

Appendix A

Existing Drawings

This Appendix includes:

1. Floor Plans
2. Existing Power Riser Diagram
3. Existing Control Component Details

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PROJECT

**FIRST LEVEL
REFERENCE PLAN**

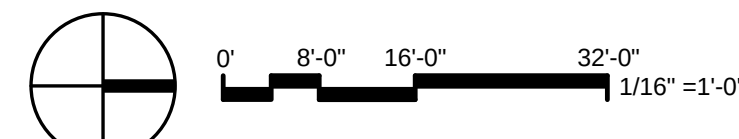
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A101

09.25.2012 - FOR CONSTRUCTION



FIRST LEVEL REFERENCE PLAN
SCALE: 1/16" = 1'-0"



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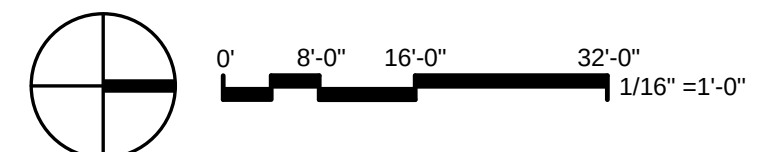
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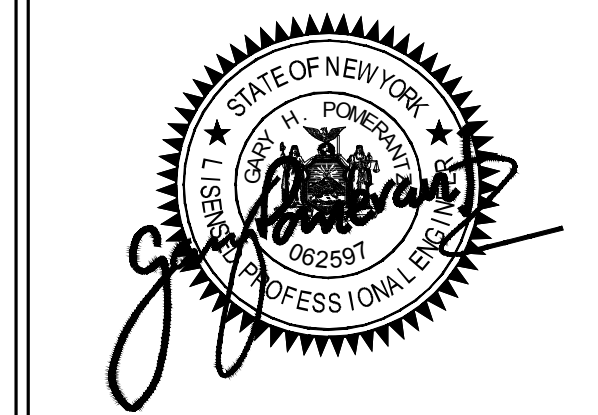
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SECOND LEVEL REFERENCE PLAN
SCALE: 1/16" = 1'-0"





REVISIONS	
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3/28/13	ASI#016
4/24/13	ASI#028
5/1/13	ASI#032
5/7/13	ASI#035
5/15/13	ASI#043
6/24/13	ASI#058

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PROJECT

ELECTRICAL POWER RISER DIAGRAM

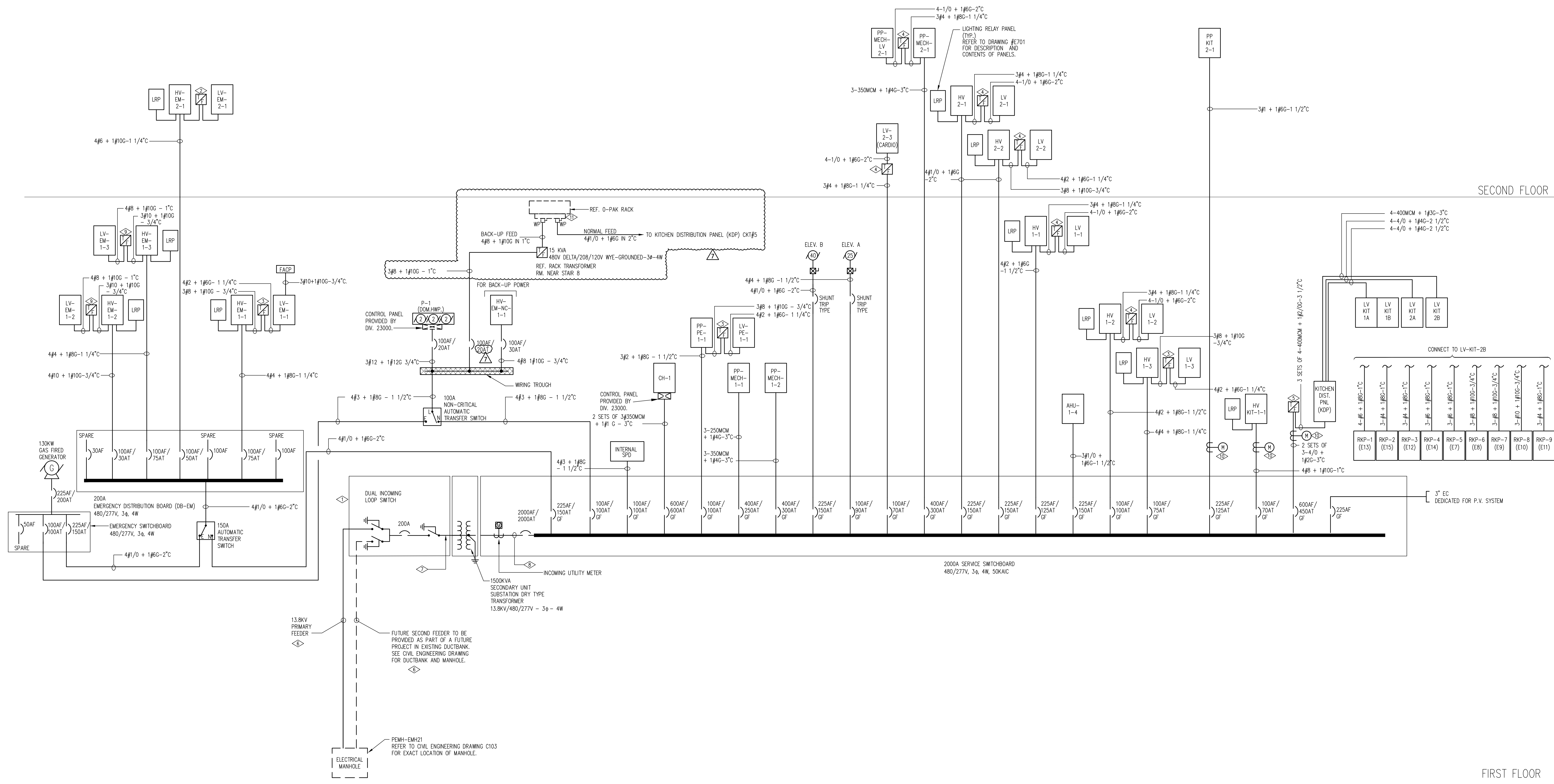
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ROOF

SECOND FLOOR

FIRST FLOOR



NOTES:

- ◇ G & W VANTAGE VACUUM INTERRUPTER LOOP SWITCH OR S & C VISTA WITH TWO INCOMING 3-POSITION (OPEN, CLOSED, GROUNDING) SWITCHED WAYS AND ONE OUTGOING VACUUM INTERRUPTER WAY WITH IN-LINE SWITCH TO FEED TRANSFORMER.
- ◇ 9 KVA 480V DELTA/208V/120V WYE-GROUND - 3φ - 4W
- ◇ 30 KVA 480V DELTA/208V/120V WYE-GROUND - 3φ - 4W
- ◇ 45 KVA 480V DELTA/208V/120V WYE-GROUND - 3φ - 4W
- ◇ 300 KVA 480V DELTA/208V/120V WYE-GROUND - 3φ - 4W
- ◇ SEE CIVIL DRAWING C105 FOR DUCTBANK AND FEEDER REQUIREMENTS.
- ◇ 3/2"Ø + 1#8G - 3 1/2" CONDUIT.
- ◇ 6 SETS OF 4-400CM + 1 #250CM - 6-3 1/2" CONDUITS.
- ◇ 15 KVA 480V DELTA/208V/120V WYE-GROUND - 3φ - 4W
- ◇ PROVIDE E-MON CLASS 3400 SMART METER WITH DUAL PROTOCOL COMMUNICATIONS. METER TO BE 277/480V, 3 PHASE WITH 3 SPAT-CORE CURRENT SENSORS. SIZE TO MATCH OVERCURRENT DEVICE FRAME SIZE. SUBMETER TO INCLUDE DIGITAL NETWORKED OWNER'S ELECTRIC SUBMETERS (DNOS) SERVING KITCHEN PANELS. DIGITAL NETWORKED SUBMETERS SHALL COMMUNICATE WITH BUILDING MANAGEMENT AND CONTROL SYSTEM (BMCS) VIA BACNET COMPATIBLE M5/TP COMMUNICATIONS. PROVIDE MANUFACTURER'S BACNET COMPATIBLE 811 TESTED COMMUNICATION GATEWAY FROM DNOS TO BMCS. COORDINATE DIGITAL COMMUNICATIONS BETWEEN DNOS AND BMCS. PROVIDE END TO END COMMUNICATIONS COORDINATION BETWEEN DNOS AND BMCS TREND DATABASE. THE FOLLOWING DATA SHALL BE TRENDED: KWH CONSUMPTION, KW REAL POWER, KVAR REACTIVE POWER, KVA APPARENT POWER, POWER FACTOR, VOLTAGE LINE TO LINE, VOLTAGE LINE TO NEUTRAL, AMPS, AVERAGE CURRENT, AMPS, PHASE A, AMPS PHASE B, AMPS PHASE C.
- ◇ REFRIGERATION RACK CONTROL PANEL AND DISCONNECTS PROVIDED WITH EQUIPMENT. PROVIDE ONE NORMAL FEED FROM KITCHEN DISTRIBUTION PANEL AND ONE BACK-UP FEED FROM NON-CRITICAL ATS WIRING TROUGH UPON LOSS OF UTILITY POWER. ONLY ONE COMBINATION COMPRESSOR & COOLER MAY OPERATE AT A TIME.

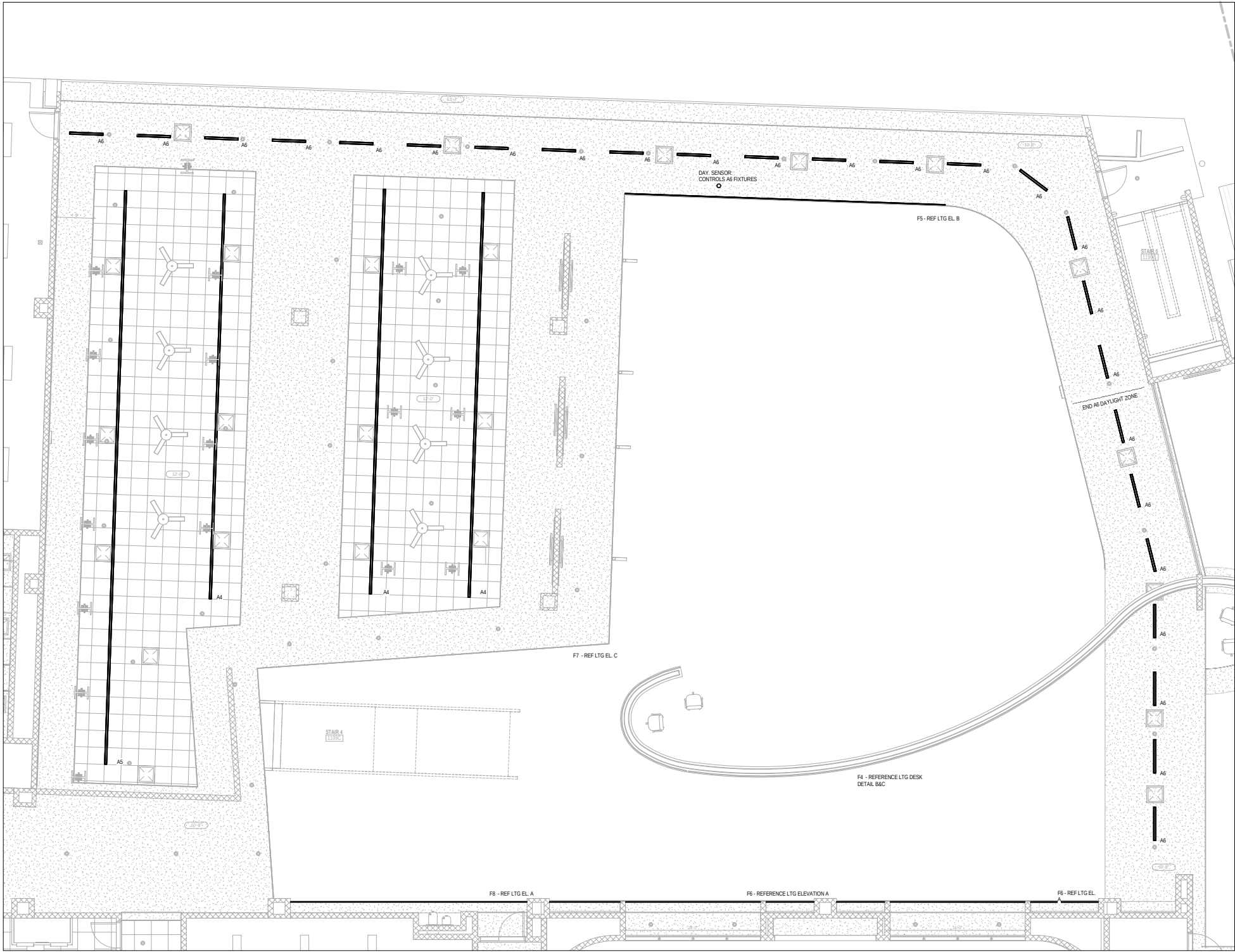
09.25.2012 - FOR CONSTRUCTION

Appendix B

Lighting Drawings

Drawing List:

L1	Lighting Gym - Level 1
L2	Lighting Gym - Level 2
L3	Lighting Lobby
L4	Lighting Track - Area A
L5	Lighting Track - Area B
L6	Lighting Skylights - Level 2
L7	Lighting Exterior
LD1	Lighting Desk Details
LD2	Lighting Elevations
LD3	Lighting Elevations



1/8" Level 1 - Lighting Gym
SCALE: 1/4" = 1'-0"

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PSU AE SENIOR THESIS
LIGHTING/ELECTRICAL

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PROJECT

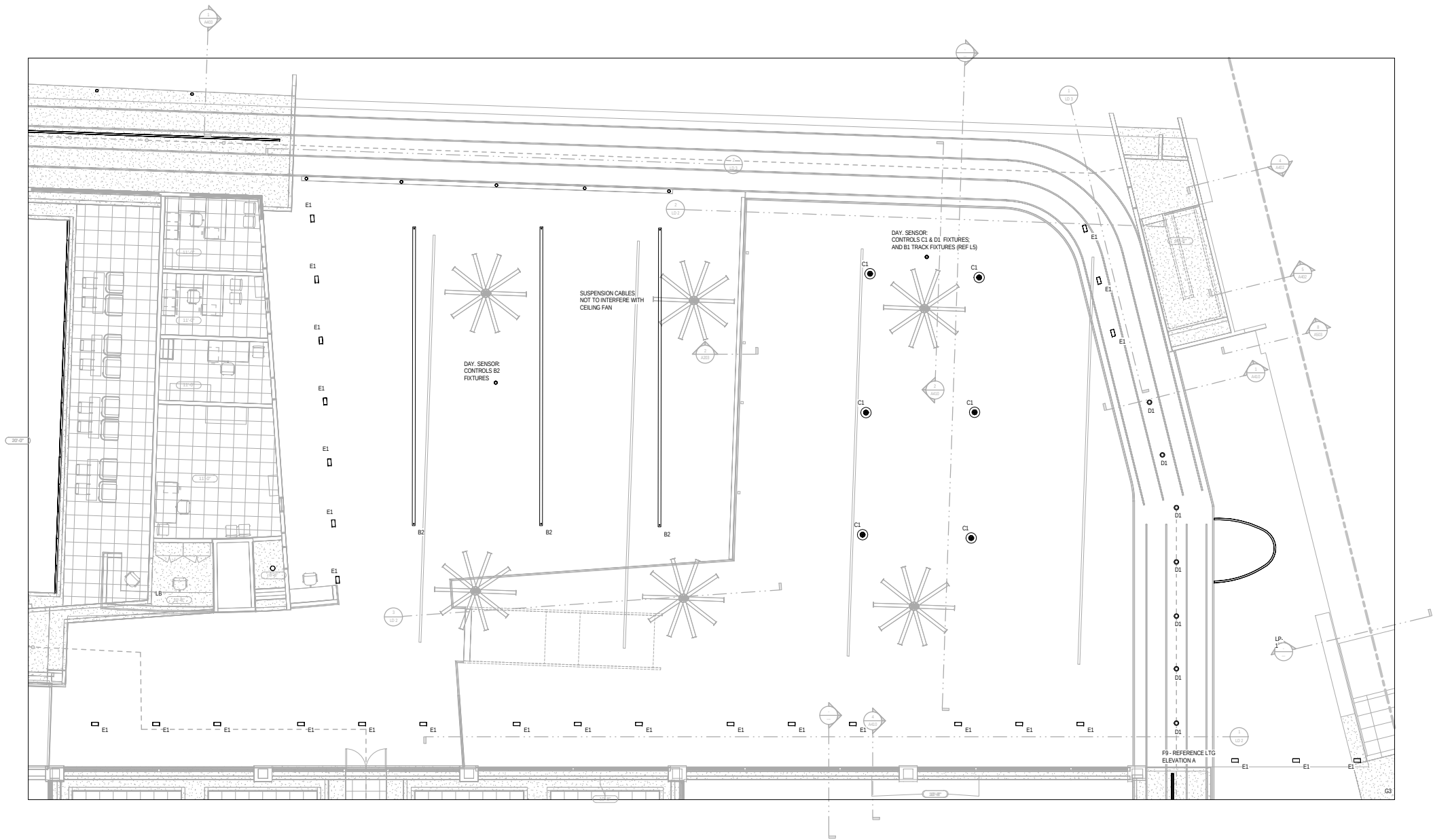
Lighting Gym - Level 1

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PROJECT MGR: JKL

L1

FOR PSU AE SENIOR THESIS PROJECT

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1/8" Level 2 - Lighting Gym
SCALE: 3/16" = 1'-0"

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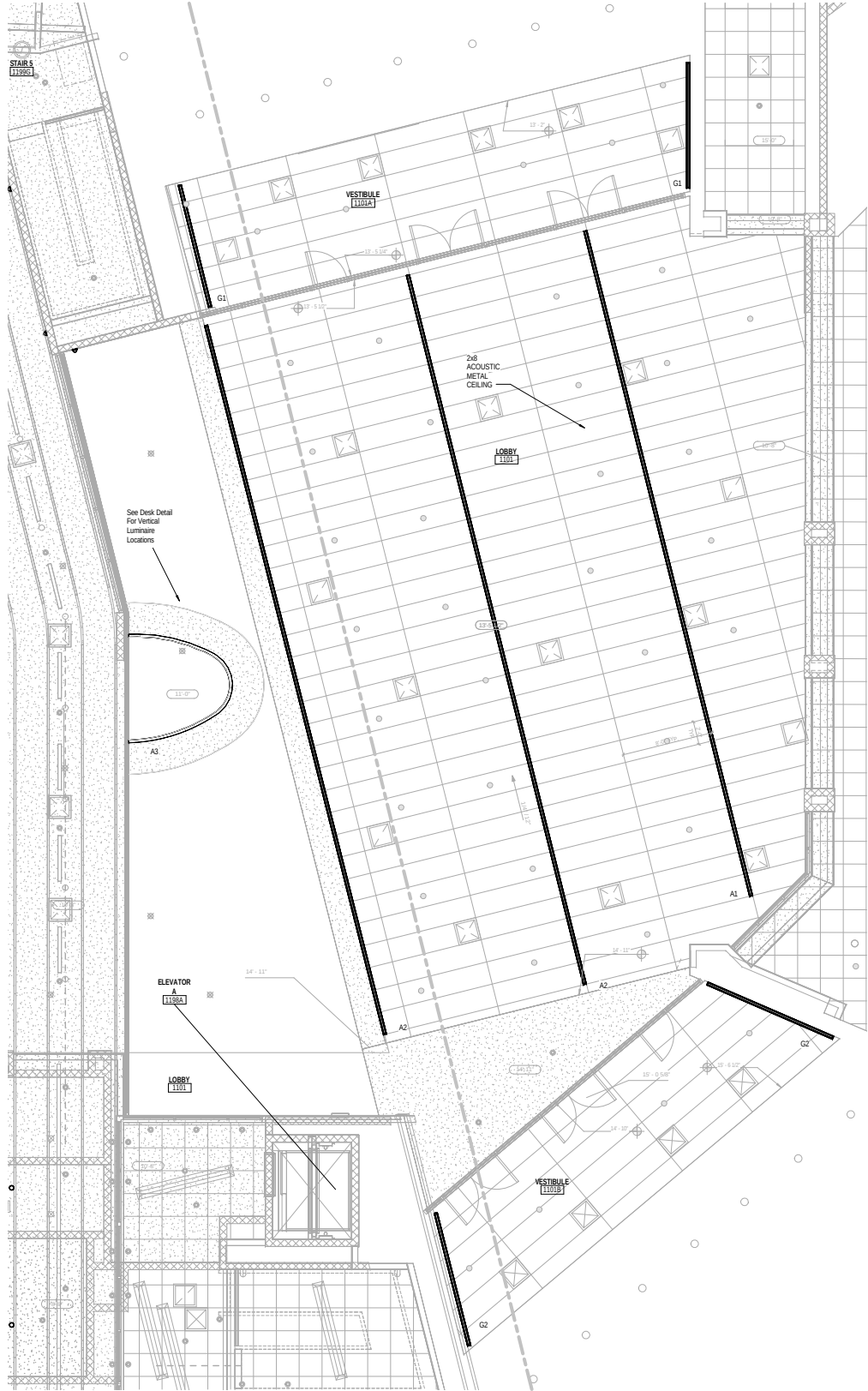
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Lighting Gym - Level 2

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PROJECT MGR: Rappert	

L2

FOR PSU AE SENIOR THESIS PROJECT



1/8" Level 1 - Lighting Lobby
SCALE: 1/4" = 1'-0"

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PROJECT

Lighting Lobby

SHEET TITLE
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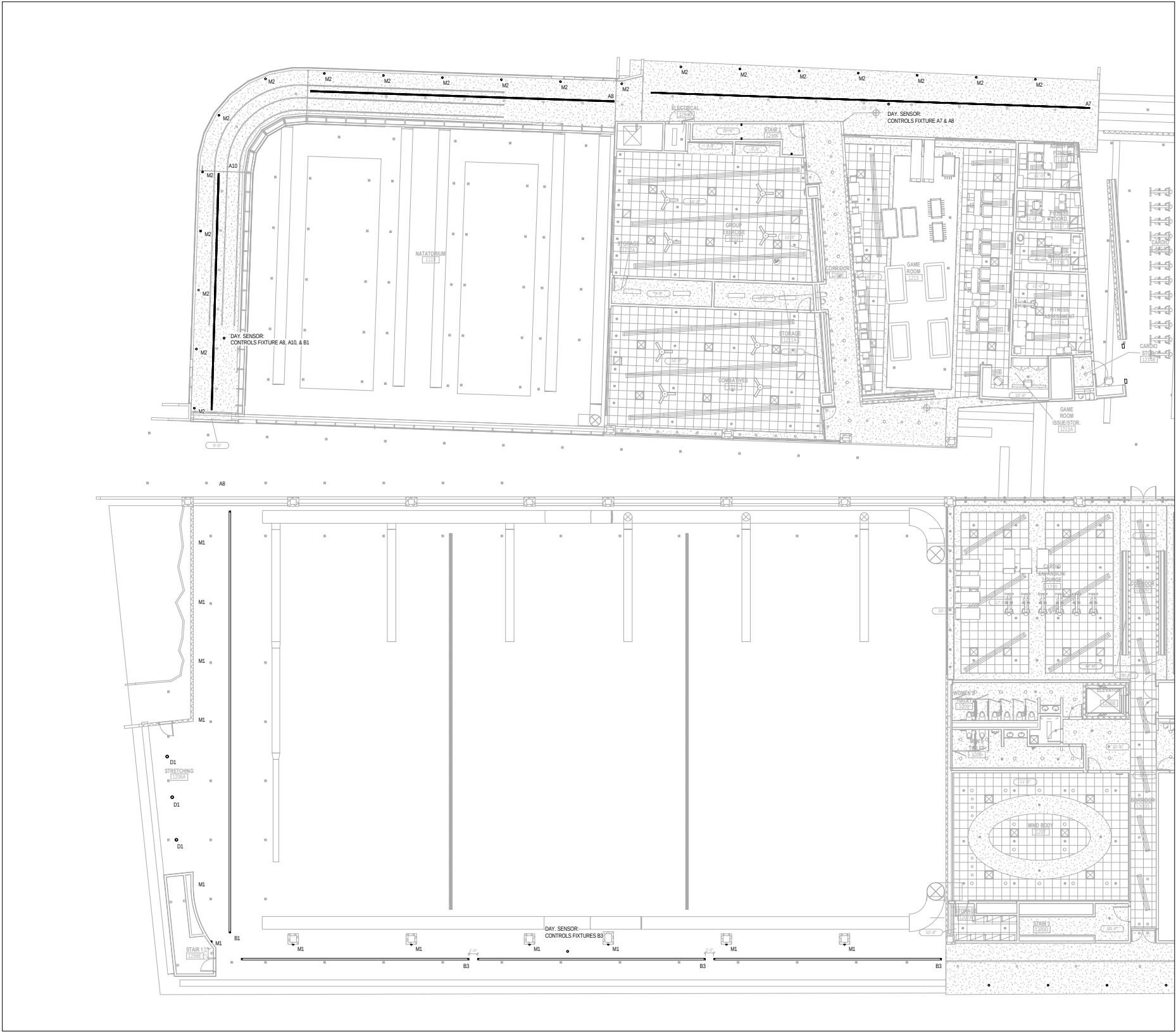
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L3

FOR PSU AE SENIOR THESIS PROJECT

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1/8" Level 2 - Lighting Track Area A
SCALE: 1/8" = 1'-0"

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PROJECT

Lighting Track - Area A

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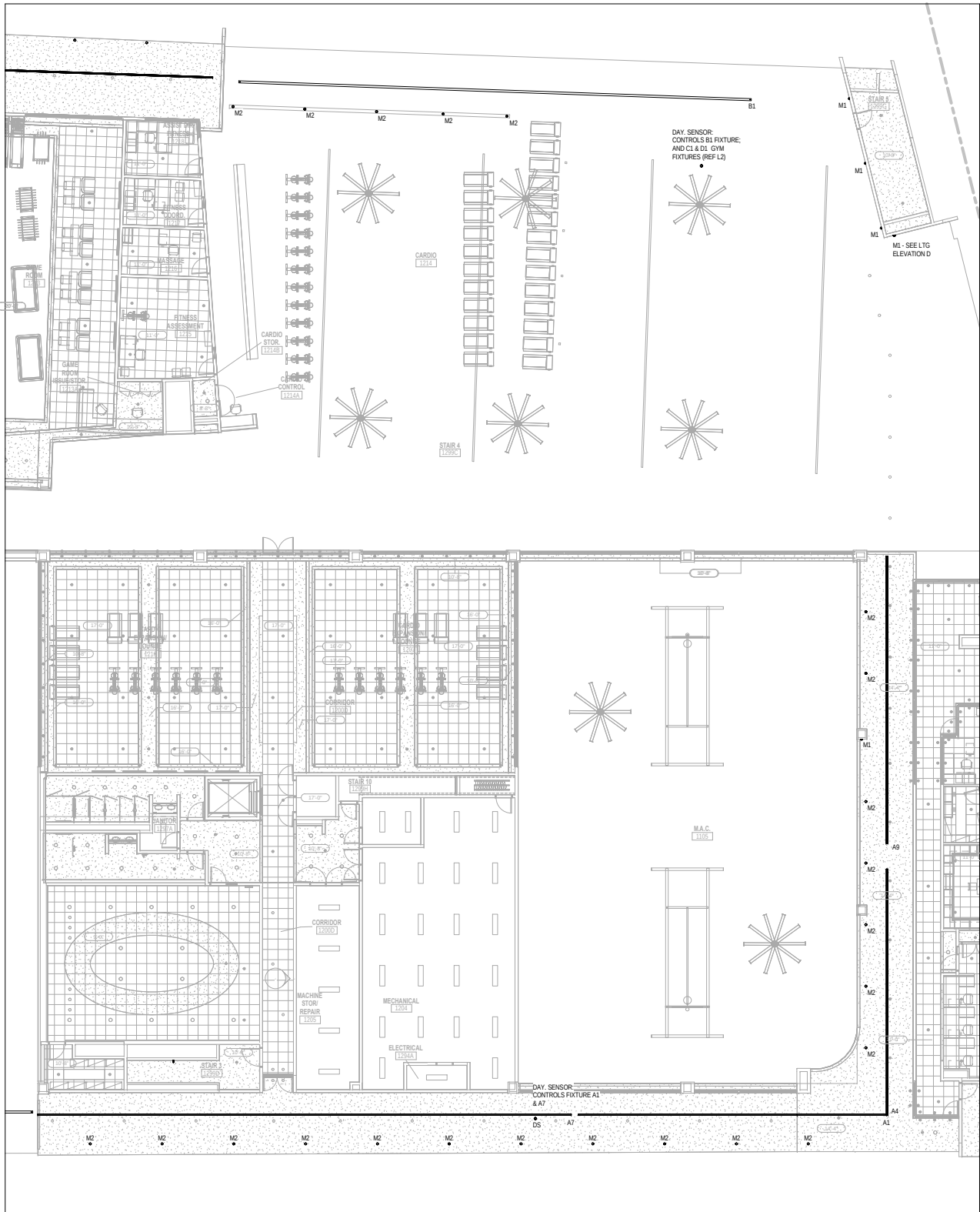
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PROJECT MGR: RUPP

L4

FOR PSU AE SENIOR THESIS PROJECT

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1/8" Level 2 - Lighting Track Area B
SCALE: 1/8" = 1'-0"

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PROJECT

Lighting Track - Area B

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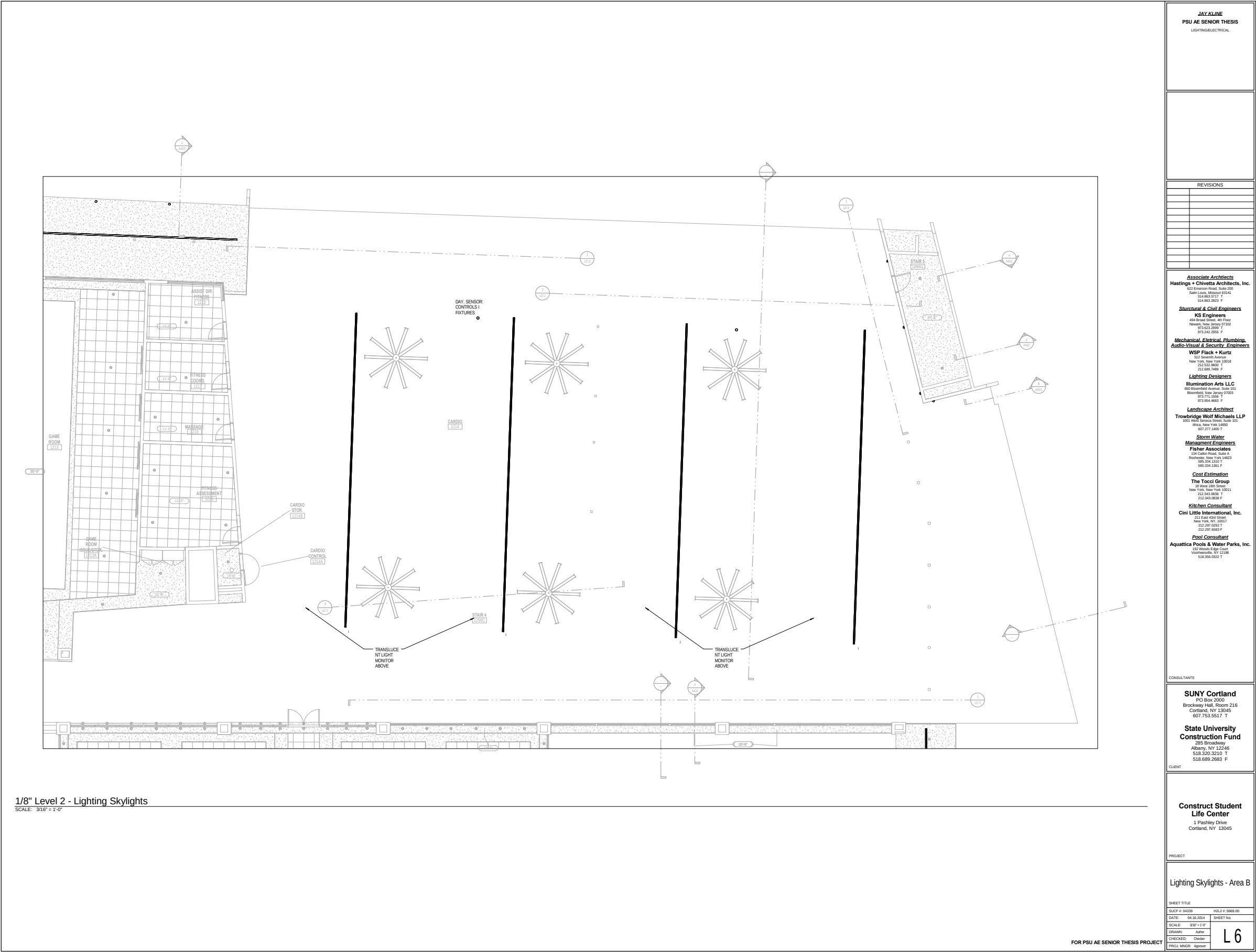
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L5

FOR PSU AE SENIOR THESIS PROJECT

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607.753.5517 T

State University
Construction Fund
285 Broadway
Albany, NY 12242
518.320.3210 T
518.689.2683 F

CLIENT

Construct Student
Life Center
1 Pashley Drive
Cortland, NY 13045

PROJECT

Lighting Skylights - Area B

SHEET TITLE
SUOF-F-04339

HOLD # 5888.00

DATE: 04.30.2014

SHEET No.

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ORIGIN: AutoCAD

CHECKED: Chider

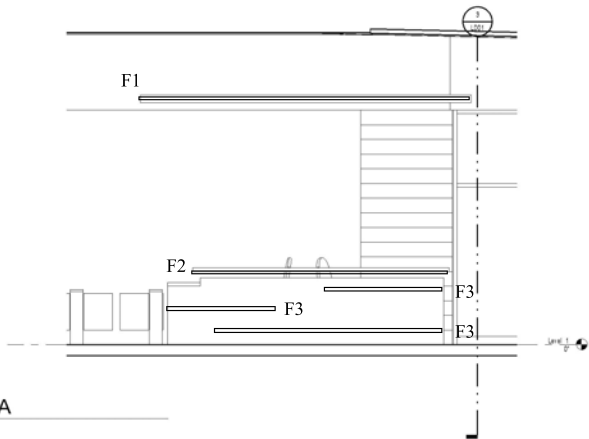
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L6

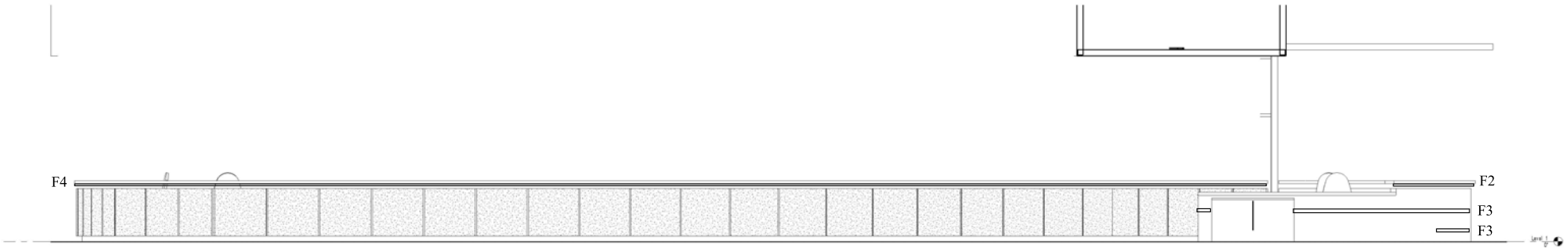
FOR PSU AE SENIOR THESIS PROJECT

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Desk Detail A
SCALE: 3/8" = 1'-0"



Desk Detail B
SCALE: 3/8" = 1'-0"



Desk Detail C
SCALE: 3/8" = 1'-0"



JAY KLINE
PSU AE SENIOR THESIS
LIGHTING/ELECTRICAL

REVISIONS	
2/8/13	ASI #012
2/12/13	ASI #013

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585.234.1301 F

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212.343.0338 F

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CLIENT

Construct Student Life Center
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PROJECT

LTG DESK DETAILS

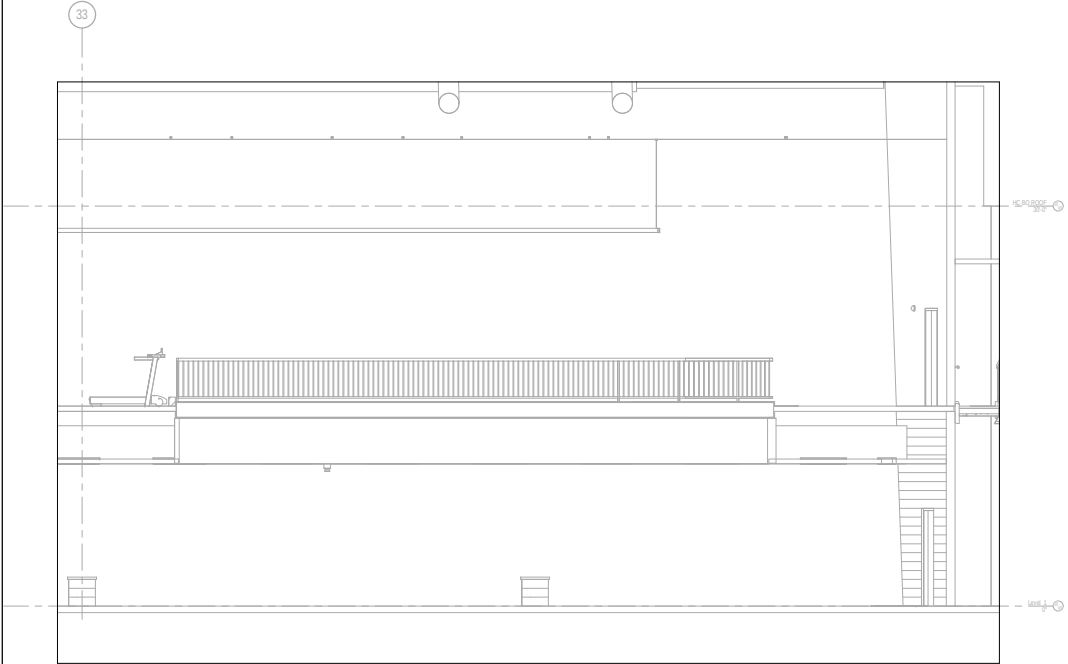
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PROJ. MGR: Approver	

LD01



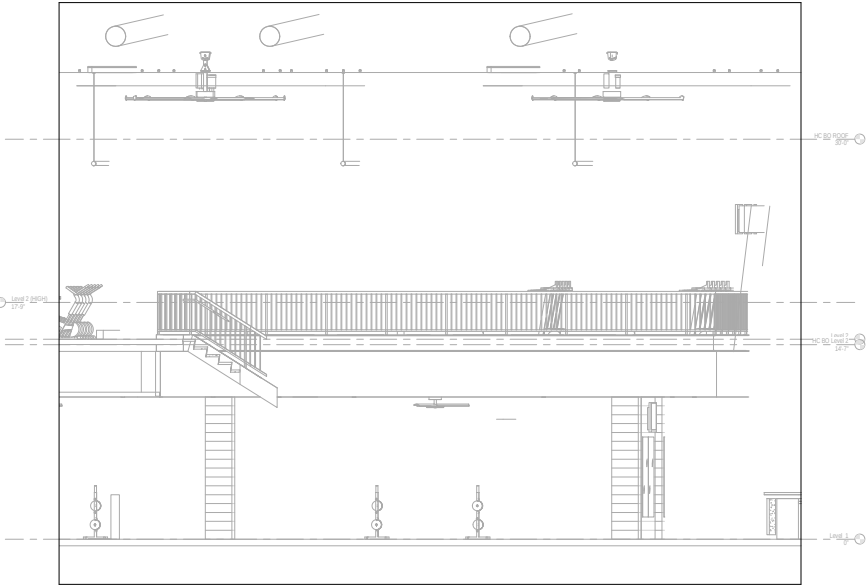
Lighting Elevation A

SCALE: 1/4" = 1'-0"



Lighting Elevation B

SCALE: 1/4" = 1'-0"



Lighting Elevation C

SCALE: 1/4" = 1'-0"

JAY KLINE
PSU AE SENIOR THESIS
LIGHTING/ELECTRICAL

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25 West 38th Street
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212.343.9838 F

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CLIENT

**Construct Student
Life Center**
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Cortland, NY 13045

PROJECT

LTG ELEVATIONS

SHEET TITLE
SUOF # 04339 HOLD # 5888.00

DATE: 04.30.2014 SHEET No.

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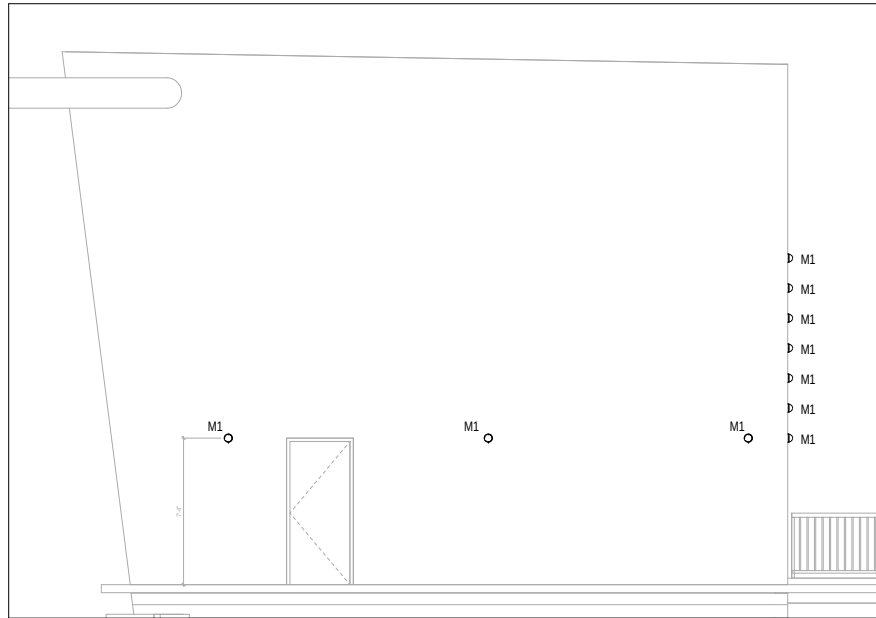
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PROJECT MGR: Agnew

LD 2

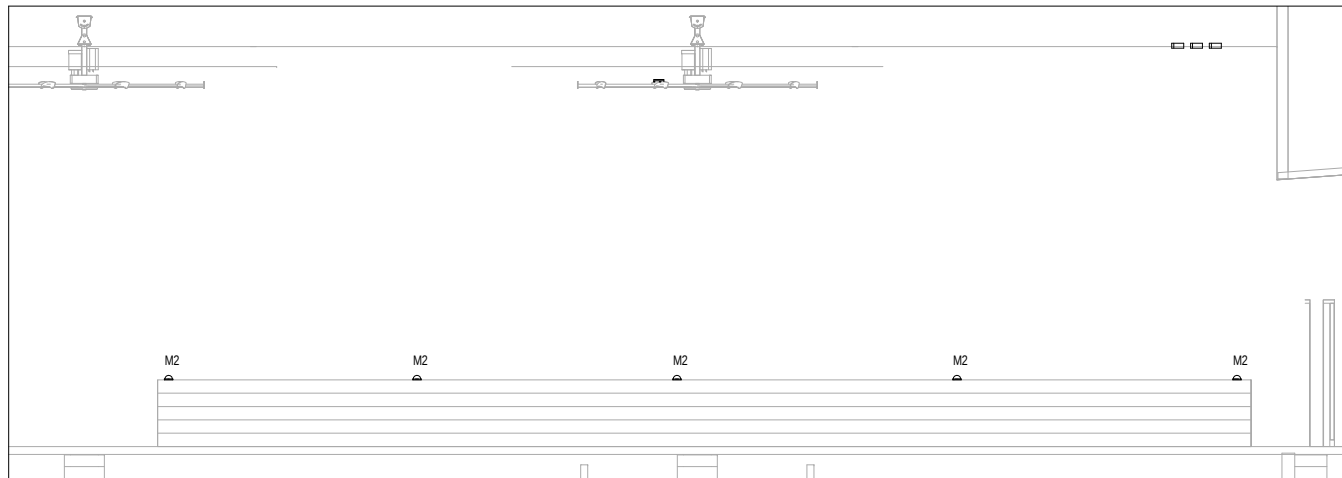
FOR PSU AE SENIOR THESIS PROJECT

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Lighting Elevation D

SCALE: $3/8" = 1'-0"$



Lighting Elevation E

SCALE: $3/8" = 1'-0"$

JAY KLINE
PSU AE SENIOR THESIS
LIGHTING/ELECTRICAL

REVISIONS

[illegible]

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518.689.2683 F

CLIENT

**Construct Student
Life Center**
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Cortland, NY 13045

PROJECT

LTG ELEVATIONS

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DATE: 04.16.2014	SHEET No.
SCALE: 3/8" = 1'-0"	LD 3
DRAWN: Author	
CHECKED: Checker	
PROJ. MGR: Approver	

FOR PSU AE SENIOR THESIS PROJECT

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Appendix C

Lighting Equipment

This Appendix includes:

1. Fixture Schedule
2. Fixture Specification Sheets
3. Lamp Catalog Information
4. Ballast/Power Source Catalog Information

SUNY Cortland Lighting Fixture Schedule

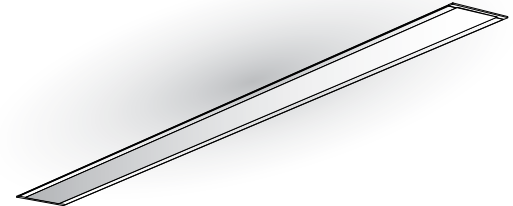
Symbol	Type	Manufacturer	Name	Product No.	Lamp Type	CRI	CCT	Lamp Life (hrs.)	Mounting	Volt	Lum or Lum/ft	W or W/Ft	Lum/W	Description
See Lighting Plans	A1	Lumenpulse	Lumenline Rec	LIU2R-227-C60-dRO40K-DMX1FX-FGL-WH	LED	86	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct
	A2	Lumenpulse	Lumenline Rec	LIU2R-227-C64-dRO40K-DMX1FX-FGL-WH	LED	85	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct
	A3	Lumenpulse	Lumenline Rec	LIU2R-227-C21-dRO40K-DMX1FX-FGL-WH	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct, Radial to Match Desk Overhang
	A4	Lumenpulse	Lumenline Rec	LIU2R-227-C48-dRO40K-DMX1FX-FGL-WH	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct
	A5	Lumenpulse	Lumenline Rec	LIU2R-227-C68-dRO40K-DMX1FX-FGL-WH	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct
	A6	Lumenpulse	Lumenline Rec	LIU2R-227-4-dRO40K-DMX1FX-FGL-WH	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, LED Direct
	A7	Lumenpulse	Lumenline Rec	LIU2R-227-C104-dRO40K-DMX1FX-FGL-WH	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct
	A8	Lumenpulse	Lumenline Rec	LIU2R-227-C72-dRO40K-DMX1FX-FGL-WH	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct
	A9	Lumenpulse	Lumenline Rec	LIU2R-227-C56-dRO40K-DMX1FX-FGL-WH	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct
	A10	Lumenpulse	Lumenline Rec	LIU2R-227-C30-dRO40K-DMX1FX-FGL-WH-SPECIAL	LED	87	4000k	100000	Recessed-Ceiling	277	1470	7	210.00	Acrylic lens, Continuous Run, Direct, Radial to Match Curvature of Track
	B1	Lumenpulse	Lumenline Pend	LIU2P-DI-227-C100-dRO40K-IRO40K-DMX1FX-ACC50-WH	LED	88	4000k	100000	Pendant	277	3299	14	235.64	Acrylic lens, Continuous Run, Direct/Indirect
	B2	Lumenpulse	Lumenline Pend	LIU2P-DI-227-C44-dRO40K-IRO40K-DMX1FX-ACC50-WH	LED	88	4000k	100000	Pendant	277	3299	14	235.64	Acrylic lens, Continuous Run, Direct/Indirect
	B3	Lumenpulse	Lumenline Pend	LIU2P-DI-227-C54-dRO40K-IRO40K-DMX1FX-ACC50-WH	LED	88	4000k	100000	Pendant	277	3299	14	235.64	Acrylic lens, Continuous Run, Direct/Indirect
	C1	Lumenpulse	Lumenbeam Grande	LBG-227-40k-WFL-blank-WH-DMX1BD	LED	81	4000k	100000	Pendant	227	4922	99	49.72	LED pendant, direct
	D1	Gotham	Incito	ICO-40-20-6AR-blank-20-277-DMXR	LED	85	4000k	50000	Recessed-Ceiling	227	2000	28	71.43	Recessed Downlight
	E1	Lighting Quotient	Elliptipar Wall Washer	M205-150G-T-02-2-00-0	Metal Halide - CDM150/T6/942	96	4200k	12000	Semi-Recessed-Ceiling	227	12700	150	84.67	Metal Halide semi-recessed wall washer, Ballast: shown in Appendix C
	F1	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W30 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F2	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W22 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F3	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W18 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F4	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W87 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F5	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W38 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F6	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W31 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F7	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W41 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F8	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W28 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	F9	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W10 TV IP67	LED	85	4100k	50000	Recessed-Wall	24	110	3	36.67	LED Continuous Flexible Strip
	G1	Lumenpulse	Lumencove	LCSRO-227-C11-40K-CL-RF-WH-DMX1FX	LED	85	4000k	100000	Cove	227	1383 (total)	25 (total)	55.00	LED Continuous Cove Light
	G2	Lumenpulse	Lumencove	LCSRO-227-C12-40K-CL-RF-WH-DMX1FX	LED	85	4000k	100000	Cove	227	1383 (total)	25 (total)	55.00	LED Continuous Cove Light
	G3	Lumenpulse	Lumencove	LCSRO-227-C72-40K-CL-RF-WH-DMX1FX	LED	85	4000k	100000	Cove	227	1383 (total)	25 (total)	55.00	LED Continuous Cove Light
	H	Lumascap	Omnio Mini	LS411LED-15W4-ME-C-09-CB	LED		4300k	Unavailable	Clamped	120	743	16	46.44	LED directional, mounted to branches for path lighting using
	I	Lumenpulse	Lumenline Wall	LIU2S-WM-I-227-C60-IRO40K-DMX1FX-WH	LED	86	4000k	100000	Wall Mount	277	1470	7	210.00	Acrylic lens, Continuous Run, Indirect
	J	Bega	Landscape Bollard	8657LED-120-BLK	LED	85	4000k	Unavailable	Bollard	120	729	13	56.08	IP67 Bollard, Black Finish, 21 inches Tall
	K	Delray	Media Square	M2LD-8x8-LOCW-BDMXMOD	LED	>80	4000k	Unavailable	Bollard	227	8652	13	665.54	Square LED Pendant, Aluminum Matte Anodized Finish
	L	LED Linear	VarioLED Flex Venus	VarioLED Flex VENUS W835/W51 TV IP67	LED	85	4100k	50000	Surface mounted	24	110	3	36.67	LED Continuous Flexible Strip, Surface mounted to bottom of fascia plate, sideways bending
	M1	Lumenpulse	Lumendome	LMDM-48V-RGB-WH-WM	LED	NA	RGB	120000	Wall Mount	227	95	12	7.92	LED 6" Color changing dome. Power source found in Appendix C
	M2	Lumenpulse	Lumendome	LMDM-48V-RGB-WH-CN	LED	NA	RGB	120000	Surface mounted	227	95	12	7.92	LED 6" Color changing dome. Power source found in Appendix C

Client: _____
 Project name: _____
 Order #: _____
 Type: _____ Qty: _____

FEATURES AND BENEFITS

Physical :

- Aluminum extrusion housing, 2" wide
- Available in 1', 2', 3', 4', 5', 6', 7' or 8' sections
- Durable polyester powder coat finish for trim
- Flange, flangeless and spackle flange trim options available
- Easy installation
- Extruded acrylic lens
- Illuminated corners available for custom configurations, consult factory for availability and orders
- Tool-less system for reflector assembly and control gear access
- Suitable for use with drywall ceiling and metal pan ceilings (millwork ceilings)
- Compatible with motion sensors
- CCEA option available



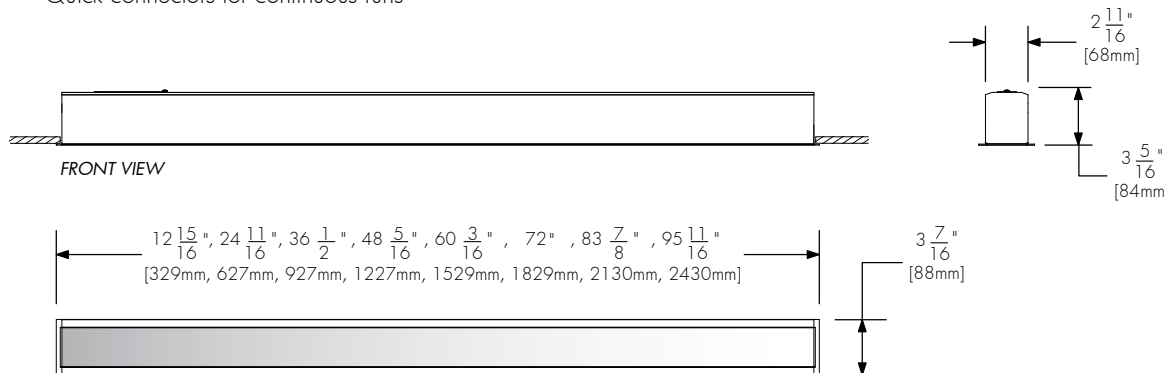
Performance :

- Available in 2700K, 3000K, 3500K, 4000K or RGB color mixing
- 55 lumens per watt (delivered, HO 3500K)
- CRI value: 80+
- Binning within a 3 step MacAdam ellipse
- Lumen maintenance: 100,000 hrs [L70 @ 25° C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture
- Operating temperatures: -25° C to 50° C [-13F to 122F]

Lumens / 4ft	RO	HO
2700K	1200	2500
3000K	1352	2876
3500K	1460	3120
4000K	1744	3476
RGB	407	

Electrical :

- Line voltage luminaire for 120 to 277V
- 7W/ft Regular Output version
- 14.25W/ft High Output version
- Dimming options for white light: 0-10 volt, DMX, DALI, Lumentalk, or Lutron® EcoSystem® enabled
- 6W/ft optional RGB source, DMX 512 ready
- Quick connectors for continuous runs

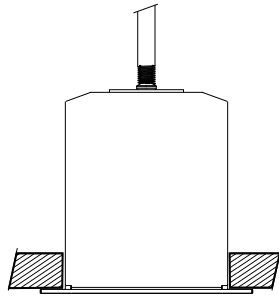


FRONT VIEW

BOTTOM VIEW
FLANGE TRIM OPTION SHOWN

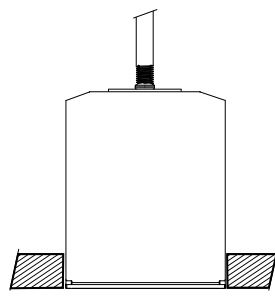
5 year warranty

TRIM OPTION



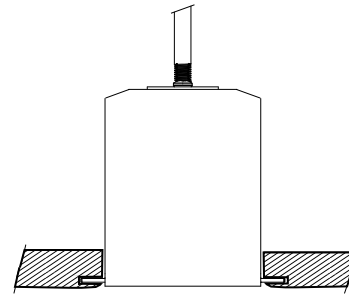
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Flange trim option



FGL

Flangeless trim option

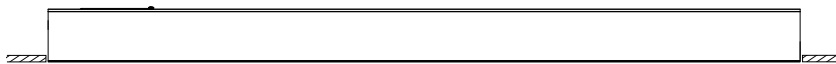


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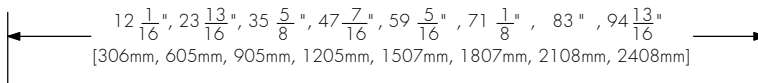
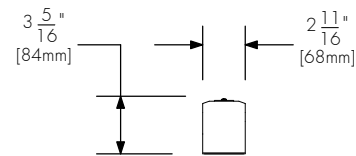
Spackle Flange trim option

TRIM OPTIONS DIMENSIONS

Flangeless and Spackle flange trim options



FRONT VIEW

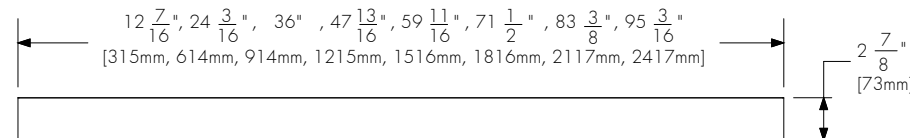


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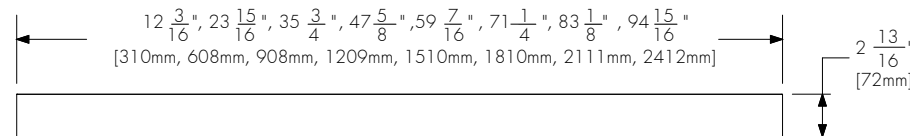
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(USE SAME DIMENSIONS FOR SPACKLE FLANGE HOUSING)

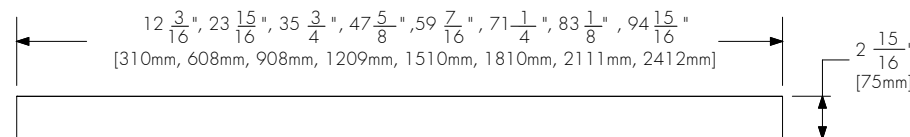
CEILING CUTOUT DIMENSIONS



FLANGE CEILING CUTOUT



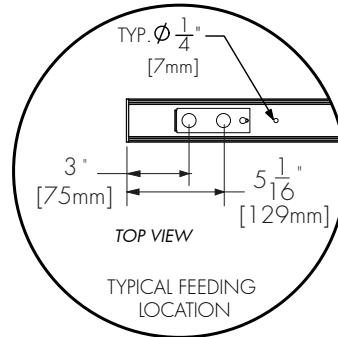
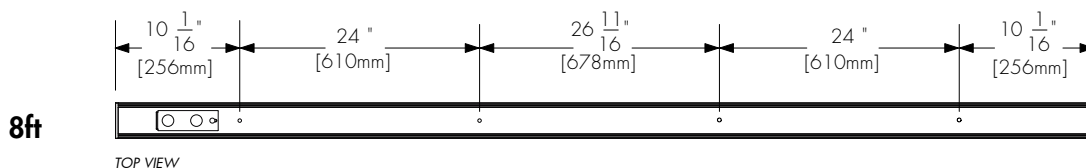
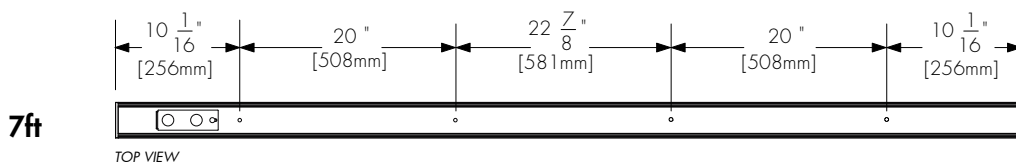
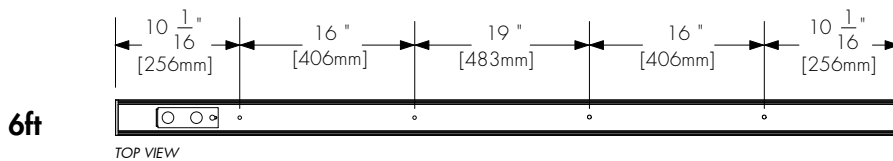
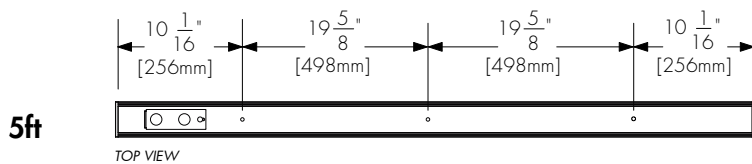
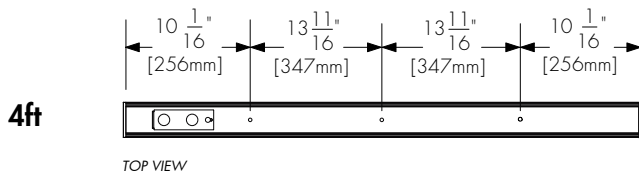
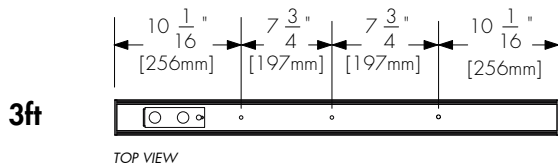
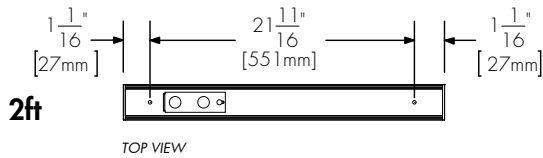
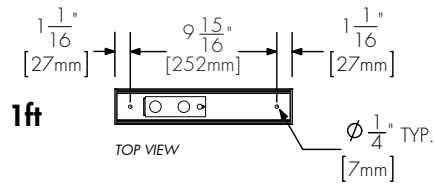
FLANGELESS CEILING CUTOUT



SPACKLE FLANGE CEILING CUTOUT

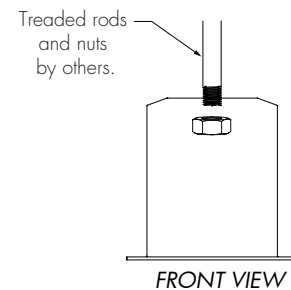
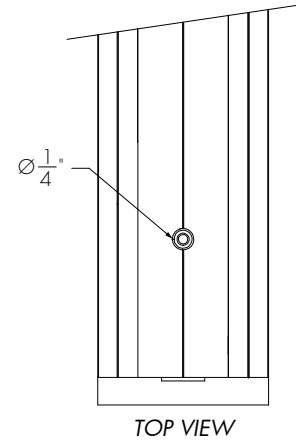
THREADED RODS MOUNTING HOLE PATTERN

Flangeless trim options shown



THREADED RODS MOUNTING DETAIL

Flangeless, spackle flange and flangeless trim options



ACCESSORIES

Order separately

Control Systems:

- LTO** Lumentouch is a wall mount DMX 512 controller keypad
- LCU** Lumencue is a USB / mini SD DMX 512 controller
- LID** LumenID is a serializing and addressing DMX 512 controller.
It must be specified on all white DMX applications.
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

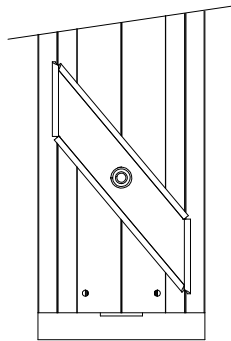
CBOX :

iCBOX-__V-__-__ Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to four outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

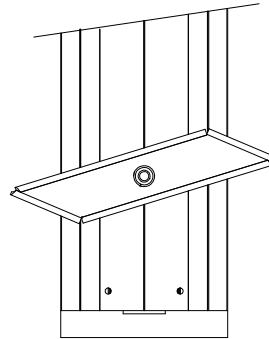
CBOX-__V-__-__ DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to four outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

ROTATING CROSSBAR MOUNTING OPTION

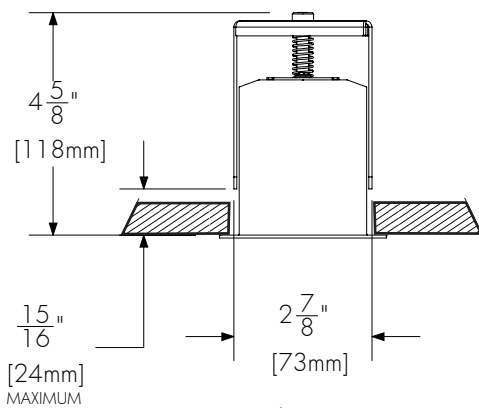
Available with Flange trim option only



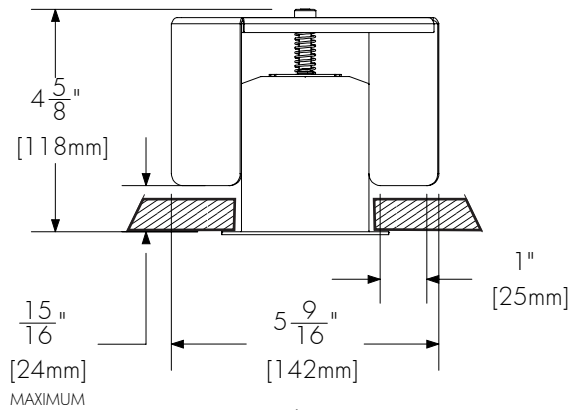
Top view
Rotating Crossbar CLOSED



Top view
Rotating Crossbar OPENED



Side view
Rotating Crossbar CLOSED

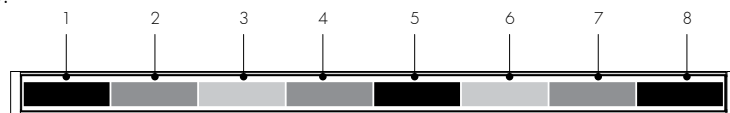


Side view
Rotating Crossbar OPENED

RESOLUTION DETAILS

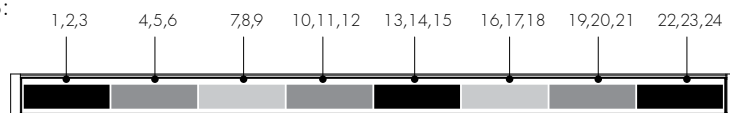
DMX 1FT - Resolution per foot: each foot is addressed independently .

WHITE DIMMING
DMX ADDRESSES:



*BOTTOM VIEW
(8 ft fixture shown)*

RGB
DMX ADDRESSES:



*BOTTOM VIEW
(8 ft fixture shown)*

DMX 1FX - Resolution per fixture: each 4 foot segment is addressed independently

WHITE DIMMING
DMX ADDRESSES:



*BOTTOM VIEW
(8 ft fixture shown)*

RGB
DMX ADDRESSES:

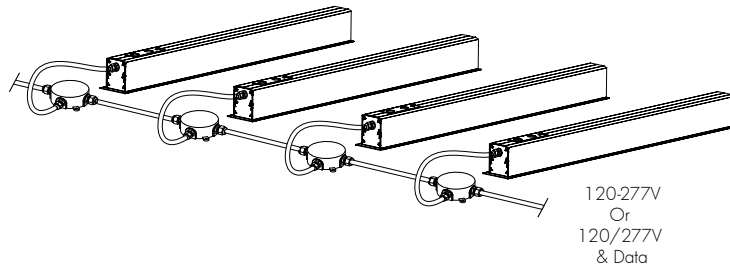


*BOTTOM VIEW
(8 ft fixture shown)*

*Warning: resolution is a factory setting and cannot be changed in the field.

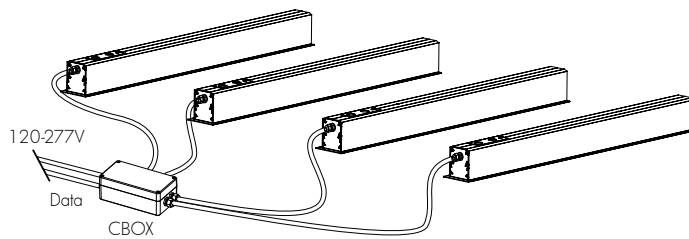
TYPICAL WIRING DIAGRAMS

Single units, daisy chain configuration
ON/OFF, 0/10V, DALI & EcoSystem dimming



*Flange option shown

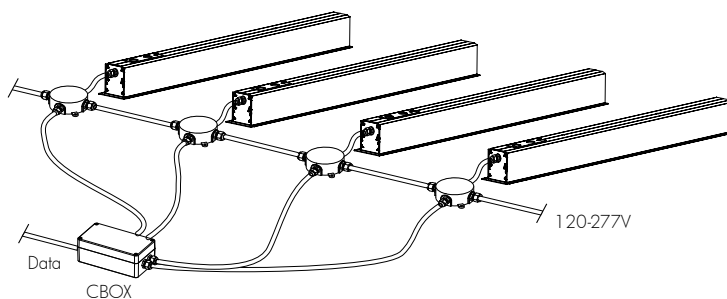
Single units, daisy chain configuration
Combined power and data input (DMX)



*Flange option shown

*For stable DMX data signal do not split more than 8 times

Single units, daisy chain configuration
Separated power and data inputs (DMX)



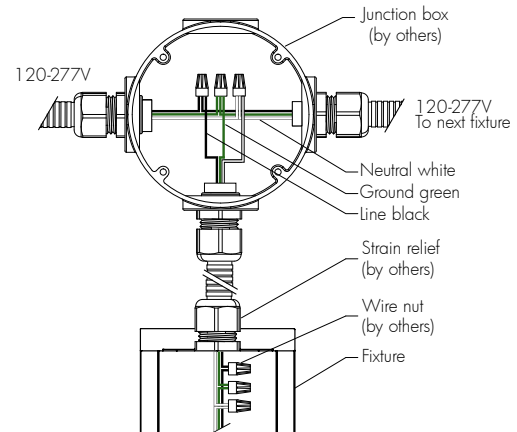
*Flange and vertical option shown

*For stable DMX data signal do not split more than 8 times

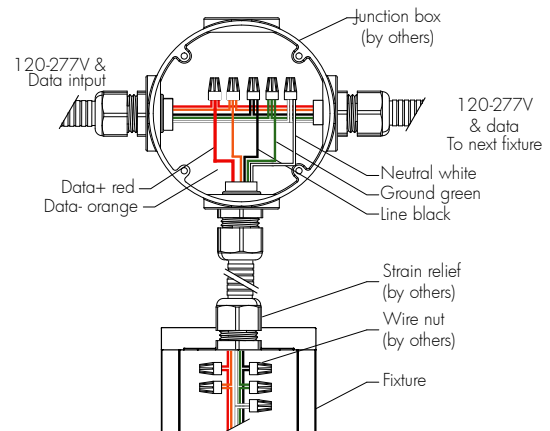


WARNING
SEPARATION OF FIELD INSTALLED POWER LIMITED CIRCUIT (DIMMING/DATA/CONTROL) WIRING FROM THE BRANCH CIRCUIT WIRING IN THE OUTLET BOX ARE TO BE MADE IN ACCORDANCE WITH LOCAL AND/OR NATIONAL ELECTRICAL INSTALLATION CODES.

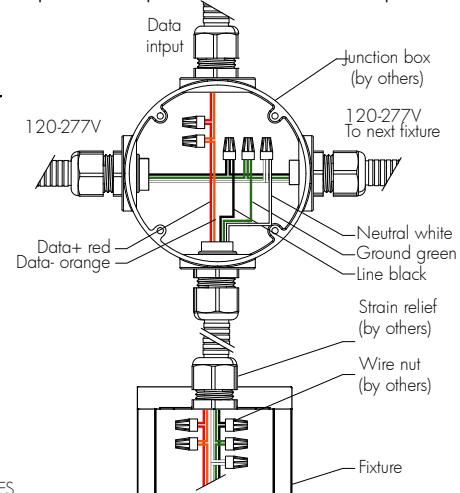
ON/OFF wiring detail



0/10V, DMX, DALI
& EcoSystem wiring detail
Combined power and data

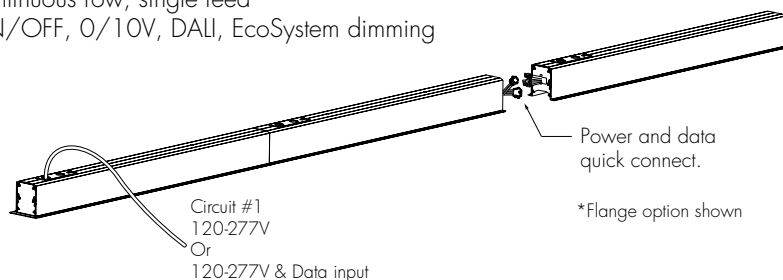


0/10V, DMX, DALI
& EcoSystem wiring detail
Separated power and data inputs

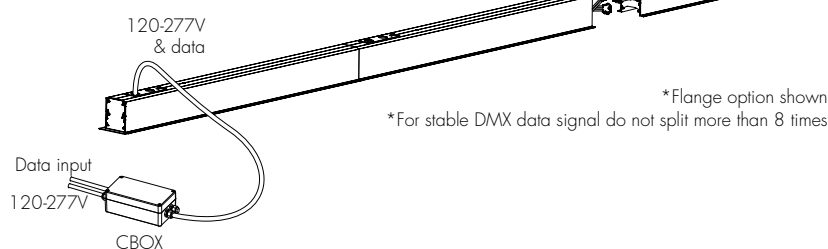


TYPICAL WIRING DIAGRAMS

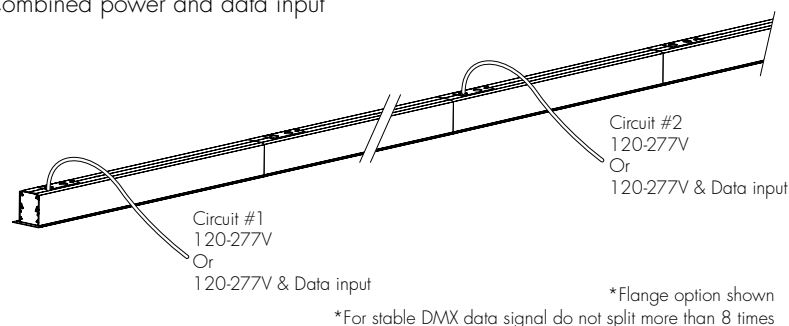
Continuous row, single feed
ON/OFF, 0/10V, DALI, EcoSystem dimming



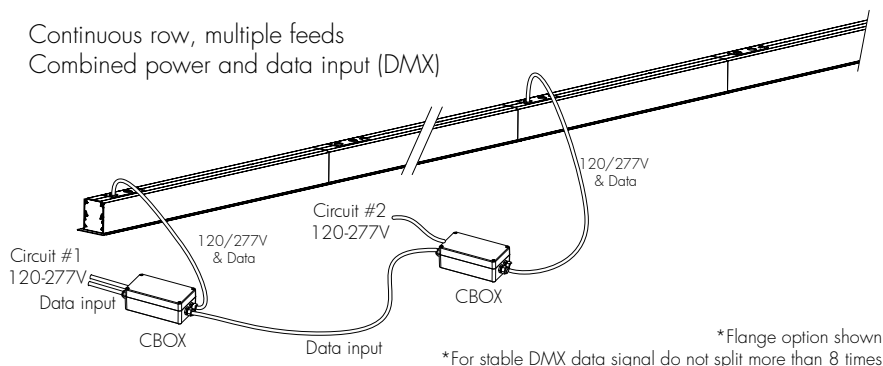
Continuous row, single feed
Combined power and data inputs (DMX)



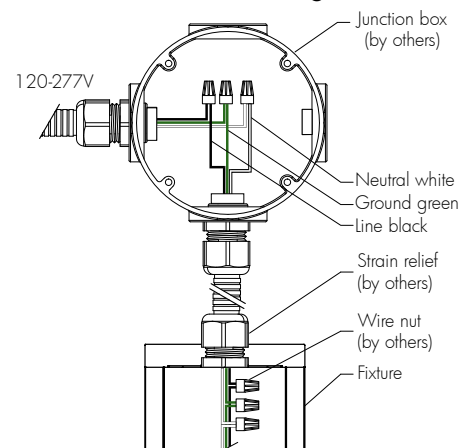
Continuous row, multiple feeds
ON/OFF, 0/10V, DALI, EcoSystem dimming
Combined power and data input



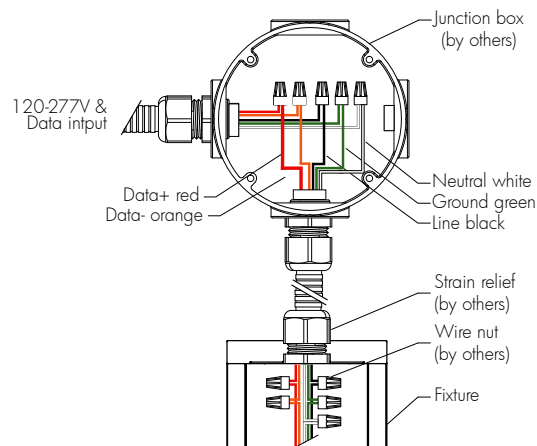
Continuous row, multiple feeds
Combined power and data input (DMX)



ON/OFF wiring detail



0/10V, DMX, DALI & EcoSystem wiring detail Combined power and data



Maximum run length by single circuit 7A maximum with 10 ft cable			
Configuration/Voltage	120V	240V	277V
RO Regular output	116ft	232ft	272ft
HO High output	56ft	116ft	132ft
RGB	128ft	272ft	312ft

⚠ WARNING

SEPARATION OF FIELD INSTALLED POWER
LIMITED CIRCUIT (DIMMING/DATA/CONTROL)
WIRING FROM THE BRANCH CIRCUIT
WIRING IN THE OUTLET BOX ARE TO BE MADE
IN ACCORDANCE WITH LOCAL AND/OR NATIONAL
ELECTRICAL INSTALLATION CODES.

HOW TO ORDER

LLI2R	277	Select:	dRO 40K	DMX 1FX	FGL	WH	Select:
Housing	Voltage	Length	Output and color temperature	Control	Trim Option	Trim Finish	Option
1	2	3	4	5	6	7	8
1		↑ See Fixture Schedule for different lengths.			5		↑ See Fixture Schedule: A10 special.
Housing:			Control:				
LLI2R - Lumenline™ Recessed, 2" wide			NO - On/Off control LT - Lumentalk (available with white light only) (available for 2-8' lengths only) (1% minimum dimming value) DIM - 0-10V Dimming option (10% minimum dimming value) DMX 1FT - DMX Dimming option, resolution per foot (1% minimum dimming value) DMX 1FX - DMX Dimming option, resolution per fixture (1% minimum dimming value) DALI - DALI Dimming option (1% minimum dimming value) ES - Lutron® EcoSystem® Enabled Dimming (available with white light only) (available for 2-8' lengths only) (1% minimum dimming value)				
2	Voltage:		Trim Option:				
	120 - 120 volts 208 - 208 volts 220/240 - 220 to 240 volts 277 - 277 volts		FG - Flange FGL - Flangeless SFG - Spackle Flange				
3	Length:		Trim Finish:				
	Dimension shown are for flangeless 1 - 12 1/16" (306mm) 2 - 23 13/16" (605mm) 3 - 35 5/8" (905mm) 4 - 47 7/16" (1205mm) 5 - 59 5/16" (1507mm) 6 - 71 1/8" (1806mm) 7 - 83" (2108mm) 8 - 94 13/16" (2408mm) C - Continuous run, specify in 1' increments		WH - White SI - Silver CC - Custom (please specify RAL color)				
4	Output and color temperature:		Option:				
	dRO 27K - 2700K regular output 7W/ft dRO 30K - 3000K regular output 7W/ft dRO 35K - 3500K regular output 7W/ft dRO 40K - 4000K regular output 7W/ft dHO 27K - 2700K high output 14.25W/ft* dHO 30K - 3000K high output 14.25W/ft* dHO 35K - 3500K high output 14.25W/ft* dHO 40K - 4000K high output 14.25W/ft* dRGB - Additive red, green and blue direct lighting 6W/ft N.B. dRGB option requires DMX control to be specified in section 5.		CCEA - Chicago plenum rated option RCB - Rotating Crossbar mounting, available for flange trim option only (2 rotating crossbars included for 1-5' lengths, 3 rotating crossbars included for 6-8' lengths)				

Client: _____
Project name: _____
Order #: _____
Type: _____ Qty: _____

FEATURES AND BENEFITS

Physical :

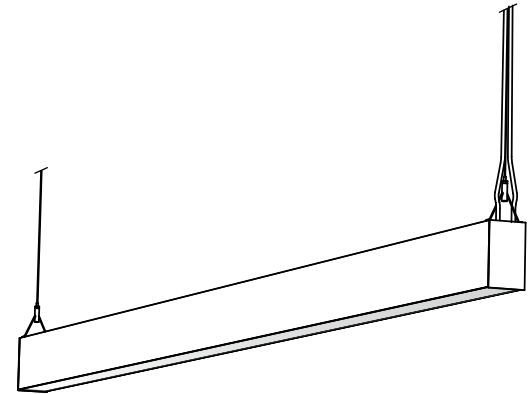
- Aluminum extruded housing
- Available in 1', 2', 3', 4', 5', 6', 7' or 8' sections
- Continuous runs available in 1' increments
- Durable polyester powder coat finish
- Extruded acrylic lens
- High reflective matte white powder coated reflectors
- Easy installation
- Tool-less system for reflector assembly and control gear access
- Suitable for use with drywall, grid and metal pan ceilings (millwork ceilings)
- 1/16" galvanized aircraft cable adjustable suspension system
- Non illuminated corners available for custom configurations
- Compatible with motion sensors

Performance :

- Available in 2700K, 3000K, 3500K, 4000K or RGB color mixing for direct and indirect lighting
- 55 lumens per watt (delivered, HO 3500K)
- CRI value: 80+
- Binning within a 3 step MacAdam ellipse
- Lumen maintenance: 100,000 hrs [L70 @ 25° C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture
- Operating temperatures: -25° C to 50° C [-13F to 122F]

Electrical :

- Line voltage luminaire for 120 to 277V
- 7W/ft Regular Output version, direct or indirect lighting
- 14.25W/ft High Output version, direct or indirect lighting
- Dimming options for white light: 0-10 volt, DMX, DALI, Lumentalk, or Lutron® EcoSystem® enabled
- 6W/ft optional RGB source, DMX 512 ready
- Quick connectors for continuous runs



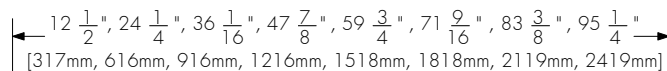
Lumens / 4ft downlight / uplight	↓RO / ↑RO	↓RO / ↑HO	↓HO / ↑RO
2700K			2316 / 1393
3000K		1191 / 2690	2770 / 1768
3500K	1378 / 1910	1575 / 3709	
4000K	1660 / 1908		



TOP VIEW

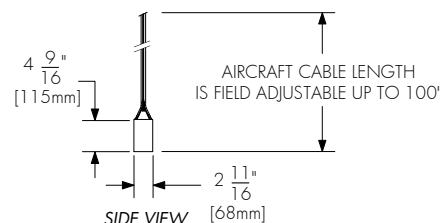


FRONT VIEW



BOTTOM VIEW

5 year warranty



SIDE VIEW

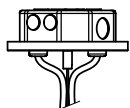
AIRCRAFT CABLE LENGTH
IS FIELD ADJUSTABLE UP TO 100"

SUSPENSION SYSTEM MOUNTING ACCESSORIES

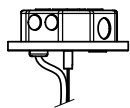
PENDANT
DIRECT/INDIRECT LIGHTING

Included

Drywall ceiling accessories



Feeder canopy
Power and data

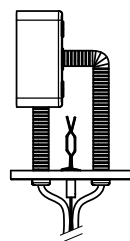


Feeder canopy
Power

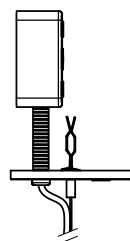


Non-feeder canopy
(1/4-20 hardware required)

Suspended ceiling accessories



Feeder canopy
Power and data



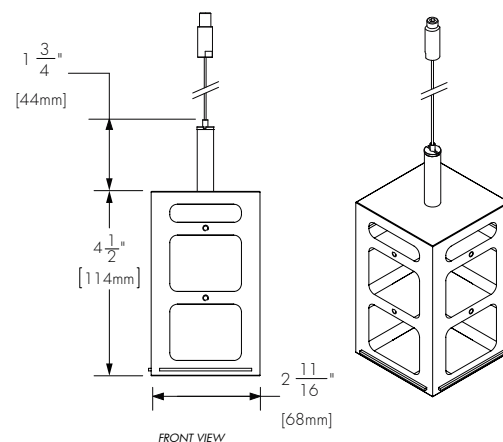
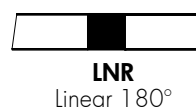
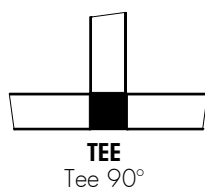
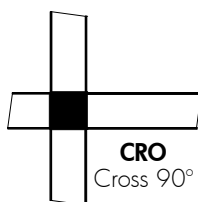
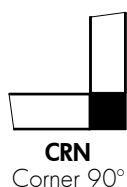
Feeder canopy
Power



Non-feeder canopy

*Require a minimum of 1 hanging point per fixture

UNLIT JOINERS & CORNERS (CONSULT UNLIT JOINERS SPECIFICATION SHEET FOR DETAILS)



ACCESSORIES

Order separately

Control Systems:

- LTO** Lumentouch is a wall mount DMX 512 controller keypad
- LCU** lumencue is a USB / mini SD DMX 512 controller
- LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

CBOX :

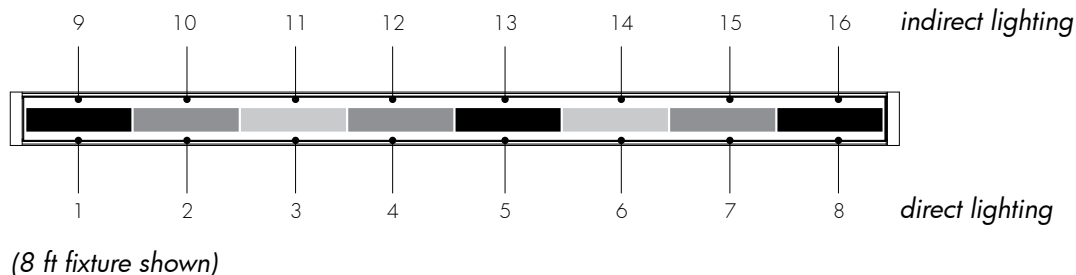
iCBOX-__V-__-__ Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

CBOX-__V-__-__ DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

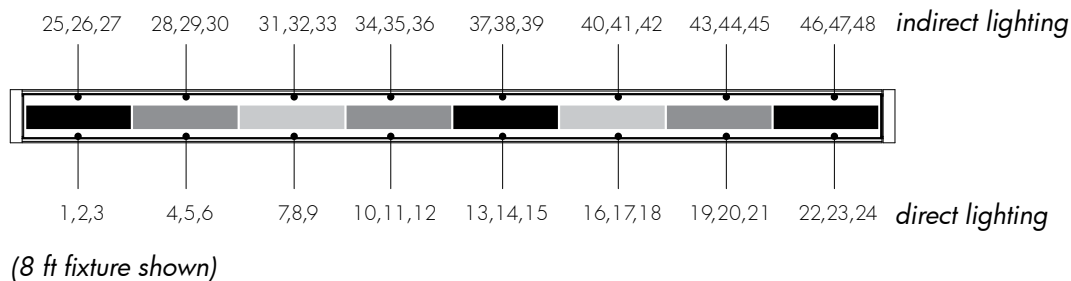
RESOLUTION DETAILS

DMX 1FT - Resolution per foot: each foot is addressed independently .

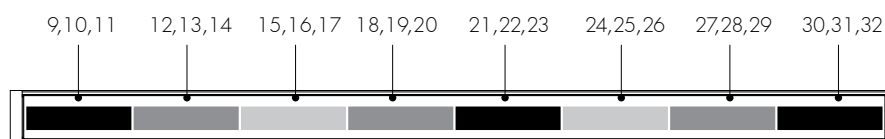
DIRECT AND INDIRECT
WHITE DIMMING
DMX ADDRESSES:



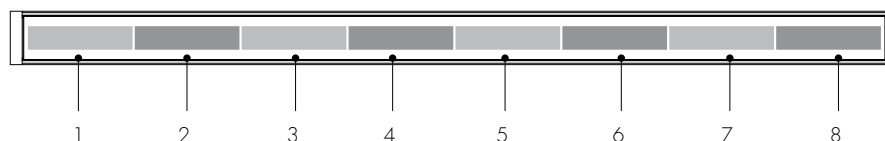
DIRECT AND INDIRECT
RGB DMX ADDRESSES:



COMBINED
WHITE DIMMING
& RGB DMX ADDRESSES:



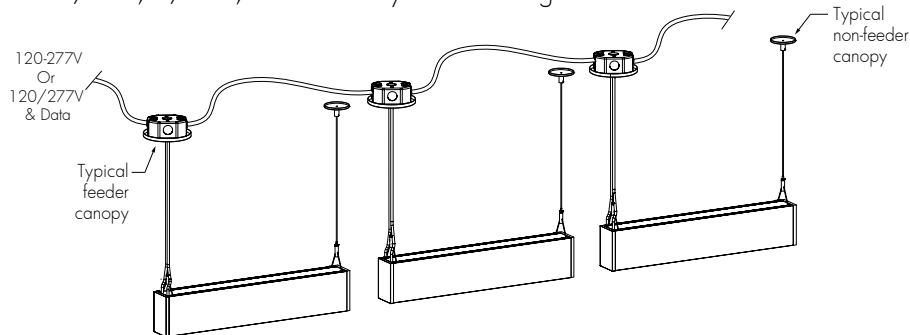
Top or bottom view
RGB
(8 ft fixture shown)



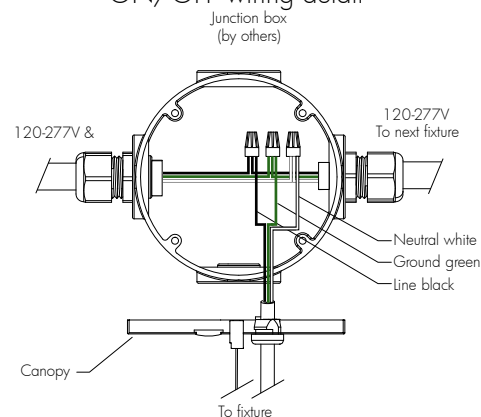
Top or bottom view
White dimming
(8 ft fixture shown)

TYPICAL WIRING DIAGRAMS

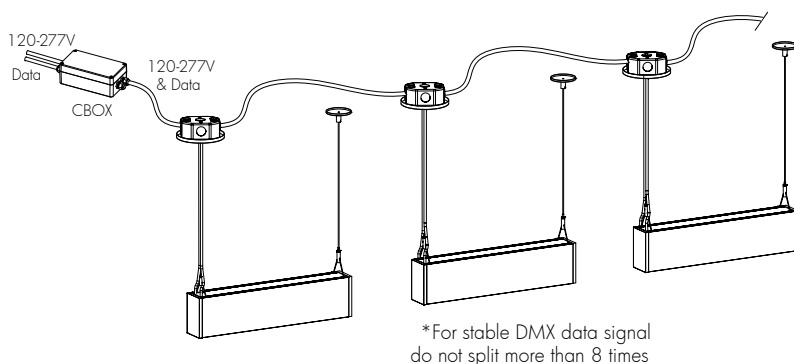
Single units, daisy chain configuration
ON/OFF, 0/10V, DALI & EcoSystem dimming



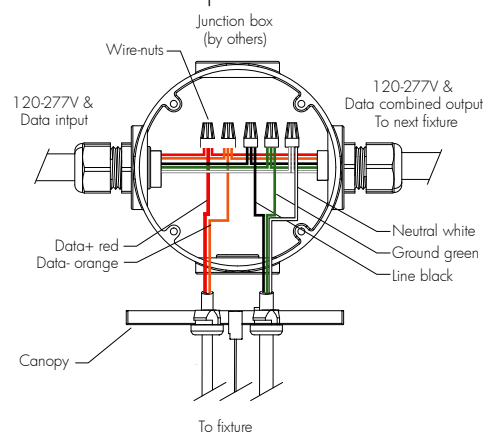
ON/OFF wiring detail



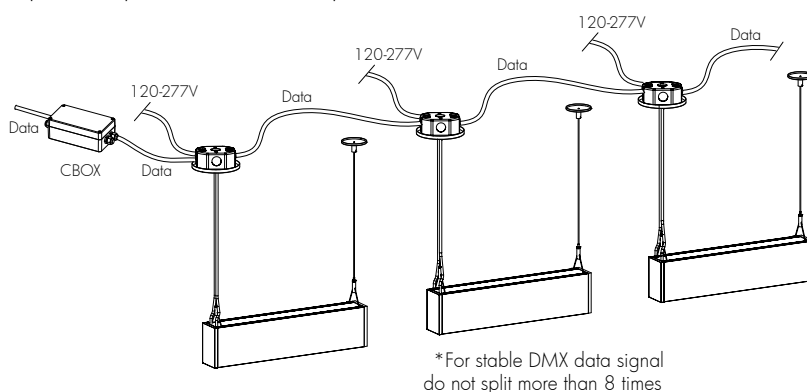
Single units, daisy chain configuration
Combined power and data inputs (DMX)



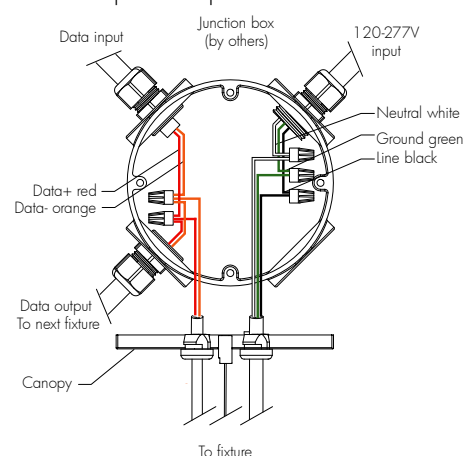
0/10V, DMX, DALI
& EcoSystem wiring detail
Combined power and data



Single units, daisy chain configuration
Separated power and data inputs (DMX)



0/10V, DMX, DALI
& EcoSystem wiring detail
Separated power and data

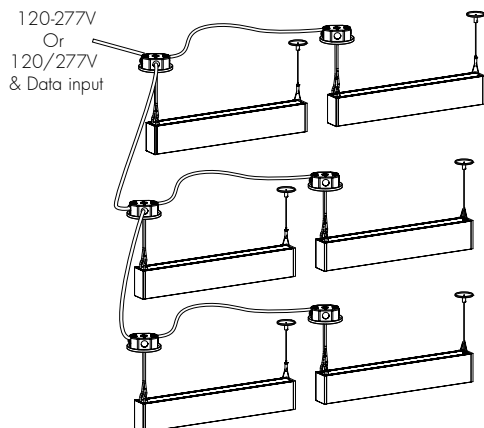


⚠ WARNING

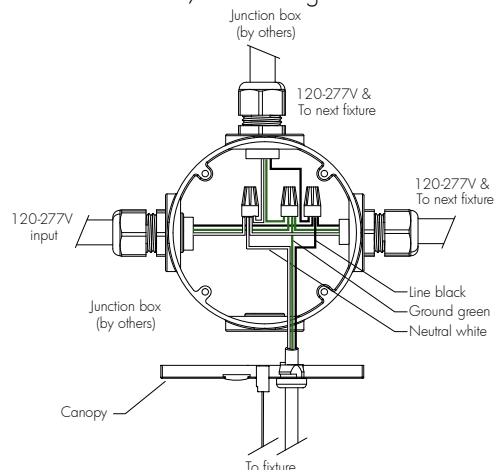
SEPARATION OF FIELD INSTALLED POWER LIMITED CIRCUIT (DIMMING/DATA/CONTROL) WIRING FROM THE BRANCH CIRCUIT WIRING IN THE OUTLET BOX ARE TO BE MADE IN ACCORDANCE WITH LOCAL AND/OR NATIONAL ELECTRICAL INSTALLATION CODES.

TYPICAL WIRING DIAGRAMS

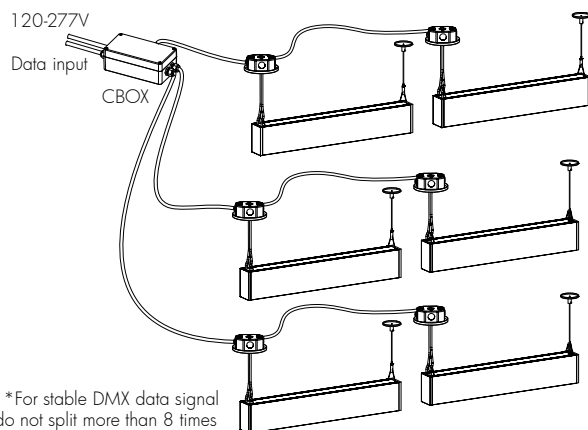
Single units, star layout configuration
ON/OFF, 0/10V, DALI, EcoSystem dimming



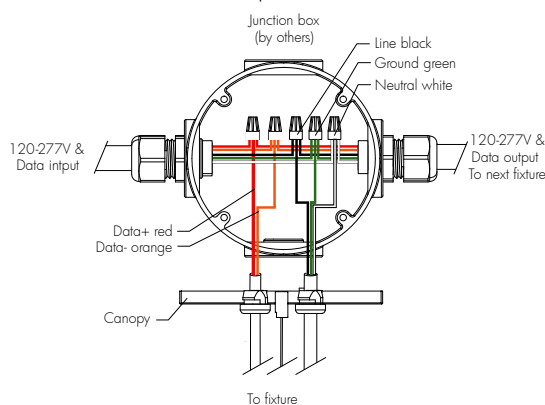
ON/OFF wiring detail



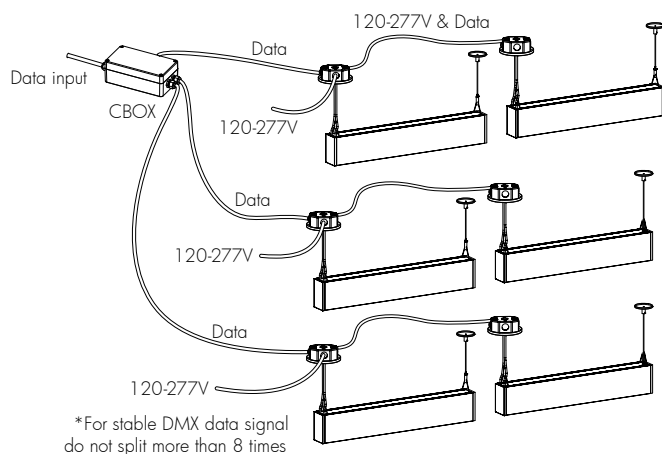
Single units, star layout configuration
Combined power and data inputs (DMX)



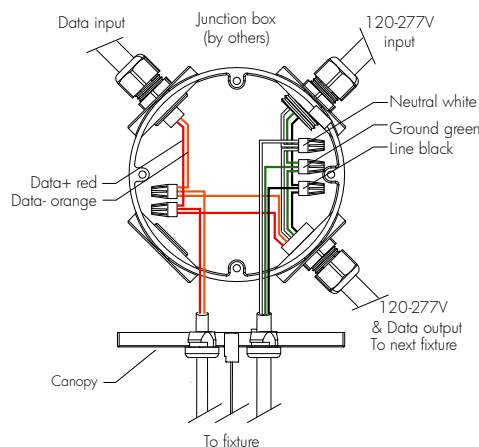
0/10V, DMX, DALI
& EcoSystem wiring detail
Combined power and data



Single units, star layout configuration
Separated power and data inputs (DMX)



0/10V, DMX, DALI
& EcoSystem wiring detail
Separated power and data

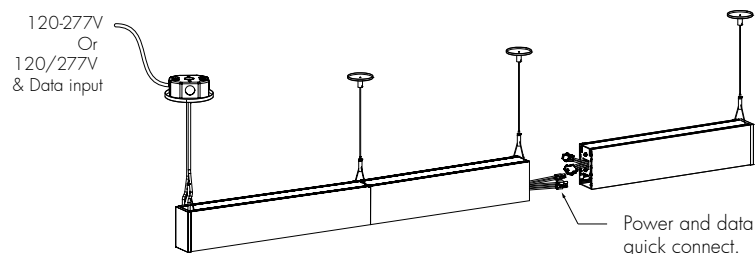


⚠ WARNING

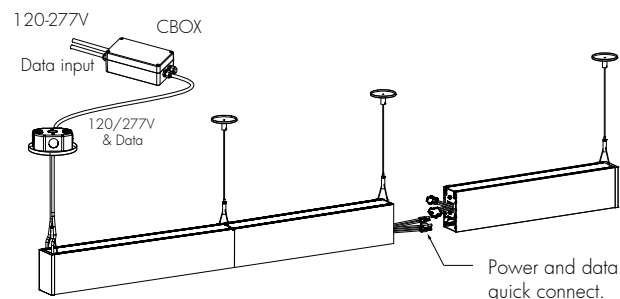
SEPARATION OF FIELD INSTALLED POWER LIMITED CIRCUIT (DIMMING/DATA/CONTROL)
WIRING FROM THE BRANCH CIRCUIT WIRING IN THE OUTLET BOX ARE TO BE MADE IN ACCORDANCE

TYPICAL WIRING DIAGRAMS

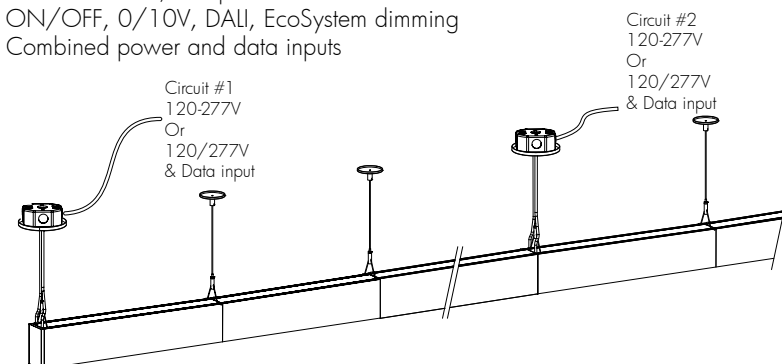
Continuous row, single feed
ON/OFF, 0/10V, DALI, EcoSystem dimming



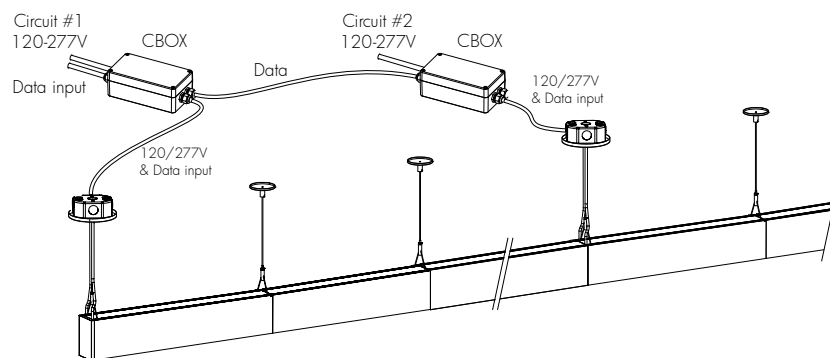
Continuous row, single feed
Combined power and data inputs (DMX)



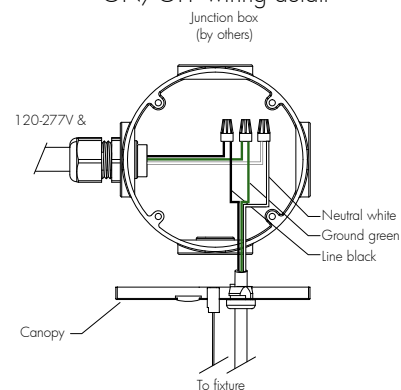
Continuous row, multiple feeds
ON/OFF, 0/10V, DALI, EcoSystem dimming
Combined power and data inputs



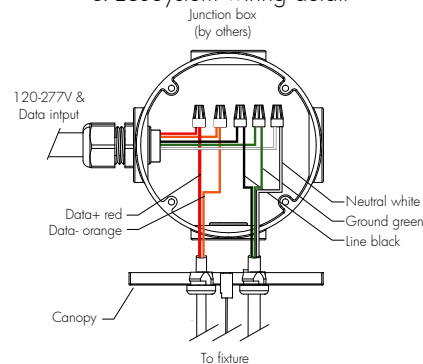
Continuous row, multiple feeds
Combined power and data (DMX)



ON/OFF wiring detail



0/10V, DMX, DALI
& EcoSystem wiring detail



⚠ WARNING

SEPARATION OF FIELD INSTALLED POWER
LIMITED CIRCUIT (DIMMING/DATA/CONTROL)
WIRING FROM THE BRANCH CIRCUIT
WIRING IN THE OUTLET BOX ARE TO BE MADE
IN ACCORDANCE WITH LOCAL AND/OR NATIONAL
ELECTRICAL INSTALLATION CODES.

Maximum run length by single circuit
7A maximum with 10 ft cable

Configuration/Voltage	120V	240V	277V
RO-RO Direct-indirect lighting	56ft	116ft	136ft
HO-RO Direct-indirect lighting	36ft	76ft	88ft
HO-RGB Direct-indirect lighting	36ft	76ft	88ft
RO-RGB Direct-indirect lighting	56ft	116ft	136ft
RGB-RGB Direct-indirect lighting	56ft	116ft	136ft

HOW TO ORDER

LLI2P	DI	277	Select:	dRO 40K	iRO 40K	DMX 1FX	ACC50	WH
Housing	Light Direction	Voltage	Length	Direct Lighting Output & Color temperature	Indirect Lighting Output & Color temperature	Control	Mounting	Finish
1	2	3	4	5	6	7	8	9
1	Housing: LLI2P - Lumenline™ Pendant 2" wide				Indirect Lighting Output & Color temperature: iRO 27K - 2700K regular output 7W/ft iRO 30K - 3000K regular output 7W/ft iRO 35K - 3500K regular output 7W/ft iRO 40K - 4000K regular output 7W/ft iHO 27K - 2700K high output 14.25W/ft* iHO 30K - 3000K high output 14.25W/ft* iHO 35K - 3500K high output 14.25W/ft* iHO 40K - 4000K high output 14.25W/ft* *High output indirect lighting cannot be combined with High output direct lighting. iRGB - Additive red, green and blue indirect lighting 6W/ft N.B. iRGB option requires DMX control to be specified in section 7.			
2	Light Direction: DI - Direct/Indirect lighting				Control: NO - On/Off control LT - Lumentalk (available with white light only) (available for 2-8' lengths only) (1% minimum dimming value) DIM - 0-10V Dimming option (10% minimum dimming value) DMX 1FT - DMX Dimming option, resolution per foot (1% minimum dimming value) DMX 1FX - DMX Dimming option, resolution per fixture (1% minimum dimming value) DALI - DALI Dimming option (1% minimum dimming value) ES - Lutron® EcoSystem® Enabled Dimming (available with white light only) (available for 2-8' lengths only) (1% minimum dimming value)			
3	Voltage: 120 - 120 volts 208 - 208 volts 220/240 - 220 to 240 volts 277 - 277 volts				Mounting: ACC50 - Aircraft Cable, 50" (field adjustable) ACC100 - Aircraft Cable, 100" (field adjustable)			
4	Length: 1 - 12 1/2 inches (317mm) 2 - 24 1/4 inches (616mm) 3 - 36 1/16 inches (916mm) 4 - 47 7/8 inches (1216mm) 5 - 59 3/4 inches (1518mm) 6 - 71 9/16 inches (1818mm) 7 - 83 3/8 inches (2119mm) 8 - 95 1/4 inches (2419mm) C - Continuous run, specify in 1' increments.				Finish: WH - White SI - Silver CC - Custom (please specify RAL color)			
5	Direct Lighting Output & Color temperature: dRO 27K - 2700K regular output 7W/ft dRO 30K - 3000K regular output 7W/ft dRO 35K - 3500K regular output 7W/ft dRO 40K - 4000K regular output 7W/ft dHO 27K - 2700K high output 14.25W/ft* dHO 30K - 3000K high output 14.25W/ft* dHO 35K - 3500K high output 14.25W/ft* dHO 40K - 4000K high output 14.25W/ft* *High output direct lighting cannot be combined with High output indirect lighting. dRGB - Additive red, green and blue direct lighting 6W/ft N.B. dRGB option requires DMX control to be specified in section 7.							
6								
7								
8								
9								

Client: _____
Project name: _____
Order #: _____
Type: _____ Qty: _____

FEATURES AND BENEFITS

Physical :

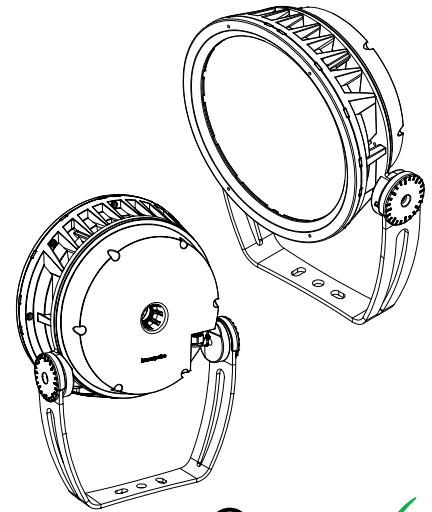
- Low copper content high pressure die-cast aluminum housing
- Heavy aluminum formed yoke (standard yoke included)
- Stainless steel hardware
- Silicone sealing devices
- Clear tempered glass
- Dual chamber design for heat management and ease of maintenance
- Electro-statically applied polyester powder coat finish
- 10.90 kg / 24 lbs
- EPA: Front = 1.60 sq. ft. / 0.15 sq. m. Side = 0.97 sq. ft. / 0.090 sq. m.
- IP66
- Corrosion-resistant option for marine environments
- Meets 3G ANSI C136.31 Vibration standard for bridge applications

Performance :

- Minimum 1fc (10.7 lux) @ 571 feet (174m) distance (4000K, 6° optic)
- 5,178 delivered lumens and 326,433 candelas at nadir (4000K, 6° optic)
- 6°, 10°, 20°, 40° or 60°, Elliptical distribution on 10° to 20° optics
- Lumen maintenance 120,000 hrs [L70 @ 25°C]
- Resolution per board or per fixture (see page 6)
- Lumen measurements comply with LM - 79 - 08 standard
- Operating temperatures: -25° C to 50° C [-13F to 122F]

Electrical :

- Line voltage luminaire for 120 to 277V
- Power and data in 1 cable, 3ft/1 m cord (#16-5)
- 48 LEDs (24 LEDs per board)
- 100W
- Dimming options: 0-10 volt, DMX, DALI, Lumentalk, or Lutron® EcoSystem® enabled



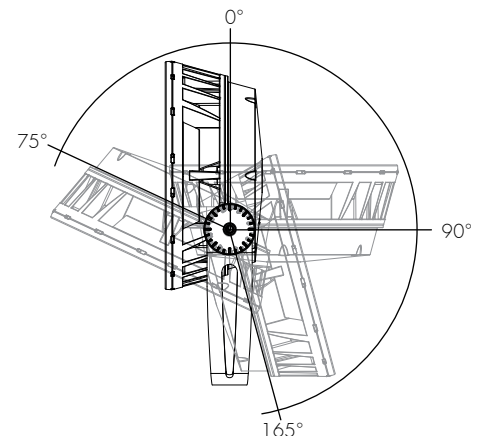
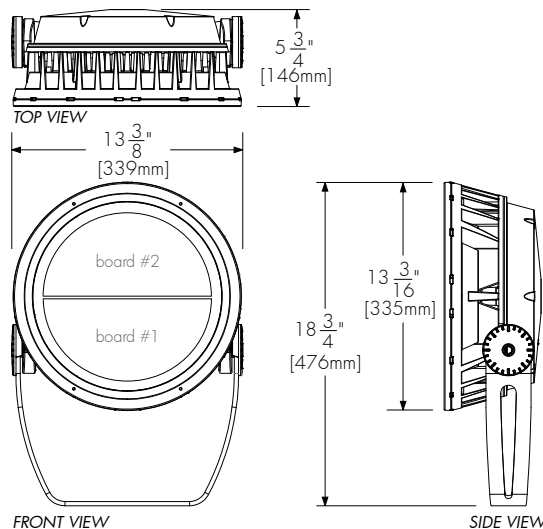
lumen **talk™**

EcoSystem
Enabled

Wiring detail

CE wire color / US wire color / USE

Yellow/Green	Green	Ground
Blue	White	Neutral
Brown	Black	Live 120-277V
Black	Red	0-10V / data +
Grey	Orange	0-10V / data -

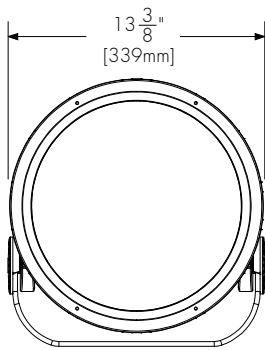
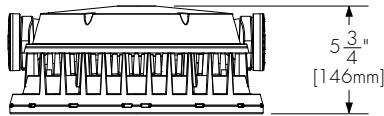


Standard Yoke Mounting
Adjustable pivot limits

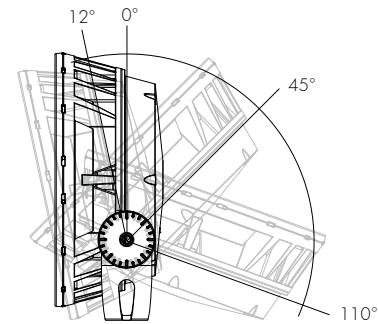
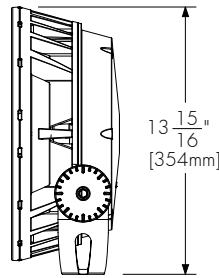
5 year warranty

Standard Yoke (as shown, included)

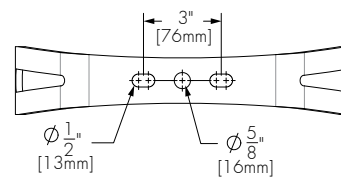
MOUNTING OPTION



SY
Short Yoke mounting



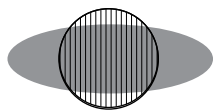
Short Yoke mounting
adjustable pivot limits



Standard and Short Yoke mounting
holes pattern

OPTICAL OPTIONS

***Factory installed**



LSLH
Linear Spread Lens
Horizontal distribution
(not adjustable on site)



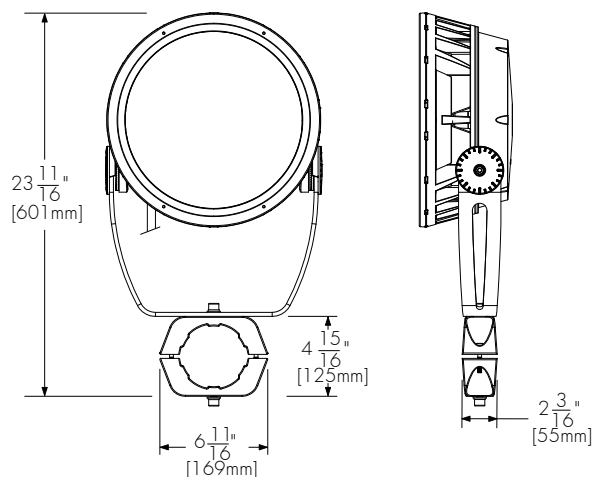
LSLV
Linear Spread Lens
Vertical distribution
(not adjustable on site)

Factory installed, available for 6° to 20° optics.
See Optical Accessories for field adjustable spread lens.
*See photometric section for optical performance data with the spread lens.

ACCESSORIES

Order separately

Mounting Accessories



PM

Round Pole Mounting Accessory

*Consult factory for square pole section



PM4-1, PM4.5-1, PM5-1

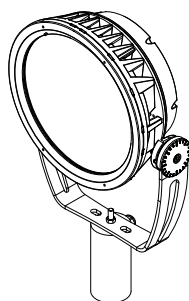
Round Pole Mounting accessory
single fixture



PM4-2, PM4.5-2, PM5-2

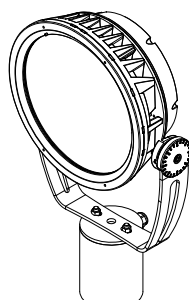
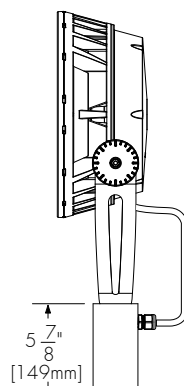
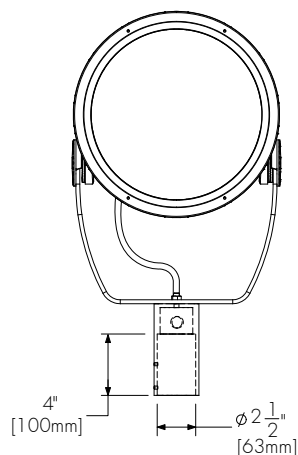
Round Pole Mounting accessory
twin fixtures

When **PM4-2, PM4.5-2 or PM5-2** are specified,
one bracket assembly is supplied per 2 fixtures unless
otherwise specified.



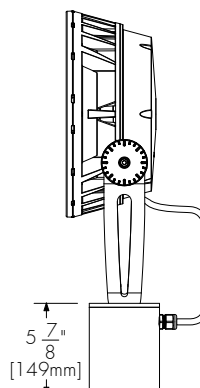
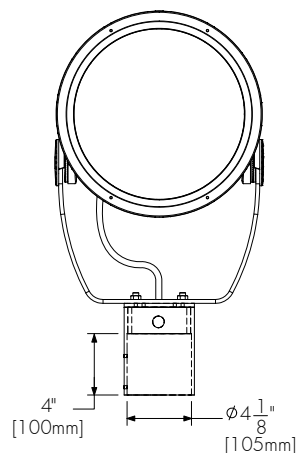
TN2

Tenon adapter
to fit on 2 3/8" O.D. tenon



TN4

Tenon adapter
to fit on 4" O.D. tenon



ACCESSORIES

Order separately

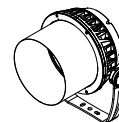
Optical Accessories:

LBG-SN-___-BK Snoot accessory. Please specify desired exterior finish :

*Interior surface SI - Silver SandText
painted black. BKM - Matte black

WH - White

CC - Custom, please specify RAL color



LBG-SNW-___-BK Snoot Wide accessory. Please specify desired exterior finish :

*Interior surface SI - Silver SandText
painted black. BKM - Matte black

WH - White

CC - Custom, please specify RAL color



LBG-VS-___-BK Visor accessory. Please specify desired exterior finish :

*Interior surface SI - Silver SandText
painted black. BKM - Matte black

WH - White

CC - Custom, please specify RAL color



LBG-WG-___ Wire Guard accessory. Please specify desired exterior finish :

SI - Silver SandText

BKM - Matte black

WH - White

CC - Custom, please specify RAL color



LBG-LSLA-___ Linear Spread Lens Adjustable accessory. Please specify desired exterior finish :

SI - Silver SandText

BKM - Matte black

WH - White

CC - Custom, please specify RAL color



Accessory combinations:

+	Snoot	Snoot Wide	Visor	Wire Guard
Snoot	NO	NO	NO	YES
Visor	NO	NO	NO	YES
Linear Spread Lens Adjustable	YES	NO	YES	NO

Accessory combinations must be ordered together on a single line.

Ex: A Snoot + Wire Guard combination order code is **LBG-SN-WG-BK-BK**.

ACCESSORIES

Order separately

Control Systems:

- LTO** Lumentouch is a wall mount DMX 512 controller keypad
- LCU** Lumencue is a USB / mini SD DMX 512 controller
- LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

CBOX :

iCBOX-__V-__-__ Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

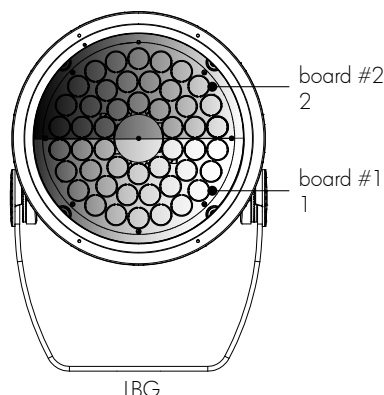
CBOX-__V-__-__ DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

RESOLUTION DETAILS

APPLICABLE FOR DMX DIMMING OPTION ONLY

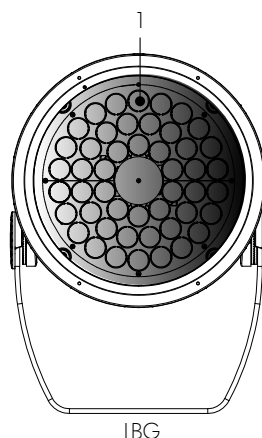
DMX 1BD - Resolution per board: each board is addressed independently (recommended for most installations).

DMX ADDRESSES:



DMX 1FX - Resolution per fixture: each fixture is addressed independently

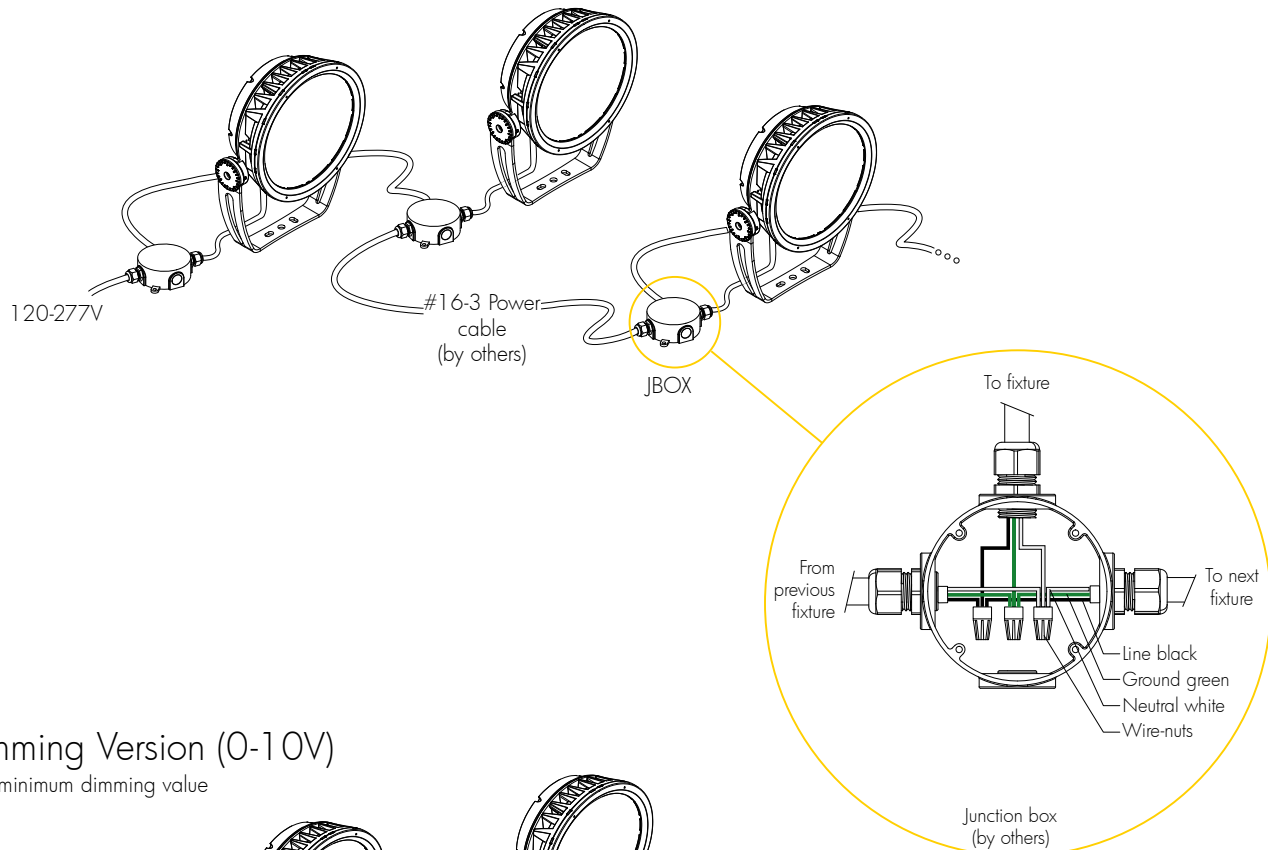
DMX ADDRESSES:



*Warning: resolution is a factory setting and cannot be changed in the field.

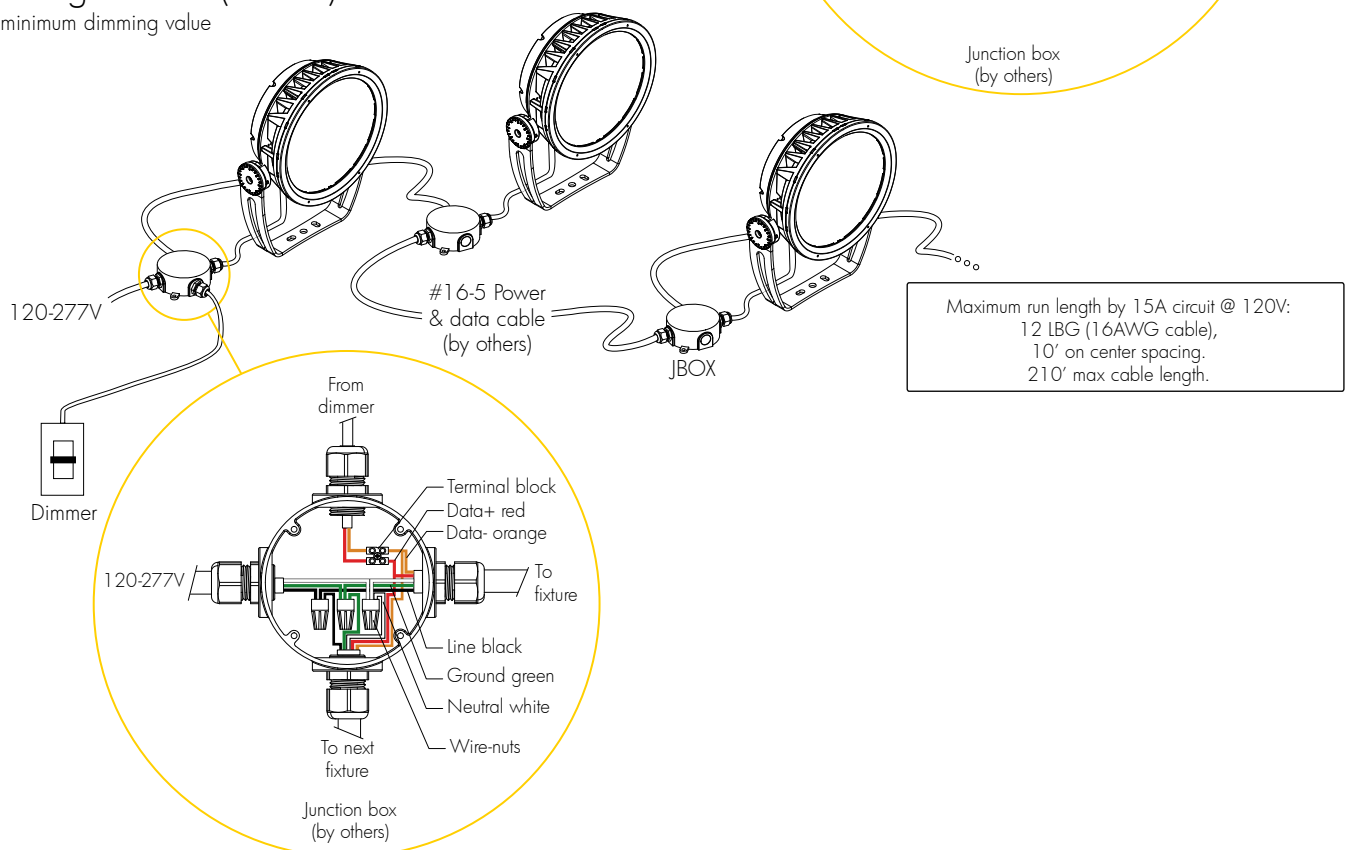
TYPICAL WIRING DIAGRAMS

Non-Dimming or Lumentalk Dimming Version



Dimming Version (0-10V)

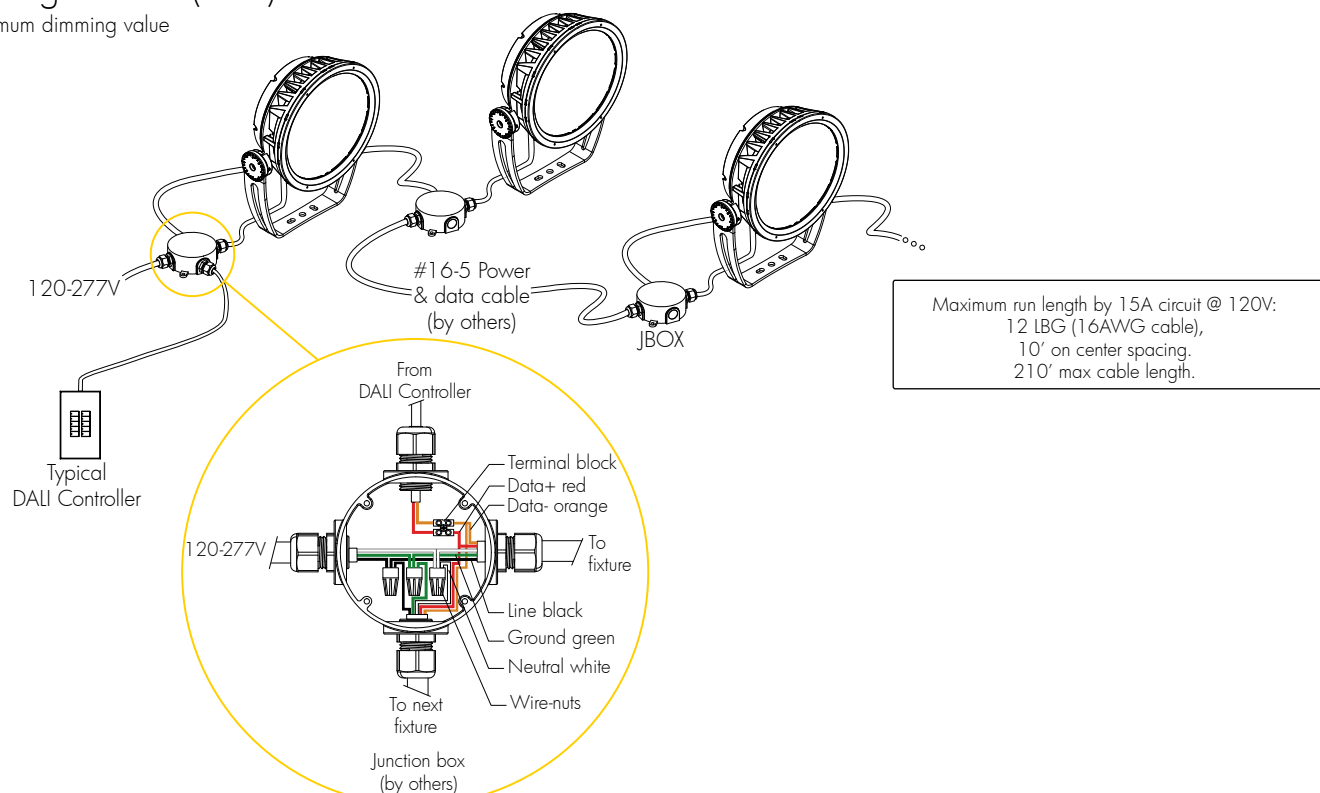
10% minimum dimming value



TYPICAL WIRING DIAGRAMS - continued

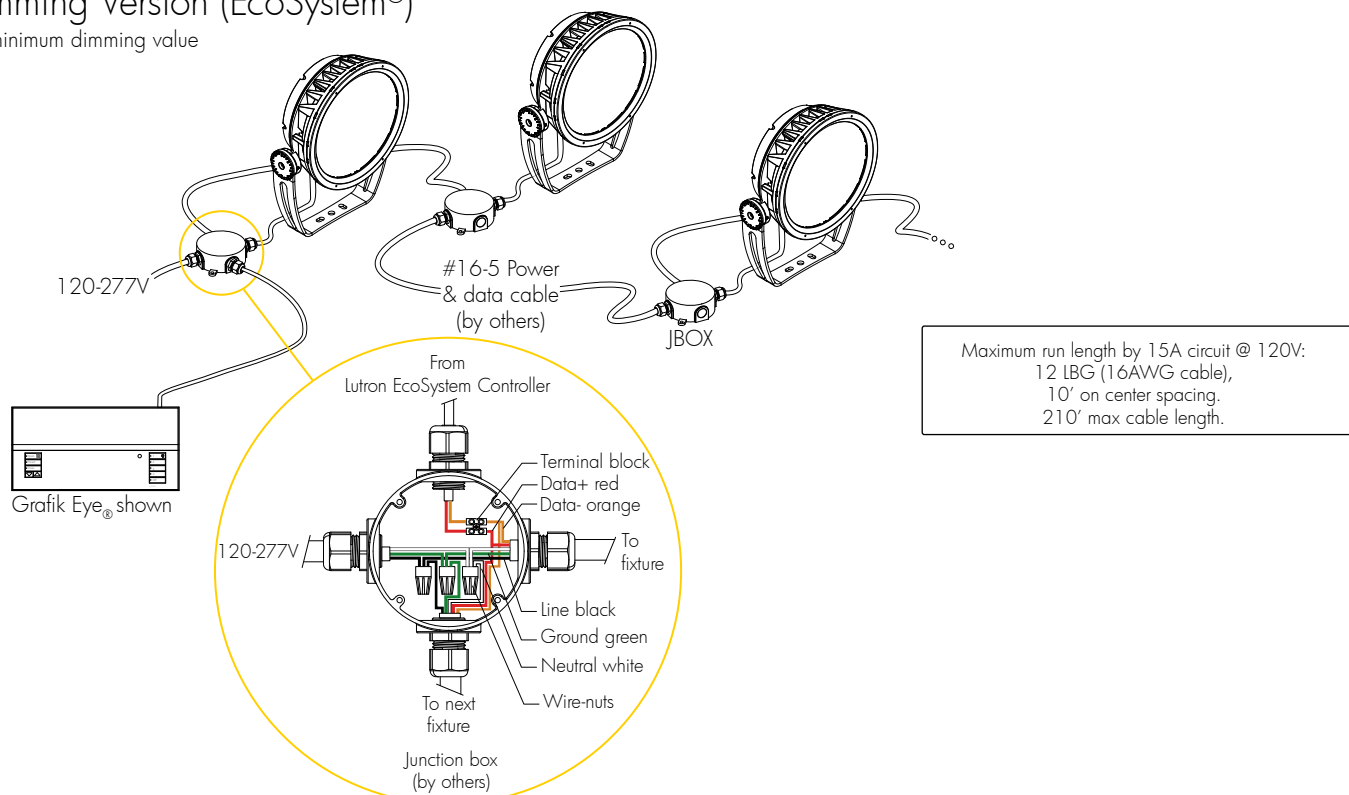
Dimming Version (DALI)

1% minimum dimming value



Dimming Version (EcoSystem®)

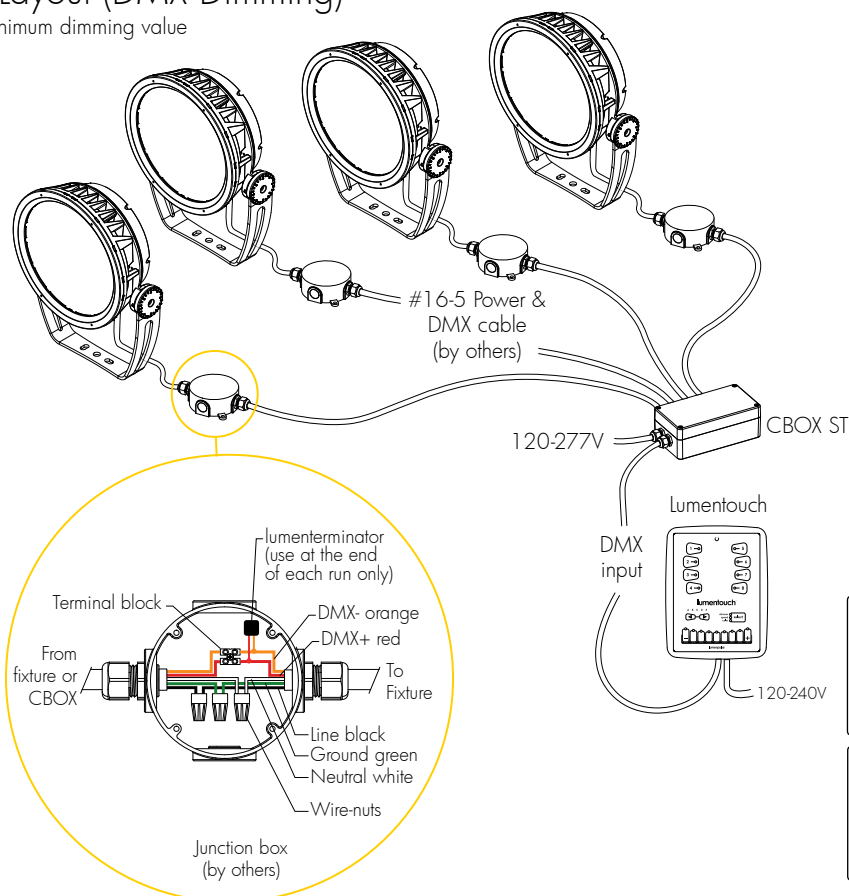
1% minimum dimming value



TYPICAL WIRING DIAGRAMS - continued

Star Layout (DMX Dimming)

1% minimum dimming value



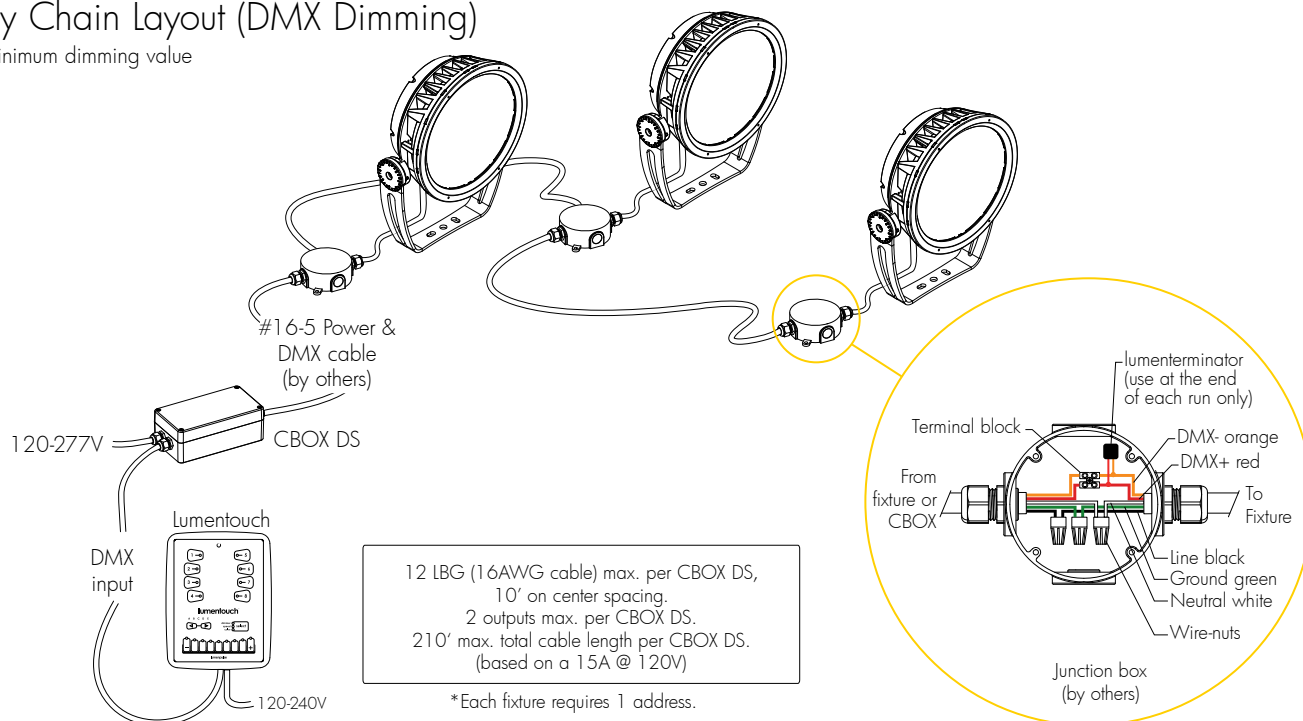
12 LBG (16AWG cable) max. per CBOX ST,
10' on center spacing.
6 outputs max. per CBOX ST.
210' max. total cable length per CBOX ST
(based on a 15A circuit @ 120V)

DMX terminator is required at the end
of each run to maintain data integrity.
(2x) DMX lumenterminator included per CBOX DS
(6x) DMX lumenterminator included per CBOX ST
See installation instructions for details.

*Each fixture requires 1 address.

Daisy Chain Layout (DMX Dimming)

1% minimum dimming value



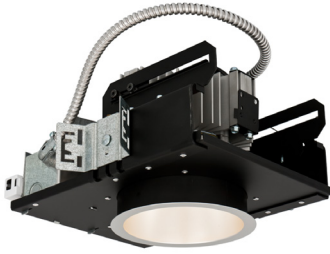
12 LBG (16AWG cable) max. per CBOX DS,
10' on center spacing.
2 outputs max. per CBOX DS.
210' max. total cable length per CBOX DS.
(based on a 15A @ 120V)

*Each fixture requires 1 address.

HOW TO ORDER

LBG	277	40K	WFL/WFL	Select:	WH	DMX 1FX	Select:
Housing	Voltage	Colors and color temperatures	Board 1 / Board 2 Optic	Optical Option	Finish	Dimming	Option
1	2	3	4	5	6	7	8
1							
Housing: LBG - lumenbeam™ Grande				Optical Option: LSLH - Linear Spread Lens Horizontal distribution LSLV - Linear Spread Lens Vertical distribution *Factory installed, available for 6° to 20° optics. See Optical Accessories for field adjustable spread lens.			
2							
Voltage: 120 - 120 volts 208 - 208 volts 220/240 - 220 to 240 volts 277 - 277 volts				Finish: SI - Silver SandText BK - Black SandText WH - White CC - Custom (please specify RAL color)			
3							
Colors and Color temperatures: 27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 57K - 5700K RD - Red GR - Green BL - Blue				Dimming: NO - No Dimming LT - Lumentalk (1% minimum dimming value) DIM - 0-10V Dimming option (10% minimum dimming value) DMX 1BD - DMX Dimming option, resolution per board (2 addresses per fixture) (1% minimum dimming value) DMX 1FX - DMX Dimming option, resolution per fixture (1 address per fixture) (1% minimum dimming value) DALI - DALI Dimming option (1% minimum dimming value) ES - Lutron® EcoSystem® Enabled Dimming (1% minimum dimming value)			
4							
Optic (Please specify for each board): VN - Very Narrow 6° NS - Narrow Spot 10° NF - Narrow Flood 20° FL - Flood 40° (cannot be combined with other optics) WFL - Wide Flood 60° (cannot be combined with other optics)				Option: SY - Short Yoke SY-3GV - Reinforced Short Yoke to meet 3G ANSI C136.31 Vibration Rating standard CRC - Corrosion-resistant Coating			





Gotham Architectural Downlighting
LED Downlights

6" Incito®
Open Downlight

Solid-State Lighting
(US and International Patents Pending)

FEATURES

OPTICAL SYSTEM

- Ten preset distribution patterns allow designers to achieve various objectives.
- Self-flanged semi-specular, matte-diffuse or specular lower reflector utilized in combination with a highly transmissive lens.
- Patented Bounding Ray™ Optical Principle design (U.S. Patent No. 5,800,050) provides source image for a smooth transition from top of the reflector to bottom.

MECHANICAL SYSTEM

- Light engine and driver are accessible from above or below ceiling.
- 16-gauge black painted steel mounting frame with C-channel mounting bars included. Post-installation adjustment possible from above or below ceiling.
- Galvanized steel junction box with hinged access covers and spring latch. Three combination 1/2"-3/4" and one 1/2" knockout for straight-through conduit runs. Capacity: 8 (4in, 4out) No. 12 AWG conductors rated for 90°C.
- Accommodates up to 1½"-thick ceilings.

ELECTRICAL SYSTEM

- Solid-state LED light engine available in 2700 K, 3000 K, 3500 K or 4000 K color temperatures. CRI: 85 typical.
- 0-10V driver standard with <1% dimming level.
- DALI driver available with <1% dimming level.
- DMX with RDM (remote device management) available with <1% dimming level.
- Rated system life of 50,000 hours at 70% output.
- Emergency battery pack with remote test switch available.

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling.

WARRANTY

- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

ORDERING INFORMATION

EXAMPLE: ICO 30/50 6AR 20 120

				WH			
Series	Color temperature	Nominal lumen values	Aperture/Trim color	Finish	Beam	Voltage	
ICO	27/ 2700 K	20 2000 lumens	6AR Clear	(blank) Semi-specular	20 20° beam angle	120	
	30/ 3000 K	25 2500 lumens	6PR Pewter	LD Matte diffuse	25 25° beam angle	277	
	35/ 3500 K	30 3000 lumens	6WTR Wheat		30 30° beam angle	347 ³	
	40/ 4000 K	35 3500 lumens	6GR Gold		35 35° beam angle		
		40 4000 lumens	6WR ² White		40 40° beam angle		
		45 4500 lumens	6BR ² Black		45 45° beam angle		
		50 5000 lumens			55 55° beam angle		
		55 5500 lumens			60 60° beam angle		
		60 6000 lumens			65 65° beam angle		
		65 ¹ 6500 lumens			70 70° beam angle		

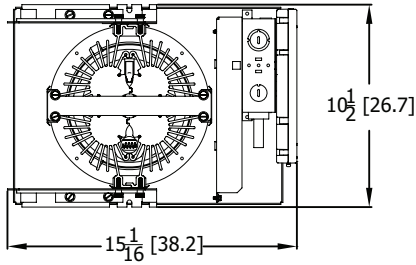
Driver		Options			
(blank)	0-10V dimming driver. Minimum dimming level <1%	SF	Single fuse	BHSG	Blacked-out housing
DALIR	DALI dimming driver. Minimum dimming level <1%	TRW ⁴	White painted flange	NEPP ⁷	Interface for Sensor Switch® nLight® network provided with integral power supply. Refer to TN-623-01 . Not for use with emergency options.
DMXR	DMX with RDM (remote device management). Minimum dimming level <1%. Includes termination plug	TRBL ⁵	Black painted flange	NSD ⁷	Sensor Switch® nLight® one 5A relay with one 0-10 VDC dimming output; requires bus power, such as nPP16 power pack. Refer to nSP5-D . Not for use with emergency options.
		ELR ⁶	Emergency battery pack with remote test switch	RRL	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.
		CP	Chicago plenum		
		HAO	High ambient capability up to 40°C. Fixture height is 10-3/8".		

ACCESSORIES order as separate catalog numbers (shipped separately)

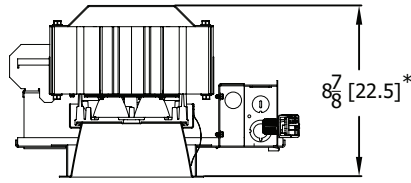
SCA Sloped ceiling adapter. Degree of slope must be specified (10D, 15D, 20D, 25D, 30D). Ex: SCA6D 10D. Refer to [TECH-190](#).

NSP5 D ER KIT Sensor Switch nLight secondary relay and dimming pack device used to switch and dim luminaires powered via an emergency circuit. Refer to [NSP5 D ER KIT](#).

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4 [15.8]
Ceiling Opening: 6-15/16 [17.6]
Overlap Trim: 7-1/2 [19.1]



* HIGH AMBIENT FIXTURE HEIGHT - 10-5/8"

WATTAGE CONSUMPTION MATRIX

LUMENS	BEAM ANGLES									
	20	25	30	35	40	45	55	60	65	70
6500	101W	101W	101W	101W	101W	45	55	60	65	70
6000	95W	95W	95W	95W	95W	101W	101W	101W	101W	101W
5500	83W	83W	83W	83W	83W	95W	95W	95W	95W	95W
5000	75W	75W	75W	75W	75W	83W	83W	83W	83W	83W
4500	65W	65W	65W	65W	65W	75W	75W	75W	75W	75W
4000	57W	57W	57W	57W	57W	64W	64W	64W	64W	64W
3500	50W	50W	50W	50W	50W	57W	57W	57W	57W	57W
3000	42W	42W	42W	42W	42W	50W	50W	50W	50W	50W
2500	35W	35W	35W	35W	35W	42W	42W	42W	42W	42W
2000	28W	28W	28W	28W	28W	35W	35W	35W	35W	35W

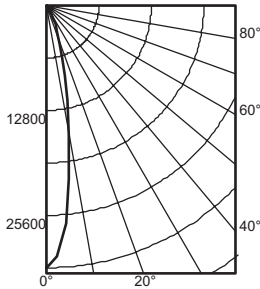
ORDERING NOTES

- Only available in 20° through 40° beam angles.
- Not available with finishes.
- Add 2" to overall height.
- Not available with white reflector.
- Not available with black reflector.
- For dimensional changes, refer to [TECH-140](#). Not available with CP option.
- For Emergency applications order non-nLight enabled fixture and NSP5 D ER KIT as an accessory. Refer to [NSP5 D ER KIT](#).

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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IC0 35/60 6AR 20 120

INPUT WATTS: 95.0, DELIVERED LUMENS: 6367.8, LM/W=67.0, 0.3 S/MH, TEST NO. LTL22079

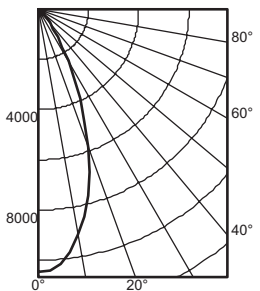


Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	20%	50%
0	32110	0° - 30°	5899.8	92.6	0	119	119	119	116	116
5	26741	0° - 40°	6269.6	98.5	1	113	111	109	111	109
15	8860	0° - 60°	6360.7	99.9	2	107	104	102	106	103
25	2522	0° - 90°	6367.8	100.0	3	102	99	96	101	98
35	537	90° - 180°	0.0	0.0	4	98	94	91	97	93
45	82	0° - 180°	6367.8	*100.0	5	94	90	87	93	89
55	21				6	91	87	83	90	86
65	4				7	88	83	80	87	83
75	0				8	85	81	78	84	80
85	1				9	82	78	75	82	78
90	0				10	80	76	73	79	75

Mounting	Initial FC	Center	Beam	Diameter	FC	Diameter	FC
8.0	1061.5	1.9	530.6	4.4	106.2		
10.0	570.8	2.6	285.3	6.0	57.1		
12.0	355.8	3.2	177.8	7.5	35.6		
14.0	242.8	3.9	121.4	9.1	24.3		
16.0	176.2	4.6	88.1	10.7	17.6		

IC0 35/60 6AR 40 120

INPUT WATTS: 96.0, DELIVERED LUMENS: 6071.4, LM/W=63.2, 0.7 S/MH, TEST NO. LTL22193

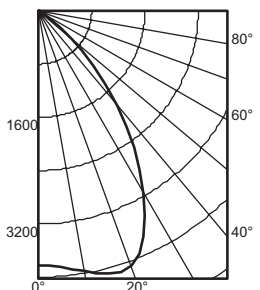


Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	20%	50%
0	10482	0° - 30°	4832.2	79.6	0	119	119	119	116	116
5	10161	0° - 40°	5697.6	93.8	1	111	109	107	109	107
15	7679	0° - 60°	6062.1	99.8	2	104	101	97	103	99
25	3921	0° - 90°	6071.4	100.0	3	98	93	90	97	92
35	1331	90° - 180°	0.0	0.0	4	92	87	83	91	86
45	371	0° - 180°	6071.4	*100.0	5	87	82	78	86	81
55	54				6	82	77	73	82	77
65	5				7	78	73	69	78	72
75	2				8	74	69	65	74	69
85	1				9	71	65	62	70	65
90	0				10	67	62	59	67	62

Mounting	Initial FC	Center	Beam	Diameter	FC	Diameter	FC
8.0	346.5	3.8	173.3	7.1	34.7		
10.0	186.3	5.2	93.2	9.6	18.6		
12.0	116.1	6.5	58.1	12.2	11.6		
14.0	79.3	7.9	39.6	14.7	7.9		
16.0	57.5	9.3	28.8	17.3	5.8		

IC0 35/60 6AR 70 120

INPUT WATTS: 101.0, DELIVERED LUMENS: 5948.3 LM/W=58.9, 1.2 S/MH, TEST NO. LTL22088



Ave	Lumens	Zone	Lumens	% Lamp	pf	pc	pw	80%	20%	50%
0	3817	0° - 30°	3220.1	54.1	0	119	119	119	116	116
5	3864	0° - 40°	4773.3	80.2	1	110	107	104	108	105
15	4088	0° - 60°	5927.6	99.7	2	101	96	92	99	95
25	3738	0° - 90°	5948.3	100.0	3	93	87	82	91	86
35	2493	90° - 180°	0.0	0.0	4	85	79	74	84	78
45	1173	0° - 180°	5948.3	*100.0	5	79	72	67	78	71
55	235				6	73	66	61	72	65
65	12				7	67	61	56	67	60
75	4				8	63	56	51	62	55
85	1				9	58	52	47	58	51
90	1				10	54	48	44	54	48

Mounting	Initial FC	Center	Beam	Diameter	FC	Diameter	FC
8.0	126.2	6.6	63.1	11.2	12.6		
10.0	67.9	9.0	33.9	15.3	6.8		
12.0	42.3	11.4	21.1	19.4	4.2		
14.0	28.9	13.8	14.4	23.4	2.9		
16.0	20.9	16.2	10.5	27.5	2.1		

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 83 typical.
- Consult factory or IES file for microgroove baffle, black cone or other photometric reports.

Choose Wall Controls.

nLIGHT offers multiple styles of wall controls – each with varying features and user experience.



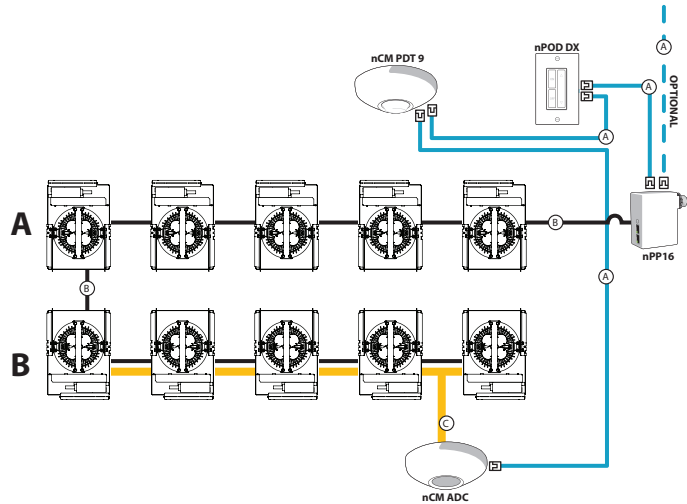
Push-Button WallPod
 Traditional tactile buttons and LED user feedback



Touch WallPod
 Contemporary capacitive touch style buttons with audible clicker for user feedback



Graphic WallPod
 Full color touch screen provides a sophisticated look and feel



EXAMPLE

Single Level Control with One Daylight Harvesting Zone

Devices Installed:

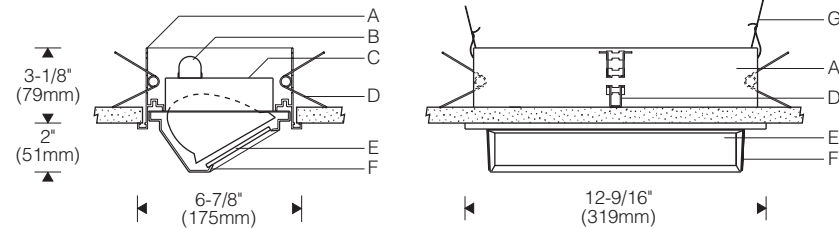
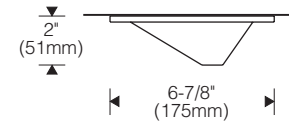
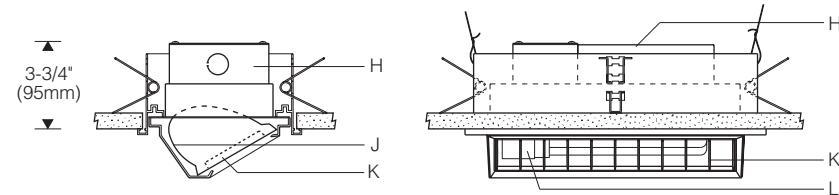
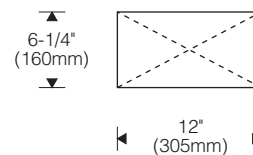
nPP16 Power Pack

nPOD DX On/Off/Dim Touch WallPod®

nCM PDT 9 Ceiling Mount Dual Tech Occupancy Sensor

nCM ADC Daylight Sensor with Automatic Dimming Control

Description: This design makes use of available daylight in the space by incorporating a standalone photocell device to automatically dim the lights in row B. Both rows of lights are turned on and off together by a single relay (in the power pack) and occupancy sensor. An On/Off/Dim Touch WallPod enables users to raise and lower row B as required.


Style 201 1:8 Scale (Tungsten halogen, metal halide remote)

Profile (below ceiling)

Style 205 1:8 Scale (Quad tube fluorescent, metal halide integral)*

Ceiling Cutout


* Diagram shows Style 205 for quad tube fluorescent. Snap-in baffle provided for quad tube only. Style 205 for metal halide is provided with lens as shown in upper Style 201 diagram.

Specifications

- | | | | |
|--|--|---|--|
| A Extruded aluminum mounting/trim frame | D Spring clips (4 incl.) | G Supplemental wire supports (by others) | K Snap-in polycarbonate cross baffle (matte gray), 15° shielding (quad tube only) |
| B Conduit connector (Style 201) | E Micro-prismatic tempered glass lens (tungsten halogen and metal halide units) | H Integral ballast with splice compartment (Style 205) | L Twist and lock lampholder (quad tube) |
| C Aluminum back box | F Die-cast aluminum hood | J Specular extruded aluminum reflector | |

Finish:

Semi-gloss white hood and ceiling trim. Black back box.

Painted surfaces – 6 stage pretreatment and electrostatically applied thermoset powder coat.

Reflector – extruded high purity aluminum with clear anodized specular finish. All luminaire hardware – stainless steel.

Mounting:

Mounting/trim frame installs from below finished ceiling. Retrofits into existing non-accessible ceilings.

Spring clips provided for rigid ceilings (drywall, plaster) up to 1-3/4" (44mm) thick.

Supplemental support wires, bar hangers, etc. (by others) required for accessible ceilings. Where wire suspension is prohibited, order accessory universal mounting brackets for use with 1/2" EMT, 1-1/2" lathing or C channel (by others).

Standard:

UL listed or CSA certified for damp locations (TH and MH units with lens recommended for damp locations).

Minimum spacings for 200W/250W Style 201, all Style 205:

2' (0.6m) on center, 1' (0.3m) fixture center to side wall, 3" (76mm) to overhead building member.

REV. 8/08

Electrical:

Use 90°C wire for supply connections.

Style 201 (halogen, metal halide remote) – 5' (1.5m) wire leads in flexible conduit exit back box for connection to accessible junction box (by others), or to remote ballast (installation prior to finished ceiling recommended).

Style 205 (quad tube, 35W/70W metal halide integral) – splice compartment with two 7/8" diameter conduit entries.

Tungsten halogen – DC bayonet or RSC lampholders in patented clamping supports for maximum heat dissipation.

Fluorescent – integral HPF thermally protected electronic ballast with end-of-life protection. Optional dimming ballast; compatible dimmer switch required. Consult representative for compatibility. Twist & lock lampholder for easy relamping.

Metal halide – Style 201 remote: encapsulated high reactance autotransformer ballast (35W and 70W) or electronic ballast.

Style 205 integral (35W, 70W only): electronic ballast provides improved voltage regulation, energy savings and automatic shut-off feature to eliminate end-of-life lamp cycling.

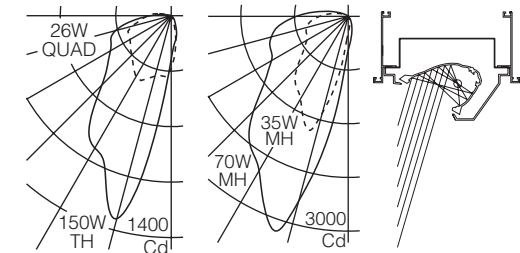
For complete ballast specifications, see Accessories Section.

Features

- Low profile – minimal silhouette focuses attention on the luminous wall, not the luminaire
- Evenly lights entire wall – reflector aperture is shielded
- Shallow recessed depth – fits under ducts at core walls
- Durable construction – extruded reflector and trim frame; die-cast hood, aluminum back box

Performance

Two parabolic reflector sections drive light to the bottom of the wall. An elliptical section shields the lamp from normal viewing angles and redirects its light to a parabola. Glare is minimized and asymmetry of the beam is maximized resulting in high beam efficiency and superior surface uniformity.



For complete photometrics, see www.elliptipar.com.

elliptipar



To form a Catalog Number

M 205 - 150G - T - 0 2 - 2 - 00 0
1 2 3 4 5 6 7 8

1 Source

F = Quad tube compact fluorescent
M = Metal halide
T = Tungsten halogen

2 Style

201 = Small semi-recessed with hood, **remote** ballast

Note: Available for tungsten halogen (no ballast) and metal halide only.

205 = Small semi-recessed with hood, **integral** ballast

Note: Available for quad tube compact fluorescent and 35W & 70W metal halide electronic only.

3 Lamp

Lamp Code	Wattage	Lamp Number	Voltages	Remote Distance
Quad Tube Fluorescent				
P126	26 (4-pin)	CFQ26W/G24q	1, 2	Integral
			T, V	
Ceramic Arc Tube Pulse Start Metal Halide (80+ CRI)*				
035G	35	CDM35/T6/830	1, 2	15' (4.5m)
			A, B	10' (3m)
070G	70	CDM70/T6/830	1, 2	15' (4.5m)
			A, B	20' (6m)
150G	150	CDM150/T6/830	1, 2	15' (4.5m)
Tungsten Halogen				
0100	100	Q100DC	A	
0150	150	Q150DC	A	
0200	200	Q200T3	A	
0250	250	Q250DC	A	

For complete lamp and ballast information, see Accessories Section.

* Standard lamp color is 3000K / 80+ CRI.

4 Mounting

T = Overlapping trim

Project:

5 Finish

02 = Semi-gloss white

6 Voltage/Ballast

Compact Fluorescent &
Metal Halide Electronic*
(Style 205)

1 = 120V

2 = 277

Compact Fluorescent
Dimming (Style 205)**

T = 120V

V = 277V

Tungsten Halogen
(Style 201)

A = 120V

Metal Halide
(Style 201)

A = 120V magnetic

B = 277V magnetic

1 = 120V electronic

2 = 277V electronic

* Electronic ballast for 35 and 70W available in Style M205 integral only; for 150W in Style M201 remote only.

**Dimming varies with ballast manufacturer and control type – see www.elliptipar.com for specifications and limitations.

7 Option (See Accessories Section for specifications)

00 = No options

0C = Style 201 modified to comply with Chicago plenum code. **Not available for Style M205** integral CMH.

0E = Style 205 **remote** emergency battery pack for quad tube fluorescent. Max. distance from battery pack to fixture is 5' (1.5m). For use with non-dim ballasts only.

0H = Style 201 long distance remote metal halide ballast (encapsulated magnetic ballast for 35 and 70W only), 35W: 15' min. up to 50' max. (4.5m - 15m), 70W: up to 50' max. (15m)

0Y = Style 201 modified to comply with New York City code (Style 205 integral complies as is without modification).

XX = For modification not listed, include detailed description. Consult factory prior to specification.

8 Standard

0 = UL, Underwriters Laboratories

J = CSA, Canadian Standards Association

Example

M205 - 035G - T - 02 - 1 - 000

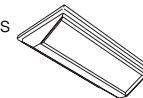
Small semi-recessed with hood for use with 35W metal halide lamp. Overlapping ceiling trim. Semi-gloss white. Integral 120V electronic ballast. UL.

Type:

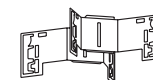
Accessories

Order separately. See Accessories Section for specifications.

AUV00030 = **Ultraviolet** (UV) filter glass lens (tungsten halogen and metal halide units only)



ASRBKT00 = Universal **mounting brackets** (set of two), accepts 1/2" EMT, 1-1/2" lathing, C channel or bar hangers (by others)



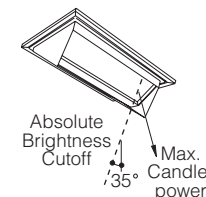
AFK000X ☐ = Ballast **fuse kit**

0 = UL

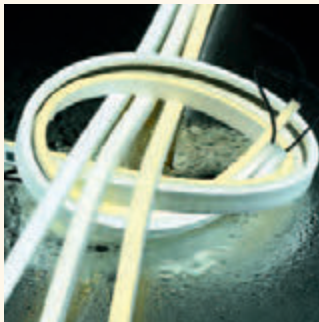
J = CSA



ASV02000 = Extended **hood visor**



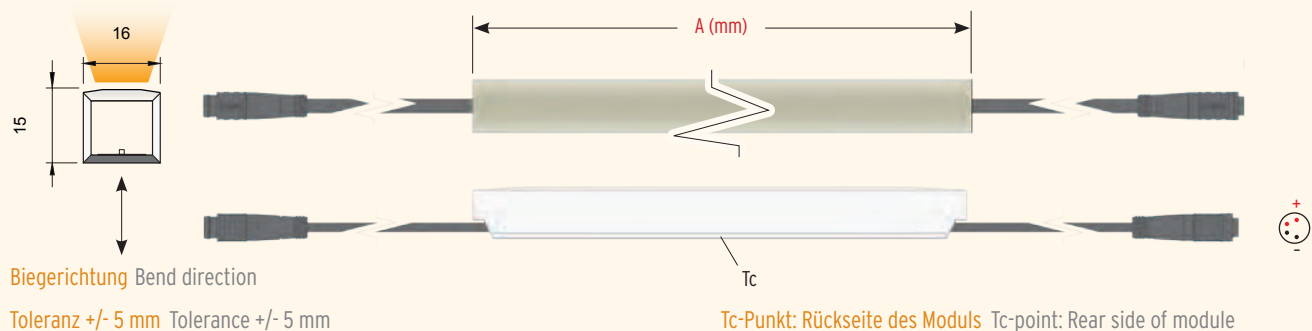
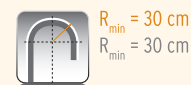
VarioLED™ Flex VENUS W TV IP67



W822 2.400 K	W827 2.900 K	W830 3.300 K	W835 4.100 K	W840 4.500 K	W850 6.200 K
3	4	5	6	7	
10 Watt/meter					
360 lumen/meter (lm/m)					
! Ra/CRI 85					
IP67					

Abmessungen & Längen Dimensions & available length

110 mm IP67 Steckverbinder (Buchse/Stecker) an den Enden
110 mm IP67 plug in connector (male/female) on both ends



$A = N \times 54,67 + 25$; $N = 1 \dots 135$; $A_{\min} = 1 \times 54,67 + 25 = 80$; $A_{\max} = 135 \times 54,67 + 25 = 7.405,5$

Bestellnummer Order Code: VarioLED Flex VENUS Wxxx/A TV IP67

Refer to Lighting
Schedule for
Different Lengths

Elektrische & Optische Betriebsdaten Electrical & optical data

Abmessungen Dimensions	A x 15 mm x 16 mm
Leistung Power	10 W/meter
Spannung Voltage (V)	24 Volt (23 V _{min} , 25 V _{max})
Temperatur Temperature	t _{c,min} = -25°C, t _{c,max} = +60°C
Lagertemp. Storage temp.	t _{min} = -25°C, t _{max} = +85°C
Außentemperatur Ambient temp.	t _{a,min} > -25°C, t _{a,max} = 45°C



Lebensdauer
Lifetime



LM 79 konform
LM 79 compliant



LM 80 konform
LM 80 compliant

VarioLED™ Flex VENUS White TV IP67	lumen/meter (lm/m)	Ra/CRI	Farbtemperatur/ Color Temperature (K)
W822	330	80	2.400
W827	345	85	2.900
W830	345	85	3.300
W835	353	85	4.100
W840	360	85	4.500
W850	360	85	6.200

Nähere Erläuterungen zu Änderungen, Grenzwerten und Schwankungen im Herstellungsprozess finden Sie im LED Linear™ Hauptkatalog, Seite 361.

For more details regarding catalogue changes, min and max data sheet values and production tolerances see the LED Linear™ main catalogue, page 361.

Ausschreibungstext Specification text

**VarioLED™ Flex VENUS White TV IP67**

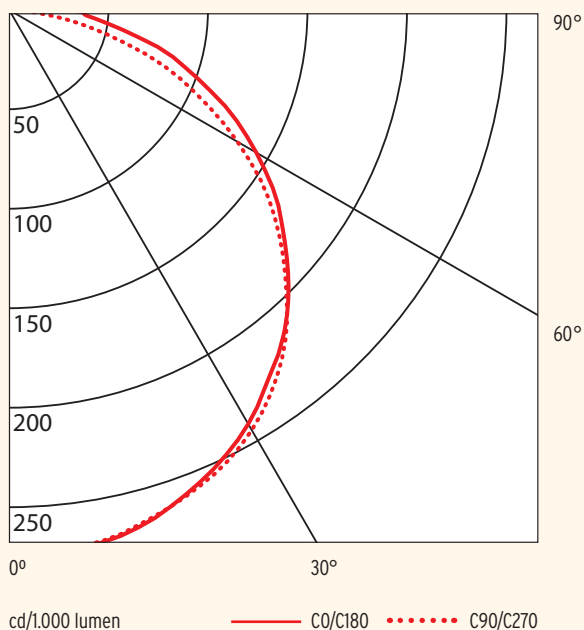
24 V, opal vergossene flexible LED Lichtlinie in IP67 für Architektur und Innenausbau. Mit selbstklebendem 3M Klebeband auf der Rückseite. Homogene lichtpunktfreie Ausleuchtung bei geringsten Bautiefen.

10 W/m, 360 lm/m. Querschnitt 15 mm x 16 mm. Länge bis zu 7,4 Meter. 110 mm IP67 Steckverbinder an beiden Enden. L80 von 50.000 h. Hohe Beständigkeit in rauen klimatischen Bedingungen. Salzwasser-, UV-, Chlor- und Lösungsmittelbeständig. Made in Germany.

VarioLED™ Flex VENUS White TV IP67

24 V, flexible fully opal encapsulated IP67 protected LED light line for architecture and interior design. 3M self adhesive tape on rear side. Homogeneous and dot free illumination in very low installation depths.

10 W/m, 360 lm/m. Cross section of 15 mm x 16 mm. Length up to 7.4 meter. 110 mm IP67 plug in connectors on both ends. L80 of 50,000 hrs. Easy installation and a rugged design for harsh environments (e. g. resistant to salt water, UV, chlorine and solvents). Made in Germany.

VarioLED™ Flex VENUS W840/244 TV IP67

UV geschützt
UV protected



Lösungsmittel
geschützt
Resistant to
solvents



Salzwasser
geschützt
Saltwater
resistant



Schutz beim
Eintauchen
Temporary immersion
protection

VarioLED™ Flex VENUS W TV basiert auf unserem Produkt VarioLED™ Flex ATON 2.

Durch die verwendete Venustechnologie ergibt sich eine Farbabweichung zum LED Flex Band, die jedoch keinen Einfluss auf die Gesamthomogenität hat.

VarioLED™ Flex VENUS W TV is based on our product VarioLED™ Flex ATON 2.

The encapsulation technology causes a color temperature drift compared to the flex tape color temperature. There is no effect on homogeneity.

Zubehör Accessories**erforderlich required**

Konverter
Power supply
unit

optional optional

Steuer-
protokoll
Power control
system



Profil VENUS TV
Contour VENUS TV



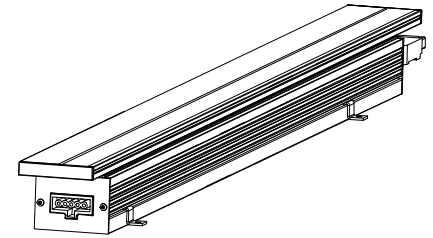
reddot design award
winner 2012

Client: _____
 Project name: _____
 Order #: _____
 Type: _____ Qty: _____

FEATURES AND BENEFITS

Physical :

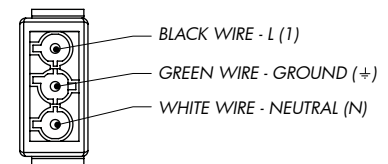
- Low copper content extruded aluminum housing
- Available in 1', 2', 3', 4' or 8' sections
- Electro-statically applied polyester powder coat finish
- Tool-less LED frame adjustable mechanism
- Low profile design
- White standard finish
- Indoor applications, dry location only
- 1 locking mechanism is included per fixture, installed.
 (Two locks provided for 8ft sections. Locking mechanism is made of unpainted steel).
- Single feed option available for end of run fixtures



Performance :

- 2700K, 3000K, 3500K, 4000K, Red, Green, Blue static colors available
- Available in Regular Output or High Output versions
- 407 delivered lumens per foot (RO version)
- 773 delivered lumens per foot (HO version)
- Lumen maintenance L70 @ 25°C - 80,000 hrs
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture (see page 9)
- Operating temperatures: -25° C to 50° C [-13F to 122F]

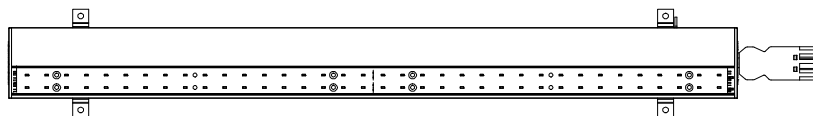
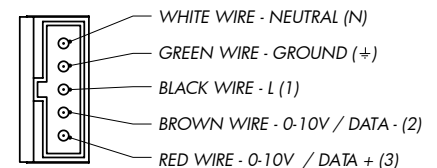
Wiring detail - non dimming



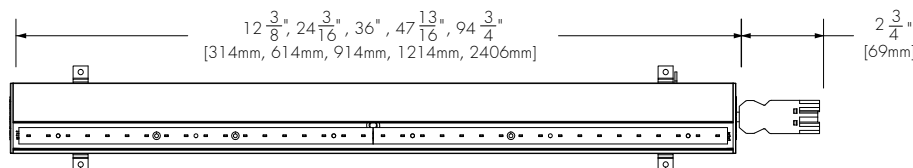
Electrical :

- Line voltage luminaire for 120 to 277V
- Power and data in 1 cable (#16-5)
- Up to 180 feet on 1 power feed (112 feet/HO version)
- 6W/ft - RO version, 12W/ft - HO version
- 0-10V, DMX or DALI dimming options

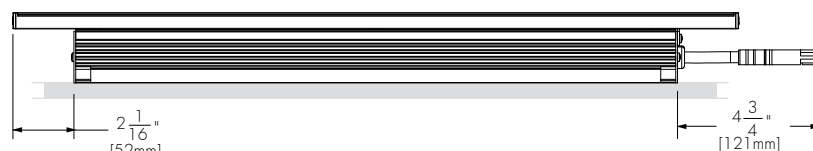
Wiring detail - dimming



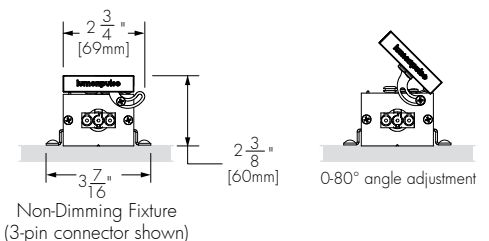
HIGH OUTPUT VERSION



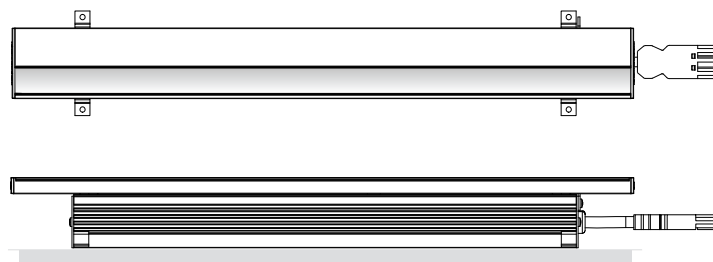
REGULAR OUTPUT VERSION



5 year warranty



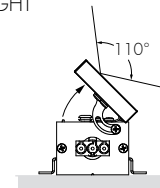
FEEDING SIDE



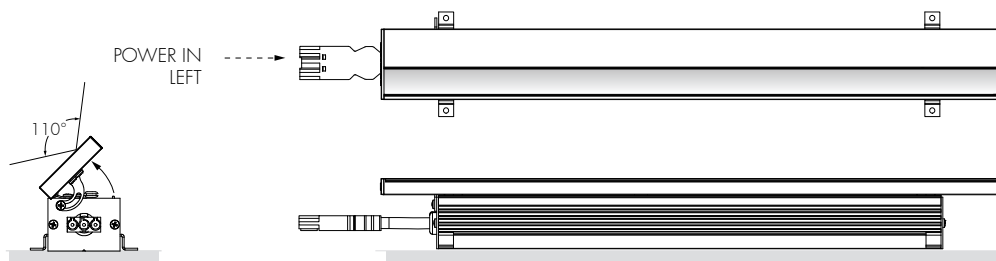
RF

Right Feeding side
standard clips shown

POWER IN
RIGHT



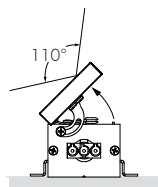
LED housing rotates
in a clockwise direction



LF

Left Feeding side
standard clips shown

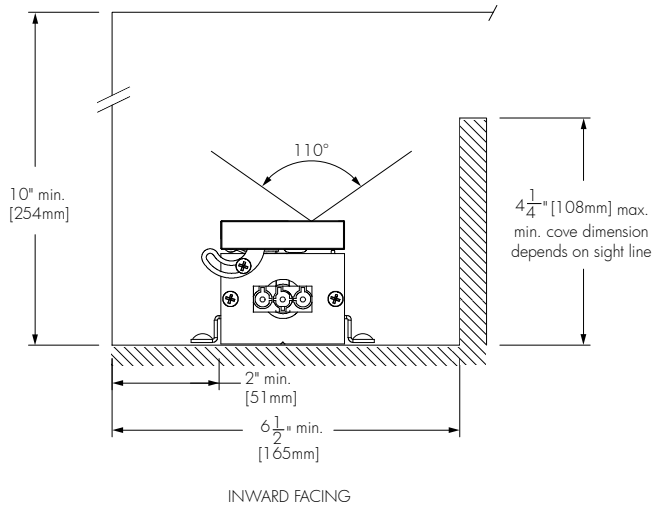
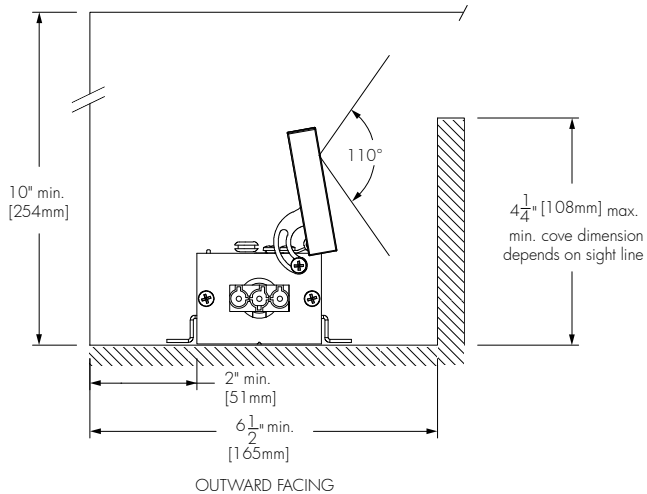
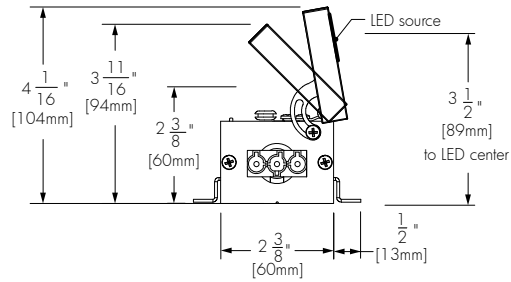
POWER IN
LEFT



LED housing rotates
in a counter-clockwise direction

MOUNTING DETAILS

MINIMUM COVE DIMENSIONS



PHOTOMETRICS

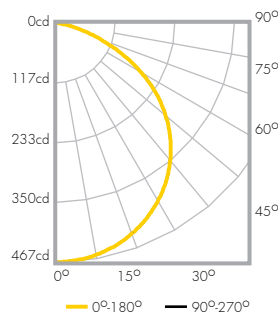
Lumencove® RO 4'

2700K

clear lens

Lamping	25.4 W
Lumens	1269
Efficacy	50 lm/W

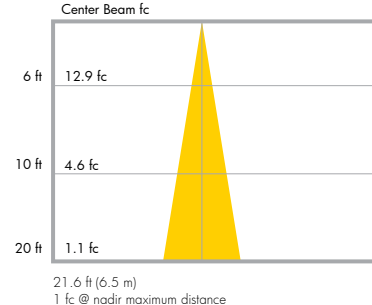
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	467	467	467	467	467
5	465	465	465	465	465
15	450	450	450	450	450
25	421	421	421	421	421
35	377	377	377	377	377
45	318	318	318	318	318
55	241	241	241	241	241
65	145	145	145	145	145
75	52	52	52	52	52
85	6	6	6	6	6
90	0	0	0	0	0

Illuminance at Distance



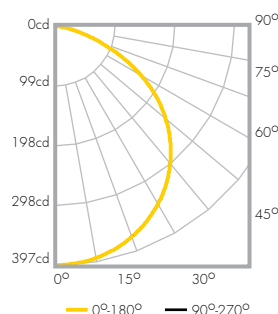
Lumencove® RO 4'

2700K

frosted lens

Lamping	25.4 W
Lumens	1079
Efficacy	55 lm/W

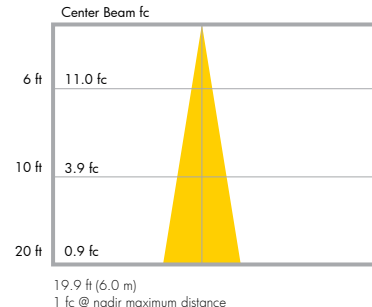
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	397	397	397	397	397
5	395	395	395	395	395
15	383	383	383	383	383
25	358	358	358	358	358
35	321	321	321	321	321
45	270	270	270	270	270
55	205	205	205	205	205
65	123	123	123	123	123
75	44	44	44	44	44
85	5	5	5	5	5
90	0	0	0	0	0

Illuminance at Distance



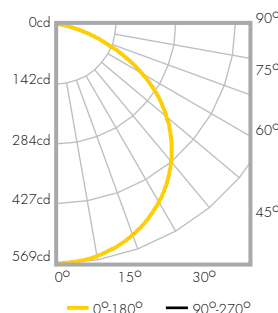
Lumencove® RO 4'

3000K

clear lens

Lamping	25 W
Lumens	1513
Efficacy	60 lm/W

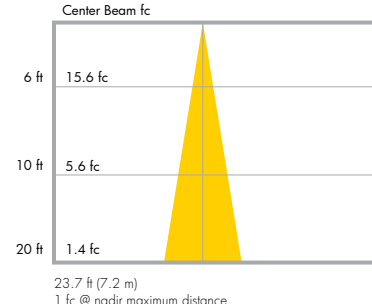
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	565	565	565	565	565
5	563	561	561	565	567
15	544	542	543	547	548
25	507	506	506	510	510
35	451	450	450	455	455
45	375	374	376	381	382
55	281	277	280	289	290
65	168	164	168	177	178
75	61	59	61	64	65
85	8	7	7	6	5
90	0	0	0	0	0

Illuminance at Distance



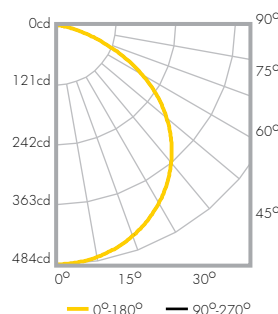
Lumencove® RO 4'

3000K

frosted lens

Lamping	25 W
Lumens	1286
Efficacy	51 lm/W

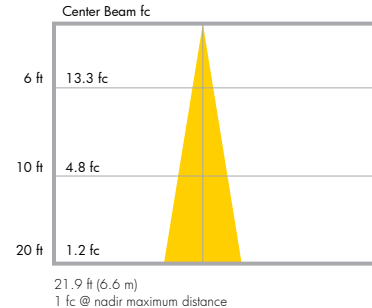
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	480	480	480	480	480
5	479	477	477	480	482
15	462	461	461	465	466
25	431	430	430	433	434
35	384	382	382	387	387
45	319	318	319	324	325
55	239	236	238	246	247
65	143	140	143	151	151
75	51	50	52	54	55
85	5	5	4	4	3
90	0	0	0	0	0

Illuminance at Distance



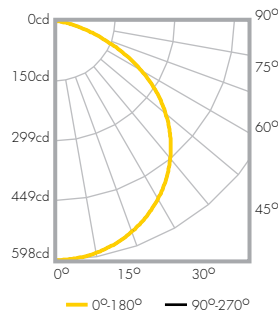
Photometric data based on test results from an independent NIST traceable testing lab. IES data is available at www.lumenpulse.com/en/support. Always refer to our website download section for the latest updates of our IES files.

PHOTOMETRICS

Lumencove® RO 4'
4000K
clear lens

Lamping	25 W
Lumens	1627
Efficacy	65 lm/W

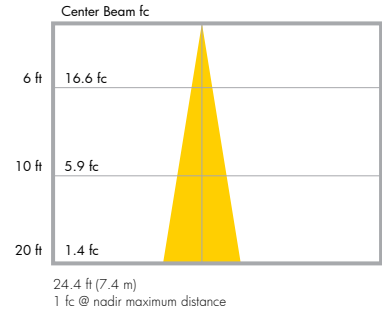
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	598	598	598	598	598
5	596	596	596	596	596
15	577	577	577	577	577
25	540	540	540	540	540
35	484	484	484	484	484
45	408	408	408	408	408
55	309	309	309	309	309
65	186	186	186	186	186
75	67	67	67	67	67
85	8	8	8	8	8
90	0	0	0	0	0

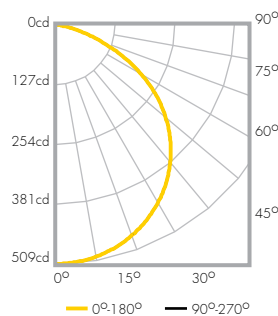
Illuminance at Distance



Lumencove® RO 4'
4000K
frosted lens

Lamping	25 W
Lumens	1383
Efficacy	55 lm/W

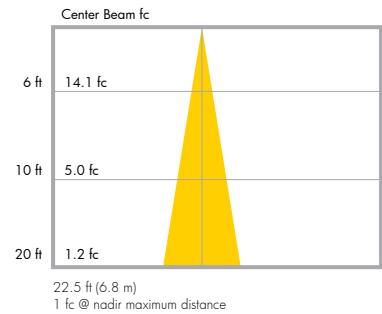
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	509	509	509	509	509
5	507	507	507	507	507
15	491	491	491	491	491
25	459	459	459	459	459
35	411	411	411	411	411
45	346	346	346	346	346
55	262	262	262	262	262
65	158	158	158	158	158
75	57	57	57	57	57
85	6	6	6	6	6
90	0	0	0	0	0

Illuminance at Distance



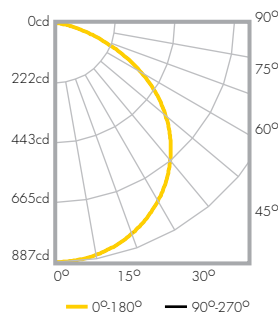
Photometric data based on test results from an independent NIST traceable testing lab. IES data is available at www.lumenpulse.com/en/support. Always refer to our website download section for the latest updates of our IES files.

PHOTOMETRICS

Lumencove® HO 4'
2700K
clear lens

Lamping	45 W
Lumens	2412
Efficacy	53 lm/W

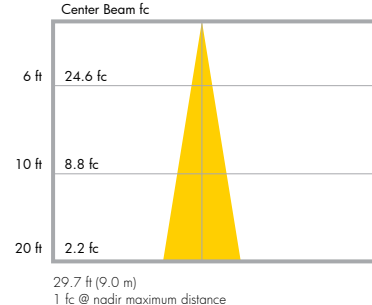
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	887	887	887	887	887
5	884	884	884	884	884
15	856	856	856	856	856
25	801	801	801	801	801
35	717	717	717	717	717
45	604	604	604	604	604
55	457	457	457	457	457
65	275	275	275	275	275
75	99	99	99	99	99
85	11	11	11	11	11
90	0	0	0	0	0

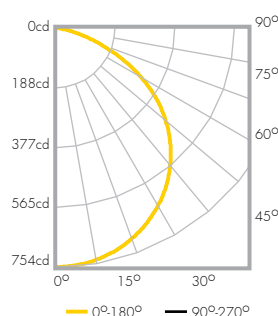
Illuminance at Distance



Lumencove® HO 4'
2700K
frosted lens

Lamping	45 W
Lumens	2050
Efficacy	45 lm/W

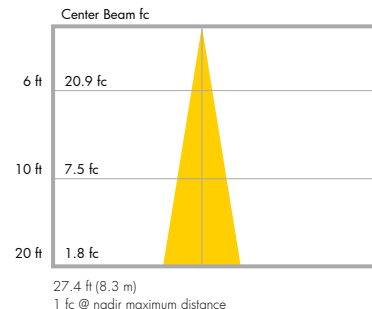
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	754	754	754	754	754
5	751	751	751	751	751
15	727	727	727	727	727
25	681	681	681	681	681
35	610	610	610	610	610
45	514	514	514	514	514
55	389	389	389	389	389
65	234	234	234	234	234
75	84	84	84	84	84
85	10	10	10	10	10
90	0	0	0	0	0

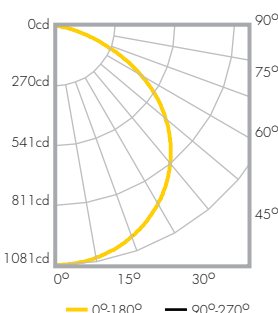
Illuminance at Distance



Lumencove® HO 4'
3000K
clear lens

Lamping	45 W
Lumens	2876
Efficacy	63 lm/W

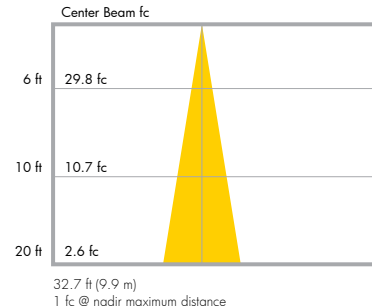
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	1075	1075	1075	1075	1075
5	1071	1067	1067	1074	1077
15	1034	1031	1032	1039	1041
25	964	961	961	969	970
35	858	855	855	865	865
45	713	711	714	725	727
55	534	527	533	550	552
65	319	313	319	337	338
75	115	113	116	122	123
85	15	14	14	12	11
90	0	0	0	0	0

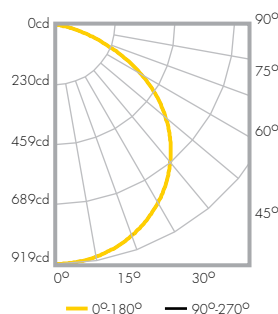
Illuminance at Distance



Lumencove® HO 4'
3000K
frosted lens

Lamping	45 W
Lumens	2444
Efficacy	54 lm/W

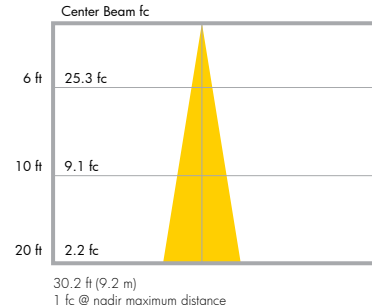
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	913	913	913	913	913
5	910	907	907	913	915
15	879	876	877	883	885
25	819	817	817	824	824
35	729	727	727	735	735
45	606	604	607	616	618
55	453	448	453	467	469
65	271	266	271	286	288
75	98	96	99	104	105
85	13	12	12	10	9
90	0	0	0	0	0

Illuminance at Distance



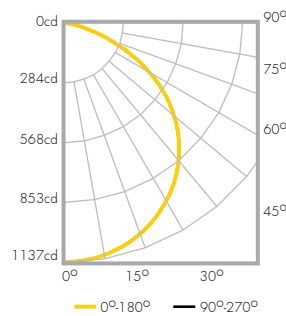
Photometric data based on test results from an independent NIST traceable testing lab. IES data is available at www.lumenpulse.com/en/support. Always refer to our website download section for the latest updates of our IES files.

PHOTOMETRICS

Lumencove® HO 4'
4000K
clear lens

Lamping	45 W
Lumens	3092
Efficacy	68 lm/W

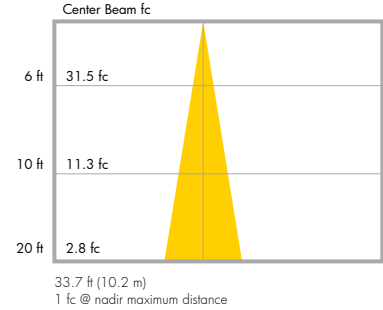
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	1137	1137	1137	1137	1137
5	1133	1133	1133	1133	1133
15	1097	1097	1097	1097	1097
25	1026	1026	1026	1026	1026
35	919	919	919	919	919
45	775	775	775	775	775
55	586	586	586	586	586
65	353	353	353	353	353
75	126	126	126	126	126
85	14	14	14	14	14
90	0	0	0	0	0

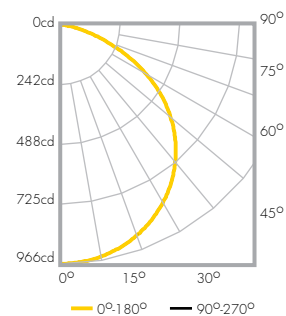
Illuminance at Distance



Lumencove® HO 4'
4000K
frosted lens

Lamping	45 W
Lumens	2628
Efficacy	58 lm/W

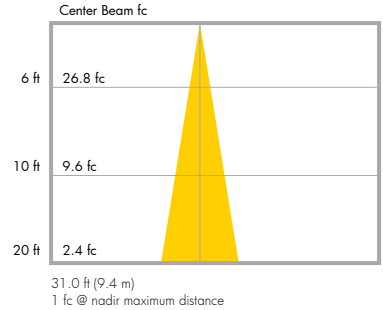
Polar Candela Distribution



Candela Table

	0	22.5	45	67.5	90
0	966	966	966	966	966
5	963	963	963	963	963
15	932	932	932	932	932
25	872	872	872	872	872
35	781	781	781	781	781
45	658	658	658	658	658
55	498	498	498	498	498
65	300	300	300	300	300
75	107	107	107	107	107
85	12	12	12	12	12
90	0	0	0	0	0

Illuminance at Distance



Photometric data based on test results from an independent NIST traceable testing lab. IES data is available at www.lumenpulse.com/en/support. Always refer to our website download section for the latest updates of our IES files.

ACCESSORIES

Order separately

Control Systems:

- LTO** Lumentouch is a wall mount DMX 512 controller keypad
- LCU** Lumencue is a USB / mini SD DMX 512 controller
- LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

CBOX :

iCBOX-__V-__-__ Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

CBOX-__V-__-__ DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

Leader Cable :

- LCSLC__** Leader Cable for lumencove® fixture (3 conductor cable).
Please add desired cable length : 6, 8 or 10 feet
- LCSLCD__** Leader Cable for dimming lumencove® fixture (5 conductor cable).
Please add desired cable length : 6, 8 or 10 feet

Jumper Cable :

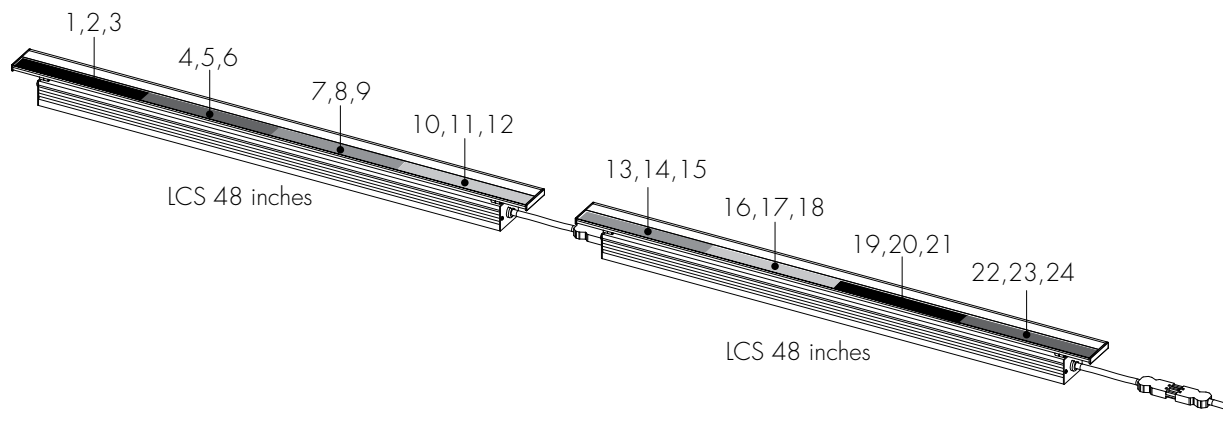
- LCSJC__** Jumper Cable for lumencove® fixture (3 conductor cable).
Please add desired cable length : 1, 2, 4 or 8 feet
- LCSJCD__** Jumper Cable for dimming lumencove® fixture (5 conductor cable).
Please add desired cable length : 1, 2, 4 or 8 feet

RESOLUTION DETAILS

APPLICABLE FOR DMX DIMMING OPTION ONLY

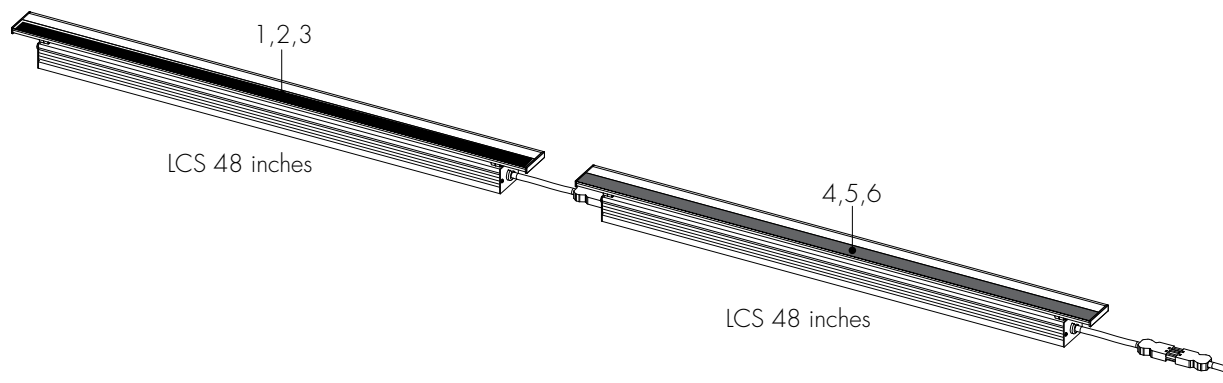
DMX 1FT - Resolution per foot: each foot is addressed independently (recommended for most installations).
1% minimum dimming value

DMX ADDRESSES:



DMX 1FX - Resolution per fixture: each fixture is addressed independently.
1% minimum dimming value

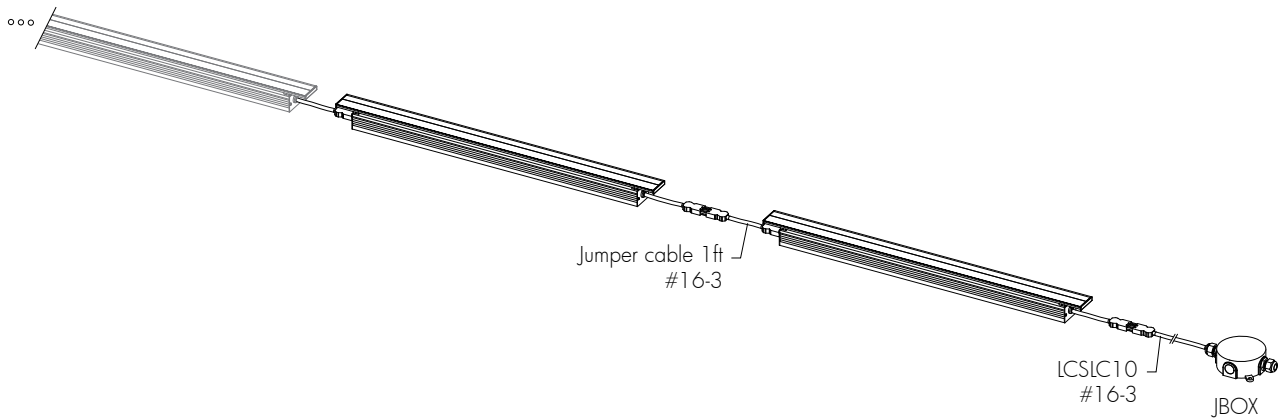
DMX ADDRESSES:



*Warning: resolution is a factory setting and cannot be changed in the field.

TYPICAL WIRING DIAGRAMS

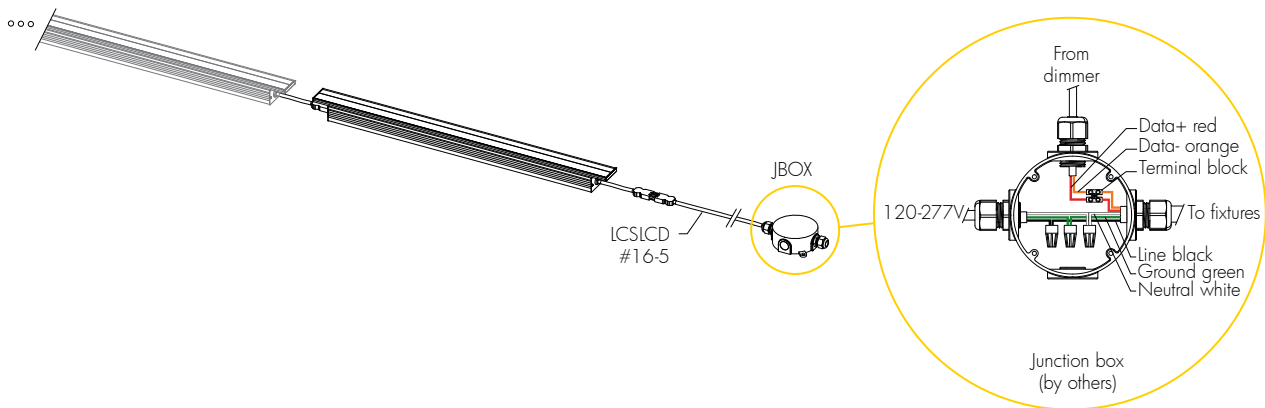
Non-Dimming Version



Maximum run length by 15A circuit - lumencove® RO 6W/ft			
Cable length/Voltage	120V	240V	277V
10ft leader cable	180ft	292ft	300ft
50ft leader cable	152ft	260ft	292ft
Maximum run length by 15A circuit - lumencove® HO 12W/ft			
Cable length/Voltage	120V	240V	277V
10ft leader cable	112ft	180ft	200ft
50ft leader cable	88ft	152ft	172ft

Dimming Version (0-10V)

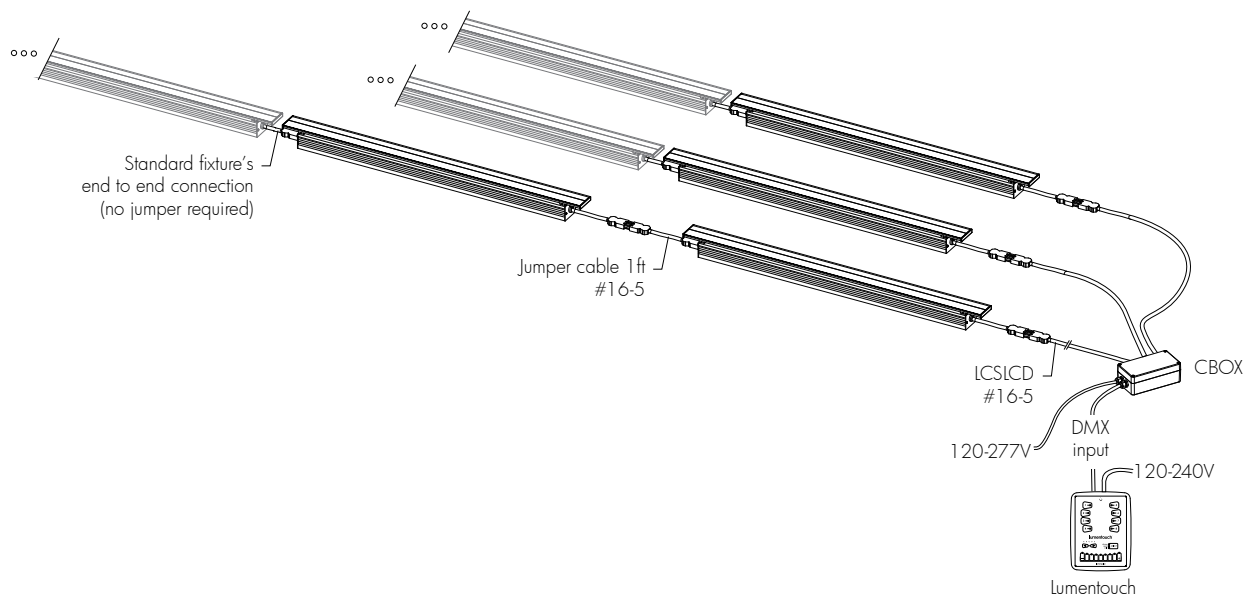
10% minimum dimming value



TYPICAL WIRING DIAGRAMS

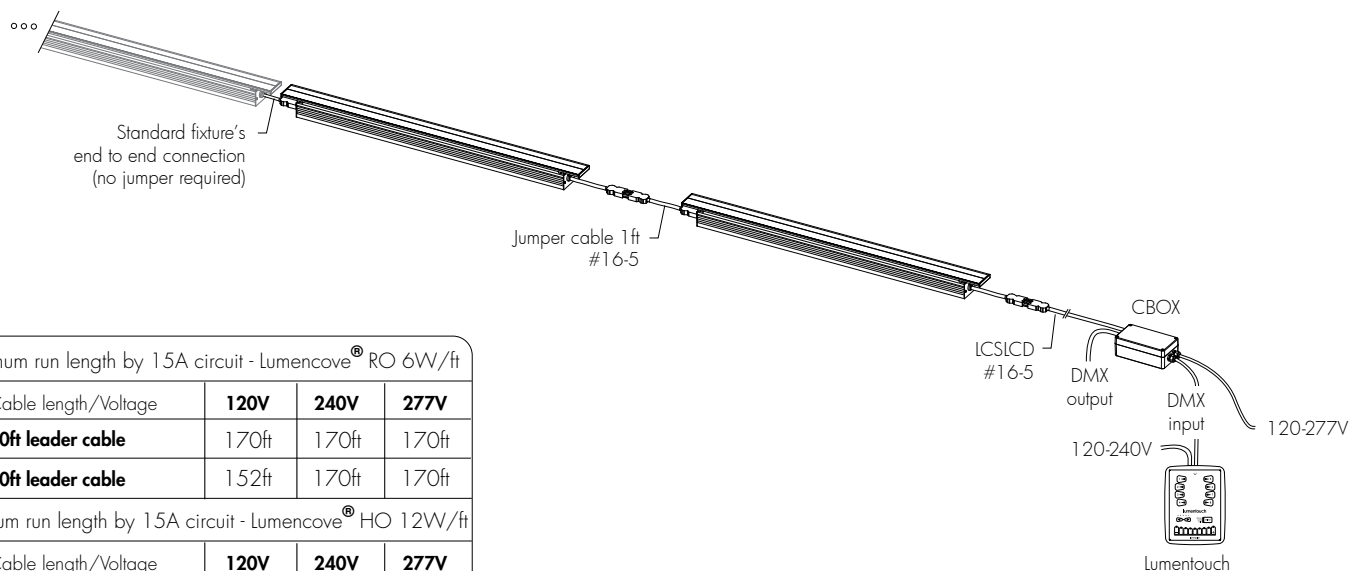
Star Layout (DMX Dimming)

*Make sure that the addition of all cable lengths and fixture lengths for each run do not exceed the recommended limit.
1% minimum dimming value



Daisy Chain Layout (DMX Dimming)

1% minimum dimming value



Maximum run length by 15A circuit - lumencove® RO 6W/ft

Cable length/Voltage	120V	240V	277V
10ft leader cable	170ft	170ft	170ft
50ft leader cable	152ft	170ft	170ft

Maximum run length by 15A circuit - lumencove® HO 12W/ft

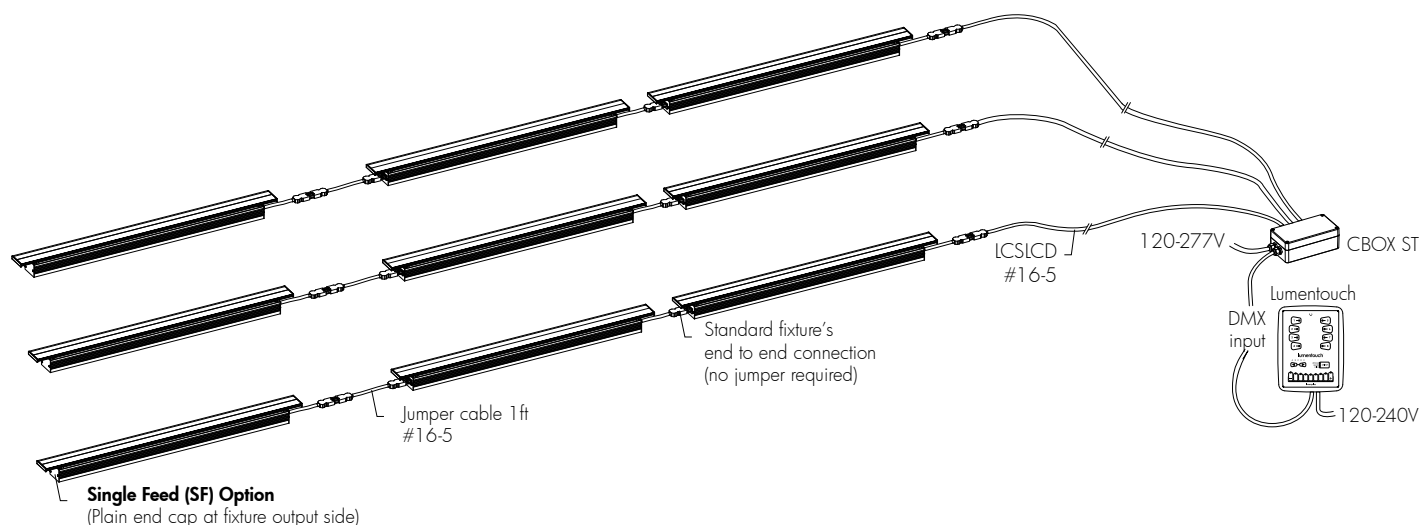
Cable length/Voltage	120V	240V	277V
10ft leader cable	112ft	170ft	170ft
50ft leader cable	88ft	152ft	170ft

*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

TYPICAL WIRING DIAGRAMS - Single Feed Option Shown

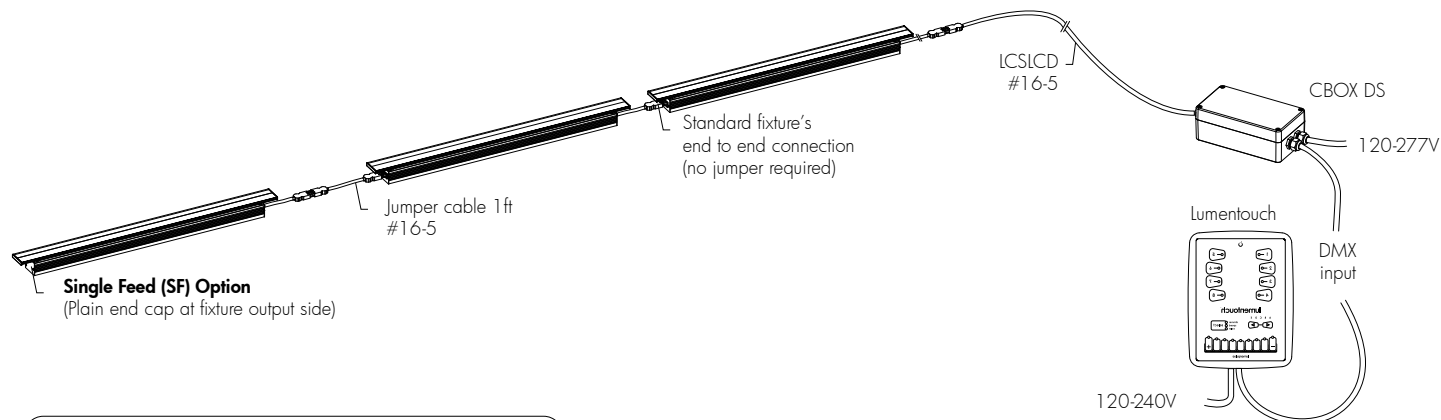
Star Layout (DMX Dimming)

*Make sure that the addition of all cable lengths and fixture lengths for each run do not exceed the recommended limit.
1% minimum dimming value



Daisy Chain Layout (DMX Dimming)

1% minimum dimming value



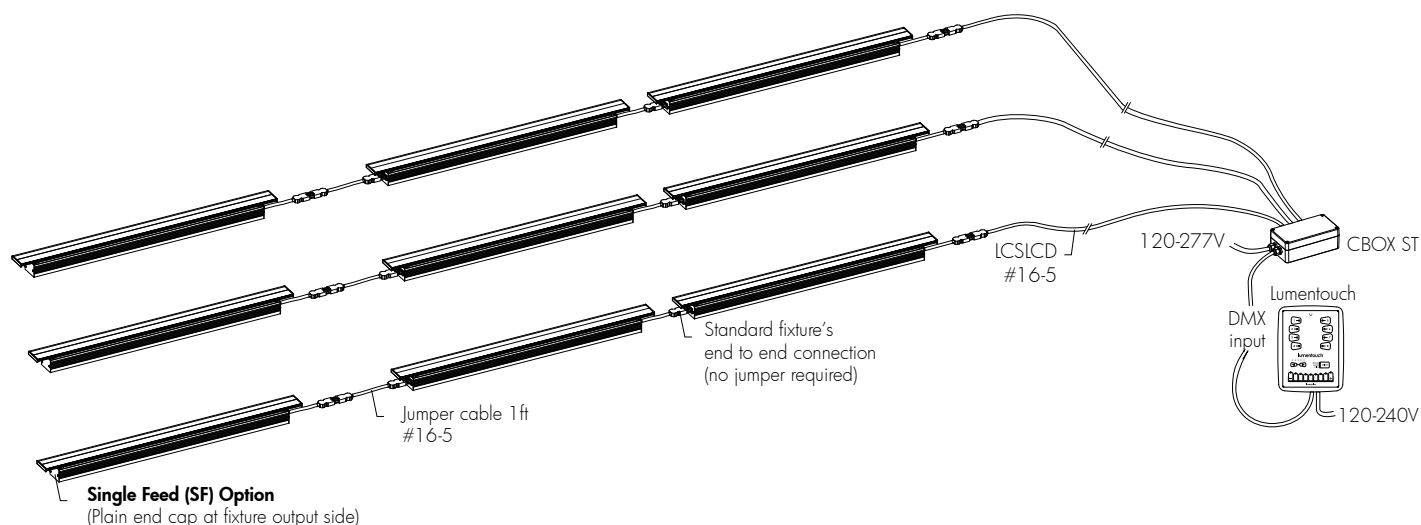
Maximum run length by 15A circuit - Lumencove® RO 6W/ft			
Cable length/Voltage	120V	240V	277V
10ft leader cable	170ft	170ft	170ft
50ft leader cable	152ft	170ft	170ft
Maximum run length by 15A circuit - Lumencove® HO 12W/ft			
Cable length/Voltage	120V	240V	277V
10ft leader cable	112ft	170ft	170ft
50ft leader cable	88ft	152ft	170ft

*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

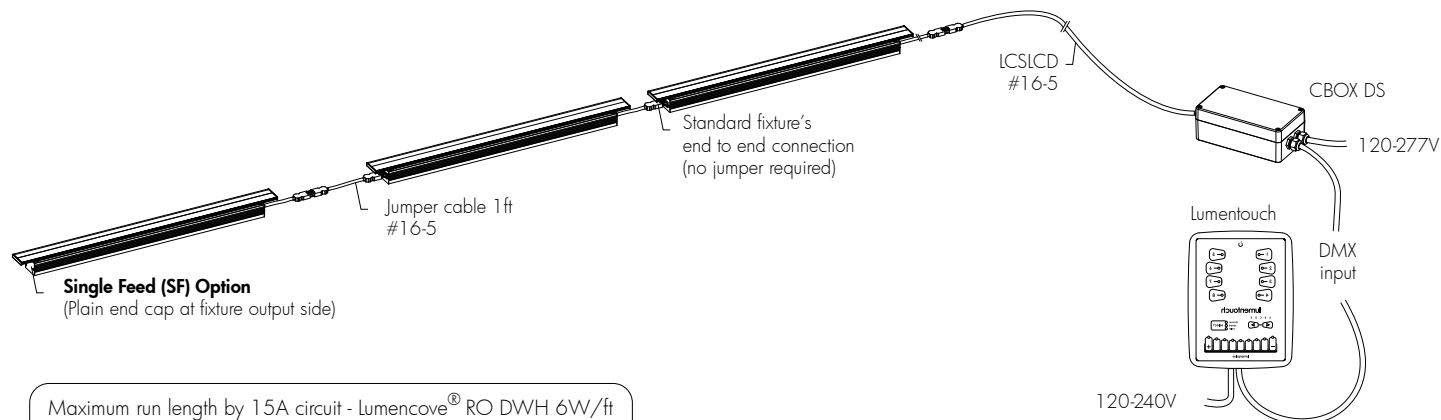
TYPICAL WIRING DIAGRAMS - Single Feed Option Shown

Star Layout

*Make sure that the addition of all cable lengths and fixture lengths for each run do not exceed the recommended limit.



Daisy Chain Layout



Maximum run length by 15A circuit - lumencove® RO DWH 6W/ft			
Cable length/Voltage	120V	240V	277V
10ft leader cable	170ft	170ft	170ft
50ft leader cable	152ft	170ft	170ft
Maximum run length by 15A circuit - lumencove® HO DWH 12W/ft			
Cable length/Voltage	120V	240V	277V
10ft leader cable	112ft	170ft	170ft
50ft leader cable	88ft	152ft	170ft

*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

HOW TO ORDER

LCS RO			40K	CL	RF	WH	DMX1FX	
Housing	Voltage	Length	Colors and color temperatures	Lens	Feeding Side	Finish	Dimming	Option
1	2	3	4	5	6	7	8	9
1					5			
Housing: LCS RO - lumencove® Regular Output 6W/ft LCS HO - lumencove® High Output 12W/ft			Lens: CL - Clear lens FR - Frosted lens					
2					6			
Voltage: 120 - 120 volts 208 - 208 volts 240 - 240 volts 277 - 277 volts			Feeding Side: Please specify one of the following: (Right Feeding side is standard unless otherwise specified) LF - Left Feeding side RF - Right Feeding side					
3					7			
Length: 12 - 12 3/8 inches (314mm) (0.72 kg/1.59 lbs) 24 - 24 3/16 inches (614mm) (1.45 kg/3.19 lbs) 36 - 36 inches (914mm) (2.16 kg/4.77 lbs) 48 - 47 13/16 inches (1214mm) (2.57 kg/5.68 lbs) 96 - 94 3/4 inches (2406mm) (5.76 kg/12.72 lbs)			Finish: WH - White (standard finish) CC - Custom (please specify RAL color)					
4					8			
Colors and Color temperatures: 27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K RD - Red GR - Green BL - Blue			Dimming: DIM - 0-10V Dimming option (10% minimum dimming value) DMX 1FT - DMX Dimming option, resolution per foot (1% minimum dimming value) DMX 1FX - DMX Dimming option, resolution per fixture (1% minimum dimming value) DALI - DALI Dimming option (1% minimum dimming value) NO - No Dimming					
					9			
			Option: SF - Single Feed option (Plain end cap at fixture output side)					

Refer to Lighting Schedule for different lengths

LS411LED Omnio Mini

At Grade



The LS411LED is a compact, adjustable luminaire with an aesthetically pleasing form, featuring integral line voltage driver and a wide range of adjustability making it ideal for general landscape lighting applications. The LS411LED is also supplied factory sealed, complete with 6.5' hookup wire. The epoxy coated, marine grade aluminum construction ensures a long service life, even in harsh environments.

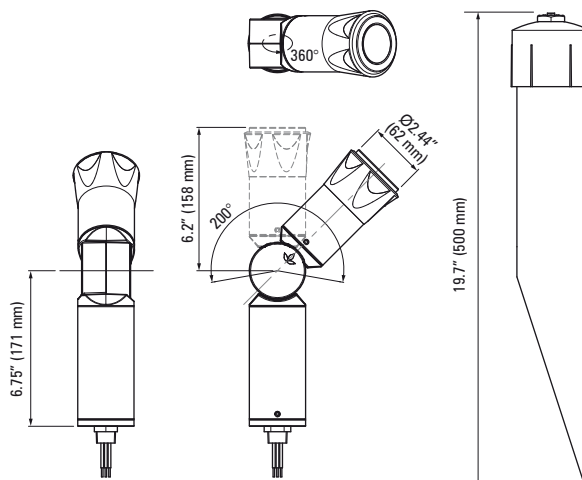
Specifications

Lamp Source	9 W or 15 W LED ☐ White (4300 K typical) ☐ Warm white (3000 K typical) ☐ Blue (470 nm) <i>Other colors by request</i> ☐ RGB
Approved Use	Suitable for wet locations
Control Options	PWM
IP Rating	IP67
Construction	LM20 die-cast marine grade powder coated aluminum
Mounting Type	1/2" NPT
Standard Inclusions	Silicone handgrip to allow hot adjustment MicroAntiLeach™ wire entry
Accessories <i>Order separately</i>	LS6054 Groundmount stake
Remote Transformers / Power Supplies <i>Order separately</i>	Refer to Technical Data section for application specific options
Ambient Operating Temperature	-22 °F to 122 °F (-30 °C to +50 °C)
Photometrics	Refer to www.lumascope.com

Any luminaire can become hot - take care with appropriate use and placement



LS411LED Omnio Mini



LS6054 Groundmount Stake
(order separately)

LS411LED

C

LAMP

Description	Wattage	Color	Code
LED	9 W	White (4 300 K typ.)	9W4
		Warm white (3000 K typ.)	9H6
		Blue (470 nm)	9B4
		RGB	9M4
	15 W	White (4 300 K typ.)	15W4
		Warm white (3000 K typ.)	15H6
		Blue (470 nm)	15B4

OPTICAL SYSTEM

Beam		Code
Narrow Medium	25°	NM
Medium	30°	ME ⁽¹⁾
Linear	20° x 40°	LN

MOUNTING

Description	Code
½" NPT	C

INPUT VOLTAGE

Voltage	Code
120-277 V, 50/60 Hz	09 ⁽¹⁾
12-15 V, 60 Hz or 12-24 V DC	13 ⁽¹⁾⁽²⁾
PWM Dimmable Driver, 12-15 V, 60 Hz or 12-24 V DC	13-DIM ⁽²⁾

FINISH

Description	Material	Code
Black, powder coated	Aluminum	CB
White, powder coated	Aluminum	CW
Silver, powder coated	Aluminum	CS

Dimmable Wiring Diagram Reference

Input Voltage	LED Color	Control Type	Wiring Diagram
13-DIM	Single Color	PWM	6
13-DIM	RGB	PWM	8,9

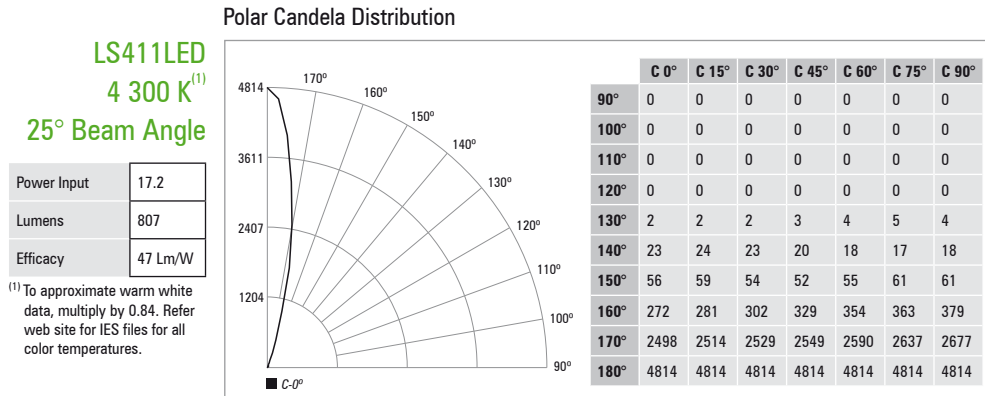
Dimmable Wiring Diagram Reference

Input Voltage	LED Color	Control Type	Wiring Diagram
13-DIM	Single Color	PWM	6
13-DIM	RGB	PWM	8,9

Photometrics

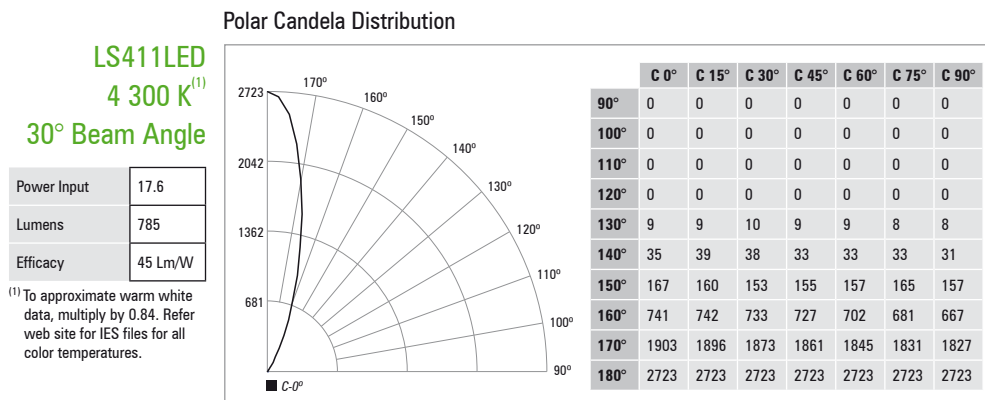
Photometric data is based on test results from a NIST traceable testing lab. IES data is available at www.lumascap.com.

Note: No depreciation factor is applied to the data shown.



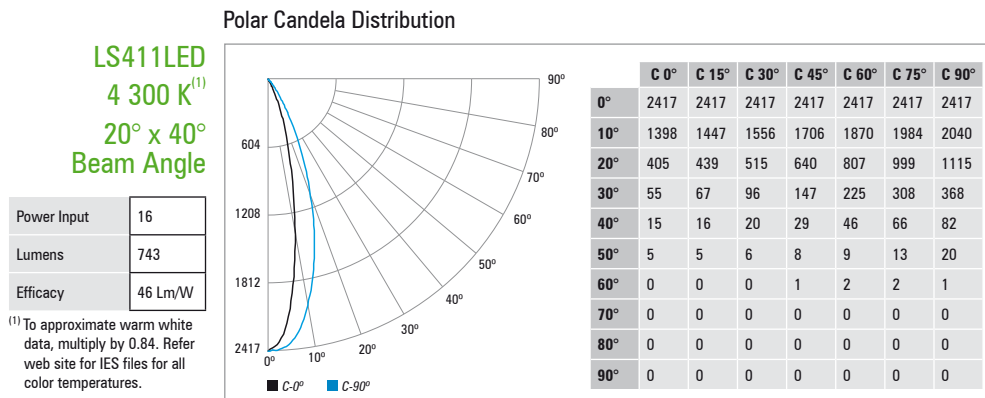
Illuminance at a Distance

ft	Center Beam fc	Beam Ø
5	192.6	2 ft
10	48.1	4 ft
15	21.4	7 ft
25	7.7	11 ft
30	5.3	13 ft
40	3	18 ft
50	1.9	22 ft



Illuminance at a Distance

ft	Center Beam fc	Beam Ø
5	108.9	3 ft
10	27.2	5 ft
15	12.1	8 ft
25	4.4	13 ft
30	3	16 ft
40	1.7	21 ft
50	1.1	27 ft



Illuminance at a Distance

ft	Center Beam fc	Beam W	Beam L
5	96.7	2 ft	3 ft
10	24.2	4 ft	7 ft
15	10.7	6 ft	10 ft
25	3.9	10 ft	17 ft
30	2.7	12 ft	21 ft
40	1.5	16 ft	28 ft
50	1	19 ft	34 ft

Diagram 6 - 0-10 V Dimming - Low Voltage LED Luminaire on 12-15 V AC or 24 V DC Circuit

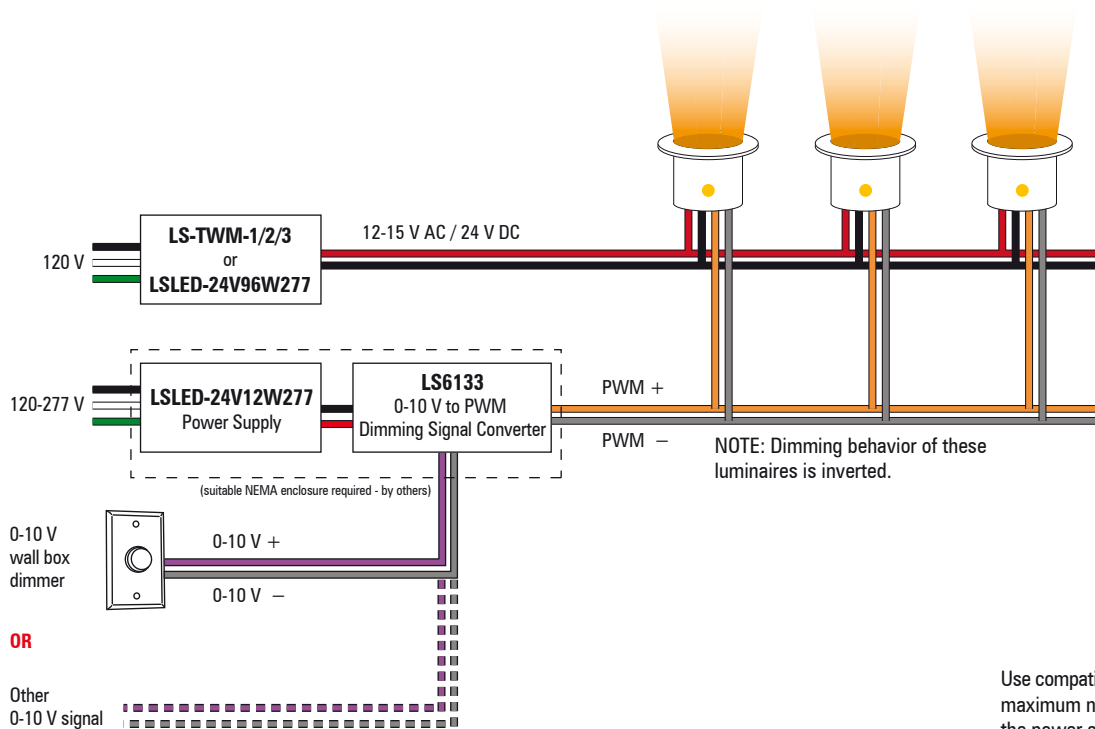
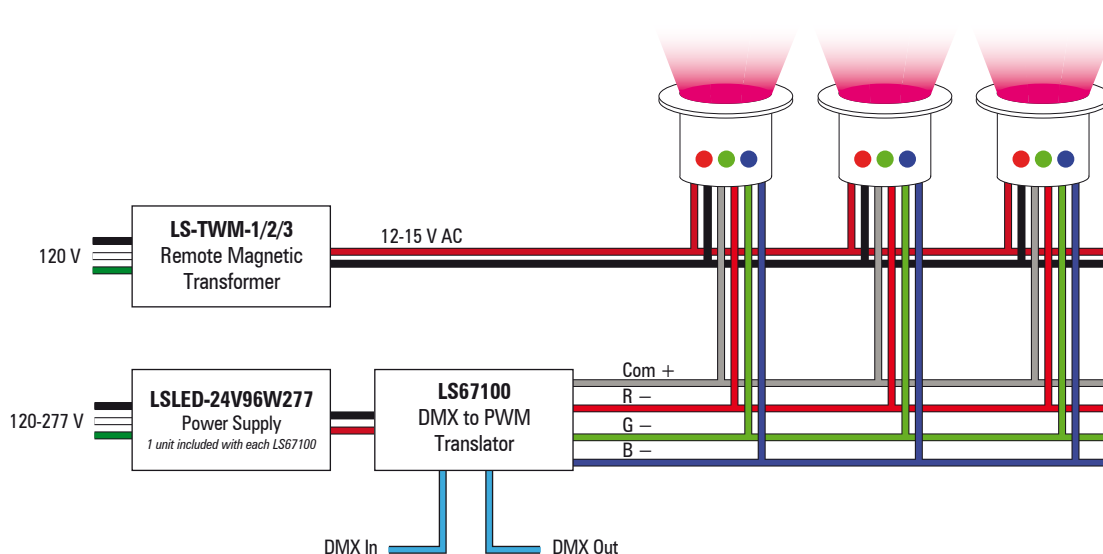


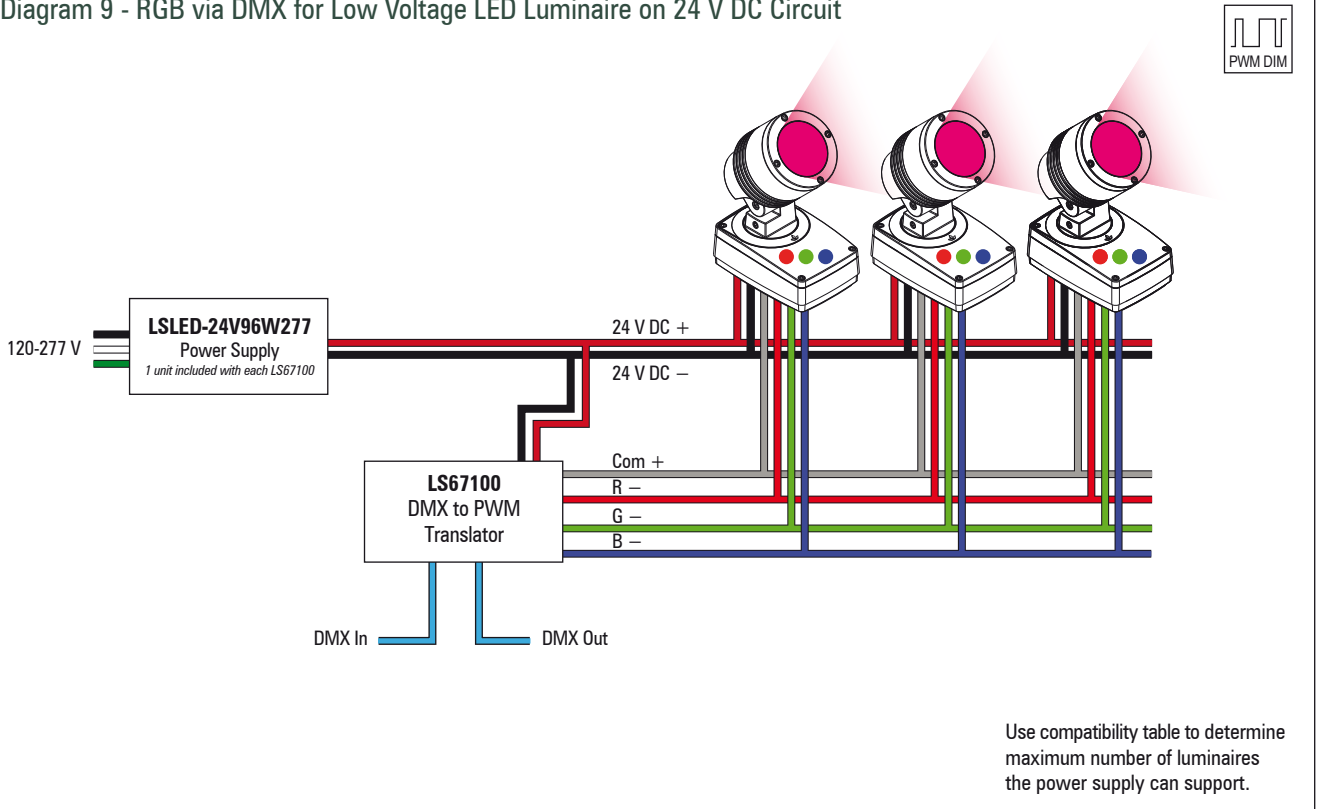
Diagram 8 - RGB via DMX for Low Voltage LED Luminaire on 12-15 V AC Circuit



NOTE: The above diagrams are intended to show electrical pathways between luminaires and ancillary devices. These diagrams are not intended to show type or color of cord/wire, wire gauge or approved use of the cord/wire supplied with luminaires.

Consult the luminaire-specific cutsheet or the factory for detailed specifications.

Diagram 9 - RGB via DMX for Low Voltage LED Luminaire on 24 V DC Circuit



NOTE: The above diagrams are intended to show electrical pathways between luminaires and ancillary devices. These diagrams are not intended to show type or color of cord/wire, wire gauge or approved use of the cord/wire supplied with luminaires.

Consult the luminaire-specific cutsheet or the factory for detailed specifications.

Transformers and Power Supplies for Low Voltage LED Luminaires

The following list of transformers and power supplies are for use with luminaires specifically described as being compatible with either 12 V AC (wirewound only) transformers or with 12-24 V DC power supplies. Compatibility will be noted in the ordering code of the luminaire concerned, and will typically be referenced by Voltage Code '13' or '13-DIM'. In the case of '13-DIM' additional components may be required. Refer to the applicable wiring diagram/s.

Compatibility with each transformer or power supply is indicated by the value mentioned, representing the maximum number of luminaires that may be powered from each transformer or power supply. Please note, this does not take into consideration voltage drop or ampacity limits of the branch circuit. For assistance, please contact factory.

	Wall Mounted Landscape Lighting Transformers			Wall Mounted Transformers				Class 2 Power Supply	Direct Burial Transformer
	LS-TWM-1-300	LS-TWM-2-600	LS-TWM-3-900	LS-TWM-50	LS-TWM-100	LS-TWM-150	LS-TWM-250	LSLED-24V96W277	LS-TDB1-300
Input Voltage	120 V, 60 Hz	120 V, 60 Hz	120 V, 60 Hz	120 V, 60 Hz	120 V, 60 Hz	120 V, 60 Hz	120 V, 60 Hz	120-277 V, 50/60 Hz	120 V, 60 Hz
Output Voltage	12/13/14/15 V 60 Hz	12/13/14/15 V 60 Hz	12/13/14/15 V 60 Hz	12 V, 60 Hz	12 V, 60 Hz	12 V, 60 Hz	12 V, 60 Hz	24 V DC	12.5 V, 60 Hz
Wattage	1 x 300 W circuit	2 x 300 W circuits	3 x 300 W circuits	50 W	100 W	150 W	250 W	96 W	300 W
LS411LED, 9 Watt	12	24	36					7	12

Client: _____
Project name: _____
Order #: _____
Type: _____ Qty: _____

FEATURES AND BENEFITS

Physical :

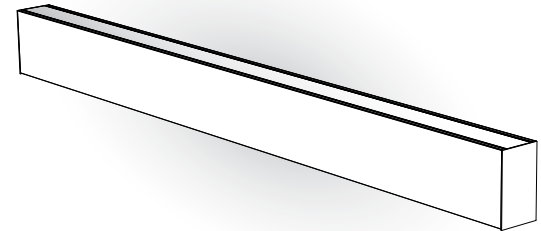
- Aluminum extruded housing, 2" wide
- Available in 1', 2', 3', 4', 5', 6', 7' or 8' sections
- Continuous runs available in 1' increments
- Durable polyester powder coat finish
- Extruded acrylic lens
- Wall mounted
- Tool-less system for reflector assembly and control gear access
- Easy installation
- Compatible with motion sensors
- Unlit joiners and corners available for custom configurations

Performance :

- Available in 2700K, 3000K, 3500K, 4000K or RGB color mixing
- 55 lumens per watt (delivered, HO 3500K)
- CRI value: 80+
- Binning within a 3 step MacAdam ellipse
- Lumen maintenance: 100,000 hrs [L70 @ 25° C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture
- Operating temperatures: -25° C to 50° C [-13F to 122F]

Electrical :

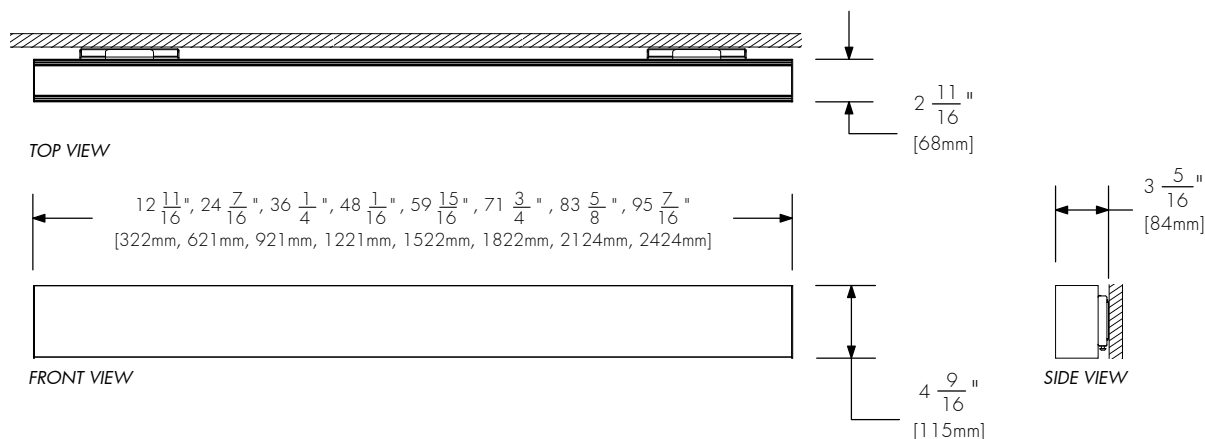
- Line voltage luminaire for 120 to 277V
- 7W/ft Regular Output version
- 14.25W/ft High Output version
- Dimming options for white light: 0-10 volt, DMX, DALI, Lumentalk, or Lutron® EcoSystem® enabled
- 6W/ft optional RGB source, DMX 512 ready
- Quick connectors for continuous runs



Wiring detail

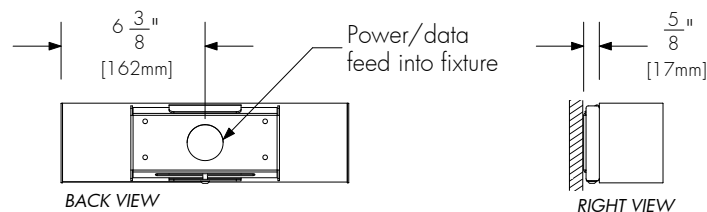
WIRE COLOR / USE

GREEN	GROUND
WHITE	NEUTRAL
BLACK	LIVE 120-277V
RED	0-10V / DATA +
ORANGE	0-10V / DATA -

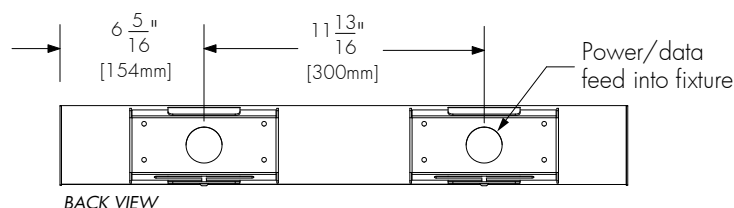


5 year warranty

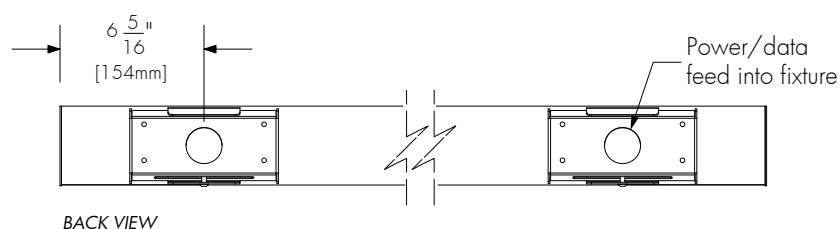
WALL MOUNTING DETAIL (SINGLE UNITS)



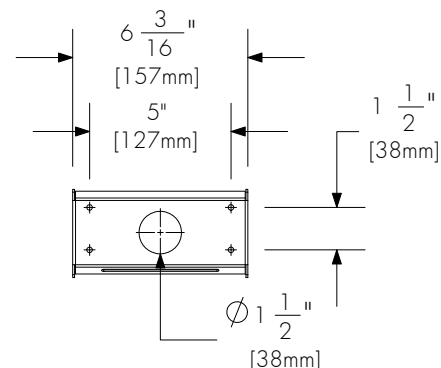
Wall mounting detail for 1' units
N.B. Horizontal 2" x 4" jonction box required



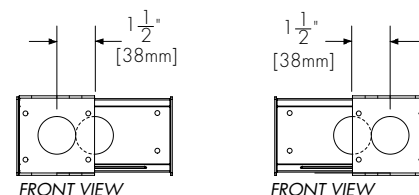
Wall mounting detail for 2' units
N.B. Horizontal 2" x 4" jonction box required



Wall mounting detail for 3' to 8' single units
N.B. Horizontal 2" x 4" jonction box required
Please consult factory for continuous runs.

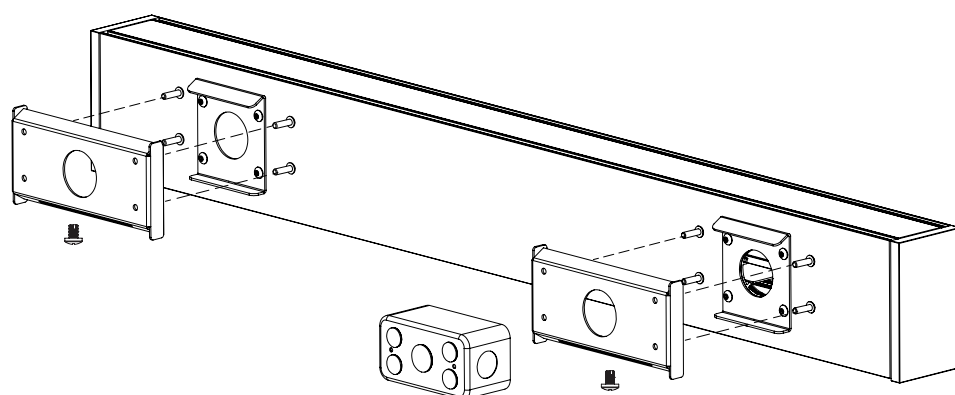


Mounting holes pattern for
Wall mounting plate



Fixture's wall mounting plates
positioning horizontal tolerance

TYPICAL WALL MOUNTED FIXTURE EXPLODED VIEW



ACCESSORIES

Order separately

Control Systems:

- LTO** Lumentouch is a wall mount DMX 512 controller keypad
- LCU** lumencue is a USB / mini SD DMX 512 controller
- LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

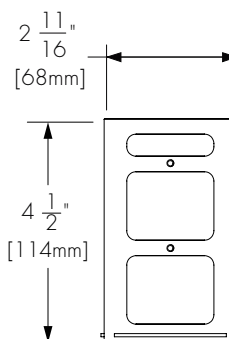
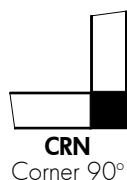
CBOX :

iCBOX-__V-__-__ Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

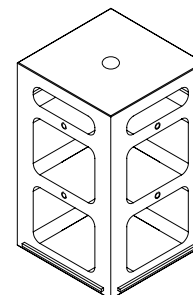
CBOX-__V-__-__ DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

UNLIT JOINERS AND CORNERS

(CONSULT FACTORY FOR CUSTOM CONFIGURATIONS AVAILABILITY AND ORDERING)



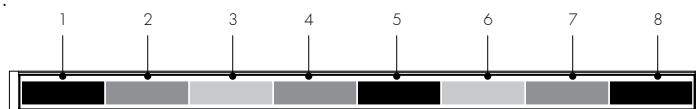
FRONT VIEW



RESOLUTION DETAILS

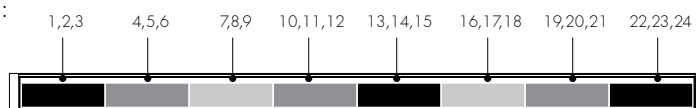
DMX 1FT - Resolution per foot: each foot is addressed independently .

WHITE DIMMING
DMX ADDRESSES:



TOP VIEW
(8 ft fixture shown)

RGB
DMX ADDRESSES:



TOP VIEW
(8 ft fixture shown)

DMX 1FX - Resolution per fixture: each 4 foot segment is addressed independently

WHITE DIMMING
DMX ADDRESSES:



TOP VIEW
(8 ft fixture shown)

RGB
DMX ADDRESSES:

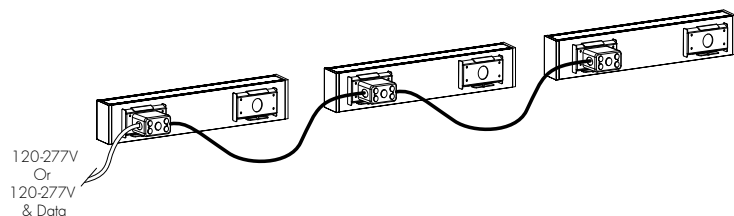


TOP VIEW
(8 ft fixture shown)

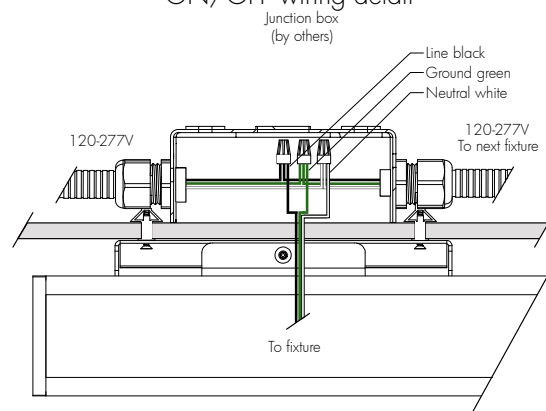
*Warning: resolution is a factory setting and cannot be changed in the field.

TYPICAL WIRING DIAGRAMS

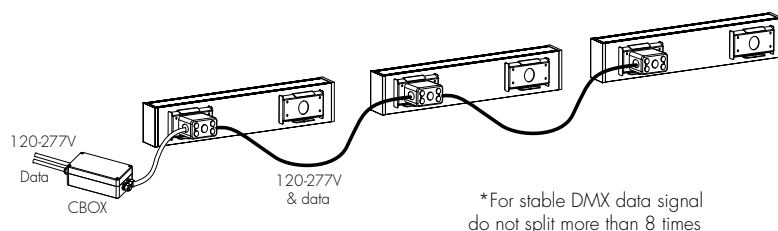
Single units, daisy chain configuration
ON/OFF, 0/10V, DALI & EcoSystem dimming



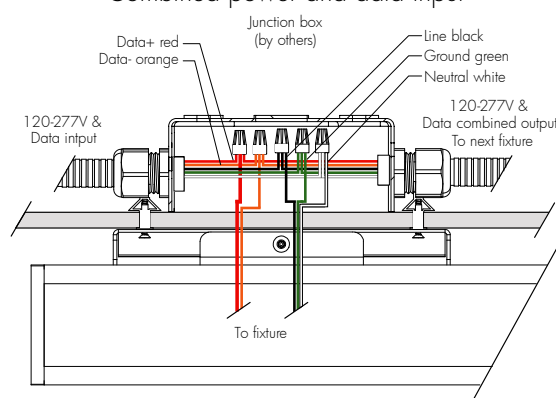
ON/OFF wiring detail



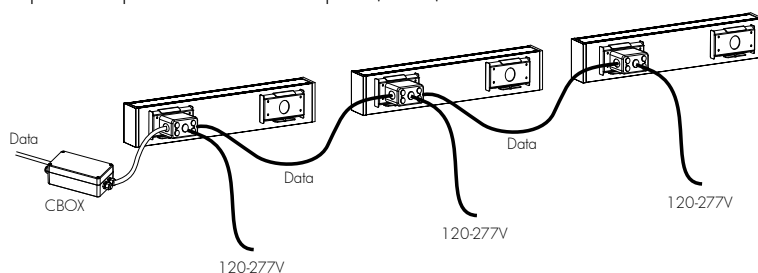
Single units, daisy chain configuration
Combined power and data input (DMX)



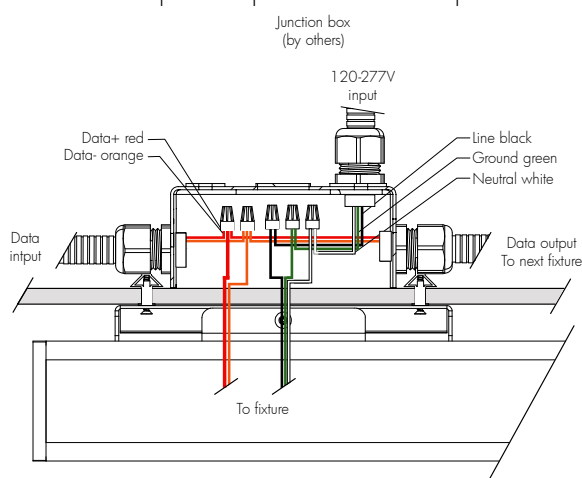
0/10V, DMX, DALI
& EcoSystem wiring detail
Combined power and data input



Single units, daisy chain configuration
Separated power and data inputs (DMX)



0/10V, DMX, DALI
& EcoSystem wiring detail
Separated power and data inputs

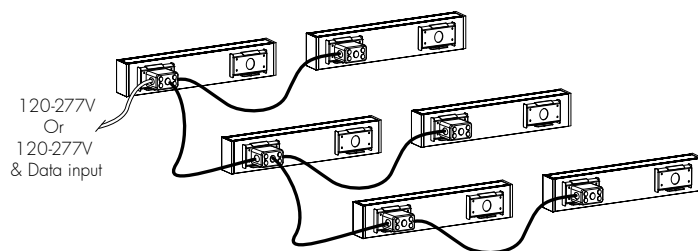


⚠ WARNING

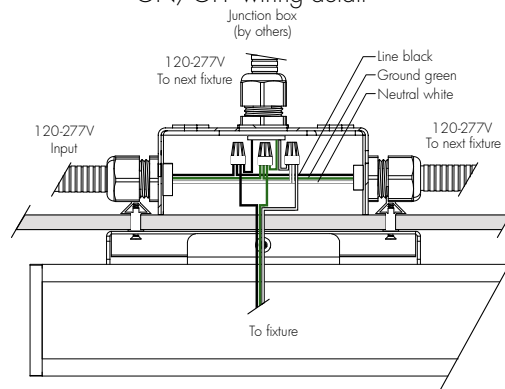
SEPARATION OF FIELD INSTALLED POWER LIMITED CIRCUIT (DIMMING/DATA/CONTROL) WIRING FROM THE BRANCH CIRCUIT WIRING IN THE OUTLET BOX ARE TO BE MADE IN ACCORDANCE WITH LOCAL AND/OR NATIONAL ELECTRICAL INSTALLATION CODES.

TYPICAL WIRING DIAGRAMS

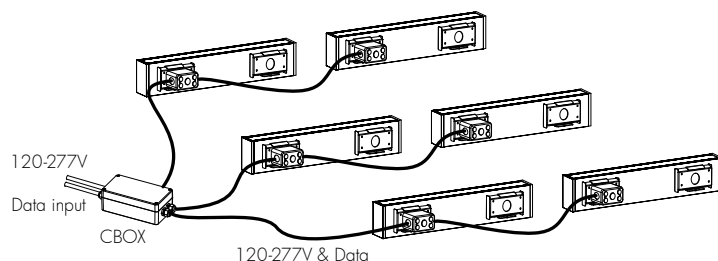
Single units, star layout configuration
ON/OFF, 0/10V, DALI, EcoSystem dimming



ON/OFF wiring detail

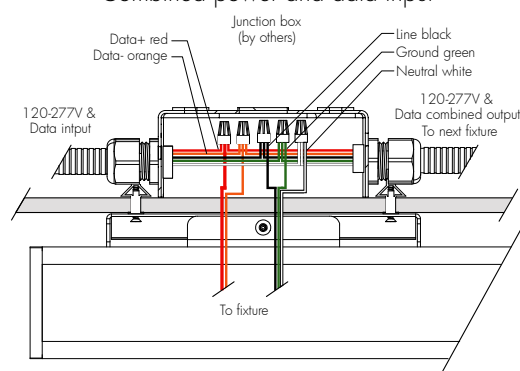


Single units, star layout configuration
Combined power and data input (DMX)

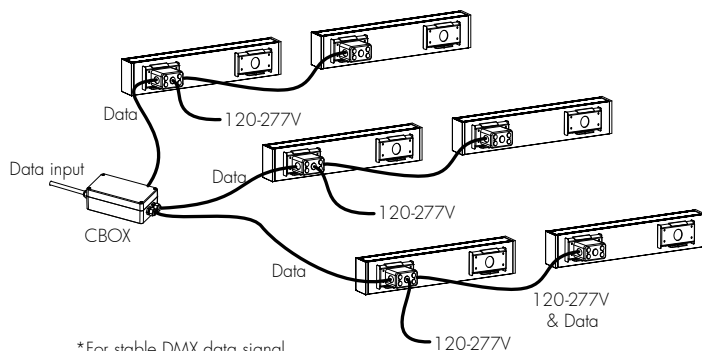


*For stable DMX data signal
do not split more than 8 times

0/10V, DMX, DALI
& EcoSystem wiring detail
Combined power and data input

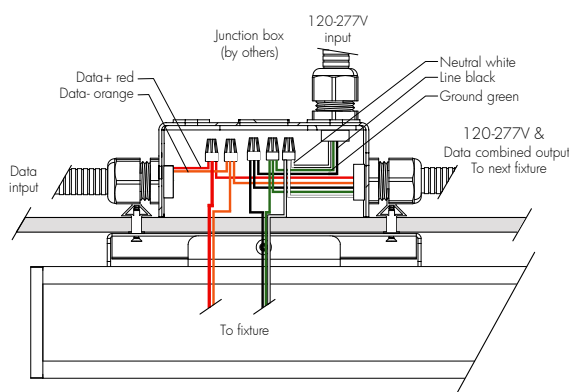


Single units, star layout configuration
Separated power and data inputs (DMX)



*For stable DMX data signal
do not split more than 8 times

0/10V, DMX, DALI
& EcoSystem wiring detail
Separated power and data inputs

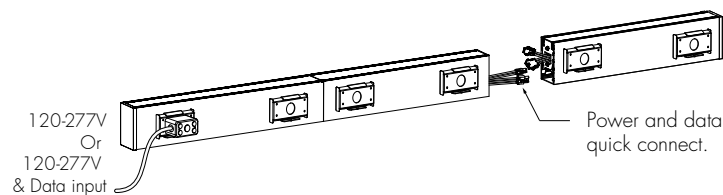


⚠ WARNING

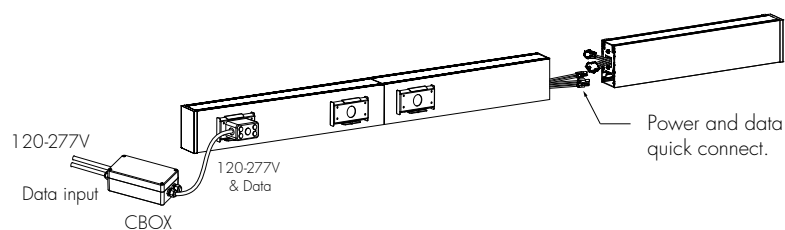
SEPARATION OF FIELD INSTALLED POWER LIMITED CIRCUIT (DIMMING/DATA/CONTROL)
WIRING FROM THE BRANCH CIRCUIT WIRING IN THE OUTLET BOX ARE TO BE MADE IN ACCORDANCE
WITH LOCAL AND/OR NATIONAL ELECTRICAL INSTALLATION CODES.

TYPICAL WIRING DIAGRAMS

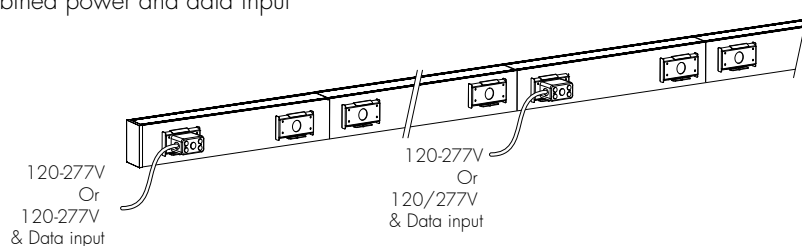
Continuous row, single feed
ON/OFF, 0/10V, DALI, EcoSystem dimming



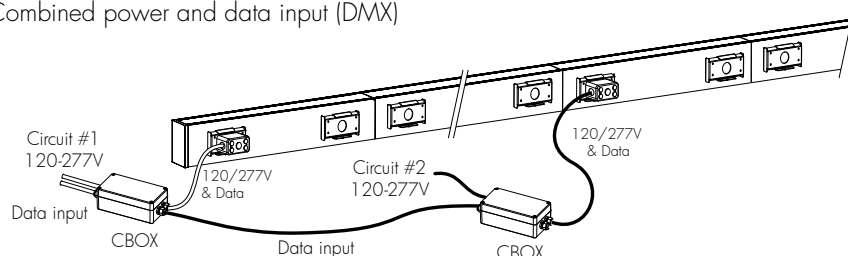
Continuous row, single feed
Combined power and data inputs (DMX)



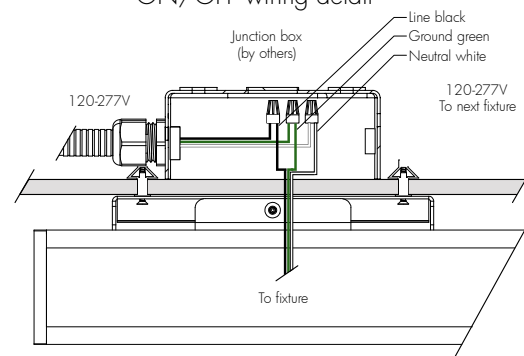
Continuous row, multiple feeds
ON/OFF, 0/10V, DALI, EcoSystem dimming
Combined power and data input



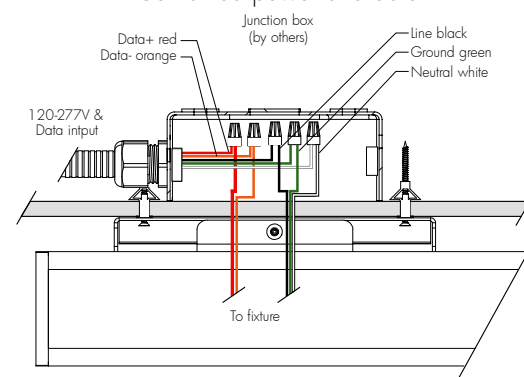
Continuous row, multiple feeds
Combined power and data input (DMX)



ON/OFF wiring detail



0/10V, DMX, DALI & EcoSystem wiring detail Combined power and data



⚠ WARNING

SEPARATION OF FIELD INSTALLED POWER
LIMITED CIRCUIT (DIMMING/DATA/CONTROL)
WIRING FROM THE BRANCH CIRCUIT
WIRING IN THE OUTLET BOX ARE TO BE MADE
IN ACCORDANCE WITH LOCAL AND/OR NATIONAL
ELECTRICAL INSTALLATION CODES.

Maximum run length by single circuit
7A maximum with 10ft fixture cord

Configuration/Voltage	120V	240V	277V
RO Regular output	116ft	232ft	272ft
HO High output	56ft	116ft	132ft
RGB	128ft	272ft	312ft

HOW TO ORDER

LLI2S	WM	I			iRO40K		WH
Housing	Mounting	Light Direction	Voltage	Length	Indirect Lighting Output & Color temperature	Control	Finish
1	2	3	4	5	6	7	8
1							
Housing: LLI2S - lumenline™ Surface, 2" wide					Indirect Lighting Output & Color temperature: iRO 27K - 2700K regular output 7W/ft iRO 30K - 3000K regular output 7W/ft iRO 35K - 3500K regular output 7W/ft iRO 40K - 4000K regular output 7W/ft iHO 27K - 2700K high output 14.25W/ft* iHO 30K - 3000K high output 14.25W/ft* iHO 35K - 3500K high output 14.25W/ft* iHO 40K - 4000K high output 14.25W/ft* iRGB - Additive red, green and blue indirect lighting 6W/ft N.B. iRGB options require DALI or DMX control specified in section 7.		
2							
Mounting: WM - Wall Mount					Control: NO - On/Off control LT - Lumentalk (available with white light only) (available for 2-8' lengths only) (1% minimum dimming value) DIM - 0-10V Dimming option (10% minimum dimming value) DMX 1FT - DMX Dimming option, resolution per foot (1% minimum dimming value) DMX 1FX - DMX Dimming option, resolution per fixture (1% minimum dimming value) DALI - DALI Dimming option (1% minimum dimming value) ES - Lutron® EcoSystem® Enabled Dimming (available with white light only) (available for 2-8' lengths only) (1% minimum dimming value)		
3							
Light Direction: I - Indirect lighting					Finish: WH - White SI - Silver CC - Custom (please specify RAL color)		
4							
Voltage: 120 - 120 volts 208 - 208 volts 220/240 - 220 to 240 volts 277 - 277 volts							
5							
Length: 1 - 12 11/16 inches (322mm) 2 - 24 7/16 inches (621mm) 3 - 36 1/4 inches (921mm) 4 - 48 1/16 inches (1221mm) 5 - 59 15/16 inches (1522mm) 6 - 71 3/4 inches (1822mm) 7 - 83 5/8 inches (2124mm) 8 - 95 7/16 inches (2424mm) C__ - Continuous run, specify in 1' increments.							

Bollards for light directed downwards

Post construction: One piece extruded aluminum with a one piece die-cast aluminum top housing and a base internally welded into an assembly. All aluminum used in the construction is marine grade and copper free.

Lamp enclosure: One piece die-cast aluminum top housing removable for relamping, secured by two captive stainless steel screws threaded into stainless steel inserts. Clear tempered safety glass. Reflector made from pure anodized aluminum. Fully gasketed using a molded silicone high temperature gasket. Fully shielded to comply with LEED Zones 1 and higher.

Electrical: 13W LED luminaire, 15.3 total system watts, -25°C start temperature. Integral 120V through 277V electronic LED driver, dimming available with reverse phase control (trailing edge) dimmers. The LED and driver are mounted on a removable plate for easy replacement. Standard LED color temperature is 5000K with a 65 CRI. Available in 3000K (85 CRI) and 4000K (85 CRI); add suffix K3 or K4 respectively to order.

Finish: Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

Anchor base: Heavy cast aluminum, slotted for precise alignment. Mounts to BEGA #895A anchorage kit. Bollards are secured to the post with one (1) stainless steel set screw.

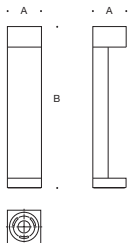
UL listed, suitable for wet locations. Protection class: IP65.

Luminaire Lumens: 729

Tested in accordance with LM-79-08

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

M



	Lamp	A	B	C	Anchorage
8657LED	13W LED	6%	21%	6%	895A



STICK MEDIA² SEAMLESS LED

**DELRAY
LIGHTING
INCORPORATED**

MEDIA² LED

TYPE: M **ORDER NUMBER:** 205

PROJECT: Special: 8x8

150G

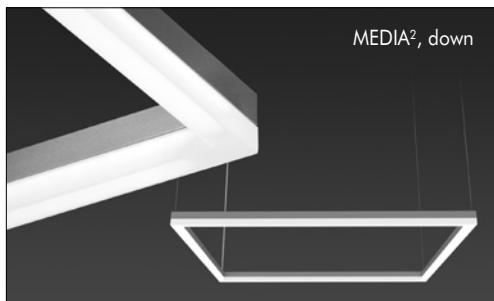
M2LD	Select	LOCW	BDMXMOD	Select
Model #	Size	LED	Options*	Other Option
M2LD—down	2x2	R—red	BDIM-RGB	SLRD
M2LS—side	2x3	B—blue	BDIM-W	
	2x4	RGB	BDMXMOD	
	3x3	LOWW—warm white*		
	3x4	LOCW—cool white*		
	4x4			

*See back page for details.

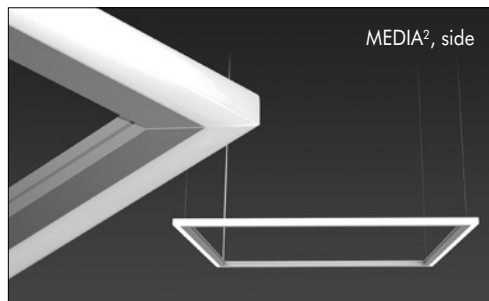
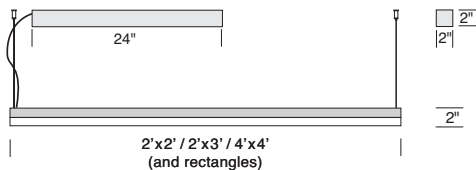
Traxon Light Drive* (order separately)

Please review mounting info before ordering.

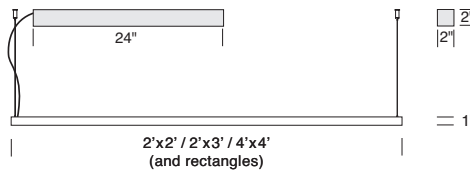
Qty BTRAXW (white) Qty BTRAXB (black)



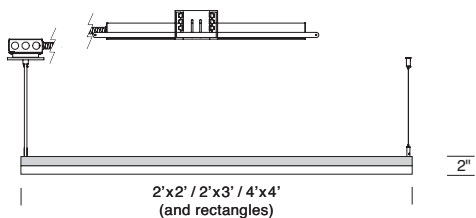
M2LD—Media Squared, Down, Pendant Mount



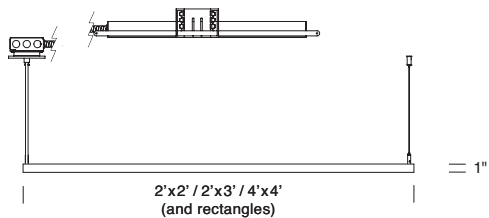
M2LS—Media Squared, Side, Pendant Mount



M2LD—Media Squared, Down, SLRD Mount



M2LS—Media Squared, Side, SLRD Mount



BURBANK,
CALIFORNIA,
91505
WWW.
DELRAY
LIGHTING.
COM

JUN 2013

4' X 4' LED

M2LD4X4LOCW

CP DISTRIBUTION

Pending

COEFFICIENTS

Pending

NOTES

M2LD4X4LOCW

4' x 4' Seamless LED
Total lumens: *pending*

WATTAGE

LO—Low Output, 24W

LOWW	35K/24W	6W per ft.
LOCW	35K/24W	6W per ft.

STICK MEDIA² CONSTRUCTION

GEOMETRIC PENDANT

- Media² is a stand alone 2', 3', or 4' square or rectangular pendant fixture. Each fixture requires its own power feed.
- Aluminum extrusion, with a matte anodized finish, mitred corners.
- Diffuser is extruded, frosted white acrylic, mitred corners.
- Suspended with field-adjustable aircraft cable, with push-button glider.
- 8' gray 18 AWG power cord.

- Standard driver, constant voltage, 100W/24V, 120/277V, 50/60 Hz Class 2, in a remote housing.
- Back plate has a 7/8" opening for direct conduit feed and is not intended for J-box mount.
- U.L. listed for dry locations.

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.
- Osram part no. OT96W/24V UNV 0-10V supplied.
- Use with 0-10V, purple/gray wire analog dimmers.

BDMXMOD

- 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)

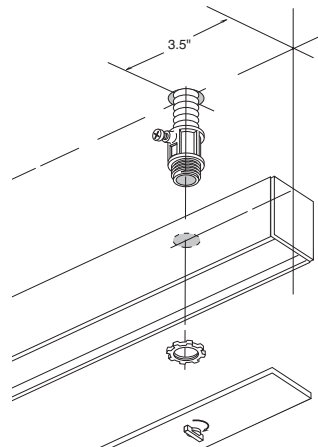
- Standalone, wall-mounted (12V power supply included) DMX controller for RGB LED that provides direct access to fixtures in two lighting zones.
- Tune color and brightness with the Light-Drive wheel.
- Two sequence modes enable continuous replay of all saved color settings, as well as a preset color-phase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

- Fully dimmable white mode button.
- See www.traxon-usa.com for details.



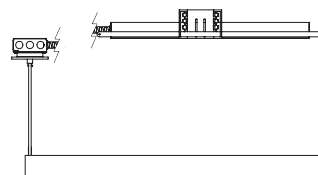
DRIVER/RAIL MOUNT INFO

Media² driver and rail housings are shipped with one opening for direct connection to conduit with a third party 1/2" fitting (as shown below). To locate input power elsewhere, an alternate 7/8" opening may be drilled at the job site anywhere along the top of the aluminum rail housing.



RECESSED LED DRIVER

Driver must be accessible after installation. Order **SLRD**.



Max. Wiring Distance (at full load)

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

VarioLED™ Flex VENUS W TV IP67

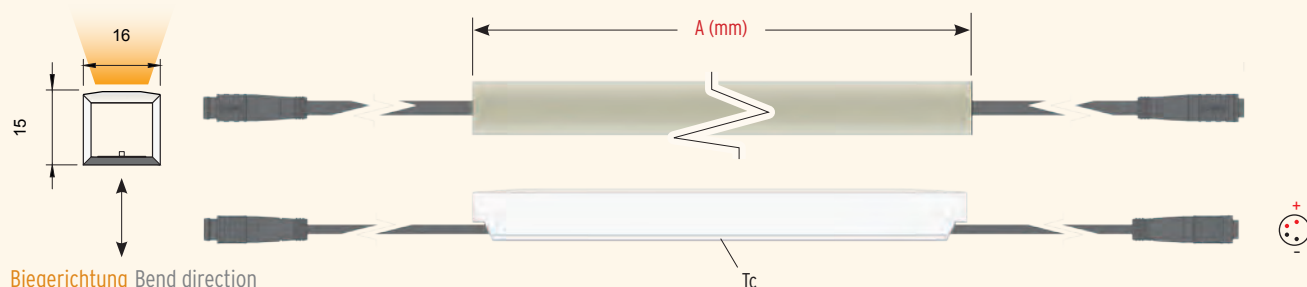
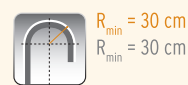


W822 2.400 K	W827 2.900 K	W830 3.300 K	W835 4.100 K	W840 4.500 K	W850 6.200 K
3	4	5	6	7	
10 Watt/meter					
360 lumen/meter (lm/m)					
Ra/CRI 85					
IP67					

Abmessungen & Längen Dimensions & available length

110 mm IP67 Steckverbinder (Buchse/Stecker) an den Enden

110 mm IP67 plug in connector (male/female) on both ends



Biegerichtung Bend direction

Toleranz +/- 5 mm Tolerance +/- 5 mm

Tc-Punkt: Rückseite des Moduls Tc-point: Rear side of module

$A = N \times 54,67 + 25$; $N = 1 \dots 135$; $A_{\min} = 1 \times 54,67 + 25 = 80$; $A_{\max} = 135 \times 54,67 + 25 = 7.405,5$

Bestellnummer Order Code: VarioLED Flex VENUS Wxxx/A TV IP67

Refer to Lighting
Schedule for
Different Lengths

Elektrische & Optische Betriebsdaten Electrical & optical data

Abmessungen Dimensions	A x 15 mm x 16 mm
Leistung Power	10 W/meter
Spannung Voltage (V)	24 Volt (23 V _{min} , 25 V _{max})
Temperatur Temperature	t _{c,min} = -25°C, t _{c,max} = +60°C
Lagertemp. Storage temp.	t _{min} = -25°C, t _{max} = +85°C
Außentemperatur Ambient temp.	t _{a,min} > -25°C, t _{a,max} = 45°C



Lebensdauer
Lifetime



LM 79 konform
LM 79 compliant



LM 80 konform
LM 80 compliant

VarioLED™ Flex VENUS White TV IP67	lumen/meter (lm/m)	Ra/CRI	Farbtemperatur/ Color Temperature (K)
W822	330	80	2.400
W827	345	85	2.900
W830	345	85	3.300
W835	353	85	4.100
W840	360	85	4.500
W850	360	85	6.200

Nähere Erläuterungen zu Änderungen, Grenzwerten und Schwankungen im Herstellungsprozess finden Sie im LED Linear™ Hauptkatalog, Seite 361.

For more details regarding catalogue changes, min and max data sheet values and production tolerances see the LED Linear™ main catalogue, page 361.

Ausschreibungstext Specification text

**VarioLED™ Flex VENUS White TV IP67**

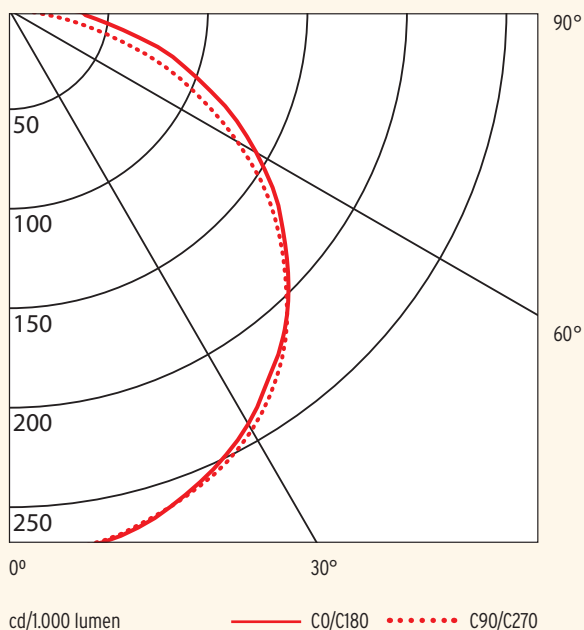
24 V, opal vergossene flexible LED Lichtlinie in IP67 für Architektur und Innenausbau. Mit selbstklebendem 3M Klebeband auf der Rückseite. Homogene lichtpunktfreie Ausleuchtung bei geringsten Bautiefen.

10 W/m, 360 lm/m. Querschnitt 15 mm x 16 mm. Länge bis zu 7,4 Meter. 110 mm IP67 Steckverbinder an beiden Enden. L80 von 50.000 h. Hohe Beständigkeit in rauen klimatischen Bedingungen. Salzwasser-, UV-, Chlor- und Lösungsmittelbeständig. Made in Germany.

VarioLED™ Flex VENUS White TV IP67

24 V, flexible fully opal encapsulated IP67 protected LED light line for architecture and interior design. 3M self adhesive tape on rear side. Homogeneous and dot free illumination in very low installation depths.

10 W/m, 360 lm/m. Cross section of 15 mm x 16 mm. Length up to 7.4 meter. 110 mm IP67 plug in connectors on both ends. L80 of 50,000 hrs. Easy installation and a rugged design for harsh environments (e. g. resistant to salt water, UV, chlorine and solvents). Made in Germany.

VarioLED™ Flex VENUS W840/244 TV IP67

UV geschützt
UV protected



Lösungsmittel
geschützt
Resistant to
solvents



Salzwasser
geschützt
Saltwater
resistant



Schutz beim
Eintauchen
Temporary immersion
protection

VarioLED™ Flex VENUS W TV basiert auf unserem Produkt VarioLED™ Flex ATON 2.

Durch die verwendete Venustechnologie ergibt sich eine Farbabweichung zum LED Flex Band, die jedoch keinen Einfluss auf die Gesamthomogenität hat.

VarioLED™ Flex VENUS W TV is based on our product VarioLED™ Flex ATON 2.

The encapsulation technology causes a color temperature drift compared to the flex tape color temperature. There is no effect on homogeneity.

Zubehör Accessories**erforderlich required**

Konverter
Power supply
unit

optional optional

Steuer-
protokoll
Power control
system



Profil VENUS TV
Contour VENUS TV



reddot design award
winner 2012

Client: _____
Project name: _____
Order #: _____
Type: _____ Qty: _____

FEATURES AND BENEFITS

Physical :

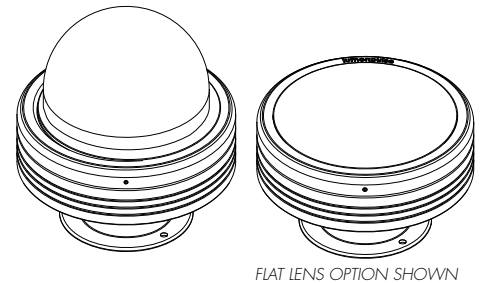
- low copper content machined aluminum housing
- Electro-statically applied polyester powder coat finish
- High impact UV protected polycarbonate lens
- Sealing gasket included
- Canopy or Wall Mount mounting options
- Flat lens option
- 1,54 kg / 3,41 lbs
- IP66
- Corrosion-resistant option for marine environments

Performance :

- 95 delivered lumens at full intensity
- 2,618 cd/m² @ 0°
- lumen maintenance 120,000 hrs [L70 @ 25°C]
- lumen measurements comply with LM - 79 - 08 standard
- Operating temperatures: -25° C to 50° C [-13F to 122F]

Electrical :

- 48V DC luminaire, remote driver & data supply available for 120-277V AC
- Power and data in 1 cable, 3ft / 1m cord (#18-5)
- 12 watts DC power (total consumption varies according to remote power supply efficiency)
- DMX 512 ready



Wiring detail

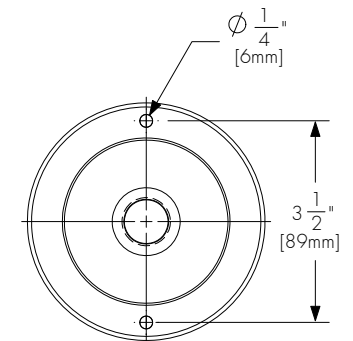
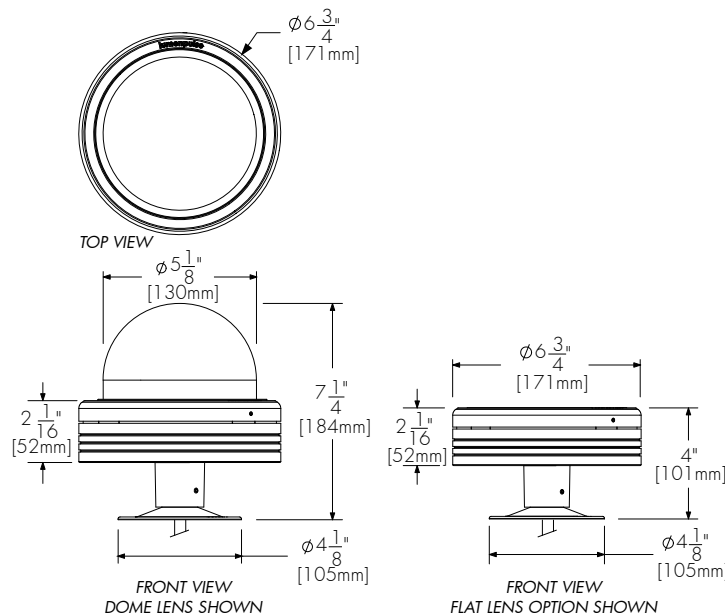
WIRE COLOR / USE

WHITE	POWER - 48V
GREEN	GROUND
BLACK	POWER + 48V
ORANGE	DATA -
RED	DATA +

CE Color Code

WIRE COLOR / USE

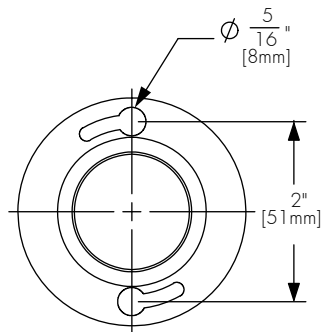
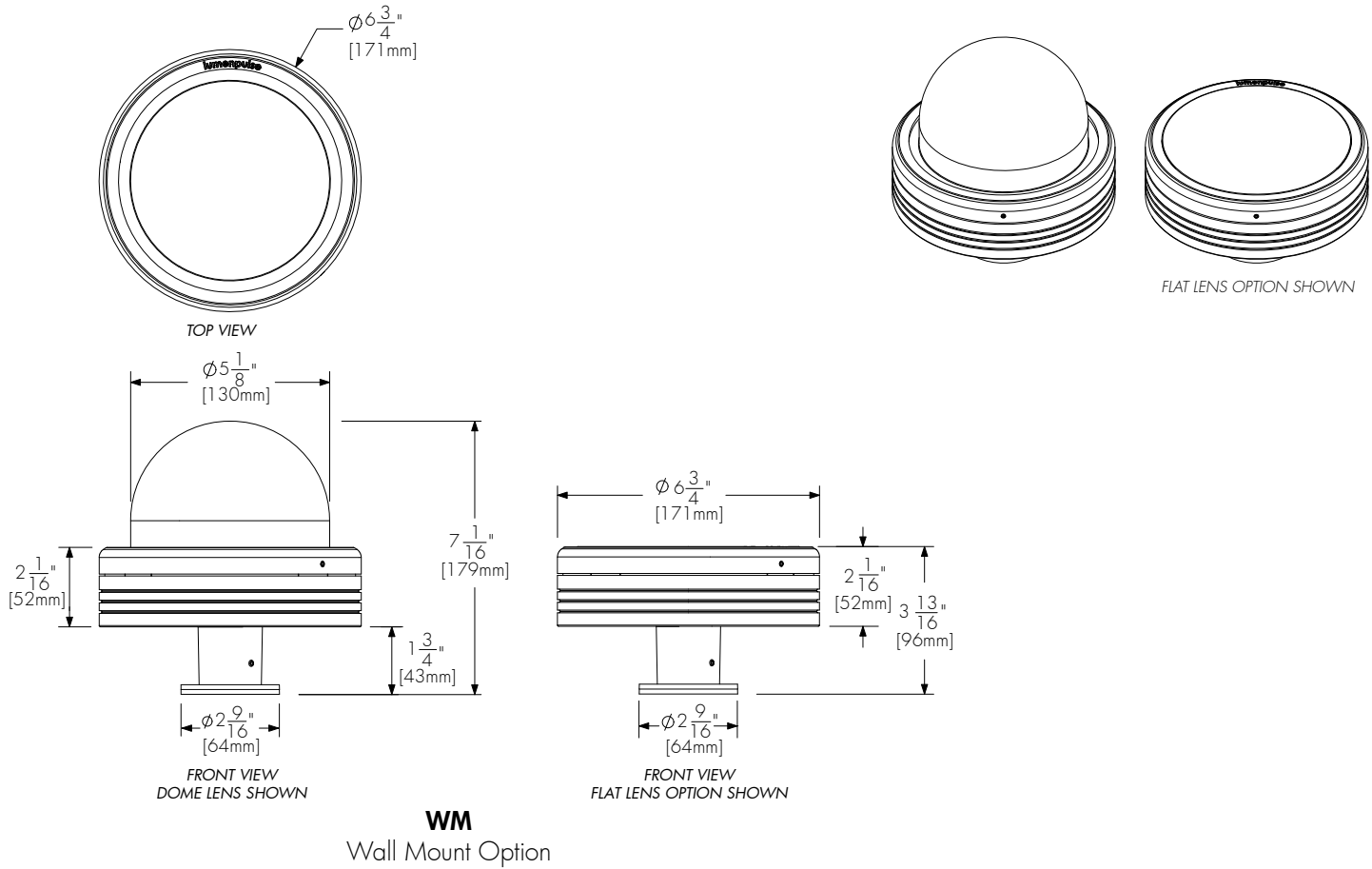
BLUE	POWER - 48V
YELLOW/GREEN	GROUND
BROWN	POWER + 48V
GREY	DATA -
BLACK	DATA +



5 year warranty

CN
Canopy Mounting

WALL MOUNT OPTION



Wall Mount Option
Mounting base
screw hole pattern

ACCESSORIES

Order separately

Control Systems:

- LTO** Lumentouch is a wall mount DMX 512 controller keypad
- LCU** Lumencue is a USB / mini SD DMX 512 controller
- LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

Exterior Remote Control Boxes

CBOX60-___-48V-___ Exterior power & data box, 60W load maximum
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures (48V DC & data), M20 provision holes with plugs.
Please specify input voltage and finish (SI - silver standard finish).
Refer to CBOX60 & CBOX100 specification sheet for details.

CBOX100-___-48V-___ Exterior power & data box, 100W load maximum
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures (48V DC & data), M20 provision holes with plugs.
Please specify input voltage and finish (SI - silver standard finish).
Refer to CBOX60 & CBOX100 specification sheet for details.

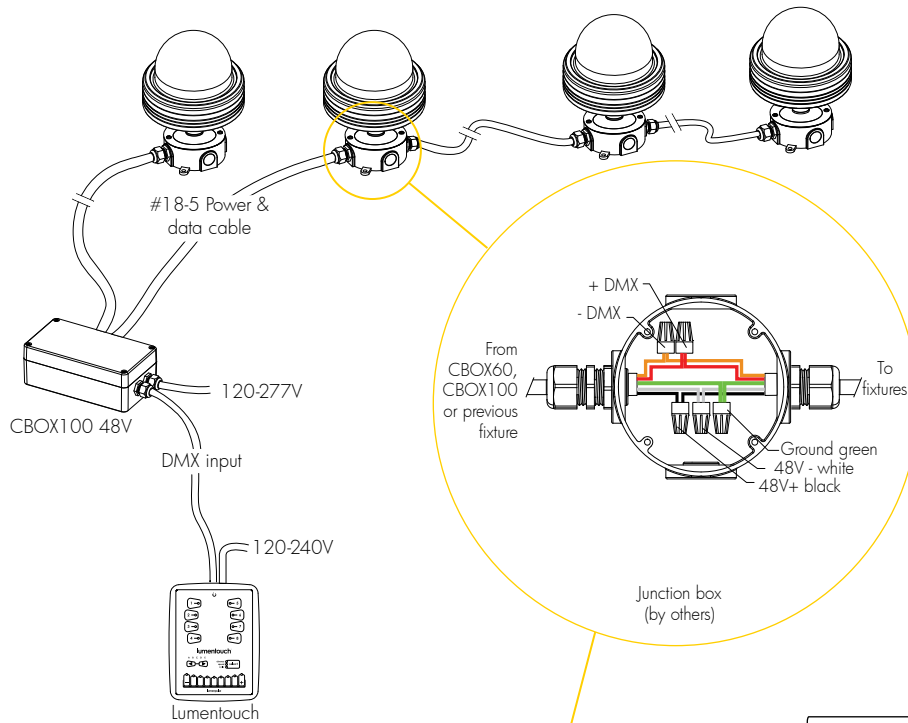
Interior Remote Control Boxes

iCBOX60-___-48V-___ Interior power & data box, 60W load maximum
(8X) 1/2" and (8X) 3/4" knockouts total.
Up to six outputs to fixtures (48V DC & data).
Please specify input voltage and finish.
Refer to iCBOX60 & iCBOX100 specification sheet for details.

iCBOX100-___-48V-___ Interior power & data box, 100W load maximum
(8X) 1/2" and (8X) 3/4" knockouts total.
Up to six outputs to fixtures (48V DC & data).
Please specify input voltage and finish.
Refer to iCBOX60 & iCBOX100 specification sheet for details.

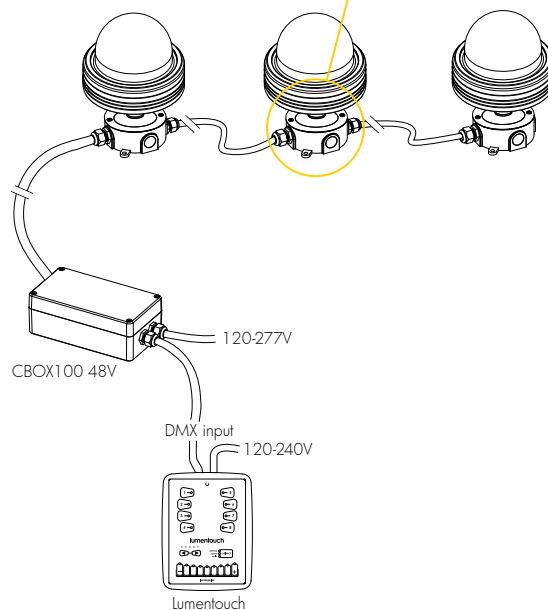
TYPICAL WIRING DIAGRAMS

Star Layout (DMX)



Maximum distance and quantity of fixtures per CBOX100:
7 lumendome medium 48V DC
(10' on center spacing) - 220' of cable maximum.

Daisy Chain Layout (DMX)



HOW TO ORDER

LMDM	48V	RGB	WH	WM	
Housing	Voltage	Colors and color temperatures	Finish	Mounting Option	Option
1	2	3	4	5	6
1					6
Housing:			Option:		
LMDM - Lumendome™ Medium			FTL - Flat Lens		
			CRC - Corrosion-resistant Coating		
2					
Voltage:					
*48V DC fixture. Refer to accessories on page 3 for control & power supply box options.					
3					
Colors and Color temperatures:					
RGB - Additive red, green and blue					
4					
Finish:					
SI - Silver SandText					
BK- Black SandText					
WH - White					
CC - Custom (please specify RAL color)					
5					
Mounting Option:					
Please specify one of the following:					
CN - Canopy cover mounting					
WM - Wall Mount option					

Client: _____
Project name: _____
Order #: _____
Type: _____ Qty: _____

FEATURES AND BENEFITS

Physical :

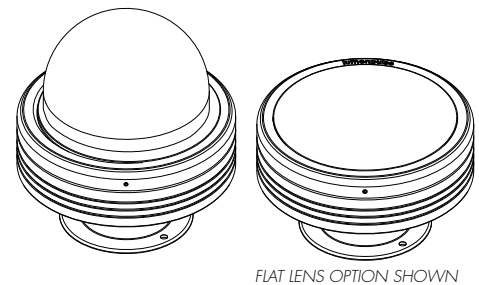
- low copper content machined aluminum housing
- Electro-statically applied polyester powder coat finish
- High impact UV protected polycarbonate lens
- Sealing gasket included
- Canopy or Wall Mount mounting options
- Flat lens option
- 1,54 kg / 3,41 lbs
- IP66
- Corrosion-resistant option for marine environments

Performance :

- 95 delivered lumens at full intensity
- 2,618 cd/m² @ 0°
- lumen maintenance 120,000 hrs [L70 @ 25°C]
- lumen measurements comply with LM - 79 - 08 standard
- Operating temperatures: -25° C to 50° C [-13F to 122F]

Electrical :

- 48V DC luminaire, remote driver & data supply available for 120-277V AC
- Power and data in 1 cable, 3ft / 1m cord (#18-5)
- 12 watts DC power (total consumption varies according to remote power supply efficiency)
- DMX 512 ready



Wiring detail

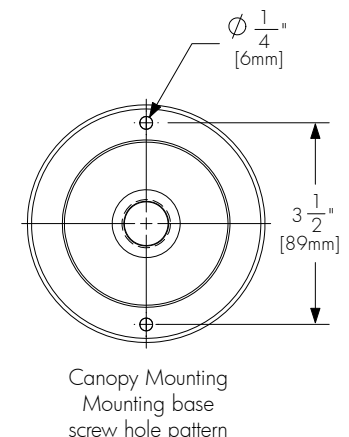
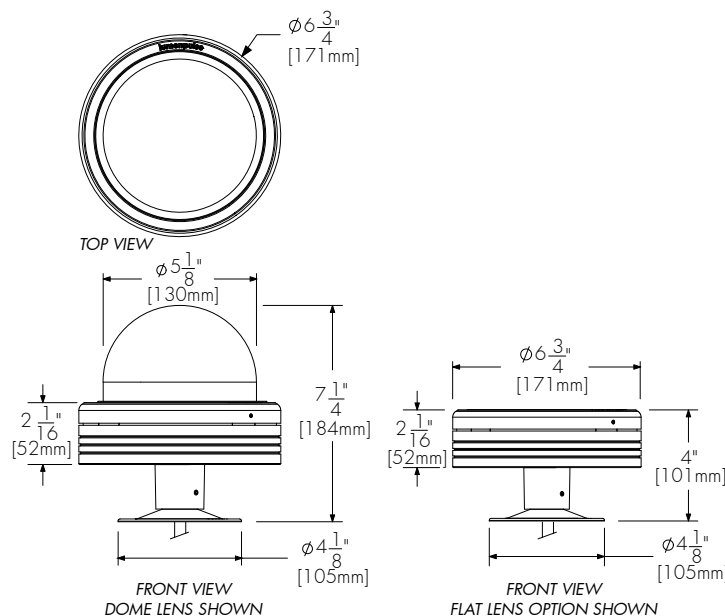
WIRE COLOR / USE

WHITE	POWER - 48V
GREEN	GROUND
BLACK	POWER + 48V
ORANGE	DATA -
RED	DATA +

CE Color Code

WIRE COLOR / USE

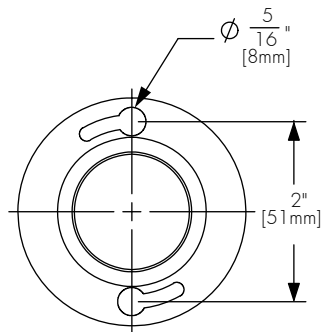
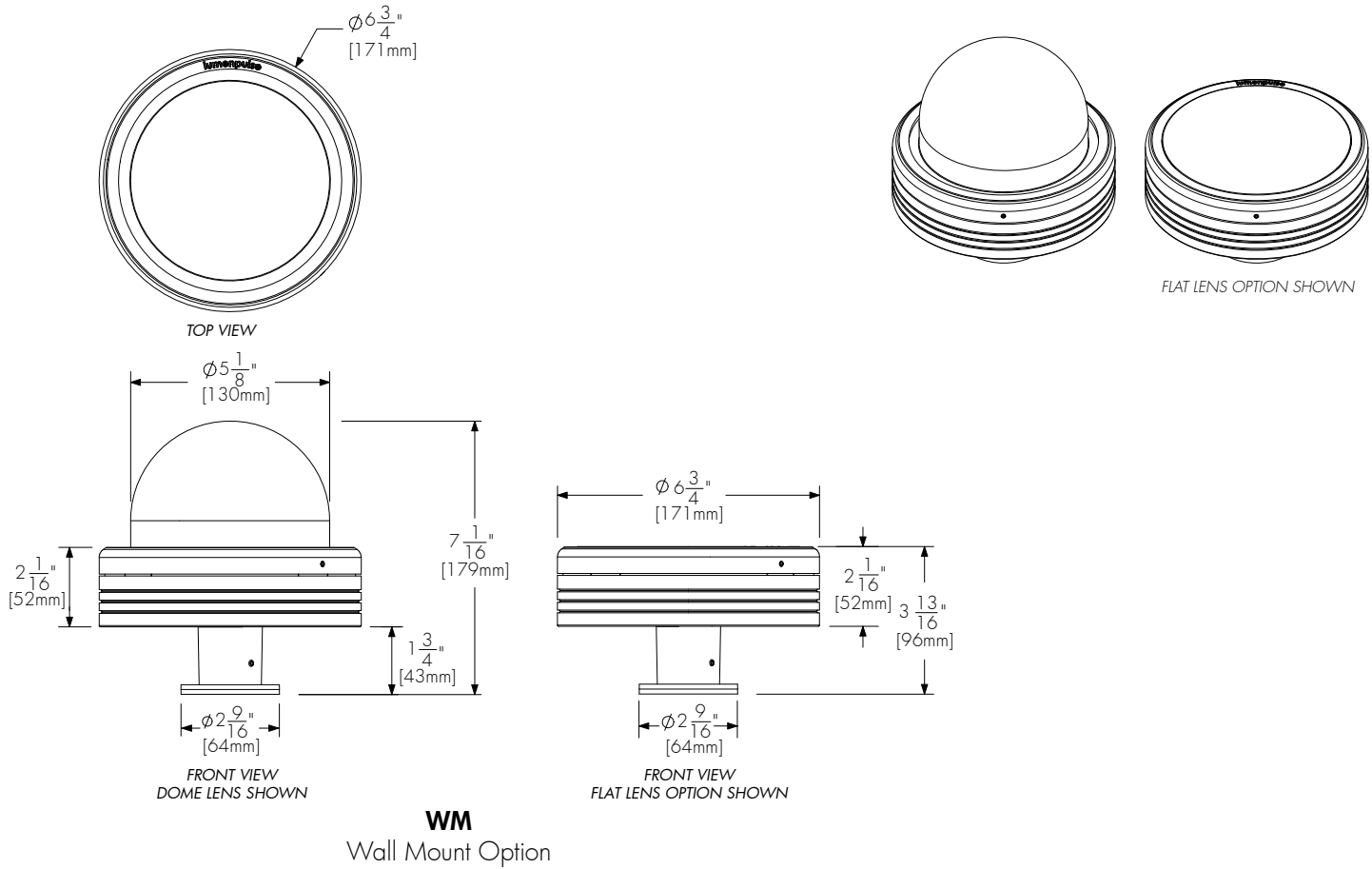
BLUE	POWER - 48V
YELLOW/GREEN	GROUND
BROWN	POWER + 48V
GREY	DATA -
BLACK	DATA +



5 year warranty

CN
Canopy Mounting

WALL MOUNT OPTION



Wall Mount Option
Mounting base
screw hole pattern

ACCESSORIES

Order separately

Control Systems:

- LTO** Lumentouch is a wall mount DMX 512 controller keypad
- LCU** Lumencue is a USB / mini SD DMX 512 controller
- LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.
- LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

Exterior Remote Control Boxes

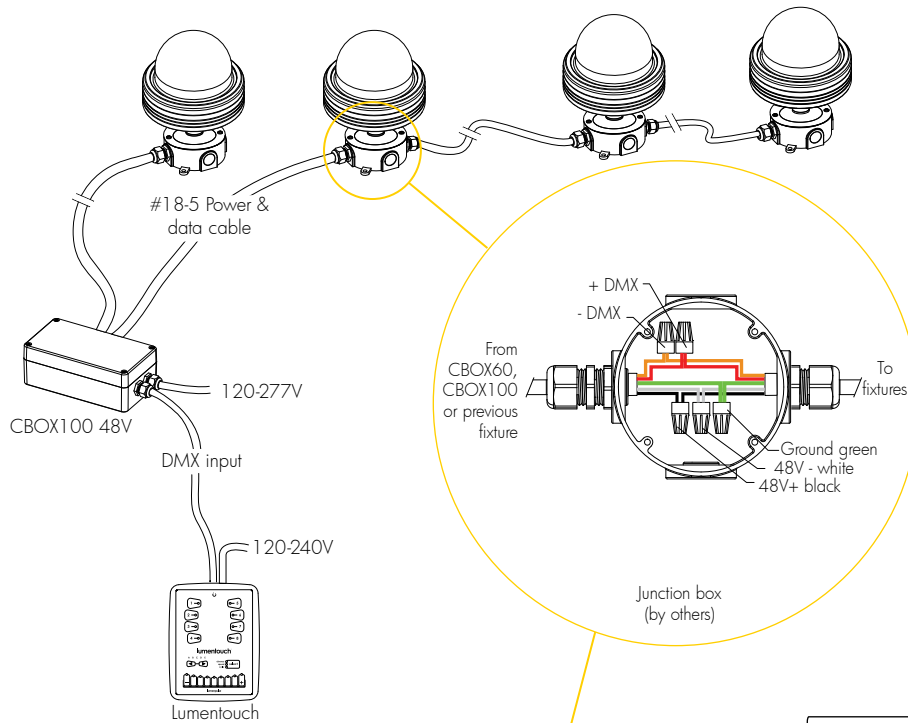
- CBOX60-___-48V-___** Exterior power & data box, 60W load maximum
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures (48V DC & data), M20 provision holes with plugs.
Please specify input voltage and finish (SI - silver standard finish).
Refer to CBOX60 & CBOX100 specification sheet for details.
- CBOX100-___-48V-___** Exterior power & data box, 100W load maximum
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures (48V DC & data), M20 provision holes with plugs.
Please specify input voltage and finish (SI - silver standard finish).
Refer to CBOX60 & CBOX100 specification sheet for details.

Interior Remote Control Boxes

- iCBOX60-___-48V-___** Interior power & data box, 60W load maximum
(8X) 1/2" and (8X) 3/4" knockouts total.
Up to six outputs to fixtures (48V DC & data).
Please specify input voltage and finish.
Refer to iCBOX60 & iCBOX100 specification sheet for details.
- iCBOX100-___-48V-___** Interior power & data box, 100W load maximum
(8X) 1/2" and (8X) 3/4" knockouts total.
Up to six outputs to fixtures (48V DC & data).
Please specify input voltage and finish.
Refer to iCBOX60 & iCBOX100 specification sheet for details.

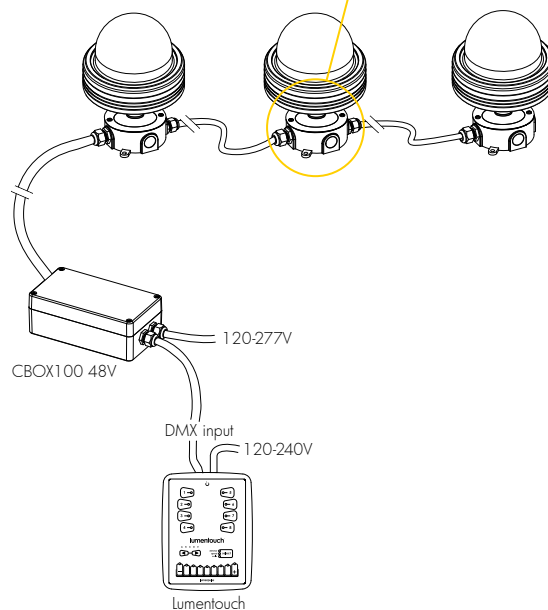
TYPICAL WIRING DIAGRAMS

Star Layout (DMX)



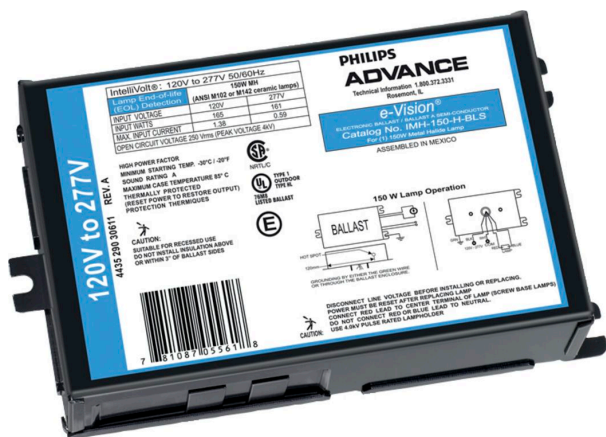
Maximum distance and quantity of fixtures per CBOX100:
7 lumendome medium 48V DC
(10' on center spacing) - 220' of cable maximum.

Daisy Chain Layout (DMX)



HOW TO ORDER

LMDM	48V	RGB	WH	WM	
Housing	Voltage	Colors and color temperatures	Finish	Mounting Option	Option
1	2	3	4	5	6
1					6
Housing: LMDM - Lumendome™ Medium			Option: FTL - Flat Lens CRC - Corrosion-resistant Coating		
2					
Voltage: *48V DC fixture. Refer to accessories on page 3 for control & power supply box options.					
3					
Colors and Color temperatures: RGB - Additive red, green and blue					
4					
Finish: SI - Silver SandText BK - Black SandText WH - White CC - Custom (please specify RAL color)					
5					
Mounting Option: Please specify one of the following: CN - Canopy cover mounting WM - Wall Mount option					



e-Vision Low Wattage 20-150W

E-VISION ELE MH BAL 150W M102/142 120-277V

Low frequency electronic HID ballasts such as the Philips Advance e-Vision line constantly measure and adjust the wattage, optimizing delivery of the ceramic lamps' superior color properties. This makes ceramic metal halide operated by e-Vision ballasts the premier choice for many applications previously illuminated by either tungsten halogen or incandescent sources, such as retail lighting.

Product data

• General Characteristics

Lamp Type	150W MH
Number of Lamps	1 piece
Input Voltage	120-277 V
Line Frequency	50/60 Hz
Ballast Type	Electronic HID
Base Model	IMH150HLF
Housing	H
Housing Dimensions	5.7" x 3.6" x 1.5"
Housing Material	Metal
Suitable for Outdoor use?	Yes
Lifetime 90% surv.@Tcaselife	50000 hr
Family Name	eVision

• Operating Characteristics

Ignition time	1200 s
Input Power Gear	165-161 W
Ballast factor	1 -
Power Factor	0.90
Lamp Current Crest Factor	1.8 -
Sound Rating	A
Max THD	15 %

• Wiring Characteristics

Color input terminals	No terminals
Color output terminals	No terminals
Connector type	No connector
Wire Striplength	0.50 mm
Control Wire Gauge	NA
Wire Gauge	18AWG

Wire Length by Color	All leads = 11"
Wire Type	Stranded
Allowed Wiring Config(Remote)	Yes
Allowed Wiring Config(Tandem)	No
Allowed Wiring Config(Through)	No

• System Chars on driver level

Rated Lamp Watts	150
------------------	-----

• Temperature Characteristics

T-case maximum	85 C
----------------	------

• Product Dimensions

Length A1	6.3 in
Length A2	5.7 in
Length A3	6.0 in
Width B1	3.6 in
Height C1	1.5 in
Length A4	2.0 in
Width B2	2.9 in

• Approval & Application Chars

EMC Immunity	FCC Non-Consumer
CE marking	No
ENEC certificate	No
VDE certificate	No
UL Listed	Yes
CSA certificate	Yes
CEC Listing	No

PHILIPS

e-Vision Low Wattage 20-150W

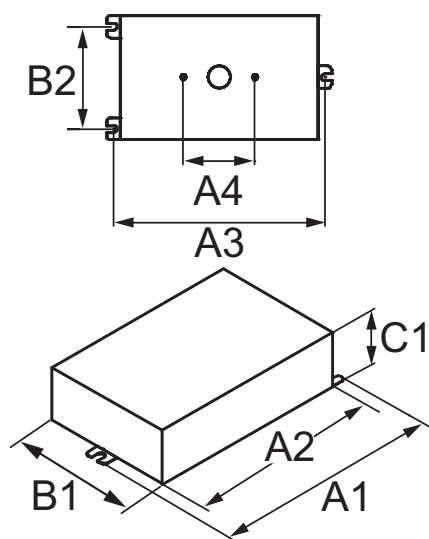
CSA Recognized	No
cUL certificate	No
EISA	No
FIDE Certificate	No
NOM certificate	Yes
RoHS Compliant	Yes
SASO Certificate	No
UL Recognized	No
ANSI Code	C102/M102, C142/M142

Full product name	ELE MH BAL 150W M102/142 120-277V
Short product name	ELE MH BAL 150W M102/142 120-277V
Pieces per Sku	1
Skus/Case	6
Bar code on pack	781087055595
Bar code on case	50781087055606
Logistics code(s)	913710295902
eop_net_weight_pp	0.885 kg

• Product Data

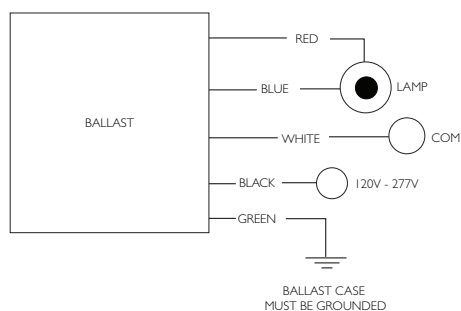
Product number	IMH150HLFM
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Dimensional drawing



E-VISION ELE MH BAL 150W M102/142 120-277V

Product	A1 (Norm)	A2 (Norm)	A3 (Norm)	A4 (Norm)	A5 (Norm)	B1 (Norm)	B2 (Norm)	C1 (Norm)
ELE MH BAL 150W M102/142 120-277V	6.3	5.7	6.0	2.0	-	3.6	2.9	1.5



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www.philips.com/lighting

2014, February 1
data subject to change

MasterColor Ceramic Metal Halide Tubular Single-Ended T6 Lamps (39 I, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

39	T6	G12	22328-9	★	CDM35/T6/830	C130/E	12	G, Clear, FadeBlock	2 ⁷ / ₃₂	3 ¹⁵ / ₁₆	12,000	3300	2600	81	3000
			20886-8	★	CDM35/T6/842	C130/E	12	G, Clear, FadeBlock	2 ⁷ / ₃₂	3 ¹⁵ / ₁₆	12,000	3300	2800	84	4200
70	T6	G12	22337-0	★	CDM70/T6/830	C139/E	12	G, Clear, FadeBlock	2 ⁷ / ₃₂	3 ¹⁵ / ₁₆	12,000	6600	4950	81	3000
			28137-8	★	CDM70/T6/942	C139/E	12	G, Clear, FadeBlock	2 ⁷ / ₃₂	3 ¹⁵ / ₁₆	12,000	6600	4620	92	4200
150	T6	G12	23272-8	★	CDM150/T6/830	C142/E	12	G, Clear, FadeBlock, also ANSI M102	2 ⁷ / ₃₂	4 ¹ / ₃₂	12,000	14,000	9800	85	3000
			37369-6	★	CDM150/T6/942	C142/E	12	G, Clear, FadeBlock, also ANSI M102	2 ⁷ / ₃₂	4 ¹ / ₃₂	12,000	12,700	8900	96	4200

Client: _____
Project name: _____
Order #: _____
Type: _____ Qty: _____

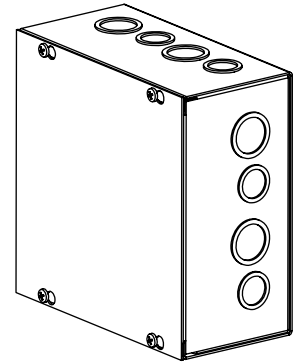
FEATURES AND BENEFITS

Physical :

- Steel enclosure and cover, 16 gauge
- Epoxy textured grey powder coat finish inside and out
- Data input, 1/2" NPT provision hole
- Power input, 1/2" NPT provision hole
- Up to six outputs, 1/2" NPT provision holes
- Mounting holes on back
- Indoor applications only
- Operating temperatures: -25°C to 50°C [-13F to 122F]
- iCBOX60W: 2.70 kg / 5.90 lbs
- iCBOX100W: 3.65 kg / 8.00 lbs

Electrical :

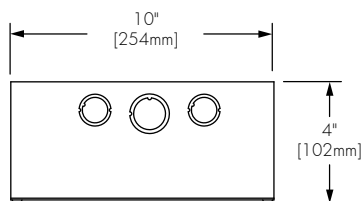
- 120 to 277V input
- 48V DC output
- 60W and 100W available
- Grounding screws included



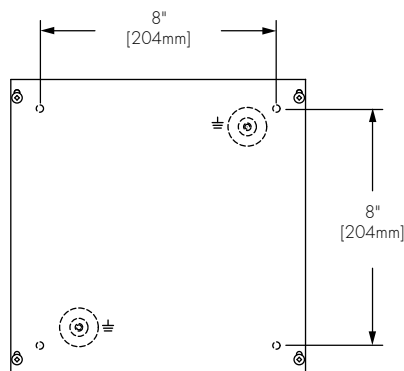
* Strain relief connectors and cables by others.

Related Products

LUMENDOME NANO WHITE, DMX DIMMING
LUMENDOME NANO COLOR CHANGING
LUMENDOME SMALL WHITE, DMX DIMMING
LUMENDOME SMALL COLOR CHANGING
LUMENDOME MEDIUM WHITE, DMX DIMMING
LUMENDOME MEDIUM COLOR CHANGING

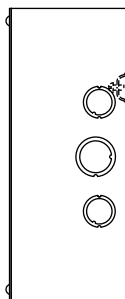


FRONT

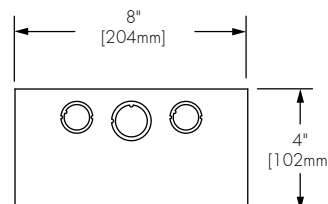


TOP

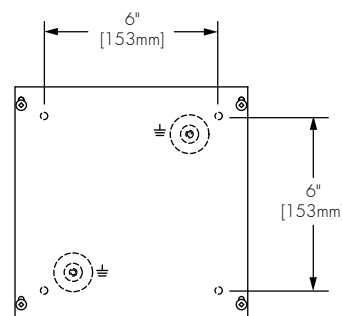
iCBOX100W DIMENSIONS
5 year warranty



RIGHT

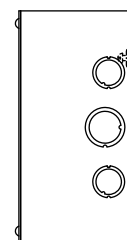


FRONT



TOP

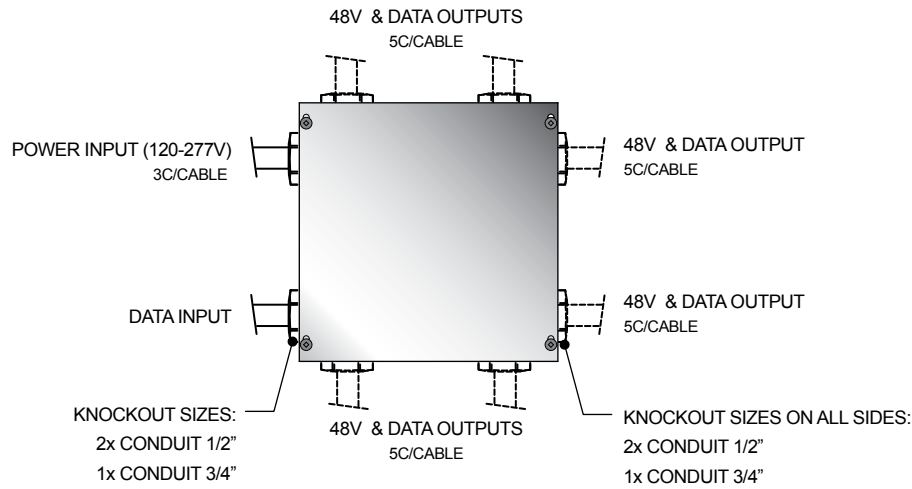
iCBOX60W DIMENSIONS



RIGHT

iCBOX60 & iCBOX100

*Strain relief connectors and cables by others.

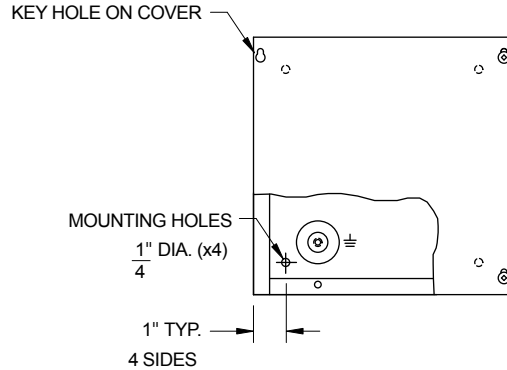


OUTPUT QUANTITY DEPENDS
ON PROJECT LAYOUT.

UP TO 6 OUTPUTS TO FIXTURES.

ADD UP ALL FIXTURE RUN
LOADS AND BE SURE THEY DO
NOT EXCEED THE
CAPACITY OF THE iCBOX.

MOUNTING



HOW TO ORDER

iCBOX	277	48V	GT
Housing	Input Voltage	Output Voltage	Finish
1	2	3	4

1

Housing:

iCBOX60 - Interior DMX 512 power & data box 60W
2 separate inputs for line voltage & data
Up to (6) output(s) for low voltage power & data combined

iCBOX100 - Interior DMX 512 power & data box 100W
2 separate inputs for line voltage & data
Up to (6) output(s) for low voltage power & data combined

2

Input Voltage:

120 - 120 volts

208 - 208 volts

220/240 - 220 to 240 volts

277 - 277 volts

3

Output Voltage :

48V - 48 volts DC

4

Finish:

GT - Standard grey polyester - epoxy textured

CC - Custom (please specify RAL color)

Appendix D

TRACE Export Data (Mechanical Breadth)

Energy Cost Budget / PRM Summary

By ACADEMIC

Project Name:	Date: April 04, 2014
City:	Weather Data: Syracuse, New York

Note: The percentage displayed for the "Proposed/ Base %" column of the base case is actually the percentage of the total energy consumption.

* Denotes the base alternative for the ECB study.

		* Alt-1			Alt-2		
		Energy 10 ⁶ Btu/yr	Proposed / Base %	Peak kBtu/h	Energy 10 ⁶ Btu/yr	Proposed / Base %	Peak kBtu/h
Lighting - Conditioned	Electricity	507.7	4	58	507.7	100	58
Space Heating	Electricity	102.7	1	19	101.6	99	19
	Gas	10,774.6	92	3,816	10,662.9	99	3,792
Space Cooling	Electricity	253.9	2	546	247.2	97	541
Heat Rejection	Electricity	31.3	0	60	30.3	97	59
Total Building Consumption		11,670.2			11,549.7		

		* Alt-1		Alt-2	
Total	Number of hours heating load not met	0		0	
	Number of hours cooling load not met	0		0	

		* Alt-1		Alt-2	
		Energy 10 ⁶ Btu/yr	Cost/yr \$/yr	Energy 10 ⁶ Btu/yr	Cost/yr \$/yr
Electricity		895.6	6,686	886.8	6,609
Gas		10,774.6	38,997	10,662.9	38,562
Total		11,670	45,684	11,550	45,171

ENERGY CONSUMPTION SUMMARY

By ACADEMIC

	Elect Cons. (kWh)	Gas Cons. (kBtu)	% of Total Building Energy	Total Building Energy (kBtu/yr)	Total Source Energy* (kBtu/yr)
Alternative 1					
Primary heating					
Primary heating		10,774,589	92.3 %	10,774,589	11,341,673
Other Htg Accessories	30,093		0.9 %	102,708	308,155
Heating Subtotal	30,093	10,774,589	93.2 %	10,877,297	11,649,828
Primary cooling					
Cooling Compressor	74,236		2.2 %	253,369	760,183
Tower/Cond Fans	9,179		0.3 %	31,327	93,989
Condenser Pump			0.0 %	0	0
Other Clg Accessories	144		0.0 %	493	1,479
Cooling Subtotal....	83,560		2.4 %	285,189	855,651
Auxiliary					
Supply Fans			0.0 %	0	0
Pumps			0.0 %	0	0
Stand-alone Base Utilities			0.0 %	0	0
Aux Subtotal....			0.0 %	0	0
Lighting					
Lighting	148,755		4.4 %	507,702	1,523,258
Receptacle					
Receptacles			0.0 %	0	0
Cogeneration					
Cogeneration			0.0 %	0	0
Totals					
Totals**	262,408	10,774,589	100.0 %	11,670,187	14,028,737

* Note: Resource Utilization factors are included in the Total Source Energy value.

** Note: This report can display a maximum of 7 utilities. If additional utilities are used, they will be included in the total.

Project Name:
Dataset Name: Thesis.trc

TRACE® 700 v6.3 calculated at 09:17 PM on 04/04/2014
Alternative - 1 Energy Consumption Summary report page 1

ENERGY CONSUMPTION SUMMARY

By ACADEMIC

	Elect Cons. (kWh)	Gas Cons. (kBtu)	% of Total Building Energy	Total Building Energy (kBtu/yr)	Total Source Energy* (kBtu/yr)
Alternative 2					
Primary heating					
Primary heating		10,662,873	92.3 %	10,662,873	11,224,077
Other Htg Accessories	29,755		0.9 %	101,552	304,688
Heating Subtotal	29,755	10,662,873	93.2 %	10,764,425	11,528,765
Primary cooling					
Cooling Compressor	72,293		2.1 %	246,738	740,287
Tower/Cond Fans	8,886		0.3 %	30,328	90,993
Condenser Pump			0.0 %	0	0
Other Clg Accessories	141		0.0 %	482	1,447
Cooling Subtotal....	81,321		2.4 %	277,548	832,727
Auxiliary					
Supply Fans			0.0 %	0	0
Pumps			0.0 %	0	0
Stand-alone Base Utilities			0.0 %	0	0
Aux Subtotal....			0.0 %	0	0
Lighting					
Lighting	148,755		4.4 %	507,702	1,523,258
Receptacle					
Receptacles			0.0 %	0	0
Cogeneration					
Cogeneration			0.0 %	0	0
Totals					
Totals**	259,831	10,662,873	100.0 %	11,549,675	13,884,749

* Note: Resource Utilization factors are included in the Total Source Energy value.

** Note: This report can display a maximum of 7 utilities. If additional utilities are used, they will be included in the total.

Project Name:
Dataset Name: Thesis.trc

TRACE® 700 v6.3 calculated at 09:17 PM on 04/04/2014
Alternative - 2 Energy Consumption Summary report page 1