


## APPENDIX A | FULL LIGHTING FIXTURE SCHEDULE AND SPECS

LUMINAIRE SCHEDULE						
Type	Description	Manufacturer	Lamp		V	Input Watts
			No	Type		
<b>A1[E]</b>	Dimmable circular LED pendant fixture. Extruded aluminum outer housing with white frosted acrylic diffuser (inner surface). 3' diameter.	Delray Lighting	--	Cool white LED	277	109
<b>A2</b>	Dimmable circular LED pendant fixture. Extruded aluminum outer housing with white frosted acrylic diffuser (inner surface). 4' diameter.	Delray Lighting	--	Cool white LED	277	109
<b>B[E]</b>	Dimmable circular LED decorative fixture. Extruded aluminum inner housing with white frosted acrylic diffuser (inner surface). 2' diameter.	Delray Lighting	--	Cool white LED	277	109
<b>C</b>	12" linear LED cove fixture. Dark-gray injected-molded plastic housing with clear polycarbonate lens.	Color Kinetics	--	LED 4000K	277/120	12.6
<b>D</b>	Low-voltage LED adjustable spotlight display fixture. Low UV cool beam. Matte chrome finish. Compatible with Ledra track system.	Ledra	1	LED (Xicaoto CRI = 97)	277	39.9
<b>F</b>	Dimmable LED downlight with 1.75" aperture. Steel/Aluminum housing with granulated powder coat finish.	Lucifer	1	LED (Xicaoto CRI = 97)	277	33.2
<b>G1</b>	2' inverted linear fluorescent pendant fixture. Matte white acrylic diffuser.	Delray Lighting	1	2 ft. T5 FLO 4000K	277	19.4
<b>G2</b>	3' inverted linear fluorescent pendant fixture. Matte white acrylic diffuser.	Delray Lighting	1	3 ft. T5 FLO 4000K	277	24.9
<b>G3</b>	4' inverted linear fluorescent pendant fixture. Matte white acrylic diffuser.	Delray Lighting	1	4 ft. T5 FLO 4000K	277	33.2
<b>H[E]</b>	4' linear fluorescent pendant fixture. Extruded die-cast aluminum housing. Formed steel reflectors with white finish. Prismatic virgin acrylic lenses with exterior longitudinal prisms.	Peerless	1	4 ft. T5 FLO 4000K	277	58.2
<b>J</b>	4' linear LED suspended wall-wash fixture. Extruded die-cast aluminum housing with 2-3/4" diameter. Acrylic lens and metal reflector.	Peerless	--	LED 4000K	277	30.5
<b>K[E]</b>	Circular fluorescent downlight. Heavy-gauge aluminum housing. 8" diameter with 6" aperture. Matte white textured polyester powder paint finish.	Gotham	1	TRT FLO 4000K	277	22.1
<b>L</b>	15 watt LED track fixture. 20, 40, 60 degree beam interchangeable reflectors. Machined cylindrical aluminum housing.	Bruck	1	LED (Xicaoto CRI = 97)	120	--
<b>M</b>	Decorative 3 watt LED pendant track fixture. Brushed aluminum finish.	Brick	1	LED (Xicaoto CRI = 97)	120	--
<b>N1</b>	4' linear Led grazing fixture with adjustable mount. Extruded aluminum housing with natural anodized aluminum finish.	Color Kinetics	--	LED 4000K	277	58.2
<b>N2</b>	12" linear Led grazing fixture with adjustable mount. Extruded aluminum housing with natural anodized aluminum finish.	Color Kinetics	--	LED 4000K	277	17.3
<b>P</b>	12 V LED decorative sconce. Machined aluminum housing. Watershed lens	Winona	3	LED 4000K	277	13.1

# Luminaire A1

CYLINDRO II COLOR LED WITH OPAL ACRYLIC DIFFUSER



**TYPE:** 6703-S-CW-2-BDIM-W     **PROJECT:** URBN Center

**ORDER NUMBER:**

6703	S	CW	2	BDIM-W
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Model#	Finish	LEDs	Voltage	Option
6703-3 ft.	S-Silver	Red	1-120V	SLRD
6704-4 ft.	W-White	Blue	2-277V	BDIM-RGB
6705-5 ft.	K-Black	CW-Cool White WW-Warm White SQ-RGB sequencer		BDIM-W BDMXMOD

**Example:**

6705	W	SQ	1	BDIM-W
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**Traxon Light Drive\*** (enter quantity)

Qty	BTRAXW (white)	Qty	BTRAXB (black)
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**CANOPY**

- Mounts to all standard JBoxes
- Specify **C2RB** for remote driver compartment in accessible ceiling or through access panel.

**NOTE:** Aircraft cable suspension is not recommended for outdoor use, where fixture will be exposed to water, or subject to wind oscillation. Avoid use near HVAC vents and in environments with corrosive chemical vapors, such as swimming pools.

**CONSTRUCTION**

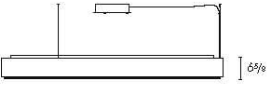
- Extruded aluminum outer housing with white frosted acrylic diffuser. 6' adjustable power cord and AC cables with push button grippers supplied standard. (Specify **XP** for additional length.)

**LED**

- Electronic drivers, DMX and dimmer interface housed in canopy or remote gear box (**C2RB**), for easy access.
- Color sequencer option features potentiometer speed control; or fixture may be ordered with dimmer or DMX interface. (See second page for details.)
- All LED components are OSRAM Sylvania.
- U.L. Listed for dry locations.

**DIMENSIONS**

Model	ID	OD
6703	34.875"	40.625"
6704	46.9"	52.625"
6705	58.9"	64.625"



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CYLINDRO II

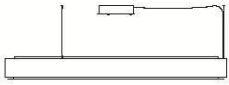
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CALIFORNIA,  
91505  
WWW.  
DELRAY  
LIGHTING.  
COM

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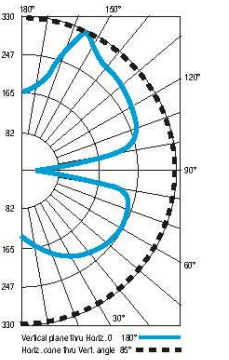
URBN Center | Philadelphia, PA | Advisor: Kevin Houser | L/E Option | 4/3/2013

**LED**

**6705.W**



**CP DISTRIBUTION**



**COEFFICIENTS**

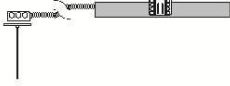
% CEILING 80 (20% FLOOR)			
% WALL	70	50	30
0	106	106	106
1	94	89	84
2	84	75	68
3	76	65	56
4	69	56	47
5	63	50	40
6	57	44	35
7	53	39	31
8	49	35	27
9	45	32	24
10	42	29	22

**NOTES**

**6705.W**  
60W LED strip, cool white  
Total lumens: 2,700

**OPTIONS**

Driver must be accessible after installation. For suspended and hard lid ceilings with access panels. Canopy mounts to mud ring attached to J-box. Order **SLRD**.



**Max. Wiring Distance (at full load)**

Wire Size (AWG)	Distance (ft.)
18	18
16	29
14	46
12	71
10	120

**ACRYLIC DIFFUSER CLEANING**

**Warning:** Do not clean with ammonia based cleaners (e.g. Windex®). Use only water or cleaners specifically formulated for cleaning plastics.

**RGB INTERFACE CONTROL OPTIONS**

**RGB SEQUENCER OPTIONS**

- Osram part no. OTRGBSEQUENCER, supplied.

**BDIM-RGB**

- Osram part no. OTRGBDIM, supplied.
- Dimming control interface for RGB LED that synchronizes the color in multiple fixtures.
- Colors are mixed manually by adjusting three 0-10V wall dimmers, or three 100K Ohm potentiometers. 0-10V converter is required for DMX control. Additional 18/4 control cable, from fixture to canopy, is supplied. Controls by others.

**BDIM-White**

- For white LEDs only.

**BDIMXMOD**

- Osram part no. OTDMXRGB supplied.
- DMX control interface for RGB LED.
- Provides DMX control with protocols that meet USITT DMX-512A or DMX512 (DIN 56930-2). No converter is required. DMX controls by others.
- A second 3-conductor control cable to fixture canopy is supplied.

**TRAXON LIGHT-DRIVE RGB (order separately)**

**BTRAXW** - white controller

**BTRAXB** - black controller (shown)


- Stand-alone, wall-mounted (12V power supply included) DMX controller for RGB LED that provides direct access to fixtures in two lighting zones.
- Tune color and brightness with the Light-Drive wheel.
- Two sequence modes enable continuous replay of all saved color settings, as well as a preset color-phase function, which can be adjusted in replay speed.
- Fully dimmable white mode button.

- See [www.traxon-usa.com](http://www.traxon-usa.com) for details.



# Luminaire A2

CYLINDRO II COLOR LED WITH OPAL ACRYLIC DIFFUSER



**TYPE:** 6703-S-CW-2-BDIM-W    **PROJECT:** URBN Center

**ORDER NUMBER:**

6704	S	CW	2	BDIM-W
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Model#	Finish	LEDs	Voltage	Option
6703-3 ft.	S-Silver	Red	1-120V	SLRD
6704-4 ft.	W-White	Blue	2-277V	BDIM-RGB
6705-5 ft.	K-Black	CW-Cool White WW-Warm White SQ-RGB sequencer		BDIM-W BDMXMOD

**Example:**

6705	W	SQ	1	BDIM-W
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**Traxon Light Drive\*** (enter quantity)

Qty	BTRAXW (white)	Qty	BTRAXB (black)
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**CANOPY**

- Mounts to all standard JBoxes
- Specify **C2RB** for remote driver compartment in accessible ceiling or through access panel.

**NOTE:** Aircraft cable suspension is not recommended for outdoor use, where fixture will be exposed to water, or subject to wind oscillation. Avoid use near HVAC vents and in environments with corrosive chemical vapors, such as swimming pools.

**CONSTRUCTION**

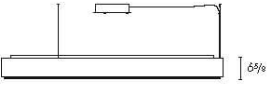
- Extruded aluminum outer housing with white frosted acrylic diffuser. 6' adjustable power cord and AC cables with push button grippers supplied standard. (Specify **XP** for additional length.)

**LED**

- Electronic drivers, DMX and dimmer interface housed in canopy or remote gear box (**C2RB**), for easy access.
- Color sequencer option features potentiometer speed control; or fixture may be ordered with dimmer or DMX interface. (See second page for details.)
- All LED components are OSRAM Sylvania.
- U.L. Listed for dry locations.

**DIMENSIONS**

Model	ID	OD
6703	34.875"	40.625"
6704	46.9"	52.625"
6705	58.9"	64.625"



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CYLINDRO II

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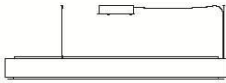
FEB.2013

URBN Center | Philadelphia, PA | Advisor: Kevin Houser | L/E Option | 4/3/2013

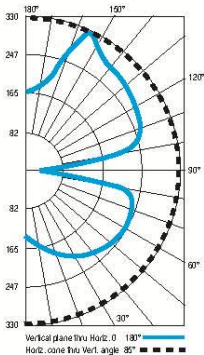


**LED**

**6705.W**



**CP DISTRIBUTION**



**COEFFICIENTS**

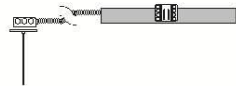
% CEILING 80 (20% FLOOR)			
% WALL	70	50	30
0	106	106	106
1	94	89	84
2	84	75	68
3	76	65	56
4	69	56	47
5	63	50	40
6	57	44	35
7	53	39	31
8	49	35	27
9	45	32	24
10	42	29	22

**NOTES**

**6705.W**  
60W LED strip, cool white  
Total lumens: 2,700

**OPTIONS**

Driver must be accessible after installation. For suspended and hard lid ceilings with access panels. Canopy mounts to mud ring attached to J-box. Order **SLRD**.



**Max. Wiring Distance (at full load)**

Wire Size (AWG)	Distance (ft.)
18	18
16	29
14	46
12	71
10	120

**ACRYLIC DIFFUSER CLEANING**

**Warning:** Do not clean with ammonia based cleaners (e.g. Windex®). Use only water or cleaners specifically formulated for cleaning plastics.

**RGB INTERFACE CONTROL OPTIONS**

**RGB SEQUENCER OPTIONS**

- Osram part no. OTRGBSEQUENCER, supplied.

**BDIM-RGB**

- Osram part no. OTRGBDIM, supplied.
- Dimming control interface for RGB LED that synchronizes the color in multiple fixtures.
- Colors are mixed manually by adjusting three 0-10V wall dimmers, or three 100K Ohm potentiometers. 0-10V converter is required for DMX control. Additional 18/4 control cable, from fixture to canopy, is supplied. Controls by others.

**BDIM-White**

- For white LEDs only.

**BDIMXMOD**

- Osram part no. OTDMXRGB supplied.
- DMX control interface for RGB LED.
- Provides DMX control with protocols that meet USITT DMX-512A or DMX512 (DIN 56930-2). No converter is required. DMX controls by others.
- A second 3-conductor control cable to fixture canopy is supplied.

**TRAXON LIGHT-DRIVE RGB (order separately)**

**BTRAXW** - white controller

**BTRAXB** - black controller (shown)

- Stand-alone, wall-mounted (12V power supply included) DMX controller for RGB LED that provides direct access to fixtures in two lighting zones.
- Tune color and brightness with the Light-Drive wheel.
- Two sequence modes enable continuous replay of all saved color settings, as well as a preset color-phase function, which can be adjusted in replay speed.
- Fully dimmable white mode button.

- See [www.traxon-usa.com](http://www.traxon-usa.com) for details.



Luminaire B

CYLINDRO COLOR LED WITH OPAL ACRYLIC DIFFUSER



<b>TYPE:</b>	<b>PROJECT:</b>		
<b>ORDER NUMBER:</b>			
6502	MW2	2	BDIM-W
<b>Model#</b>	<b>LEDs</b>	<b>Voltage</b>	<b>Option</b>
	Red	1-120V	<b>BMR16</b> -50W MR16
	Blue	2-277V	<b>BART11</b> -50W AR11
	<b>SQ</b> -RGB sequencer		<b>BMR16LED</b> -3.3W LED
	<b>CW1</b> -Cool White, 1 wrap		<b>BDIM-RGB</b> -3 channel analog interface
	<b>WW1</b> -Warm White, 1 wrap		<b>BDIM-W</b> -for white LEDs
	<b>CW2</b> -Cool White, 2 wrap		<b>BDMXMOD</b> -DMX interface module
	<b>WW2</b> -Warm White, 2 wrap		
	<i>(see back page for details)</i>		
<b>Example:</b>			
6501	SQ	1	BMR16

Traxon Light Drive\* (order separately)

QTY **BTRAXW** (white)  QTY **BTRAXB** (black)

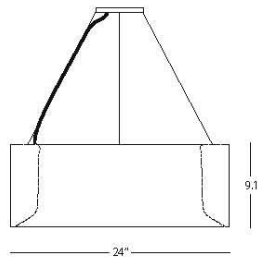
**DELRAY**  
LIGHTING  
INCORPORATED

650

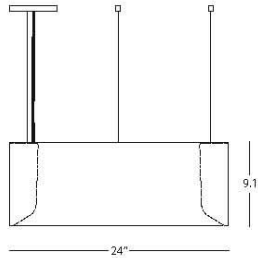
**CYLINDRO PENDANT**

- Canopy mounts to standard 3" mud ring
- Aluminum housing unlocks with a screw for servicing.
- Electronic drivers and color sequencer fit inside fixture for easy access.
- Color sequencer option has speed control knob on top of fixture; or fixture may be ordered with a dimmer or DMX controller. (See back page.)
- All LED components are Osram Sylvania.
- 6' standard pendant, with push button adjustable aircraft cable.
- Silver finish, with steel braided power cord and opal acrylic diffuser.
- Optional low voltage downlights available, for task lighting.
- May be ordered with one central or multi-point mount canopy.
- U.L. Listed for dry locations.

6501  
Central  
Mount



6502  
Multi-Point  
Mount

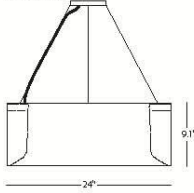


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JAN 2013

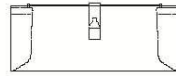
**LED**

**6501.CW2**

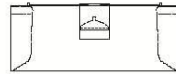


**DOWNLIGHT**

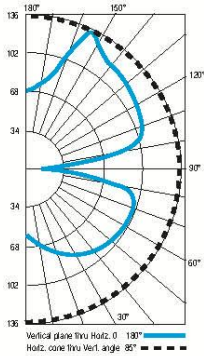
**BMR16**—50W MR16  
**BMR 16LED**—3.3W LED  
Downlight



**BAR111**—50W AR111  
Downlight



**CP DISTRIBUTION**



**COEFFICIENTS**

% CEILING 80	(20% FLOOR)		
% WALL	70	50	30
0	106	106	106
1	94	89	84
2	84	75	68
3	76	65	56
4	69	56	47
5	62	50	40
6	57	44	35
7	53	39	31
8	49	35	27
9	45	32	24
10	42	29	22

**NOTES**

**6501.CW2**  
Cool White, 2-wrap LED  
Total lumens: 1,153

**RGB INTERFACE CONTROL OPTIONS**

**RGB SEQUENCER OPTIONS**

- Osram part no. OTRGBSEQUENCER, supplied.

**BDIM-RGB**

- Osram part no. OTRGBDIM, supplied.
- Dimming control interface for RGB LED that synchronizes the color in multiple fixtures.
- Colors are mixed manually by adjusting three 0-10V wall dimmers, or three 100K Ohm potentiometers. 0-10V converter is required for DMX control. Additional 18/4 control cable, from fixture to canopy, is supplied. Controls by others.

**BDIM-White**

- For white LEDs only.

**BDIMXMOD**

- Osram part no. OTDMXRGB supplied.
- DMX control interface for RGB LED.
- Provides DMX control with protocols that meet USITT DMX-512A or DMX512 (DIN 56930-2). No converter is required. DMX controls by others.
- A second 3-conductor control cable to fixture canopy is supplied.

**TRAXON LIGHT-DRIVE RGB (order separately)**

**BTRAXW**—white controller

**BTRAXB**—black controller (shown)

- See [www.traxon-usa.com](http://www.traxon-usa.com) for details.

- Standalone, wall-mounted (12V power supply included) DMX controller for RGB LED that provides direct access to fixtures in two lighting zones.
- Tune color and brightness with the Light-Drive wheel.
- Two sequence modes enable continuous replay of all saved color settings, as well as a preset color-phase function, which can be adjusted in replay speed.
- Fully dimmable white mode button.



**WATTS**

Red	19W	CW/WW1	36W
Blue	16W	CW/WW2	72W
SQ	41W		

**WHITE LED OPTIONS**

White LEDs available in two configurations:

**CW/WW1**—single wrap for ambient glow (36W).

**CW/WW2**—double wrap for ambient glow and illumination (72W).

**ACRYLIC DIFFUSER CLEANING**

**Warning:** Do not clean with ammonia based cleaners (e.g. Windex®). Use only water or cleaners specifically formulated for cleaning plastics.

JAN 2013

# Luminaire C



Date: 4/3/2013 Type: C  
 Firm Name: COOK Lighting  
 Project: URBN Center

## eW Cove MX Powercore

1 ft, 50° × 70° (medium) beam angle

Premium interior linear LED cove and accent fixture with solid white light

### Specifications

Due to continuous improvements and innovations, specifications may change without notice.

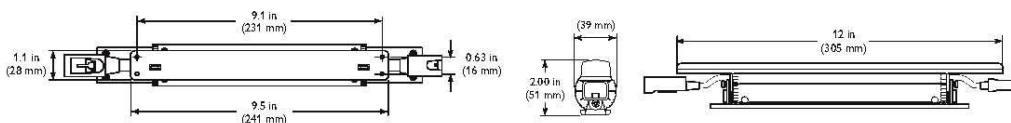
Item	Specification	Details
Output	Lumens*	384 (2700 K)† 446 (3000 K)† 476 (3500 K)† 518 (4000 K)†
	Efficacy	34.9 (2700 K) 36.9 (3000 K) 40.0 (3500 K) 43.5 (4000 K)
	CRI	B3 (2700 K) B3 (3000 K) B4 (3500 K) B2 (4000 K)
	Lumen Maintenance‡	50,000 hours L70 @ 25° C 37,000 hours L70 @ 50° C 90,000 hours L50 @ 25° C 80,000 hours L50 @ 50° C
Electrical	Input Voltage	100 – 277 VAC auto-ranging, 50 / 60 Hz
	Power Consumption	12.5 W maximum at full output, steady state
	Power Factor	.99 @ 120 VAC
Control	Dimming	Compatible with selected commercially available reverse-phase ELY-type dimmers§
Physical	Dimensions (Height x Width x Depth)	2.0 x 12 x 1.5 in (51 x 305 x 39 mm)
	Weight	1 lb (454 g)
	Housing	Die-cast aluminium, white powder-coated finish
	Lens	Polycarbonate
	Fixture Connections	Integral male / female connectors
	Temperature Ranges	-4° – 122° F (-20° – 50° C) Operating -4° – 122° F (-20° – 50° C) Startup -40° – 176° F (-40° – 80° C) Storage
	Humidity	0 – 95%, non-condensing
Certification and Safety	Certification	UL / eUL, FCC Class B, CE, CCC, SAA, C-Tick
Environment	Environment	Dry / Damp Location, IP20

\* Color temperatures conform to nominal CCTs as defined in ANSI Chromaticity Standard C78.377A.

† Lumen measurement complies with IES LM-79-08 testing procedures.

‡ L70 = 70% lumen maintenance (when light output drops below 70% of initial output). L50 = 50% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED fixtures are based on measurements that comply with IES LM-80-08 testing procedures. Refer to [www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf](http://www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf) for more information.

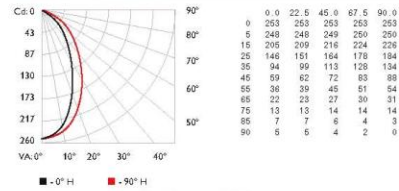
§ Refer to [www.philipscolorkinetics.com/support/appnotes/](http://www.philipscolorkinetics.com/support/appnotes/) for specific details.



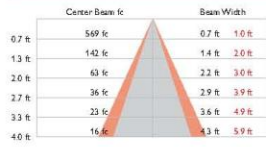
Photometrics

2700 K

Polar Candela Distribution



Illuminance at Distance



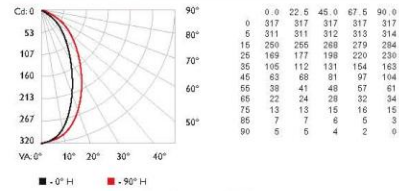
15.9 ft (4.8 m) Vert. Spread: 56.7°  
1 fc maximum distance Horiz. Spread: 72.9°

Lumens 384  
Efficacy 34.9 lm / W

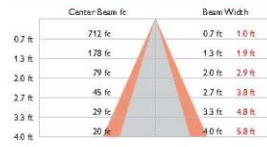
For lux multiply fc by 10.7

3000 K

Polar Candela Distribution



Illuminance at Distance



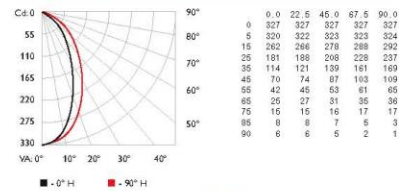
17.8 ft (5.4 m) Vert. Spread: 53.1°  
1 fc maximum distance Horiz. Spread: 71.5°

Lumens 446  
Efficacy 36.9 lm / W

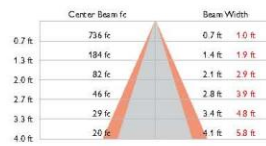
For lux multiply fc by 10.7

3500 K

Polar Candela Distribution



Illuminance at Distance



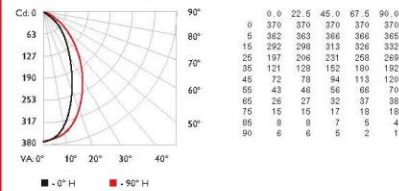
18.1 ft (5.5 m) Vert. Spread: 54.6°  
1 fc maximum distance Horiz. Spread: 71.8°

Lumens 476  
Efficacy 40.0 lm / W

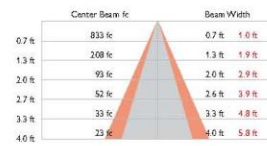
For lux multiply fc by 10.7

4000 K

Polar Candela Distribution



Illuminance at Distance



19.2 ft (5.9 m) Vert. Spread: 52.6°  
1 fc maximum distance Horiz. Spread: 71.8°

Lumens 518  
Efficacy 43.5 lm / W

For lux multiply fc by 10.7



Philips Color Kinetics  
3 Burlington Woods Drive  
Burlington, Massachusetts 01803 USA.  
Tel 888.385.5742  
Tel 617.423.9999  
Fax: 617.423.9998  
www.philipscolorkinetics.com

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## Luminaire D



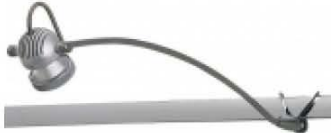
Job Name: URBN Center

Contact: COOK Lighting

Fixture Type: D

Part Number: 2047

LEDRA TRACK DISPLAY



### Description:

The Ledra Track Display is an adjustable spotlight display fixture with a 210° tilt and 360° rotation on fixture head. Compatible with the Ledra Track system, the small size, long life, lack of UV, and cool beam allows for a wide variety of applications. 18 awg wire required to connect Ledra to driver, not included.

### Part Numbers:

<b>136711mc/s</b>	matte chrome, white, 10° lens
<b>136711mc/m</b>	matte chrome, white, 30° lens
<b>136711mc/fl</b>	matte chrome, white, 45° lens
<b>136711-1mc/s</b>	matte chrome, warm white, 10° lens
<b>136711-1mc/m</b>	matte chrome, warm white, 30° lens
<b>136711-1mc/fl</b>	matte chrome, warm white, 45° lens

### Technical Specs:

Finish: matte chrome

Input voltage: 3.7VDC

Power consumption: 3 Watts

Drive current: 700mA

Lumen output: 65 at 700mA

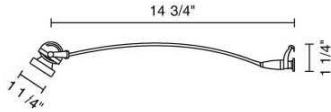
Lamp life: 70% at 50,000 hrs (white) 100,000 hrs (blue)

Rating: Class II

White 4000K

Warm White 3000K

ETL Listed



### Warranty:

All 3 Watt LED fixtures are warranted to be free from defects in material and workmanship for three (3) years from date of delivery.

For full warranty details, please see our terms and conditions [here](#)



# Luminaire F



## DL1ZP [LEDX]

DL1ZP [LEDX]

RECESSED LED DOWNLIGHT (IC, NON-IC, REMODEL)  
ROUND FIXED

### TRIM

#### A LED

Remote phosphor dimmable LED module in aluminum and glass casing

#### B Special Features

Die-cast Professional Baffle minimizes aperture glare; sealed collar prevents light leak

#### C Effects Devices

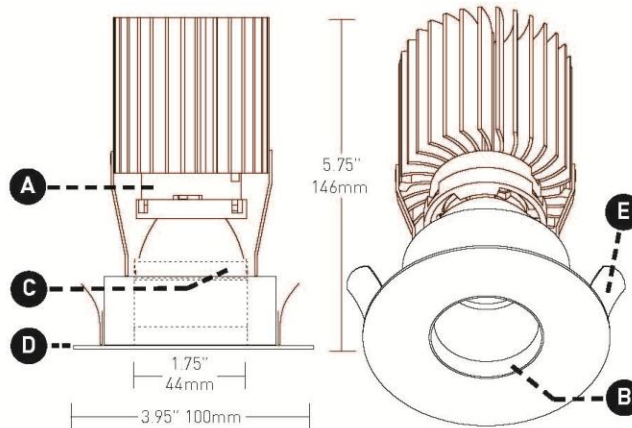
Soft focus lens included; adjustable yoke allows secure placement of up to 2 effects devices

#### D Trim Plate

Thickness measures 0.055"; install as zero-sightline or flange overlay

#### E Retention

Torsion spring clips designed to bear 3 times fixture weight; accommodates varying ceiling thicknesses and ensure snug fit of trim against ceiling



### TECHNICAL

#### CONSTRUCTION

Trim: Steel and aluminum; painted finishes are granulated powdercoat; heat-sink is extruded aluminum

#### LED

Xicato LED module available in configurations of 80+ CRI: 720, 1000 and 1300 lumen packages, and 95+ CRI: 580, 800 and 1000 lumen packages. Available color temperatures are 2700K (+/- 40K), 3000K (+/- 50K), 3500K (+/- 60K) and 4000K (+/- 70K), with beam angles of 40° and 60°. Average rated lamp life of 50,000 hours. LED/ heat-sink module field replaceable.

#### DIMMING PROTOCOL

Analog 0-10 and Triac dim to nominal 10% lm output; Lutron system dims to nominal 1% lm output. Consult factory with questions about particular dimming systems.

#### LISTING

ETL / C-ETL listed for dry/damp locations

#### WARRANTY

Five year warranty on LED lamp module and driver. One year warranty on all other Lucifer Lighting provided system components. Consult factory for full warranty guidelines.



This fixture is ARRA "Buy America" compliant. Lucifer Lighting Company will supply a Certificate of Compliance upon request.

#### LED SPEC LOCKERS

Color Consistency	1x2 SDCM
Phosphor Architecture	Remote Phosphor
Standard Series 80+ CRI	R9=16, R13= 81, R15=75
Artist Series 95+ CRI	R9=98, R13=98, R15=98
Module Nominal lm/watt	720lm (70lm/watt); 1000lm (68lm/watt)
Construction	Aluminum & Glass; IP66 (module)
Temperature Limit	40°C
Dimming	All dimming protocols

#### EMERGENCY LIGHTING

LEDX downlights may be used in conjunction with remote emergency battery EMB20-LEDX (specified separately) which is a Philips Bodine inverter.

In cases where normal power is interrupted, the remote inverter is rated to provide minimum 90 minutes of emergency power to the LED lighting system. Upon restoration of normal power, the inverter automatically recharges within 24 hours.

Refer to Philips Bodine model number ELI-S-20 spec sheet for complete details.



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page 1

[121712]





# DL1ZP [LEDX]

RECESSED LED DOWNLIGHT (IC, NON-IC, REMODEL)  
ROUND FIXED

DL1ZP [LEDX]

## TRIM

### NCTYPE DOWNLIGHT

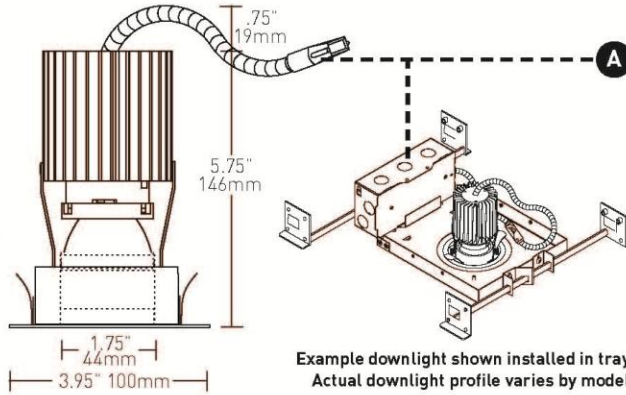
For use with mounting tray in non-IC installations

#### Special Features

Quick-connect conduit plug between fixture and power supply on mounting tray / junction box assembly (example illustration shown); metal conduit protected wiring

Ensure minimum 1/2" (13mm) setback from combustible materials and minimum 3" (76mm) setback from insulation material on all sides of tray and downlight fixture assembly

Do not install in environments where ambient temperatures exceed 40°C



Example downlight shown installed in tray. Actual downlight profile varies by model.

### REMODEL TYPE DOWNLIGHT

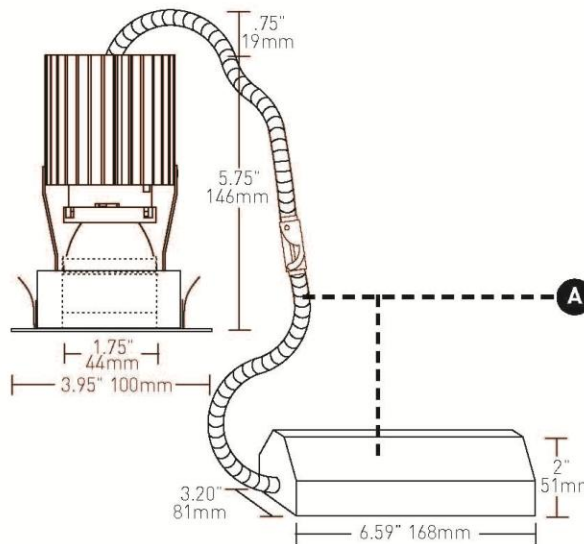
For use in non-IC remodel installations; ceiling mounted collar must be specified for flange overlay or zero-sightline installations

#### Special Features

Tethered junction box with metal conduit protected wiring and quick-connect plug; for mounting without conventional housing

Ensure minimum 2.53" (64mm) setback from combustible materials and minimum 5.03" (128mm) setback from insulation material on all sides

Do not install in environments where ambient temperatures exceed 40°C



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page 2

[121712]

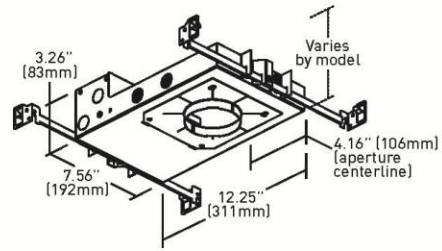
**HOUSING AND MOUNTING**

DL1ZP [LEDX]

**NON-IC MOUNTING TRAY**

For use with LEDX downlights in non-IC, accessible and non-accessible ceilings. Metal conduit protected wiring and quick-connect conduit plug between fixture and power supply on mounting tray / junction box assembly. Provided hanger bars may be fitted to short or long side of tray and may be cut/narrowed ensuring minimum 1/2" (13mm) setback from combustible materials and minimum 3" (76mm) setback from insulation material on all sides.

Do not install in environments where ambient temperatures exceed 40°C.



**IC HOUSINGS**

For use with LEDX downlights in IC, Airtight, CCEA accessible and non-accessible ceilings. Transformer compartment and all splice connections may be serviced from room side. Certified Chicago Plenum and ASTM E283 Airtight. Hanger bars included.

*IC housing use depends on system configuration.*

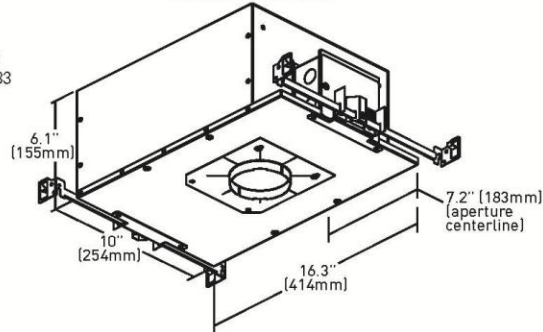
**Standard Wattage** housing is used for 8007 or 9505 configurations.

**Intermediate Wattage** housing is used for 8010 or 9508 configurations.

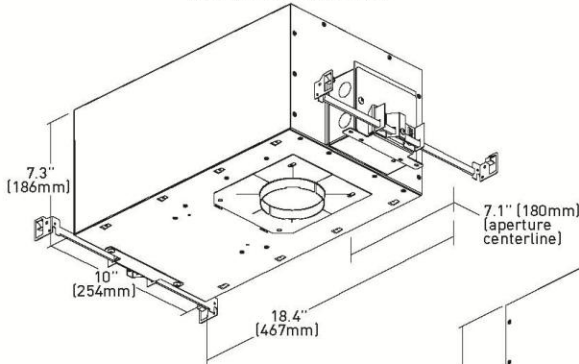
**Maximum Wattage** housing is used for 8013 or 9510 configurations.

Do not install in environments where ambient temperatures exceed 40°C.

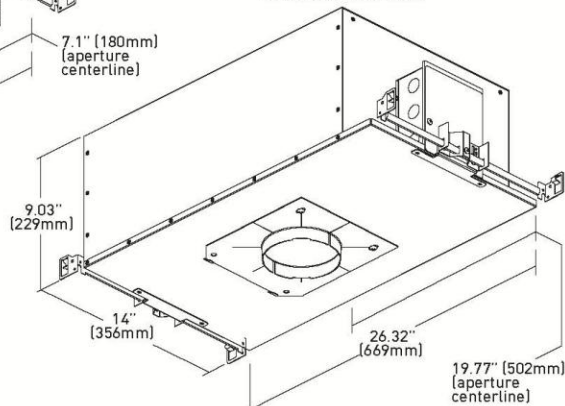
**STANDARD WATTAGE**



**INTERMEDIATE WATTAGE**



**MAXIMUM WATTAGE**



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[121712]

ZERO-SIGHTLINE APPLIQUÉS FOR NC TRAY AND IC HOUSINGS

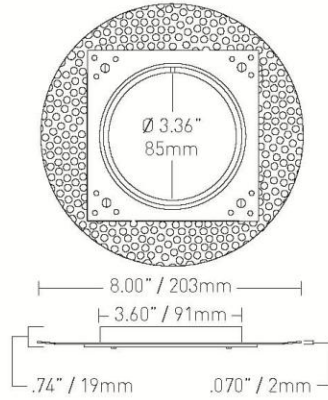
DL1ZP [LEDX]

An appliqué is necessary to complete a Z Series zero-sightline installation. When installed according to manufacturer's installation instructions and when ceiling conditions are met, the fixture is flush with the ceiling plane. Available in standard and reduced profile versions. All models include a removable plaster plug to ensure flush trim fit after mudding.

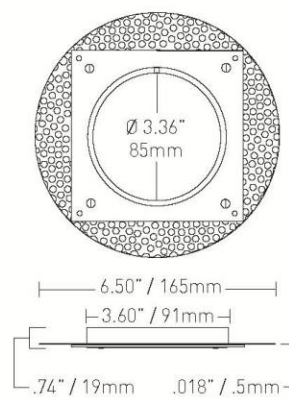
DLA-APP-Z-RD-3 is recommended for all applications as it provides maximum structural reinforcement.

DLA-APP-Z-RD-5 has a thinner profile and smaller diameter and is optional for installations where a thinner profile to apply mudding is preferred.

DLA-APP-Z-RD-3



DLA-APP-Z-RD-5



MOUNTING FOR REMODEL DOWNLIGHTS

Remodel downlight installations require ceiling mounted zero-sightline appliqué or flange overlay collar.

**Zero-Sightline**

When installed according to manufacturer's installation instructions and when ceiling conditions are met, the fixture is flush with the ceiling plane.

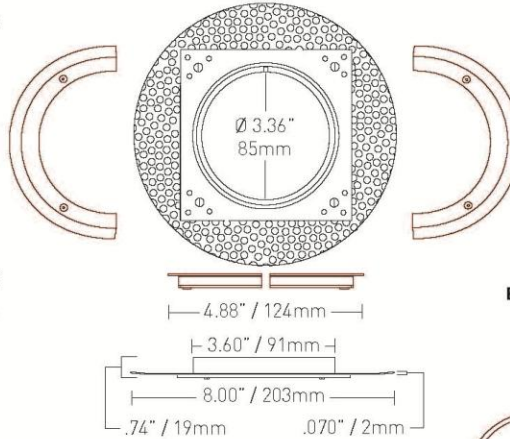
Use with EDLA-APP-Z-RD appliqué for zero-sightline flush installations. [5" (127mm) ceiling cutout.] Includes a removable plaster plug to ensure flush trim fit after mudding.

**Flange Overlay**

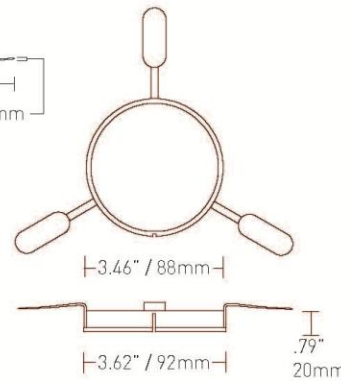
Fixture overlays ceiling plane.

Use with EDL-ZF collar. [3.5" (89mm) ceiling cutout; Lucifer Lighting recommends that the edge of the ceiling cutout be beveled to ensure proper fit.]

EDLA-APP-Z-RD



EDL-ZF



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[121712]

**ORDERING**

**DL1ZP [LEDX]**

Downlights may be specified for use in IC/Airtight/CCEA ceilings, non-IC ceilings, and for remodel applications in non-IC ceilings.

IC or NC downlight fixture installation type must be specified with matching housing installation type.

RM remodel downlight fixture installation type is specified with matching power supply instead of housing. Ceiling mounted collar or appliqué must also be specified for use with remodel downlight fixture.

**Downlight Fixture**

Ex: DL1ZP-NC-BRM-1-800730-1

FINISH	
<b>W</b>	Matte White Powdercoat
<b>B</b>	Matte Black Powdercoat
<b>C</b>	Polished Chrome
<b>IG</b>	Industrial Gray [Bead Blasted SS]
<b>MG</b>	Metallic Gray Powdercoat
<b>SS</b>	Brushed Stainless Steel
<b>ABR</b>	Architectural Bronze Powdercoat
<b>BRP</b>	Polished Oil-Rubbed Bronze Plate
<b>BRM</b>	Matte Oil-Rubbed Bronze Plate

COLOR TEMPERATURE	
<b>27</b>	2700K
<b>30</b>	3000K
<b>35</b>	3500K
<b>40</b>	4000K

OPTIC	
<b>1</b>	40° Faceted
<b>2</b>	40° Smooth
<b>3</b>	60° Smooth

DL1ZP-**NC**-**SS**-**3**-**9505**-**40**-**2**

INSTALLATION TYPE	
<b>IC</b>	IC/Airtight/CCEA [Version depends on System Configuration; see page 3]
<b>NC</b>	Non-IC
<b>RM</b>	Remodel; Non-IC

CEILING THICKNESS	
<b>ZF OPTIONS</b>	
<b>1</b>	5/8"
<b>2</b>	3/4"
<b>3</b>	1"
<b>4</b>	1-1/4"
<b>5</b>	1-1/2"
<b>6</b>	1-3/4"
<b>ZO OPTIONS</b>	
<b>1</b>	5/8" to 1"

NOMINAL SYSTEM CONFIGURATION	
<b>8013</b>	80+ CRI, 27W / 1300lm
<b>8010</b>	80+ CRI, 18W / 1000lm
<b>8007</b>	80+ CRI, 14W / 720lm
<b>9510</b>	95+ CRI, 25W / 1000lm
<b>9508</b>	95+ CRI, 22W / 800lm
<b>9505</b>	95+ CRI, 18W / 580lm

**Housing**

Ex: DH-NC-ZF-1-8007-UNIVL3

DH-**NC**-**ZF**-**1**-**8505**-**UNIVL3**

FIXTURE FLANGE	
<b>ZF</b>	Flange Overlay
<b>ZO</b>	Zero-Sightline

POWER SUPPLY	
<b>12T</b>	120V Electronic, TRIAC †
<b>UNIVA</b>	120V-277V Electronic, Analog 0-10
<b>12L2</b>	120V Electronic, Lutron 2 Wire Hi-Lume A
<b>UNIVL3</b>	120V-277V Electronic, Lutron 3 Wire Hi-Lume A
<b>UNIVND</b>	120V-277V Electronic, Non-Dimming

† Not available for 9510 or 9505 system configurations

**Remodel Power Supply**

Ex: PS-LEDX-RM-8007-UNIVL3

PS-LEDX-RM-**8505**-**UNIVL3**

**ORDERING (ACCESSORIES)**

**ADDITIONAL EFFECTS DEVICES**

- AGL-2** Amber Glass Lens
- CGL-2** Clear Glass Lens
- FGL-2** Frosted Glass Lens
- HCL-2** Honeycomb Louver
- LSL-2** Linear Spread Lens
- SGL-2** Spread Lens
- WTL-2** Warm Tone Lens

**EMERGENCY LIGHTING**

- EMB20-LEDX** 20W Emergency Battery Backup

For IC or NC zero-sightline [ZO] installations, select appliqué profile.

**DLA-APP-Z-RD** -

**APPLIQUÉ**

**PROFILE**

- 3** Recommended
- 5** Level 5 Ceilings

For remodel RM installations, select mounting option.

**REMODEL MOUNTING OPTION**

- EDL-ZF** Flange overlay collar
- EDLA-APP-Z-RD** Zero-sightline appliqué



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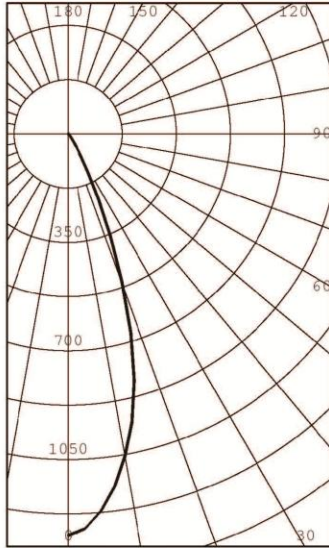
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**PHOTOMETRICS**

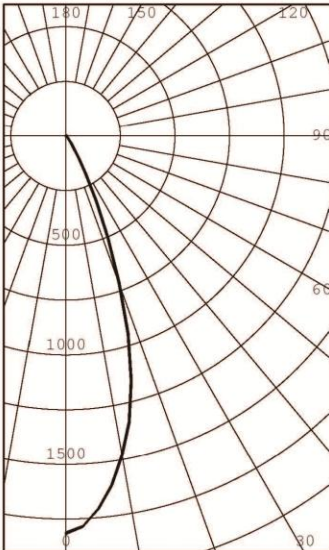
**DL1ZP [LEDX]**

**DL1ZP:** Nominal 80+ CRI, 3000K, 18W, 1000 lumen package, soft focus lens.  
Refer to website for additional photometry, if available.



ANGLE	MEAN CP	LUMENS
0	1295	
5	1220	113
10	1056	
15	823	219
20	506	
25	234	112
30	83	
35	31	23
40	16	
45	10	8
50	7	
55	5	4
60	3	
65	1	1
70	1	
75	1	1
80	0	
85	0	0
90	0	

**DL1ZP:** Nominal 80+ CRI, 3000K, 27W, 1300 lumen package, soft focus lens.  
Refer to website for additional photometry, if available.



ANGLE	MEAN CP	LUMENS
0	1815	
5	1710	158
10	1481	
15	1156	308
20	714	
25	331	158
30	117	
35	44	32
40	21	
45	13	10
50	8	
55	6	5
60	3	
65	1	1
70	1	
75	0	0
80	0	
85	0	0
90	0	



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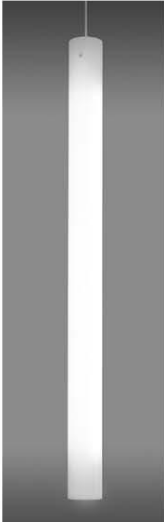
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[121712]

# Luminaire G1

4" T5 CYLINDER WITH DOWNLIGHT



**TYPE:** 6304-11-S-2-SD9      **PROJECT:** URBN Center

**ORDER NUMBER:**


6304	14	S	2	SD9	Select
<b>Model#</b>	<b>Wattage</b>	<b>Finish</b>	<b>Voltage</b>	<b>Ballast</b>	<b>Downlight</b>
14		S-silver	1-120V	SD3-dimming	B6MR16
21		W-white	2-277V	SD5-dimming	
24				SD8-dimming	
28				SD9-dimming	
39					
54					

**Example:**

6306	54	W	2	D3	B6MR16
------	----	---	---	----	--------

**Other Options:**

- CRB**—remote ballast
- BLA/RB**—remote ballast with ball aligner
- BIA**—pipe mount
- B4XP**—extra pendant length (inches):



6300-4" T5

---

**CONSTRUCTION**

- Matte white acrylic diffuser provides even illumination.
- cUL listed for damp locations.

**CANOPY**

- W—white or S—silver, with matching cord.
- Flat, 5.5" o.d., mounts to standard J-box.
- Standard mount is 6 ft. power cord. Order **B4XP** for additional power cord length.
- Hard stem also available. Order **BIA**.

**BALLASTS**


- Standard ballast is program start, HPF electronic, mounted in 3" diameter tube at ceiling.
- See back page for dimming ballasts. 3.5 ft. maximum pendant.
- Emergency not available.
- Above ceiling mount available for accessible ceiling only: order **CRB**.
- Ballast Canopy Dimensions:

Configuration	Ht.*
Standard	16.3"
MR16	17.8"
Dimming	20.3"
MR16 + Dimming	21.8"

**OPTIONAL DOWNLIGHT**

- Order **B4MR16**.
- 9W max.
- Uses LED MR16 2-pin lamps (by others).

6304—2 ft. T5, 1x 14/24W  
 6305—3 ft. T5, 1x 21/39W  
 6306—4 ft. T5, 1x 28/54W



BURBANK,  
 CALIFORNIA,  
 91505  
 WWW.  
 DELRAY  
 LIGHTING.  
 COM

MAY 2012

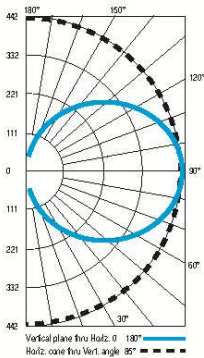
URBN Center | Philadelphia, PA | Advisor: Kevin Houser | L/E Option | 4/3/2013

**T5**

6304  
6305  
6306



**CP DISTRIBUTION**



**COEFFICIENTS**

	% CEILING 80	(20% FLOOR)	
	70	50	30
0	88	88	88
1	75	70	65
2	67	58	51
3	60	50	42
4	54	43	35
5	49	38	29
6	45	33	25
7	41	30	22
8	38	27	19
9	35	24	17
10	33	22	15

**NOTES**

**6306**  
1-5/4W T5 HO  
T5 miniature bi-pin socket  
Total lumens: 3850 mean  
Total luminaire efficiency: 82%

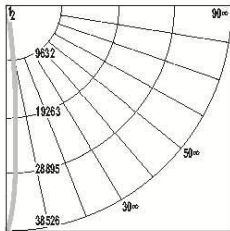
**LED MR16**

**B4MR16**—4" downlight, 9W max.

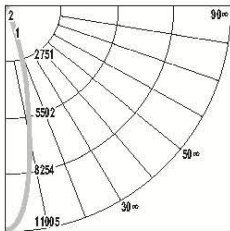


**CP DISTRIBUTION**

**SPOT**



**FLOOD**



**ACRYLIC DIFFUSER CLEANING**

**Warning:** Do not clean with ammonia based cleaners (e.g. Windox®). Use only water or cleaners specifically formulated for cleaning plastics.

**OPTIONS**

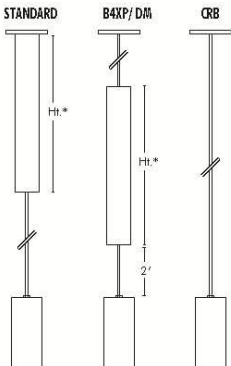
**MOUNTING**

**PIPE MOUNT**  
Order **BLA** mount for 3/8" IPS pipe. Length must be specified. Includes ball aligner canopy rated for 75 lbs. and mounts to standard J-boxes (below, left). Not for windy locations.

Pipe longer than 8 ft. will be shipped in two pieces—one 8 ft. section plus a second section for the balance—supplied with a painted, threaded pipe coupler, with set screws (below, right).



**4" BALLAST CONFIGURATIONS**



\*Height: see Ballast Canopy Dimensions, first page.

**BALL ALIGNER OPTION**

Order **BLA**.

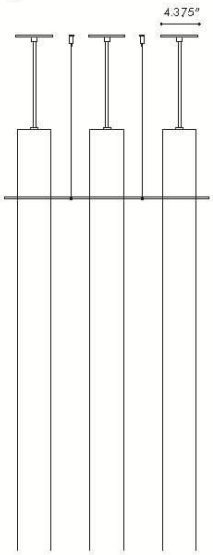


**DIMMING**

- T5—14, 21, 24, 28 39, 54W
- Maximum 3.5 feet.
- **SD3**—Advance Mark X, *SAW only*
- **SD5**—Advance Mark VII
- **SD8**—Lutron Hi Lume FDB
- **SD9**—Lutron Eco System

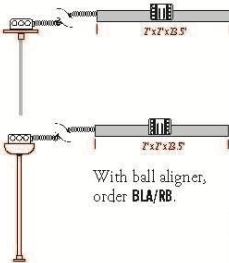
**MULTI-TUBE CONFIGURATIONS**

Standard and custom solid acrylic collars may be added for decoration and earthquake code compliance. (Shown with **CRB** option.)



**REMOTE BALLAST**

Install ballast enclosure (supplied) maximum 14 ft. from fixture; must remain accessible. Order **CRB**.

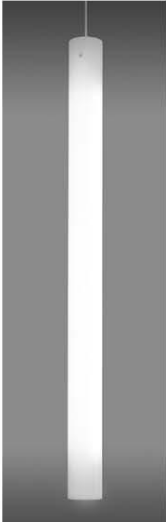


1141012



# Luminaire G2

4" T5 CYLINDER WITH DOWNLIGHT



**TYPE:** PROJECT:

**ORDER NUMBER:**


6305	21	S	2	SD9	Select
<b>Model#</b>	<b>Wattage</b>	<b>Finish</b>	<b>Voltage</b>	<b>Ballast</b>	<b>Downlight</b>
14		S-silver	1-120V	SD3-dimming	B6MR16
21		W-white	2-277V	SD5-dimming	
24				SD8-dimming	
28				SD9-dimming	
39					
54					

**Example:**

6306	54	W	2	D3	B6MR16
------	----	---	---	----	--------

**Other Options:**

- CRB-remote ballast
- BLA/RB-remote ballast with ball aligner
- BLA-pipe mount
- B4XP-extra pendant length (inches):



6300-4" T5

---

**CONSTRUCTION**

- Matte white acrylic diffuser provides even illumination.
- cUL listed for damp locations.

**CANOPY**

- W-white or S-silver, with matching cord.
- Flat, 5.5" o.d., mounts to standard J-box.
- Standard mount is 6 ft. power cord. Order **B4XP** for additional power cord length.
- Hard stem also available. Order **BLA**.

**BALLASTS**

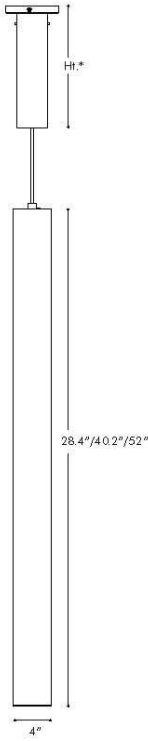
- Standard ballast is program start, HPF electronic, mounted in 3" diameter tube at ceiling.
- See back page for dimming ballasts. 3.5 ft. maximum pendant.
- Emergency not available.
- Above ceiling mount available for accessible ceiling only: order **CRB**.
- Ballast Canopy Dimensions:

Configuration	Ht.*
Standard	16.3"
MR16	17.8"
Dimming	20.3"
MR16 + Dimming	21.8"

**OPTIONAL DOWNLIGHT**

- Order **B4MR16**.
- 9W max.
- Uses LED MR16 2-pin lamps (by others).

6304-2 ft. T5, 1x 14/24W  
 6305-3 ft. T5, 1x 21/39W  
 6306-4 ft. T5, 1x 28/54W



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 DELRAY  
 LIGHTING.  
 COM

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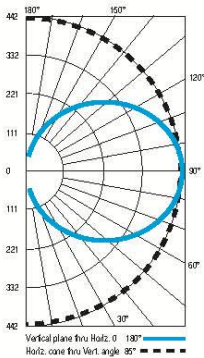
URBN Center | Philadelphia, PA | Advisor: Kevin Houser | L/E Option | 4/3/2013

**T5**

6304  
6305  
6306



**CP DISTRIBUTION**



**COEFFICIENTS**

	% CEILING 80	(20% FLOOR)	
	70	50	30
0	88	88	88
1	75	70	65
2	67	58	51
3	60	50	42
4	54	43	35
5	49	38	29
6	45	33	25
7	41	30	22
8	38	27	19
9	35	24	17
10	33	22	15

**NOTES**

**6306**  
1-5/4W T5 HO  
T5 miniature bi-pin socket  
Total lumens: 3850 mean  
Total luminaire efficiency: 82%

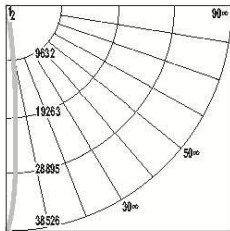
**LED MR16**

**B4MR16**—4" downlight, 9W max.

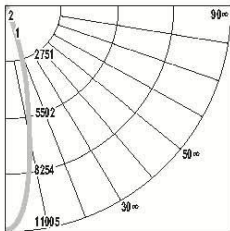


**CP DISTRIBUTION**

**SPOT**



**FLOOD**



**ACRYLIC DIFFUSER CLEANING**

**Warning:** Do not clean with ammonia based cleaners (e.g. Windex®). Use only water or cleaners specifically formulated for cleaning plastics.

**OPTIONS**

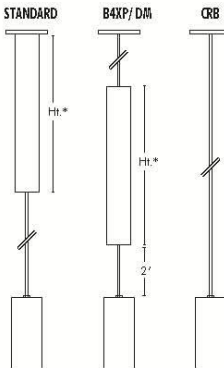
**MOUNTING**

**PIPE MOUNT**  
Order **BLA** mount for 3/8" IPS pipe. Length must be specified. Includes ball aligner canopy rated for 75 lbs. and mounts to standard J-boxes (below, left). Not for windy locations.

Pipe longer than 8 ft. will be shipped in two pieces—one 8 ft. section plus a second section for the balance—supplied with a painted, threaded pipe coupler, with set screws (below, right).



**4" BALLAST CONFIGURATIONS**



\*Height: see Ballast Canopy Dimensions, first page.

**BALL ALIGNER OPTION**

Order **BLA**.

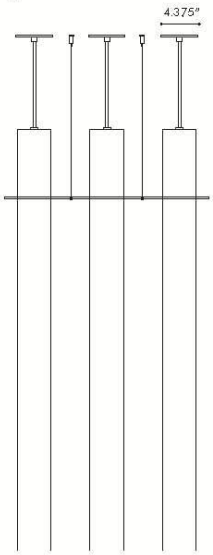


**DIMMING**

- T5—14, 21, 24, 28 39, 54W
- Maximum 3.5 feet.
- **SD3**—Advance Mark X, *SAW only*
- **SD5**—Advance Mark VII
- **SD8**—Lutron Hi Lume FDB
- **SD9**—Lutron Eco System

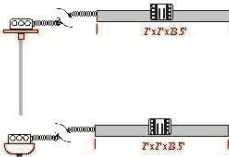
**MULTI-TUBE CONFIGURATIONS**

Standard and custom solid acrylic collars may be added for decoration and earthquake code compliance. (Shown with **CRB** option).



**REMOTE BALLAST**

Install ballast enclosure (supplied) maximum 14 ft. from fixture; must remain accessible. Order **CRB**.

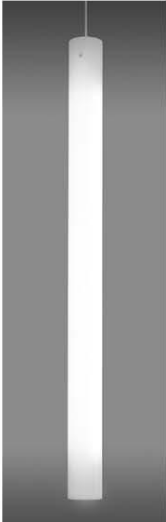


With ball aligner, order **BLA/RB**.

MAP 2012

# Luminaire G3

4" T5 CYLINDER WITH DOWNLIGHT



**TYPE:** PROJECT:

**ORDER NUMBER:**


6306	28	S	2	SD9	Select
<b>Model#</b>	<b>Wattage</b>	<b>Finish</b>	<b>Voltage</b>	<b>Ballast</b>	<b>Downlight</b>
14		S-silver	1-120V	SD3-dimming	B6MR16
21		W-white	2-277V	SD5-dimming	
24				SD8-dimming	
28				SD9-dimming	
39					
54					

**Example:**

6306	54	W	2	D3	B6MR16
------	----	---	---	----	--------

**Other Options:**

- CRB-remote ballast
- BLA/RB-remote ballast with ball aligner
- BLA-pipe mount
- B4XP-extra pendant length (inches):



6300-4" T5

---

**CONSTRUCTION**

- Matte white acrylic diffuser provides even illumination.
- cUL listed for damp locations.

**CANOPY**

- W-white or S-silver, with matching cord.
- Flat, 5.5" o.d., mounts to standard J-box.
- Standard mount is 6 ft. power cord. Order **B4XP** for additional power cord length.
- Hard stem also available. Order **BLA**.

**BALLASTS**

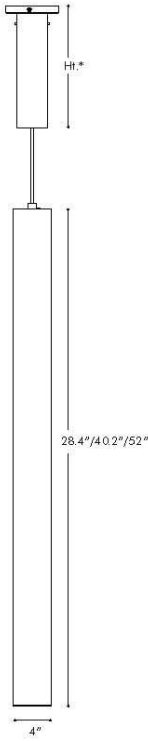
- Standard ballast is program start, HPF electronic, mounted in 3" diameter tube at ceiling.
- See back page for dimming ballasts. 3.5 ft. maximum pendant.
- Emergency not available.
- Above ceiling mount available for accessible ceiling only: order **CRB**.
- Ballast Canopy Dimensions:

Configuration	Ht.*
Standard	16.3"
MR16	17.8"
Dimming	20.3"
MR16 + Dimming	21.8"

**OPTIONAL DOWNLIGHT**

- Order **B4MR16**.
- 9W max.
- Uses LED MR16 2-pin lamps (by others).

6304-2 ft. T5, 1x 14/24W  
 6305-3 ft. T5, 1x 21/39W  
 6306-4 ft. T5, 1x 28/54W



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 91505  
 WWW.  
 DELRAY  
 LIGHTING.  
 COM

MAY 2012

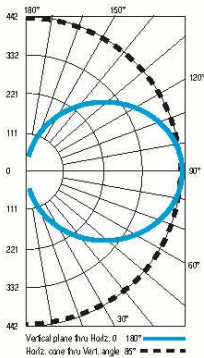
URBN Center | Philadelphia, PA | Advisor: Kevin Houser | L/E Option | 4/3/2013

**T5**

6304  
6305  
6306



**CP DISTRIBUTION**



**COEFFICIENTS**

	% CEILING 80	(20% FLOOR)	
	70	50	30
0	88	88	88
1	75	70	65
2	67	58	51
3	60	50	42
4	54	43	35
5	49	38	29
6	45	33	25
7	41	30	22
8	38	27	19
9	35	24	17
10	33	22	15

**NOTES**

**6306**  
1-54W T5 HO  
T5 miniature bi-pin socket  
Total lumens: 3850 mean  
Total luminaire efficiency: 82%

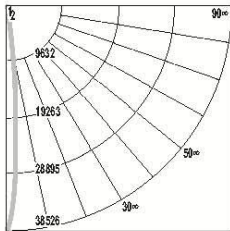
**LED MR16**

**B4MR16**—4" downlight, 9W max.

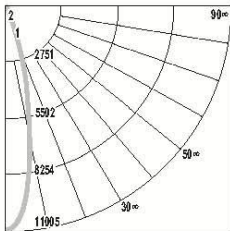


**CP DISTRIBUTION**

**SPOT**



**FLOOD**



**ACRYLIC DIFFUSER CLEANING**

**Warning:** Do not clean with ammonia based cleaners (e.g. Windex®). Use only water or cleaners specifically formulated for cleaning plastics.

**OPTIONS**

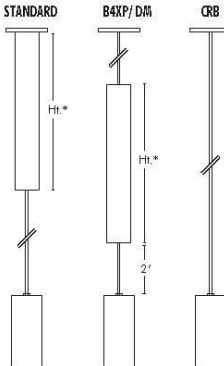
**MOUNTING**

**PIPE MOUNT**  
Order **BLA** mount for 3/8" IPS pipe. Length must be specified. Includes ball aligner canopy rated for 75 lbs. and mounts to standard J-boxes (below, left). Not for windy locations.

Pipe longer than 8 ft. will be shipped in two pieces—one 8 ft. section plus a second section for the balance—supplied with a painted, threaded pipe coupler, with set screws (below, right).



**4" BALLAST CONFIGURATIONS**



\*Height: see Ballast Canopy Dimensions, first page.

**BALL ALIGNER OPTION**

Order **BLA**.

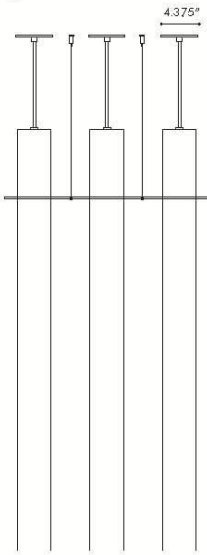


**DIMMING**

- T5—14, 21, 24, 28 39, 54W
- Maximum 3.5 feet.
- **SD3**—Advance Mark X, *SAW only*
- **SD5**—Advance Mark VII
- **SD8**—Lutron Hi Lume FDB
- **SD9**—Lutron Eco System

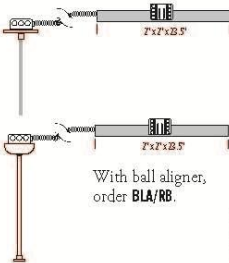
**MULTI-TUBE CONFIGURATIONS**

Standard and custom solid acrylic collars may be added for decoration and earthquake code compliance. (Shown with **CRB** option).



**REMOTE BALLAST**


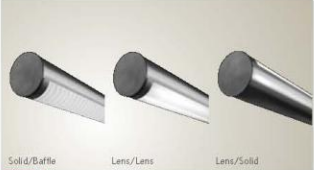
Install ballast enclosure (supplied) maximum 14 ft. from fixture; must remain accessible. Order **CRB**.



With ball aligner, order **BLA/RB**.

MAP 2012

# Luminaire H

## Classic Round<sup>®</sup>

### 6" Diameter T8

Type: **H**

Project: **URBN**

**SPECIFICATIONS**
Suspended / Wall
**LD6**

**LD6** 101100 T5HO X R4 277 DMHL3D
L/LP F1 XX C041

#### SPECIFICATIONS

<p><b>Construction</b> One- or two-piece nominal 6" diameter housing is extruded aluminum. Die-cast aluminum end plates are mechanically attached with no exposed fasteners.</p> <p><b>Reflectors</b> Formed steel with white finish.</p> <p><b>Shielding</b> Baffle: One piece white painted aluminum baffle with snap-on feature.</p>	<p>Upper Lens: Linear prismatic virgin acrylic with snap on feature. Lens has interior longitudinal prisms and smooth exterior.</p> <p>Lower Lens: Linear prismatic virgin acrylic with snap on feature. Lens has exterior longitudinal prisms and smooth interior.</p> <p><b>Finish</b> C041 White white (low gloss) standard; custom colors available, consult factory.</p>	<p><b>Electrical</b> Specify 120V, 277V or 347V. Pre-wired with 16AWG fixture wires. For special circuiting or wire gauge, consult factory. Plug-in electrical connectors included. UL and C-UL listed.</p> <p><b>Luminaire Length</b> 4', 8', and 12' lengths in a single section for exact suspension spacing of 4', 8' and 12'. Using internal joiners 4', 8', and 12' sections can be joined to form longer rows.</p>
---	---	---

#### CATALOG NUMBER

**Examples:** LD6 102203 T8 12F T12 120 GEB10PS SCT LP830 F1/24 C100 DL

LD6	101100	T5HO	X	R4	277	DMHL3D	
Luminaire	Light Direction/# of Lamps Up/ # of Lamps Down/Shielding	Lamp Type	Luminaire Row Length, Special	Maximum Section Length	Voltage	Ballast Type	# of Emergency Modules
LD6 LD6W	010200 211204 020202 211754 101100 401204 101200 412205 101202 412206 102203 412753	32 32W T8  <small>(T5, T5HO available with some shielding options. Consult factory for more information.)</small>	X FT	R4 4' section(s) R8 8' section(s) R12 12' section(s)	120 277 347	GEB10PS <10% THD Electronic ADEZ Advance Mark 10 dim DMHL3D Lutron Hi-Lume dim ADZT Advance Mark 7 0-10 V dim <small>Reference <a href="#">Ballast Wizard</a> on website or consult factory for other options.</small>	(Blank) None 1SE 1 section 2SE 2 sections XSE X sections

		L/LP	F1	XX	C041	
Emergency Type <sup>1</sup>	Switching	Lamp Color	Mounting Type /	Overall Suspension	Finish	Options
(Blank) None EC Emergency circuit EL Emergency battery pack EN Emergency battery pack w/night light circuit	SCT Single circuit DCT Dual circuit	L/LP No lamp L/LPE No lamp. Wired for energy saving lamps. LP830 3000K 80+ CRI LP835 3500K 80+ CRI LP841 4100K 80+ CRI <small>Reference <a href="#">Lamp Chart</a> on website or consult factory for other options.</small>	FV/ T-bar ceiling (universal mounting bracket) FW/ T-bar ceiling (UMB with integrated J-box) FZ/ Hard ceiling (horizontal J-box) F3/ Rigid stem F4A/ IDS clip 3/8" tee F4B/ IDS clip 1/2" tee F4C/ IDS clip screw slot	24 24" 48 48" 96 96" 144 144" XX XX"  <small>Overall suspension is measured from ceiling to bottom of luminaire.</small>	C041 White white (low gloss) C100 Satin anodized finish C099 Custom finish	CP Chicago plenum (available with FIA only) DL Damp location label ELH Emergency through wiring w/ separate feed ELS Emergency through wiring w/ single feed, shared neutral GIR Fusing (fast blow) GMF Fusing (slow blow) NYC New York City code RIF Radio interference filter

**Notes:**  
 1 EL and EC are installed in last 4' of luminaire sections and are not available concurrently.  
 Separate feed required for each EL, EC or EN unless ELH or ELS is specified

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 1-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/customerresources/terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/customerresources/terms_and_conditions.aspx)

LD6 Classic Round  
6" Diameter T8

**Peerless**

# Classic Round<sup>®</sup>

6" Diameter T8

Type: H

Project: URBN

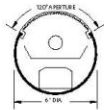
Suspended / Wall

LD6

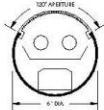
**LAMPING OPTIONS**

**INDIRECT**

**LD6 010200**  
Up Lens with 1 Lamp Up

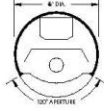


**LD6 020202**  
Up Lens with 2 Lamps Up

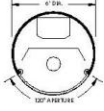


**DIRECT**

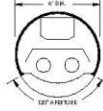
**LD6 101100**  
Down Baffle with 1 Lamp Down



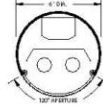
**LD6 101200** Down  
Lens with 1 Lamp Down  
(wide spread distribution)



**LD6 102102**  
Down Baffle with  
2 Lamps Down

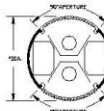


**LD6 102203**  
Down Lens with  
2 Lamps Down

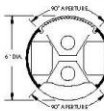


**I/D**

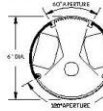
**LD6 211204** Up/Down  
Lens with 1 Lamp Up,  
1 Lamp Down



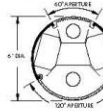
**LD6 211754** Up/Down  
Lens Up Baffle Down  
with 1 Lamp Up, 1 Lamp Down



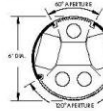
**LD6 401204**  
Mostly Down  
Lens with 1 Lamp Down



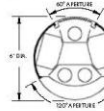
**LD6 411206** Mostly Down  
Open Up Lens Down with  
1 Lamp Up, 1 Lamp Down



**LD6 412205** Mostly Down  
Lens with 1 Lamp Up,  
2 Lamps Down



**LD6 412753** Mostly Down  
Baffle with 1 Lamp Up,  
2 Lamps Down



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LD6 Classic Round  
6" Diameter T8



**Peerless®**

# Classic Round®

6" Diameter T8

Type: H

Project: URBN

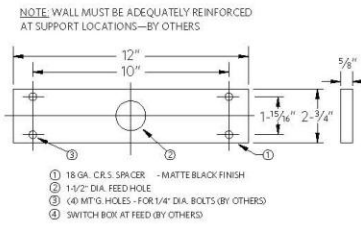
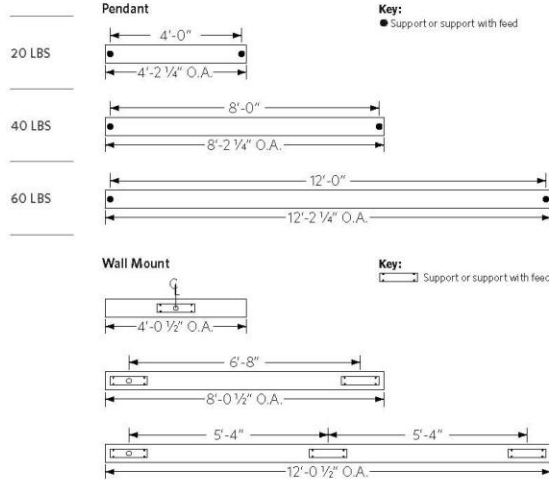
Suspended / Wall

LD6

**WEIGHTS & SUPPORT SPACING**

Suspension spacing equals section length. Consult factory for stem mounting suspension spacing.

**STANDARD SECTIONS**



Sensors available with some configurations. Please contact [techsupport@peerlesslighting.com](mailto:techsupport@peerlesslighting.com) for availability.

**PHOTOMETRICS** Actual performance may differ as a result of end-user environment and application.



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LD6 Classic Round  
6" Diameter T8



# Luminaire J

**Peerless**



## Round LED Direct Wall-Wash

Type: J  
Project: **URBN  
Center**

### SPECIFICATIONS

Suspended

RDMW

RDMW 20L X R4 277 D30 X SCT LP840 F1 XX C310

### DIMENSIONS

RDMW



Body rotates 90%

### SPECIFICATIONS

#### Construction

Extruded aluminum housing has diameter of 2 3/4". Die-cast aluminum end caps mechanically attach with no exposed fasteners. Die-cast rotational device standard.

#### Source

Two LED lumen packages (2000 lumens, 4000 lumens) and three available color temperature options (3000K, 3500K and 4000K).

#### Optics

Optical system consists of an acrylic lens and metal reflector.

#### Finish

Standard finish for housing and end caps is painted aluminum or gloss white. Consult factory for custom colors.

#### Electrical

LED light engine consists of modular LED boards and 0-10V dimming driver rated 50,000 hours (L80) at 25° C ambient temperature. Driver input wattage is 30W for 2000 delivered-lumen package and 60W for 4000 delivered-lumen package per 4' section.

Specify 120V or 277V. Pre-wired with 16AWG fixture wire. For special circuiting or wire gauge, consult factory. Plug-in electrical connectors included.

#### Luminaire Length

4' and 8' lengths in a single section for exact suspension spacing of 4' and 8'. For total row length, add 3 1/4" per side for end cap and rotational mechanism. Using internal joiners, 4' and 8' sections can be joined to form longer rows.

#### Environment

Damp location label option. Ambient operating temperature 0° C to 25° C.

#### Validation

CSA/CUS listed. Individual sections are FCC part 15 certified. LM-79 tested. Lighting Facts partner.

#### Warranty

Five-year limited warranty coverage includes luminaire construction, LED light engine and driver. Terms and conditions apply.

#### Packaging

100% post-consumer recycled cardboard box. Biodegradable foam inserts and protective luminaire bag. Recycled kraft paper tape.

### CATALOG NUMBER

Examples: RDMW 40L 40FT R8 277 D60 SCT LP835 F1/24 C310 LM — RDMW 20L 40FT R8 120 D30 SCT LP835 F1/18 C310

<input type="checkbox"/> RDMW	<input type="checkbox"/> 20L	<input type="checkbox"/> X	<input type="checkbox"/> R4	<input type="checkbox"/> 277	<input type="checkbox"/> D30	<input type="checkbox"/> X	<input type="checkbox"/> SCT	<input type="checkbox"/> ▶▶▶
Luminaire	Light Output	Luminaire Row Length	Maximum Section Length	Voltage	Driver Type	# of Emergency Modules	Emergency Type <sup>1</sup>	Switching
RDMW	20L 2000 nominal delivered-lumens 40L 4000 nominal delivered-lumens	X FT (4' increments)	R4 4' section(s) R8 8' section(s)	120 277	D30 30W maximum (2000L package) D60 60W maximum (4000L package)	(Blank) None 1SE 1 section 2SE 2 sections XSE X sections	(Blank) None EC Emergency circuit	SCT Single circuit
▶▶ LP840								
LED Color Temperature	Mounting Type /	Overall Suspension <sup>2</sup>	Finish	Options				
LP830 3000K 80+ CRI 16+ R9 LP835 3500K 80+ CRI 20+ R9 LP840 4000K 80+ CRI 20+ R9	FV/ T-bar ceiling (universal mounting bracket) F1W/ T-bar ceiling (UMB with integrated J-box) F2/ Hard ceiling (horizontal J-box) F4A/ IDS clip 3/8" tee F4B/ IDS clip 1/2" tee F4C/ IDS clip screw slot	24 24" 36 36" 48 48" 72 72" XX XX" <i>Overall suspension is measured from ceiling to bottom of luminaire</i>	C310 Gloss white C311 Painted aluminum C099 Custom finish	BLK Black cord, cord manager and canopy CP Chicago plenum (available with F1A only) DL Damp location label ELH/ Emergency through wiring w/separate feed GLR Fusing (fast blow) GMF Fusing (slow blow) LM 80% lumen management without networking MCS Matching feed canopy at support OJB Offset junction box SLP Sloped ceiling (for 10-45°; must be specified with F2 and OJB options)				

#### Notes:

- Emergency type is installed in last 4' of luminaire sections. Separate feed required
- Adjustable cable gripper comes standard
- No dimming control on emergency feed

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RDMW Round LED  
Direct Wall-Wash

**Peerless**

# Round LED Direct Wall-Wash

Type: J

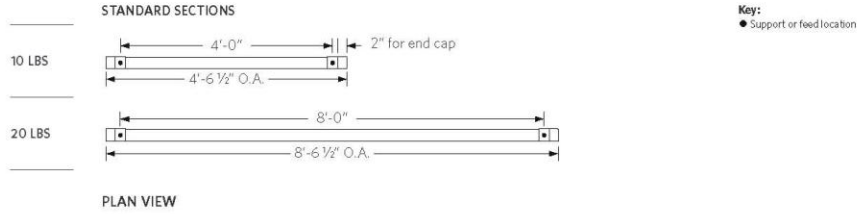
Project: URBN Center

Suspended

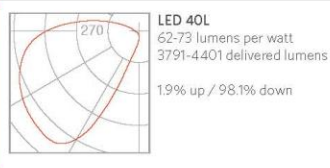
RDMW

## WEIGHTS & SUPPORT SPACING

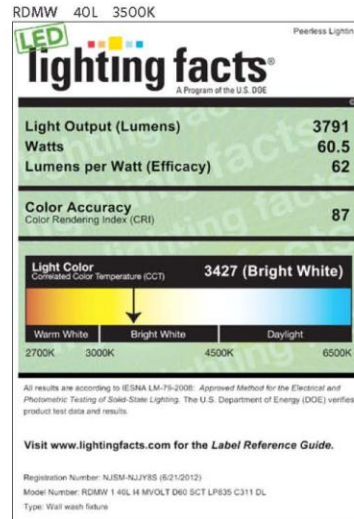
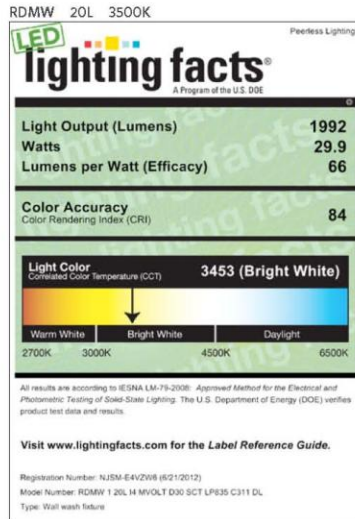
Suspension spacing equals section length.



## PHOTOMETRICS Actual performance may differ as a result of end-user environment and application.



## LIGHTING FACTS LABELS



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RDMW Round LED  
Direct Wall-Wash

**Peerless**

# Round LED Direct Wall-Wash

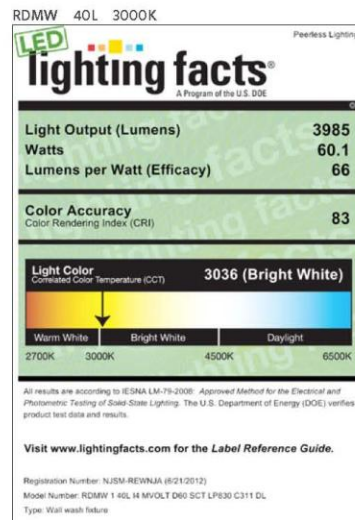
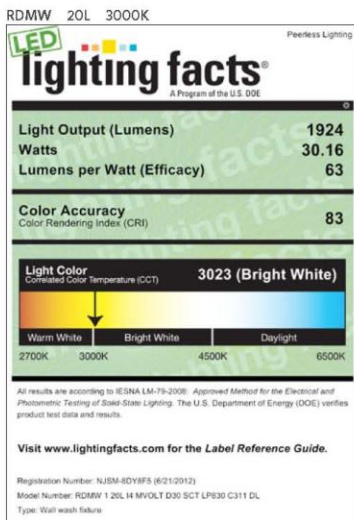
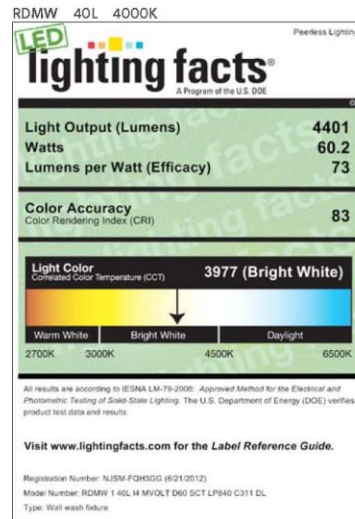
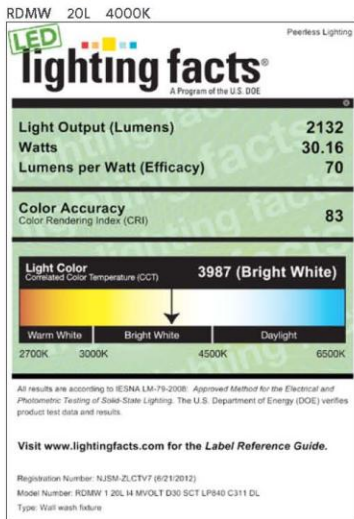
Type: J

Project: URBN Center

Suspended

RDMW

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RDMW Round LED  
Direct Wall-Wash **3**

# Luminaire K

## FEATURES

### OPTICAL SYSTEM

- Self-flanged, semi-specular or matte-diffuse reflector. Patented Bounding Ray™ Optical Principle design (U.S. Patent No. 5,800,050) provides lamp before lamp image and smooth transition from top of reflector to bottom.

### HOUSING

- Heavy-gauge aluminum housing with top deck for clean appearance. Matte white textured polyester powder paint finish standard.
- Reflector edge sits flush with cylinder wall for clean, one-piece appearance.
- Reveal on standard ceiling and optional pendant mount give floating luminaire appearance.

### MOUNTING

- Ceiling mount (standard) offers patented (U.S. Patent No. 4,300,190) quick-mount attachment plate for direct installation to 4" square junction box.
- Optional wall mount provided with mounting pattern for direct installation to 4" square or octagonal junction box.
- Optional pendant mounting entry provided for 3/8" National Pipe Thread stem. Mounting accessories available (see Accessories).

### ELECTRICAL SYSTEM

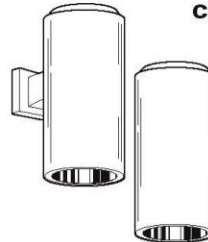
- Vertically mounted, four-pin, positive-latch, thermoplastic socket.
- Class P, thermally protected, high-power-factor electronic ballast.

### LISTING

- Fixtures are UL Listed for damp locations. Listed and labeled to comply with Canadian Standards.

Type Catalog number

K

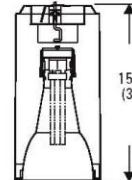


### Compact Fluorescent Cylinders

## 8" CFV

### Cylinders

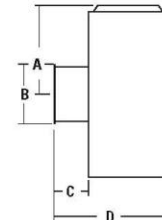
Vertical Lamp  
Double Twin-Tube  
or Triple-Tube  
6" Aperture



A = 7-3/4 (19.7)  
B = 5-5/16 (13.5)  
C = 3-1/4 (8.3)  
D = 10-7/8 (27.6)  
Wall Mount Dimensions

Reflector Aperture: 6-1/4 (15.9)  
Housing Diameter: 7-5/8 (19.4)

All dimensions are inches (centimeters).



## ORDERING INFORMATION

Example: **CFV8 26DTT 6AR 120 DWHG**

Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog numbers (shipped separately).

CFV8	18TRT	6AR		277	ECOS		GLR	DWHG
Series	Wattage/Lamp	Trim color	Finish	Voltage	Ballast	Mounting	Options	Housing Color <sup>4</sup>
CFV8	130TT	6AR Clear	(blank) Semi-specular	<b>MVOLT<sup>1</sup></b>	(blank) Electronic ballast	(blank) Ceiling mount	<b>WLP</b> With lamp (3500 K)	<b>DWHG</b> Matte white
	180TT	6PR Pewter	LD Matte diffuse	<b>120</b>	<b>ECOS</b> Lutron EcoSystem™	<b>PM<sup>3</sup></b> Pendant 3/8" thread mount	<b>GMF<sup>2</sup></b> Single slow-blow fuse	<b>DBL</b> Black
	260TT	6WTR Wheat		<b>277</b>	<b>ADEZ<sup>2</sup></b> Advance Mark 10	<b>WM</b> Wall mount	<b>GLR<sup>2</sup></b> Single fast-blow fuse	<b>DNA</b> Natural aluminum
	13TRT			<b>347</b>	<b>ADZT<sup>2</sup></b> Advance Mark 7			<b>DDB</b> Dark bronze
	18TRT							<b>DWH</b> Gloss white
	26TRT							
	32TRT							
	42TRT							

### NOTES:

- 1 Multi-volt electronic ballast capable of operating on any line voltage from 120V through 277V, 50 or 60 Hz.
- 2 Available in 120V or 277V only.
- 3 Stem not included.
- 4 Additional housing colors available; please see brochure 794.3.
- 5 For use on pendant mount (PM) only. Specify length of stem (from 6" to 240" in even increments in maximum sections of 48"). EX.: CYS06 DWHG. Consult Gotham Technical Support for exterior use.

### Accessories

- Order as separate catalog number
- CYS<sup>5</sup>** 3/8" stem and canopy with 5° "hang straight" swivel
  - CRS<sup>5</sup>** 3/8" stem and canopy with 45° swivel
  - nSP5 D** Sensor Switch nLight™ 0-10V dimming relay. Requires additional nLight bus power supply.



GOTHAM ARCHITECTURAL DOWNLIGHTING  
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CFV 8 DTT/TRT

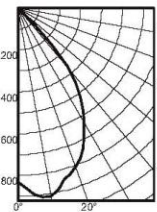
SCF-240



### 8" CFV Fluorescent Cylinders

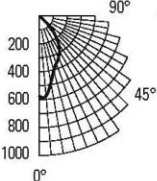
**Distribution curve    Distribution data    Output data    Coefficient of utilization    Single luminaire data 30' above floor**

**CFV8 26TRT 6AR, (1) 26W PL-T 26W/30/4P lamp, 1.1 s/mh, 1800 rated lumens, Test No. 2196032101**



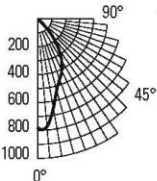
Zone	Lumens	% Lamp	p f	p c	p w	80%			70%			50%			Mounting Height	Initial FC Center	50% beam -		10% beam -	
						50%	30%	10%	50%	30%	10%	50%	30%	10%			59.5'	66.1'		
0°-30°	662.4	36.8	0	72	72	72	70	70	70	67	67	67	8.0	27.5	6.3	13.8	10.3	2.8	2.8	
0°-40°	980.3	54.5	1	67	65	64	66	64	63	63	62	61	10.0	14.8	8.6	7.4	14.0	1.5	1.5	
0°-60°	1090.6	60.6	2	62	59	57	61	59	57	59	57	55	12.0	9.2	10.9	4.6	17.7	0.9	0.9	
0°-90°	1091.0	60.6	3	57	54	52	57	54	51	55	52	50	14.0	6.3	13.1	3.1	21.5	0.5	0.5	
90°-180°	0.0	0.0	4	53	50	47	53	49	47	51	48	46	16.0	4.6	15.4	2.3	25.2	0.5	0.5	
0°-180°	1091.0	60.6	5	49	46	43	49	45	43	48	45	42								
*Efficiency			6	46	42	39	46	42	39	45	41	39								
			7	43	39	36	43	39	36	42	38	36								
			8	40	36	34	40	36	34	39	36	33								
			9	38	34	31	37	34	31	37	33	31								
			10	35	32	29	35	31	29	34	31	29								

**CFV8 13DTT 6AR, (1) 13W PL-C 13W/27/4P lamp, 0.8 s/mh, 900 rated lumens, Test No. 2196032201**



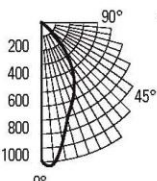
Zone	Lumens	% Lamp	p f	p c	p w	80%			70%			50%			Mount Height	Initial fc at beam center	50% beam angle 41.0°		10% beam angle 84.6°	
						50%	30%	10%	50%	30%	10%	50%	30%	10%			Beam diameter	Beam diameter	Beam diameter	Beam diameter
0°-30°	320	35.6	1	70	69	69	67	66	65	10'	10.2	5.6	5.1	13.6	1.0	1.0				
0°-40°	470	52.3	2	66	63	64	62	62	61	12'	6.3	7.1	1.2	17.3	0.6	0.6				
0°-60°	564	62.7	3	61	58	60	58	59	57	14'	4.3	8.6	2.2	20.9	0.4	0.4				
0°-90°	564	62.8	4	58	54	57	54	56	53	16'	3.1	10.1	1.6	24.5	0.3	0.3				
90°-180°	0	0.0	5	54	50	53	50	52	49											
0°-180°	564	62.8*	6	51	47	50	47	49	46											
*Efficiency			7	47	43	47	43	46	43											
			8	44	40	43	40	43	40											
			9	41	37	41	37	40	37											
			10	38	34	38	34	37	34											

**CFV8 18DTT 6AR, (1) 18W DULUX D/E CF18DD/E/827 lamp, 0.7 s/mh, 1250 rated lumens, Test No. 2196032501**



Zone	Lumens	% Lamp	p f	p c	p w	80%			70%			50%			Mount Height	Initial fc at beam center	50% beam angle 39.0°		10% beam angle 81.3°	
						50%	30%	10%	50%	30%	10%	50%	30%	10%			Beam diameter	Beam diameter	Beam diameter	Beam diameter
0°-30°	410	32.9	1	58	57	57	56	55	54	10'	13.8	5.3	6.9	12.9	1.4	1.4				
0°-40°	578	46.3	2	55	53	54	52	52	51	12'	8.6	6.7	4.3	16.3	0.9	0.9				
0°-60°	647	51.8	3	51	49	51	49	49	48	14'	5.9	8.1	2.9	19.7	0.6	0.6				
0°-90°	648	51.8	4	49	46	48	46	47	45	16'	4.3	9.6	2.1	23.2	0.4	0.4				
90°-180°	0	0.0	5	46	43	45	43	44	42											
0°-180°	648	51.8*	6	43	40	43	40	42	40											
*Efficiency			7	41	38	40	38	40	37											
			8	38	35	38	35	37	35											
			9	36	33	36	33	35	33											
			10	34	31	34	31	33	31											

**CFV8 26DTT 6AR, (1) 26W DULUX D/E 26W/27K lamp, 0.8 s/mh, 1825 rated lumens, Test No. 2196032502**



Zone	Lumens	% Lamp	p f	p c	p w	80%			70%			50%			Mount Height	Initial fc at beam center	50% beam angle 41.4°		10% beam angle 81.9°	
						50%	30%	10%	50%	30%	10%	50%	30%	10%			Beam diameter	Beam diameter	Beam diameter	Beam diameter
0°-30°	549	30.1	1	55	54	54	53	52	51	10'	17.6	5.7	8.8	13.0	1.8	1.8				
0°-40°	776	42.5	2	52	50	51	49	49	48	12'	11.0	7.2	5.5	16.5	1.1	1.1				
0°-60°	904	49.5	3	49	47	48	46	47	45	14'	7.5	8.7	3.7	19.9	0.7	0.7				
0°-90°	905	49.6	4	46	43	45	43	44	42	16'	5.4	10.2	2.7	23.4	0.5	0.5				
90°-180°	0	0.0	5	43	40	43	40	42	40											
0°-180°	905	49.6*	6	41	38	40	38	40	37											
*Efficiency			7	38	35	38	35	37	35											
			8	36	33	35	33	35	32											
			9	33	31	33	31	33	30											
			10	31	28	31	28	31	28											

**NOTES:**

- For electrical characteristics consult Technical Bulletins tab.
- Tested to current IES and NEMA standards under stabilized laboratory conditions. Various operating factors can cause differences between laboratory data and actual field measurements. Dimensions and specifications are based on the most current available data and are subject to change without notice.

SCF-240

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 1400 Lester Road Conyers Georgia 30012  
 P 800 315 4982 F 770 860 3129  
 www.gothamlighting.com


# Luminaire L

Job Name:

Ordering Code:

Contact:


Fixture Type:



---

**Fixture Heads**

## Chroma Magnum I Track Spot



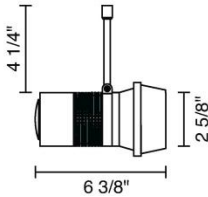

**Additional Info:**

mo  
14

ph  
1

ls  
1

mounting options    photometric data    LED info

---

**Description**

The Chroma Magnum I is a powerful 1000 lumen LED Line Voltage fixture for Bruck's line voltage track systems, Zonyx, Halo, GEO and ECO, using a specified adapter. It has a flared snoot with interchangeable reflectors for 20, 40 or 60 degree beams spreads for a variety of design options. All Chroma fixtures have the best color consistency offered in the market with an SDCM of 2x, 1y. A 97 CRI, 700lm option is also offered.

This attractive spot has a patent pending modular advanced thermal management design that surrounds its housing. Machined sleek cylindrical aluminum housings allows for additional airflow around the 360° DiamoSink™ heat sink. This advanced thermal solution helps Magnum's Xicato LED run cooler, longer and more efficient.

**Technical Specs**

- 120Vac input, 50/60Hz
- 12.7W, 12.8VA
- Lumens: 1000lm, and 700lm.
- CCT: 2700K, 3000K, 3500K, 4000K
- CRI: 82 and 97
- SDCM: 2x, 1y, 2 step MacAdam Ellipse
- Duv +/- .001
- Max +/- 50 Kelvin
- Rated life, based on IESNA-LM-80-2008: 85% of initial lumens after 50,000 hrs
- Dimming capability: electronic low voltage (ELV), Reverse Phase
- Track mounting:
  - Global Trac Systems, GEO track and ECO track
  - Halo® Power Trac track
  - Zonyx track
- Made in the USA - meets the requirements of the Buy American provision within the ARRA.
- ETLus Listed to UL1574 (suitable for dry locations only)
- cETL Listed to CSA C22.2 #9.0
- 5 year limited fixture warranty
- 5 year no color shift warranty

---

Ordering Code:

example: **350417 - mc - 3a - fl - zonmc**

Light Source	Finish	Color Temperature	Reflector	Adaptor Option
350417 LED	<b>bk</b> black	<b>2</b> >80 CRI, 2700k	<b>fl</b> flood, 60°	<b>ecobk</b> ECO/HALO black
	<b>mc</b> matte chrome	<b>2a</b> >95 CRI, 2700k	<b>m</b> medium, 40°	<b>ecosv</b> ECO/HALO matte silver
	<b>wh</b> white	<b>3</b> >80 CRI, 3000k	<b>s</b> spot, 20°	<b>ecowh</b> ECO/HALO white
		<b>3a</b> >95 CRI, 3000k		<b>geobk</b> GEO black
		<b>4</b> >80 CRI, 4000k		<b>geosv</b> GEO matte silver
		<b>4a</b> >95 CRI, 4000k		<b>geowh</b> GEO white
				<b>zonmc</b> Zonyx matte chrome

---

**Notes:**

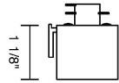
- for other retrofit options consult factory

---

Bruck Lighting Systems, Inc. 15774 Gateway Circle Tustin, CA 92780 p:714.259.9959 f:714.259.9969
v.3.20.13



Mounting Options

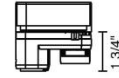


**Eco/Halo Adaptor**

for Eco and Halo line-voltage track

add to ordering code

- ecobk** black
- ecosv** matte silver
- ecowh** white



**Geo Adaptor**

for Geo line-voltage track

add to ordering code

- geobk** black
- geosv** matte silver
- geowh** white

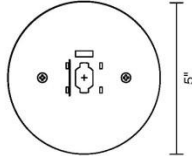


**Zonyx Adaptor**

for Zonyx line-voltage track

add to ordering code

- zonmc** matte chrome



**Eco Monopoint**


for Eco fixtures



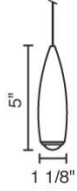
ordering code

- 370GES70bk** black
- 370GES70sv** matte silver
- 370GES70wh** white



## Luminaire M


	Job Name: <u>URBN Center</u> Contact: <u>COOK Lighting</u> Fixture Type: <u>M</u> Part Number: _____ HAVANA	
---	---	--

**Description:**  
 The Havana 3 Watt LED pendant Uni-plug design, allows Havana 3 Watt LED pendant to be mounted on any lighting system through the use of an appropriate adaptor, not included. **Standard cable length of 59" cannot be cut in field (specify when ordering).** May be specified with Kiss canopy by adding /MP to part number or /MP2 for 2" version.


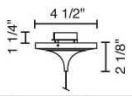
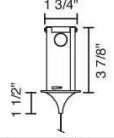
**Warranty:**  
 All 3 Watt LED fixtures are warranted to be free from defects in material and workmanship for three (3) years from date of delivery.  
 For full warranty details, please see our terms and conditions [here](#)

**Ordering Code:**  
 Choose the desired light source, color temperature, finish, reflector, and mounting from the options below.  
 example: 135 - 721-1 - al - m - MP2

<b>Light Source:</b>	<b>Color Temperature:</b>	<b>Finish:</b>	<b>Reflector:</b>	<b>Mounting Options:</b>
135  LED	<input checked="" type="text" value="721"/> 4000k 721-1 3000k	<input checked="" type="checkbox"/> brushed aluminum <input type="checkbox"/> aluminum <input checked="" type="checkbox"/> chrome	<input checked="" type="text" value="m"/> medium, 30°	<input type="checkbox"/> MP 4" Kiss Canopy <input checked="" type="checkbox"/> MP2 2" Kiss Canopy

---

Bruck Lighting System, Inc. 15774 Gateway Circle Tustin, CA 92780 p:714.259.9959 f:714.259.9969 18 Dec 2012

LED	LED MP	LED MP2
		
<p><b>135 - xxx</b>                      12V AC/DC input                      700mA CC output 3W, 6VA                      Connects to UNI-LIGHT system                      Suitable for dry locations only                      Compatible with dimmable power supply                      Compatible with selected Bruck electronic transformers and must meet the minimum VA (load)</p>	<p><b>135 - xxx/MP</b>                      100-277V, 50/60Hz input                      700mA CC output 3W, 6VA                      Mount to 3 1/2" - 4" round J-Box                      Suitable for dry locations only                      Short circuit protection                      Thermal protection</p>	<p><b>135 - xxx/MP2</b>                      100-277V, 50/60Hz input                      700mA CC output                      3W, 6VA                      2 1/4" hole cutout                      Required material thickness 3/16" - 1 1/16"                      Suitable for dry locations only                      Not thru-wire rated                      Short circuit protection                      Overload protection                      Thermal protection</p>

## Luminaire N1 & N2



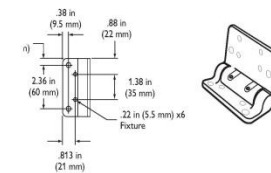
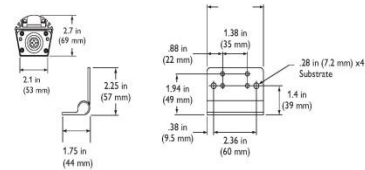
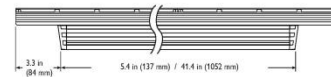
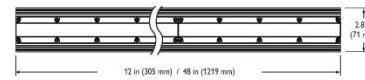
Date: 4/3/2013 Type: N1-2  
 Firm Name: COOK Lighting  
 Project: URBN Center

### eColor Graze Powercore

Linear exterior LED wall grazing fixture with solid color light

eColor Graze Powercore linear LED lighting fixtures are ideal for surface grazing and wall-washing applications that require high-quality solid red, green, blue, or amber light. Featuring Powercore technology, eColor Graze Powercore processes power directly from line voltage, eliminating the need for external power supplies. A space-efficient, low-profile extruded aluminum housing and flexible mounting options allow discreet placement within architectural niches of many different shapes and sizes.

- Tailor light output to specific applications — eColor Graze Powercore is available in standard 1 ft and 4 ft exterior-rated housings, and standard 10° x 60° and 30° x 60° beam angles.
- High-performance illumination and beam quality — Superior beam quality offers striation-free saturation as close as 6 in (152 mm) from fixture placement with no visible light scalloping between fixtures.
- Universal power input range — eColor Graze Powercore accepts line voltage input of 100, 120, 220 – 240, and 277 VAC.
- Support for installations requiring conduit to fixtures — eColor Graze Powercore Conduit fixtures have flying leads and threaded openings for 1/2 in NPT conduit to support installations in North America where conduit is required
- Versatile installation options — Constant torque locking hinges offer simple position control from various angles without special tools.



- Dimming capability — Patented DIMand technology offers smooth dimming capability with selected commercially available reverse-phase ELV-type dimmers.
- Wide range of custom configurations — Additional fixture lengths and beam angles are available as custom configurations. See the eColor Graze Powercore Ordering Information specification sheet for complete details.

For detailed product information, please refer to the eColor Graze Powercore Product Guide at [www.philipscolorkinetics.com/ls/essentialcolor/ecolorgraze/](http://www.philipscolorkinetics.com/ls/essentialcolor/ecolorgraze/)



### Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	1 ft (305 mm)	4 ft (1.2 m)
Output	Beam Angle	10° × 16 / 30° × 60°	
Electrical	Input Voltage	120 / 220 – 240 / 277 VAC, 50 / 60 Hz	
	Power Consumption	15W maximum at full output, steady state	60 W maximum at full output, steady state
Control	Dimming	Compatible with selected commercially available reverse-phase ELV-type dimmers*	
Physical	Dimensions (Height x Width x Depth)	2.7 x 12 x 2.8 in (69 x 305 x 71 mm)	2.7 x 48 x 2.8 in (69 x 1219 x 71 mm)
	Weight	2.7 lb (1.2 kg)	10.8 lb (4.9 kg)
	Housing	Extruded anodized aluminum	
	Lens	Clear polycarbonate	
	Fixture Connectors	Integral male / female waterproof connectors	
	Mounting	Multi-positional, constant torque locking hinges	
	Temperature Ranges	-40° – 122° F (-40° – 50° C) Operating -4° – 122° F (-20° – 50° C) Startup -40° – 176° F (-40° – 80° C) Storage	
Certification and Safety	Humidity	0 – 95%, non-condensing	
	Fixture Run Lengths	To calculate fixture run lengths and total power consumption for your specific installation, download the Configuration Calculator from <a href="http://www.philipscolorkinetics.com/support/install_tool/">www.philipscolorkinetics.com/support/install_tool/</a>	
	Certification	UL / cUL, FCC (120VAC only), CE, C-Tick, CCC	
	Environment	Dry / Damp / Wet Location, IP66	

\* Refer to [www.philipscolorkinetics.com/support/appnotes/](http://www.philipscolorkinetics.com/support/appnotes/) for details.



### Accessories

Item	Type	Size	Item Number	Philips 12NC
Leader Cable	UL / cUL	50 ft (15.2 m)	108-000041-00	910503700320
	CE		108-000041-01	910503700321
Jumper Cable	UL / cUL	1 ft (305 mm)	108-000039-00	910503700314
			108-000039-01	910503700315
	CE	5 ft (1.5 m)	108-000039-02	910503700316
			108-000040-00	910503700317
Glare Shield	CE	1 ft (305 mm)	108-000040-01	910503700318
		5 ft (1.5 m)	108-000040-02	910503700319
		1 ft (305 mm)	120-000001-00	910503700745
		2 ft (610 mm)	120-000001-01	910503700746
Additional Terminators	Quantity 10	3 ft (914 mm)	120-000001-02	910503700747
		4 ft (1.2 m)	120-000001-03	910503700748
		120-000074-00	910503700580	
Additional Hinges	Quantity 1	120-000098-00	910503700772	

Use Item Number when ordering in North America.

For help estimating the light output and distribution of eColor lighting fixtures, please contact Philips Color Kinetics Applications Engineering Services at [support@colorkinetics.com](mailto:support@colorkinetics.com).

### Fixtures

Fixture	Length	Red		Green		Blue		Amber	
		Item Number	Philips 12NC	Item Number	Philips 12NC	Item Number	Philips 12NC	Item Number	Philips 12NC
10° × 60° Beam Angle									
eColor Graze Powercore 120 VAC	1 ft (305 mm)	223-000031-05	910503701243	223-000031-06	910503701244	223-000031-07	910503701245	223-000031-04	910503701242
	4 ft (1.2 m)	223-000031-65	910503701304	223-000031-66	910503701305	223-000031-67	910503701306	223-000031-64	910503701303
eColor Graze Powercore 220 – 240 VAC	1 ft (305 mm)	223-000030-05	910503700804	223-000030-06	910503700805	223-000030-07	910503700806	223-000030-04	910503700803
	4 ft (1.2 m)	223-000030-65	910503700864	223-000030-66	910503700865	223-000030-67	910503700866	223-000030-64	910503700863
eColor Graze Powercore 277 VAC	1 ft (305 mm)	223-000032-05	910503701324	223-000032-06	910503701325	223-000032-07	910503701326	223-000032-04	910503701323
	4 ft (1.2 m)	223-000032-65	910503701384	223-000032-66	910503701385	223-000032-67	910503701386	223-000032-64	910503701383
eColor Graze Powercore Conduit / 120 VAC	1 ft (305 mm)	223-000003-05	910503701576	223-000003-06	910503701577	223-000003-07	910503701578	223-000003-04	910503701575
	4 ft (1.2 m)	223-000003-65	910503701637	223-000003-66	910503701638	223-000003-67	910503701639	223-000003-64	910503701636
eColor Graze Powercore Conduit / 277 VAC	1 ft (305 mm)	223-000006-05	910503701437	223-000006-06	910503701438	223-000006-07	910503701439	223-000006-04	910503701436
	4 ft (1.2 m)	223-000006-65	910503701497	223-000006-66	910503701498	223-000006-67	910503701499	223-000006-64	910503701496
30° × 60° Beam Angle									
eColor Graze Powercore 120 VAC	1 ft (305 mm)	223-000031-13	910503701251	223-000031-14	910503701252	223-000031-15	910503701253	223-000031-12	910503701250
	4 ft (1.2 m)	223-000031-73	910503701312	223-000031-74	910503701313	223-000031-75	910503701314	223-000031-72	910503701311
eColor Graze Powercore 220 – 240 VAC	1 ft (305 mm)	223-000030-13	910503700812	223-000030-14	910503700813	223-000030-15	910503700814	223-000030-12	910503700811
	4 ft (1.2 m)	223-000030-73	910503700872	223-000030-74	910503700873	223-000030-75	910503700874	223-000030-72	910503700871
eColor Graze Powercore 277 VAC	1 ft (305 mm)	223-000032-13	910503701332	223-000032-14	910503701333	223-000032-15	910503701334	223-000032-12	910503701331
	4 ft (1.2 m)	223-000032-73	910503701392	223-000032-74	910503701393	223-000032-75	910503701394	223-000032-72	910503701391
eColor Graze Powercore Conduit / 120 VAC	1 ft (305 mm)	223-000003-13	910503701584	223-000003-14	910503701585	223-000003-15	910503701586	223-000003-12	910503701583
	4 ft (1.2 m)	223-000003-73	910503701645	223-000003-74	910503701646	223-000003-75	910503701647	223-000003-72	910503701644
eColor Graze Powercore Conduit / 277 VAC	1 ft (305 mm)	223-000006-13	910503701445	223-000006-14	910503701446	223-000006-15	910503701447	223-000006-12	910503701444
	4 ft (1.2 m)	223-000006-73	910503701506	223-000006-74	910503701507	223-000006-75	910503701508	223-000006-72	910503701505

Additional beam angles and lengths available. Please contact your Philips Color Kinetics sales representative for details.

Use Item Number when ordering in North America.



Philips Color Kinetics  
3 Burlington Woods Drive  
Burlington, Massachusetts 01803 USA  
Tel 888.385.5742  
Tel 617.423.9999  
Fax 617.423.9998  
[www.philipscolorkinetics.com](http://www.philipscolorkinetics.com)

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# Luminaire P



**Draco LED**  
12V LED-16

**UL Listed:** Wet location  
Indoor/Outdoor  
**cUL Listed:** Wet location  
Indoor/Outdoor  
**ETL Listed:**  
Indoor/Outdoor  
Conforms to UL STD 1838



**Nebula LED**  
12V LED-16

**UL Listed:** Wet location  
Indoor/Outdoor  
**cUL Listed:** Wet location  
Indoor/Outdoor  
**ETL Listed:**  
Indoor/Outdoor  
Conforms to UL STD 1838

**DRLED - DRACO LED**

**SERIES**  
DRLED - Draco LED

**LIGHT SOURCE - 12V LED-16 - (see foldout after pg. 562)**  
3022 3025 3012 3015

**VOLTAGE**  
12V - 12 Volt

**FINISH - (see pg. 562)**  
BKS BKT BRS BRT WHS WHT SIS  
IVS CHS NBS VET SAT BAL CPF

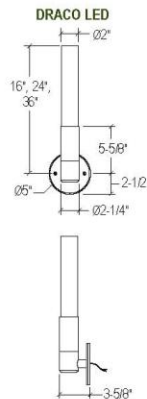
**COLOR FILTER - (see foldout after pg. 562)**  
F0 FM FR FRD FP FA  
FG FGD FLB FMB FMBD

**LENGTH**  
16 - 16" Length  
24 - 24" Length  
36 - 36" Length

**SPECIAL**  
STD - Standard  
MOD - Modified

**DRACO LED**

- Luminaire machined from ALUMINUM
- Illuminated Rod is Ø2" solid acrylic
- 3002 & 3005 LED-16 (G2) Light Source Codes:
  - LED unit uses three High Output LEDs with a integral low voltage driver
  - Warm White (3000K) and Cool White (6500K) color temps
  - NON-DIMMING - units are NOT rated for use with dimmers or dimming systems
- 3012 & 3015 LED-16 (G3) Light Source Codes:
  - LED unit uses a single High Output LED with a integral low voltage driver
  - Warm White (3000K) and Cool White (5000K) color temps
  - DIMMING - units ARE rated for use with Low Voltage Magnetic Dimmers & systems
- Field replaceable lens
- Can be mounted in any position
- Any color filter can be specified
- Comes standard with WATERSHED LENS™
- Low Voltage **MAGNETIC TRANSFORMER** required to function properly (purchased separately, see winscape mounting and accessories section)
- Mounts to a standard 4" wet location round J-box
- Technical lamp (pg. 558-559) / photometric information ([www.winonaighting.com](http://www.winonaighting.com))
- Winona Lighting reserves the right to make design revisions without prior notice



**NELED - NEBULA LED**

**SERIES**  
NELED - Nebula LED

**LIGHT SOURCE - 12V LED-16 - (2 required) - (see foldout after pg. 562)**  
3022 3025 3012 3015

**VOLTAGE**  
12V - 12 Volt

**FINISH - (see pg. 562)**  
BKS BKT BRS BRT WHS WHT SIS  
IVS CHS NBS VET SAT BAL CPF

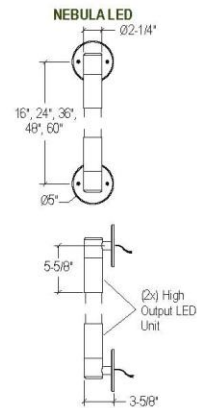
**COLOR FILTER - (2 required) - (see foldout after pg. 562)**  
F0 FM FR FRD FP FA  
FG FGD FLB FMB FMBD

**LENGTH**  
16 - 16" Length (mount center)  
24 - 24" Length (mount center)  
36 - 36" Length (mount center)  
48 - 48" Length (mount center)  
60 - 60" Length (mount center)

**SPECIAL**  
STD - Standard  
MOD - Modified

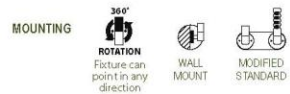
**NEBULA LED**

- Luminaire machined from ALUMINUM
- Illuminated Rod is Ø2" solid acrylic
- 3002 & 3005 LED-16 (G2) Light Source Codes:
  - LED unit uses three High Output LEDs with a integral low voltage driver
  - Warm White (3000K) and Cool White (6500K) color temps
  - NON-DIMMING - units are NOT rated for use with dimmers or dimming systems
- 3012 & 3015 LED-16 (G3) Light Source Codes:
  - LED unit uses a single High Output LED with a integral low voltage driver
  - Warm White (3000K) and Cool White (5000K) color temps
  - DIMMING - units ARE rated for use with Low Voltage Magnetic Dimmers & systems
- Field replaceable lens
- Can be mounted in any position
- Any color filter can be specified
- Specifications for light source/color filter require two options
- Comes standard with WATERSHED LENS™
- Low Voltage **MAGNETIC TRANSFORMER** required to function properly (purchased separately, see winscape mounting and accessories section)
- Mounts to TWO standard 4" wet location round J-box
- Technical lamp (pg. 558-559) / photometric information ([www.winonaighting.com](http://www.winonaighting.com))
- Winona Lighting reserves the right to make design revisions without prior notice



**PRODUCT SPECIFICATION**  
(Nebula LED must specify 2 options in light source & color filter fields)

DRLED	3027	12V	BAL	FMB	36	STD
Series	Light Source	Voltage	Finish	Color Filter	Length	Special





WINSCAPE CODES

LAMP	DESCRIPTION	BEAM SPREAD
0-	Lamp By Others	
XX-	Custom Lamping	
96-	No Lamp, 39W Ballast	
97-	No Lamp, 70W Ballast	
98-	No Lamp, 100W Ballast	
99-	No Lamp, 150W Ballast	
100-	No Lamp, 20W Ballast	
<b>MR-8</b>		
42-	20W/10° MR8	10°
43-	20W/23° MR8	23°
44-	35W/13° MR8	13°
45-	35W/26° MR8	26°
<b>MR-11</b>		
35-	12WB* MR11	8°
36-	FSS/20W/10° MR11	10°
37-	FST/20W/17° MR11	17°
38-	FSV/20W/30° MR11	30°
39-	GDX/35W/10° MR11	10°
40-	GDY/35W/20° MR11	20°
41-	GDZ/35W/30° MR11	30°
<b>MR-16</b>		
10-	ESX/20W/12° MR16	12°
11-	BAB/20W/36° MR16	36°
12-	FRB/35W/12° MR16	12°
13-	FRA/35W/24° MR16	24°
14-	FMW/35W/36° MR16	36°
15-	EYR/42W/12° MR16	12°
16-	EYS/42W/23° MR16	23°
17-	EYP/42W/38° MR16	38°
18-	EXT/50W/12° MR16	12°
19-	EXZ/50W/24° MR16	24°
20-	EXN/50W/36° MR16	36°
21-	FNV/50W/60° MR16	60°
22-	EYF/75W/12° MR16	12°
23-	EYJ/75W/24° MR16	24°
24-	EYK/75W/36° MR16	36°
130-	BBF/20W/24° MR16 10,000HR	24°
131-	BAB/20W/36° MR16 10,000HR	36°
65-	FMW/35W/24° MR16 10,000HR	24°
66-	FMW/35W/36° MR16 10,000HR	36°
132-	35W/60° MR16 10,000HR	60°
67-	EXT/50W/12° MR16 10,000HR	12°
68-	EXZ/50W/24° MR16 10,000HR	24°
69-	EXN/50W/36° MR16 10,000HR	36°
133-	FNV/50W/60° MR16 10,000HR	60°
<b>T-3/T-4</b>		
90-	5W T3 Halogen	N/A
91-	10W T3 Halogen	N/A
92-	20W T3 Halogen	N/A
94-	35W T4 Halogen	N/A
<b>PAR-16</b>		
112-	45W PAR16H/SP10	10°
113-	45W PAR16H/INFL27	27°
114-	60W PAR16H/SP10	10°
115-	60W PAR16H/FL30	30°
116-	75W PAR16H/SP10	10°
117-	75W PAR16H/FL30	30°
<b>PAR-20</b>		
46-	50W PAR20H/NSP10	10°
48-	50W PAR20H/FL30	30°
<b>PAR-30</b>		
49-	50W PAR30H/NSP10	10°
50-	50W PAR30H/SP16	16°
51-	50W PAR30H/FL30	30°
52-	50W PAR30H/WFL40	40°
53-	75W PAR30H/NSP10	10°
54-	75W PAR30H/SP16	16°
55-	75W PAR30H/FL30	30°
56-	75W PAR30H/WFL40	40°
<b>PAR-36</b>		
118-	35W PAR36H/NSP5	5°
119-	35W PAR36H/NSP8	8°
120-	35W PAR36H/FL30	30°
121-	50W PAR36H/NSP5	5°
122-	50W PAR36H/NSP8	8°
123-	50W PAR36H/FL30	30°

LAMP	DESCRIPTION	BEAM SPREAD
<b>AR-111</b>		
104-	50W AR111H/NSP8	8°
105-	50W AR111H/FL25	25°
106-	75W AR111H/NSP8	8°
107-	75W AR111H/FL25	25°
108-	75W AR111H/WFL45	45°
109-	100W AR111H/NSP8	8°
110-	100W AR111H/FL25	25°
111-	100W AR111H/WFL45	45°
<b>PAR-38</b>		
57-	90W PAR38H/NSP10	10°
59-	90W PAR38H/FL30	30°
60-	120W PAR38H/NSP10	10°
61-	120W PAR38H/FL30	30°
62-	120W PAR38H/WFL55	55°
<b>PAR-20 MH</b>		
88-	20W PAR20MH/SP8	8°
89-	20W PAR20MH/FL25	25°
70-	39W PAR20MH/SP10	10°
71-	39W PAR20MH/FL30	30°
<b>PAR-30 MH</b>		
72-	39W PAR30MH/SP10	10°
73-	39W PAR30MH/FL30	30°
74-	70W PAR30MH/SP10	10°
75-	70W PAR30MH/FL40	40°
<b>PAR-38 MH</b>		
76-	70W PAR38MH/SP15	15°
77-	70W PAR38MH/FL25	25°
78-	70W PAR38MH/WFL60	60°
79-	100W PAR38MH/SP15	15°
80-	100W PAR38MH/FL25	25°
81-	100W PAR38MH/WFL60	60°
82-	150W PAR38MH/SP20	20°
83-	150W PAR38MH/FL35	35°
84-	150W PAR38MH/WFL65	65°
<b>T/1-T-4.5 MH</b>		
125-	CMH20T/4.5MH	N/A
126-	CDM39T/4.5MH	N/A
127-	CDM70T/4.5MH	N/A
<b>T-6 MH</b>		
85-	CMD39T/6MH	N/A
86-	CMD70T/6MH	N/A
87-	CMD150T/6MH	N/A

LIGHT SOURCE	DESCRIPTION	BEAM SPREAD
XXXX-	Custom Light Source	
<b>LED-11</b>		
	Warm White, 3000K, 120 lumen	
1002-	2.5W/10° SP/WW LED	10°
1003-	2.5W/20° NFL/WW LED	20°
1004-	2.5W/36° FL/WW LED	36°
	Cool White, 6500K, 150 lumen	
1005-	2.5W/10° SP/CW LED	10°
1006-	2.5W/20° NFL/CW LED	20°
1007-	2.5W/36° FL/CW LED	36°
<b>LED-16</b>		
	Warm White, 3000K, 215 lumen	
3022-	6W/10° SP/WW LED	10°
3023-	6W/25° NFL/WW LED	25°
3024-	6W/40° FL/WW LED	40°
	Cool White, 5000K, 300 lumen	
3025-	6W/10° SP/CW LED	10°
3026-	6W/25° NFL/CW LED	25°
3027-	6W/40° FL/CW LED	40°
	Warm White, 3000K, 370 lumen	
3012-	3.5W/12° SP/WW LED	12°
3013-	3.5W/20° NFL/WW LED	20°
3014-	3.5W/35° FL/WW LED	35°
	Cool White, 5000K, 430 lumen	
3015-	3.5W/12° SP/CW LED	10°
3016-	3.5W/20° NFL/CW LED	20°
3017-	3.5W/35° FL/CW LED	35°

LAMP	DESCRIPTION	BEAM SPREAD
<b>LED-32</b>		
	Warm White, 3000K, 725 lumen	
9002-	15W/10° SP/WW LED	10°
9003-	15W/25° NFL/WW LED	25°
9004-	15W/40° FL/WW LED	40°
	Cool White, 5000K, 845 lumen	
9005-	15W/10° SP/CW LED	10°
9006-	15W/25° NFL/CW LED	25°
9007-	15W/40° FL/CW LED	40°

	FINISH		
Aluminum Finish	BKS-	Black Smooth	
	BKT-	Black Textured	
	BRS-	Bronze Smooth	
	BRT-	Bronze Textured	
	WHS-	White Smooth	
	WHT-	White Textured	
	SIS-	Silver Smooth	
	IVS-	Ivory Smooth	
	CHS-	Chrome Smooth	
	NBS-	Natural Bronze Smooth	
Brass Finish	NET-	Natural Brass w/ Gloss Clear	
	BRZ-	Satin Brass w/ Satin Clear	
	CPF-	Custom Finish	
	Stainless Steel Finish	POL-	Polished Brass w/ Gloss Clear
		NAT-	Natural Brass w/ Satin Clear
		BRZ-	Satin Brass w/ Satin Clear
		CPF-	Custom Finish
		PSS-	Polished Stainless
		NSS-	Natural Stainless
		BSS-	Brushed Stainless
CPF-		Custom Finish	

	COLOR FILTER
FA-	None
FM-	Mercury Vapor
FR-	Red
FRD-	Red Dichroic
FP-	Pink
FA-	Amber
FG-	Green
FGD-	Green Dichroic
FLB-	Light Blue
FMB-	Medium Blue
FMBD-	Medium Blue Dichroic

	CAP STYLE
C1-	Short Flush
C2-	Lens Recessed
C3-	45° Cutoff
C4-	Long Flush
C5-	45° Scalloped

	REFLECTOR
SP8°-	Spot 8°
NF23°-	Narrow Flood 23°
FL30°-	Flood 30°
WF50°-	Wide Flood 50°

	BALLAST OPTIONS
0-	None
PC-	Concrete Pour Collar (B1 & B4 only)


	BALLAST HOUSING
B3-	Remote Wall Mount
B4-	Remote Ingrade
B4PC-	Remote Ingrade w/ Pour Collar

# APPENDIX B | BALLAST/DRIVER & LAMP SPECS

## Luminaire A & B | LED Driver

www.sylvania.com/OPTOTRONIC

### OPTOTRONIC® Power Supply OT96W/24V/UNV/DIM

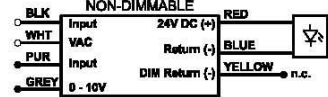
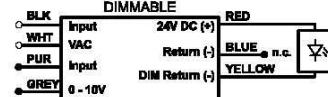


ENVIRONMENTAL SPECIFICATIONS	
Ambient Operating Temp	-25 to 40 °C
Max. Case Temp. Tc	75°C
Storage Temp.	-25 to 50 °C
Max. Relative Humidity (%)	96% non-condensing
Surge Protection (KV)	ANSI C62.41 Cat A (2.5KV)
Vibration Rating	3G
Overvoltage Protection	Yes
Short Circuit Protection	Yes
Over-temperature Protection	Yes
UL Environmental Rating	Damp
IP Rating	IP64
EMI Compliance	FCC Part 15 Class A

GENERAL INFORMATION	
Item Number	51520
Type	Constant Voltage
Output Power	96W (Max.)
Output Voltage	24V DC
Input	Universal (120-277V)

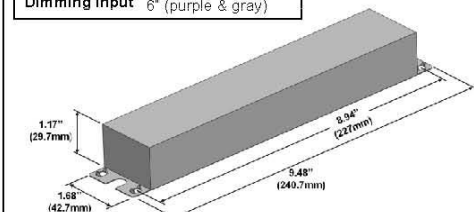
ELECTRICAL SPECIFICATIONS	
<b>Input</b>	
Input Voltage (VAC)	120V-277V (+/- 10%)
Frequency Range (Hz)	50 – 60 Hz (+/- 10%)
Input Current (A)	0.91 @ 120V 0.39 @ 277V
Input Power (W)	111W
THD	< 20%
Power Factor	> 0.95
Inrush Current (A <sub>pk</sub> )	< 55A
Line Regulation	< 5%
Stand-by Power (W)	< 1.5W
<b>Output</b>	
Output Voltage (VDC)	24V (+/- 5%)
Output Current (A)	0.1 – 4.0A
Output Ripple (V)	1V
Efficiency	>85% (Typical)
Load Regulation	<5%

DIMMING	
Dimming Control	0 – 10V
Dimming Range	10 – 100%
Dimming Type	PWM
Frequency	250Hz
Dimming Input Isolation	2.5KV

WIRING DIAGRAM	
<p><b>NON-DIMMABLE</b></p> 	<p><b>DIMMABLE</b></p> 

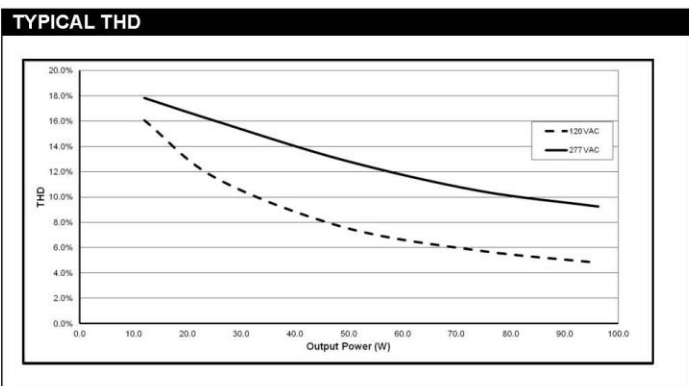
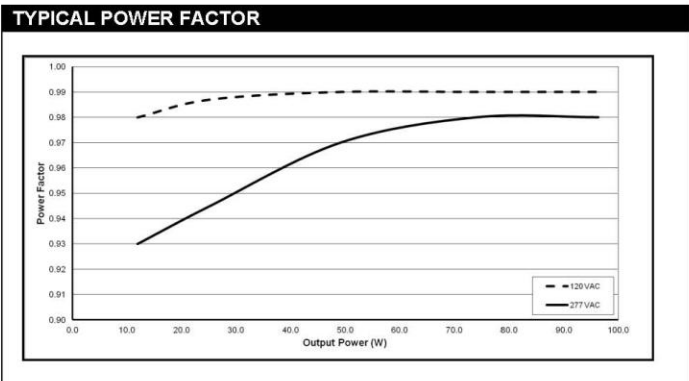
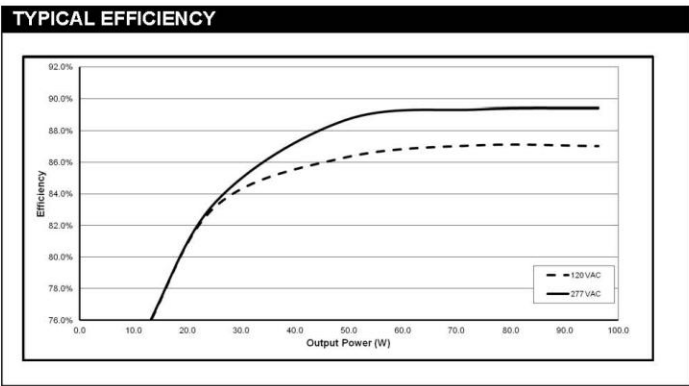
Note: Mounting distance for 18AWG wire is 15 feet. For additional information on further distances and EMI compliance reference application note LED126.

MECHANICAL DIAGRAM	
Wiring	Leads Only
Wire Gauge	18AWG
Input Wire	6" (black & White)
Output	6" (red, blue & yellow)
Dimming Input	6" (purple & gray)



1.17" (29.7mm) | 8.94" (227mm) | 5.48" (140.2mm) | 1.68" (42.7mm)

SEE THE WORLD IN A NEW LIGHT



**WARRANTY**  
 OPTOTRONIC<sup>®</sup> products are covered by our LED Module, OPTOTRONIC Power Supply or Control Warranty. For additional details, refer to the latest version of the warranty available at [www.sylvania.com](http://www.sylvania.com).

**United States**  
**OSRAM SYLVANIA**  
 100 Endicott Street  
 Danvers, MA 01923  
 Trade  
 Phone: 1-800-255-5042  
 Fax: 1-800-255-5043  
**National Accounts**  
 Phone: 1-800-562-4671  
 Fax: 1-800-562-4674  
**OEM/Special Markets**  
 Phone: 1-800-762-7191  
 Fax: 1-800-762-7192  
**Display Optic**  
 Phone: 1-888-677-2627  
 Fax: 1-800-762-7192  
**SYLVANIA Lighting Service**  
 Phone: 1-800-323-0572  
 Fax: 1-800-537-0784

**Canada**  
**OSRAM SYLVANIA LTD./LTÉE**  
 2001 Drew Road  
 Mississauga, ON L5S 1S4  
 Trade  
 Phone: 1-800-263-2852  
 Fax: 1-800-667-6772  
**OEM/Special Markets**  
 Phone: 1-800-265-2852  
 Fax: 1-800-667-6772  
**SYLVANIA Lighting Service**  
 Phone: 1-800-663-4268  
 Fax: 1-866-239-1278

**Mexico**  
**OSRAM Mexico**  
 Headquarters  
 Tultitlan/Edo de Mexico  
 011-52-55-58-99-18-50

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 Specifications subject to change without notice  
 1-800-LIGHTBULB (1-800-544-4828)

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OT51520R2

## Luminaire C | LED Driver



For information on installation planning, including electrical and data configuration guidelines, view or download the Data Enabler Pro Product Guide from [www.philipscolorkinetics.com/ls/pds/dataenablerpro/](http://www.philipscolorkinetics.com/ls/pds/dataenablerpro/)

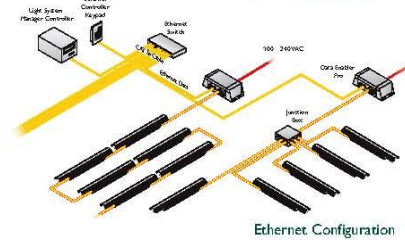
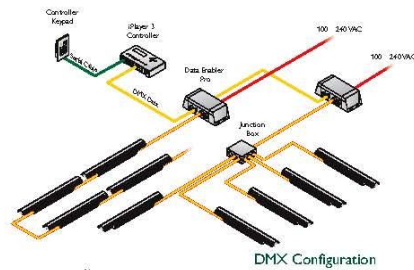
Date: 4/3/2013 Type: \_\_\_\_\_  
 Firm Name: COOK Lighting \_\_\_\_\_  
 Project: URBN Center \_\_\_\_\_

## Data Enabler Pro

Integrated data and power for intelligent LED lighting fixtures employing Powercore technology

Data Enabler Pro delivers integrated data and power to intelligent color and tunable white LED lighting fixtures employing Powercore technology from Philips Color Kinetics. Data Enabler Pro integrates many of the features of the previous generation of Data Enablers, including Data Enabler DMX, Data Enabler Ethernet, and Data Enabler EO. Data Enabler Pro is the single solution for all intelligent Powercore-based installations, whether DMX or Ethernet, color or white, indoors or outdoors.

- Easy installation — Accessible, clearly labeled terminal block connectors for DMX, Ethernet, line voltage, and fixtures make installation easy. Tethered cover with captive screws ensures convenient removal and replacement.
- Supports fixtures employing Powercore technology — Powercore technology rapidly, efficiently, and accurately controls power output to LED lighting fixtures directly from line voltage. Philips Data Enabler Pro merges line voltage and control data and delivers them to Powercore fixtures over a single cable, dramatically simplifying installation and lowering total system cost.
- On-board diagnostics — On-board indicator LEDs provide visual feedback for normal operation, Ethernet connection detection, and Ethernet and DMX data transmission.
- Full support for DMX and Ethernet — Provides inputs and outputs for both DMX and Ethernet, allowing you to connect multiple Data Enabler Pro devices in series. Also provides an Ethernet output terminal for eW Accent MX Powercore and iColorAccent MX Powercore support.



- Outdoor-rated for use in damp and wet environments — Data Enabler Pro offers superior leakage protection in a cast aluminum, IP66-rated enclosure.
- Multiple conduit entries — Data Enabler Pro conduit entries accommodate NPT conduit in US trade sizes of 1/2 in and 3/4 in, or metric sizes of PG13 and PG21.
- Universal power input range — Data Enabler Pro automatically senses mains voltages ranging from 100 – 277 VAC, and passes mains voltages through to all connected lights.
- Designed for maximum energy efficiency — Data Enabler Pro consumes just 20 W maximum. Optional power-saving modes automatically cut power to attached lights when lights are off for a configurable number of minutes.

**PHILIPS**



### Specifications

Due to continuous improvements and innovations, specifications may change without notice.

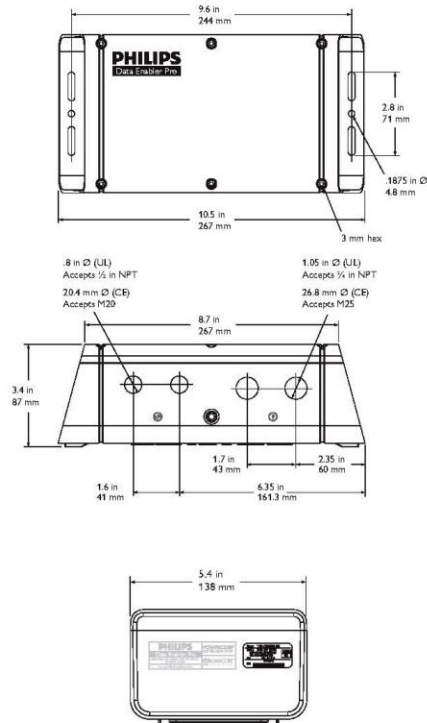
Item	Specification	Details
Electrical	Input Voltage	100 – 277 VAC*, auto-ranging, 50 / 60 Hz
	Maximum Input Current	16.5 A maximum
	Power Consumption	20 W maximum
	Load Current	16 A maximum
Connections	Power Input	3-wire PC terminal block connector†
	Power / Data Output	4-wire PC terminal block connector† 4-wire IDC terminal block connector (eW Accent MX Powercore and iColor Accent MX Powercore only)‡
	DMX Input / Output	Double-pair, double-entry IDC connectors‡
	Ethernet Input / Output	Double-pair, double-entry IDC connectors‡
	Dimensions (Height x Width x Depth)	3.4 x 10.5 x 5.4 in (87 x 267 x 138 mm)
Physical	Weight	5.4 lb (2.4 kg)
	Construction	Cast aluminum enclosure with slots for surface mounting
	Finish	Powder-coated industrial gray matte
	Threaded Openings	3/4 in NPT for power / 1/2 in NPT for data (US trade) PG21 for power / PG13 for data (metric)
	Temperature Ranges	-40° – 122° F (-40° – 50° C) Operating -20° – 122° F (-20° – 50° C) Startup -40° – 176° F (-40° – 80° C) Storage
	Humidity	0 – 95%, non-condensing
	Cooling	Convection
	Heat Dissipation	20 W
	Data Input Source	Philips full range of controllers, third-party DMX controllers, or KINET-compatible§ third-party Ethernet controllers
	Certification and Safety	Certification
Environment		Dry / Damp / Wet Location, IP66

\* Verify that the line voltage is appropriate for the lighting fixtures in your installation. See a specific fixture's documentation for supported line voltages.

† PC terminal block connectors accept recommended wire sizes from 8 – 18 AWG (8.37 – 0.823 mm<sup>2</sup>).

‡ IDC connectors accept wire sizes from 22 – 26 AWG (0.326 – 0.129 mm<sup>2</sup>).

§ KINET is the Ethernet lighting protocol from Philips Color Kinetics.



### Ordering Information

Item	Type	Item Number	Philips 12NC
Data Enabler Pro	3/4 in / 1/2 in NPT (US trade size conduit)	106-000004-00	910503701210
	PG21 / PG13 (metric size conduit)	106-000004-01	910503701211

Use Item Number when ordering in North America.



Philips Color Kinetics  
3 Burlington Woods Drive  
Burlington, Massachusetts 01803 USA  
Tel 888.385.5742  
Tel 617.423.9999  
Fax 617.423.9998  
www.philipscolorkinetics.com

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## Luminaire D | Dimming Compatibility – Lutron Grafic Eye

<b>Wallbox Dimmer (0-10V)</b>			
<b>Company</b>	<b>Part #</b>	<b>Power Booster Available</b>	<b>Confirmed</b>
Douglas Lighting	WPC-5721		
Entertainment Technology	TG600F AM120 Tap Glide(120V), TGH1500FAM120 Tap Glide Heatsink (120V) 0A2000FAMU (120/277V)		
Honeywell Inc.	EL7315A1019 EL7315A1009	EL7305A1010 EL7305A1010	
HUNT Dimming	PS-010-120V PS-010-120V Preset Slide PS-010-3W-120V Preset Slide PS-010-277V Preset Slide PS-010-3W-277V Preset Slide FD-010:PS-IFC-010-120/277V FD-010:PS-IFC-010-3W-120/277V FD-010-120V and FD-010-277V		yes
Lehigh Electric Products	Solitaire	PBX	
Leviton Lighting Controls Div	IP710-DLX Leviton Centura Florescent Control System Illuma Tech IP7 Series	ON100 PE300	yes
Lightolier Controls	ZP600FAM120 (120) Sunrise Preset Slider MP1500FAM120 (120) Momentum Preset Slider V2000FAMU (120/277) Vega Slider		yes
Lithonia Controls	ZP600FAM120 (120) Sunrise Preset Slider MP1500FAM120 (120) Momentum Preset Slider V2000FAMU (120/277) Vega Slider		
Lutron Electronics Co. Inc.	NTFTV- Nova T NFTV- Nova VF- 10W/GRX-TVI- Vareo DVP103P W/GRX-TVI Diva		
Starfield Controls	TR61 with DALI Interface Port	RT03 DALInet Router	
The Watt Stopper Inc.	LS-4 used with LCD-101 and LCD-103		
<b>Occupancy Sensor (0-10V)</b>			
<b>Company</b>	<b>Part #</b>	<b>Power Booster Available</b>	<b>Confirmed</b>
Cutler-Hammer	PRC-100DOC PRC100LSI PRL100LSO PRC100LSA PRC100LSS		
Hubbell Building Automation	OMNI Light Owl Light Hawk LP-2	MP-xxx MP-xxx	
Leviton Lighting Controls Div	Multi-Tech Wall Occupancy Sensor: ODW12 Wide View Occupancy Sensor: ODWWW High Bay Occupancy Sensory: ODWHB	ODP Series	

AVAB America, Inc.	PWR Series- FLV		
Colortran - Leviton	Digital Ballast Controller		
Creston Electronics, Inc.	Crestlite Lighting Systems		
Douglas Lighting	DILOR ALC3 System		
Electronics Diversified, Inc.	Mark VII System Rack Prolite Dimming System and Versa-Pak System Electronic Ballast Controller		
Entertainment Technology	Intelligent Power System IPSLM 2-2000FAM-32(120V) Intelligent Power System IPSLM 2-4000FAM-32(277V) Intelligent Power System IPSLM 2-2000FAM-32(120V)		
Electronic Theater	UNISON		
HUNT Dimming	Preset slide: PS-010-120V Preset slidePS-010-3W-120V Preset slide:PS-010-277V Preset slide: PS-010-3W-277V Preset slide, controls FD-010: PS-IFC-010-120/277V Preset slide, controls FD-010: PS-IFC-010-3W-120/277V Remote mounted unit: FD-010-120V and FD-010-277V		
Lehigh Electric Products Co.	Sentry Solitaire DX2 System Sunburst System DCFL Interface	PBX	
Lighting Control &	GR 4000		
Lightolier Controls	Lytemode moduleLM2-2400FAM (120V) Lytemode moduleLM2-2400FAM-32 (120V) Lytemode moduleLM2-4000FAM (277V)	Dimming Cabinet Dimming Cabinet Dimming Cabinet	
Lithonia Controls	Synergy System SGIDC 2000 Sequel Minipac	RDMFC	
Lutron Electronics Co., Inc.	GRAFIK EYE 3000/2000 – GRX- TVI QSG-GRX-TVI 4000-TVM Module GXI-included Spacer system- SPSF-6AW/GRX-TVI		
Marlin Controls, Inc.	EFD Stellar smart relay board		
Nexlight	WRT 4244-84		
Starfield Controls	TR25	RT03 DALInet Router	
Sterner Controls	BPM-ELVFL-0-10 or ARA Series		
Strand Lighting	Electronic Florescent Ballast Controller (120/277V)		
Touch-Plate	CPD-8000D		
TRIATEK Lighting	Digi-Touch		
Vantage	SD4008-120		
Vara-	PFC-Analog and PGS-M-Digital	EBIC	

**Remote Control Via Computer 0-10V**

## Luminaire D | Track Feed



Job Name: URBN Center

Contact: COOK Lighting

Fixture Type:

Part Number:

LEDRA® POWER FEED



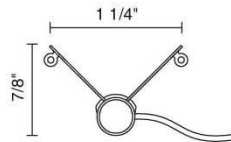
**Description:**

The Ledra Power Feed directly connects to the track to deliver power from driver one power feed needed per circuit. Recommended placement near center of track run. 18 awg wire required to connect Ledra to driver, not included.

**Part Numbers:**

136304mc                      matte chrome

**Technical Specs:**



## Luminaire D | Driver

**BRUCK**

Job Name: URBN Center

Contact: COOK Lighting

Fixture Type:

Part Number:

40W 700mA LED DRIVER



**Description:**

The 40 watt driver is a Class II power supply rated for operating LEDs. It features a universal voltage input and a constant current output. The encapsulated electronics and inherent protection adds reliability to both the driver and LEDs connected. To avoid damage to LEDs, the number of fixtures connected must be within the range limits listed for the driver and be wired in series. Use 18-20 gauge wire for remote installation up to a maximum of 150ft. National and local codes should be followed during installation. Enclosure box version is listed for code requirements. Please contact manufacturer for further details. [Click Here for LED Driver Matrix.](#)

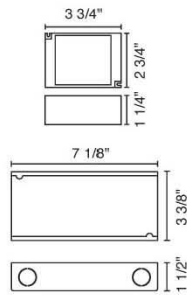
**Part Numbers:**

**70418-700**

40W, 700mA LED Driver

**P70418-700**

40W, 700mA LED Driver w/ box



**Technical Specs:**

- 100-277V AC, 50/60Hz input
- 700mA DC constant current output
- Operating temperature: -22°F to 140°F
- Class II rated
- Suitable for damp location (enclosure version dry only)
- Short circuit protection
- Overload protection
- Over-voltage protection
- Thermal protection

# Luminaire F | Driver

LED Dimming Driver

Hi-lume® A-Series L3D

Architectural Dimming

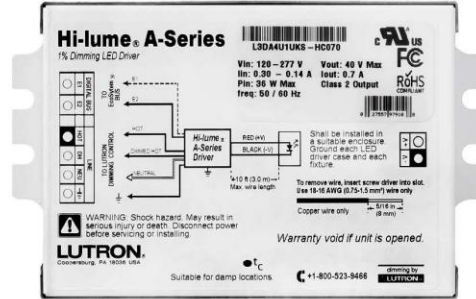
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## Hi-lume® A-Series Driver Overview EcoSystem® or 3-wire control

Hi-lume® A-Series Driver is a high-performance LED driver that provides smooth, continuous 1% dimming for virtually any LED fixture, whether it requires constant current or constant voltage. It is the most versatile LED driver offered today due to its compatibility with a wide variety of LED arrays, multiple form factors, and numerous control options.

### Features

- Continuous, flicker-free dimming from 100% to 1%.
- Compatible with Energi Savr Node™ with EcoSystem® unit, GRAFIK Eye® QS control unit, PowPak® dimming module with EcoSystem®, and Quantum® systems, allowing for integration into a planned or existing EcoSystem® lighting control solution. Please see chart at the end of this document or contact Lutron for details regarding compatible controls.
- Standard 3-wire line-voltage phase-control technology for consistent dimming performance and compatibility with all Lutron® 3-wire fluorescent controls.
- Protected from miswires of input power to EcoSystem® control inputs.
- 100% performance tested at factory.
- 100% burned in at factory.
- A rated lifetime of 50,000 hours @  $t_c = 65^\circ\text{C}$ .
- UL recognized for United States and Canada.
- FCC Part 15 compliant for commercial applications at 120 V~ or 277 V~.
- Pulse Width Modulation (PWM) or Constant Current Reduction (CCR) dimming methods available. See Application Note #360 for details.
- RoHS Compliant
- For more information please go to: [www.lutron.com/HilumeLED](http://www.lutron.com/HilumeLED)



### Hi-lume® A-Series, case type K

3.00 in (76 mm) W x 1.00 in (25 mm) H x 4.90 in (124 mm) L



### Hi-lume® A-Series, case type M

1.18 in (30 mm) W x 1.00 in (25 mm) H x 14.25 in (362 mm) L

LUTRON SPECIFICATION SUBMITTAL

Page 1

Job Name: URBN Center	Model Numbers:
Job Number: 2047	



**Specifications**

**Performance**

- Dimming Range: 100% to 1%
- Operating Voltage: 120-277 V~ at 50/60 Hz
- A rated lifetime of 50,000 hours @ t<sub>c</sub> = 65 °C. Contact Lutron for derating information.
- Patented thermal foldback protection
- LEDs turn on to any dimmed level without going to full brightness.
- Nonvolatile memory restores all driver settings after power failure.
- Power Factor: >0.90 at 40 W
- Standby Power Consumption: < 1.0 W
- Total Harmonic Distortion (THD): < 20% at 40 W
- Inrush Current: < 2 A
- Inrush Current Limiting Circuitry: eliminates circuit breaker tripping, switch arcing and relay failure.
- Open circuit protected
- Short circuit protected
- Turn-on time: ≤ 1 second
- PWM Dimming Frequency: 550 Hz

**Environmental**

- Sound Rating: Class A.
- Relative Humidity: Maximum 90% non-condensing.
- Minimum operating ambient temperature t<sub>a</sub> = 32 °F (0 °C).

**Standards**

- Meets ANSI C62.41 category A surge protection standards up to and including 4 kV.
- FCC Part 15 compliant for commercial applications at 120 V~ or 277 V~.
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20.
- Lutron® Quality Systems registered to ISO 9001.2008.

- UL 8750 recognized.
- Class 2 output available.
- Models available to meet LED Driver requirements for Energy Star 1.1.

**Driver Wiring & Mounting**

- Driver is grounded by a mounting screw to the grounded fixture (or by terminal connection on the K case).
- Terminal blocks on the driver accept one solid wire per terminal from 18 to 16 AWG (0.75 to 1.5 mm<sup>2</sup>).
- Fixture must be grounded in accordance with local and national electrical codes.
- Maximum driver-to-LED light engine wire length for **Constant Current Drivers:**

Wire Gauge	Maximum Lead Length		
	200 mA to 700 mA	710 mA to 1.50 A	1.51 A to 2.10 A
18	30 ft (9 m)	15 ft (4.5 m)	10 ft (3 m)
16	35 ft (10.5 m)	25 ft (7.5 m)	15 ft (4.5 m)
14	50 ft (15 m)	40 ft (12 m)	25 ft (7.5 m)
12	100 ft (30 m)	60 ft (18 m)	40 ft (12 m)

- Maximum driver-to-LED light engine wire length for **Constant Voltage Drivers:**

Wire Gauge	Maximum Lead Length		
	10 V to 20 V	20.5 V to 40 V	40.5 V to 60 V
18	10 ft (3 m)	15 ft (4.5 m)	30 ft (9 m)
16	15 ft (4.5 m)	25 ft (7.5 m)	50 ft (15 m)
14	25 ft (7.5 m)	40 ft (12 m)	75 ft (22.5 m)
12	40 ft (12 m)	60 ft (18 m)	100 ft (30 m)

<b>Job Name:</b> URBN Center	<b>Model Numbers:</b>	
<b>Job Number:</b> 2047		

LED Dimming Driver
Hi-lume® A-Series L3D
Architectural Dimming

369-325d 3 08.15.12

### How to Build a Model Number: Hi-lume® A-Series

**L3DA4U1U** - - - - -

**Case Size:**  
K = Compact  
**M = Stick**

**Case Style:**  
S = Studded (K case only)  
N = Non-Studded

**example: L3DA4U1UKS-HC070**  
For further assistance selecting your model number, contact our LED Center of Excellence at 1.877.346.5338 or LEDSD@lutron.com

**Current Level (for Constant Current):**  
020 = 0.20 A; 021 = 0.21 A . . . 070 = 0.70 A . . . 210 = 2.10 A

**Voltage Level (for Constant Voltage):**  
100 = 10.0 V; 105 = 10.5 V . . . 600 = 60.0 V

**Driver Output:**  
C = Constant current driver with pulse width modulation (PWM) dimming  
A = Constant current driver with constant current reduction (CCR) dimming  
V = Constant voltage driver with pulse width modulation (PWM) dimming

**LED Load Output Range (see the following pages for more detail):**

<u>Class 2 Constant Voltage</u>	<u>Class 2 Constant Current</u>	<u>Isolated Non-Class 2 Constant Current</u>
A = 10.0 V–12.0 V	E = 0.20 A–0.50 A 30 V–54 V	Y = 0.20 A–0.50 A 30 V–60 V
B = 12.5 V–20.0 V	F = 0.51 A–1.00 A 30 V–54 V	Z = 0.51 A–1.00 A 30 V–60 V
C = 20.5 V–24.0 V	G = 0.20 A–0.70 A 8 V–20 V	
D = 24.5 V–38.0 V	<b>H = 0.20 A–0.70 A 15 V–38 V</b>	
	I = 0.71 A–1.05 A 8 V–20 V	
<u>Isolated Non-Class 2 Constant Voltage</u>	J = 0.71 A–1.05 A 15 V–38 V	
X = 38.5 V–60.0 V	K = 1.06 A–1.50 A 8 V–20 V	
	L = 1.06 A–1.50 A 15 V–38 V	
	M = 1.51 A–2.10 A 8 V–20 V	

**LUTRON** SPECIFICATION SUBMITTAL

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<p><b>Job Name:</b> <input style="width: 90%;" type="text" value="URBN Center"/></p> <p><b>Job Number:</b> <input style="width: 50%;" type="text" value="2047"/></p>	<p><b>Model Numbers:</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; height: 20px; width: 50%;"></td> <td style="border: 1px solid black; height: 20px; width: 50%;"></td> </tr> </table>		


LED Dimming Driver

Hi-lume® A-Series L3D

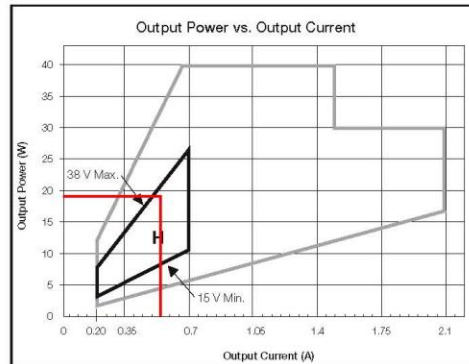
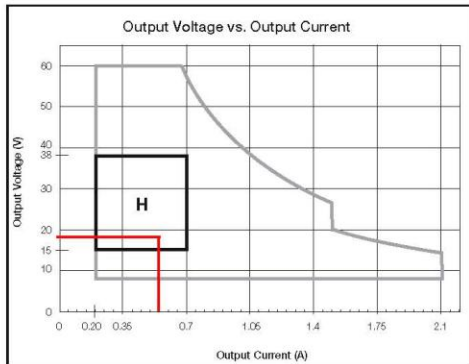
Architectural Dimming

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“H” Output Range, Current Driver Models

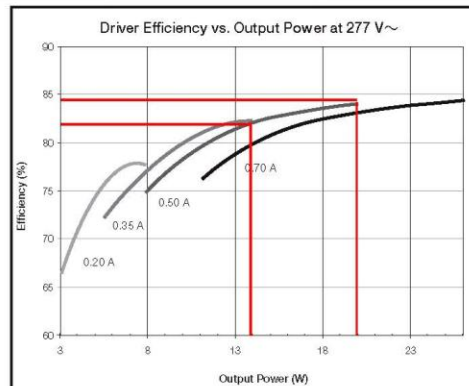
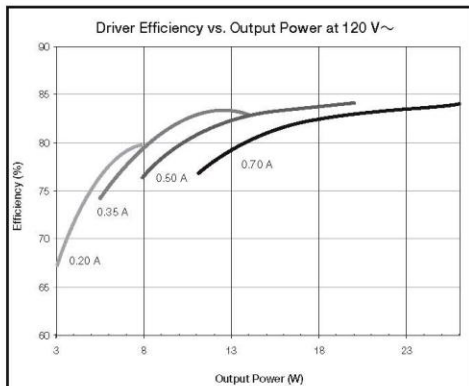
Driver Type	Output Dimming Method	Output Voltage	Output Current	Output Power	Standards Recognition
Constant Current Driver (Class 2)	Pulse Width Modulation (PWM)	15 – 38 V PWM	0.20 – 0.70 A	3 – 26 W	
	Constant Current Reduction (CCR)	15 – 38 V~			

Current Driver Operation Range:



Typical Performance Specifications:

Parameter	120 V~	240 V~	277 V~	Test Conditions
Input Current	270 mA	140 mA	120 mA	t <sub>a</sub> = 25 °C, 0.70 A, 26 W load, Max. Light Output, K enclosure
Power Factor	0.99	0.96	0.94	
THD	7%	10%	12%	
Driver Efficiency	84%	85%	85%	



**LUTRON** SPECIFICATION SUBMITTAL

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Job Name: URBN Center	Model Numbers:  
Job Number: 2047	 

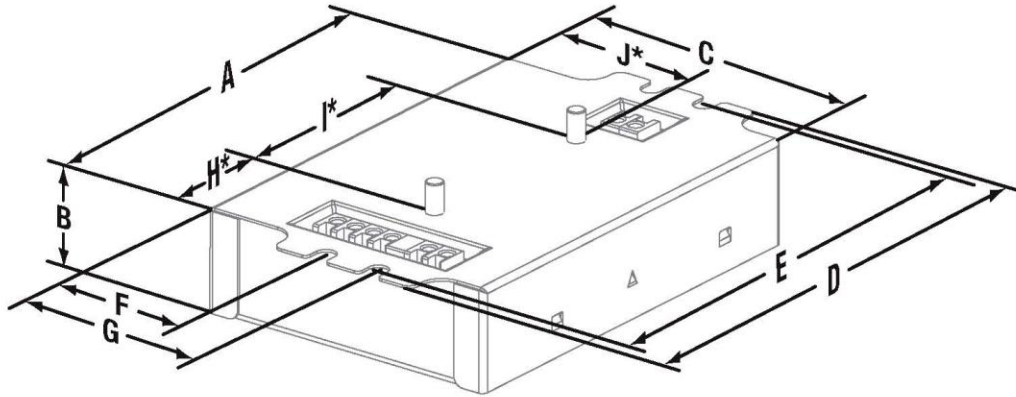
LED Dimming Driver

Hi-lume® A-Series L3D

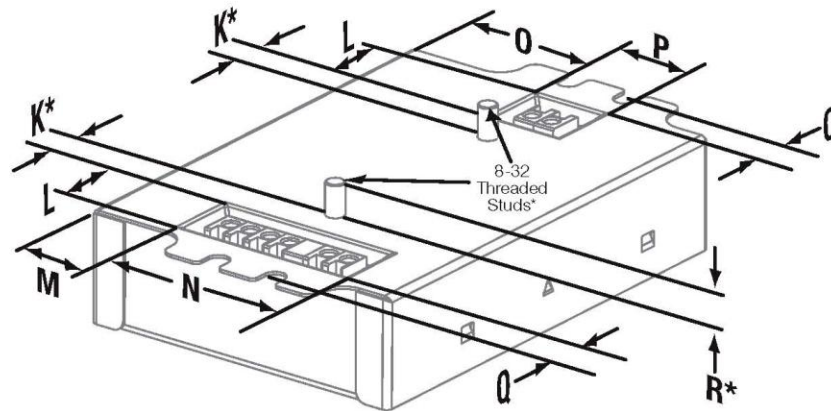
Architectural Dimming

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**K Case: Case Dimensions**



**K Case: Connector Location Dimensions**



A	4.20 in (107 mm)	F	1.42 in (36 mm)	K*	0.33 in (8.3 mm)	P	0.74 in (19 mm)
B	1.00 in (25 mm)	G	1.99 in (51 mm)	L	0.65 in (16.5 mm)	Q	0.32 in (8 mm)
C	3.00 in (76 mm)	H*	1.11 in (28 mm)	M	0.75 in (19 mm)	R*	0.29 in (7 mm)
D	4.90 in (124 mm)	I*	2.00 in (51 mm)	N	1.73 in (44 mm)		
E	4.60 in (117 mm) (mounting center)	J*	1.60 in (41 mm)	O	1.33 in (34 mm)		

\* Applies to studded K case only.

**LUTRON** SPECIFICATION SUBMITTAL

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Job Name: URBN Center	Model Numbers:
Job Number: 2047	

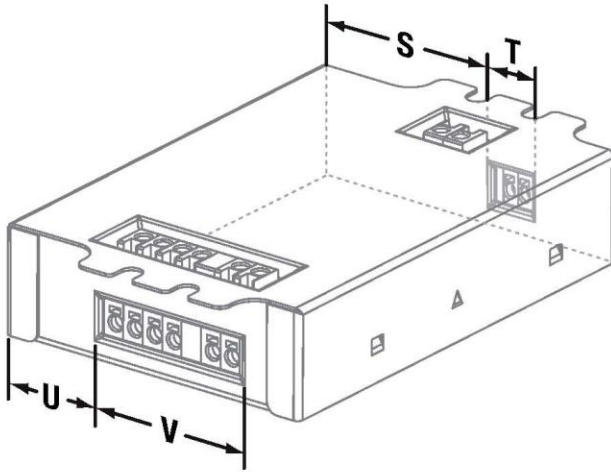
LED Dimming Driver

Hi-lume® A-Series L3D

Architectural Dimming

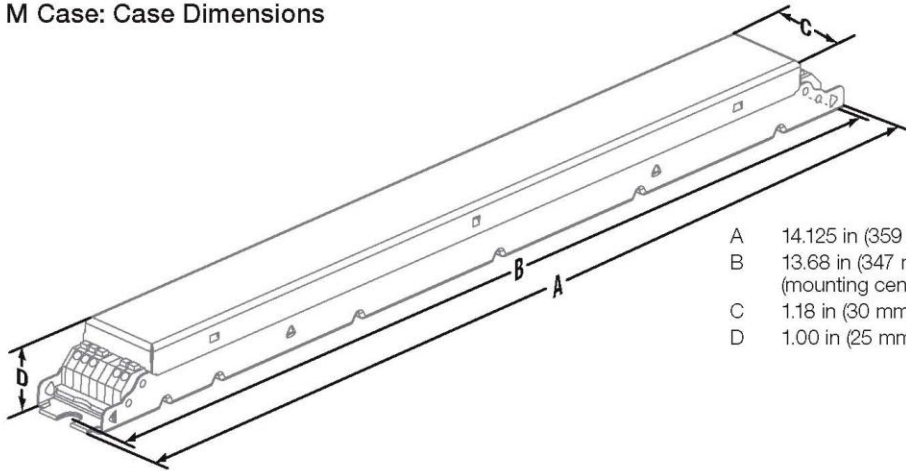
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**K Case: Side Entry Connector Location Dimensions (Non-Studded)**



- S 1.38 in (35 mm)
- T 0.64 in (16 mm)
- U 0.88 in (22 mm)
- V 1.53 in (39 mm)

**M Case: Case Dimensions**



- A 14.125 in (359 mm)
- B 13.68 in (347 mm)  
(mounting center)
- C 1.18 in (30 mm)
- D 1.00 in (25 mm)

**LUTRON** SPECIFICATION SUBMITTAL

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Job Name: <input type="text" value="URBN Center"/>	Model Numbers: <input type="text"/>	
Job Number: <input type="text" value="2047"/>	<input type="text"/>	<input type="text"/>



LED Dimming Driver
Hi-lume® A-Series L3D
Architectural Dimming

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### Wiring Diagram for 3-Wire Control

### Wiring Diagram for EcoSystem® Digital Control

**Note:** Colors shown correspond to terminal blocks on driver.

---

<sup>1</sup> Ground wire connection available on K case models only.  
<sup>2</sup> Fixture and driver case must be grounded in accordance with local and national electrical codes.  
<sup>3</sup> For maximum driver-to-LED light engine wire length, see charts in *Driver Wiring & Mounting* section.

LUTRON® SPECIFICATION SUBMITTAL

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Job Name: <input style="width: 90%;" type="text" value="URBN Center"/>	Model Numbers: <input style="width: 100%; height: 20px;" type="text"/>
Job Number: <input style="width: 80%;" type="text" value="2047"/>	<input style="width: 100%; height: 20px;" type="text"/>

LED Dimming Driver

Hi-lume® A-Series L3D

Architectural Dimming

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**Compatible Controls**

- Guaranteed performance specifications with the controls listed in the chart below.
- For assistance selecting controls, contact our LED Center of Excellence at 1.877.346.5338 or LEDSD@lutron.com

Product	Part Number		Fixtures per Control <sup>1</sup>		Measured Light Output Range
	120 V~	277 V~	120 V~	277 V~	
Nova T <sup>2</sup> ®	NTF-10-	NTF-10-277-	1 – 41	1 – 44	100% – 1%
	NTF-103P-	NTF-103P-277-	1 – 20	1 – 33	100% – 1%
Nova®	NF-10-	NF-10-277-	1 – 41	1 – 44	100% – 1%
	NF-103P-	NF-103P-277-	1 – 20	1 – 33	100% – 1%
Vareo®	VF-10-		1 – 20	–	100% – 1%
Skylark®	SF-10P-	SF-12P-277-	1 – 20	1 – 33	100% – 1%
	SF-103P-	SF-12P-277-3	1 – 20	1 – 33	100% – 1%
Diva®	DVF-103P-	DVF-103P-277-	1 – 20	1 – 33	100% – 1%
	DVSCF-103P-	DVSCF-103P-277-	1 – 20	1 – 33	100% – 1%
Ariadni®	AYF-103P-	AYF-103P-277-	1 – 20	1 – 44	100% – 1%
Verti®	VTF-6A-		1 – 15	1 – 33	100% – 1%
Maestro®	MAF-6AM-	MAF-6AM-277-	1 – 15	1 – 33	100% – 1%
	MSCF-6AM-	MSCF-6AM-277-	1 – 15	1 – 33	100% – 1%
Maestro Wireless®	MRF2-F6AN-DV-		1 – 15	1 – 33	100% – 1%
RadioTouch®	RTA-RX-F-		1 – 41	1 – 88	100% – 1%
Spacer System®	SPSF-6A-	SPSF-6A-277-	1 – 15	1 – 33	100% – 1%
	SPSF-6AM-	SPSF-6AM-277-	1 – 15	1 – 33	100% – 1%
Lyneo® Lx	LXF-103PL-	LXF-103PL-277-	1 – 20	1 – 33	100% – 1%
RadioRA® 2	RRD-F6AN-DV-		1 – 15	1 – 33	100% – 1%
HomeWorks® QS	HQRD-F6AN-DV		1 – 15	1 – 33	100% – 1%
Interfaces <sup>2</sup>	PHPM-3F-120		1 – 41	–	100% – 1%
	PHPM-3F-DV		1 – 41	1 – 88	100% – 1%
	GRX-FDBI-16A		1 – 41	1 – 88	100% – 1%
PowPak® dimming Module with EcoSystem®	RMJ-ECO32-DV-B		32 per EcoSystem® link		100% – 1%
Energi Savr Node™ with EcoSystem®	QSN-1ECO-S, QSN-2ECO-S		64 per EcoSystem® link		100% – 1%
GRAFIK Eye® QS with EcoSystem®	QSGRJ-_E, QSGR-_E		64 per EcoSystem® link		100% – 1%
Quantum®	Various		64 per EcoSystem® link		100% – 1%

<sup>1</sup> Fixtures per Control value assumes a 40 W fixture. Number of fixtures may be higher if wattage is less than 40 W and may be lower if ganged. See control specification submittal sheet for details.

<sup>2</sup> For use with 3-wire controls or Commercial Systems, RadioRA® Systems or Home Systems applications.

**NOTE:** Contact Lutron Technical Support for derating rules when using wallbox controls on the Hi-lume® A-Series LED Driver in multi-gang applications.

For the list of compatible controls, visit [www.lutron.com/HiLumeLED](http://www.lutron.com/HiLumeLED) and select "EcoSystem/3-wire Control Report Card."

**LUTRON** SPECIFICATION SUBMITTAL

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Job Name: URBN Center	Model Numbers:  
Job Number: 2047	 

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**EcoSystem® Wiring Diagrams**

**EcoSystem® Digital Link Overview**

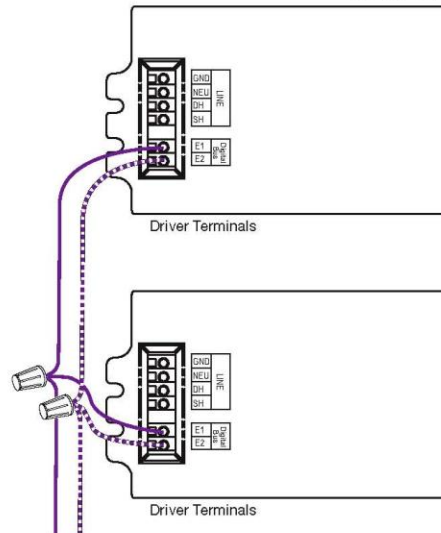
- The EcoSystem® Digital Link wiring (E1 and E2) connects the digital ballasts and drivers together to form a lighting control system.
- Each EcoSystem® Digital Link supports up to 64 digital ballasts, LED drivers or EcoSystem® Modules (e.g. C5-BMJ-16A, C5-XPJ-16A), 32 occupancy sensors (64 occupancy sensors with Energi Savr Node™ with EcoSystem®), 16 daylight sensors, and 64 wallstations or IR receivers.\*
- Sensors do not directly connect to Hi-Lume® A-Series LED drivers.
- E1 and E2 (EcoSystem® digital link wires) are polarity insensitive and can be wired in any topology.
- An Energi Savr Node™ with EcoSystem® unit, GRAFIK Eye® QS control unit with EcoSystem®, PowPak® dimming module with EcoSystem®, or Quantum® system provides power for the EcoSystem® Digital Link and supports system programming.\*
- All EcoSystem® Digital Link programming is completed by using the Energi Savr App for *Apple iPad*, *iPod Touch* or *iPhone* mobile digital devices, GRAFIK Eye® QS with EcoSystem®, PowPak® dimming module with EcoSystem®, or Quantum® System.

**EcoSystem® Digital Link Wiring**

- Driver EcoSystem® Digital Link terminals only accept one 18 to 16 AWG (0.75 to 1.5 mm<sup>2</sup>) solid copper wire per terminal.
- Make sure that the supply breaker to the Digital Driver and EcoSystem® Digital Link Supply is OFF when wiring.
- Connect the two conductors to the two Digital Driver terminals E1 and E2 as shown.
- Using two different colors for E1 and E2 will reduce confusion when wiring several drivers together.
- The EcoSystem® Digital Link may be wired Class 1 or Class 2. Consult applicable electrical codes for proper wiring practices.

\* PowPak® dimming module with EcoSystem® provides power for the EcoSystem® Digital Link and can support 32 digital ballasts, LED drivers or EcoSystem® Modules, 6 Wireless Occupancy Sensors, 1 Wireless Daylight Sensor, and 9 Pico® Wireless Controllers.

Apple, iPad, iPod Touch, and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries.



To the EcoSystem® Digital Bus and additional drivers and/or ballasts

**Notes**

- The EcoSystem® Digital Link Supply does not have to be located at the end of the Digital Link.
- EcoSystem® Digital Link length is limited by the wire gauge used for E1 and E2 as follows:

Wire Gauge	Digital Link Length (max)
12 AWG	2200 ft
14 AWG	1400 ft
16 AWG	900 ft
18 AWG	550 ft

Wire Size	Digital Link Length (max)
4.0 mm <sup>2</sup>	828 m
2.5 mm <sup>2</sup>	517 m
1.5 mm <sup>2</sup>	310 m
1.0 mm <sup>2</sup>	207 m
0.75 mm <sup>2</sup>	155 m

**LUTRON® SPECIFICATION SUBMITTAL**

Job Name: <input type="text" value="URBN Center"/>	Model Numbers: <input type="text"/>
Job Number: <input type="text" value="2047"/>	<input type="text"/>

**ELECTRICIANS AND CONTRACTORS**

**FACILITIES MANAGERS**

**Driver Leads**

Maximum driver-to-LED light engine wire length for  
**Constant Current Drivers:**

Wire Gauge	Maximum Lead Length		
	200 mA to 700 mA	710 mA to 1.50 A	1.51 A to 2.10 A
18	30 ft (9 m)	15 ft (4.5 m)	10 ft (3 m)
16	35 ft (10.5 m)	25 ft (7.5 m)	15 ft (4.5 m)
14	50 ft (15 m)	40 ft (12 m)	25 ft (7.5 m)
12	100 ft (30 m)	60 ft (18 m)	40 ft (12 m)

Maximum driver-to-LED light engine wire length for  
**Constant Voltage Drivers:**

Wire Gauge	Maximum Lead Length		
	10 V to 20 V	20.5 V to 40 V	40.5 V to 60 V
18	10 ft (3 m)	15 ft (4.5 m)	30 ft (9 m)
16	15 ft (4.5 m)	25 ft (7.5 m)	50 ft (15 m)
14	25 ft (7.5 m)	40 ft (12 m)	75 ft (22.5 m)
12	40 ft (12 m)	60 ft (18 m)	100 ft (30 m)

**Wiring and Grounding**

Driver and lighting fixture must be grounded.  
Drivers must be installed per national and local electrical codes.

**LED Load Replacement**

For Class 2 rated drivers, the LED load can be changed while the driver is installed and powered.

**Maximum Driver Operating Temperature**

Driver case temperature (t<sub>c</sub>) must not exceed UL conditions of acceptability in end product.  
For 50,000 hour lifetime, driver case temperature (t<sub>c</sub>) must not exceed 65 °C.

**SERVICE**

**Warranty**

For warranty information, please visit <http://www.lutron.com/TechnicalDocumentLibrary/Ballast%20and%20Driver%20Warranty.pdf>

**Replacement Parts**

When ordering Lutron® replacement parts please provide the full model number. Consult Lutron if you have any questions.

**Further Information**

For further information, please visit us at [www.lutron.com/hilumeLED](http://www.lutron.com/hilumeLED) or contact our LED Control Center of Excellence at 1.877.346.5338 or [LEDs@lutron.com](mailto:LEDs@lutron.com)

Job Name: URBN Center	Model Numbers:
Job Number: 2047	

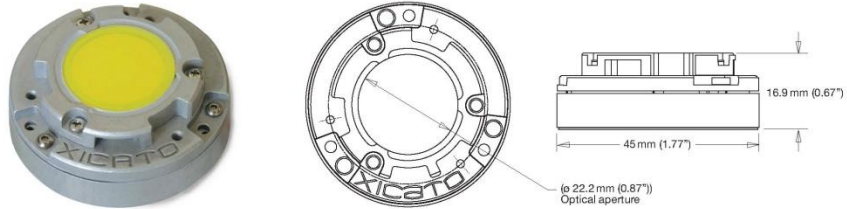


# Luminaire F | Lamp

## PRODUCT DATA SHEET

# XSM Artist Series LED Module

Corrected Cold Phosphor Technology®



### Specification Features

#### Physical Characteristics

**Module Source Type:** Corrected Cold Phosphor LED module.  
**Module Dimensions:** Dia. 45mm (1.77") x 16.9 mm (.67"). Optical Aperture Dia. 22.2mm (.87").  
**Maximum Case Temperature:** 90°C  
**Phosphor Proximity:** Remote.  
**Module Weight:** 54gm (1.9oz) (100ct box weight 6kg (13.2lbs)).  
**Interfaces:** Base dia. 45mm (1.77"). Provision for accessory reflector attachment. Integral wire harness 24 AWG, 40cm, UL105°C, 300V. Mounting screws M3 x 0.5 x 12mm. Internal thermal pad: Nominal thermal conductivity 10W/m-K (through-plane), 150W/m-K (in-plane), .127mm thick.  
**Module Housing:** Diecast aluminum construction with sealed glass aperture. IP66 rated.  
**Storage Temperature:** -40°C to 85°C

#### Photometric Characteristics

**Color Consistency - Initial:** CCT +/- 50K, Duv +/- .001, 1 x 2 step MacAdam (1x2 SDCM) along BBL.  
**Color Rendering Index:** Ra: ≥ 95, R9 ≥ 90, R15 ≥ 95 (R9 3500K, 4000K ≥ 85)  
**Color Consistency - Maintained:** C3 50,000hrs.<sup>11</sup>  
**Lumen Maintenance:** L80 50,000 hrs.

#### Other

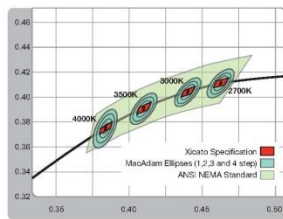
**Regulatory:** Modules UL recognized. RoHS compliant.  
 CE Compliant (IEC62031), IP66 (IEC60529).  
**Mercury Content:** No mercury.  
**UV or IR Content:** None.

### Ordering Guide\*

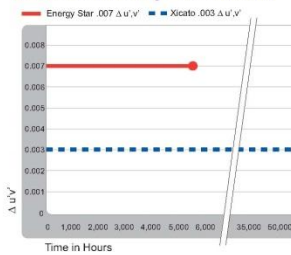
Luminous Flux	Part Number	Correlated Color Temperature
700 lm	XSM9527-700-C	2700K
	XSM9530-700-C	3000K
	XSM9540-700-C	4000K
	XSM9527-1000-C	2700K
1000 lm	XSM9530-1000-C	3000K
	XSM9535-1000-C	3500K
	XSM9540-1000-C	4000K
	XSM9527-1300-C	2700K
	XSM9530-1300-C	3000K
1300 lm	XSM9535-1300-C	3500K
	XSM9540-1300-C	4000K

\* For a complete list of luminaires incorporating Xicato LED Modules and information on compatible drivers, heatsinks and reflectors, go to [www.xicato.com](http://www.xicato.com). For XSM 80 series, refer to XSM 80 Series Product Data Sheet.

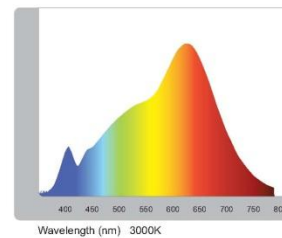
#### Color Consistency - Initial



#### Color Consistency - Maintained



#### Spectral Power Distribution



#### Color Rendering Index (Typical)

Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98	98	99	98	98	98	97	98	98	98	99	98	88	98	98	98





**Technical Data**

Lighting <sup>1</sup>								Electrical (constant current)									
Module	Part Number	Correlated Color Temperature	Color Rendering Index <sup>2</sup>	Color Consistency			Lumen Maintenance <sup>3</sup>	Module	Drive Current <sup>4</sup>		Forward Voltage <sup>5</sup>			Power Consumption <sup>6</sup>	Lumen Output <sup>9</sup> (Typical)	Efficacy (Typical)	Thermal Class <sup>10</sup>
		(CCT) <sup>7</sup>		SDCM	CCT	Duv	hrs		mA	Min	Typ	Max	W	lm	lm/W		
700 lm	XSM9527-700-C	2700K	CRI Ra ≥ 95	≤1 x2	± 40K	± 0,001	50k	700	15.3	19.2	22.6	13.4	700	52	F		
	XSM9530-700-C	3000K	R9 ≥ 90		± 50K			500	14.8	18.8	22.0	9.4	550	59	D		
	XSM8040-700-C	4000K	R15 ≥ 95		± 70K			350	14.5	19.3	21.5	6.8	400	59	C		
1000 lm	XSM9527-1000-C	2700K	CRI Ra ≥ 95	≤1 x2	± 40K	± 0,001	50k	1050	16.0	20.5	23.4	21.5	1000	46	H		
	XSM9530-1000-C	3000K	R9 ≥ 90		± 50K			700	15.3	19.2	22.6	13.4	720	54	F		
	XSM9535-1000-C	3500K	R15 ≥ 95		± 60K			500	14.8	18.8	22.0	9.4	540	57	D		
	XSM9540-1000-C	4000K			± 70K			350	14.5	18.5	21.5	6.5	380	59	C		
1300 lm	XSM9527-1300-C	2700K	CRI Ra ≥ 95	≤1 x2	± 40K	± 0,001	50k	1050	23.9	26.4	30.0	27.7	1300	47	K		
	XSM9530-1300-C	3000K	R9 ≥ 90		± 50K			700	23.1	25.4	29.0	17.8	930	52	G		
	XSM9535-1300-C	3500K	R15 ≥ 95		± 60K			500	22.3	24.7	28.2	12.4	700	57	E		
	XSM9540-1300-C	4000K			± 70K			350	21.8	24.2	27.6	8.5	500	59	C		

- Notes:
- All lighting data shown in the above table is taken at a recommended operating test point (Tc) temperature of 70°C and highest rated drive current.
  - "3000K" and "3500K" CCT's are 2950K and 3420K, respectively. CCT data ANSI/NEMA compliant.
  - "Ra" is defined as the average of color rendering indices R1-R8. 3000K data shown.
  - Lumen and color maintenance is based on B10/50,000 hrs criteria.
  - The module is designed for usage with a constant current power supply with an output current up to 770mA or 1100mA max. without affecting lifetime performance.
  - Voltage data based on 20°C to 90°C operating range. For operation outside this range, contact Xicato.
  - Power consumption is stated as a typical value that is based on the typical range of forward voltage. Maximum and minimum power values can be calculated using the voltage range.
  - Absolute range of lumen output is ±10% of typical value.
  - Specifications subject to change without notice.
  - Thermal compatibility classification: Contact Xicato for details.
  - < .003 Δ u', v', 50,000hrs.

**Recommended LED Module Specification**

**Physical Characteristics:** LED module shall be remote phosphor, nominal 45mm (1.77") diameter, and aluminum and glass construction. Module shall be sealed, meeting IP66 requirements. Module shall be field-serviceable.

**Performance:** LED module shall have a CRI (Ra) ≥95, with an R9 value ≥85. CRI values shall be +3/-0 points initial. LED module color points shall be within 1 x 2 SDCM initial. Flux output shall be measured at a minimum of 70 °C (±5°C).

**General Requirements:** LED module shall be UL recognized, CE compliant and RoHS compliant. Module shall be warranted for 5 years for catastrophic failure, lumen maintenance (≥L70), and color consistency (<.003 Δ u', v').

LED module shall be Xicato Module. #

**Luminaire Thermal Validation Program and Warranty**

The Xicato Luminaire Thermal Validation Program was developed to ensure that luminaires incorporating Xicato LED Modules perform properly and deliver quality light that meets customer requirements. Validated luminaires carry limited 5 year warranty. For details on Xicato's Luminaire Thermal Validation Program and Warranty, contact Xicato.

**About Xicato**

Xicato is passionate about light. Light has an emotional effect on people and a direct impact on business profitability. It ultimately influences everything in our lives. Xicato is a recognized leader in creating LED modules that provide superior aesthetics, economics and durability. Xicato aspires to be the trusted partner of the global lighting design community and luminaire manufacturers.



For an overview of our customers' luminaires visit [www.xicato.com](http://www.xicato.com).

For the best in lighting design, Xicato recommends a qualified lighting designer from the Professional Lighting Design Association (PLDA) or the International Association of Lighting Designers (IALD).



Spec Sheet XSM95-0213 v2 Specifications subject to change.

## Luminaire G | Ballast

<b>EcoSystem®</b>	<b>Five Control Input</b>	<b>Digital Dimming Ballasts</b>									
		369-454c 1 2.29.12									
<h3>EcoSystem® Multiple Control Input Ballasts</h3> <p>Digital electronic dimming ballasts maximize the benefits of a lighting management system. EcoSystem® Ballasts offer 100% to 10% dimming; ideal for use where saving energy, increasing flexibility, and maximizing productivity are the goals of the lighting design.</p>											
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Continuous, flicker-free dimming from 100% to 10%</li> <li>• Available with and without an integral sensor connection</li> <li>• Integral sensor connection provides power for and responds to one occupancy sensor, one photo sensor, and one personal control input (infrared receiver or wallstation)</li> <li>• Communicates status and sensor inputs over the EcoSystem® digital link</li> <li>• Programmed rapid start design ensures full rated lamp life while dimming and cycling</li> <li>• Lamps turn on to any dimmed level without flashing to full brightness</li> <li>• Low harmonic distortion throughout the entire dimming range</li> <li>• Frequency of operation ensures that ballast does not interfere with infrared devices</li> <li>• End-of-lamp-life protection circuitry ensures safe operation throughout entire lamp life</li> <li>• Ultra-quiet operation</li> <li>• Nonvolatile memory restores all ballast settings after power failure</li> <li>• Ballasts maintain consistent light output for linear lamp lengths (i.e. 4 ft [1.5 m], 3 ft [1 m], 2 ft [0.5 m] have same relative output)</li> <li>• Protected from miswires of any input power to control lead, or from lamp leads to each other and/or ground</li> <li>• 100% performance tested at factory</li> <li>• Custom ballast factors available.</li> </ul> <p>Design tool and specifications can be found at <a href="http://www.lutron.com/ballasttool">www.lutron.com/ballasttool</a></p>	 <p><b>EcoSystem® case type G</b></p>  <p><b>EcoSystem® case type J</b></p>										
<p><b>LUTRON® SPECIFICATION SUBMITTAL</b> <span style="float: right;">Page <span style="border: 1px solid black; padding: 0 5px;">1</span></span></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"><b>Job Name:</b></td> <td colspan="2"><b>Model Numbers:</b></td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">URBN Center</td> <td style="border: 1px solid black; width: 33%;"></td> <td style="border: 1px solid black; width: 33%;"></td> </tr> <tr> <td><b>Job Number:</b></td> <td style="border: 1px solid black; padding: 2px;">2047</td> <td style="border: 1px solid black;"></td> </tr> </table>			<b>Job Name:</b>	<b>Model Numbers:</b>		URBN Center			<b>Job Number:</b>	2047	
<b>Job Name:</b>	<b>Model Numbers:</b>										
URBN Center											
<b>Job Number:</b>	2047										

**Specifications**

**Standards**

- California Energy Commission (CEC) Listed\*
- UL Listed (evaluated to the requirements of UL935)
- CSA certified (evaluated to the requirements of C22.2 No. 74)
- Select ballasts are NOM Listed (contact Lutron for more information)
- S Mark Certified
- Class P thermally protected
- Meets ANSI C82.11 High Frequency Ballast Standard
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- Meets ANSI C62.41 Category A surge protection standards up to and including 4 kV
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20
- Lutron Quality Systems registered to ISO 9001:2008

\* Not required for T5 twin tube models

**Performance**

- Operating Voltage: 120, 220/240, 277 V~ at 50 or 60 Hz
- Grounding: ballast and fixture must be grounded for proper dimming
- Dimming Range: 100% to 10% measured relative light output
- Lamp Starting: programmed rapid start
- Lamp Current Crest Factor: less than 1.7
- Light Output Variation: Constant ±2% light output for line voltage variations of ±10%
- Lamp Life: Average lamp life meets or exceeds specified lamp ratings
- Power Factor: 0.95 minimum
- Total Harmonic Distortion (THD): Less than 10%\*\*
- Maximum Inrush Current: 3 A per ballast at 277 V~, 7 A per ballast at 120 V~
- Class 2 Output: +20 V=, 50 mA maximum (one daylight sensor, one keypad and one occupancy sensor can be connected)

\*\* Models EC5T514JUNV1 and EC5T817JUNV1 have less than 15% THD

**Environment**

- Minimum lamp starting temperature: 50 °F (10 °C)
- Relative humidity: less than 90% non-condensing
- Sound Rating: Class A
- Maximum ballast case temperature: 75 °C

**Ballast Wiring & Mounting**

- Ballast is grounded by a mounting screw to the fixture
- Terminal blocks on the ballast accept the following wire gauges:  
Power Wiring, Lamp Wiring, and EcoSystem® digital link:  
only one 16 or 18 AWG (0.75 or 1.5 mm<sup>2</sup>) solid per terminal  
Class 2 Sensors:  
only one 22 AWG (0.25 mm<sup>2</sup>) solid per terminal
- Only one wire per terminal
- Class 2 sensor wiring must be separated from all power and Class 1 wiring, consult all applicable local and national codes
- Ballast mounts using two screws (or sheet metal feature and one screw) within a fluorescent fixture
- Wiring from the ballast to lamp sockets shall not exceed 7 ft (2 m) for T8, T5, and T5HO lamps
- Wiring from the ballast to lamps sockets shall not exceed 3 ft (1 m) for T5 Twin Tube lamps

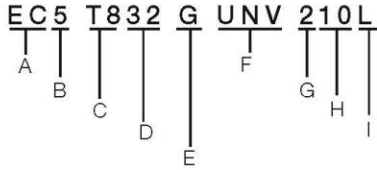
**Lamp Seasoning**

Refer to lamp manufacturer for lamp seasoning requirements prior to dimming.

Job Name: URBN Center	Model Numbers:
Job Number: 2047	

**How to Build a Model Number**

**Example**



**A - Type of Ballast**

EC = EcoSystem® Ballast

**B - Control Type**

5 = 5 control inputs: EcoSystem® digital link, 3-wire phase control input, daylight sensor, occupancy sensor, and personal control (IR receiver or wallstation)

**C - Lamp Size (2 characters)**

T8 or T5

**D - Lamp Wattage (2 characters)**

XX = Lamp wattage (e.g. 54 for 54 W lamp)

**E - Case Type (1 character)**

G or J

**F - Voltage (3 characters)**

UNV = Universal voltage (120, 220/240, 277 V~)

**G - Number of Lamps (1 character)**

1, 2, or 3

**H - Ballast Factor**

Blank = Default (0.85 for T8 and 1.0 for T5)

17 = 1.17 BF

CXX = Custom ballast factor of 0.XX

**I - Optional Power and Lamp Leads (1 character)**

Blank = No leads





L = Power and lamp leads included (only available on select models in G case)

Job Name: URBN Center	Model Numbers:	
Job Number: 2047		

EcoSystem® Five Control Input Digital Dimming Ballasts

369-454c 6 2.29.12

EcoSystem® Ballasts with Integral Sensor Connection for linear T5 Lamps

Lamp	No. of Lamps	Model	Case Size	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm)	System Efficacy (lm/W)	Ballast Efficacy Factor	Relative Efficacy (RSE)
F35T5 (57.1 in 1450 mm) 	1	EC5 T535 J UNV 1	J	277	0.15	42.0	1.0	3650	87	2.38	0.83
				240	0.18	42.3	1.0	3650	87	2.38	0.83
				120	0.35	42.2	1.0	3650	87	2.38	0.83
F28T5 (45.2 in 1148 mm) 	1	EC5 T528 J UNV 1	J	277	0.12	32.6	1.0	2900	89	3.07	0.86
				240	0.14	32.9	1.0	2900	88	3.04	0.85
				120	0.27	32.9	1.0	2900	88	3.04	0.85
	2	EC5 T528 J UNV 2	J	277	0.23	64.5	1.0	5800	90	1.55	0.87
				240	0.27	65.0	1.0	5800	89	1.54	0.86
				120	0.54	65.2	1.0	5800	89	1.53	0.86
F21T5 (33.4 in 848 mm) 	1	EC5 T521 J UNV 1	J	277	0.09	25.8	1.0	2100	81	3.88	0.81
				240	0.12	25.8	1.0	2100	81	3.88	0.81
				120	0.22	25.8	1.0	2100	81	3.88	0.81
	2	EC5 T521 J UNV 2	J	277	0.17	46.0	1.0	4200	91	2.17	0.91
				240	0.20	47.2	1.0	4200	89	2.12	0.89
				120	0.39	47.2	1.0	4200	89	2.12	0.89
F14T5 (21.6 in 549 mm) 	1	EC5 T514 J UNV 1	J	277	0.07	19.0	1.0	1350	71	5.26	0.74
				240	0.08	19.2	1.0	1350	70	5.21	0.74
				120	0.16	19.2	1.0	1350	70	5.21	0.74
	2	EC5 T514 J UNV 2	J	277	0.12	32.8	1.0	2700	82	3.05	0.85
				240	0.14	33.3	1.0	2700	81	3.00	0.85
				120	0.28	33.3	1.0	2700	81	3.00	0.85

**LUTRON** SPECIFICATION SUBMITTAL

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Job Name: URBN Center	Model Numbers:
Job Number: 2047	



# Luminaire G | Lamp

FLUORESCENT

↔

T5 Miniature Bipin (5/8" diameter)

**PENTRON® T5 FLUORESCENT LAMPS**  
**PENTRON® PREMIER™ High Performance T5 ECOLOGIC® Lamps**

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life		CCT (K)	CRI	Approx Lumens		Notes
								Hours per start 3hrs	12hrs			Initial (Mean) 25°C/77°F	Initial (Mean) 35°C/95°F	
28	T5	48	45.8	Mini Bipin	20948	FP28/830/PM/ECO	40	30000	36000	3000	85	2730 (2540)	3050 (2835)	☀, 12, 13, 14, 17, 24
					20943	FP28/835/PM/ECO	40	30000	36000	3500	85	2730 (2540)	3050 (2835)	☀, 12, 13, 14, 17, 24
					20944	FP28/841/PM/ECO	40	30000	36000	4100	85	2730 (2540)	3050 (2835)	☀, 12, 13, 14, 17, 24




**PENTRON® High Performance T5 ECOLOGIC® Lamps**

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life		CCT (K)	CRI	Approx Lumens		Notes
								Hours per start 3hrs	12hrs			Initial (Mean) 25°C/77°F	Initial (Mean) 35°C/95°F	
28	T5	48	45.8	Mini Bipin	20975	FP28/827/ECO	40	20000	22000	2700	85	2600 (2420)	2900 (2695)	☀, 12, 13, 14, 17, 24, 36
					20868	FP28/830/ECO	40	30000	36000	3000	85	2600 (2420)	2900 (2695)	☀, 12, 13, 14, 17, 24
					20901	FP28/835/ECO	40	30000	36000	3500	85	2600 (2420)	2900 (2695)	☀, 12, 13, 14, 17, 24
					20902	FP28/841/ECO	40	30000	36000	4100	85	2600 (2420)	2900 (2695)	☀, 12, 13, 14, 17, 24
					22203	FP28/850/ECO	40	30000	36000	5000	85	2545 (2365)	2840 (2640)	☀, 12, 13, 14, 17, 24
					20990	FP28/865/ECO	40	30000	36000	6500	85	2400 (2230)	2750 (2560)	☀, 12, 13, 14, 17, 24
					14	T5	24	22.2	Mini Bipin	20907	FP14/830/ECO	40	20000	22000
20908	FP14/835/ECO	40	20000	22000						3500	85	1200 (1115)	1350 (1255)	☀, 12, 13, 14, 17, 24
20914	FP14/841/ECO	40	20000	22000						4100	85	1200 (1115)	1350 (1255)	☀, 12, 13, 14, 17, 24
20988	FP14/865/ECO	40	20000	22000						6500	85	1100 (1045)	1300 (1210)	☀, 12, 13, 14, 17, 24
21	T5	36	34.0	Mini Bipin	20919	FP21/830/ECO	40	20000	22000	3000	85	1900 (1765)	2100 (1955)	☀, 12, 13, 14, 17, 24
					20921	FP21/835/ECO	40	20000	22000	3500	85	1900 (1765)	2100 (1955)	☀, 12, 13, 14, 17, 24
					20924	FP21/841/ECO	40	20000	22000	4100	85	1900 (1765)	2100 (1955)	☀, 12, 13, 14, 17, 24
35	T5	60	57.6	Mini Bipin	20925	FP35/830/ECO	40	20000	22000	3000	85	3300 (3070)	3650 (3395)	☀, 12, 13, 14, 17, 24
					20926	FP35/835/ECO	40	20000	22000	3500	85	3300 (3070)	3650 (3395)	☀, 12, 13, 14, 17, 24
					20927	FP35/841/ECO	40	20000	22000	4100	85	3300 (3070)	3650 (3395)	☀, 12, 13, 14, 17, 24

For the current listing of available products and more complete product information, please visit us at [www.sylvania.com](http://www.sylvania.com). Specifications subject to change without notice.

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## Luminaire H | Ballast

EcoSystem®	Five Control Input	Digital Dimming Ballasts
369-454c 1 2.29.12		
<h3>EcoSystem® Multiple Control Input Ballasts</h3> <p>Digital electronic dimming ballasts maximize the benefits of a lighting management system. EcoSystem® Ballasts offer 100% to 10% dimming; ideal for use where saving energy, increasing flexibility, and maximizing productivity are the goals of the lighting design.</p>		
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Continuous, flicker-free dimming from 100% to 10%</li> <li>• Available with and without an integral sensor connection</li> <li>• Integral sensor connection provides power for and responds to one occupancy sensor, one photo sensor, and one personal control input (infrared receiver or wallstation)</li> <li>• Communicates status and sensor inputs over the EcoSystem® digital link</li> <li>• Programmed rapid start design ensures full rated lamp life while dimming and cycling</li> <li>• Lamps turn on to any dimmed level without flashing to full brightness</li> <li>• Low harmonic distortion throughout the entire dimming range</li> <li>• Frequency of operation ensures that ballast does not interfere with infrared devices</li> <li>• End-of-lamp-life protection circuitry ensures safe operation throughout entire lamp life</li> <li>• Ultra-quiet operation</li> <li>• Nonvolatile memory restores all ballast settings after power failure</li> <li>• Ballasts maintain consistent light output for linear lamp lengths (i.e. 4 ft [1.5 m], 3 ft [1 m], 2 ft [0.5 m] have same relative output)</li> <li>• Protected from miswires of any input power to control lead, or from lamp leads to each other and/or ground</li> <li>• 100% performance tested at factory</li> <li>• Custom ballast factors available.</li> </ul> <p>Design tool and specifications can be found at <a href="http://www.lutron.com/ballasttool">www.lutron.com/ballasttool</a></p>	 <p><b>EcoSystem® case type G</b></p>  <p><b>EcoSystem® case type J</b></p>	
 SPECIFICATION SUBMITTAL <span style="float: right;">Page <span style="border: 1px solid black; padding: 0 5px;">1</span></span>		
Job Name: <input style="width: 150px;" type="text" value="URBN CENTER"/>		Model Numbers: <input style="width: 150px;" type="text"/>
Job Number: <input style="width: 100px;" type="text" value="2047"/>		<input style="width: 150px;" type="text"/>

**Specifications**

**Standards**

- California Energy Commission (CEC) Listed\*
- UL Listed (evaluated to the requirements of UL935)
- CSA certified (evaluated to the requirements of C22.2 No. 74)
- Select ballasts are NOM Listed (contact Lutron for more information)
- S Mark Certified
- Class P thermally protected
- Meets ANSI C82.11 High Frequency Ballast Standard
- Meets FCC Part 18 Non-Consumer requirements for EMI/RFI emissions
- Meets ANSI C62.41 Category A surge protection standards up to and including 4 kV
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20
- Lutron Quality Systems registered to ISO 9001:2008

\* Not required for T5 twin tube models

**Performance**

- Operating Voltage: 120, 220/240, 277 V~ at 50 or 60 Hz
- Grounding: ballast and fixture must be grounded for proper dimming
- Dimming Range: 100% to 10% measured relative light output
- Lamp Starting: programmed rapid start
- Lamp Current Crest Factor: less than 1.7
- Light Output Variation: Constant ±2% light output for line voltage variations of ±10%
- Lamp Life: Average lamp life meets or exceeds specified lamp ratings
- Power Factor: 0.95 minimum
- Total Harmonic Distortion (THD): Less than 10%\*\*
- Maximum Inrush Current: 3 A per ballast at 277 V~, 7 A per ballast at 120 V~
- Class 2 Output: +20 V=, 50 mA maximum (one daylight sensor, one keypad and one occupancy sensor can be connected)

\*\* Models EC5T514JUNV1 and EC5T817JUNV1 have less than 15% THD

**Environment**

- Minimum lamp starting temperature: 50 °F (10 °C)
- Relative humidity: less than 90% non-condensing
- Sound Rating: Class A
- Maximum ballast case temperature: 75 °C

**Ballast Wiring & Mounting**

- Ballast is grounded by a mounting screw to the fixture
- Terminal blocks on the ballast accept the following wire gauges:  
Power Wiring, Lamp Wiring, and EcoSystem® digital link:  
    only one 16 or 18 AWG (0.75 or 1.5 mm<sup>2</sup>) solid per terminal  
Class 2 Sensors:  
    only one 22 AWG (0.25 mm<sup>2</sup>) solid per terminal
- Only one wire per terminal
- Class 2 sensor wiring must be separated from all power and Class 1 wiring, consult all applicable local and national codes
- Ballast mounts using two screws (or sheet metal feature and one screw) within a fluorescent fixture
- Wiring from the ballast to lamp sockets shall not exceed 7 ft (2 m) for T8, T5, and T5HO lamps
- Wiring from the ballast to lamps sockets shall not exceed 3 ft (1 m) for T5 Twin Tube lamps

**Lamp Seasoning**

Refer to lamp manufacturer for lamp seasoning requirements prior to dimming.

**LUTRON® SPECIFICATION SUBMITTAL**




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Job Number: <input style="width: 80%;" type="text" value="2047"/>	<input style="width: 95%;" type="text"/>

<b>EcoSystem®</b>	<b>Five Control Input</b>	<b>Digital Dimming Ballasts</b>																				
		369-454c 3 2.29.12																				
<b>How to Build a Model Number</b>																						
<b>Example</b>																						
<table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black; padding: 2px 5px;">EC</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">5</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">T8</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">32</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">G</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">UNV</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">2</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">1</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">0</td> <td style="border-bottom: 1px solid black; padding: 2px 5px;">L</td> </tr> <tr> <td style="text-align: center; padding: 2px 5px;">A</td> <td style="text-align: center; padding: 2px 5px;">B</td> <td style="text-align: center; padding: 2px 5px;">C</td> <td style="text-align: center; padding: 2px 5px;">D</td> <td style="text-align: center; padding: 2px 5px;">E</td> <td style="text-align: center; padding: 2px 5px;">F</td> <td style="text-align: center; padding: 2px 5px;">G</td> <td style="text-align: center; padding: 2px 5px;">H</td> <td style="text-align: center; padding: 2px 5px;">I</td> <td></td> </tr> </table>			EC	5	T8	32	G	UNV	2	1	0	L	A	B	C	D	E	F	G	H	I	
EC	5	T8	32	G	UNV	2	1	0	L													
A	B	C	D	E	F	G	H	I														
<b>A - Type of Ballast</b>																						
EC = EcoSystem® Ballast																						
<b>B - Control Type</b>																						
5 = 5 control inputs: EcoSystem® digital link, 3-wire phase control input, daylight sensor, occupancy sensor, and personal control (IR receiver or wallstation)																						
<b>C - Lamp Size (2 characters)</b>																						
T8 or T5																						
<b>D - Lamp Wattage (2 characters)</b>																						
XX = Lamp wattage (e.g. 54 for 54 W lamp)																						
<b>E - Case Type (1 character)</b>																						
G or J																						
<b>F - Voltage (3 characters)</b>																						
UNV = Universal voltage (120, 220/240, 277 V~)																						
<b>G - Number of Lamps (1 character)</b>																						
1, 2, or 3																						
<b>H - Ballast Factor</b>																						
Blank = Default (0.85 for T8 and 1.0 for T5)																						
17 = 1.17 BF																						
CXX = Custom ballast factor of 0.XX																						
<b>I - Optional Power and Lamp Leads (1 character)</b>																						
Blank = No leads																						
L = Power and lamp leads included (only available on select models in G case)																						
<b>LUTRON® SPECIFICATION SUBMITTAL</b>		Page <span style="border: 1px solid black; padding: 0 5px;">3</span>																				
<b>Job Name:</b>	<b>Model Numbers:</b>																					
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<b>Job Number:</b> 2047																						

EcoSystem® Five Control Input Digital Dimming Ballasts

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EcoSystem® Ballasts with Integral Sensor Connection for Linear T5 HO Lamps

Lamp	No. of Lamps	Model	Case Size	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm)	System Efficacy (lm/W)	Ballast Efficacy Factor	Relative Efficacy (RSE)
F54T5 (45.2 in 1148 mm)	1	EC5 T554 J UNV 1	J	277	0.21	56.5	1.0	5000	88	1.77	0.96
				240	0.24	58.0	1.0	5000	86	1.73	0.93
				120	0.48	57.9	1.0	5000	86	1.73	0.93
	2	EC5 T554 J UNV 2	J	277	0.40	110.1	1.0	10,000	91	0.91	0.98
				240	0.52	119.0	1.0	10,000	84	0.84	0.91
				120	0.99	119.3	1.0	10,000	84	0.84	0.91
F39T5 (33.4 in 848 mm)	1	EC5 T539 J UNV 1	J	277	0.16	43.3	1.0	3500	81	2.31	0.90
				240	0.18	44.0	1.0	3500	80	2.27	0.89
				120	0.37	44.0	1.0	3500	80	2.27	0.89
	2	EC5 T539 J UNV 2	J	277	0.30	83.0	1.0	7000	84	1.20	0.94
				240	0.35	84.0	1.0	7000	83	1.19	0.93
				120	0.70	84.3	1.0	7000	83	1.19	0.93
F24T5 (21.6 in 549 mm)	1	EC5 T524 J UNV 1	J	277	0.11	30.0	1.0	2000	67	3.33	0.80
				240	0.13	28.8	1.0	2000	69	3.47	0.83
				120	0.24	28.8	1.0	2000	69	3.47	0.83
	2	EC5 T524 J UNV 2	J	277	0.20	54.8	1.0	4000	73	1.82	0.89
				240	0.23	54.0	1.0	4000	74	1.85	0.89
				120	0.45	53.9	1.0	4000	74	1.86	0.89

**LUTRON** SPECIFICATION SUBMITTAL

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Job Name: URBN CENTER	Model Numbers:	
Job Number: 2047		



# Luminaire H | Lamp

FLUORESCENT

T5 Miniature Dipin (5/8" diameter)

PENTRON® T5 FLUORESCENT LAMPS  
 PENTRON® High Output, High Performance T5 ECOLOGIC® Lamps

Nominal Voltage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life		CCT (K)	CRI	Approx Lumens		Notes
								Hours per start 3hrs	12hrs			Initial (Mean) 25°C/77°F	Initial (Mean) 35°C/95°F	
54	T5	48	45.8	Mini Dipin	20903	FP54/830/HO/ECO	40	30000	40000	3000	85	4450 (4140)	5000 (4650)	☀️, 13, 14, 17, 24
					20904	FP54/835/HO/ECO	40	30000	40000	3500	85	4450 (4140)	5000 (4650)	☀️, 13, 14, 17, 24
					20906	FP54/841/HO/ECO	40	30000	40000	4100	85	4450 (4140)	5000 (4650)	☀️, 13, 14, 17, 24
					20949	FP54/850/HO/ECO	40	30000	40000	5000	85	4360 (4070)	4900 (4560)	☀️, 13, 14, 17, 24
					20862	FP54/865/HO/ECO	40	30000	40000	6500	85	4050 (3765)	4750 (4420)	☀️, 13, 14, 17, 24
24	T5	24	22.2	Mini Dipin	20928	FP24/830/HO/ECO	40	30000	36000	3000	85	1750 (1625)	2000 (1860)	☀️, 13, 14, 17, 24
					20929	FP24/835/HO/ECO	40	30000	36000	3500	85	1750 (1625)	2000 (1860)	☀️, 13, 14, 17, 24
					20931	FP24/841/HO/ECO	40	30000	36000	4100	85	1750 (1625)	2000 (1860)	☀️, 13, 14, 17, 24
30	T5	36	34	Mini Dipin	20932	FP39/830/HO/ECO	40	30000	36000	3000	85	3100 (2885)	3500 (3255)	☀️, 13, 14, 17, 24
					20933	FP39/835/HO/ECO	40	30000	36000	3500	85	3100 (2885)	3500 (3255)	☀️, 13, 14, 17, 24
					20934	FP39/841/HO/ECO	40	30000	36000	4100	85	3100 (2885)	3500 (3255)	☀️, 13, 14, 17, 24
80	T5	60	57.6	Mini Dipin	20935	FP80/830/HO/ECO	40	25000	30000	3000	85	6150 (5720)	7000 (6510)	☀️, 13, 14, 17, 24
					20936	FP80/835/HO/ECO	40	25000	30000	3500	85	6150 (5720)	7000 (6510)	☀️, 13, 14, 17, 24
					20937	FP80/841/HO/ECO	40	25000	30000	4100	85	6150 (5720)	7000 (6510)	☀️, 13, 14, 17, 24

PENTRON® High Output, Amalgam, Wide Temperature Range T5 ECOLOGIC® Lamps

Nominal Voltage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life		CCT (K)	CRI	Approx Lumens		Notes
								Hours per start 3hrs	12hrs			Initial (Mean) 25°C/77°F	Initial (Mean) 35°C/95°F	
54	T5	48	45.8	Mini Dipin	21042	FP54/835/C/HO/ECO	40	25000	35000	3500	85	4900 (4560)	4900 (4560)	☀️, 13, 14, 17, 24, 34
					21043	FP54/841/C/HO/ECO	40	25000	35000	4100	85	4900 (4560)	4900 (4560)	☀️, 13, 14, 17, 24, 34
					21044	FP54/850/C/HO/ECO	40	25000	35000	5000	85	4800 (4464)	4800 (4464)	☀️, 13, 14, 17, 24, 34

For the current listing of available products and more complete product information, please visit us at [www.sylvania.com](http://www.sylvania.com). Specifications subject to change without notice.

# Luminaire J | Driver

LED Dimming Driver

Hi-lume® A-Series L3D

Architectural Dimming

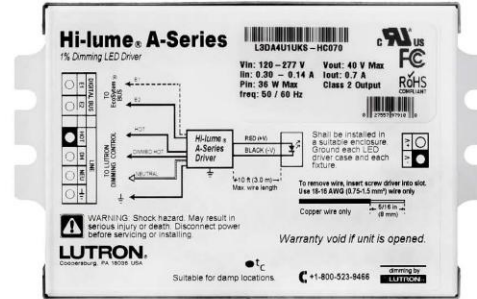
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## Hi-lume® A-Series Driver Overview EcoSystem® or 3-wire control

Hi-lume® A-Series Driver is a high-performance LED driver that provides smooth, continuous 1% dimming for virtually any LED fixture, whether it requires constant current or constant voltage. It is the most versatile LED driver offered today due to its compatibility with a wide variety of LED arrays, multiple form factors, and numerous control options.

### Features

- Continuous, flicker-free dimming from 100% to 1%.
- Compatible with Energi Savr Node™ with EcoSystem® unit, GRAFIK Eye® QS control unit, PowPak™ dimming module with EcoSystem®, and Quantum® systems, allowing for integration into a planned or existing EcoSystem® lighting control solution. Please see chart at the end of this document or contact Lutron for details regarding compatible controls.
- Standard 3-wire line-voltage phase-control technology for consistent dimming performance and compatibility with all Lutron® 3-wire fluorescent controls.
- Protected from miswires of input power to EcoSystem® control inputs.
- 100% performance tested at factory.
- 100% burned in at factory.
- A rated lifetime of 50,000 hours @  $T_c = 149^\circ\text{F}$  ( $65^\circ\text{C}$ ).
- UL recognized for United States and Canada.
- FCC Part 15 compliant for commercial applications at 120 V~ or 277 V~.
- Pulse Width Modulation (PWM) or Constant Current Reduction (CCR) dimming methods available. See Application Note #360 for details.
- For more information please go to: [www.lutron.com/HilumeLED](http://www.lutron.com/HilumeLED)



### Hi-lume® A-Series, case type K

3.00 in (76 mm) W x 1.00 in (25 mm) H x 4.90 in (124 mm) L



### Hi-lume® A-Series, case type M

1.18 in (30 mm) W x 1.00 in (25 mm) H x 14.25 in (362 mm) L

**LUTRON** SPECIFICATION SUBMITTAL

Page 1

Job Name: URBN Center	Model Numbers:
Job Number: 2047	

**Specifications**

**Performance**

- Dimming Range: 100% to 1%
- Operating Voltage: 120-277 V~ at 50/60 Hz
- A rated lifetime of 50,000 hours @ T<sub>c</sub> = 149 °F (65 °C). Contact Lutron for derating information.
- Patented thermal foldback protection
- LEDs turn on to any dimmed level without flashing to full brightness.
- Nonvolatile memory restores all driver settings after power failure.
- Power Factor: > 0.90 at 40 W
- Standby Power Consumption: < 1.0 W
- Total Harmonic Distortion (THD): < 20% at 40 W
- Inrush Current: < 2 A
- Inrush Current Limiting Circuitry: eliminates circuit breaker tripping, switch arcing and relay failure.
- Open circuit protected
- Short circuit protected
- Turn-on time: < 1 second
- PWM Dimming Frequency: 550 Hz

**Environmental**

- Sound Rating: Class A.
- Relative Humidity: Maximum 90% non-condensing.
- Minimum operating ambient temperature T<sub>A</sub> = 32 °F (0 °C).

**Standards**

- Meets ANSI C62.41 category A surge protection standards up to and including 4 kV.
- FCC Part 15 compliant for commercial applications at 120 V~ or 277 V~.
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20.
- Lutron® Quality Systems registered to ISO 9001.2008.
- UL 8750 recognized.
- Class 2 output available.
- Meets LED Driver requirements for Energy Star 1.1.

**Driver Wiring & Mounting**

- Driver is grounded by a mounting screw to the grounded fixture (or by terminal connection on the K case).
- Terminal blocks on the driver accept one solid wire per terminal from 18 to 16 AWG (0.75 to 1.5 mm<sup>2</sup>).
- Fixture must be grounded in accordance with local and national electrical codes.
- Maximum driver-to-LED light engine wire length is 10 ft (3.0 m).

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Job Number: <input style="width: 80%;" type="text" value="2047"/>	<input style="width: 90%;" type="text"/>	<input style="width: 90%;" type="text"/>

How to Build a Model Number: Hi-lume® A-Series

L3DA4U1U -

**Case Size:**  
K = Compact  
M = Stick

**Case Style:**  
S = Studded  
(K case only)  
N = Non-Studded

**example: L3DA4U1UKS-HC070**  
For further assistance selecting your model number, contact our LED Center of Excellence at 1-877-346-5338 or LEDSD@lutron.com

**Current Level (for Constant Current):**  
020 = 0.20 A; 021 = 0.21 A . . . 210 = 2.10 A

**Voltage Level (for Constant Voltage):**  
100 = 10.0 V; 105 = 10.5 V . . . 600 = 60.0 V

**Driver Output:**  
C = Constant current driver  
with pulse width modulation (PWM) dimming  
A = Constant current driver  
with constant current reduction (CCR) dimming  
V = Constant voltage driver  
with pulse width modulation (PWM) dimming

LED Load Output Range (see the following pages for more detail):

Class 2 Constant Voltage

- A = 10.0 V–12.0 V
- B = 12.5 V–20.0 V
- C = 20.5 V–24.0 V
- D = 24.5 V–38.0 V

Isolated Non-Class 2 Constant Voltage

- X = 38.5 V–60.0 V

Class 2 Constant Current

- E = 0.20 A–0.50 A 30 V–54 V
- F = 0.51 A–1.00 A 30 V–54 V
- G = 0.20 A–0.70 A 8 V–20 V
- H = 0.20 A–0.70 A 15 V–38 V
- I = 0.71 A–1.05 A 8 V–20 V
- J = 0.71 A–1.05 A 15 V–38 V
- K = 1.06 A–1.50 A 8 V–20 V
- L = 1.06 A–1.50 A 15 V–38 V
- M = 1.51 A–2.10 A 8 V–20 V

Isolated Non-Class 2 Constant Current

- Y = 0.20 A–0.50 A 30 V–60 V
- Z = 0.51 A–1.00 A 30 V–60 V

Job Name: URBN Center	Model Numbers:	
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LED Dimming Driver

Hi-lume® A-Series L3D

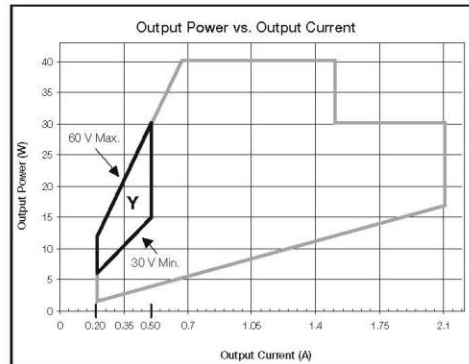
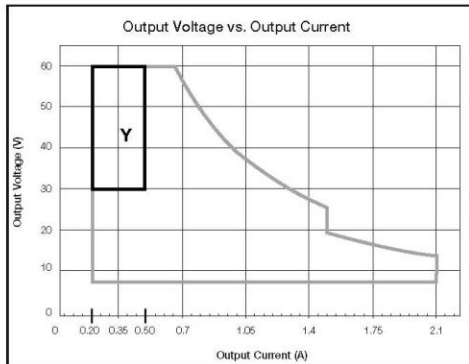
Architectural Dimming

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“Y” Output Range, Current Driver Models

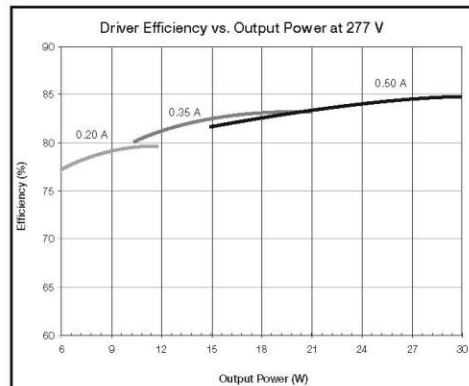
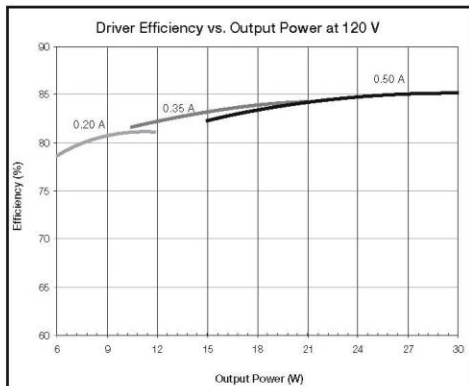
Driver Type	Output Dimming Method	Output Voltage	Output Current	Output Power	Standards Recognition
Constant Current Driver (Isolated, Non-Class 2)	Pulse Width Modulation (PWM) OR Constant Current Reduction (CCR)	30 – 60 V	0.20 – 0.50 A	6 – 30 W	

Current Driver Operation Range:



Typical Performance Specifications:

Parameter	120 V	240 V	277 V	Test Conditions
Input Current	280 mA	150 mA	120 mA	T <sub>A</sub> = 25° C, 0.50 A, 30 W load, Max. Light Output, K enclosure
Power Factor	0.99	0.98	0.97	
THD	8%	9%	9%	
Driver Efficiency	85%	86%	86%	



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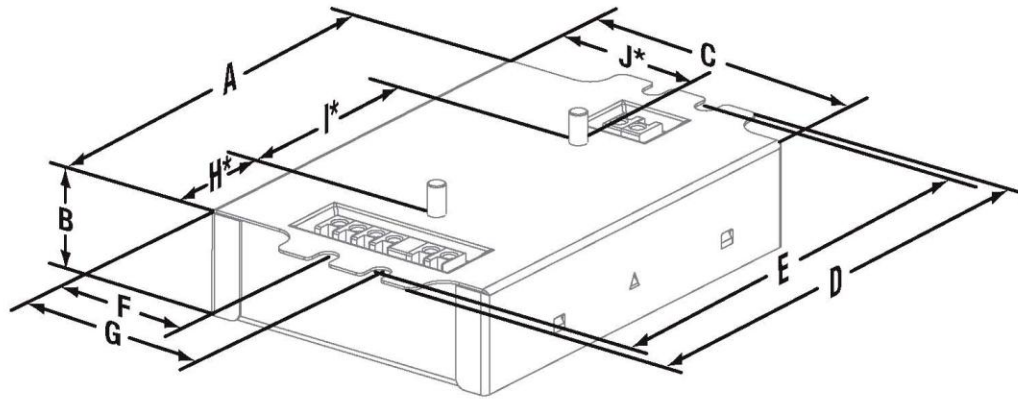
LED Dimming Driver

Hi-lume® A-Series L3D

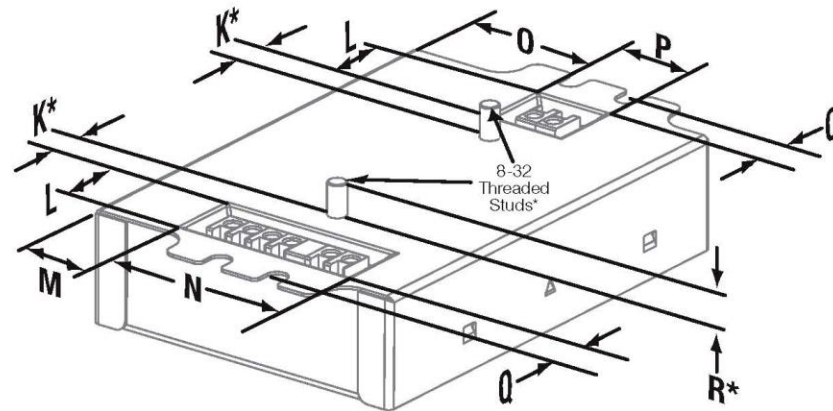
Architectural Dimming

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**K Case: Case Dimensions**



**K Case: Connector Location Dimensions**



A	4.20 in (107 mm)	F	1.42 in (36 mm)	L	0.65 in (16.5 mm)	R*	0.29 in (7 mm)
B	1.00 in (25 mm)	G	1.99 in (51 mm)	M	0.75 in (19 mm)		
C	3.00 in (76 mm)	H*	1.11 in (28 mm)	N	1.73 in (44 mm)		
D	4.90 in (124 mm)	I*	2.00 in (51 mm)	O	1.33 in (34 mm)		
E	4.60 in (117 mm)	J*	1.60 in (41 mm)	P	0.74 in (19 mm)		
	(mounting center)	K*	0.33 in (8.3 mm)	Q	0.32 in (8 mm)		

\* Applies to studded K case only.

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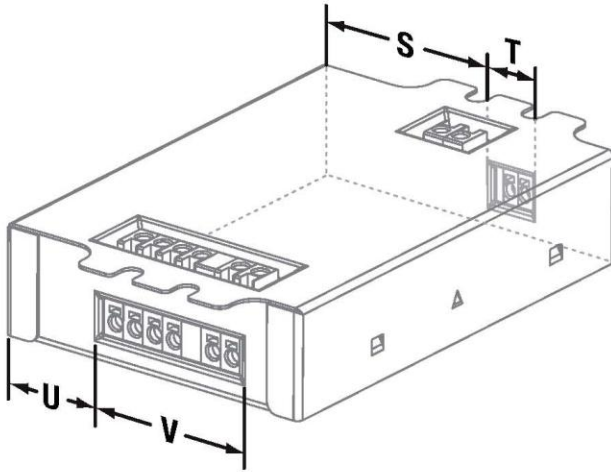
LED Dimming Driver

Hi-lume® A-Series L3D

Architectural Dimming

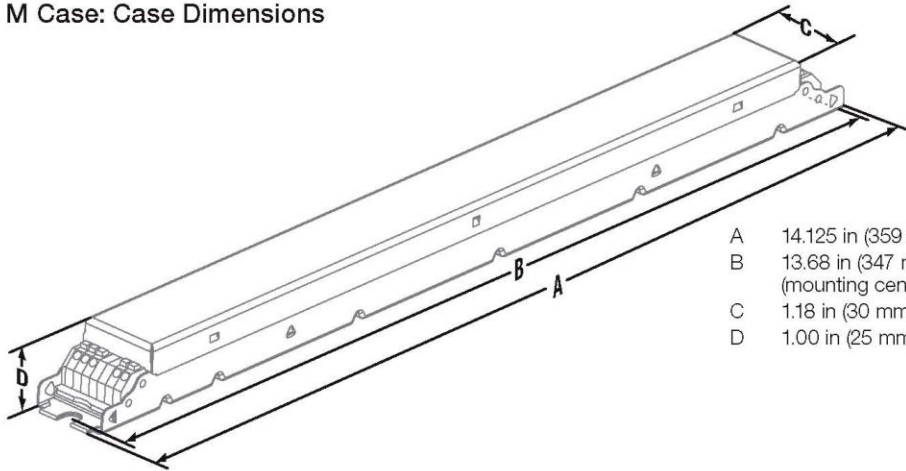
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**K Case: Side Entry Connector Location Dimensions (Non-Studded)**



- S 1.38 in (35 mm)
- T 0.64 in (16 mm)
- U 0.88 in (22 mm)
- V 1.53 in (39 mm)

**M Case: Case Dimensions**



- A 14.125 in (359 mm)
- B 13.68 in (347 mm)  
(mounting center)
- C 1.18 in (30 mm)
- D 1.00 in (25 mm)

**LUTRON** SPECIFICATION SUBMITTAL

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LED Dimming Driver
Hi-lume® A-Series L3D
Architectural Dimming

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### Wiring Diagram for 3-Wire Control

The diagram shows a Hi-lume A-Series driver connected to an LED light engine. On the left, four wires are connected to the driver: a black wire labeled 'Switched Hot (Black)', an orange wire labeled 'Dimmed Hot (Orange)', a white wire labeled 'Neutral (White)', and a green wire labeled 'Ground (Green)'. The driver is also connected to a ground symbol labeled 'Ground<sup>2</sup>'. On the right, two wires connect the driver to the LED light engine: a red wire labeled '+V<sup>3</sup> (Red)' and a black wire labeled '-V<sup>3</sup> (Black)'.

### Wiring Diagram for EcoSystem® Digital Control

The diagram shows a Hi-lume A-Series driver connected to an LED light engine. On the left, five wires are connected to the driver: a black wire labeled 'Switched Hot (Black)', a white wire labeled 'Neutral (White)', a green wire labeled 'Ground (Green)', and two purple wires labeled 'E1 (Purple)' and 'E2 (Purple)'. The driver is also connected to a ground symbol labeled 'Ground<sup>2</sup>'. On the right, two wires connect the driver to the LED light engine: a red wire labeled '+V<sup>3</sup> (Red)' and a black wire labeled '-V<sup>3</sup> (Black)'.

**Note:** Colors shown correspond to terminal blocks on driver.

<sup>1</sup> Ground wire connection available on K case models only.  
<sup>2</sup> Fixture and driver case must be grounded in accordance with local and national electrical codes.  
<sup>3</sup> Maximum driver-to-LED light engine wire length is 10 ft (3.0 m).

LUTRON® SPECIFICATION SUBMITTAL

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Job Name: <input style="width: 95%;" type="text" value="URBN Center"/>	Model Numbers: <input style="width: 95%;" type="text"/>
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LED Dimming Driver

Hi-lume® A-Series L3D

Architectural Dimming

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**Compatible Controls**

- Guaranteed performance specifications with the controls listed in the chart below.
- For assistance selecting controls, contact our LED Center of Excellence at 1-877-346-5338 or LEDSD@lutron.com

Product	Part Number		Fixtures per Control <sup>1</sup>		Measured Light Output Range
	120 V	277 V	120 V	277 V	
Nova T <sup>2</sup> ®	NTF-10-	NTF-10-277-	1 - 41	1 - 44	100% - 1%
	NTF-103P-	NTF-103P-277-	1 - 20	1 - 33	100% - 1%
Nova®	NF-10-	NF-10-277-	1 - 41	1 - 44	100% - 1%
	NF-103P-	NF-103P-277-	1 - 20	1 - 33	100% - 1%
Vareo®	VF-10-		1 - 20	-	100% - 1%
Skylark®	SF-10P-	SF-12P-277-	1 - 20	1 - 33	100% - 1%
	SF-103P-	SF-12P-277-3	1 - 20	1 - 33	100% - 1%
Diva®	DVF-103P-	DVF-103P-277-	1 - 20	1 - 33	100% - 1%
	DVSCF-103P-	DVSCF-103P-277-	1 - 20	1 - 33	100% - 1%
Ariadni®	AYF-103P-	AYF-103P-277-	1 - 20	1 - 44	100% - 1%
Verti®	VTF-6A-		1 - 15	1 - 33	100% - 1%
Maestro®	MAF-6AM-	MAF-6AM-277-	1 - 15	1 - 33	100% - 1%
	MSCF-6AM-	MSCF-6AM-277-	1 - 15	1 - 33	100% - 1%
Maestro Wireless®	MRF2-F6AN-DV-		1 - 15	1 - 33	100% - 1%
RadioTouch®	RTA-RX-F-		1 - 41	1 - 88	100% - 1%
Spacer System®	SPSF-6A-	SPSF-6A-277-	1 - 15	1 - 33	100% - 1%
	SPSF-6AM-	SPSF-6AM-277-	1 - 15	1 - 33	100% - 1%
Lyneo® Lx	LXF-103PL-	LXF-103PL-277-	1 - 20	1 - 33	100% - 1%
RadioRA® 2	RRD-F6AN-DV-		1 - 15	1 - 33	100% - 1%
HomeWorks® QS	HQRD-F6AN-DV		1 - 15	1 - 33	100% - 1%
Interfaces <sup>2</sup>	PHPM-3F-120		1 - 41	-	100% - 1%
	PHPM-3F-DV		1 - 41	1 - 88	100% - 1%
	GRX-FDBI-16A		1 - 41	1 - 88	100% - 1%
PowPak™ dimming Module with EcoSystem	RMJ-ECO32-DV-B		32 per EcoSystem link		100% - 1%
Energi Savr Node™ with EcoSystem®	QSN-1ECO-S, QSN-2ECO-S		64 per EcoSystem link		100% - 1%
GRAFIK Eye® QS with EcoSystem®	QSGRJ-_E, QSGR-_E		64 per EcoSystem link		100% - 1%
Quantum®	Various		64 per EcoSystem link		100% - 1%

<sup>1</sup> Fixtures per Control value assumes a 40 W fixture. Number of fixtures may be higher if wattage is less than 40 W and may be lower if ganged. See control specification submittal sheet for details.

<sup>2</sup> For use with 3-wire controls or Commercial Systems, RadioRA® Systems or Home Systems applications.

**NOTE:** Contact Lutron Technical Support for derating rules when using wallbox controls on the Hi-lume® A-Series LED Driver in multi-gang applications.

For the list of compatible controls, visit [lutron.com/HiLumeLED](http://lutron.com/HiLumeLED) and select "EcoSystem/3-wire Control Report Card."

**LUTRON** SPECIFICATION SUBMITTAL

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**EcoSystem® Wiring Diagrams**

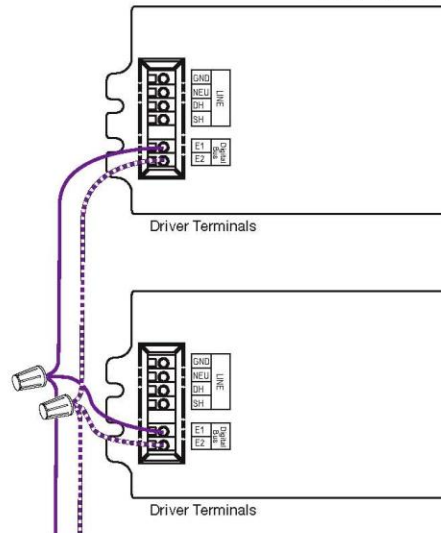
**EcoSystem® Digital Link Overview**

- The EcoSystem® Digital Link wiring (E1 and E2) connects the digital ballasts and drivers together to form a lighting control system.
- Each EcoSystem® Digital Link supports up to 64 digital ballasts, LED drivers or EcoSystem® Modules (e.g. C5-BMJ-16A, C5-XPJ-16A), 32 occupancy sensors (64 occupancy sensors with Energi Savr Node™ with EcoSystem®), 16 daylight sensors, and 64 wallstations or IR receivers.\*
- Sensors do not directly connect to Hi-Lume® A-Series LED drivers.
- E1 and E2 (EcoSystem® digital link wires) are polarity insensitive and can be wired in any topology.
- An Energi Savr Node™ with EcoSystem® unit, GRAFIK Eye® QS control unit with EcoSystem®, PowPak™ dimming module with EcoSystem®, or Quantum® system provides power for the EcoSystem® Digital Link and supports system programming.\*
- All EcoSystem® Digital Link programming is completed by using the Energi Savr App for Apple iPad, iPod Touch or iPhone mobile digital devices, GRAFIK Eye® QS with EcoSystem®, PowPak™ dimming module with EcoSystem®, or Quantum® System.

**EcoSystem® Digital Link Wiring**

- Driver EcoSystem® Digital Link terminals only accept one 18 to 16 AWG (0.75 to 1.5 mm<sup>2</sup>) solid copper wire per terminal.
  - Make sure that the supply breaker to the Digital Driver and EcoSystem® Digital Link Supply is OFF when wiring.
  - Connect the two conductors to the two Digital Driver terminals E1 and E2 as shown.
  - Using two different colors for E1 and E2 will reduce confusion when wiring several drivers together.
  - The EcoSystem® Digital Link may be wired Class 1 or IEC/PELV NEC® Class 2. Consult applicable electrical codes for proper wiring practices.
- \* PowPak™ dimming module with EcoSystem® provides power for the EcoSystem® Digital Link and can support 32 digital ballasts, LED drivers or EcoSystem® Modules, 6 Wireless Occupancy Sensors, 1 Wireless Daylight Sensor, and 9 Pico Wireless Controllers.

Apple, iPad, iPod Touch, and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries.



To the EcoSystem® Digital Bus and additional drivers and/or ballasts

**Notes**

- The EcoSystem® Digital Link Supply does not have to be located at the end of the Digital Link.
- EcoSystem® Digital Link length is limited by the wire gauge used for E1 and E2 as follows:

Wire Gauge	Digital Link Length (max)
12 AWG	2200 ft
14 AWG	1400 ft
16 AWG	900 ft
18 AWG	550 ft

Wire Size	Digital Link Length (max)
4.0 mm <sup>2</sup>	828 m
2.5 mm <sup>2</sup>	517 m
1.5 mm <sup>2</sup>	310 m
1.0 mm <sup>2</sup>	207 m
0.75 mm <sup>2</sup>	155 m

**LUTRON® SPECIFICATION SUBMITTAL**

Job Name: URBN Center	Model Numbers:
Job Number: 2047	



**ELECTRICIANS AND CONTRACTORS**

**Driver Leads**

Maximum driver-to-LED light engine wire length is 10 ft (3.0 m).

**Wiring and Grounding**

Driver and lighting fixture must be grounded. Drivers must be installed per national and local electrical codes.

**LED Load Replacement**

For Class 2 rated drivers, the LED load can be changed while the driver is installed and powered.

**Maximum Driver Operating Temperature**

Driver case temperature (T<sub>c</sub>) must not exceed UL conditions of acceptability in end product.

For 50,000 hour lifetime, driver case temperature (T<sub>c</sub>) must not exceed 149 °F (65 °C).

**FACILITIES MANAGERS**

**SERVICE**

**Warranty**

For warranty information, please visit <http://www.lutron.com/TechnicalDocumentLibrary/Ballast%20and%20Driver%20Warranty.pdf>

**Replacement Parts**

When ordering Lutron® replacement parts please provide the full model number. Consult Lutron if you have any questions.

**Further Information**

For further information, please visit us at [www.lutron.com/hilumeLED](http://www.lutron.com/hilumeLED) or contact our LED Control Center of Excellence at 1.877.346.5338 or [LEDs@lutron.com](mailto:LEDs@lutron.com)

Job Name: URBN Center	Model Numbers:	
Job Number: 2047		

# Luminaire K | Ballast

EcoSystem®

Compact Fluorescent Ballasts

Digital Dimming Ballasts

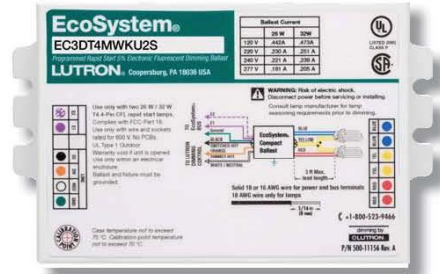
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## EcoSystem® Digital Ballasts

EcoSystem compact ballasts provide high-performance dimming for any compact fluorescent application, including within an EcoSystem Lighting Control System. EcoSystem compact ballasts offer 100% to 5% dimming, providing both energy savings and lighting flexibility.

### Features

- Continuous, flicker-free dimming from 100% to 5%
  - Compatible with EcoSystem Energi Savr Noder™, GRAFIK Eye® QS with EcoSystem, PowPak™ dimming module with EcoSystem unit, and Quantum® systems, allowing for integration into an existing/planned EcoSystem lighting control system
  - Supports standard 3-wire line-voltage phase control technology.
  - Programmed rapid start design ensures full-rated lamp life while dimming and cycling.
  - Lamps turn on to any dimmed level without flashing to full brightness.
  - Low harmonic distortion throughout the entire dimming range.
  - Frequency of operation ensures that ballast does not interfere with infrared devices.
  - Inrush current limiting circuitry eliminates circuit breaker tripping, switch arcing, and relay failure.
  - Ultra-quiet operation.
  - Protected from miswires of any input power to control lead, or from lamp leads to each other and/or ground.
  - End-of-lamp-life protection circuitry ensures safe operation throughout entire lamp life
  - Nonvolatile memory restores all ballast settings after power failure
  - 100% compatible with all Lutron 3-wire fluorescent controls and EcoSystem digital controls.
  - 100% performance tested at factory.
  - Custom ballast factors available.
- Design tool and specifications can be found at [www.lutron.com/ballasttool](http://www.lutron.com/ballasttool)



EcoSystem ballast, case type K

**LUTRON** SPECIFICATION SUBMITTAL

Page 1

Job Name: URBN Center	Model Numbers:
Job Number: 2047	

**Specifications**

**Performance**

- Dimming Range: 100% to 1%
- Operating Voltage: 120-277 V~ at 50/60 Hz
- A rated lifetime of 50,000 hours @ T<sub>c</sub> = 149 °F (65 °C). Contact Lutron for derating information.
- Patented thermal foldback protection
- LEDs turn on to any dimmed level without flashing to full brightness.
- Nonvolatile memory restores all driver settings after power failure.
- Power Factor: > 0.90 at 40 W
- Standby Power Consumption: < 1.0 W
- Total Harmonic Distortion (THD): < 20% at 40 W
- Inrush Current: < 2 A
- Inrush Current Limiting Circuitry: eliminates circuit breaker tripping, switch arcing and relay failure.
- Open circuit protected
- Short circuit protected
- Turn-on time: < 1 second
- PWM Dimming Frequency: 550 Hz

**Environmental**

- Sound Rating: Class A.
- Relative Humidity: Maximum 90% non-condensing.
- Minimum operating ambient temperature T<sub>A</sub> = 32 °F (0 °C).

**Standards**

- Meets ANSI C62.41 category A surge protection standards up to and including 4 kV.
- FCC Part 15 compliant for commercial applications at 120 V~ or 277 V~.
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20.
- Lutron® Quality Systems registered to ISO 9001.2008.
- UL 8750 recognized.
- Class 2 output available.
- Meets LED Driver requirements for Energy Star 1.1.

**Driver Wiring & Mounting**

- Driver is grounded by a mounting screw to the grounded fixture (or by terminal connection on the K case).
- Terminal blocks on the driver accept one solid wire per terminal from 18 to 16 AWG (0.75 to 1.5 mm<sup>2</sup>).
- Fixture must be grounded in accordance with local and national electrical codes.
- Maximum driver-to-LED light engine wire length is 10 ft (3.0 m).

**LUTRON** SPECIFICATION SUBMITTAL



Page 2

Job Name: <span style="border: 1px solid black; padding: 2px;">URBN Center</span>	Model Numbers: <span style="border: 1px solid black; display: inline-block; width: 100%; height: 15px;"></span>
Job Number: <span style="border: 1px solid black; padding: 2px;">2047</span>	<span style="border: 1px solid black; display: inline-block; width: 100%; height: 15px;"></span>

EcoSystem® Compact Fluorescent Ballasts Digital Dimming Ballasts

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EcoSystem® Compact Fluorescent Ballast Models

Lamp Type	Lamp Watts	No. of Lamps	Model	Case Size	Input Voltage (VAC)	Input Current (A)	Input Power (W)	Ballast Factor (BF)	System Lumens (lm)	System Efficacy (lm/W)	Ballast Efficacy Factor	Relative Efficacy (RSE)
	18 W	1	EC3DT418KU1S (Studded)	K	120	0.18	21.3	0.95	1140	53.5	4.46	0.80
				K	220	0.10	21.1	0.95	1140	54.0	4.50	0.81
			EC3DT418KU1 (Non-studded)	K	240	0.09	21.4	0.95	1140	53.3	4.44	0.80
		2	EC3DT418KU2S (Studded)	K	120	0.34	41.1	0.95	2280	55.5	2.31	0.83
				K	220	0.18	39.6	0.95	2280	57.6	2.40	0.86
			EC3DT418KU2 (Non-studded)	K	240	0.17	39.4	0.95	2280	57.9	2.41	0.87
	26 W	1	EC3DT4MWKU1S (Studded)	K	120	0.22	26.4	0.95	1710	64.8	3.60	0.94
				K	220	0.12	26.8	0.95	1710	63.9	3.55	0.92
			EC3DT4MWKU1 (Non-studded)	K	240	0.11	26.9	0.95	1710	63.7	3.54	0.92
		2	EC3DT4MWKU2S (Studded)	K	120	0.43	51.6	0.95	3420	66.3	1.84	0.96
				K	220	0.23	49.9	0.95	3420	68.5	1.90	0.99
			EC3DT4MWKU2 (Non-studded)	K	240	0.21	50.6	0.95	3420	67.5	1.88	0.98
	32 W	1	EC3DT4MWKU1S (Studded)	K	120	0.29	34.8	0.95	2280	65.5	2.73	0.87
				K	220	0.15	33.0	0.95	2280	69.1	2.88	0.92
			EC3DT4MWKU1 (Non-studded)	K	240	0.14	33.6	0.95	2280	67.9	2.83	0.90
		2	EC3DT4MWKU2S (Studded)	K	120	0.55	66.0	0.95	4560	69.1	1.44	0.92
				K	220	0.29	64.5	0.95	4560	70.7	1.47	0.94
			EC3DT4MWKU2 (Non-studded)	K	240	0.26	63.0	0.95	4560	72.3	1.51	0.96
	42 W	1	EC3DT442KU1S (Studded)	K	120	0.36	43.2	0.95	3040	70.4	2.20	0.92
				K	220	0.20	42.9	0.95	3040	70.8	2.21	0.93
			EC3DT442KU1 (Non-studded)	K	240	0.18	42.7	0.95	3040	71.2	2.23	0.93
		2	EC3DT442KU2S (Studded)	K	120	0.73	87.6	0.95	6080	69.4	1.08	0.91
				K	220	0.39	85.9	0.95	6080	70.8	1.11	0.93
			EC3DT442KU2 (Non-studded)	K	240	0.35	85.1	0.95	6080	71.5	1.12	0.94
	K	277	0.31	85.4	0.95	6080	71.2	1.11	0.93			

NOTE: The "S" at the end of the ballast model number indicates a studded option. Remove the "S" for a non-studded ballast.

**LUTRON** SPECIFICATION SUBMITTAL

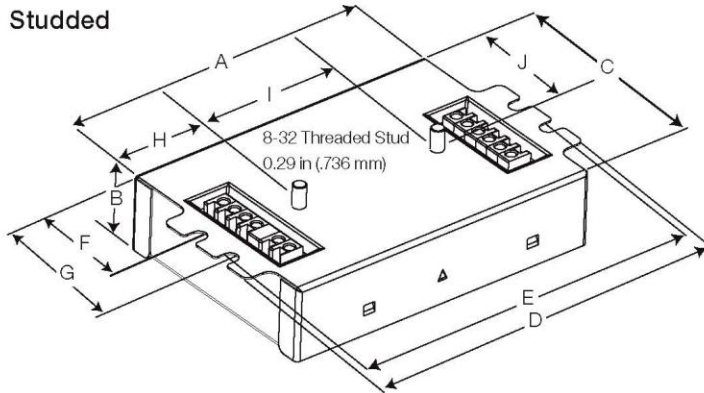
Page 3

Job Name:	URBN Center		Model Numbers:	
Job Number:	2047			

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EcoSystem® Compact Fluorescent Ballast Case Dimensions

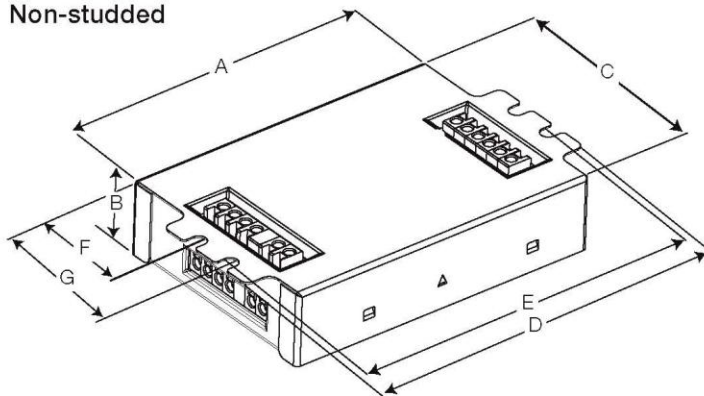
Studded



- A 4.20 in (107 mm)
- B 1.00 in (25 mm)
- C 3.00 in (76 mm)
- D 4.90 in (124 mm)
- E 4.60 in (117 mm)  
(mounting centers)
- F 1.42 in (36 mm)
- G 1.99 in (51 mm)
- H 1.09 in (28 mm)
- I 2.00 in (51 mm)
- J 1.60 in (41 mm)

NOTE: Studded version does not have side connectors.

Non-studded



- A 4.20 in (107 mm)
- B 1.00 in (25 mm)
- C 3.00 in (76 mm)
- D 4.90 in (124 mm)
- E 4.60 in (117 mm)  
(mounting centers)
- F 1.42 in (36 mm)
- G 1.99 in (51 mm)

Job Name: URBN Center	Model Numbers:
Job Number: 2047	



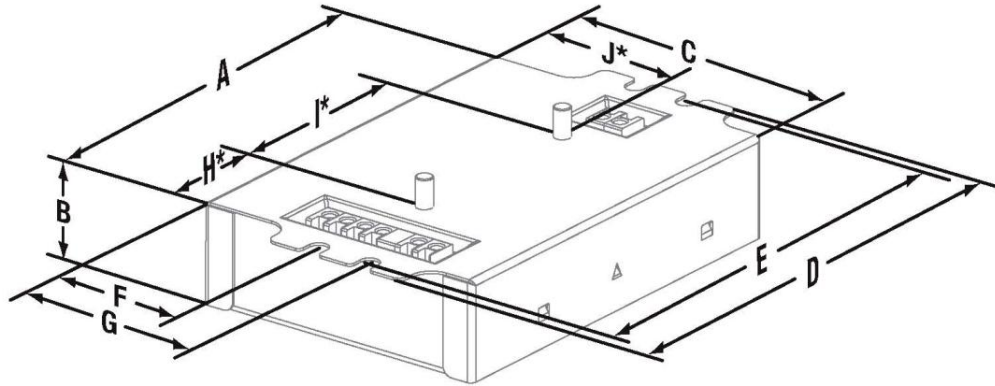
LED Dimming Driver

Hi-lume® A-Series L3D

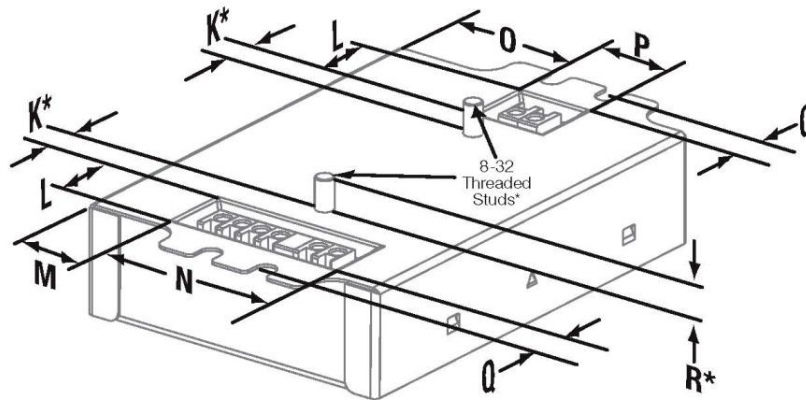
Architectural Dimming

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**K Case: Case Dimensions**



**K Case: Connector Location Dimensions**



A	4.20 in (107 mm)	F	1.42 in (36 mm)	L	0.65 in (16.5 mm)	R*	0.29 in (7 mm)
B	1.00 in (25 mm)	G	1.99 in (51 mm)	M	0.75 in (19 mm)		
C	3.00 in (76 mm)	H*	1.11 in (28 mm)	N	1.73 in (44 mm)		
D	4.90 in (124 mm)	I*	2.00 in (51 mm)	O	1.33 in (34 mm)		
E	4.60 in (117 mm)	J*	1.60 in (41 mm)	P	0.74 in (19 mm)		
	(mounting center)	K*	0.33 in (8.3 mm)	Q	0.32 in (8 mm)		

\* Applies to studded K case only.

**LUTRON** SPECIFICATION SUBMITTAL

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Job Name: URBN Center	Model Numbers:
Job Number: 2047	

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**EcoSystem® Bus Wiring Diagrams**

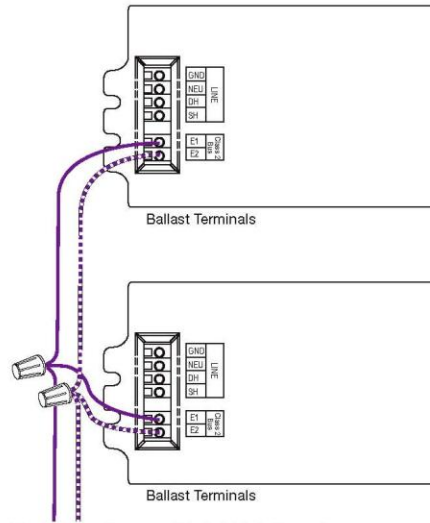
**EcoSystem® Digital Link Overview**

- The *EcoSystem* Digital Link wiring (E1 and E2) connects the digital ballasts and drivers together to form a lighting control system.
- Each *EcoSystem* Digital Link supports up to 64 digital ballasts or LED drivers, 64 occupant sensors, 16 daylight sensors, and 64 wallstations or IR receivers.\*
- Sensors do not directly connect to *EcoSystem* H-Series ballasts.
- No 3-wire phase control with *EcoSystem* H-Series ballasts.
- E1 and E2 (*EcoSystem* digital link wires) are polarity insensitive and can be wired in any topology.
- An Energi Savr Node™ with *EcoSystem* unit, GRAFIK Eye® QS control unit with *EcoSystem*, or Quantum® system provides power for the *EcoSystem* Digital Link and supports system programming.
- All *EcoSystem* Digital Link programming is completed by using the Energi Savr App for an Apple® iPad® or iPhone® mobile digital devices, GRAFIK Eye® QS with *EcoSystem*, PowPak™ dimming module with *EcoSystem*, or Quantum System.
- For complete information, see *EcoSystem* Design & Application Guide (P/N 367-1533).

**EcoSystem® Digital Link Wiring**

- Ballast *EcoSystem* Digital Link terminals only accept one 18 to 16 AWG (0.75 to 1.5 mm<sup>2</sup>) solid copper wire per terminal.
- Make sure that the supply breaker to the Digital Ballast and *EcoSystem* Digital Link Supply is OFF when wiring.
- Connect the two conductors to the two Digital Ballast terminals E1 and E2 as shown.
- Using two different colors for E1 and E2 will reduce confusion when wiring several ballasts together.
- The *EcoSystem* Digital Link may be wired Class 1 or Class 2. Consult applicable electrical codes for proper wiring practices.

\* *PowPak* dimming module with *EcoSystem* can support 32 ballasts or LED drivers.



To the *EcoSystem* Digital Link Supply

**Notes**

- The *EcoSystem* Digital Link Supply does not have to be located at the end of the Digital Link.
- *EcoSystem* Digital Link length is limited by the wire gauge used for E1 and E2 as follows:

Wire Gauge	Digital Link Length (max)
12 AWG	2200 ft
14 AWG	1400 ft
16 AWG	900 ft
18 AWG	550 ft

Wire Size	Digital Link Length (max)
4.0 mm <sup>2</sup>	828 m
2.5 mm <sup>2</sup>	517 m
1.5 mm <sup>2</sup>	310 m
1.0 mm <sup>2</sup>	207 m
0.75 mm <sup>2</sup>	155 m

Job Name: URBN Center	Model Numbers:
Job Number: 2047	

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**EcoSystem® Ballast Wiring:  
Line Voltage Dimmers**

**EcoSystem Ballasts and 3-wire dimmers**

- Lutron® 3-wire dimmers only control the ballasts they are wired to; EcoSystem ballasts do not support grouping of 3-wire control input.

**3-Wire Control Wiring**

- Make sure that the supply breaker to the Digital Ballast is OFF when wiring.
- Wire as shown

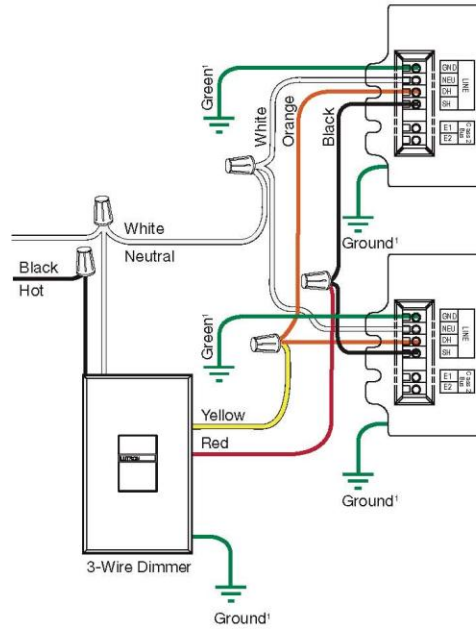
Line input	Connects to
Hot	Dimmer Black Wire
Neutral	Dimmer White Wire

Dimmer wire	Connects to
Yellow	Ballast Orange (DH)
Red	Ballast Black (SH)
White	Ballast White (NEU)
Green	Earth Ground (GND)

- EcoSystem ballast line voltage and 3-wire input terminals only accept one 16 AWG (1.31 mm<sup>2</sup>) or 18 AWG (0.82 mm<sup>2</sup>) solid wire.

**Emergency and 3-wire**

- EcoSystem ballasts controlled by a wallbox dimmer should not be used for emergency/egress lighting unless an external emergency ballast is used in the fixture. See Lutron App Note #50.
- EcoSystem ballasts may be used for emergency/egress lighting when controlled by a Lutron dimming panel (GP); where the panel is a dedicated emergency panel.



<sup>1</sup> Ballast is grounded via the case or terminal

**Notice**

3-Wire control turns off digital ballasts when the control is in the off position.

Job Name: URBN Center	Model Numbers:
Job Number: 2047	

EcoSystem®

Compact Fluorescent Ballasts

Digital Dimming Ballasts

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**ATTENTION ELECTRICIANS  
AND CONTRACTORS**

**ATTENTION  
FACILITIES MANAGERS**

**Ballast/Socket Leads**

Lead lengths from ballast to socket must not exceed 7 ft (2 m) for T8, T5, and T5HO linear lamps.

**Lamp Sockets**

Lamp sockets as per IEC 60400 are required to ensure positive lamp-pin to socket contact.

**Lamp Mounting**

Many fluorescent lamp sockets are available with mounting slots to vary the height of the lamp away from the grounded metal surface. Use these slots to get the lamp glass to be 1/2 in ± 1/4 in away from the grounded metal surface for T8 lamps and 3/8 in ± 1/8 in for T5 and T5HO lamps.

Having a fluorescent lamp too close to the grounded metal will make the minimum intensity too low and will reduce lamp life. Having a fluorescent lamp too far away from the grounded metal will make the lamp flicker or not turn on at all.

**Ballast Operating Temperature**

Ballast case temperature must not exceed 75 °C at any point on ballast.

**Wiring and Grounding**

Ballast and lighting fixture must be effectively grounded. Ballasts must be installed per national and local electrical codes.

**PERFORMANCE**

**Lamp Seasoning**

Consult lamp manufacturer's recommendations on lamp seasoning prior to dimming.

**SERVICE**

**Replacement Parts**

Use replacement parts with exact Lutron model numbers. Consult Lutron if you have any questions.

**Further Information**

For further information, please visit us at [www.lutron.com/ballasts](http://www.lutron.com/ballasts) or contact our 24-hour Technical Support Center at 1-800-523-9466.

**LUTRON** SPECIFICATION SUBMITTAL

Page 8

Job Name: URBN Center	Model Numbers:	
Job Number: 2047		

# Luminaire K | Lamp



## DULUX® T/E/IN Amalgam, 4-PIN ECOLOGIC® Compact Fluorescent Lamps

Nominal Voltage	Bulb	Avg (in)	Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Notes	
											Initial (Mean) @25°C/77°F	Initial (Mean) @35°C/95°F		
18	T (T4)	4.4	111	GX24Q-2	20875	CF18DT/EAN/827/ECO	CFTR18W/GX24Q/827	50	12000	2700	82	1165 (1000)	1200 (1030)	☀️ 1,2,4,5,9,10
					20876	CF18DT/EAN/830/ECO	CFTR18W/GX24Q/830	50	12000	3000	82	1165 (1000)	1200 (1030)	☀️ 1,2,4,5,9,10
					20877	CF18DT/EAN/835/ECO	CFTR18W/GX24Q/835	50	12000	3500	82	1165 (1000)	1200 (1030)	☀️ 1,2,4,5,9,10
					20878	CF18DT/EAN/841/ECO	CFTR18W/GX24Q/841	50	12000	4100	82	1165 (1000)	1200 (1030)	☀️ 1,2,4,5,9,10
26	T (T4)	5.0	126	GX24Q-3	20879	CF26DT/EAN/827/ECO	CFTR26W/GX24Q/827	50	16000	2700	82	1745 (1500)	1800 (1550)	☀️ 1,2,4,5,9,10
					20880	CF26DT/EAN/830/ECO	CFTR26W/GX24Q/830	50	16000	3000	82	1745 (1500)	1800 (1550)	☀️ 1,2,4,5,9,10
					20881	CF26DT/EAN/835/ECO	CFTR26W/GX24Q/835	50	16000	3500	82	1745 (1500)	1800 (1550)	☀️ 1,2,4,5,9,10
					20882	CF26DT/EAN/841/ECO	CFTR26W/GX24Q/841	50	16000	4100	82	1745 (1500)	1800 (1550)	☀️ 1,2,4,5,9,10
32	T (T4)	5.6	142	GX24Q-3	20883	CF32DT/EAN/827/ECO	CFTR32W/GX24Q/827	50	16000	2700	82	2330 (2000)	2400 (2065)	☀️ 1,2,4,5,9,10
					20884	CF32DT/EAN/830/ECO	CFTR32W/GX24Q/830	50	16000	3000	82	2330 (2000)	2400 (2065)	☀️ 1,2,4,5,9,10
					20885	CF32DT/EAN/835/ECO	CFTR32W/GX24Q/835	50	16000	3500	82	2330 (2000)	2400 (2065)	☀️ 1,2,4,5,9,10
					20886	CF32DT/EAN/841/ECO	CFTR32W/GX24Q/841	50	16000	4100	82	2330 (2000)	2400 (2065)	☀️ 1,2,4,5,9,10
42	T (T4)	6.5	163	GX24Q-4	20887	CF42DT/EAN/827/ECO	CFTR42W/GX24Q/827	50	12000	2700	82	3105 (2670)	3200 (2750)	☀️ 1,2,4,5,9,10
					20888	CF42DT/EAN/830/ECO	CFTR42W/GX24Q/830	50	12000	3000	82	3105 (2670)	3200 (2750)	☀️ 1,2,4,5,9,10
					20871	CF42DT/EAN/835/ECO	CFTR42W/GX24Q/835	50	12000	3500	82	3105 (2670)	3200 (2750)	☀️ 1,2,4,5,9,10
					20890	CF42DT/EAN/841/ECO	CFTR42W/GX24Q/841	50	12000	4100	82	3105 (2670)	3200 (2750)	☀️ 1,2,4,5,9,10
57	T (T4)	7.76	197	GX24Q-5	20896	CF57DT/EAN/830/ECO	CFTR57W/GX24Q/830	50	12000	3000	82	4170 (3585)	4300 (3700)	☀️ 1,2,4,5,9,10
					20897	CF57DT/EAN/835/ECO	CFTR57W/GX24Q/835	50	12000	3500	82	4170 (3585)	4300 (3700)	☀️ 1,2,4,5,9,10
					20899	CF57DT/EAN/841/ECO	CFTR57W/GX24Q/841	50	12000	4100	82	4170 (3585)	4300 (3700)	☀️ 1,2,4,5,9,10

COMPACT FLUORESCENT

Specifications subject to change without notice. Symbols/Footnotes on page 64



## Luminaire L | Power Supply & Accessories

# BRUCK.

Job Name: URBN Center

Contact: COOK Lighting

Fixture Type:

Part Number:

ZONYX FLEXIBLE POWER FEED 10ft



### Description:

The Zonyx Flexible Power Feed for Zonyx line voltage track system is length field adjustable from 118" to 5". It covers a standard 3" - 4" junction box. Available with circuit breaker.

### Part Numbers:

<b>350105mc</b>	matte chrome
<b>350105mc/010</b>	matte chrome with 1 amp breaker
<b>350105mc/020</b>	matte chrome with 2 amp breaker
<b>350105mc/030</b>	matte chrome with 3 amp breaker
<b>350105mc/050</b>	matte chrome with 5 amp breaker
<b>350105mc/075</b>	matte chrome with 7.5 amp breaker
<b>350105mc/100</b>	matte chrome with 10 amp breaker
<b>350105mc/125</b>	matte chrome with 12.5 amp breaker

### Technical Specs:

2400VA maximum  
 120VAC input  
 Suitable for dry location only  
 Mount to 3" - 4" round J-box  
 Switchable circuit breaker (1 - 25A)  
 Shortenable cable





Job Name: URBN Center

Contact: COOK Lighting

Fixture Type:

Part Number:

ZONYX TRACK



**Description:**

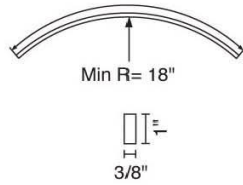
The Zonyx Track in lengths of 4ft, 6ft and 8ft is made out of anodized aluminum with insulated conductors and copper ground wire. Track is field bendable to a minimum of a 18" radius using bending machine. Each track section includes two (2) insulated end caps that are secured with set screws.

**Part Numbers:**

- 350004mc**      matte chrome, 4'
- 350006mc**      matte chrome, 6'
- 350006-1mc**    matte chrome, 5'-4" factory curved
- 350008mc**      matte chrome, 8'
- 350008-1mc**    matte chrome, 7'-4" factory curved

**Technical Specs:**

2400VA maximum  
 120VAC input  
 Suitable for dry location only



**BRUCK.**

Job Name: URBN Center

Contact: COOK Lighting

Fixture Type: \_\_\_\_\_

Part Number: \_\_\_\_\_

ZONYX END CAP



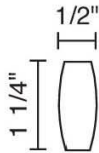
**Description:**

The Zonyx end cap is a cover piece for Zonyx end segments.

**Part Numbers:**

**350020mc**

matte chrome



**BRUCK.**

Job Name: URBN Center

Contact: COOK Lighting

Fixture Type: \_\_\_\_\_

Part Number: \_\_\_\_\_

ZONYX CEILING SUPPORT 4"

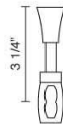


**Description:**

The Zonyx Ceiling support allows a 4" drop from ceiling to the center of track. This is a rigid support for the Zonyx Line Voltage track system.

**Part Numbers:**

**350110mc**      matte chrome



**BRUCK.**

Job Name: URBN Center

Contact: COOK Lighting

Fixture Type: \_\_\_\_\_

Part Number: \_\_\_\_\_

UNI-PLUG EZ CONNECTOR



**Description:**

Uni-Plug EZ Connector.

**Part Numbers:**

**900415bz**                      bronze

**900415mc**                      matte chrome



## Luminaire M | Driver

**BRUCK.**

Job Name: URBN Center

Contact: COOK Lighting

Fixture Type: \_\_\_\_\_

Part Number: \_\_\_\_\_

20W 700mA LED DRIVER



**Description:**

The 20 watt driver is a Class II power supply rated for operating LEDs. It features a constant current output. The encapsulated electronics and inherent protection adds reliability to both the driver and LEDs connected. To avoid damaged to LEDs, the number of fixtures connected must be within the range limits listed for the driver and be wired in series. Use 18-20 gauge wire for remote installation up to a maximum of 150ft. National and local codes should be followed during installation. Enclosure box version is listed for code requirements. Please contact manufacturer for further details. [Click Here for LED Driver Matrix.](#)

**Part Numbers:**

**70417-700**

20W,700mA LED Driver

**P70417-700**

20W,700mA LED Driver w/ box

**Technical Specs:**

100-130V AC, 50/60Hz input  
700mA DC constant current output

Operating temperature: -22°F to 140°F

Class II rated

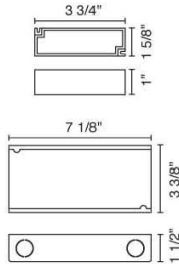
Suitable for damp location (enclosure version dry only)

Short circuit protection

Overload protection

Over-voltage protection

Thermal protection



# Luminaire P | Transformer

## Transformers

### MAGNETIC TRANSFORMER (100W or less)



**Construction:** All **STEEL** construction. Magnetic transformer completely encased in waterproof potting compound.  
**Finishes:** All transformers come in black powdercoat finish only.  
**Features:** "TM" series transformers have 120V or 277V primary and 12V secondary output. Each circuit has a resettable internal circuit breaker in case of overload. All housings feature two 1/2" "knock-outs", one in each side. Housing is built to "NEMA 3R" specification.  
**General:** It is recommended that these transformers are only loaded to 85% of their maximum capacity. These recommendations will allow the transformer to function at its optimum level. All "TM" series transformers must be mounted a minimum of 12" above finished grade with wire connection terminals facing down.

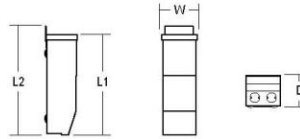
**TM SERIES**  
 TM - Magnetic Transformer

**WATTAGE**  
 40 - 40VA  
 100 - 100VA

**VOLTAGE**  
 120V - 120 Volt Primary  
 277V - 277 Volt Primary

SERIES	L1 *	L2 *	D *	W *
TM40	5-1/4"	6"	2"	2-1/4"
TM100	6-1/4"	6-1/2"	2-1/4"	2-5/8"

\*All dimensions are subject to change without prior notice.



### MAGNETIC TRANSFORMER (200W and above)



**Construction:** All **STAINLESS STEEL** construction. Magnetic transformer completely encased in waterproof potting compound.  
**Finishes:** Transformers come in stainless only. Custom "wet" paint finishes are available (contact factory for more information).  
**Features:** "TM" series transformers have multi-tap secondary output, 12V, 13V, 14V and 15V. Each 300VA circuit has an on/off switch to reset internal circuit breaker in case of overload. All housings feature five "knock-outs" in bottom cover plate (two 1/2", two 3/4", and one 1-1/2"). Housing is built to "NEMA 3R" specification.  
**General:** It is recommended that these transformers are loaded to 85% of their maximum capacity (i.e. 200VA = 170W max. load, 300VA = 255W max. load). It is also recommended that the minimum load should be greater than 40% of the total capacity of transformer (i.e. 200VA = 80W min. load, 300VA = 120W min. load). These recommendations will allow the transformer to function at its optimum level. All "TM" series transformers must be mounted a minimum of 12" above finished grade with wire connection terminals facing down.

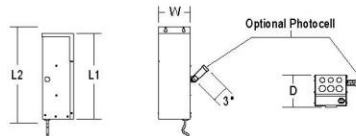
**TM SERIES**  
 TM - Magnetic Transformer

**WATTAGE**  
 200 - 200VA  
 201 - 200VA w/ Timer  
 202 - 200VA w/ Timer & Photocell  
 300 - 300VA  
 301 - 300VA w/ Timer  
 302 - 300VA w/ Timer & Photocell  
 600 - 2 x 300VA  
 601 - 2 x 300VA w/ Timer  
 602 - 2 x 300VA w/ Timer & Photocell  
 900 - 3 x 300VA  
 901 - 3 x 300VA w/ Timer  
 902 - 3 x 300VA w/ Timer & Photocell

**VOLTAGE**  
 120V - 120 Volt Primary  
 277V - 277 Volt Primary

SERIES	L1 *	L2 *	D *	W *
TM200	16-1/2"	17-1/2"	5-1/2"	8"
TM300	16-1/2"	17-1/2"	5-1/2"	8"
TM600	16-1/2"	17-1/2"	5-1/2"	8"
TM900	18-1/4"	19-1/4"	7"	8-1/2"

\*All dimensions are subject to change without prior notice.



mounting / accessories

### MAGNETIC INGRADE TRANSFORMER (Direct Burial Rated)



**Construction:** All **STAINLESS STEEL** construction. Magnetic transformer completely encased in waterproof potting compound.  
**Finishes:** Transformers come in stainless only. Custom "wet" paint finishes are available (contact factory for more information).  
**Features:** "TMI" series transformers have a multi-tap secondary output, 12V-15.5V. Each 300VA circuit has an on/off switch circuit breaker in case of overload. Housing features two 3/4" holes, one on each side plate. Transformer includes two 3/4" liquid tight conduit adapters and five silicone filled waterproof wirenuts.  
**General:** It is recommended that these transformers are loaded to 85% of their maximum capacity (i.e. 300VA = 255W max. load). It is also recommended that the minimum load should be greater than 40% of the total capacity of transformer (i.e. 300VA = 120W min. load). These recommendations will allow the transformer to function at its optimum level. All "TMI" series transformers are suitable for direct in ground burial when properly installed. Also approved for above ground use within 1" above ground.

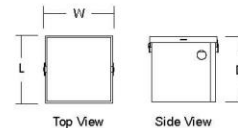
**TMI SERIES**  
 TMI - Magnetic Ingrade Transformer

**WATTAGE**  
 300 - 300VA Ingrade  
 600 - 2 x 300VA Ingrade

**VOLTAGE**  
 120V - 120 Volt Primary  
 277V - 120 Volt Primary

SERIES	L *	D *	W *
TMI300	8-1/2"	8-1/4"	9"
TMI600	8-1/2"	8-1/4"	9"

\*All dimensions are subject to change without prior notice.



Transformers

ELECTRONIC TRANSFORMER

- TE SERIES**  
TE - Electronic Transformer
- WATTAGE - VOLTAGE**  
60-120V - 60VA, 120 Volt Primary  
60-230V - 60VA, 230/240 Volt Primary  
75-120V - 75VA, 120 Volt Primary  
75-277V - 75VA, 277 Volt Primary  
150-120V - 150VA, 120 Volt Primary

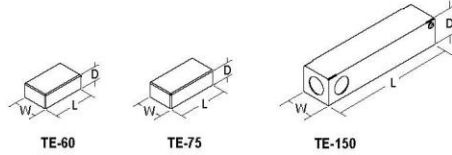
**Construction:** TE-60 and TE-75 have an ALUMINUM case with an electronic transformer completely sealed with a waterproof potting compound. TE-150 has an anodized aluminum outer case and an anodized aluminum inner case with an electronic transformer sealed with a waterproof potting compound.

**Features:** The secondary output of all "TE" series transformers is 12V (11.75V). All "TE" series transformers have an internal thermal protection and an overload switch. TE-60 is class 2 rated. TE-150 includes its own wiring compartment with four 1/2" "knock-outs" and a 1.6 amp fuse.

**General:** All transformers are dimmable to a minimum load of 20W. Maximum remote distance is 8' to 10'. TE-60 and TE-75 will fit into a standard 4" round wet location J-box. It is **NOT** recommended that either be used in a rectangular single gang switchbox. **NOT for use with LED fixtures.**



\*All dimensions are subject to change without prior notice.



SERIES	L *	D *	W *
TE60	2-1/8"	7/8"	1-1/4"
TE75	2-5/8"	7/8"	1-3/8"
TE150	6-1/2"	1-3/8"	1-1/2"

MAGNETIC TRANSFORMER (10W & 20W)

- TM SERIES**  
TM - Magnetic LED Transformer
- WATTAGE**  
10 - 10VA  
20 - 20VA
- VOLTAGE**  
120V - 120 Volt Primary  
277V - 277 Volt Primary

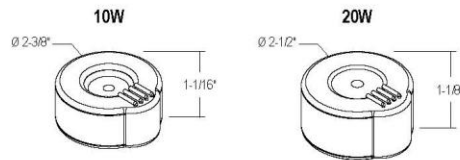
**Construction:** Toroidal transformer.

**Features:**  
**Power rating:** 10 watt or 20 watt.  
**Primary Voltage:** 120 volt. or 277 volt.  
**Secondary Voltage:** 12 volt.  
**Insulation:** Class B  
**Dimmable:** Fully dimmable with magnetic low voltage dimmer.

**General:** Transformers must be placed in a sealed enclosure when used in a wet location. TM-10 will fit into a standard 4 inch round wet location J-box. TM-20 requires a double depth 4 inch round J-box (extension ring).

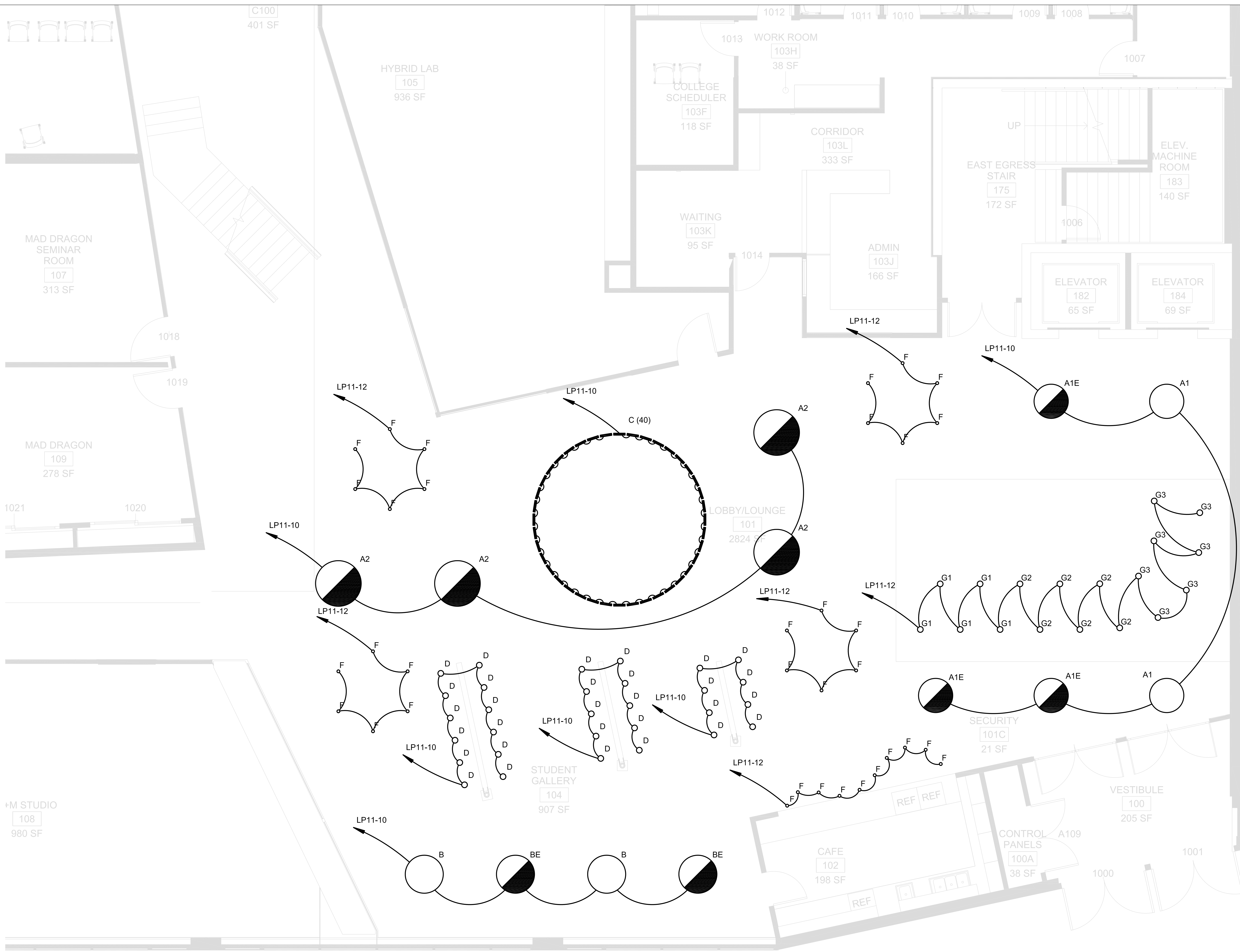


Winona Lighting reserves the right to make design revisions without prior notice.



mounting / accessories

## APPENDIX D | LIGHTING PLANS



ARCHITECT  
**Meyer Scherer & Rockcastle, LTD**  
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CIVIL ENGINEERS  
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LANDSCAPE ARCHITECT  
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 Suite 200  
 Minneapolis, MN 55401  
 PHONE: 612.359.9144

LIGHTING DESIGNER  
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 PHONE: 957.867.1626

ACOUSTIC CONSULTANT  
**Walters-Storyk Design Group**  
 282 Martin Avenue  
 Highland, NY 12535  
 PHONE: 845.691.9300

**URBN CENTER**  
**DREXEL UNIVERSITY**  
 College of Media Arts & Design  
 3501 Market St, Philadelphia PA, 19104

NAME:  
 JOHNATHAN COOK

PROJECT:  
 FINAL SENIOR THESIS REPORT

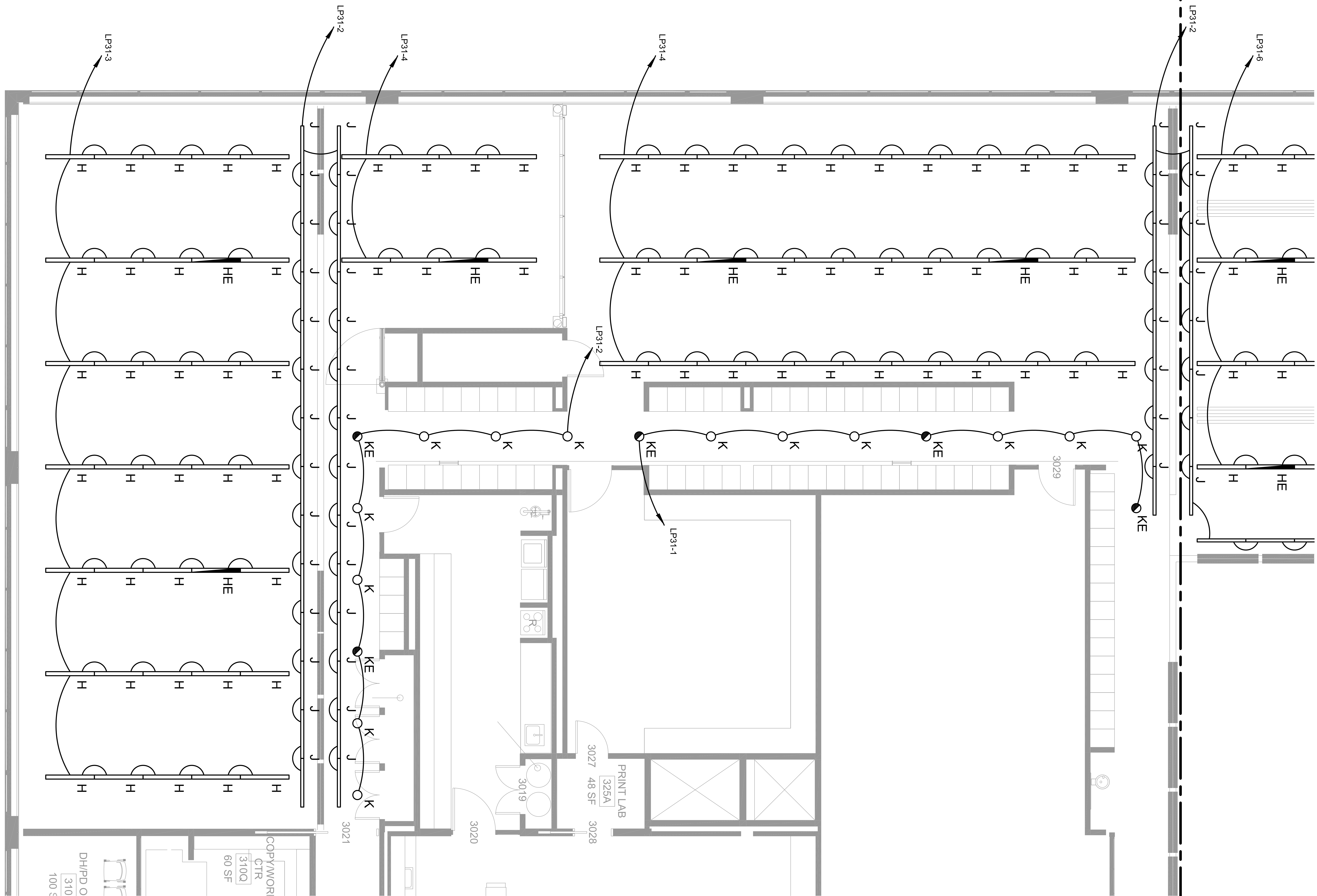
AE ADVISOR:  
 DR. KEVIN W. HOUSER

OFFICE:  
 LIGHTING/ELECTRICAL

**1 LIGHTING PLAN - MAIN LOBBY**  
 AL 101 SCALE: 3/8" = 1'-0"

**LIGHTING PLAN**  
**FIRST FLOOR**





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ACOUSTIC CONSULTANT  
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 282 Martin Avenue  
 Highland, NY 12528  
 PHONE: 845.691.9300

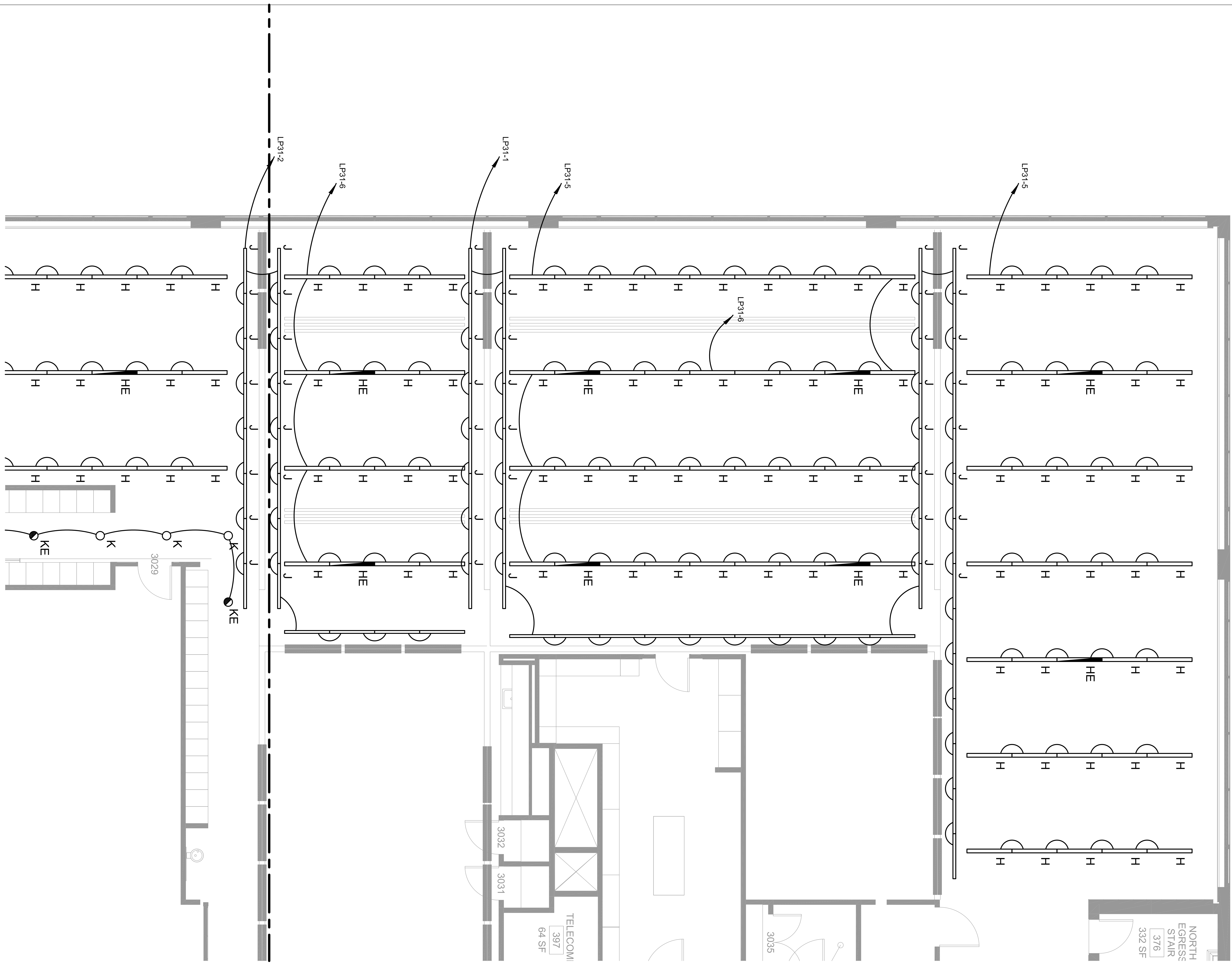
**URBN CENTER**  
**DREXEL UNIVERSITY**  
 College of Media Arts & Design  
 3501 Market St, Philadelphia PA, 19104

NAME:  
 JOHNATHAN COOK  
 PROJECT:  
 FINAL SENIOR THESIS REPORT  
 AE ADVISOR:  
 DR. KEVIN W. HOUSER  
 OPTIC:  
 LIGHTING/ELECTRICAL

**LIGHTING PLAN  
 THIRD FLOOR**

**AL 103A**

**1 LIGHTING PLAN - FASHION STUDIO**  
**AL 103A SCALE: 3/8" = 1'-0"**



ARCHITECT  
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 PHONE: 845.691.9300

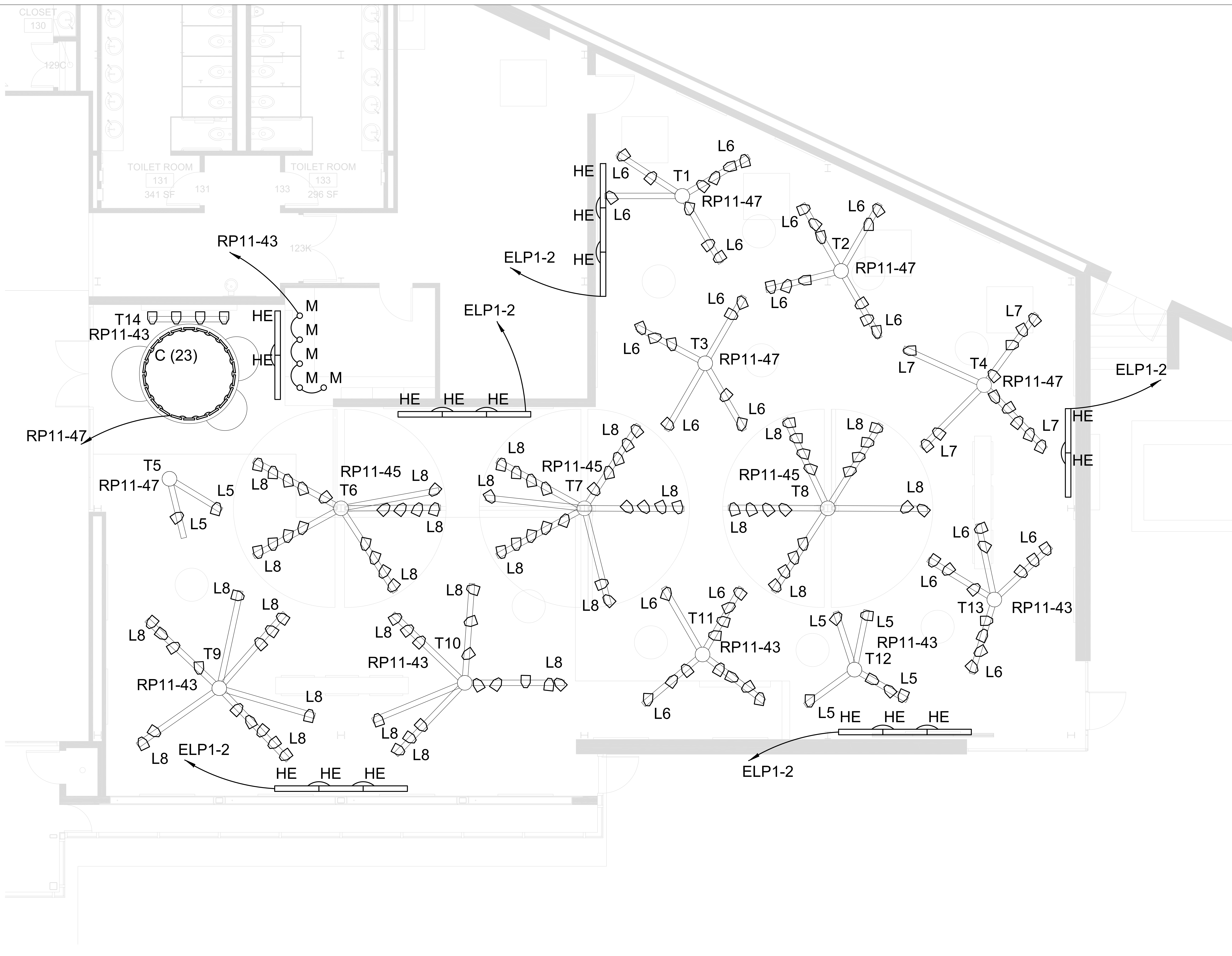
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NAME: JOHNATHAN COOK  
 PROJECT: FINAL SENIOR THESIS REPORT  
 AE ADVISOR: DR. KEVIN W. HOUSER  
 OPTION: LIGHTING/ELECTRICAL

1 LIGHTING PLAN - FASHION STUDIO  
 AL 103B SCALE: 3/8" = 1'-0"

LIGHTING PLAN  
 THIRD FLOOR

AL 103B



ARCHITECT  
**Meyer Scherer & Rockcastle, LTD**  
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 PHONE: 845.691.9300

**URBN CENTER ANNEX**  
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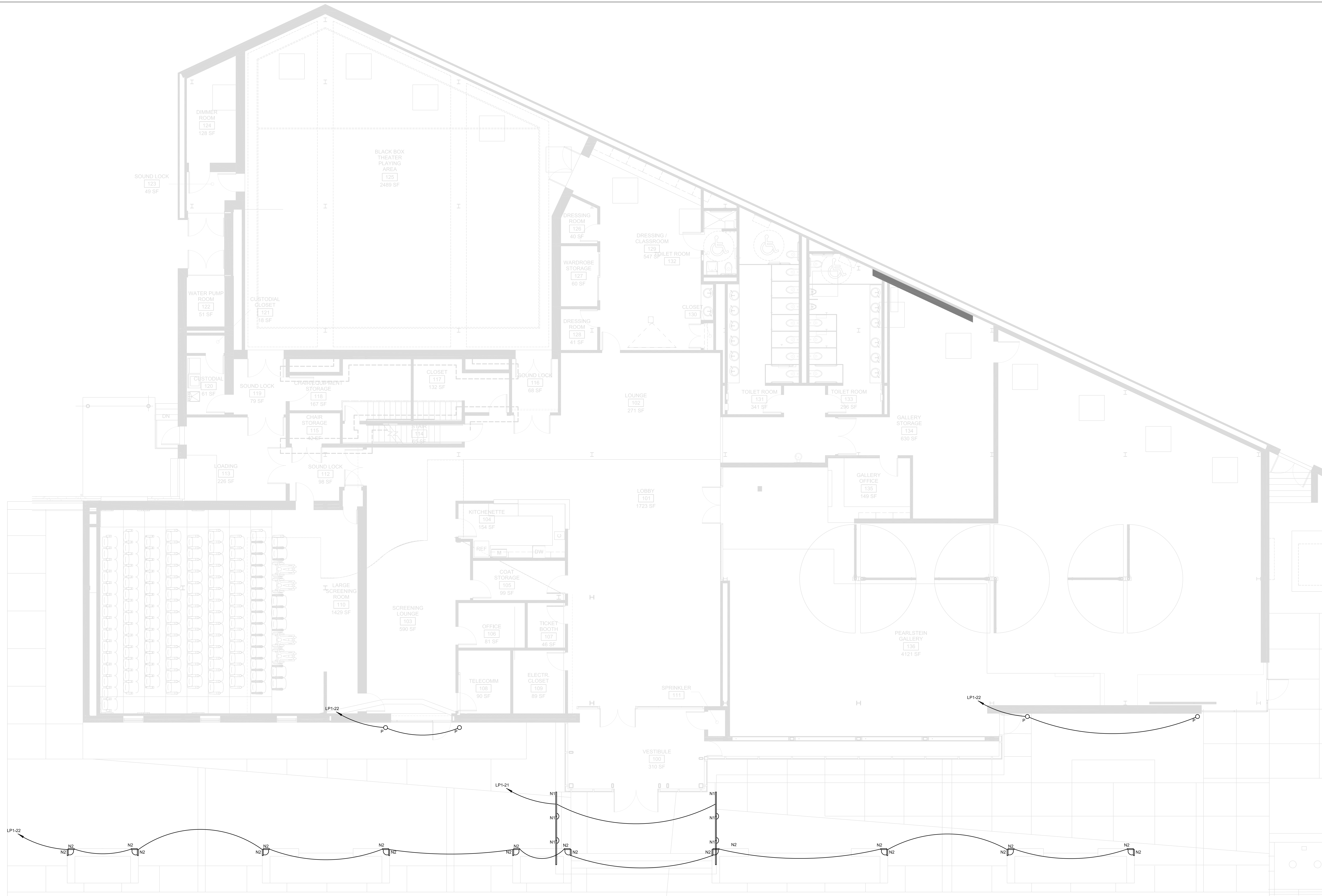
NAME:  
 JOHNATHAN COOK  
 PROJECT:  
 FINAL SENIOR THESIS REPORT  
 AE ADVISOR:  
 DR. KEVIN W. HOUSER  
 OFFICE:  
 LIGHTING/ELECTRICAL

1 LIGHTING PLAN - GALLERY  
 AL 101 SCALE: 3/8" = 1'-0"

LIGHTING PLAN  
 FIRST FLOOR

AL 101





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 PROJECT: FINAL SENIOR THESIS REPORT  
 AE ADVISOR: DR. KEVIN W. HOUSER  
 OPTION: LIGHTING/ELECTRICAL

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 King of Prussia PA, 19406  
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STRUCTURAL ENGINEERS  
**O'Donnell & Naccarato**  
 111 South Independence Mall East  
 Suite 900  
 Philadelphia, PA 19106  
 PHONE: 215.925.3788

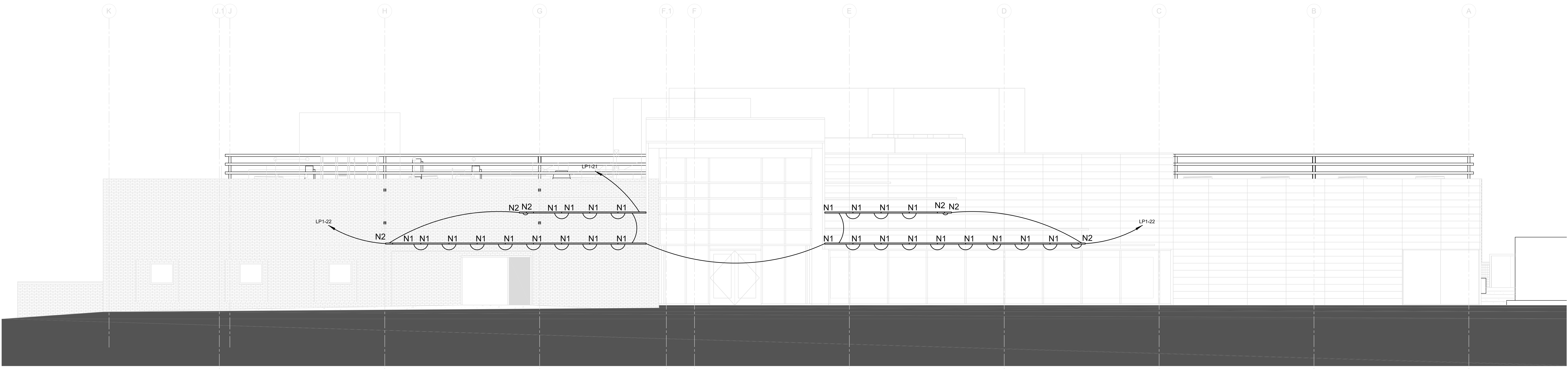
CIVIL ENGINEERS  
**Advanced GeoServices, Inc.**  
 1055 Archer Drive  
 Suite A  
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 PHONE: 610.863.9100

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1 LIGHTING PLAN - FACADE  
 SL 102 SCALE: 3/16" = 1'-0"

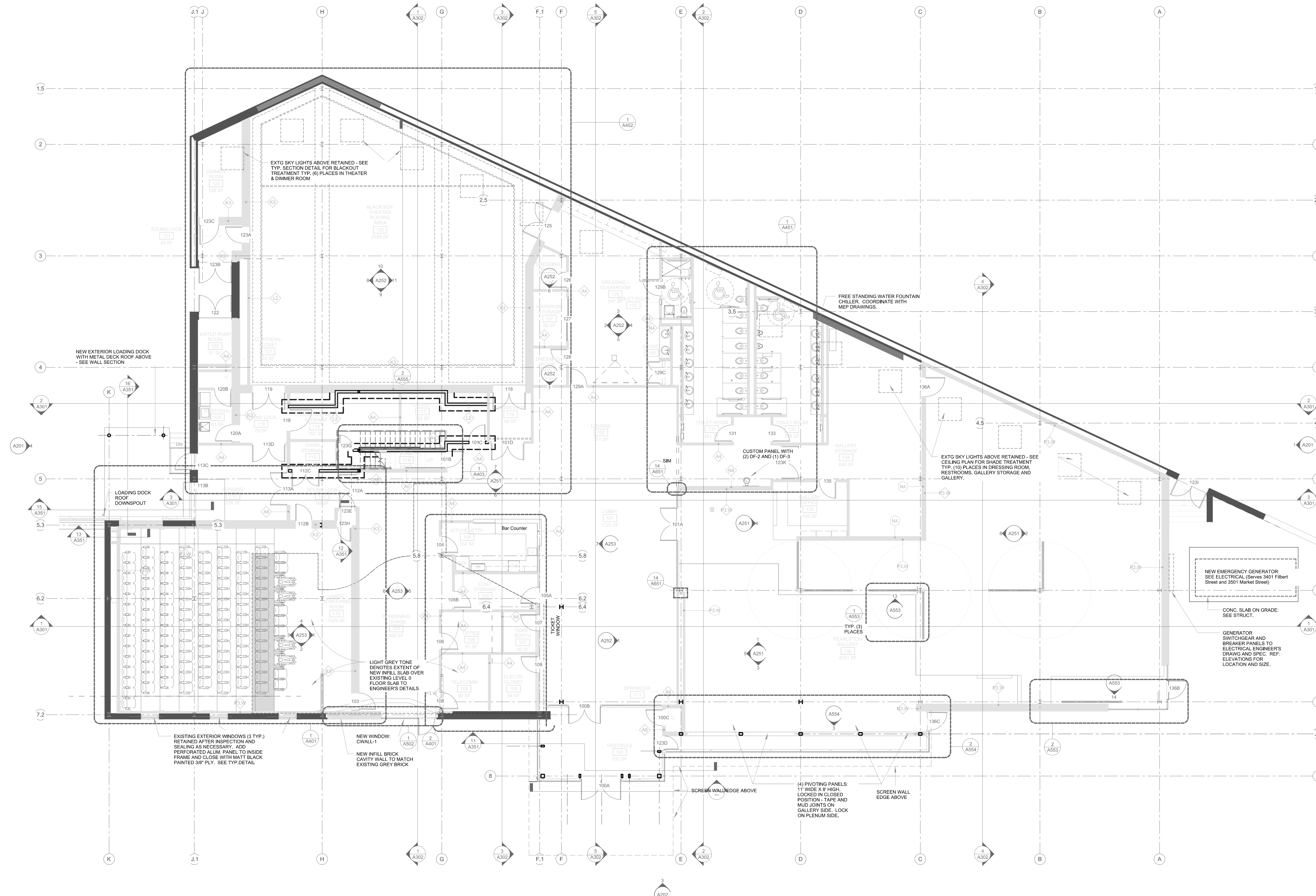
NAME:  
 JOHNATHAN COOK  
 PROJECT:  
 FINAL SENIOR THESIS REPORT  
 AE ADVISOR:  
 DR. KEVIN W. HOUSER  
 OPTION:  
 LIGHTING/ELECTRICAL

LIGHTING PLAN  
 FACADE

AL 102



**APPENDIX E | ARCHITECTURAL DRAWINGS**



1 FIRST FLOOR PLAN  
A 101 SCALE: 1/8" = 1'-0"

ARCHITECT  
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PHONE: 845.691.9300

URBN CENTER  
DREXEL UNIVERSITY  
College of Media Arts & Design  
3501 Market St., Philadelphia PA, 19104

NAME: JOHNATHAN COOK  
PROJECT: FINAL SENIOR THESIS REPORT  
AS APPLIED: DR. KEVIN W. HOUSER  
OPTION: LIGHTING/ELECTRICAL

FIRST FLOOR PLAN  
REDESIGN

A 101

ARCHITECT  
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 Champlin, MN 55324  
 PHONE: 957.867.1628

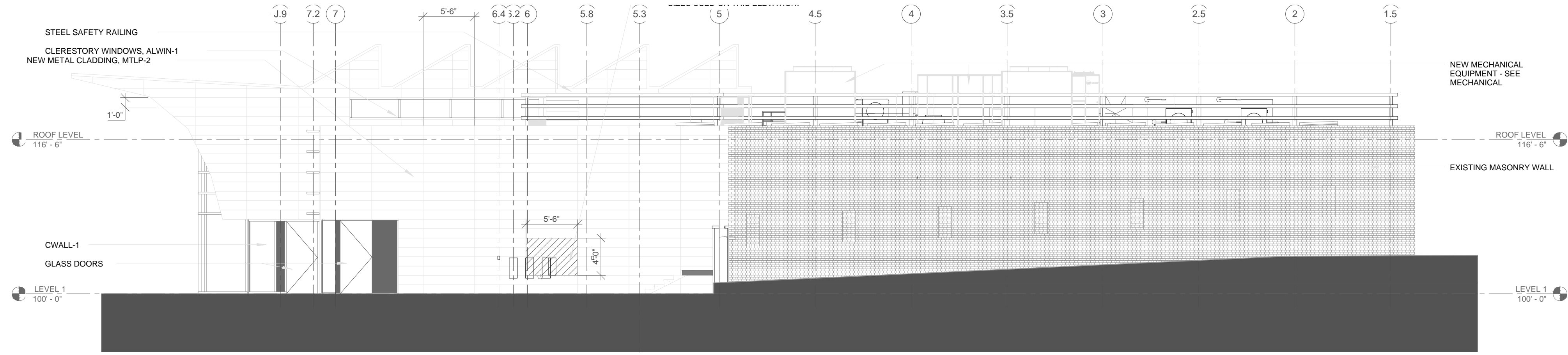
ACOUSTIC CONSULTANT  
**Walters-Storky Design Group**  
 262 Morris Avenue  
 Highland, NY 12528  
 PHONE: 845.691.9300

**URBN CENTER**  
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 College of Media Arts & Design  
 3501 Market St., Philadelphia PA, 19104

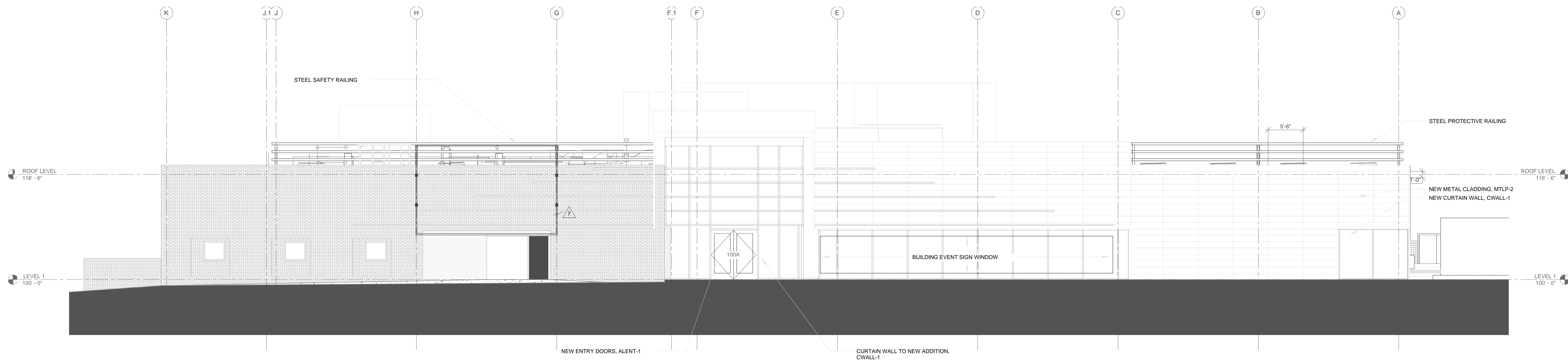
NAME: JOHNATHAN COOK  
 PROJECT: FINAL SENIOR THESIS REPORT  
 APPROVED BY: DR. KEVIN W. HOUSER  
 OPTION: LIGHTING/ELECTRICAL

**BUILDING ELEVATION  
 REDESIGN**

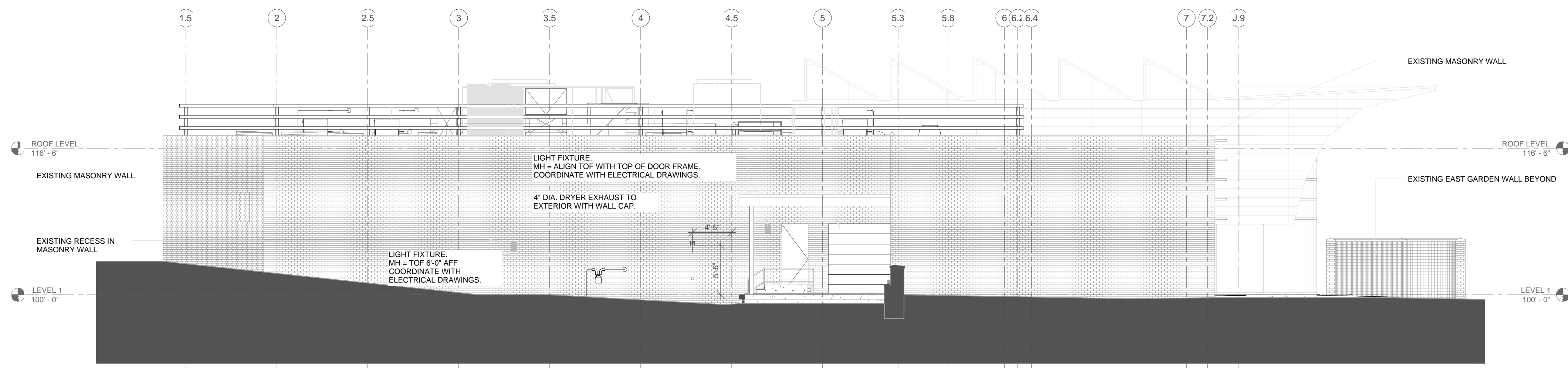
**A 201**



**1 BUILDING EAST ELEVATION**  
 A 201 SCALE: 1/8" = 1'-0"



**2 BUILDING SOUTH ELEVATION**  
 A 201 SCALE: 1/8" = 1'-0"



**3 BUILDING WEST ELEVATION**  
 A 201 SCALE: 1/8" = 1'-0"