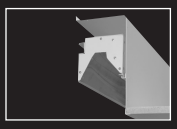
# APPENDIX B | LIGHTING FIXTURE CUTSHEETS

# Mini-Grazer™

**FLUORESCENT**

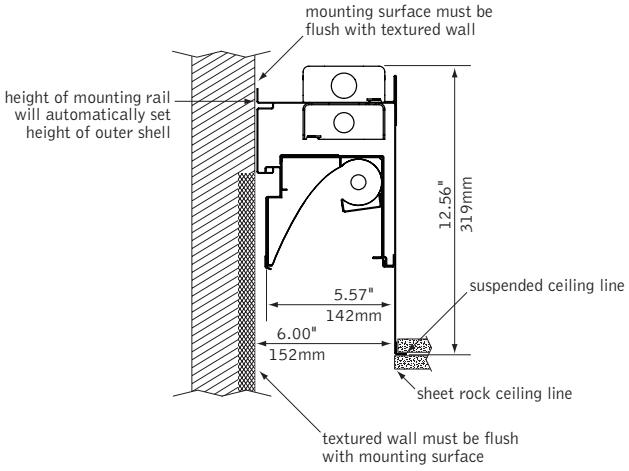
FOCAL POINT®



open optic

baffle

## DIMENSIONAL DATA




## FEATURES

High performance, T5 or T5HO Fluorescent Wall Grazer.

Nautilus optic designed to highlight textured walls and ceilings evenly from ceiling to floor.

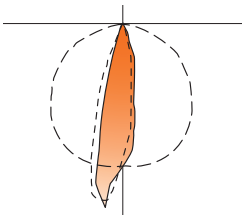
Swing down lamp tray allows for easy lamp accessibility.

Housing creates 6" architectural slot.

Great energy solution that replaces multiple MR16 or PAR lamps commonly used for grazing applications.

Housing designed for drywall or grid ceilings.

## PERFORMANCE



1-lamp T5HO

**37% Efficient**

**3734 cd @ 5˚**

### PRODUCT OVERVIEW

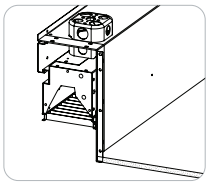
| | |
|---|---|
| Lumen Output: | 919-1864lm |
| Wattage: | 33-63W |
| Lamping: | T5, T5HO |

Visit focalpointlights.com for complete photometric data.

fixture: project:

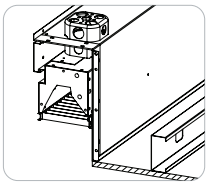
## MOUNTING INFORMATION

### Grid



Acoustical tile may rest on flange of luminaire.

### Drywall

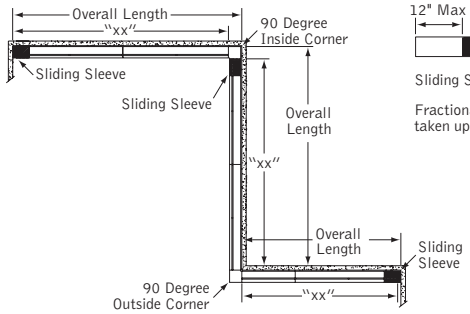


Mount drywall under luminaire and support to ceiling structure.

NOTE: Add drywall thickness to overall height of luminaire.

NOTE: Luminaire must be installed prior to ceiling.

### typical run layout




### sliding sleeves




Fractional Dimensions up to 12" are taken up by the use of a sliding sleeve.

Luminaires must be installed prior to ceiling.

Start run from corner with any standard luminaire. Corner to corner runs end with a sliding sleeve.

## SPECIFICATIONS

### Construction

20 Ga. steel housing. 20 Ga. internal bulkheads. 20 Ga. steel rough–in housings are provided to create wall to wall slot. 20 Ga. steel sliding sleeve. Optional baffle (.650"H x .800" frequency) provides 50° cutoff to lamp and held captive with torsion springs. Luminaires are available in 3' and 4' lengths. 3' unit weight: 24 lbs., 4' unit weight: 26 lbs.

### Optic

CNC roll-formed specular .016" thick aluminum.

### Electrical

Electronic ballasts are thermally protected and have a Class "P" rating. Consult factory for dimming specifications and availability.

### Labels

UL and cUL listed.

### Finish

Polyester powder coat applied over a 5-stage pre–treatment.

## ORDERING

| | | |
|---|---|---|
| **Luminaire Series** | | **FMG** |
| Mini-Grazer | FMG | |
| **Shielding** | | |
| No Shielding, Open Optic | NS | |
| Baffle, White | BB | |
| **Lamping** | | |
| One Lamp T5 | 1T5 | |
| One Lamp T5HO | 1T5HO | |
| **Circuit** | | **1C** |
| Single Circuit | 1C | |
| **Voltage** | | |
| 120 Volt | 120 | |
| 277 Volt | 277 | |
| 347 Volt | 347 | |
| **Ballast** | | |
| Electronic Dimming Ballast* | D | |
| Electronic Program Start <10% THD | S | |
| **Factory Options** | | |
| Air Return | AR | |
| Chicago Plenum | CP | |
| Emergency Battery Pack* | EM | |
| HLR/GLR Fuse | FU | |
| Include 3000K Lamp* | L830 | |
| Include 3500K Lamp* | L835 | |
| Include 4100K Lamp* | L841 | |
| 12" Sliding Sleeve | SS | |
| **Finish** | | **WH** |
| Matte White Housing | WH | |
| **Luminaire Length** | | |
| Designate overall run length dimension (light modules provided in 3' & 4' lengths) | XX' | |
| **Corner Options** | | |
| 90–degree Inside Corner | FMG-IC90 | |
| 90–degree Outside Corner | FMG-OC90 | |

NOTE: Not intended for drywall surfaces unless a Level 5 finish is specified.



*For more information visit focalpointlights.com/reference or consult factory.

# Mini-Grazer™

**FLUORESCENT**

**FGM3-NS-1T5HO-UNV-S-WH-4'**

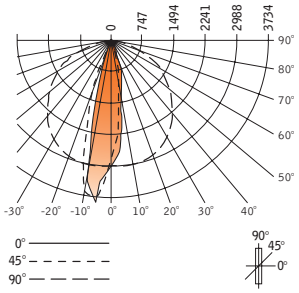
Filename:

Test #: 14016.0

Lumens: 1864lm

Efficiency 37%

## CANDELPOWER DISTRIBUTION




| Vertical Angle | Horizontal Angle 0° | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|---|---|---|---|---|---|---|
| 0° | | | | | | |
| 5° | | | | | | |
| 15° | | | | | | |
| 25° | | | | | | |
| 35° | | | | | | |
| 45° | | | | | | |
| 55° | | | | | | |
| 65° | | | | | | |
| 75° | | | | | | |
| 85° | | | | | | |
| 90° | | | | | | |
| 95° | | | | | | |
| 105° | | | | | | |
| 115° | | | | | | |
| 125° | | | | | | |
| 135° | | | | | | |
| 145° | | | | | | |
| 155° | | | | | | |
| 165° | | | | | | |
| 175° | | | | | | |
| 180° | | | | | | |

## LUMEN SUMMARY

| | Zone | Lumens | % Lamp | % Fixture |
|---|---|---|---|---|
| | 0-30° | 1177 | 23.5 | 63.2 |
| | 0-40° | 1478 | 29.6 | 79.3 |
| | 0-60° | 1813 | 36.3 | 97.2 |
| | 0-90° | 1864 | 37.3 | 100 |
| Total Luminaire | 0-180° | **1864** | **37.3** | **100** |

## CO-EFFICIENTS OF UTILIZATION

| Floor | | 20 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling | | 80 | | | | 70 | | 50 | | 30 | | 10 | 00 |
| Wall | | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 00 |
| RCR | 0 | 44 | 44 | 44 | 44 | 43 | 43 | 41 | 41 | 40 | 40 | 38 | 38 | 37 |
| | 1 | 42 | 41 | 40 | 39 | 10 | 39 | 39 | 37 | 37 | 36 | 36 | 35 | 35 |
| | 2 | 40 | 38 | 36 | 35 | 37 | 35 | 36 | 34 | 35 | 33 | 34 | 32 | 32 |
| | 3 | 38 | 34 | 33 | 32 | 35 | 31 | 34 | 31 | 33 | 30 | 32 | 30 | 29 |
| | 4 | 36 | 33 | 30 | 29 | 32 | 29 | 31 | 28 | 31 | 28 | 30 | 28 | 27 |
| | 5 | 34 | 30 | 8 | 26 | 30 | 26 | 29 | 26 | 29 | 26 | 28 | 26 | 25 |
| | 6 | 32 | 28 | 26 | 24 | 28 | 24 | 28 | 24 | 27 | 24 | 27 | 24 | 23 |
| | 7 | 31 | 27 | 24 | 23 | 27 | 23 | 26 | 22 | 26 | 22 | 25 | 22 | 22 |
| | 8 | 29 | 25 | 23 | 21 | 25 | 21 | 25 | 21 | 24 | 21 | 24 | 21 | 20 |
| | 9 | 28 | 24 | 22 | 20 | 24 | 20 | 23 | 20 | 23 | 20 | 23 | 20 | 19 |
| | 10 | 27 | 23 | 20 | 19 | 23 | 19 | 22 | 19 | 22 | 19 | 22 | 19 | 18 |

Numbers indicate percentage values of reflectivity.

Go to www.focalpointlights.com for additional photometric data.

note: Photometric testing performed in an independent lab with standard lamps and ballasts. Lamp and ballast type and configuration will affect photometric performance.

# mini-grazer™

FOCAL POINT®

## features

High performance, T5 or T5HO Fluorescent Wall Grazer.

Nautilus optic designed to highlight textured walls and ceilings evenly from ceiling to floor.

Swing down lamp tray allows for easy lamp accessibility.

Housing creates 6" architectural slot.

Great energy solution that replaces multiple MR16 or PAR lamps commonly used for grazing applications.

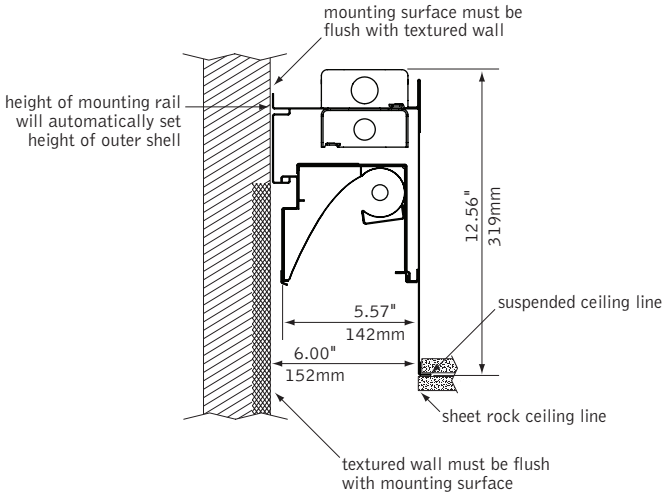
Housing designed for drywall or grid ceilings.

### shielding options

open optic

baffle

## dimensional data




## performance

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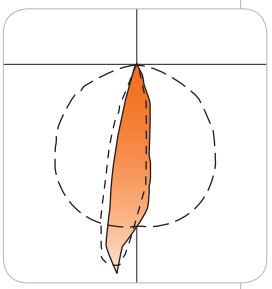

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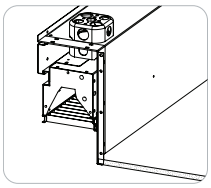
april 2009 A

## mounting information

### Grid



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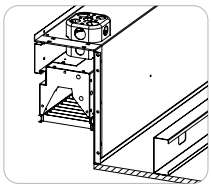

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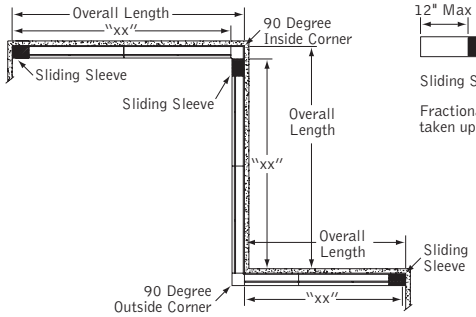


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| Mini-Grazer | FMG | |
| **shielding** | | |
| No Shielding, Open Optic | NS | |
| Baffle, White | BB | |
| **lamping** | | |
| One Lamp T5 | 1T5 | |
| One Lamp T5HO | 1T5HO | |
| **circuits** | | 1C |
| Single Circuit | 1C | |
| **voltage** | | |
| 120 Volt | 120 | |
| 277 Volt | 277 | |
| 347 Volt | 347 | |
| **ballast** | | |
| Electronic Dimming Ballast* | D | |
| Electronic Program Start <10% THD | S | |
| **factory options** | | |
| Air Return | AR | |
| Chicago Plenum | CP | |
| Emergency Circuit* | EC | |
| Emergency Battery Pack* | EM | |
| HLR/GLR Fuse | FU | |
| Include 3000K Lamp | L830 | |
| Include 3500K Lamp | L835 | |
| Include 4100K Lamp | L841 | |
| 12" Sliding Sleeve | SS | |
| **finish** | | WH |
| Matte White Housing | WH | |
| **luminaire length** | | |
| Designate overall run length dimension (light modules provided in 3' & 4' lengths) | XX' | |
| **corner options** | | |
| 90–degree Inside Corner | FMG-IC90 | |
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NOTE: Not intended for drywall surfaces unless a Level 5 finish is specified.

* for more information see Reference section.

Focal Point LLC | 4141 S. Pulaski Rd, Chicago, IL 60632 | T: 773.247.9494 | F: 773.247.8484 | info@focalpointlights.com | www.focalpointlights.com.

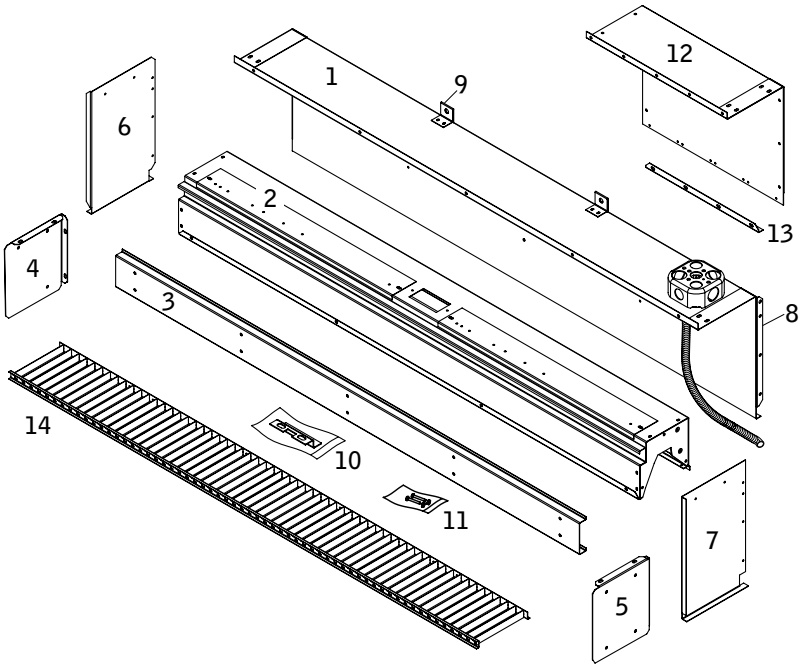
# mini-grazer™

FMG

FOCAL POINT

**⚠ ROUGH-IN SHELL MUST BE INSTALLED PRIOR TO CEILING ⚠**

## FOCAL POINT PARTS




## KEY

ATTENTION

GLOVES REQUIRED

POWER OFF

POWER ON

## PARTS LIST

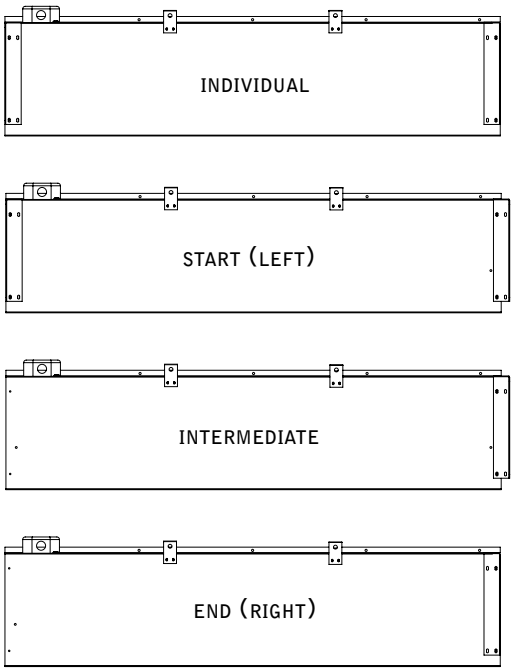
1 ROUGH-IN SHELL
2 LIGHT MODULE
3 WALL RAIL
4 FINISH END, RIGHT
5 FINISH END, LEFT
6 FLANGE END, RIGHT
7 FLANGE END, LEFT
8 JOINER BRACKET
9 MOUNTING BRACKET
10 LOCKING BRACKET (SHIPPED ATTACHED TO END OF LIGHT MODULE)
11 HARDWARE BAG

OPTIONAL

12 SLIDING SLEEVE
13 FINISH FLANGE
14 LOUVER

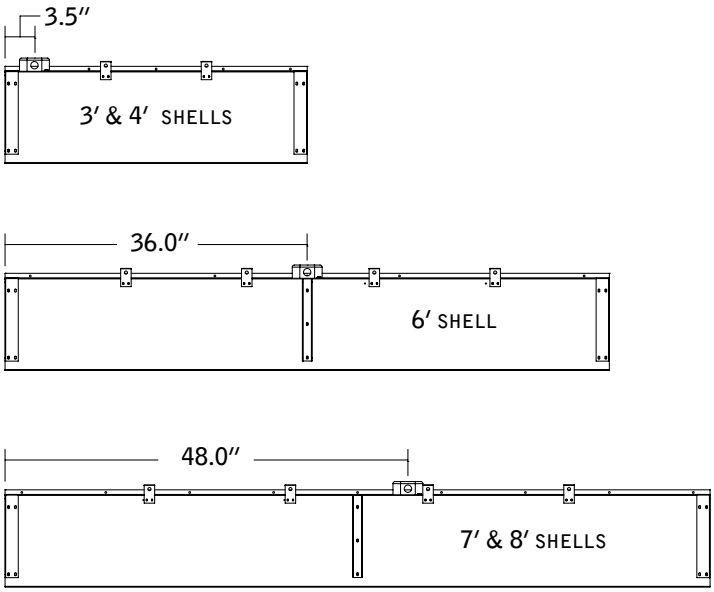
## ROUGH-IN SHELL TYPES (4′ SHOWN)

(JOINER BRACKET LOCATION DETERMINES SHELL TYPE)



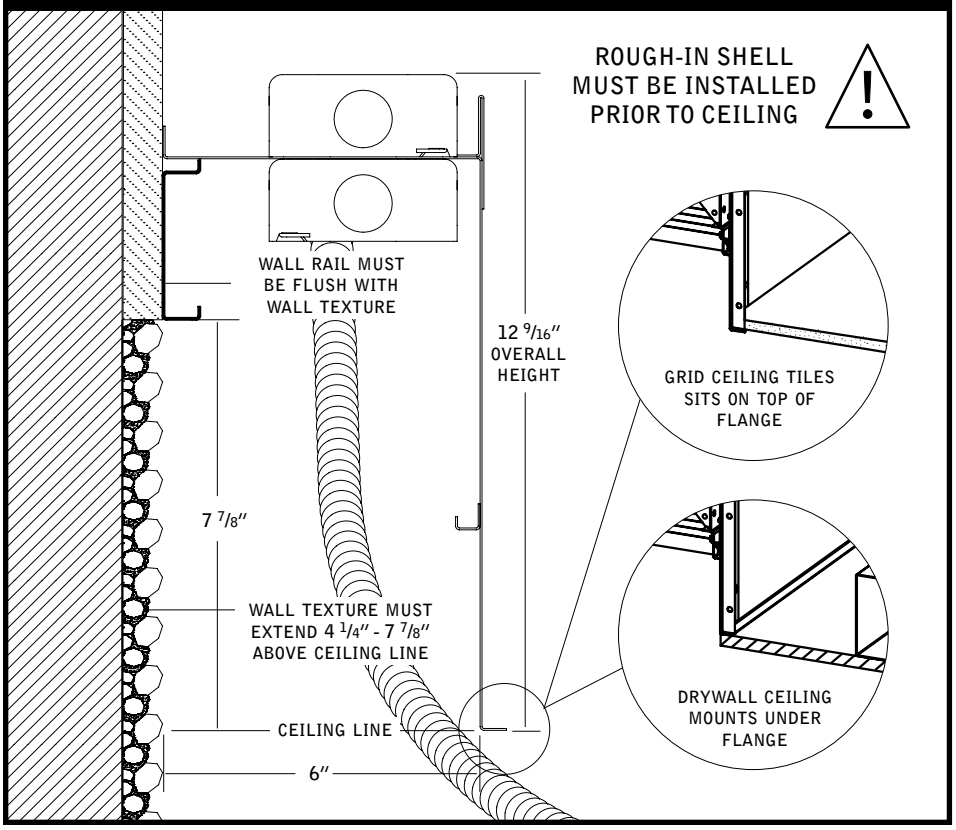

## J-BOX LOCATIONS

(ALL SHELLS COMES WITH J-BOX INSTALLED)

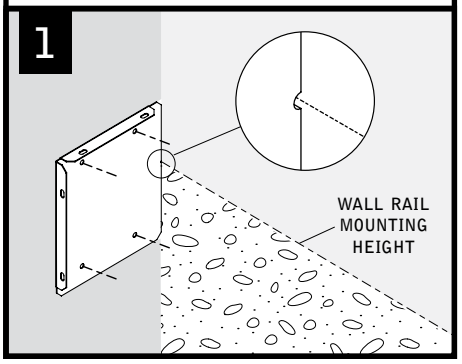


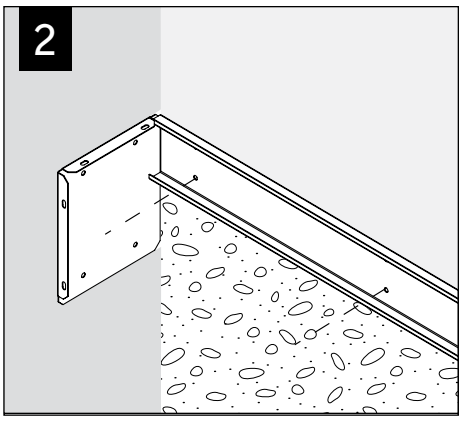

Luminaires must be installed by a qualified electrician (check with local and national codes for proper installation).
To prevent electrical shock, disconnect electrical supply before installation or servicing.

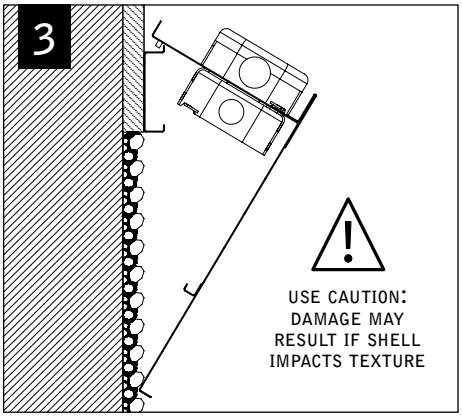
## WALL/CEILING PREP

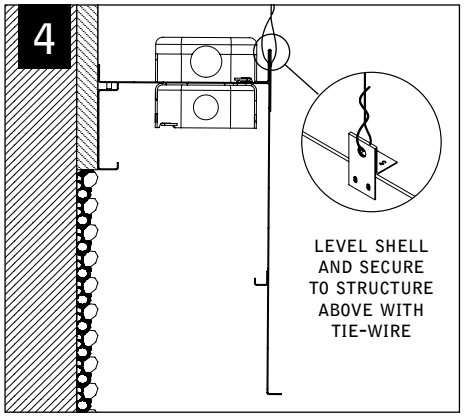


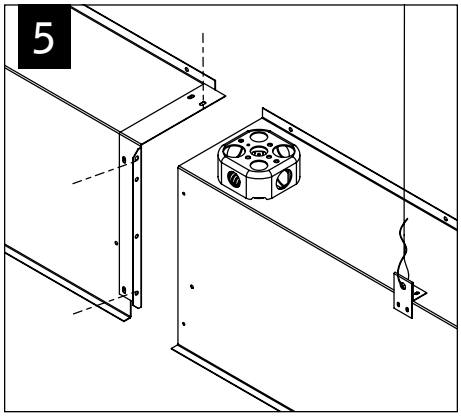

## ENDS TERMINATING AT WALL



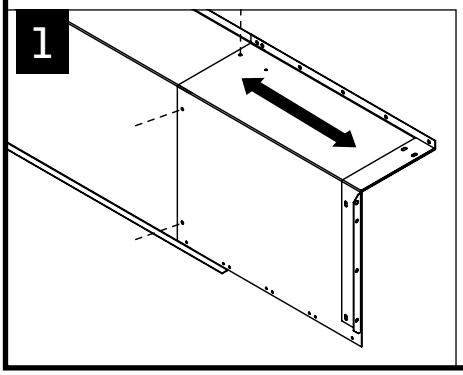



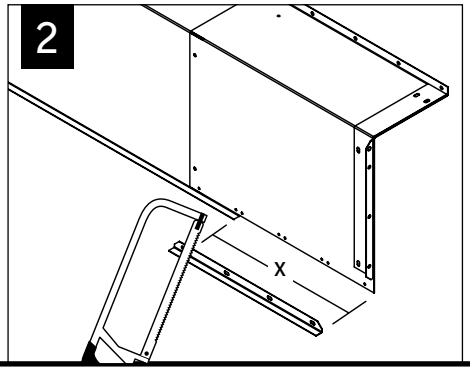



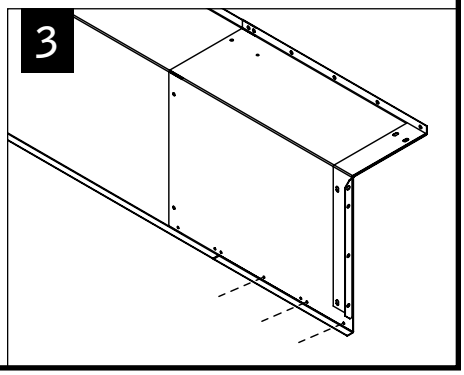




REPEAT STEPS 3 - 5 FOR ALL INTERMEDIATE SHELLS

## SLIDING SLEEVE - OPTIONAL

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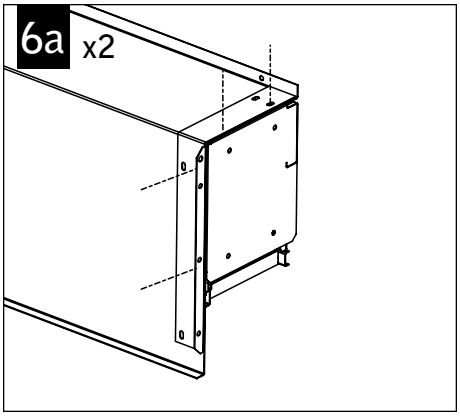
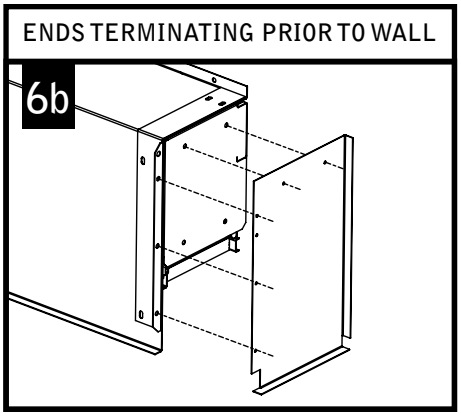
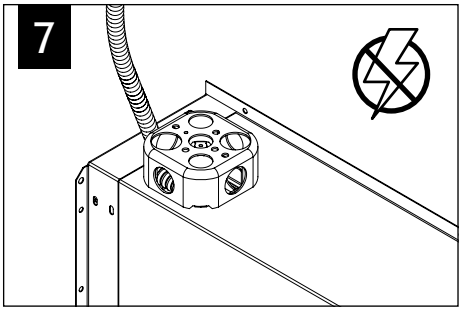
To prevent electrical shock, disconnect electrical supply before installation or servicing.



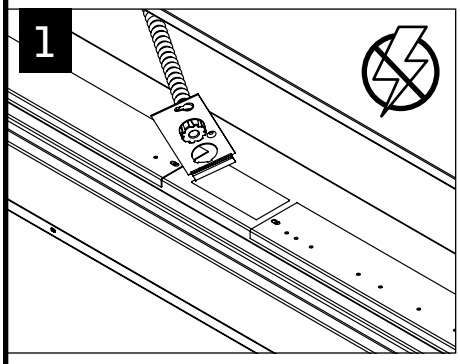

ENDS TERMINATING PRIOR TO WALL



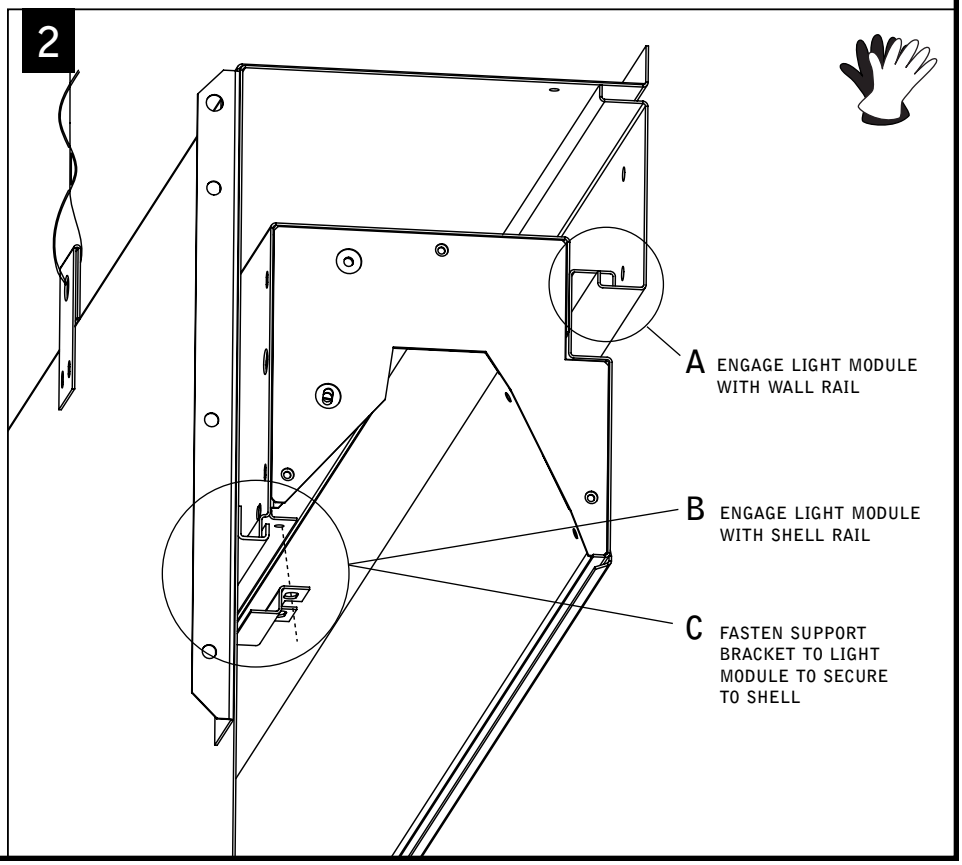




MAKE ELECTRICAL CONNECTIONS BEFORE INSTALLING DRYWALL CEILING

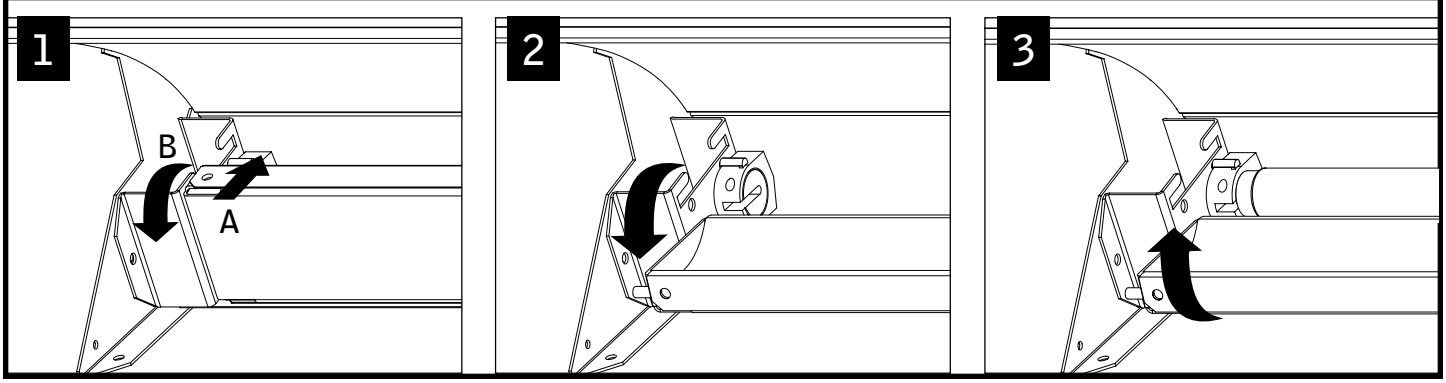
## LIGHT MODULE INSTALLATION




MAKE ELECTRICAL CONNECTIONS




## LAMPING

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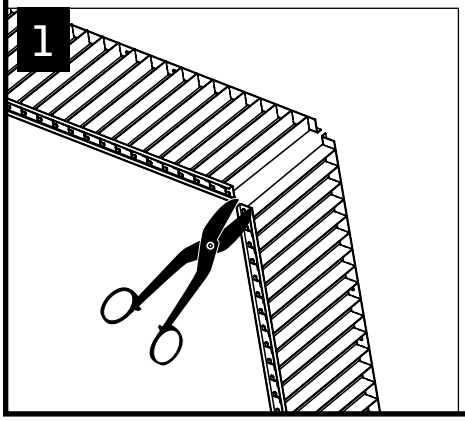
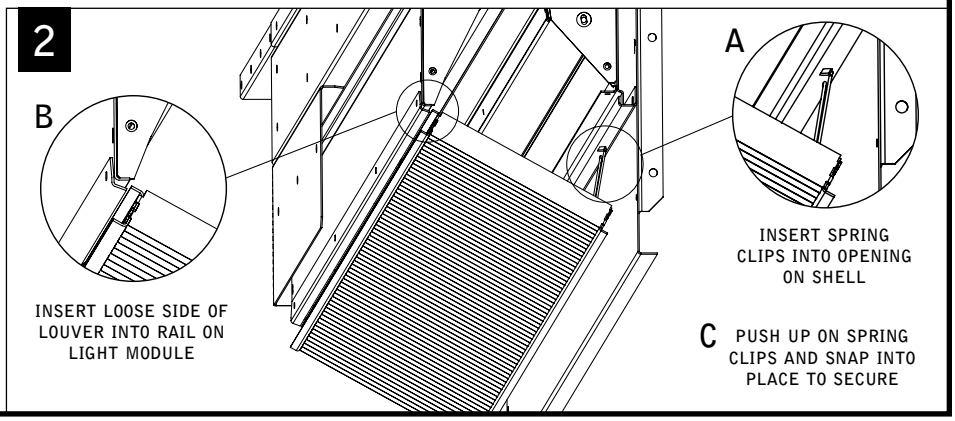
## LOUVER (OPTIONAL) 4

1



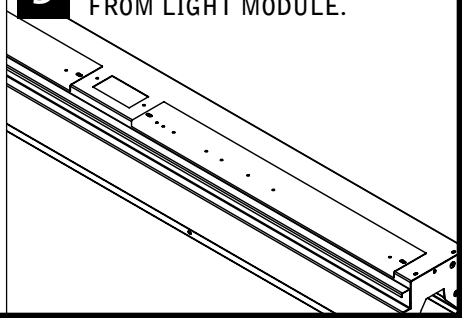
2




## BALLAST SERVICE 4

1. PULL DOWN ON SHELL SIDE OF LOUVER TO DISENGAGE.
2. RELEASE SPRING CLIPS AND REMOVE LOUVER.
3. REMOVE SUPPORT BRACKETS TO RELEASE MODULE FROM SHELL.
4. REMOVE LIGHT MODULE FROM SHELL AND DISCONNECT ELECTRICAL.

5 REMOVE BALLAST COVER(S) FROM LIGHT MODULE.



# BeveLED® BASIC Trimless

**PROJECT INFORMATION**

**PROJECT** _____

_____

**DATE** _____

**TYPE** _____

## DOWNLIGHT 1021

**1" REGRESS**

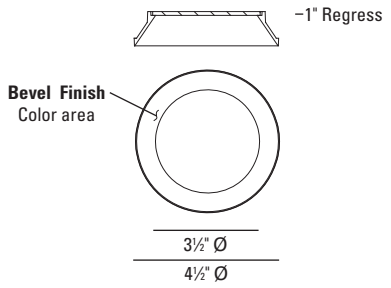
**BeveLED Basic Recessed Downlight** - Our narrow footprint housing provides an economical architectural solution while delivering high performance with LEDs.

## DELIVERED PERFORMANCE

| BeveLED Basic DOWNLIGHT  | 14 Watts | 20 Watts |
|---|---|---|
| Color Rendering Index | 80+ CRI | 80+ CRI |
| Lumens per Watt | 66 | 59 |
| Source Lumens | 1100 | 1500 |
| **Delivered Lumens** | **975** | **1250** |
| Color Consistency | 2-Step MacAdam Ellipse | |

Performance based on 3000K

**1" Regress**




| CCT MULTIPLIER | 2700K | 3000K | 3500K |
|---|---|---|---|
| Color Rendering Index | 80+ CRI | 80+ CRI | 80+ CRI |
| Multiplier for Lumen Output | 1.00 | 1.00 | 1.08 |

## HOW TO SPECIFY

**Ordering Example:** Specify trim code and housing code to order: Example : **1021W - B1 - 10 - LSTD4 - 9014 - M2 - 27KS - 30 - NCSM - 277V - DIML2 - CB27**

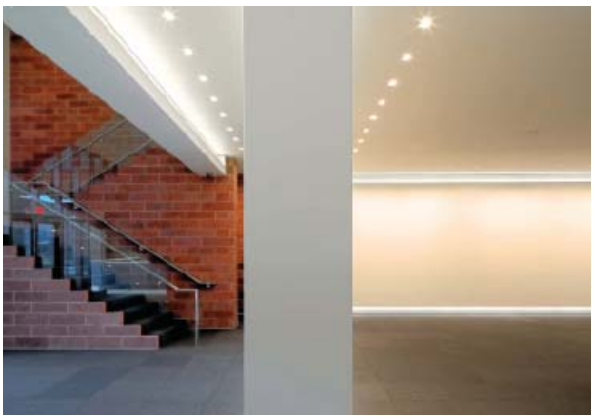
### TRIM ORDERING INFORMATION

| TRIM | OPTION | | BEVEL STYLE | | BEVEL FINISH |
|---|---|---|---|---|---|
| 1021 | _____ | – | B1 | – | |

| 1021 | OPTION | | BEVEL STYLE | BEVEL FINISH | |
|---|---|---|---|---|---|
| 1021 Round Trimless Downlight 1" Regress | **W** | Wet location [1] | **B1** 1" Regress Bevel, Die Cast | **10** | White |
| | **EML** | Emergency [2] | | **13** | Statuary Bronze |
| | **EMLW** | Emergency and wet location [1,2] | | **21** | Black |
| | | | | **28** | Metalized Grey |
| | | | | **RAL** | Custom Color (specify RAL #) |

[1] Wet location, use with B1 trims only.

[2] not for use with IC housing.



### HOUSING ORDERING INFORMATION

| HOUSING CODE | WATTAGE | ENGINE CODE | COLOR | REFLECTOR | HOUSING TYPE | VOLTAGE | OPTIONAL DIMMING DRIVER | ACCESSORIES |
|---|---|---|---|---|---|---|---|---|
| LRLD4 – | – | M2 – | – | – | – | – | – | – |

| LRLD4 | | M2 | | | | 120V 277V | | |
|---|---|---|---|---|---|---|---|---|
| | **9014** 14W LED, 975 lumens | | **27KS** 2700K, 80+ CRI | **30** 30° beam | **NCSM1** New Construction 5/8"- 1-1/4" Ceiling Thickness | | **DIML2** 0-10V dim, 10% | **CB27** 27" C-Channel Bars |
| | **9020** 20W LED, 1250 lumens | | **30KS** 3000K, 80+ CRI | **50** 50° beam | | | **DIML3** Lutron Hi-Lume 1% 2-wire, 120V only | **CB52** 52" C-Channel Bars |
| | | | **35KS** 3500K, 80+ CRI | **80** 80° beam | **NCSM2** New Construction 1-1/4"- 2-1/4" Ceiling Thickness | | **DIML4** Lutron Hi-Lume 1% 3-wire/ECO | **EML** Emergency battery [3] |
| | | | | | | | **DIML6A** ELDO 0-10V 0.1%, logarithmic | **EMLW** Emergency battery, wet location [3] |
| | | | | | **IC** Insulation-Contact Rated / Airtight | | **DIML6B** ELDO 0-10V 0.1%, linear | **MLXX** - Millwork Adapter [4] XX=Specify Color (10, 13, 21, 28, RAL) Millwork not wet listed |
| | | | | | | | **DIML7** ELDO DALI 0.1% | |
| | | | | | | | **DIML9** TRIAC 15% 2-wire, 120V only | |
| | | | | | | | **DIML10** ELV 15% 2-wire, 120V only | |

2 Step MacAdam ellipse is standard for all

[3] NCSM housings require above ceiling access. Not for use with IC housing.

[4] N/A with NCSM1 housing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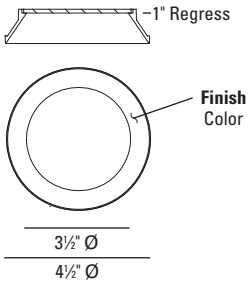
# BeveLED® BASIC Trimless

DOWNLIGHT 1021

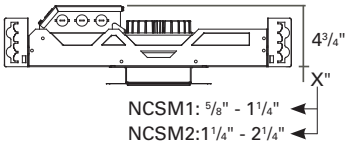
## TRIM INFORMATION

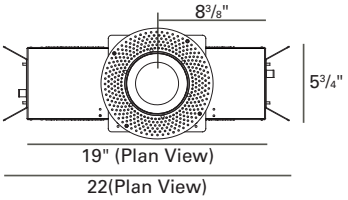
**1" Regress**

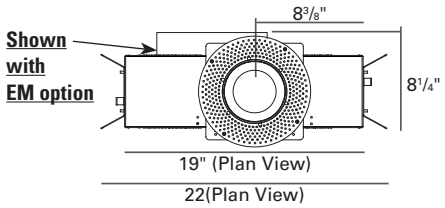



## HOUSING INFORMATION

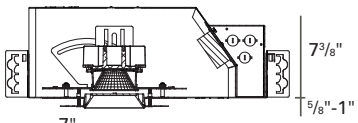
**New Construction, Narrow Width - NCSM**

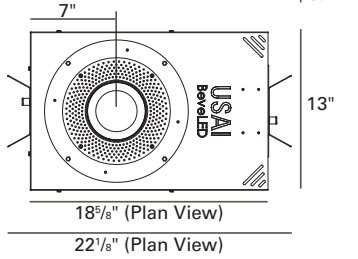



**IC / Airtight - IC**




## SPECIFICATIONS

**TRIM:** 4-1/2" round aperture with a 1" regressed bevel, retained by three ball plungers. Die cast aluminum bevel is available in white, statuary bronze, black, and metalized grey finishes. Custom color available (provide RAL#).

**TRIM LENS:** Trim is shipped with integral solite lens standard.

**REFLECTOR:** Interchangeable precision injection molded specular polycarbonate reflector optimized for 30°, 50° or 80° beam distribution.

**FIELD REPLACEABLE LIGHT ENGINE:** Available in 2 lumen packages: 14W (975 delivered lumens) and 20W (1250 delivered lumens). Engine is field replaceable through the aperture without tools.

**COLOR:** BeveLED is available in 3 color temperatures (2700K, 3000K, 3500K). All color options are tightly binned for fixture-to-fixture color consistency within a 2-Step MacAdam Ellipse. 80+ color rendering index provided standard.

**RATED LIFE:** Based on IESNA LM80-2008 50,000 hours at 70% lumen maintenance (L70).

**THERMAL MANAGEMENT:** Proprietary high performance aluminum die cast heatsink for maximum LED life. Ambient temperatures at fixture location should not exceed 40°C during normal operation.

**FIELD REPLACEABLE DRIVER:** Solid state electronic constant current driver with a high power factor provided standard. Specify 120V or 277V. Driver complies with IEEE C62.41 surge protection.

**DIMMING OPTIONS:** Multiple dimming drivers available. See compatibility chart attached. Some on-time delay may be experienced depending on control system used. Note: DIML6A logarithmic control is intended for use with Lutron control systems; DIML6B linear control is intended for use with non-Lutron controls. DIML2 and DIML6 drivers source 2mA.

**EMERGENCY:** Emergency lighting battery pack is provided with remote test switch and require above ceiling access for service. EM option is not available with IC housings.

**MOUNTING:** Butterfly brackets and adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers.

**HOUSING:** Fabricated of 20 ga. galvanized steel with thru wire J-box, 4 in 4 out at min. 90°C, #12 AWG thru branch circuit wiring. IC rated housing rated for direct contact with insulation.

**MAXIMUM CEILING THICKNESS:** As per drawings above. ML option is for 1" max thickness wood with IC housing and for 2-1/4" max thickness wood with NCSM2 housing. Millwork option is not available with NCSM1 housing.

**CEILING CUT OUT:** 5½" Ø
Millwork: 4-13/16" Ø

**LISTINGS:** Dry/Damp. Wet location option available with B1 trim only. Millwork Dry/Damp only. NRTL/CSA-US tested to UL standards. IBEW union made.

**WARRANTY:** 5 years

**NOTES:**
- Not for use in corrosive environment.
- Use of pressure washer voids warranty.
- Trimless for drywall installation only.

**PHOTOMETRICS:** Consult factory or website for IES files. Tested in accordance with IESNA LM79-2008.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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML2

## DIMMING DRIVER WIRING SCHEMES:

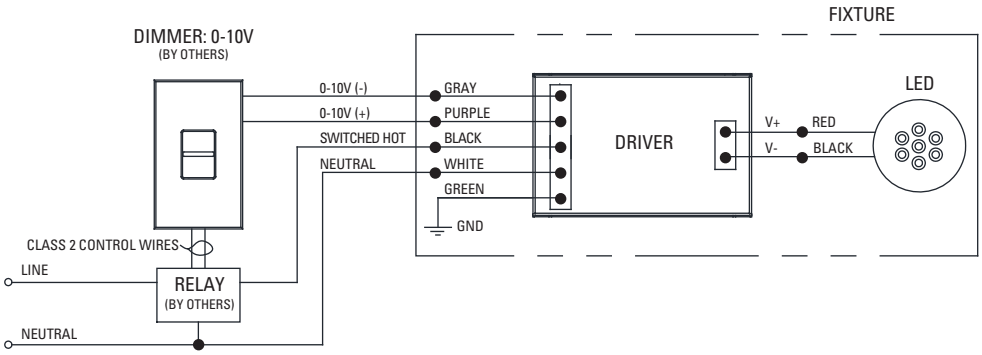
Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

### DIML2 LED: 0-10V Dimming Driver Wiring (Dims down to 10%)

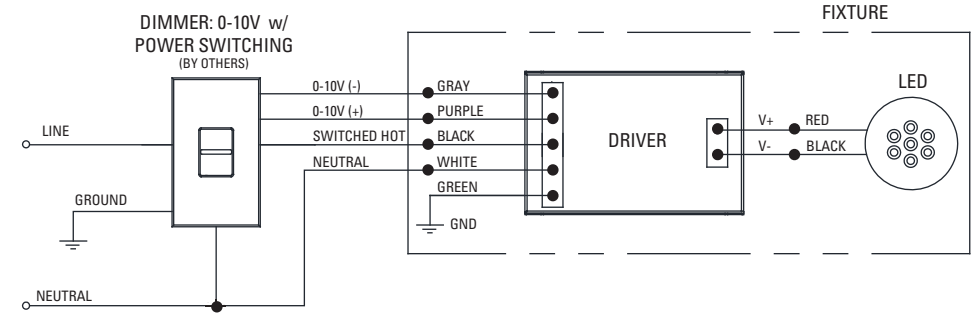
| DIML2 Dimmer Compatibility Chart | | | | |
|---|---|---|---|---|
| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* |
| **120V / 277V** | | | | Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating. |
| Crestron | iLux dimmer expansion module | CLS-EXP-DIMFLV | 100% - 10% | |
| Crestron | DIN Rail dimmer | DIN-4DIMFLV4 | 100% - 10% | |
| Crestron | DIN Rail analog output module | DIN-A08 | 100% - 10% | |
| Crestron | 8 Channel dimmer module | GLX-DIMFLV8 | 100% - 10% | |
| Crestron | 8 Channel dimmer module | GLXP-DIMFLV8 | 100% - 10% | |
| Leviton | IllumaTech dimmer | IP710-DLX | 100% - 10% | |
| Lightolier (Philips) | Vega | V2000FAMU | 100% - 10% | |
| Lutron | Diva | DVTV-XX | 100% - 10% | |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

### DIML2
### 0-10V DIMMING W/RELAY TO SWITCH POWER




### DIML2
### 0-10V DIMMING (NO RELAY)





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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML3

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

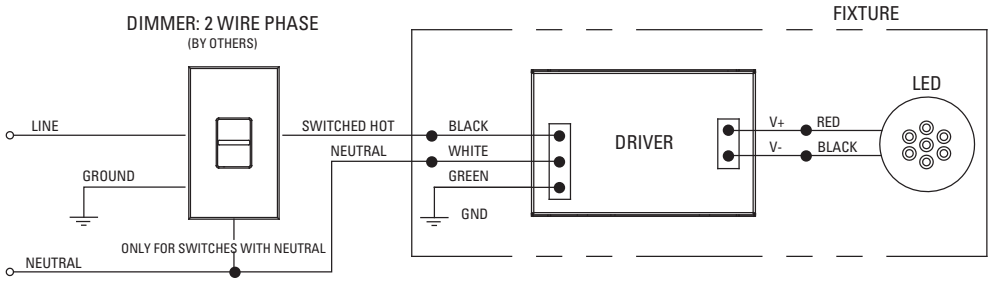
**DIML3 LED: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V only.**

**DIML3 Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* Typical | High Wattage |
|---|---|---|---|---|---|
| **120V Only** | | | | 40W and Less | 41W - 80W |
| ETC | Sensor+ Cabinet | ELV10 | 100% - 1% | 1 – 26 | 1 – 13 |
| ETC | Unison DRd Cabinet | ELV10 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | Maestro Wireless® dimmer | MRF2-6ND-120- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | HomeWorks® QS adaptive dimmer | HQRD-6NA- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | HomeWorks® QS 60W dimmer | HQRD-6ND- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | HomeWorks® QS 1000 W dimmer | HQRD-10ND- | 100% - 1% | 1 – 13 | 1 – 6 |
| Lutron | Stanza® dimmer | SZ-6ND- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | RadioRA® 2 adaptive dimmer | RRD-6NA- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | RadioRA® 2 1000 W dimmer | RRD-10ND- | 100% - 1% | 1 – 13 | 1 – 6 |
| Lutron | HomeWorks® QS wallbox power module | HQRJ-WPM-6D-120- | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | HomeWorks® wallbox power module | HWI-WPM-6D-120 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | GRAFIK Eye® QS control unit | QSGR-, QSGRJ- | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | GRAFIK Eye® 3000 control unit | GRX-3100-, GRX-3500- | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | RPM-4U module | HW-RPM-4U-120, LP-RPM-4U-120 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | RPM-4A module | HW-RPM-4A-120, LP-RPM-4A-120 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | GP dimming panels | Various | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | Ariadni CL 250W dimmer | AYCL-253P- | 100%-1% | 1 – 8 | 1 – 4 |
| Lutron | Diva CL 250W dimmer | DVCL-253P-, DVSCCL-253P- | 100%-1% | 1 – 8 | 1 – 4 |
| Lutron | Grafik T CL or RF CL dimmer | GT-250M-, GTJ-250M- | 100%-1% | 1 – 8 | 1 – 4 |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

### DIML3
### 2 WIRE PHASE DIMMING





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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML4

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

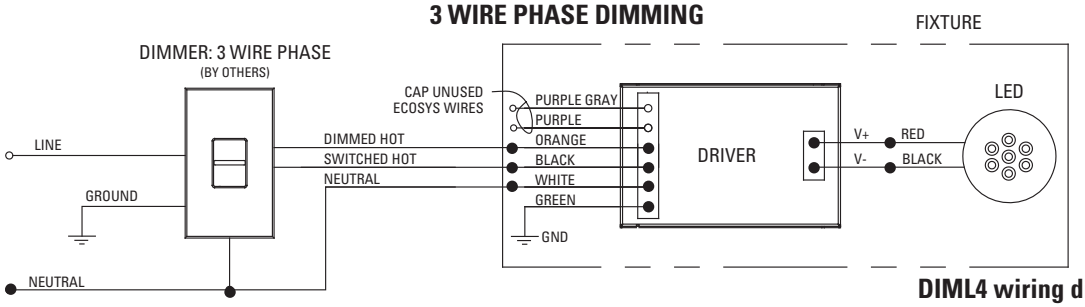
### DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)

**DIML4 3-Wire Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Control* Typical | High Wattage |
|---|---|---|---|---|---|
| **120V Only** | | | | 40W and Less | 41W - 80W |
| ETC | Sensor+ Cabinet | D20 Dimming module | 100% - 1% | 1–53 | 1–26 |
| ETC | Unison DRd Cabinet | D20F Dimming module | 100% - 1% | 1–53 | 1–26 |
| Lutron | Nova T | NTF-10- | 100%–1% | 1–41 | 1 – 20 |
| Lutron | Nova T | NTF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Nova | NF-10- | 100%–1% | 1–41 | 1 – 20 |
| Lutron | Nova | NF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Vareo | VF-10- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Skylark | SF-10P-, SF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Diva | DVF-103P-, DVSCF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Ariadni | AYF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Vierti | VTF-6A- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Maestro | MAF-6AM-, MSCF-6AM- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Maestro Wireless | MRF2-F6AN-DV- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | RadioTouch | RTA-RX-F- | 100%–1% | 1–41 | 1 – 20 |
| Lutron | Spacer System | SPSF-6A-, SPSF-6AM- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Lyneo Lx | LXF-103PL- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | RadioRA 2 | RRD-F6AN-DV- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | HomeWorks QS | HQRD-F6AN-DV | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Interfaces | PHPM-3F-120, PHPM-3F-DV, GRX-FDBI-16A | 100%–1% | 1–41 | 1 – 20 |
| Lutron | GP Dimming Panels | Various | 100%–1% | 1–41 | 1 – 20 |
| **277V Only** | | | | 40W and Less | 41W - 80W |
| ETC | Sensor+ Cabinet | D20 Dimming module | 100% - 1% | 1–53 | 1–26 |
| ETC | Unison DRd Cabinet | D20F Dimming module | 100% - 1% | 1–53 | 1–26 |
| Lutron | Nova T | NTF-10-277- | 100%–1% | 1–44 | 1 – 22 |
| Lutron | Nova T | NTF-103P-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Nova | NF-10-277- | 100%–1% | 1–44 | 1 – 22 |
| Lutron | Nova | NF-103P-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Skylark | SF-12P-277-, SF-12P-277-3 | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Diva | DVF-103P-277-, DVSCF-103P-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Ariadni | AYF-103P-277- | 100%–1% | 1–44 | 1 – 22 |
| Lutron | Vierti | VTF-6A- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Maestro | MAF-6AM-277-, MSCF-6AM-277- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Maestro Wireless | MRF2-F6AN-DV- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | RadioTouch | RTA-RX-F- | 100%–1% | 1–88 | 1 – 44 |
| Lutron | Spacer System | SPSF-6A-277-, SPSF-6AM-277- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Lyneo Lx | LXF-103PL-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | RadioRA 2 | RRD-F6AN-DV- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | HomeWorks QS | HQRD-F6AN-DV | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Interfaces | PHPM-3F-DV, GRX-FDBI-16A | 100%–1% | 1–88 | 1 – 44 |
| Lutron | GP Dimming Panels | Various | 100%–1% | 1–88 | 1 – 44 |

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**DIML4**
**3 WIRE PHASE DIMMING**




**DIML4 wiring diagrams continued on next page**

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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE

## DIML4 Continued

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

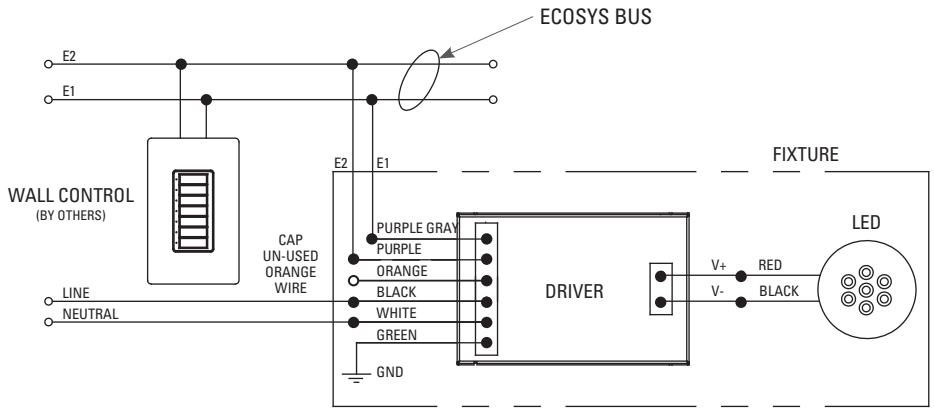
### DIML4 LED: Lutron Hi-Lume A-Series LED Driver with Eco System Control / LED Dimming Driver Wiring (Dims down to 1%)

**DIML4 3-Wire Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Control* Typical | High Wattage |
|---|---|---|---|---|---|
| **120V / 277V** | | | | 40W and Less | 41W - 80W |
| Lutron | PowPak dimming module | RMJ-ECO32-DV-B | 100%–1% | 1–32 | 1 – 16 |
| Lutron | Energi Savr Node | QSN-1ECO-S, QSN-2ECO-S | 100%–1% | 1–64 | 1 – 32 |
| Lutron | GRAFIK Eye QS (120V ONLY) | QSGRJ- _E, QSGR- _E | 100%–1% | 1–64 | 1 – 32 |
| Lutron | Quantum | Various | 100%–1% | 1–64 | 1 – 32 |

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**DIML4**
**ECOSYS CONTROLS**





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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML6A, 6B

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

### DIML6A LED: EldoLED SOLOdrive 561/S 0-10V control 100%-0.1% linear-programmed dimming driver for use with logarithmic-style controls (e.g., Lutron and others listed in the table below)

**DIML6A Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* |
|---|---|---|---|---|
| **120V & 277V** | | | | Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. |
| Lutron | Diva | DVTV/NFTV/NTFTV with PP-20 | 99% - 0.1% | |
| Lutron | Energi Savr Node | QSN-4T16-S | 100% - 0.1% | |
| Lutron | GP Dimming Panels | TVM2 Module | 99% - 0.1% | |
| Lutron | Interfaces | GRX-TVI w/ GRX3503 | 100% - 0.1% | |
| Sensor Switch | nIO | nIO EZ | 100% - 0.1% | |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

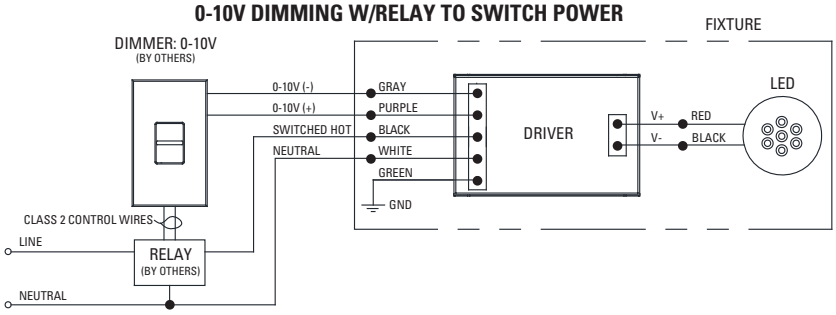
### DIML6B LED: EldoLED SOLOdrive 561/S 0-10V control 100%-0.1% logarithmic-programmed dimming driver for use with linear-style controls (e.g., Crestron, non-Lutron, and others listed in the table below)

**DIML6B Dimmer Compatibility Chart**

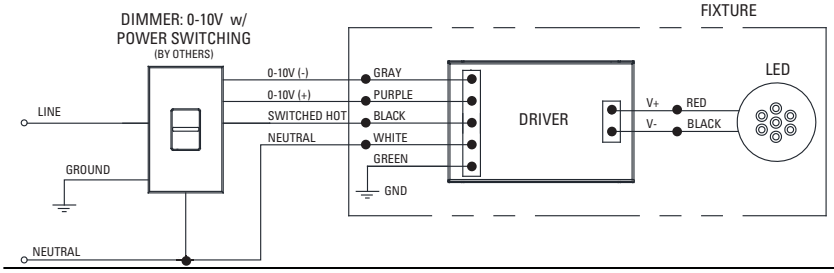
| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* |
|---|---|---|---|---|
| **120V & 277V** | | | | Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. |
| Bush-Jaeger | Electronic potentiometer | 2112U-101 | 100% - 0.1% | |
| Jung | Electronic potentiometer | 240-10 | 100% - 0.1% | |
| Leviton | IllumaTech dimmer | IP710-DLX | 100% - 0.1% | |
| Lightolier (Philips) | Momentum (120V ONLY) | ZP600FAM120 | 100% - 0.1% | |
| Merten | Electronic potentiometer | 5729 | 100% - 0.1% | |
| Pass & Seymour | Titan | CD4FB-W | 100% - 0.1% | |
| Watt Stopper | Miro | DCLV1 | 100% - 0.1% | |
| Synergy | Wallbox Dimmers | ISD BC | 100% - 0.1% | |
| ABB | i-bus | SD/S 2.16.1 | 100% - 0.1% | |
| Crestron | Modules | GLX-DIMFLV8, GLXP-DIMFLV8 | 100% - 0.1% | |
| Crestron | Green Light | GLPAC-DIMFLV4-, GLPAC-DIMFLV8- | 100% - 0.1% | |
| Crestron | Green Light Power Pack | GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM | 100% - 0.1% | |
| Crestron | DIN Rail Analog Output Module | DIN-A08 | 100% - 0.1% | |
| Crestron | DIN Rail 0-10V Fluorescent Dimmer | DIN-4DIMFLV4 | 100% - 0.1% | |
| Crestron | iLux 0-10V Dimmer Expansion Module | CLS-EXP-DIMFLV | 100% - 0.1% | |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**DIML6A, 6B**
**0-10V DIMMING W/RELAY TO SWITCH POWER**




**DIML6A, 6B**
**0-10V DIMMING (NO RELAY)**





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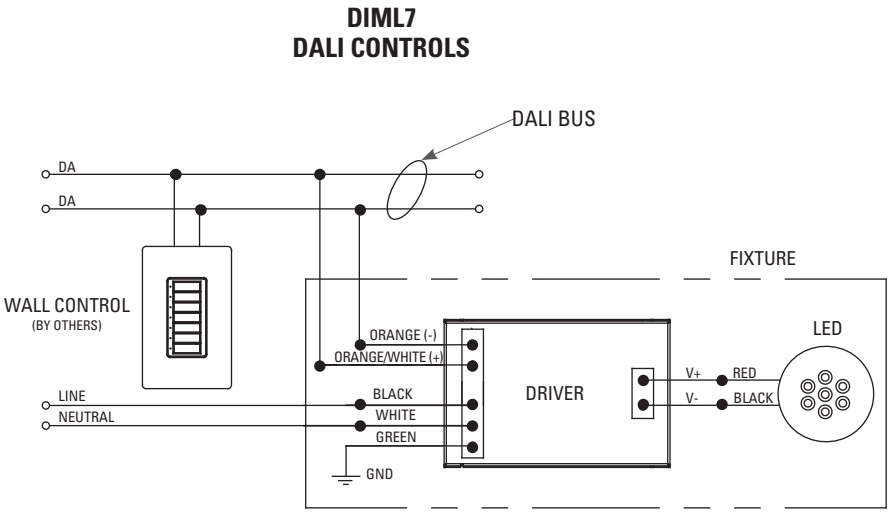
# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML7

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**DIML7 LED: EldoLED DALI Dimming Driver Wiring (Dims down to 0.1%)**



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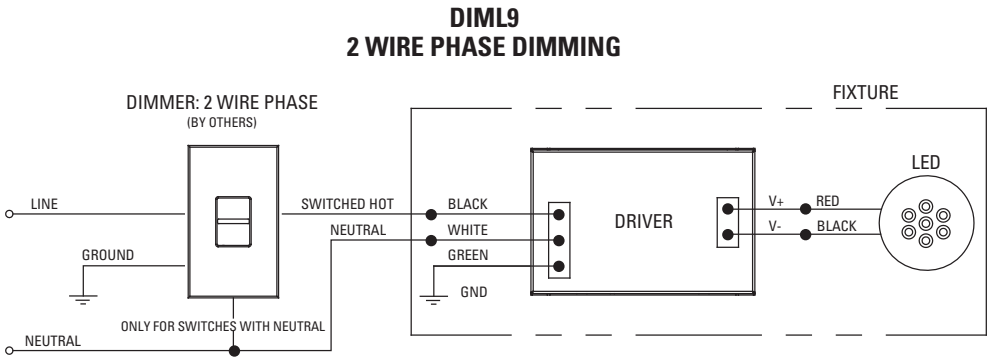
# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML9

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

### DIML9 LED: TRIAC Forward Phase Dimming Driver Wiring (Dims down to 15%) 120V Only



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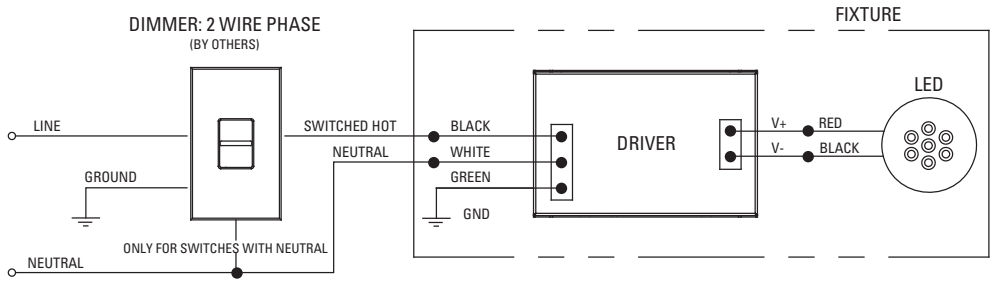
# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML10

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**DIML10 LED: ELV Reverse Phase Dimming Driver Wiring (Dims down to 15%) 120V Only**

**DIML10**
**2 WIRE PHASE DIMMING**

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LITHONIA LIGHTING®

| Catalog Number | |
|---|---|
| Notes | |
| Type | |

# FEATURES & SPECIFICATIONS

**INTENDED USE** — RT5™ is designed for applications that require the extremely energy efficient delivery of comfortable volumetric light from a lay-in fixture that is appealing and shallow in depth. Ideal for offices, schools, hospitals, retail and numerous other commercial applications. **Certain airborne contaminants can diminish integrity of acrylic. Click here for Acrylic Environmental Compatibility table for suitable uses.**

**OPTICS** — Delivers volumetric lighting by filling the entire volume of space with light, delivering the ideal amount of light to walls, cubicles, work surfaces and people.

Luminous characteristics are carefully managed at high angles to deliver just enough intensity to deliver the volumetric effect.

Regressed, two-piece refractive system obscures and softens the lamp and smoothly washes the reflector with light.

Linear faceted reflector softens and distributes light into the space and minimizes the luminance ratio between the fixture and the ceiling.

Mechanical cut-off across the reflector and fresnel refracton along the refractor provide high angle shielding and a quiet ceiling.

Sloped endplates provide a balanced fixture to ceiling ratio while enhancing the perception of fixture depth.

**CONSTRUCTION** — Impact modified acrylic prismatic refractor with polymer light diffusing film.

Rugged, one-piece, cold-rolled steel reflector with embossed facets with polyester powder paint after fabrication.

Rigid structure with ballast box and endplates with integral T-bar clips.

Fixtures may be mounted end-to-end.

**ELECTRICAL** — Highly efficient program start electronic ballasts, Class P, thermally protected, resetting, HPF, non PCB, UL Listed, CSA Certified, sound rated A. Your choice of Premium or Premium XP T5 lamp with enhanced phosphors and 85 CRI. Lamp is TCLP compliant.

S5 option available for use with SIMPLY5™ Lighting Intelligence system with multi-level dimming. See SYNERGY® Lighting Controls specification sheets for more information. Ballast Disconnect provided standard where required to comply with U.S. and Canadian electrical codes.

**INSTALLATION** — Side mounted ballast tray accessed by removing adjacent ceiling tile. Ballast tray may be removed from fixture during service.

Lamp accessed by squeezing refractor to release from retention tabs.

**LISTING** — UL Listed (standard). Optional: Canada CSA or cUL. Mexico NOM.

**WARRANTY** — 1-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Protected by one or more of US Patents Nos. 7,229,192; D541,467; D541,468; D544,633; D544,634; D544,992; D544,933 and additional patent pending.

**Note:** Specifications subject to change without notice.

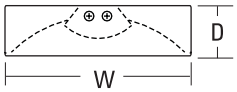
# RT5

1'x 4'
One or Two Lamps
Premier and Premier XP T5

SIMPLY5™ LIGHTING INTELLIGENCE

*Specifications*

Length: 48 (121.8)
Width: 12 (30.5)
Depth: 3-1/8 (7.9)




All dimensions are inches (centimeters) unless otherwise specified.

**ORDERING INFORMATION** For shortest lead times, configure products using **bolded options**.

**Example**: RT5 1 28T5 MVOLT GEB10PS LPM835P

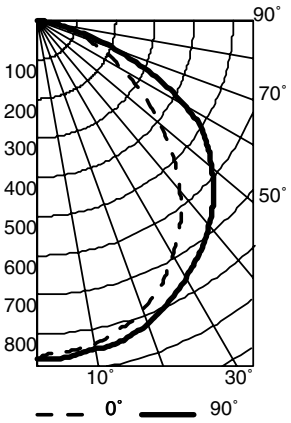
| RT5 | | | | | | |
|---|---|---|---|---|---|---|
| **Series** | **Number of lamps** | **Lamp type** | **Voltage** | **Ballast** | **Lamp[6]** | **Options** |
| **RT5** Recessed T5 | **1**<br>2 | **28T5** 28W T5 (46")<br>**54T5HO** 54W T5HO (46")[1] | **MVOLT**[2]<br>347[3] | **GEB10PS** 1.0 ballast factor, program start[4]<br>GEB95 .95 ballast factor (2-lamp only)[7]<br>GEB95S .95 ballast factor, step dimming (2-lamp only)[7]<br>S5 SIMPLY5™ system[5]<br>GEB80 .80 ballast factor (2-lamp only)[8]<br>GEB80S .80 ballast factor, step dimming (2-lamp only)[8]<br>GEB115 1.15 ballast factor (2-lamp only)[7]<br>GEB115S 1.15 ballast factor (2-lamp only), step dimming[7]<br>GEB90 .90 ballast factor (2-lamp only)<br>GEB90S .90 ballast factor, step dimming (2-lamp only) | **LPM835P** Premier 3500°K lamp[7]<br>LPM830P Premier 3000°K lamp[7]<br>LPM841P Premier 4100°K lamp[7]<br>L835XP Premier 3500°K lamp[7]<br>L830XP Premier 3000°K lamp[7]<br>L841XP Premier 4100°K lamp[7]<br>LP835 3500°K lamp[8]<br>LP830 3000°K lamp[8]<br>LP841 4100°K lamp[8] | GLR Internal fast-blow fuse[9]<br>PWS1836 6' prewire, 3/8" diameter, 18-gauge, 3-wire (n/a with GEB95S)[10]<br>PWS1846 6' prewire, 3/8" diameter, 18-gauge, wire[11]<br>**EL14** Emergency battery pack[12]<br>CSA Listed and labeled to comply with Canadian standards<br>QFC_ Quick-flex cable[9] |

**Notes**

1 For T5HO applications, use GEB10PS, GEB80 or GEB80S ballasts. Not available with 28T5.
2 MVOLT (120-277 volts), 50-60HZ.
3 For 347V use GEB95, GEB95S or GEB10PS ballast only.
4 GEB10PS for use with one-lamp 28T5, and one- and two-lamp 54T5HO.
5 SIMPLY5 includes 13' S5 SSC RELOC® wiring system, specify voltage unless HW (hardwire) or PWS is ordered. Two-lamp = .95 ballast factor; one-lamp = 1.0 ballast factor.
6 Required. All fixtures shipped with lamps installed.
7 28T5 only.
8 54T5HO only.
9 Must specify voltage, 120 or 277.
10 For use with standard ballast.
11 For use with step dimming ballast.
12 See PS1400QD spec sheet for EL lumen output information.

# **RT5** Volumetric Recessed Lighting, 1' x 4'

**RT5 28T5 GEB10PS LPM835P**, (1) FP28/835/PM/ECO lamp, 2730 lumens per lamp, s/m 1.2 (along) 1.3 (across), test no. LTL13316




**CP Summary**

| | 0° | 90° |
|---|---|---|
| 0° | 862 | 862 |
| 5° | 848 | 862 |
| 15° | 814 | 844 |
| 25° | 747 | 792 |
| 35° | 636 | 723 |
| 45° | 492 | 636 |
| 55° | 331 | 523 |
| 65° | 189 | 323 |
| 75° | 85 | 106 |
| 85° | 15 | 13 |
| 90 | 0 | 0 |

**Coefficients of Utilization**

| | pf | 80% | | | 70% | | | 50% | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | pc | 20% | | | 20% | | | 20% | | |
| RCR | pw | 70% | 50% | 30% | 50% | 30% | 10% | 50% | 30% | 10% |
| | 0 | 104 | 104 | 104 | 101 | 101 | 101 | 97 | 97 | 97 |
| | 1 | 95 | 91 | 88 | 89 | 86 | 83 | 86 | 83 | 81 |
| | 2 | 87 | 80 | 74 | 78 | 73 | 68 | 75 | 71 | 67 |
| | 3 | 79 | 70 | 63 | 69 | 62 | 57 | 66 | 61 | 56 |
| | 4 | 72 | 62 | 55 | 61 | 54 | 49 | 59 | 53 | 48 |
| | 5 | 67 | 56 | 48 | 55 | 47 | 42 | 53 | 46 | 42 |
| | 6 | 62 | 50 | 42 | 49 | 42 | 37 | 48 | 41 | 36 |
| | 7 | 57 | 45 | 38 | 45 | 37 | 32 | 43 | 37 | 32 |
| | 8 | 53 | 41 | 34 | 41 | 34 | 29 | 40 | 33 | 29 |
| | 9 | 50 | 38 | 31 | 37 | 31 | 26 | 36 | 30 | 26 |
| | 10 | 46 | 35 | 28 | 35 | 28 | 24 | 34 | 28 | 23 |

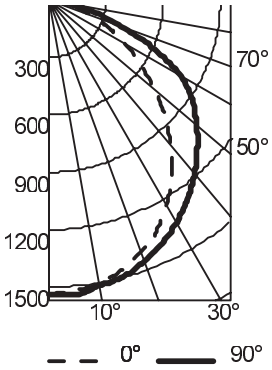
**Zonal Lumen Summary**

| Zone | Lumens | % Lamp | % Fixture |
|---|---|---|---|
| 0° - 30° | 672 | 24.6 | 28.3 |
| 0° - 40° | 1100 | 40.3 | 46.3 |
| 0° - 60° | 1940 | 71.1 | 81.7 |
| 0° - 90° | 2375 | 87.0 | 100.0 |
| 90° - 180° | 0 | 0.0 | 0.0 |
| 0° - 180° | 2375 | 87.0 | 100.0 |

LER: 74.2 lpw

Efficiency: 87.0%

**RT5 2 28T5 GEB95S LPM835P**, (2) FP28/835/PM/ECO lamp, 2730 lumens per lamp, s/m 1.2 (along) 1.3 (across), test no. LTL14100




**CP Summary**

| | 0° | 90° |
|---|---|---|
| 0° | 1540 | 1540 |
| 5° | 1527 | 1547 |
| 15° | 1463 | 1499 |
| 25° | 1333 | 1405 |
| 35° | 1120 | 1270 |
| 45° | 860 | 1102 |
| 55° | 588 | 920 |
| 65° | 349 | 609 |
| 75° | 159 | 235 |
| 85° | 27 | 18 |
| 90° | 0 | 0 |

| | pr | 80% | | | 70% | | | 50% | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | pc | 20% | | | 20% | | | 20% | | |
| RCR | pw | 70% | 50% | 30% | 50% | 30% | 10% | 50% | 30% | 10% |
| | 0 | 92 | 92 | 92 | 90 | 90 | 90 | 86 | 86 | 86 |
| | 1 | 85 | 81 | 78 | 79 | 76 | 74 | 76 | 74 | 71 |
| | 2 | 77 | 71 | 66 | 69 | 65 | 61 | 67 | 63 | 59 |
| | 3 | 70 | 62 | 56 | 61 | 55 | 51 | 59 | 54 | 50 |
| | 4 | 64 | 55 | 48 | 54 | 48 | 43 | 52 | 47 | 42 |
| | 5 | 59 | 49 | 42 | 48 | 42 | 37 | 47 | 41 | 37 |
| | 6 | 55 | 44 | 38 | 44 | 37 | 32 | 42 | 36 | 32 |
| | 7 | 51 | 40 | 34 | 40 | 33 | 29 | 38 | 33 | 28 |
| | 8 | 47 | 37 | 30 | 36 | 30 | 26 | 35 | 29 | 25 |
| | 9 | 44 | 34 | 27 | 33 | 27 | 23 | 32 | 27 | 23 |
| | 10 | 41 | 31 | 25 | 31 | 25 | 21 | 30 | 25 | 21 |

**Zonal Lumen Summary**

| Zone | Lumens | % Lamp | % Fix |
|---|---|---|---|
| 0° - 30° | 1198 | 21.9 | 28. |
| 0° - 40° | 1951 | 35.7 | 46. |
| 0° - 60° | 3413 | 62.5 | 80. |
| 0° - 90° | 4223 | 77.3 | 100 |
| 90° - 180° | 0 | 0.0 | 0.( |
| 0° - 180° | 4223 | 77.3 | 100 |

Efficiency: 77.3%

LER: 69.1 lpw

*The LER (Luminaire Efficacy Rating) is the lumens per watt rating for this fixture. It is used to compare the energy efficiency of various products. This photometric report is based upon IES testing procedures, as stated in LM-41-1998. The reported lumen rating is based upon lamp manufacturer's published lumen output for the cold spot temperature measured during lamp calibration.




FLUORESCENT: One Lithonia Way Conyers, GA 30012 Phone: 800.858.7763 Fax: 770-929-8789 www.lithonia.com

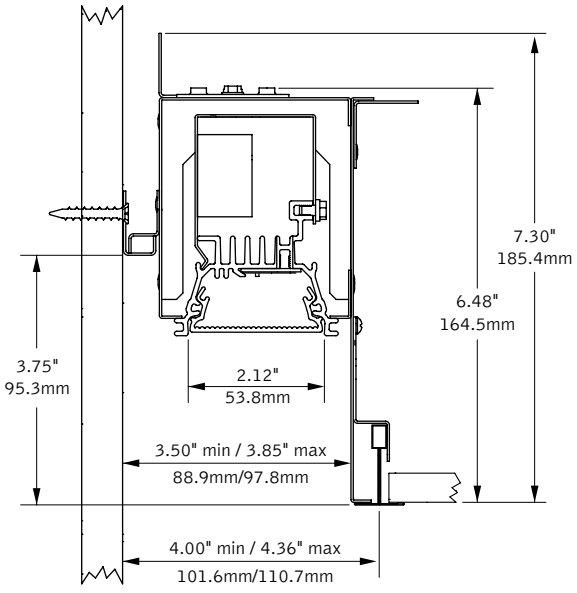
# Trace™

**LED**

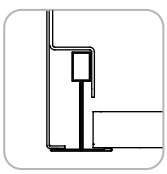
FOCAL POINT®

## DIMENSIONAL DATA

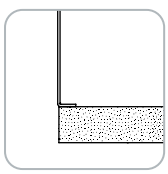
Grid Ceiling Shown




Mounting Details



Grid
15/16" or 9/16" Flat Tee
main runner required at edge.



Drywall
Ceiling mounts below housing.

## FEATURES

Low wattage LED slot provides glowing transition between wall and ceiling.

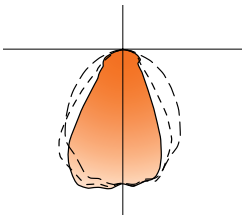
Frosted lens with linear micro prism pattern obscures visibility to LED's and provides continuous, shadow-free illumination.

Housing creates 3" architectural slot.

Premium LEDs operate efficiently on a solid-core module platform to achieve excellent thermal management and reliable operation.

L70 at 50,000 hours

## PERFORMANCE



4' Luminaire

**Delivered Lumens: 1207lm**

**Total System Watts: 22.9W**

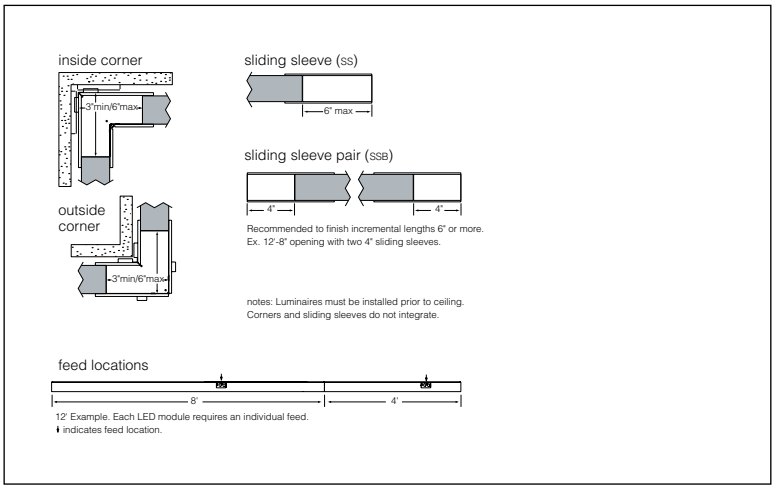
### PRODUCT OVERVIEW

| | |
|---|---|
| Lumen Output: | 1207lm |
| Wattage: | 23W per 4' |
| LPW: | 53 |
| SDCM: | 3 |
| Lumen Maintenance: | L70 @ 50,000hrs |

Photometric performance is measured in accordance with IESNA LM-79.
Visit focalpointlights.com for complete photometric data.

fixture: project:

## DETAILS




## SPECIFICATIONS

### LED System

Proprietary linear LED module incorporates premium LEDs on a solid-core platform to achieve excellent thermal management. Module is available in 3000K, 3500K or 4000K with CRI > 80. 0-10V dimming driver standard. LED module and driver are replaceable from below.

### Construction

One piece .07" thick LED module housing of extruded aluminum. 20 Ga. steel outer housing creates floating ceiling effect and adjusts for alignment with walls. 20 Ga. steel internal bulkheads. 20 Ga. steel sliding sleeves and corners. 4' unit weight: 26 lbs.

### Optic

Continuous illumination enabled by linear LED modules shielded by ribbed extruded frosted acrylic lens .06" thick with opal satin finish. Extended outer housing provides cutoff to illuminated lens.

### Electrical

Standard 120-277V driver includes 0-10V analog dimming. Power factor > .9.

### Labels

UL and cUL listed. Suitable for Dry or Damp Locations, indoor use only. Suitable for wood ceiling applications.

### Finish

Polyester powder coat applied over a 5-stage pre–treatment.

### Lumen Maintenance

L70 at 50,000 hours.

### Warranty

LED system rated for operation in ambient environments up to 25°C. 5 year limited warranty.

## ORDERING

| | | |
|---|---|---|
| **Luminaire Series** | | **FTRL** |
| Trace | FTRL | |
| **Shielding** | | **AC** |
| Frosted Acrylic Diffuser | AC | |
| **LED System** | | **LL1** |
| Standard Output | LL1 | |
| **Color Temperature** | | |
| 3000K | 30K | |
| 3500K | 35K | |
| **Circuits** | | **1C** |
| Single Circuit | 1C | |
| **Voltage** | | |
| 120 Volt | 120 | |
| 277 Volt | 277 | |
| **Driver** | | |
| 0-10V Dimming | LD1 | |
| **Mounting** | | |
| Grid | G | |
| Drywall | XF | |
| **Factory Options** | | |
| Chicago Plenum | CP | |
| Emergency Circuit* | EC | |
| Flanged Ends | FL | |
| HLR/GLR Fuse | FU | |
| Sliding Sleeve | SS | |
| Sliding Sleeve Pair (3' minimum length) | SSB | |
| **Finish** | | **WH** |
| Matte White Housing | WH | |
| **Luminaire Length** | | |
| Specify luminaire/row length in 1' increments (2' minimum) | XX' | |
| **Corner Options** | | |
| 90-degree Inside Corner | FTRL-IC90 | |
| 90-degree Outside Corner | FTRL-OC90 | |



*For more information visit focalpointlights.com/reference or consult factory.

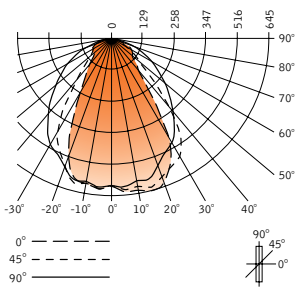
# Trace®™

**LED**

**FTRL-AC-LL1-L30-1C-120-LD1-G-WH-4’**

| | | | |
|---|---|---|---|
| Filename: | FTRLLL1L30G.IES | Lumens: | 1207lm |
| Test #: | 16610.0 | System Watts: | 22.9W |
| | | LPW: | 53 |

## CANDELPOWER DISTRIBUTION




| Vertical Angle | Horizontal Angle 0° | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|---|---|---|---|---|---|---|
| 0˚ | 601 | 601 | 601 | 601 | 601 | |
| 5˚ | 629 | 619 | 608 | 614 | 616 | 59 |
| 15˚ | 645 | 629 | 594 | 607 | 588 | 173 |
| 25˚ | 572 | 581 | 521 | 502 | 378 | 243 |
| 35˚ | 311 | 499 | 459 | 331 | 170 | 242 |
| 45˚ | 153 | 258 | 347 | 146 | 95 | 194 |
| 55˚ | 111 | 133 | 245 | 86 | 90 | 143 |
| 65˚ | 71 | 95 | 157 | 77 | 71 | 88 |
| 75˚ | 31 | 46 | 73 | 46 | 38 | 48 |
| 85˚ | 5 | 11 | 15 | 16 | 11 | 16 |
| 90˚ | 0 | 0 | 0 | 0 | 0 | |
| 95˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 105˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 115˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 125˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 135˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 145˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 155˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 165˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 175˚ | 0 | 0 | 0 | 0 | 0 | 0 |
| 180˚ | 0 | 0 | 0 | 0 | 0 | |

## LUMEN SUMMARY

| | Zone | Lumens | % Fixture |
|---|---|---|---|
| | 0-30˚ | 475 | 39.4 |
| | 0-40˚ | 717 | 59.4 |
| | 0-60˚ | 1054 | 87.3 |
| | 0-90˚ | 1207 | 100 |
| Total Luminaire | 0-180˚ | **1207** | **100** |

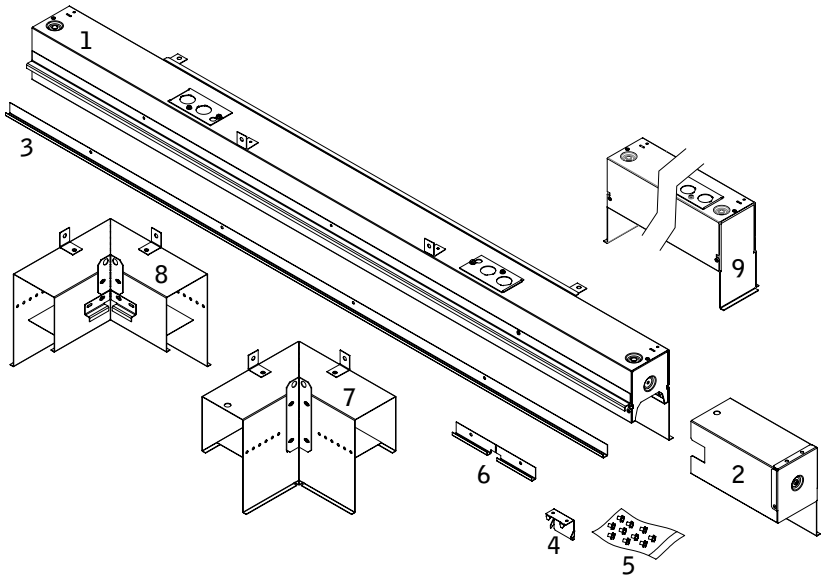
Go to www.focalpointlights.com for additional photometric data.

# trace™
FTRL

FOCAL POINT

**⚠ MUST BE INSTALLED PRIOR TO DRYWALL /HARD CEILING ⚠**
**READ ALL INSTALLATION INSTRUCTIONS BEFORE BEGINNING INSTALLATION**

## FOCAL POINT PARTS




## KEY

ATTENTION

POWER OFF

POWER ON

## PARTS LIST

1 HOUSING

2 SLIDING SLEEVE (SS)
(SHIPPED INSTALLED. SSB INDICATES A SLIDING SLEEVE AT BOTH ENDS)

3 J-RAIL

4 JOINER BRACKET

5 HARDWARE BAG

6 CORNER J-RAIL

7 INSIDE CORNER
(SHIPPED INSTALLED.)

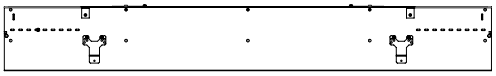
8 OUTSIDE CORNER
(SHIPPED INSTALLED.)

9 FINISH FLANGES
(SHIPPED INSTALLED)

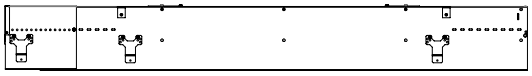
## BY OTHERS

GRID CEILING - 15/16" OR 9/16" FLAT TEE MAIN RUNNER REQUIRED FOR FINISH EDGE.

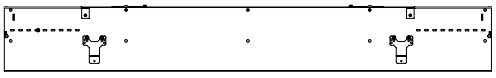
## HOUSING TYPES (4' SHOWN)



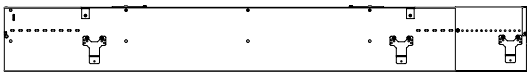
INDIVIDUAL (MAY INCLUDE SLIDING SLEEVES)



START (SHOWN WITH SLIDING SLEEVE)



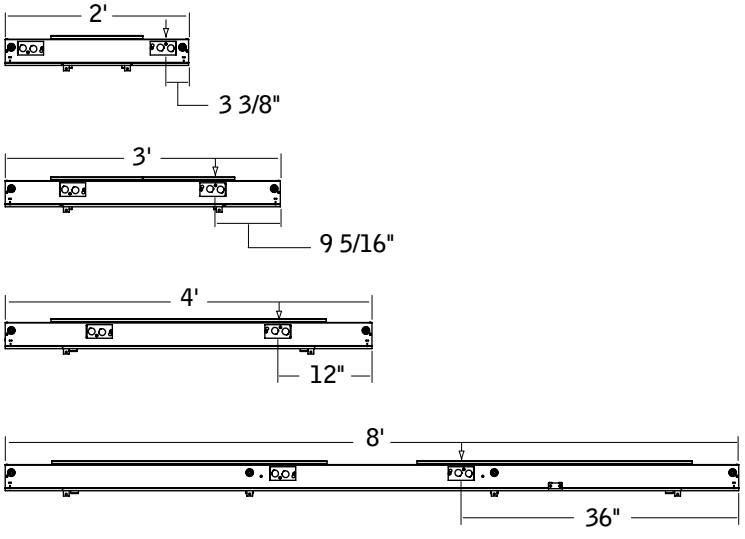
INTERMEDIATE



END (SHOWN WITH SLIDING SLEEVE)

## FEED LOCATIONS

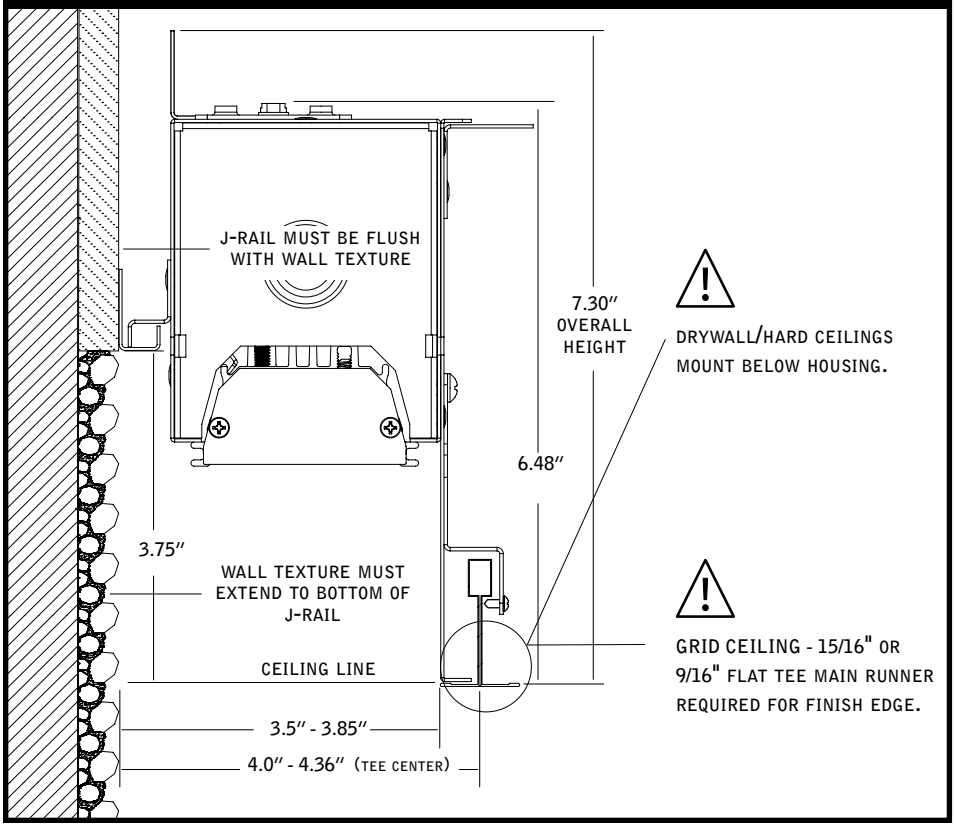
INDICATES FEED LOCATION




THRU-WIRING NOT AVAILABLE. EACH HOUSING SECTION REQUIRES ITS OWN FEED.

Luminaires must be installed by a qualified electrician (check with local and national codes for proper installation).
To prevent electrical shock, disconnect electrical supply before installation or servicing.

## WALL/CEILING PREP




## BASIC INSTALLATION

STEPS 1-8

SLIDING SLEEVES SEE PG 3
CORNERS SEE PG 4

FOCAL POINT RECOMMENDS STARTING WITH CORNER INSTALLATION IF APPLICABLE

SLIDING SLEEVE PAIRS (SSB) START & END WITH A SLIDING SLEEVE

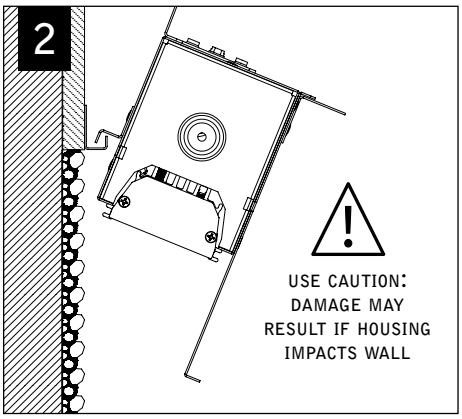
1



MOUNT J-RAIL TO WALL

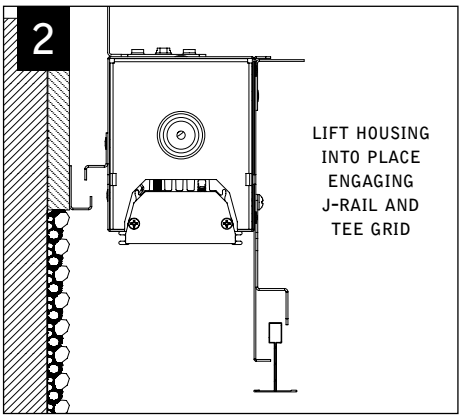
## DRYWALL/HARD CEILING

2




## GRID

2

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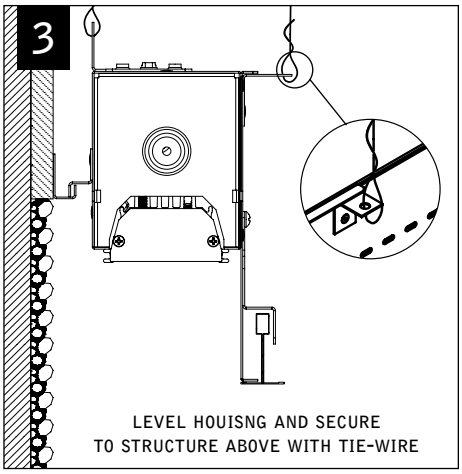


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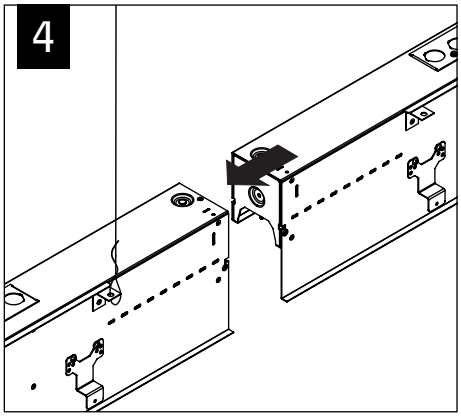

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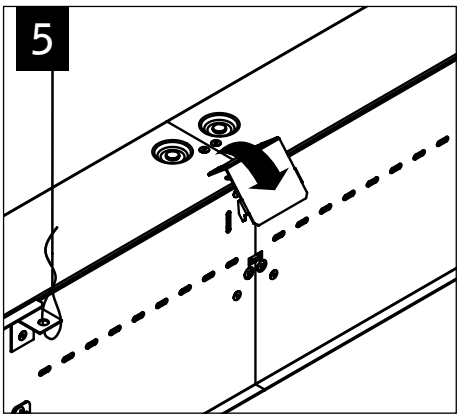

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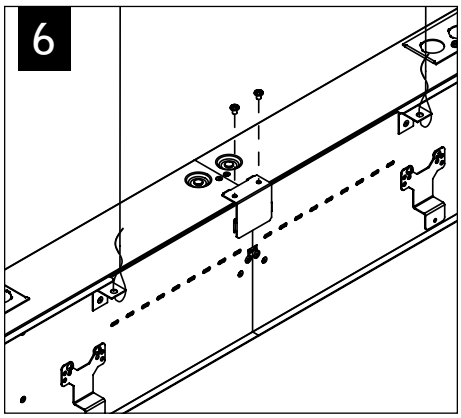
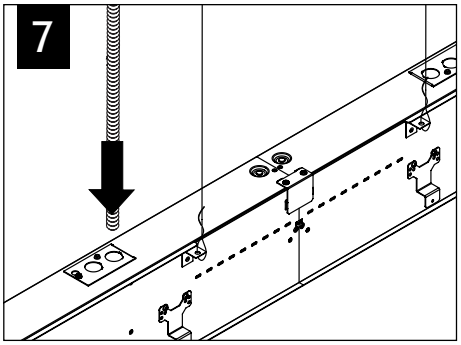


REPEAT STEPS 2 - 6 FOR EACH HOUSING SECTION

Luminaires must be installed by a qualified electrician (check with local and national codes for proper installation).
To prevent electrical shock, disconnect electrical supply before installation or servicing.

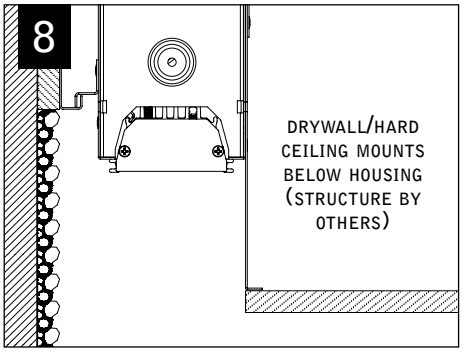
7



MAKE ELECTRICAL CONNECTIONS

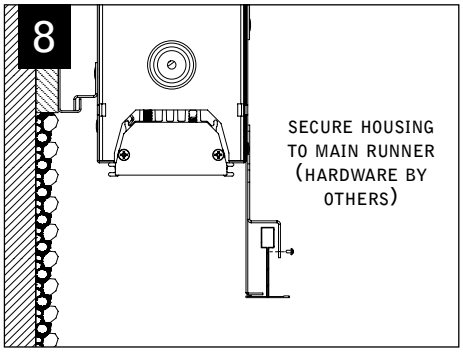
## DRYWALL/HARD CEILING

8




## GRID

8




## SLIDING SLEEVES

⚠ MAX LENGTH 6" PER SLEEVE

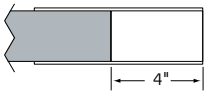
⚠ SLIDING SLEEVES & CORNERS DO NOT INTEGRATE

SINGLE SLIDING SLEEVE (SS):

EXAMPLE:

20' 4" RUN LENGTH - 20' HOUSING =

4" SLIDING SLEEVE

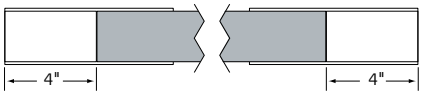



SLIDING SLEEVE PAIR (SSB):

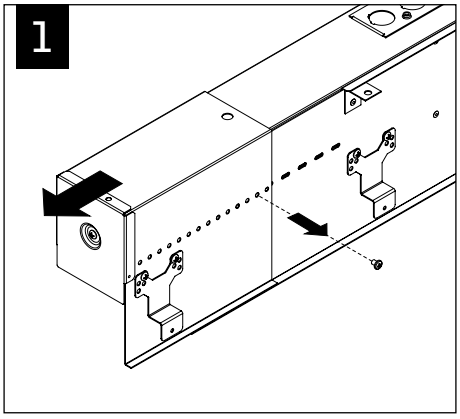
EXAMPLE:

(20' 8" RUN LENGTH - 20' HOUSING) / 2 =

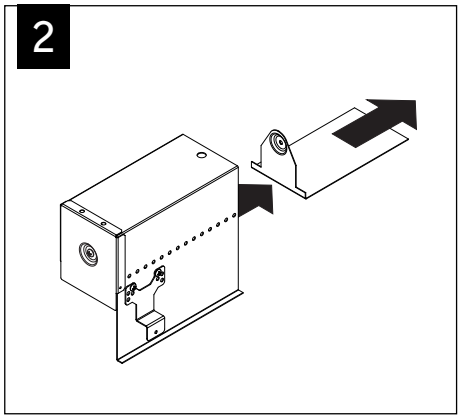
4" SLIDING SLEEVE ON EACH END




1



2



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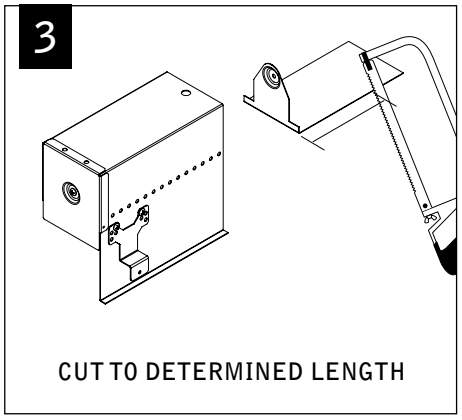
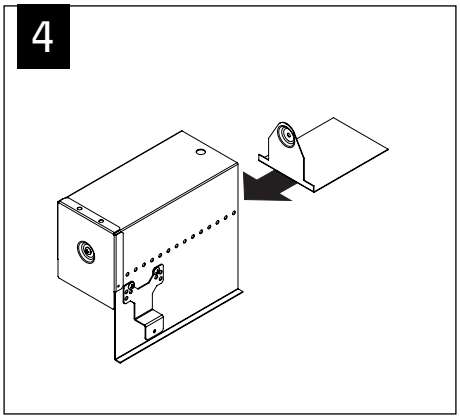


CUT TO DETERMINED LENGTH

4



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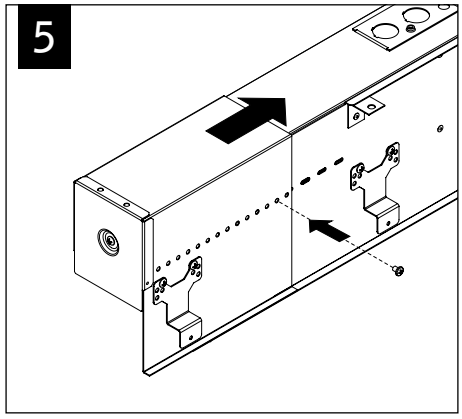
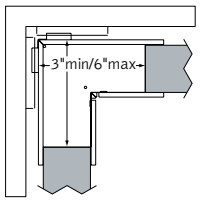


Luminaires must be installed by a qualified electrician (check with local and national codes for proper installation).
To prevent electrical shock, disconnect electrical supply before installation or servicing.

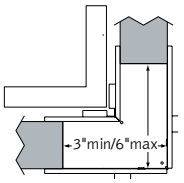
## CORNERS

3" MIN / 6" MAX PER SIDE

INSIDE CORNER:

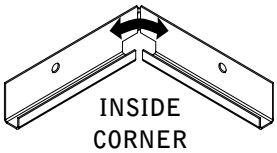



OUTSIDE CORNER:

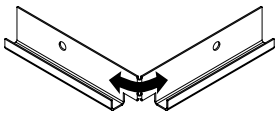



CORNERS &
SLIDING SLEEVES
DO NOT INTEGRATE

1

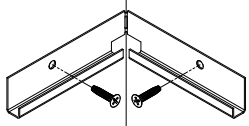


INSIDE
CORNER



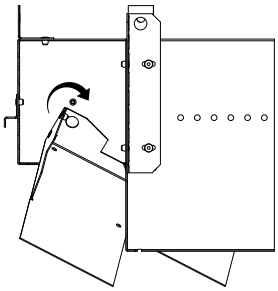
OUTSIDE CORNER

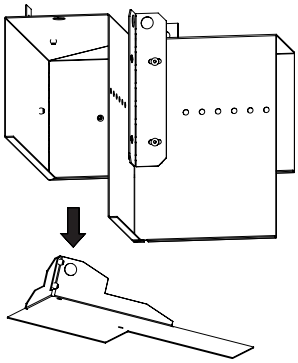
2



INSIDE CORNER SHOWN

3





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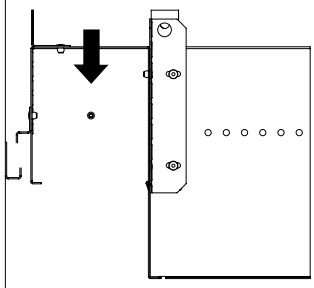
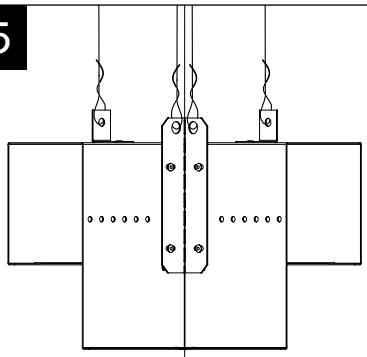


LIFT HOUSING INTO PLACE
ENGAGING J-RAIL

5



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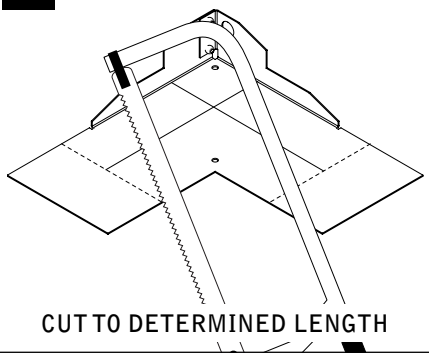
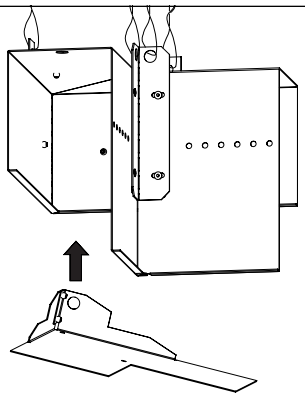
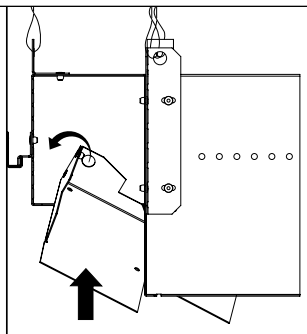


CUT TO DETERMINED LENGTH

7





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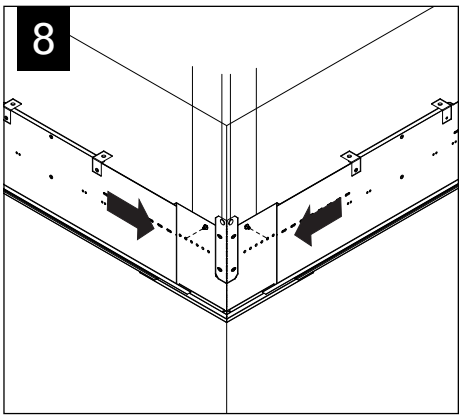

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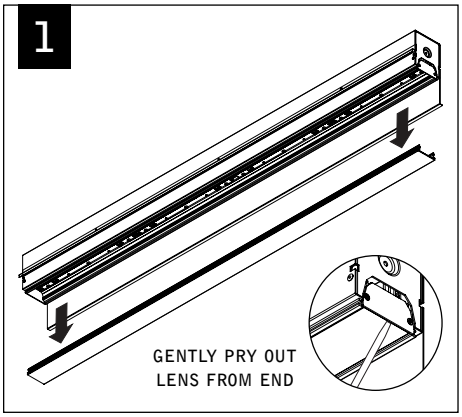
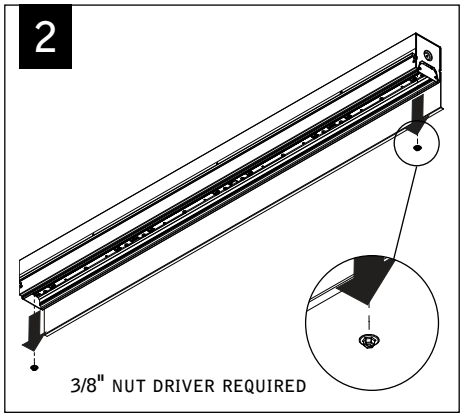
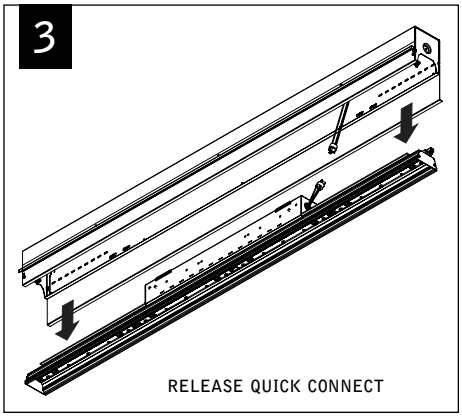
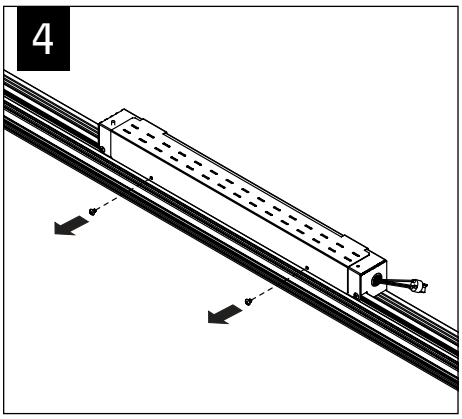
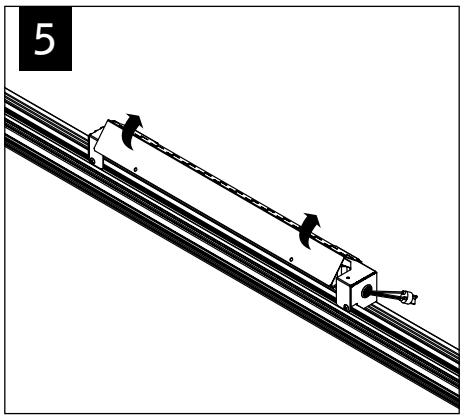
## SERVICE

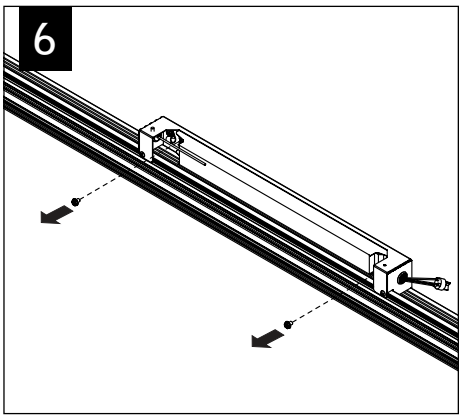


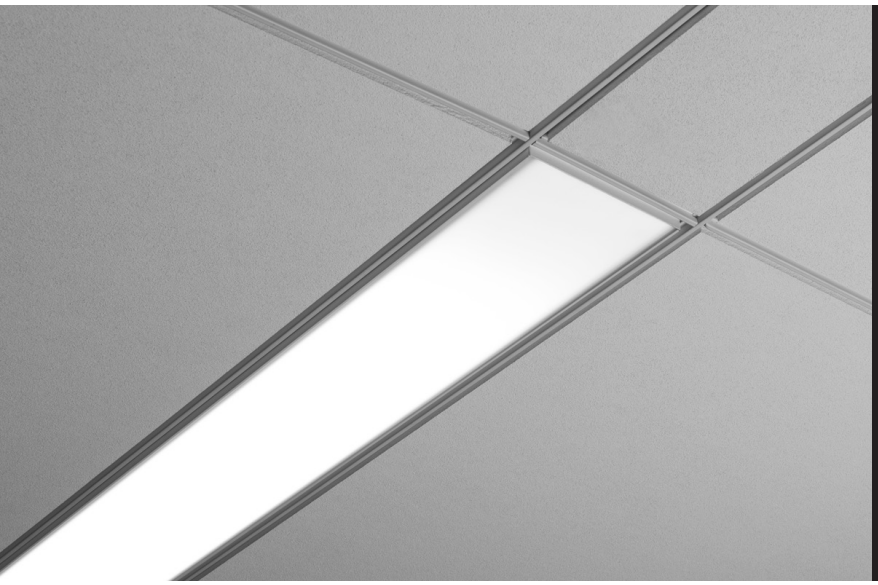



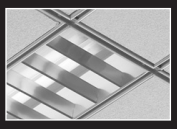



# Seem® 6

## FLUORESCENT GRID

FOCAL POINT®

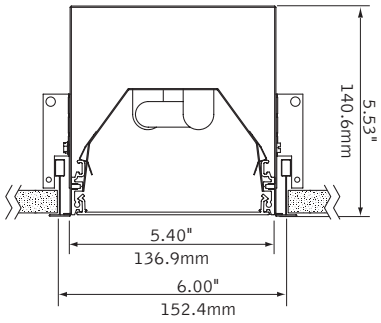




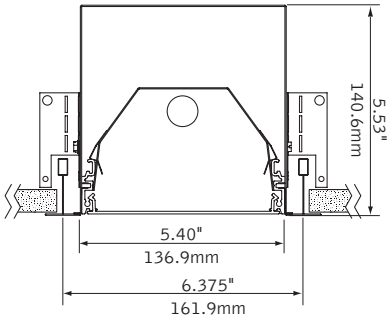
parabolic louver

## DIMENSIONAL DATA

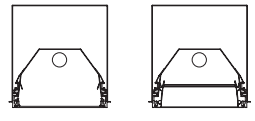
9/16" grid




15/16" grid




shielding options



flush lens parabolic louver

## FEATURES

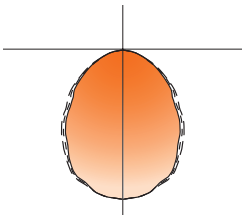
Narrow 6" aperture slot fluorescent luminaire that integrates with the ceiling for a clean unobtrusive aesthetic.

Frosted acrylic flush lens provides even illumination, high performance lens also available for increased efficiency. Parabolic Louver also available.

Allows for individual and continuous row mount in grid applications.

Available in 1 or 2 lamp T5, T5HO or T8 configurations, Seem 6 provides continuous illumination by combining 3' and 4' staggered lamps. Specify 1 lamp for even appearance and minimal lamp image, or 2 lamps when higher light levels are required.

## PERFORMANCE



### PRODUCT OVERVIEW

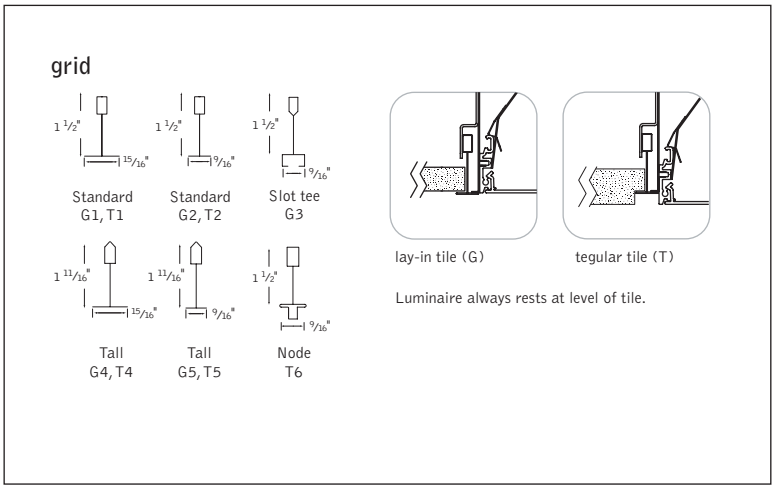
| | |
|---|---|
| Lumen Output: | 1730-7190lm |
| Wattage: | 33-120W |
| Lamping: | T5, T5HO, T8 |

| 1-Lamp T5 High Performance Lens | 1-Lamp T5 Flush Satin Lens |
|---|---|
| **73% Efficient** | **60% Efficient** |
| **922 cd @ 0˚** | **619 cd @ 5˚** |

Visit focalpointlights.com for complete photometric data.

fixture: project:

## MOUNTING INFORMATION




## SPECIFICATIONS

### Construction

Die–formed one-piece 20 Ga. steel housing with extruded aluminum reflector and lens attachment rails. 16 Ga. internal bulkhead. 20 Ga. steel end caps. Earthquake brackets supplied as standard.

Lengths 6' and longer configured with staggered lamps (6' & 8' T8 configured with non-staggered lamps). 1-lamp T8: 4.47" overlap, 2-lamp T8: 9.35" overlap, 1-lamp T5/T5HO: 4.35" overlap, 2-lamp T5/T5HO: 2.00" overlap.

2' unit weight: 9lbs., 3' unit weight: 13lbs., 4' unit weight: 17lbs., 5' unit weight: 20lbs., 6' unit weight: 23lbs., 8' unit weight: 31lbs.

### Optic

Reflectors fabricated of 20 Ga. steel finished in High Reflectance White powder coat. Flush satin lens: extruded acrylic lens .07" thick with satin finish. High performance flush lens: extruded acrylic lens .07" thick with increased light transmission. Paraboic louver: .75"H x 1.5" frequency fabricated of low iridescent, semi-specular premium grade aluminum.

### Electrical

Luminaires are pre–wired with factory installed branch circuit wiring and over-molded quick connects. Electronic fluorescent ballasts are thermally protected and have a Class "P" rating. Optional dimming ballasts available.

### Labels

UL and cUL listed.

### Finish

Housing: High reflectance white pre-paint. Aluminum Rails: Polyester powder coat applied over a 5-stage pre-treatment.

## ORDERING

| | | |
|---|---|---|
| **Luminaire Series** | | **FSM6** |
| Seem 6 | FSM6 | |
| **Shielding** | | _____ |
| Flush Satin Lens | FL | |
| High Performance Flush Lens (lamp image may be visible) | FLXP | |
| Parabolic Louver | PL | |
| **Lamping** | | _____ |
| One Lamp T8 | 1T8 | |
| Two Lamp T8 | 2T8 | |
| One Lamp T5 | 1T5 | |
| Two Lamp T5 | 2T5 | |
| One Lamp T5HO | 1T5HO | |
| Two Lamp T5HO | 2T5HO | |
| **Circuit** | | _____ |
| Single Circuit | 1C | |
| Dual Circuit (2-lamp luminaires only) | 2C | |
| **Voltage** | | _____ |
| 120 Volt | 120 | |
| 277 Volt | 277 | |
| 347 Volt | 347 | |
| **Ballast** | | _____ |
| Electronic Instant Start (T8 only) (maximum <20% THD) | E | |
| Electronic Program Start <10% THD | S | |
| Electronic Dimming Ballast* | D | |
| **Ceiling Configurations** (9/16" grid = 6.000" tee spacing 15/16" grid = 6.375" tee spacing) | | _____ |
| Std. 15/16" Lay-in | G1 | |
| Std. 15/16" Tegular | T1 | |
| Std. 9/16" Lay-in | G2 | |
| Std. 9/16" Tegular | T2 | |
| 9/16" Slot-tee Tegular | G3 | |
| Tall 15/16" Lay-in | G4 | |
| Tall 15/16" Tegular | T4 | |
| Tall 9/16" Lay-in | G5 | |
| Tall 9/16" Tegular | T5 | |
| Node 9/16" Tegular | T6 | |
| **Factory Options** | | |
| Chicago Plenum | CP | _____ |
| Emergency Circuit* | EC | _____ |
| Emergency Battery Pack* | EM | _____ |
| Flex Whip* | FW | _____ |
| HLR/GLR Fuse | FU | _____ |
| Include 3000K Lamp* | L830 | |
| Include 3500K Lamp* | L835 | |
| Include 4100K Lamp* | L841 | |
| **Finish** | | **WH** |
| Matte White Housing | WH | |
| **Luminaire Length** (designed to fit standard grid lengths) | | _____ |
| Specify luminaire/row length in 1' increments (lengths 6' and longer configured with staggered lamps. 6' & 8' 2-lamp T8 configured with non-staggered lamps) | X' | |



*For more information visit focalpointlights.com/reference or consult factory.

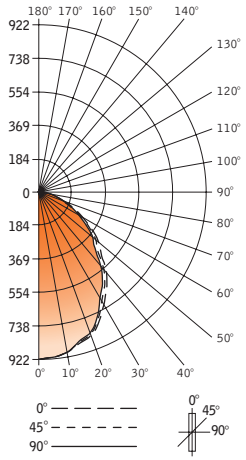
# Seem® 6

## FLUORESCENT - HIGH PERFORMANCE FLUSH LENS

### FSM6-FLXP-1T5-1C-120-S-WH-4'

Filename: FSM6FLXP1T5.IES
Test #: 16086.0
Lumens: 2110lm
Efficiency 73%

## CANDELPOWER DISTRIBUTION




| Vertical Angle | Horizontal Angle 0° | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|---|---|---|---|---|---|---|
| 0° | 922 | 922 | 922 | 922 | 922 | |
| 5° | 916 | 918 | 916 | 915 | 916 | 88 |
| 15° | 865 | 865 | 862 | 859 | 856 | 244 |
| 25° | 792 | 790 | 781 | 771 | 770 | 361 |
| 35° | 657 | 653 | 639 | 623 | 617 | 401 |
| 45° | 484 | 476 | 459 | 444 | 437 | 356 |
| 55° | 361 | 355 | 341 | 326 | 320 | 306 |
| 65° | 224 | 220 | 210 | 202 | 199 | 209 |
| 75° | 113 | 111 | 108 | 103 | 102 | 114 |
| 85° | 31 | 29 | 29 | 28 | 27 | 31 |
| 90° | 0 | 0 | 0 | 0 | 0 | |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | |

## LUMEN SUMMARY

| | Zone | Lumens | % Lamp | % Fixture |
|---|---|---|---|---|
| | 0-30° | 639 | 23.9 | 32.8 |
| | 0-40° | 1094 | 37.7 | 51.8 |
| | 0-60° | 1756 | 60.5 | 83.2 |
| | 0-90° | 2110 | 72.8 | 100 |
| Total Luminaire | 0-180° | **2110** | **72.8** | **100** |

## LUMINANCE DATA (CD/M²)

| Vertical Angle | 0° | 45° | 90° |
|---|---|---|---|
| 45° | 4371 | 4145 | 3946 |
| 55° | 4019 | 3796 | 3563 |
| 65° | 3385 | 3173 | 3007 |
| 75° | 2788 | 2665 | 2517 |
| 85° | 271 | 2125 | 1978 |

## CO-EFFICIENTS OF UTILIZATION

| Floor | | 20 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling | | 80 | | | | 70 | | | 50 | | 30 | | 10 | 00 |
| Wall | | 70 | 50 | 30 | 10 | 70 | 50 | 10 | 50 | 10 | 50 | 10 | 00 | 00 |
| RCR | 0 | 87 | 87 | 87 | 87 | 85 | 85 | 85 | 81 | 81 | 77 | 77 | 74 | 73 |
| | 1 | 80 | 77 | 74 | 72 | 78 | 76 | 74 | 73 | 69 | 70 | 67 | 67 | 63 |
| | 2 | 74 | 69 | 64 | 61 | 72 | 67 | 60 | 65 | 59 | 63 | 57 | 60 | 56 | 55 |
| | 3 | 68 | 61 | 56 | 52 | 67 | 60 | 51 | 58 | 51 | 56 | 50 | 55 | 49 | 47 |
| | 4 | 63 | 55 | 49 | 45 | 61 | 54 | 45 | 52 | 44 | 51 | 43 | 49 | 43 | 41 |
| | 5 | 58 | 49 | 43 | 39 | 56 | 48 | 38 | 47 | 38 | 45 | 38 | 44 | 37 | 36 |
| | 6 | 53 | 44 | 38 | 34 | 52 | 44 | 34 | 42 | 33 | 41 | 33 | 40 | 33 | 31 |
| | 7 | 49 | 40 | 34 | 30 | 42 | 40 | 30 | 38 | 30 | 37 | 29 | 36 | 29 | 28 |
| | 8 | 46 | 36 | 30 | 26 | 45 | 36 | 26 | 35 | 26 | 34 | 26 | 33 | 26 | 24 |
| | 9 | 42 | 33 | 27 | 23 | 41 | 32 | 23 | 31 | 23 | 31 | 23 | 30 | 22 | 21 |
| | 10 | 39 | 30 | 24 | 20 | 38 | 29 | 20 | 29 | 20 | 28 | 20 | 27 | 20 | 19 |

Numbers indicate percentage values of reflectivity.

Go to www.focalpointlights.com for additional photometric data.

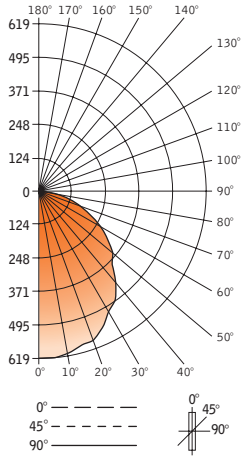
# Seem® 6

## FLUORESCENT - FLUSH LENS

### FSM6-FL-1T5-1C-120-S-WH-4'

Filename: FSM6FL1T5.IES
Test #: 16085.0
Lumens: 1740lm
Efficiency 60%

## CANDELPOWER DISTRIBUTION




| Vertical Angle | Horizontal Angle 0° | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|---|---|---|---|---|---|---|
| 0° | 617 | 617 | 617 | 617 | 617 | |
| 5° | 619 | 617 | 617 | 617 | 617 | 59 |
| 15° | 592 | 592 | 592 | 592 | 592 | 168 |
| 25° | 559 | 558 | 558 | 559 | 559 | 259 |
| 35° | 492 | 492 | 492 | 492 | 492 | 309 |
| 45° | 384 | 384 | 384 | 384 | 385 | 298 |
| 55° | 311 | 311 | 311 | 313 | 311 | 280 |
| 65° | 212 | 212 | 212 | 213 | 213 | 211 |
| 75° | 115 | 116 | 118 | 118 | 118 | 124 |
| 85° | 31 | 32 | 31 | 32 | 32 | 35 |
| 90° | 0 | 0 | 0 | 0 | 0 | |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | |

## LUMEN SUMMARY

| | Zone | Lumens | % Lamp | % Fixture |
|---|---|---|---|---|
| | 0-30° | 485 | 16.7 | 27.9 |
| | 0-40° | 794 | 27.4 | 45.6 |
| | 0-60° | 1371 | 47.3 | 78.8 |
| | 0-90° | 1740 | 60.0 | 100 |
| Total Luminaire | 0-180° | **1740** | **60.0** | **100** |

## LUMINANCE DATA (CD/M²)

| Vertical Angle | 0° | 45° | 90° |
|---|---|---|---|
| 45° | 3468 | 3468 | 3477 |
| 55° | 3462 | 3462 | 3462 |
| 65° | 3203 | 3203 | 3218 |
| 75° | 2837 | 2911 | 2911 |
| 85° | 2271 | 2271 | 2344 |

## CO-EFFICIENTS OF UTILIZATION

| Floor | | 20 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling | | 80 | | | | 70 | | | 50 | | 30 | | 10 | 00 |
| Wall | | 70 | 50 | 30 | 10 | 70 | 50 | 10 | 50 | 10 | 50 | 10 | 00 | 00 |
| RCR | 0 | 71 | 71 | 71 | 71 | 70 | 70 | 70 | 67 | 67 | 64 | 64 | 61 | 60 |
| | 1 | 66 | 63 | 61 | 58 | 64 | 62 | 57 | 59 | 56 | 57 | 54 | 55 | 52 | 51 |
| | 2 | 60 | 55 | 52 | 48 | 59 | 54 | 48 | 52 | 47 | 50 | 46 | 48 | 45 | 43 |
| | 3 | 55 | 49 | 44 | 41 | 54 | 48 | 40 | 46 | 40 | 45 | 39 | 43 | 38 | 37 |
| | 4 | 51 | 44 | 39 | 35 | 49 | 43 | 34 | 41 | 34 | 40 | 34 | 39 | 33 | 32 |
| | 5 | 46 | 39 | 33 | 29 | 45 | 38 | 29 | 37 | 29 | 36 | 29 | 34 | 28 | 27 |
| | 6 | 43 | 35 | 29 | 26 | 41 | 34 | 26 | 33 | 25 | 32 | 25 | 31 | 25 | 24 |
| | 7 | 39 | 31 | 26 | 22 | 38 | 31 | 22 | 30 | 22 | 29 | 22 | 28 | 22 | 20 |
| | 8 | 36 | 28 | 23 | 19 | 35 | 27 | 19 | 27 | 19 | 26 | 19 | 25 | 19 | 18 |
| | 9 | 33 | 25 | 20 | 17 | 32 | 25 | 17 | 24 | 17 | 23 | 16 | 23 | 16 | 15 |
| | 10 | 32 | 23 | 18 | 15 | 30 | 22 | 15 | 22 | 15 | 21 | 15 | 21 | 14 | 13 |

Numbers indicate percentage values of reflectivity.

Go to www.focalpointlights.com for additional photometric data.

note: Photometric testing performed in an independent lab with standard lamps and ballasts. Lamp and ballast type and configuration will affect photometric performance.

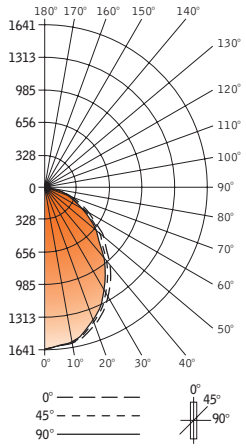
# Seem® 6

## FLUORESCENT - HIGH PERFORMANCE FLUSH LENS

### FSM6-FLXP-2T5-1C-120-S-WH-4'

Filename: FSM6FLXP2T5.IES
Test #: 16084.0
Lumens: 3712lm
Efficiency 64%

## CANDELPOWER DISTRIBUTION




| Vertical Angle | Horizontal Angle 0° | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|---|---|---|---|---|---|---|
| 0° | 1641 | 1641 | 1641 | 1641 | 1641 | |
| 5° | 1615 | 1614 | 1612 | 1612 | 1609 | 154 |
| 15° | 1552 | 1547 | 1540 | 1529 | 1526 | 436 |
| 25° | 1395 | 1385 | 1362 | 1341 | 1330 | 631 |
| 35° | 1151 | 1138 | 1106 | 1072 | 1063 | 695 |
| 45° | 869 | 853 | 816 | 787 | 771 | 634 |
| 55° | 641 | 627 | 598 | 570 | 561 | 537 |
| 65° | 400 | 390 | 371 | 355 | 345 | 369 |
| 75° | 198 | 196 | 187 | 179 | 177 | 198 |
| 85° | 55 | 55 | 52 | 50 | 49 | 57 |
| 90° | 0 | 0 | 0 | 0 | 0 | |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | |

## LUMEN SUMMARY

| | Zone | Lumens | % Lamp | % Fixture |
|---|---|---|---|---|
| | 0-30° | 1221 | 21.0 | 32.9 |
| | 0-40° | 1915 | 33.0 | 51.6 |
| | 0-60° | 3087 | 53.2 | 83.2 |
| | 0-90° | 3712 | 64.0 | 100 |
| Total Luminaire | 0-180° | **3712** | **64.0** | **100** |

## LUMINANCE DATA (CD/M²)

| Vertical Angle | 0° | 45° | 90° |
|---|---|---|---|
| 45° | 7848 | 7369 | 6963 |
| 55° | 7136 | 6657 | 6246 |
| 65° | 6044 | 5606 | 5213 |
| 75° | 4885 | 4614 | 4367 |
| 85° | 4030 | 3810 | 3590 |

## CO-EFFICIENTS OF UTILIZATION

| Floor | | 20 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling | | 80 | | | | 70 | | | 50 | | 30 | | 10 | 00 |
| Wall | | 70 | 50 | 30 | 10 | 70 | 50 | 10 | 50 | 10 | 50 | 10 | 00 | |
| RCR | 0 | 76 | 76 | 76 | 76 | 74 | 74 | 74 | 71 | 71 | 69 | 69 | 65 | 65 | 64 |
| | 1 | 71 | 68 | 66 | 63 | 69 | 66 | 62 | 64 | 60 | 61 | 59 | 59 | 57 | 56 |
| | 2 | 65 | 60 | 57 | 53 | 63 | 59 | 53 | 57 | 51 | 55 | 50 | 53 | 49 | 48 |
| | 3 | 60 | 54 | 49 | 46 | 59 | 53 | 45 | 51 | 44 | 50 | 44 | 48 | 43 | 42 |
| | 4 | 55 | 48 | 43 | 39 | 54 | 48 | 39 | 46 | 39 | 45 | 38 | 43 | 38 | 36 |
| | 5 | 51 | 43 | 38 | 34 | 50 | 43 | 34 | 41 | 33 | 40 | 33 | 39 | 33 | 31 |
| | 6 | 47 | 39 | 34 | 30 | 46 | 38 | 30 | 37 | 29 | 36 | 29 | 35 | 29 | 28 |
| | 7 | 43 | 35 | 30 | 26 | 42 | 35 | 26 | 34 | 26 | 33 | 26 | 32 | 26 | 24 |
| | 8 | 40 | 32 | 27 | 23 | 39 | 31 | 23 | 31 | 23 | 30 | 23 | 29 | 22 | 21 |
| | 9 | 37 | 29 | 24 | 20 | 36 | 28 | 20 | 28 | 20 | 27 | 20 | 26 | 20 | 19 |
| | 10 | 34 | 26 | 21 | 18 | 34 | 26 | 18 | 25 | 18 | 25 | 18 | 24 | 18 | 16 |

Numbers indicate percentage values of reflectivity.

Go to www.focalpointlights.com for additional photometric data.

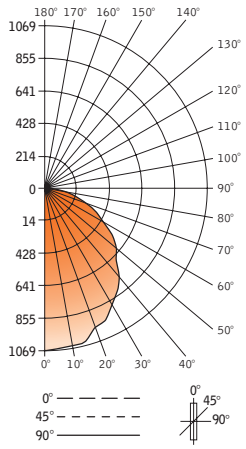
# Seem® 6

## FLUORESCENT - FLUSH LENS

### FSM6-FL-2T5-1C-120-S-WH-4'

Filename: FSM6FL2T5.IES
Test #: 16083.0
Lumens: 3020lm
Efficiency 52%

## CANDELPOWER DISTRIBUTION




| Vertical Angle | Horizontal Angle 0° | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|---|---|---|---|---|---|---|
| 0° | 1069 | 1069 | 1069 | 1069 | 1069 | |
| 5° | 1062 | 1062 | 1061 | 1061 | 1062 | 101 |
| 15° | 1046 | 1046 | 1046 | 1046 | 1046 | 297 |
| 25° | 958 | 958 | 958 | 958 | 958 | 443 |
| 35° | 838 | 838 | 838 | 838 | 836 | 526 |
| 45° | 670 | 670 | 668 | 670 | 671 | 519 |
| 55° | 543 | 541 | 546 | 546 | 543 | 488 |
| 65° | 369 | 369 | 371 | 372 | 373 | 368 |
| 75° | 204 | 204 | 204 | 204 | 206 | 216 |
| 85° | 57 | 57 | 57 | 57 | 57 | 62 |
| 90° | 0 | 0 | 0 | 0 | 0 | |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | |

## LUMEN SUMMARY

| | Zone | Lumens | % Lamp | % Fixture |
|---|---|---|---|---|
| | 0-30° | 841 | 14.5 | 27.9 |
| | 0-40° | 1368 | 23.6 | 45.3 |
| | 0-60° | 2374 | 40.9 | 78.6 |
| | 0-90° | 3020 | 52.1 | 100 |
| Total Luminaire | 0-180° | **3020** | **52.1** | **100** |

## LUMINANCE DATA (CD/M²)

| Vertical Angle | 0° | 45° | 90° |
|---|---|---|---|
| 45° | 6050 | 6032 | 6059 |
| 55° | 6045 | 6079 | 6045 |
| 65° | 5575 | 5606 | 5636 |
| 75° | 5033 | 5033 | 5082 |
| 85° | 4176 | 4176 | 4176 |

## CO-EFFICIENTS OF UTILIZATION

| Floor | | 20 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling | | 80 | | | | 70 | | | 50 | | 30 | | 10 | 00 |
| Wall | | 70 | 50 | 30 | 10 | 70 | 50 | 10 | 50 | 10 | 50 | 10 | 00 | |
| RCR | 0 | 62 | 62 | 62 | 62 | 61 | 61 | 61 | 58 | 58 | 55 | 55 | 53 | 53 | 52 |
| | 1 | 57 | 55 | 53 | 51 | 56 | 53 | 50 | 51 | 48 | 49 | 47 | 47 | 45 | 44 |
| | 2 | 52 | 48 | 45 | 42 | 51 | 47 | 41 | 45 | 40 | 44 | 39 | 42 | 39 | 37 |
| | 3 | 48 | 43 | 39 | 35 | 47 | 42 | 35 | 40 | 34 | 39 | 34 | 38 | 33 | 32 |
| | 4 | 44 | 38 | 33 | 30 | 43 | 37 | 30 | 36 | 29 | 35 | 29 | 34 | 29 | 28 |
| | 5 | 40 | 33 | 29 | 25 | 39 | 33 | 25 | 32 | 25 | 31 | 25 | 30 | 25 | 23 |
| | 6 | 37 | 30 | 25 | 22 | 36 | 29 | 22 | 29 | 22 | 28 | 22 | 27 | 21 | 20 |
| | 7 | 34 | 27 | 22 | 19 | 33 | 27 | 19 | 26 | 19 | 25 | 19 | 24 | 19 | 18 |
| | 8 | 31 | 24 | 20 | 17 | 30 | 24 | 17 | 23 | 17 | 22 | 16 | 22 | 16 | 15 |
| | 9 | 29 | 22 | 17 | 14 | 28 | 21 | 14 | 21 | 14 | 20 | 14 | 20 | 14 | 13 |
| | 10 | 27 | 20 | 16 | 13 | 26 | 19 | 13 | 19 | 13 | 18 | 13 | 18 | 13 | 12 |

Numbers indicate percentage values of reflectivity.

Go to www.focalpointlights.com for additional photometric data.

note: Photometric testing performed in an independent lab with standard lamps and ballasts. Lamp and ballast type and configuration will affect photometric performance.

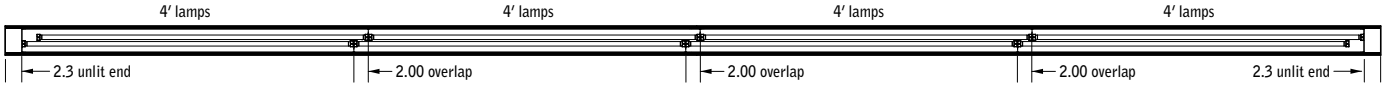
# Seem® 4 & 6

## FLUORESCENT RECESSED RUN GUIDE

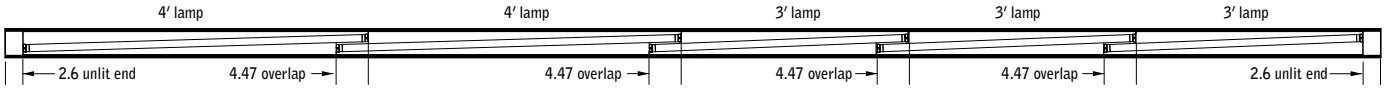
FOCAL POINT®

### EXAMPLE 16' RUN

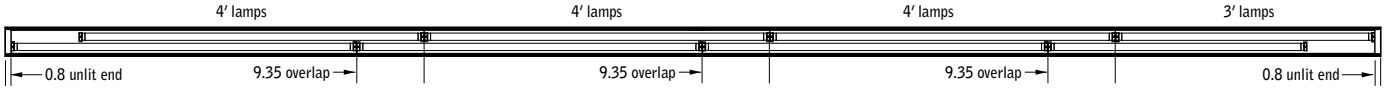

1-T5/T5HO




2-T5/T5HO (May exhibit noticeable socket shadows, color of lamp ends may be visible through lens)




1-T8




2-T8 (May exhibit noticeable socket shadows, color of lamp ends may be visible through lens)

Notes:

- Lamp overlap is consistent throughout run.
- Unlit ends vary to provide even light throughout run.
- Standard configurations listed, consult factory for additional options.
- 2T5HO not available with Seem 4

# Seem® 4 & 6

## FLUORESCENT RECESSED RUN GUIDE

FOCAL POINT®

| Nominal run length (ft) | 1-T5/T5HO (4.35" overlap) | | | 2-T5/T5HO (2.00" overlap) | | | 1-T8 (4.47" overlap) | | | 2-T8 (9.35" overlap) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lamp quantity | | Unlit ends (in) | Lamp quantity | | Unlit ends (in) | Lamp quantity | | Unlit ends (in) | Lamp quantity | | Unlit ends (in) |
| | 3' | 4' | | 3' | 4' | | 3' | 4' | | 3' | 4' | |
| 6 | | 2 | 0.3* | 4 | | 0.2 | 2 | | 1.8 | 4 | | 0.1* |
| 7 | | 2 | 0.3* | 2 | 2 | 0.3 | 1 | 1 | 1.8 | 4 | | 0.8 |
| 8 | 3 | | 0.5 | | 4 | 0.4 | | 2 | 1.8 | 2 | 2 | 0.8 |
| 9 | 2 | 1 | 0.6 | 6 | | 1.1 | 3 | | 4.0 | | 4 | 0.9 |
| 10 | 1 | 2 | 0.6 | 4 | 2 | 1.2 | 2 | 1 | 4.1 | 6 | | 0.8 |
| 11 | | 3 | 0.8 | 2 | 4 | 1.3 | 4 | | 0.3 | 4 | 2 | 0.8 |
| 12 | 2 | 2 | 0.3* | | 6 | 1.3 | 3 | 1 | 0.3 | 8 | | 0.1* |
| 13 | 5 | | 0.7 | 6 | 2 | 2.1 | 2 | 2 | 0.3 | | 6 | 0.8 |
| 14 | 4 | 1 | 0.8 | 4 | 4 | 2.2 | 1 | 3 | 0.3 | 6 | 2 | 0.8 |
| 15 | 3 | 2 | 0.8 | 2 | 6 | 2.3 | | 4 | 0.3 | 4 | 4 | 0.8 |
| 16 | 2 | 3 | 1.0 | | 8 | 2.3 | 3 | 2 | 2.6 | 2 | 6 | 0.8 |
| 17 | 1 | 4 | 1.1 | 6 | 4 | 3.0 | 2 | 3 | 2.6 | | 8 | 0.8 |
| 18 | | 5 | 1.1 | 4 | 6 | 3.1 | 1 | 4 | 2.6 | 6 | 4 | 0.8 |
| 19 | 6 | 1 | 0.8 | 2 | 8 | 3.2 | 7 | | 1.0 | 4 | 6 | 0.8 |
| 20 | 5 | 2 | 0.8 | | 10 | 3.3 | 6 | 1 | 1.0 | 2 | 8 | 0.8 |
| 21 | 4 | 3 | 1.0 | 6 | 6 | 4.0 | 5 | 2 | 1.1 | | 10 | 0.8 |
| 22 | 3 | 4 | 1.1 | 4 | 8 | 4.1 | 4 | 3 | 1.1 | 6 | 6 | 0.8 |
| 23 | 9 | | 1.1 | 2 | 10 | 4.2 | 3 | 4 | 1.1 | 4 | 8 | 0.8 |
| 24 | 1 | 6 | 0.9 | | 12 | 4.3 | 2 | 5 | 1.1 | 2 | 10 | 0.8 |
| 25 | 7 | 2 | 1.3 | 12 | 4 | 0.1* | 1 | 6 | 1.1 | | 12 | 0.8 |
| 26 | 6 | 3 | 1.2 | 18 | | 0.3 | | 7 | 1.2 | 6 | 8 | 0.8 |
| 27 | 5 | 4 | 1.3 | 16 | 2 | 0.3 | 10 | | 1.8 | 4 | 10 | 0.8 |
| 28 | 11 | | 1.0 | 14 | 4 | 0.4 | 9 | 1 | 1.8 | 2 | 12 | 0.8 |
| 29 | 10 | 1 | 1.1 | 12 | 6 | 0.6 | 8 | 2 | 1.8 | | 14 | 0.8 |
| 30 | 9 | 2 | 1.2 | 10 | 8 | 0.7 | 7 | 3 | 1.8 | 6 | 10 | 0.8 |
| 31 | 8 | 3 | 1.3 | | 16 | 0.2 | 6 | 4 | 1.8 | 4 | 12 | 0.8 |
| 32 | 7 | 4 | 1.4 | 6 | 12 | 0.8 | 5 | 5 | 1.8 | 2 | 14 | 0.8 |
| 33 | 13 | | 1.2 | 4 | 14 | 0.9 | 4 | 6 | 1.8 | | 16 | 0.8 |
| 34 | 12 | 1 | 1.2 | 2 | 16 | 1.1 | 3 | 7 | 1.9 | 6 | 12 | 0.8 |
| 35 | 11 | 2 | 1.3 | | 18 | 1.1 | 2 | 8 | 1.9 | 4 | 14 | 0.8 |
| 36 | 10 | 3 | 1.4 | 6 | 14 | 1.8 | 1 | 9 | 1.9 | 2 | 16 | 0.8 |
| 37 | 9 | 4 | 1.5 | 4 | 16 | 1.9 | 7 | 5 | 0.3 | | 18 | 0.9 |
| 38 | 15 | | 1.3 | 2 | 18 | 2.0 | 6 | 6 | 0.3 | 6 | 14 | 0.8 |
| 39 | 14 | 1 | 1.3 | | 20 | 2.1 | 5 | 7 | 0.4 | 4 | 16 | 0.8 |
| 40 | 13 | 2 | 1.4 | 6 | 16 | 2.8 | 4 | 8 | 0.4 | 2 | 18 | 0.8 |
| 41 | 12 | 3 | 1.6 | 4 | 18 | 2.8 | 3 | 9 | 0.4 | | 20 | 0.9 |
| 42 | 11 | 4 | 1.7 | 2 | 20 | 2.9 | 2 | 10 | 0.4 | 6 | 16 | 0.8 |
| 43 | 10 | 5 | 1.8 | | 22 | 3.1 | 1 | 11 | 0.4 | 4 | 18 | 0.9 |
| 44 | 9 | 6 | 1.9 | 6 | 18 | 3.7 | | 12 | 0.4 | 2 | 20 | 0.9 |
| 45 | 8 | 7 | 1.9 | 26 | 4 | 0.1* | 3 | 10 | 2.7 | | 22 | 0.9 |
| 46 | 7 | 8 | 2.1 | 32 | 0 | 0.7* | 2 | 11 | 2.7 | 6 | 18 | 0.9 |
| 47 | 13 | 4 | 1.8 | 22 | 8 | 0.3* | 1 | 12 | 2.7 | 4 | 20 | 0.9 |
| 48 | 19 | | 1.5 | 20 | 10 | 0.4* | 7 | 8 | 1.1 | 2 | 22 | 0.9 |

* special lamp stagger to decrease end darkness.
note: 2T5HO not available with Seem 4

# BeveLED 2.0

## PROJECT INFORMATION

PROJECT _____

_____

DATE _____

TYPE _____

# WALL WASH 3251

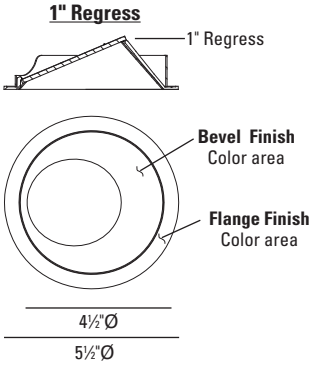
1" Regress

**BeveLED 2.0 Recessed Wall Wash** - It's a Downlight, Adjustable and Wall Wash - all in one housing - interchangeable anytime. The BeveLED 2.0 provides maximum delivered lumens and optical performance through the optimization of thermal, optical and LED science in the smallest possible aperture.

## DELIVERED PERFORMANCE

| BeveLED 2.0 WALL WASH | 12 Watts | | 16 Watts | | 24 Watts | | 33 Watts | |
|---|---|---|---|---|---|---|---|---|
| Color Rendering Index | 80+ CRI | 90+ HIGH CRI | 80+ CRI | 90+ HIGH CRI | 80+ CRI | 90+ HIGH CRI | 80+ CRI | 90+ HIGH CRI |
| Lumens per Watt | 42 | 38 | 44 | 36 | 40 | 33 | 36 | 30 |
| Source Lumens | 1150 | 1000 | 1575 | 1300 | 2175 | 1800 | 2725 | 2275 |
| **Delivered Lumens** | **500** | **450** | **700** | **575** | **950** | **800** | **1200** | **1000** |
| Color Consistency | 2-Step MacAdam Ellipse | | | | | | | |

Performance based on 3000K




| CCT MULTIPLIER | 2700K | | 3000K | | 3500K | 4000K |
|---|---|---|---|---|---|---|
| Color Rendering Index | 80+ CRI | 90+ HIGH CRI | 80+ CRI | 90+ HIGH CRI | 80+ CRI | 80+ CRI |
| Multiplier for Lumen Output | 0.91 | 0.78 | 1.00 | .83 | 1.00 | 1.09 |

## HOW TO SPECIFY

**Ordering Example:** Specify trim code and housing code to order: Example : **3251W - B1- 10 - LRTW4 - 6012 - C2 - 27KS - NC - 277V - DIML2 - CB27**

### TRIM ORDERING INFORMATION

TRIM | OPTION | – | BEVEL STYLE | – | FLANGE FINISH

3251 | _____ | – | _____ | – | _____

| 3251 | OPTION | BEVEL STYLE | FLANGE FINISH |
|---|---|---|---|
| 3251 Round Wall Wash 1" Regress | **W** Wet location [1]<br>**EML** Emergency<br>**EMLW** Emergency and wet location [1] | **B1** 1" Regress Bevel, Die Cast<br>**AB1** 1" Regress Bevel, Black<br>**AC1** 1" Regress Bevel, Clear Matte | **01** Clear Matte (w/ AC Bevel)<br>**02** Black Anodized (W/ AB Bevel)<br>**10** White<br>**13** Statuary Bronze<br>**21** Black<br>**28** Metalized Grey<br>**RAL** Custom Color (specify RAL #) |

[1] Wet location, use with B1 trims only.

### HOUSING ORDERING INFORMATION

HOUSING CODE | – | WATTAGE | – | ENGINE CODE | – | COLOR | – | HOUSING TYPE | – | VOLTAGE | – | OPTIONAL DIMMING DRIVER | – | ACCESSORIES

LRTW4 | – | _____ | – | C2 | – | _____ | – | _____ | – | _____ | – | _____ | – | _____

| LRTW4 | WATTAGE | ENGINE CODE | COLOR | HOUSING TYPE | VOLTAGE | OPTIONAL DIMMING DRIVER | ACCESSORIES |
|---|---|---|---|---|---|---|---|
| LRTW4 | **6012** 12W LED, 500 lumens<br>**6016** 16W LED, 700 lumens<br>**6024** 24W LED, 950 lumens<br>**6033** 33W LED, 1200 lumens | C2 | **27KS** 2700K, 80+ CRI<br>**30KS** 3000K, 80+ CRI<br>**35KS** 3500K, 80+ CRI<br>**40KS** 4000K, 80+ CRI<br>**27KH** 2700K, 90+ CRI<br>**30KH** 3000K, 90+ CRI | **NC** New Construction<br>**CP** Chicago Plenum [2]<br>**IC** Insulation-Contact Rated / Airtight [2] | **120V**<br>**277V** | **DIML2** 0-10V dim, 10%<br>**DIML3** Lutron Hi-Lume 1% 2-wire, 120V only<br>**DIML4** Lutron Hi-Lume 1% 3-wire/ECO<br>**DIML6A** ELDO 0-10V 0.1%, logarithmic [3]<br>**DIML6B** ELDO 0-10V 0.1%, linear [3]<br>**DIML7** ELDO DALI 0.1% [3]<br>**DIML8** ELDO DMX 0.1% [3]<br>**DIML9** TRIAC 15% [3] 2-wire, 120V only<br>**DIML10** ELV 15% [3] 2-wire, 120V only | **CB27** 27" C-Channel Bars<br>**CB52** 52" C-Channel Bars<br>**EML** Emergency battery [4]<br>**EMLW** Emergency battery, wet location [4] |

2 Step MacAdam ellipse is standard

[2] Not available with EM

[3] Note: N/A with 33W

[4] For use with NC housings only.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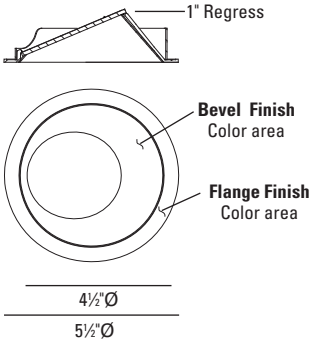
Revised 03/31/2015

# BeveLED2.0

**WALL WASH 3251**

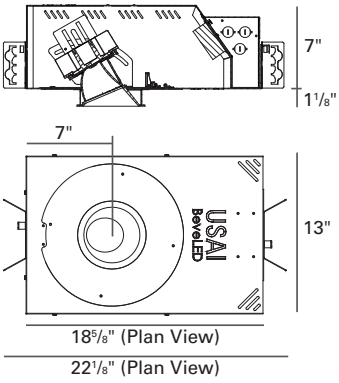
## TRIM INFORMATION

**1" Regress**

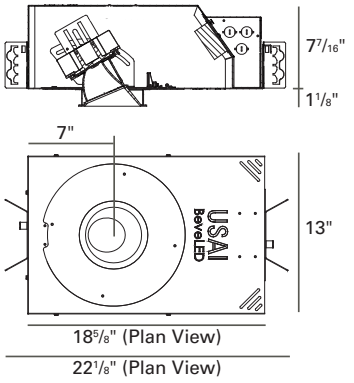



## HOUSING INFORMATION

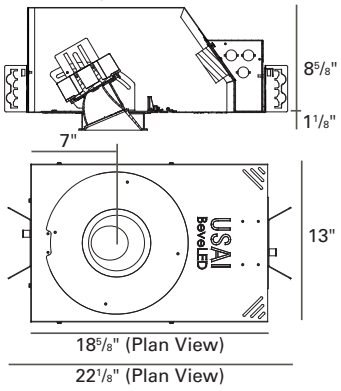
**New Construction**
**Universal Style Housing - NC**




**Chicago Plenum (12W, 16W & 24W) - CP**
**IC / Airtight (12W, 16W & 24W) - IC**




**Chicago Plenum (33W) - CP**
**IC / Airtight (33W) - IC**




## SPECIFICATIONS

**TRIM:** 4-1/2" round aperture with a 1" regressed bevel and 1/2" flange, retained by two mounting clips. Die cast aluminum bevel is self flanged and available in white, statuary bronze, black, and metalized grey finishes. Also available in black or clear matte bevel with self finish or painted flange. Custom color flanges available (provide RAL#).

**TRIM LENS:** Trim is shipped with micro diffusion wall wash lens.

**REFLECTOR:** Proprietary precision injection molded wall wash reflector.

**ADJUSTMENT:** 362° horizontal rotation, lockable.

**FIELD REPLACEABLE LIGHT ENGINE:** Available in 4 lumen packages: 12W (500 delivered lumens), 16W (700 lm), 24W (950 lm) and 33W (1200 lm). Engine is field replaceable through the aperture without tools.

**COLOR:** BeveLED is available in 4 color temperatures (2700K, 3000K, 3500K, 4000K). All color options are tightly binned for fixture-to-fixture color consistency within a 2-Step MacAdam Ellipse. 80+ color rendering index provided standard. 90+ CRI available for 2700K and 3000K CCTs.

**RATED LIFE:** Based on IESNA LM80-2008 50,000 hours at 70% lumen maintenance (L70).

**THERMAL MANAGEMENT:** Proprietary high performance aluminum die cast heatsink for maximum LED life. Ambient temperatures at fixture location should not exceed 40°C during normal operation.

**FIELD REPLACEABLE DRIVER:** Solid state electronic constant current driver with a high power factor provided standard. Specify 120V or 277V. Driver complies with IEEE C62.41 surge protection.

**DIMMING OPTIONS:** Multiple dimming drivers available. See compatibility chart attached. Some on-time delay may be experienced depending on control system used. Note: DIML6A logarithmic control is intended for use with Lutron control systems; DIML6B linear control is intended for use with non-Lutron controls. DIML2 and DIML6 dimming drivers source 2mA.

**EMERGENCY:** Emergency lighting battery pack with remote test switch is serviceable through aperture for NC housings. Bodine BSL26C provides 200mA for 90 minutes; delivers ~275-300 lumens. EMLW wet location option is available with B1 trim only and requires remote test switch. EM option is available with NC housings only.

**MOUNTING:** Butterfly brackets and adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers.

**HOUSING:** Fabricated of 20 ga. galvanized steel with thru wire J-box, 4 in 4 out at min. 90°C, #12 AWG thru branch circuit wiring.

**MAXIMUM CEILING THICKNESS:** As per drawings above.

**CEILING CUT OUT:** 5-1/16" Ø

**LISTINGS:** Dry/Damp. Wet location option available with B1 trim only. NRTL/CSA-US tested to UL standards. IBEW union made.

**WARRANTY:** 5 years

**NOTES:**
- Not for use in corrosive environment.
- Use of pressure washer voids warranty.

**PHOTOMETRICS:** Consult factory or website for IES files. Tested in accordance with IESNA LM79-2008.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Revised 03/31/2015

## DELIVERED PERFORMANCE

### 3251 / 3351 16W 30KS

**Coefficients Of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance: 20%

| RCC %: | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RW %: | 70 | 50 | 30 | 0 | 70 | 50 | 30 | 0 | 50 | 30 | 20 | 50 | 30 | 20 | 50 | 30 | 20 | 0 |
| RCR: 0 | 1.19 | 1.19 | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.00 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 1.00 |
| 1 | 1.11 | 1.08 | 1.04 | 1.01 | 1.09 | 1.05 | 1.02 | .90 | 1.01 | .99 | .97 | .97 | .95 | .94 | .94 | .92 | .91 | .89 |
| 2 | 1.03 | .97 | .91 | .87 | 1.01 | .95 | .90 | .79 | .92 | .87 | .84 | .88 | .85 | .82 | .86 | .83 | .80 | .78 |
| 3 | .96 | .87 | .81 | .75 | .94 | .86 | .80 | .70 | .83 | .78 | .73 | .80 | .76 | .72 | .78 | .74 | .71 | .69 |
| 4 | .89 | .79 | .72 | .66 | .87 | .78 | .71 | .63 | .75 | .69 | .65 | .73 | .68 | .64 | .71 | .67 | .63 | .61 |
| 5 | .83 | .72 | .64 | .59 | .81 | .71 | .64 | .56 | .69 | .63 | .58 | .67 | .61 | .57 | .65 | .60 | .57 | .55 |
| 6 | .77 | .66 | .58 | .52 | .76 | .65 | .58 | .51 | .63 | .57 | .52 | .62 | .56 | .51 | .60 | .55 | .51 | .49 |
| 7 | .72 | .60 | .53 | .47 | .71 | .60 | .52 | .46 | .58 | .52 | .47 | .57 | .51 | .47 | .56 | .50 | .46 | .45 |
| 8 | .68 | .56 | .48 | .43 | .66 | .55 | .48 | .42 | .54 | .47 | .43 | .53 | .47 | .42 | .52 | .46 | .42 | .41 |
| 9 | .64 | .52 | .44 | .39 | .62 | .51 | .44 | .39 | .50 | .44 | .39 | .49 | .43 | .39 | .48 | .43 | .39 | .37 |
| 10 | .60 | .48 | .41 | .36 | .59 | .48 | .41 | .36 | .47 | .40 | .36 | .46 | .40 | .36 | .45 | .40 | .36 | .34 |

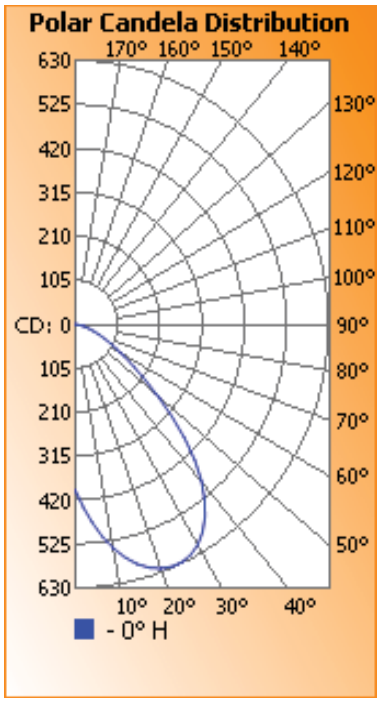
**Zonal Lumen Summary**

| Zone | Lumens | % Luminaire |
|---|---|---|
| 0-30 | 271.3 | 41.8% |
| 0-40 | 411.0 | 63.4% |
| 0-60 | 595.8 | 91.9% |
| 60-90 | 52.8 | 8.1% |
| 70-100 | 15.8 | 2.4% |
| 90-120 | 0 | 0% |

**Illuminance at a Distance**

| | Center Beam fc | Beam Width | |
|---|---|---|---|
| 2.0ft | 98.7 fc | 2.0 ft | 2.0 ft |
| 4.0ft | 24.7 fc | 4.0 ft | 4.0 ft |
| 6.0ft | 11.0 fc | 6.0 ft | 6.0 ft |
| 8.0ft | 6.2 fc | 8.0 ft | 8.0 ft |
| 10.0ft | 3.9 fc | 10.0 ft | 10.0 ft |
| 12.0ft | 2.7 fc | 12.0 ft | 12.0 ft |
| 14.0ft | 2.0 fc | 14.0 ft | 14.0 ft |
| 16.0ft | 1.5 fc | 16.0 ft | 16.0 ft |

Vert. Spread: 53.2°
Horiz. Spread: 53.1°




### 3251 / 3351 33W 30KS

**Coefficients Of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance: 20%

| RCC %: | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RW %: | 70 | 50 | 30 | 0 | 70 | 50 | 30 | 0 | 50 | 30 | 20 | 50 | 30 | 20 | 50 | 30 | 20 | 0 |
| RCR: 0 | 1.19 | 1.19 | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.00 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 1.00 |
| 1 | 1.11 | 1.08 | 1.04 | 1.01 | 1.09 | 1.05 | 1.02 | .90 | 1.01 | .99 | .97 | .97 | .95 | .94 | .94 | .92 | .91 | .89 |
| 2 | 1.03 | .97 | .91 | .87 | 1.01 | .95 | .90 | .79 | .92 | .87 | .84 | .88 | .85 | .82 | .86 | .83 | .80 | .78 |
| 3 | .96 | .87 | .81 | .75 | .94 | .86 | .80 | .70 | .83 | .78 | .73 | .80 | .76 | .72 | .78 | .74 | .71 | .69 |
| 4 | .89 | .79 | .72 | .66 | .87 | .78 | .71 | .63 | .75 | .69 | .65 | .73 | .68 | .64 | .71 | .67 | .63 | .61 |
| 5 | .83 | .72 | .64 | .59 | .81 | .71 | .64 | .56 | .69 | .63 | .58 | .67 | .61 | .57 | .65 | .60 | .57 | .55 |
| 6 | .77 | .66 | .58 | .52 | .76 | .65 | .58 | .51 | .63 | .57 | .52 | .62 | .56 | .51 | .60 | .55 | .51 | .49 |
| 7 | .72 | .60 | .53 | .47 | .71 | .60 | .52 | .46 | .58 | .52 | .47 | .57 | .51 | .47 | .56 | .50 | .46 | .45 |
| 8 | .68 | .56 | .48 | .43 | .66 | .55 | .48 | .42 | .54 | .47 | .43 | .53 | .47 | .42 | .52 | .46 | .42 | .41 |
| 9 | .64 | .52 | .44 | .39 | .62 | .51 | .44 | .39 | .50 | .44 | .39 | .49 | .43 | .39 | .48 | .43 | .39 | .37 |
| 10 | .60 | .48 | .41 | .36 | .59 | .48 | .41 | .36 | .47 | .40 | .36 | .46 | .40 | .36 | .45 | .40 | .36 | .34 |

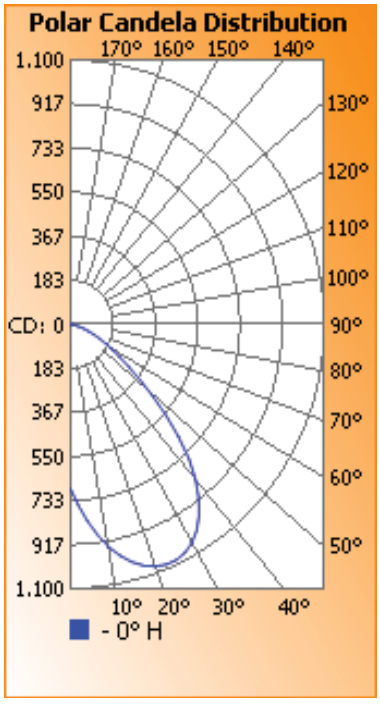
**Zonal Lumen Summary**

| Zone | Lumens | % Luminaire |
|---|---|---|
| 0-30 | 472.3 | 41.8% |
| 0-40 | 715.5 | 63.4% |
| 0-60 | 1,037.3 | 91.9% |
| 60-90 | 92.0 | 8.1% |
| 70-100 | 27.6 | 2.4% |
| 90-120 | 0 | 0% |

**Illuminance at a Distance**

| | Center Beam fc | Beam Width | |
|---|---|---|---|
| 2.0ft | 171.9 fc | 2.0 ft | 2.0 ft |
| 4.0ft | 43.0 fc | 4.0 ft | 4.0 ft |
| 6.0ft | 19.1 fc | 6.0 ft | 6.0 ft |
| 8.0ft | 10.7 fc | 8.0 ft | 8.0 ft |
| 10.0ft | 6.9 fc | 10.0 ft | 10.0 ft |
| 12.0ft | 4.8 fc | 12.0 ft | 12.0 ft |
| 14.0ft | 3.5 fc | 14.0 ft | 14.0 ft |
| 16.0ft | 2.7 fc | 16.0 ft | 16.0 ft |

Vert. Spread: 53.2°
Horiz. Spread: 53.1°

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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML2

## DIMMING DRIVER WIRING SCHEMES:

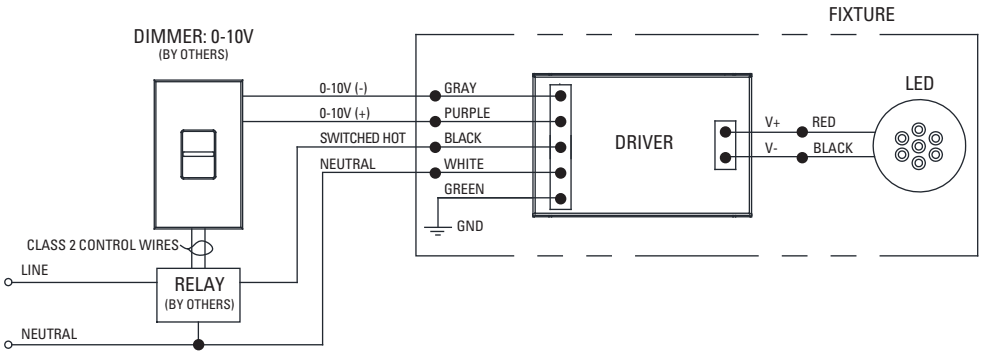
Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

### DIML2 LED: 0-10V Dimming Driver Wiring (Dims down to 10%)

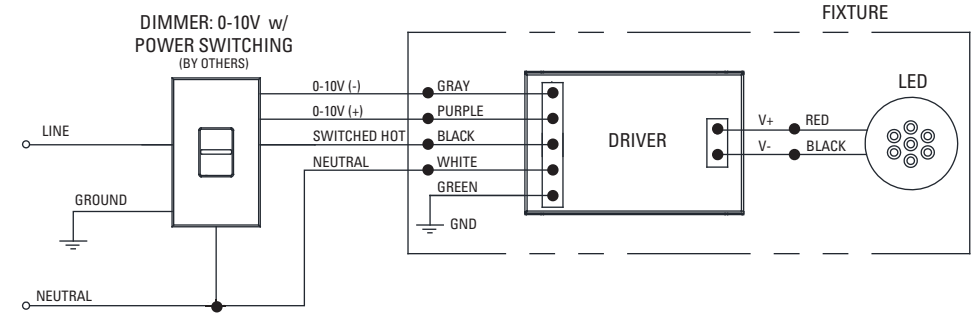
| DIML2 Dimmer Compatibility Chart | | | | |
|---|---|---|---|---|
| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* |
| **120V / 277V** | | | | Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating. |
| Crestron | iLux dimmer expansion module | CLS-EXP-DIMFLV | 100% - 10% | |
| Crestron | DIN Rail dimmer | DIN-4DIMFLV4 | 100% - 10% | |
| Crestron | DIN Rail analog output module | DIN-A08 | 100% - 10% | |
| Crestron | 8 Channel dimmer module | GLX-DIMFLV8 | 100% - 10% | |
| Crestron | 8 Channel dimmer module | GLXP-DIMFLV8 | 100% - 10% | |
| Leviton | IllumaTech dimmer | IP710-DLX | 100% - 10% | |
| Lightolier (Philips) | Vega | V2000FAMU | 100% - 10% | |
| Lutron | Diva | DVTV-XX | 100% - 10% | |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

### DIML2
### 0-10V DIMMING W/RELAY TO SWITCH POWER




### DIML2
### 0-10V DIMMING (NO RELAY)





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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML3

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

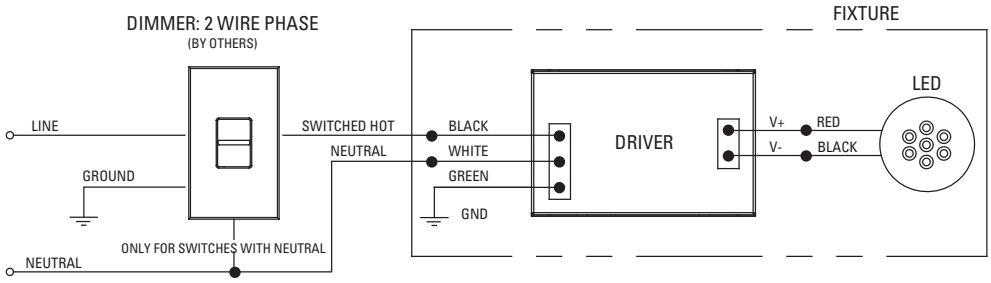
**DIML3 LED: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V only.**

**DIML3 Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* Typical | High Wattage |
|---|---|---|---|---|---|
| **120V Only** | | | | 40W and Less | 41W - 80W |
| ETC | Sensor+ Cabinet | ELV10 | 100% - 1% | 1 – 26 | 1 – 13 |
| ETC | Unison DRd Cabinet | ELV10 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | Maestro Wireless® dimmer | MRF2-6ND-120- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | HomeWorks® QS adaptive dimmer | HQRD-6NA- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | HomeWorks® QS 60W dimmer | HQRD-6ND- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | HomeWorks® QS 1000 W dimmer | HQRD-10ND- | 100% - 1% | 1 – 13 | 1 – 6 |
| Lutron | Stanza® dimmer | SZ-6ND- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | RadioRA® 2 adaptive dimmer | RRD-6NA- | 100% - 1% | 1 – 8 | 1 – 4 |
| Lutron | RadioRA® 2 1000 W dimmer | RRD-10ND- | 100% - 1% | 1 – 13 | 1 – 6 |
| Lutron | HomeWorks® QS wallbox power module | HQRJ-WPM-6D-120- | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | HomeWorks® wallbox power module | HWI-WPM-6D-120 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | GRAFIK Eye® QS control unit | QSGR-, QSGRJ- | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | GRAFIK Eye® 3000 control unit | GRX-3100-, GRX-3500- | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | RPM-4U module | HW-RPM-4U-120, LP-RPM-4U-120 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | RPM-4A module | HW-RPM-4A-120, LP-RPM-4A-120 | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | GP dimming panels | Various | 100% - 1% | 1 – 26 | 1 – 13 |
| Lutron | Ariadni CL 250W dimmer | AYCL-253P- | 100%-1% | 1 – 8 | 1 – 4 |
| Lutron | Diva CL 250W dimmer | DVCL-253P-, DVSCCL-253P- | 100%-1% | 1 – 8 | 1 – 4 |
| Lutron | Grafik T CL or RF CL dimmer | GT-250M-, GTJ-250M- | 100%-1% | 1 – 8 | 1 – 4 |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

### DIML3
### 2 WIRE PHASE DIMMING





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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML4

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

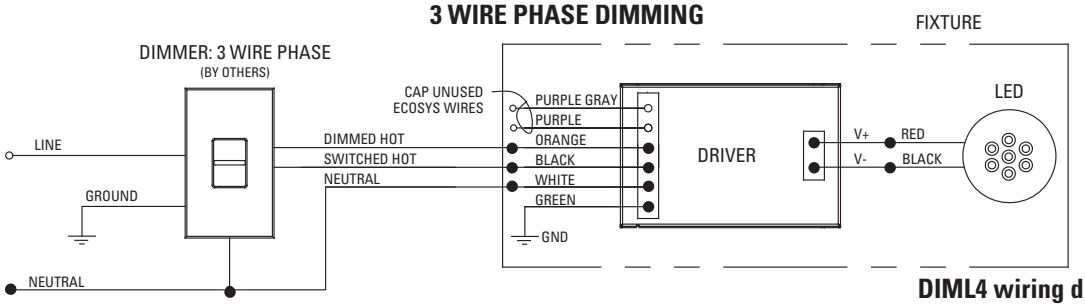
### DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)

**DIML4 3-Wire Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Control* Typical | High Wattage |
|---|---|---|---|---|---|
| **120V Only** | | | | 40W and Less | 41W - 80W |
| ETC | Sensor+ Cabinet | D20 Dimming module | 100% - 1% | 1–53 | 1–26 |
| ETC | Unison DRd Cabinet | D20F Dimming module | 100% - 1% | 1–53 | 1–26 |
| Lutron | Nova T | NTF-10- | 100%–1% | 1–41 | 1 – 20 |
| Lutron | Nova T | NTF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Nova | NF-10- | 100%–1% | 1–41 | 1 – 20 |
| Lutron | Nova | NF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Vareo | VF-10- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Skylark | SF-10P-, SF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Diva | DVF-103P-, DVSCF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Ariadni | AYF-103P- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Vierti | VTF-6A- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Maestro | MAF-6AM-, MSCF-6AM- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Maestro Wireless | MRF2-F6AN-DV- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | RadioTouch | RTA-RX-F- | 100%–1% | 1–41 | 1 – 20 |
| Lutron | Spacer System | SPSF-6A-, SPSF-6AM- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Lyneo Lx | LXF-103PL- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | RadioRA 2 | RRD-F6AN-DV- | 100%–1% | 1–15 | 1 – 7 |
| Lutron | HomeWorks QS | HQRD-F6AN-DV | 100%–1% | 1–15 | 1 – 7 |
| Lutron | Interfaces | PHPM-3F-120, PHPM-3F-DV, GRX-FDBI-16A | 100%–1% | 1–41 | 1 – 20 |
| Lutron | GP Dimming Panels | Various | 100%–1% | 1–41 | 1 – 20 |
| **277V Only** | | | | 40W and Less | 41W - 80W |
| ETC | Sensor+ Cabinet | D20 Dimming module | 100% - 1% | 1–53 | 1–26 |
| ETC | Unison DRd Cabinet | D20F Dimming module | 100% - 1% | 1–53 | 1–26 |
| Lutron | Nova T | NTF-10-277- | 100%–1% | 1–44 | 1 – 22 |
| Lutron | Nova T | NTF-103P-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Nova | NF-10-277- | 100%–1% | 1–44 | 1 – 22 |
| Lutron | Nova | NF-103P-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Skylark | SF-12P-277-, SF-12P-277-3 | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Diva | DVF-103P-277-, DVSCF-103P-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Ariadni | AYF-103P-277- | 100%–1% | 1–44 | 1 – 22 |
| Lutron | Vierti | VTF-6A- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Maestro | MAF-6AM-277-, MSCF-6AM-277- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Maestro Wireless | MRF2-F6AN-DV- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | RadioTouch | RTA-RX-F- | 100%–1% | 1–88 | 1 – 44 |
| Lutron | Spacer System | SPSF-6A-277-, SPSF-6AM-277- | 100%–1% | 1–20 | 1 – 10 |
| Lutron | Lyneo Lx | LXF-103PL-277- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | RadioRA 2 | RRD-F6AN-DV- | 100%–1% | 1–33 | 1 – 16 |
| Lutron | HomeWorks QS | HQRD-F6AN-DV | 100%–1% | 1–33 | 1 – 16 |
| Lutron | Interfaces | PHPM-3F-DV, GRX-FDBI-16A | 100%–1% | 1–88 | 1 – 44 |
| Lutron | GP Dimming Panels | Various | 100%–1% | 1–88 | 1 – 44 |

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**DIML4**
**3 WIRE PHASE DIMMING**




**DIML4 wiring diagrams continued on next page**

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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE

## DIML4 Continued

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

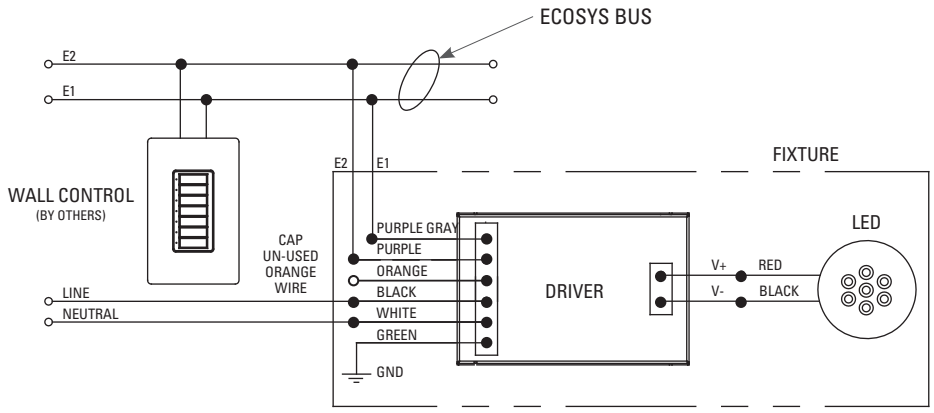
### DIML4 LED: Lutron Hi-Lume A-Series LED Driver with Eco System Control / LED Dimming Driver Wiring (Dims down to 1%)

**DIML4 3-Wire Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Control* Typical | High Wattage |
|---|---|---|---|---|---|
| **120V / 277V** | | | | 40W and Less | 41W - 80W |
| Lutron | PowPak dimming module | RMJ-ECO32-DV-B | 100%–1% | 1–32 | 1 – 16 |
| Lutron | Energi Savr Node | QSN-1ECO-S, QSN-2ECO-S | 100%–1% | 1–64 | 1 – 32 |
| Lutron | GRAFIK Eye QS (120V ONLY) | QSGRJ- _E, QSGR- _E | 100%–1% | 1–64 | 1 – 32 |
| Lutron | Quantum | Various | 100%–1% | 1–64 | 1 – 32 |

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**DIML4**
**ECOSYS CONTROLS**





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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML6A, 6B

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

### DIML6A LED: EldoLED SOLOdrive 561/S 0-10V control 100%-0.1% linear-programmed dimming driver for use with logarithmic-style controls (e.g., Lutron and others listed in the table below)

**DIML6A Dimmer Compatibility Chart**

| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* |
|---|---|---|---|---|
| **120V & 277V** | | | | Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. |
| Lutron | Diva | DVTV/NFTV/NTFTV with PP-20 | 99% - 0.1% | |
| Lutron | Energi Savr Node | QSN-4T16-S | 100% - 0.1% | |
| Lutron | GP Dimming Panels | TVM2 Module | 99% - 0.1% | |
| Lutron | Interfaces | GRX-TVI w/ GRX3503 | 100% - 0.1% | |
| Sensor Switch | nIO | nIO EZ | 100% - 0.1% | |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

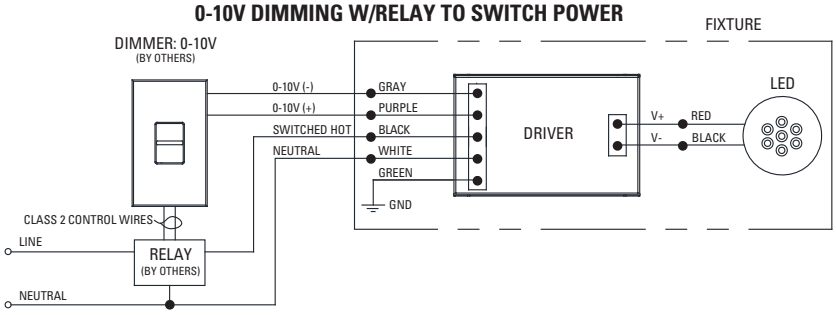
### DIML6B LED: EldoLED SOLOdrive 561/S 0-10V control 100%-0.1% logarithmic-programmed dimming driver for use with linear-style controls (e.g., Crestron, non-Lutron, and others listed in the table below)

**DIML6B Dimmer Compatibility Chart**

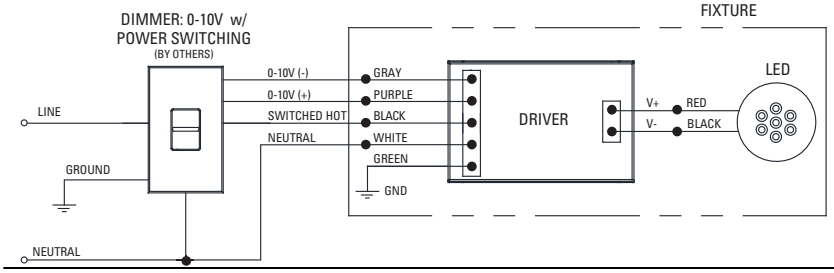
| Manufacturer | Product | Part Number | Dimmed Light Output Range | Qty Fixtures Per Dimmer* |
|---|---|---|---|---|
| **120V & 277V** | | | | Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. |
| Bush-Jaeger | Electronic potentiometer | 2112U-101 | 100% - 0.1% | |
| Jung | Electronic potentiometer | 240-10 | 100% - 0.1% | |
| Leviton | IllumaTech dimmer | IP710-DLX | 100% - 0.1% | |
| Lightolier (Philips) | Momentum (120V ONLY) | ZP600FAM120 | 100% - 0.1% | |
| Merten | Electronic potentiometer | 5729 | 100% - 0.1% | |
| Pass & Seymour | Titan | CD4FB-W | 100% - 0.1% | |
| Watt Stopper | Miro | DCLV1 | 100% - 0.1% | |
| Synergy | Wallbox Dimmers | ISD BC | 100% - 0.1% | |
| ABB | i-bus | SD/S 2.16.1 | 100% - 0.1% | |
| Crestron | Modules | GLX-DIMFLV8, GLXP-DIMFLV8 | 100% - 0.1% | |
| Crestron | Green Light | GLPAC-DIMFLV4-, GLPAC-DIMFLV8- | 100% - 0.1% | |
| Crestron | Green Light Power Pack | GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM | 100% - 0.1% | |
| Crestron | DIN Rail Analog Output Module | DIN-A08 | 100% - 0.1% | |
| Crestron | DIN Rail 0-10V Fluorescent Dimmer | DIN-4DIMFLV4 | 100% - 0.1% | |
| Crestron | iLux 0-10V Dimmer Expansion Module | CLS-EXP-DIMFLV | 100% - 0.1% | |

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

**DIML6A, 6B**
**0-10V DIMMING W/RELAY TO SWITCH POWER**




**DIML6A, 6B**
**0-10V DIMMING (NO RELAY)**





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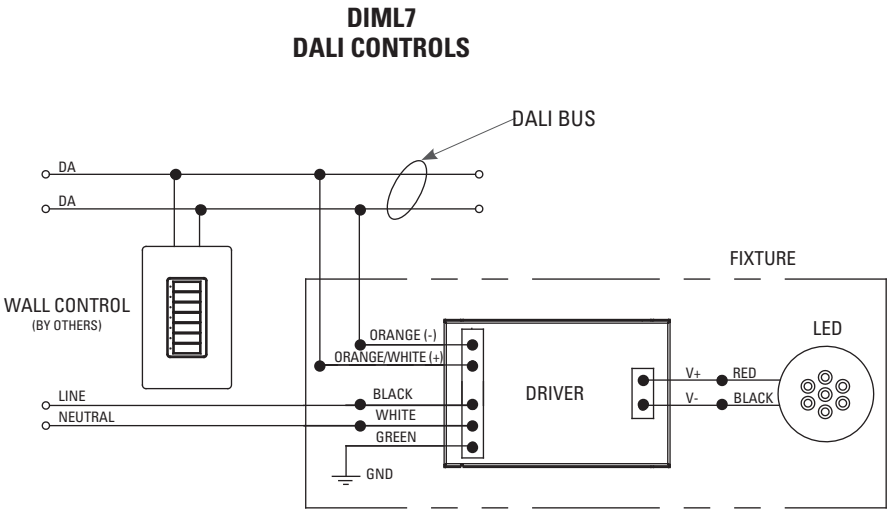
# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML7

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**DIML7 LED: EldoLED DALI Dimming Driver Wiring (Dims down to 0.1%)**



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# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML8

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

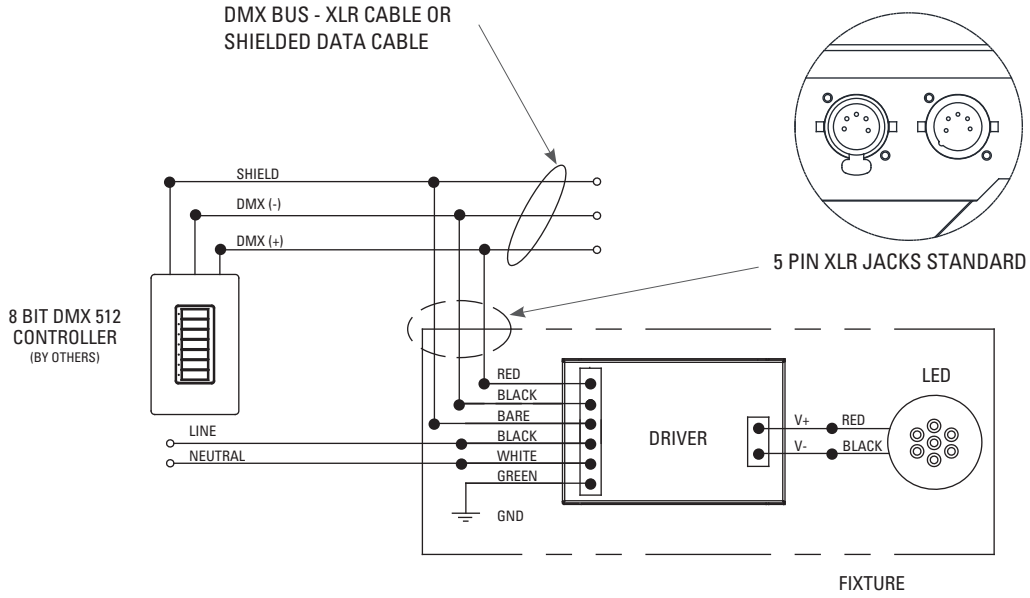
### DIML8 LED: EldoLED DMX Dimming Driver Wiring (Dims down to 0.1%)

DMX BUS - XLR CABLE OR
SHIELDED DATA CABLE

The data cable used must meet the following requirements:

- type: shielded, 2-conductor twisted pair
- maximum capacitance between conductors: 30 pF/ft
- maximum capacitance between conductor and shield: 55 pF/ft
- maximum resistance: 0.02 ohms/ft
- normal impedance: 100-140 ohms
- conductive core: 24 AWG is recommended

If 3-wire data cables are preferred, we suggest a Belden 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Do not use standard microphone cables: they cannot transmit DMX512 data reliably over long distances. NOTE: DMX link termination device (by others) should be used on last fixture in line on a circuit to avoid signal loss.

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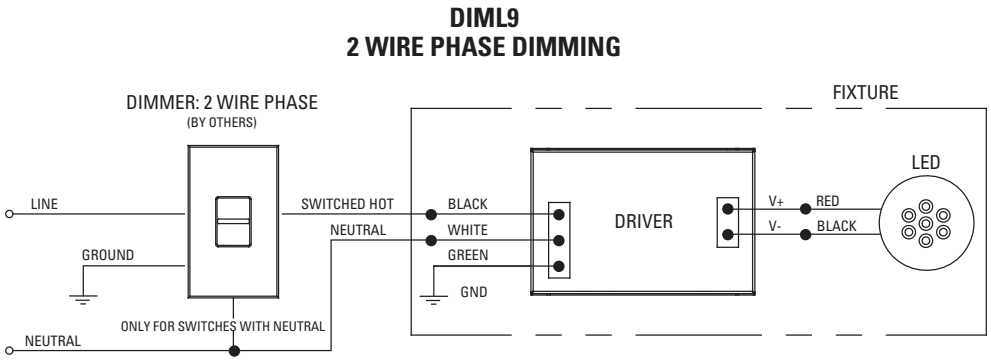
# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML9

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

### DIML9 LED: TRIAC Forward Phase Dimming Driver Wiring (Dims down to 15%) 120V Only



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Revised 03/20/2015
I2-264-9

USAI Lighting

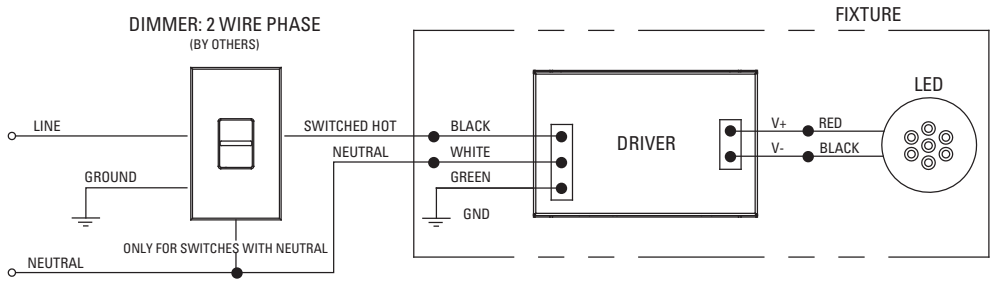
# DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
# DIML10

## DIMMING DRIVER WIRING SCHEMES:

Note: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

**DIML10 LED: ELV Reverse Phase Dimming Driver Wiring (Dims down to 15%) 120V Only**

**DIML10**
**2 WIRE PHASE DIMMING**

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# MRP LED
## LED Area Luminaire

Catalog Number

Notes

Type

*Hit the Tab key or mouse over the page to see all interactive elements.*

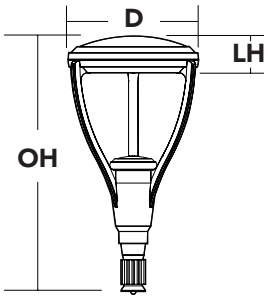
## Introduction

The Omero™ family of luminaires blends a traditional round dayform with contemporary, low-profile styling to accent architectural elements in a variety of applications.

The MRP LED combines the latest in LED technology with the designer aesthetic of the Omero™ family for stylish, high-performance illumination that lasts. The MRP LED is ideal for replacing 100-250W metal halide in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

## Specifications

| | |
|---|---|
| **EPA:** | 1.125 ft² *(0.105 m²)* |
| **Luminaire Height:** | 6-3/8″ *(16.2 cm)* |
| **Overall Height:** | 32″ *(81.3 cm)* |
| **Diameter:** | 18″ *(45.7 cm)* |
| **Weight (max):** | 37.5 lbs *(17 kg)* |




## Ordering Information

**EXAMPLE:** MRP LED 1 63B350/40K SR5 MVOLT DDBXD

| MRP LED | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Series** | **Light Engines** | **Performance Package** [1] | **Distribution** | **Voltage** | **Mounting** | **Options** | **Finish** *(required)* |
| MRP LED | 1 One engine (49 or 63 LEDs) | **350 mA options:**<br>49B350/30K 3000K<br>49B350/40K 4000K<br>49B350/50K 5000K<br>63B350/30K 3000K<br>63B350/40K 4000K<br>63B350/50K 5000K<br>**530 mA options:**<br>49B530/30K 3000K<br>49B530/40K 4000K<br>49B530/50K 5000K<br>63B530/30K 3000K<br>63B530/40K 4000K<br>63B530/50K 5000K | SR2 Type II<br>SR3 Type III<br>SR4 Type IV<br>SR5 Type V | MVOLT [2]<br>120 [2]<br>208 [2]<br>240 [2]<br>277 [2]<br>347<br>480 | **Shipped included**<br>(blank) Fits 4″OD round pole<br>**Shipped separately** [3]<br>MRPT20 2-3/8″ tenon slipfitter<br>MRPT25 2-7/8″ tenon slipfitter<br>MRPT30 3-1/2″tenon slipfitter<br>MRPT35 4″tenon slipfitter<br>MRPF3 3″OD round pole adapter<br>MRPF5 5″OD round pole adapter [4] | **Shipped installed**<br>PER NEMA twist-lock receptacle only (no controls)<br>DMG 0-10V dimming driver (no controls) [5]<br>SF Single fuse (120, 277, 347V) [6]<br>DF Double fuse (208, 240, 480V) [6]<br>DFL Diffusing lens<br>BL30 Switched dimming, 30% [7]<br>BL50 Switched dimming, 50% [7] | DDBXD Dark bronze<br>DBLXD Black<br>DNAXD Natural aluminum<br>DWHXD White<br>DDBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white |

## Accessories

*Ordered and shipped separately.*

| | |
|---|---|
| DLL127F 1.5 JU | Photocell - SSL twist-lock (120-277V) [8] |
| DLL347F 1.5 CUL JU | Photocell - SSL twist-lock (347V) [8] |
| DLL480F 1.5 CUL JU | Photocell - SSL twist-lock (480V) [8] |
| SC U | Shorting cap [8] |
| MRPT20 DDBXD U | 2-3/8″ tenon slipfitter (specify finish) |
| MRPT25 DDBXD U | 2-7/8″ tenon slipfitter (specify finish) |
| MRPT30 DDBXD U | 3-1/2″ tenon slipfitter (specify finish) |
| MRPT35 DDBXD U | 4″ tenon slipfitter (specify finish) |
| MRPF3 DDBXD U | 3″ OD round pole adapter (specify finish) |
| MRPF5 DDBXD U | 5″ OD round pole adapter (specify finish) [4] |

*For more control options, visit DTL and ROAM online.*

**NOTES**

1. Configured with 4000K (40K) provides the shortest lead times. Consult factory for 3000K (30K) and 5000K (50K) lead times.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
3. Also available as a separate accessory; see Accessories information at left.
4. Maximum pole wall thickness is 0.156″.
5. Not available with 347 or 480V.
6. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
7. Requires an additional switched line. Dimming driver standard. MVOLT only.
8. Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com

# Performance Data

## Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

| Light Engines | Drive Current (mA) | Performance Package | System Watts | Dist. Type | 40K (4000K, 67 CRI) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Lumens | B | U | G | LPW |
| 1 (49 LEDs) | 350 | 49B350/--K | 58 W | SR2 | 5043 | 1 | 3 | 1 | 87 |
| | | | | SR3 | 5024 | 1 | 3 | 1 | 85 |
| | | | | SR4 | 5032 | 1 | 3 | 1 | 85 |
| | | | | SR5 | 5218 | 2 | 3 | 1 | 87 |
| 1 (63 LEDs) | 350 | 63B350/--K | 73 W | SR2 | 6167 | 1 | 3 | 1 | 84 |
| | | | | SR3 | 6408 | 2 | 3 | 1 | 85 |
| | | | | SR4 | 6368 | 1 | 3 | 1 | 85 |
| | | | | SR5 | 6577 | 3 | 3 | 1 | 88 |
| | 530 | 63B530/--K | 109W | SR2 | 8269 | 2 | 3 | 2 | 76 |
| | | | | SR3 | 8208 | 2 | 3 | 2 | 76 |
| | | | | SR4 | 8196 | 2 | 3 | 2 | 76 |
| | | | | SR5 | 8671 | 3 | 3 | 1 | 80 |

## Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

| Ambient | | Lumen Multiplier |
|---|---|---|
| 0°C | 32°F | 1.02 |
| 10°C | 50°F | 1.01 |
| 20°C | 68°F | 1.00 |
| **25°C** | **77°F** | **1.00** |
| 30°C | 86°F | 1.00 |
| 40°C | 104°F | 0.99 |

## Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **MRP LED 1 63B530** platform in a **40°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

| Operating Hours | 0 | 25,000 | 50,000 | 100,000 |
|---|---|---|---|---|
| Lumen Maintenance Factor | 1.0 | 0.95 | 0.92 | 0.87 |

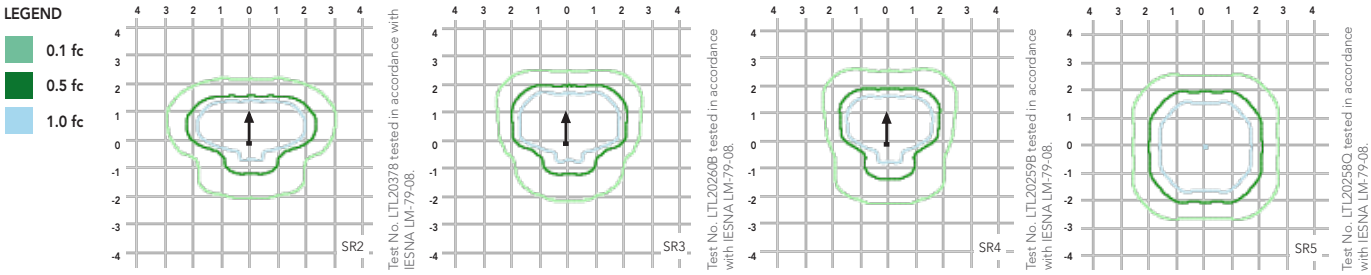
## Electrical Load

| Light Engines | Drive Current (mA) | System Watts | Current (A) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 120 | 208 | 240 | 277 | 347 | 480 |
| 1 (49) | 350 | 58W | 0.54 | 0.31 | 0.27 | 0.23 | 0.19 | 0.13 |
| 1 (63) | 350 | 73W | 0.68 | 0.39 | 0.34 | 0.29 | 0.23 | 0.17 |
| | 530 | 109W | 1.01 | 0.58 | 0.50 | 0.44 | 0.35 | 0.25 |

# Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's MRP LED homepage.

Isofootcandle plots for the MRP LED 1 63B530/40K. Distances are in units of mounting height (20').




## FEATURES & SPECIFICATIONS

**INTENDED USE**
Streets, walkways, parking lots and surrounding areas.

**CONSTRUCTION**
Single-piece die-cast aluminum housing with nominal wall thickness of .012". Die-cast top access doorframe has impact-resistant, tempered glass lens (3/16" thick). Doorframe is fully gasketed with one-piece tubular silicone.

**FINISH**
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum and white. Available in textured and non-textured finishes.

**OPTICS**
Precision acrylic refractive optics for optimum light distribution through the flat glass lens. Light engines are available in standard 4000K (67 CRI) or optional 3000K (80 CRI) or 5000K (67 CRI) configurations.

**ELECTRICAL**
Light engine consists of 49 or 63 high-efficacy LEDs mounted to a metal-core circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low for operation (per ANSI/IEEE C62.41.2).

**INSTALLATION**
Standard post-top mounting configuration fits into a 4" OD open pole top (round pole only). Multiple options and accessories are available for other mounting needs.

**LISTINGS**
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient. **U.S. Patent No. D556,357.**

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

**WARRANTY**
Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

**Note:** Specifications subject to change without notice.

*1-year warranty*

# luxrail™

## INTERIOR/EXTERIOR APPLICATIONS

### Application

ANSI and ADA compliant, **luxrail** is an indoor/outdoor LED-based handrail that delivers functional illumination. Three intensities may be specified: standard output, mid output, and high output. The standard light output version delivers illuminance levels appropriate for exterior applications (2 footcandles at grade) as well as for dark interior environments with low ambient illumination levels (e.g., themed environments, theatres and residential areas). The high output version delivers illuminance levels applicable to interior environments – providing in excess of 10 footcandles along the path of egress (ANSI required for stair treads). Independent photometric test reports and IES Format data are available at **www.iolighting.com**.

**luxrail**'s standard handrail gripping surfaces are circular in cross section and meet 2004 ADAAG (Americans with Disability Act Accessibility Guidelines). Patented optical assemblies deliver 10˚, 25˚, and 55˚ beam spreads, as well as an asymmetric option. The 25˚ and 55˚ beam patterns are most suitable for illuminating pathways, while the 10˚ beam spread offers accent lighting for optional glass or stainless steel cable railing infills. Reference page 54 of this catalog for information regarding infill options. Projected average rated life is 50,000 hours at 70% of lamp lumen output. Contact factory for IES LM-80 compliance. To ensure proper performance, architectural details should allow for ventilation and air flow around the fixture. Ambient temperature surrounding the fixture shall not exceed 122˚F *(50˚C)*.

### Light Output

Three luminous intensities are available for white light. All values below represent the initial raw lumens of the LED. IES format photometry of Lighting Facts labels represent actual light output measured in lumens and candle power. Light output losses include optical, thermal and power supply inefficiencies. IES LM-79 format files may be obtained from the factory or downloaded from **www.iolighting.com.** Results are typical measurements. For 90+ CRI, please consult factory for pricing and availability.

Initial Lumens

| | Standard Output | Mid Output | High Output |
|---|---|---|---|
| 2700K White: | 72 lms/ft | 181 lms/ft | 253 lms/ft |
| 3000K White: | 81 lms/ft | 203 lms/ft | 284 lms/ft |
| 3500K White: | 83 lms/ft | 206 lms/ft | 289 lms/ft |

*Non-standard color temperatures available as a custom offering for a modest additional cost and lead-time.*

### Construction

**luxrail** may be post mounted or wall mounted. **io** recommends installation be completed by a qualified handrail installer. Mounting hardware (post or wall) is typically required up to 5' O.C., depending on the handrail alloy. Final post and wall bracket spacing must be determined by a licensed architect or structural engineer. **luxrail** is available in stainless steel and aluminum. Vandal resistant access chamber allows units to be removed for maintenance purposes. The LED light fixture inside the caprail is UL Listed for wet locations. Handrail alloy options include stainless steel and aluminum. Contact factory for maintenance guidelines.

All handrail component parts are engineered for quick installation. Field welding or cutting is typically not required. All parts are prefabricated to field dimensions and are assembled in the field with mechanical connection or epoxy. Contact **io** Lighting for recommended handrail installers.

### Electrical

**luxrail** houses a low voltage LED-based light fixture that is integrated into the underside of the handrail. 24 volt 100 watt power supplies are provided as a standard. For detailed information regarding daisy chain limitations, remote distance limitations, power supply options, and dimming options consult the **io** website **(www.iolighting.com)** or an **io** representative.

**Driver Remote Distance**

**7'-0" (2.1m) w/22 AWG**
**18'-0" (5.5m) w/18 AWG**
**46'-0" (14.0m) w/14 AWG**
**71'-0" (21.6m) w/12 AWG**

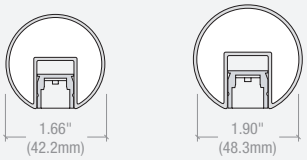
Dimming modules must be specified separately. For detailed information download the power supply specification sheet from **www.iolighting.com**.

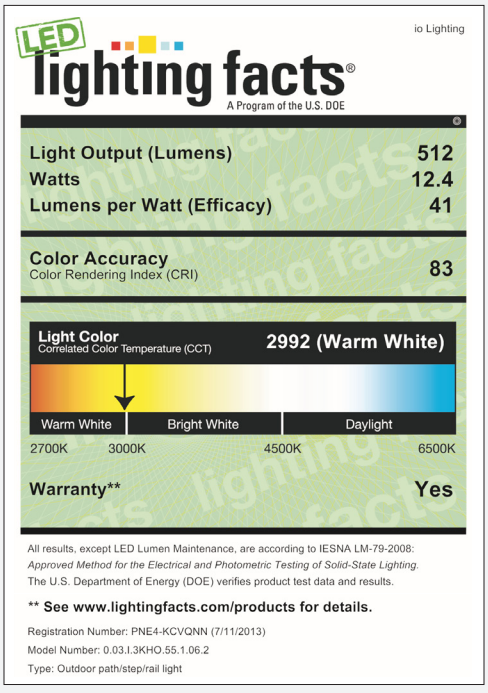
### Power Consumption

Power consumption does not include power supply losses.

| Standard Output | Mid Output | High Output |
|---|---|---|
| 1.02 w/ft | 2.54 w/ft | 3.81 w/ft |

### Dimensions

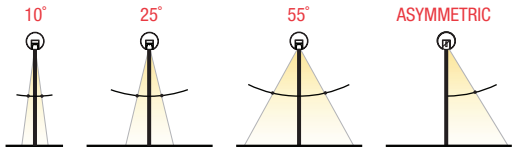


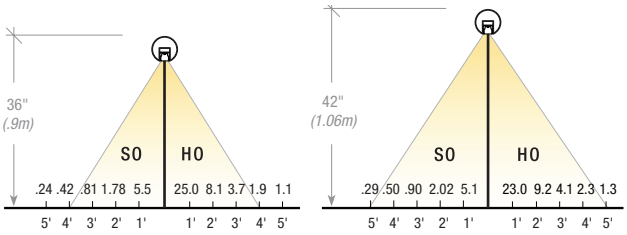

Label references 36" **luxrail** fixture with a 55˚ beam spread in High Output 3000K. Lighting Facts for additional beam spreads and light output levels may be obtained from **io** Lighting.

## Light Output / Distributions

### BEAM SPREAD OPTIONS

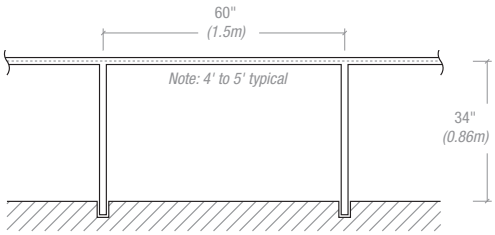



### LIGHT OUTPUT - 55 DEGREE WARM WHITE



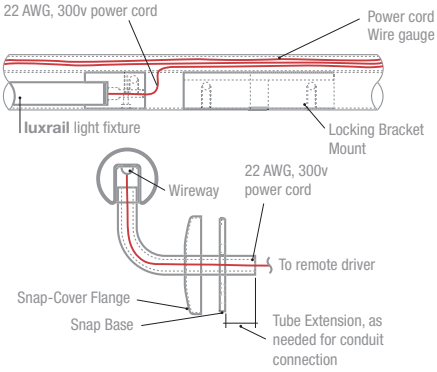

Calculation assumes 12'0" run length. All footcandle values are initial.

### POST MOUNT APPLICATION




*Note: Will depend on alloy and diameter specifications.*

### WALL MOUNT DETAILS*




* Wall mounted **luxrail** may be mounted to new or existing guardrail (by others).

Post and wall bracket spacing must be determined by a licensed architect or structural engineer.

**io Lighting** recommends a qualified handrail installer be on site during install.

### LIGHT OUTPUT CONVERSION TABLE

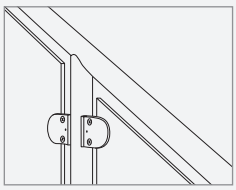
| | Standard Output | Mid Output | High Output |
|---|---|---|---|
| 2700K White | **0.25**(1) | **0.69**(1) | **0.94**(1) |
| 3000K White | **0.27**(1) | **0.73**(1) | **1.00**(1) |
| 3500K White | **0.29**(1) | **0.78**(1) | **1.06**(1) |

*Note: Visit **www.iolighting.com** or contact an **io** representative for IES format photometrics.*

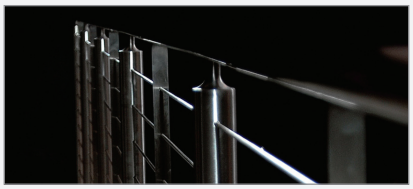
## Mounting / Infill Options

PM *(POST MOUNTED)*

WM *(WALL MOUNT INTERMEDIATE)*



GLASS INFILL
*(glass provided by others)*



STAINLESS STEEL CABLE INFILL
*(only available on flat surfaces)*

## Order Code

| 0 | . | 06 | . | | . | | . | | . | | . | | . | | . | | . | | . | | . | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| io | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 |

**1. PRODUCT FAMILY**
06 luxrail

**2. ALLOY / FINISH**
SSS Stainless steel satin
SSP Stainless steel polished
CAA Clear anodized aluminum

**3. SIZE**
1 1.66" O.D. (1¼" pipe size) (available in SS only)
2 1.90" O.D. (1½" pipe size) (available for SS & CAA)

**4. MOUNTING**
PMC Post mount concrete
PMW Post mount wood
PMS Post mount stone
WM Wall or guard rail mounted

**5. INFILL**
AC Stainless steel cable (4)
GL Glass (provided by others)
C Custom
NR Not required

**6. LIGHT DISTRIBUTION**
10 10 Degree
25 25 Degree
55 55 Degree
ASYM Asymmetric
NI Handrail only (not illuminated)

**7. LIGHT COLOR**
27K Warm White
27KMO Warm White
27KHO Warm White
3K Warm White (3)
3KMO Warm White (3)
3KHO Warm White (3)
35K Warm White
35KMO Warm White
35KHO Warm White
CC Custom Color(6)

**8. LENGTH**
GB2 Grab Bar 2' nominal(6)
GB3 Grab Bar 3' nominal(6)
GB4 Grab Bar 4' nominal(6)
GB5 Grab Bar 5' nominal(6)
HR Hand Rail length in Feet / Inches (provide overall length of each handrail section)(2)(5)
HRC Hand Rail Curved length in Feet / Inches (provide overall length of each handrail section)(2)(5)

**9. VOLTAGE / DIMMING**
1 120v
2 277v
3 120v w/dim
4 277v w/dim
5 Other (International voltage)

**10. SPECIFY DRIVER / DIMMING(1)**
*Note: If not specified otherwise, **io** will supply 100 watt drivers. Download Power Supply specification sheet from **www.iolighting.com**.*

**11.**
CE Available upon request.

## Footnotes

1. ***Power Supply Specification Sheet** may be downloaded from **www.iolighting.com**.*
2. *Each handrail application will be custom to accommodate varying field conditions and design requirements. Shop drawings will be required to manage specifics of each handrail section.*
3. *White light variance between LEDs is equal to or better than 3-step MacAdam Binning.*
4. *Stainless Steel cable available for flat surfaces only.*
5. *Detailed elevation drawings of handrail section are required for quote.*
6. *Non-standard color temperature and CRI are available. Consult factory for availability.*

**luxrail** applications
*youtube.com/iolighting*