LITHONIA LIGHTING®

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

# GRAD LINEAR

I/D, Direct

## FEATURES & SPECIFICATIONS

**INTENDED USE** —The GRAD is a linear suspended product for commercial indoor, education and healthcare applications.

**CONSTRUCTION** — Nominal 8-1/4" x 1-3/4" rectangular housing is formed from cold-rolled steel.

End caps are mechanically attached with no exposed fasteners.

Color for housing and end caps is white or painted aluminum. Consult factory for custom colors.

**OPTICS** — Four LED lumen packages and three available color temperature options (3000K, 3500K and 4000K) — all within 2.5 MacAdam ellipses.

**ELECTRICAL** — LED light engine — consisting of modular LED boards and dimming driver — is rated for >60,000 hours (L80) at 25° C ambient temperature. Specify 120V or 277V. Pre-wired with 16AWG fixture wire. For special circuiting or wire gauge, consult factory. Plug-in electrical connectors included.

MIN1 option provides "natural dimming" with smooth, continuous and flicker-free dimming. Syncing for controls: 2mA max. THD: < 20%. Insignificant inrush current at 120 and 277VAC. FCC Class A and B tested for EMI and RFI. Controls and system networking options. For wired networking via Cat-5e, choose an integrated nLight® module. For daylight dimming and/or dual technology occupancy detection. See Integrated Sensor Layout Page for more details.

**INSTALLATION** — 4' and 8' lengths in a single section for exact suspension spacing of 4' and 8'. For total luminaire length, add 1/16" for each flat end cap. Using internal joiners, 4' and 8' sections can be joined to form longer rows.

Ambient operating temperature between 0° C and 25° C.

**LISTINGS** — CSA/CUS listed. LM-79 tested. Individual sections meet FCC Part 15 requirements. Lighting Facts partner. CSA tested to UL 1598 standards.

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

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

## ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** GRD LLP 16FT MSL4 80CRI 30K ID1000LMF 80/20 MIN1 ZT 120 SCT F1/24A C110

| Luminaire | Linear length plan | Total run length | Maximum section length | LED color rendering | LED color temperature | Indirect/direct LED output | Indirect/direct intensity ratio |
|---|---|---|---|---|---|---|---|
| GRD | LLP Linear longest possible<br>LSL Linear same length | __FT<br>Indicate luminaire row length in 4' increments. Ex: 12FT | MSL4 4' section(s)<br>MSL8 8' section(s) | 80CRI 80+ CRI | 27K 2700K<br>30K 3000K<br>35K 3500K<br>40K 4000K<br>50K 5000K | ID800LMF 800 nominal lumens per foot<br>ID1000LMF 1000 nominal lumens per foot<br>ID1300LMF 1300 nominal lumens per foot<br>ID1500LMF 1500 nominal lumens per foot | 80/20 Std. 80% up/ 20% down<br>20/80 20% up/ 80% down<br>0/100 0% up/ 100% down |

| Minimum dimming level | Control input | Voltage | Wiring option | Emergency options[8] |
|---|---|---|---|---|
| MIN1 Constant current, dimming to 1%<br>MIN10[1] Constant current, dimming to 10% | ZT 0-10V[2]<br>NLIGHT nLight enabled[3]<br>ECO Lutron Ecosystem[4] | 120 120V<br>277 277V | SCT Single circuit | (blank) None<br>1EC (1) Emergency circuit module<br>2EC (2) Emergency circuit modules<br>__EC ___ Emergency circuit modules<br>_E10WLCP _10 Watt battery pack, constant power with self diagnostics. CEC Certified |

| Primary Sensor[5] | Secondary Sensor[5] | Mounting type / | Overall suspension | |
|---|---|---|---|---|
| (blank) No factory-installed, integrated sensor<br>PDT_ Dual technology occupancy sensor. PIR & microphonics sensor<br>ADC_ Daylight Dimming Sensor<br>APD_ Dual technology occupancy sensor and daylight dimming sensor | (blank) No factory-installed, integrated sensor<br>SPDT_ Dual technology occupancy sensor. PIR & microphonics sensor<br>SADC_ Daylight Dimming Sensor<br>SAPD_ Dual technology occupancy sensor and daylight dimming sensor | F1/ T-bar ceiling (universal mounting bracket)<br>F1A/ T-bar ceiling (UMB with integrated J-box)<br>F2/ Hard ceiling (horizontal J-box) | 12F 12" fixed<br>18F 18" fixed<br>24F 24" fixed<br>24A 24" adjustable<br>36A 36" adjustable<br>48A 48" adjustable | 72A 72" adjustable<br>96A 96" adjustable<br>144A 144" adjustable<br>192A 192" adjustable<br>240A 240" adjustable |

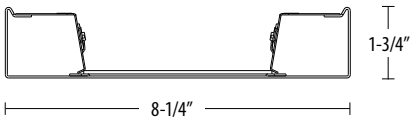
| Option | Color | Fusing | Territory compliance | Cover | Canopy | Junction box | Slope |
|---|---|---|---|---|---|---|---|
| IND[10] Individual luminaire (factory installed end caps and power cord; hanging hardware in box) | C110 Painted aluminum (low gloss)<br>C210 White white (fine textured)<br>C202[6] Black (fine textured)<br>C099 Custom color | (blank) None<br>GLR Fast blow<br>GMF Slow blow | (blank) None<br>CSA[7] Manufactured to Canadian standards | (blank) None<br>DU Dust cover | (blank) None<br>MCS Matching canopy at support for aesthetics<br>MCSJ Matching canopy for J-box mounting at non-power feed support locations<br>BLK[6] Black cord, cord manager and canopy | (blank) None<br>OJB Offset J-box at feed | (blank) None<br>SLP Sloped ceiling |

**Notes**

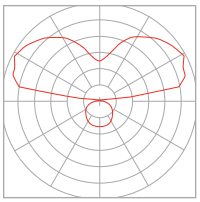
1 Not available with NLIGHT or Sensors.
2 0-10V will use linear dimming curve.
3 Will use logarithmic dimming curve.
4 Only available with MIN1
5 Only available with ZT or NLIGHT.
6 Will use white cord and canopy unless BLK canopy option is selected.
7 When chosen with EC entire section must be EC. EX: MSL8 section would need to be 2EC for entire section.
8 Separate feed required.
9 4FT MSL4 Individual fixture with EC Consult factory
10 Not available with F1A or SLP or fixed cables (12F, 18F & 24F)

## DIMENSIONS

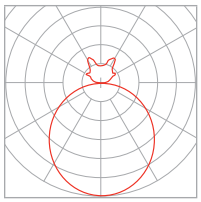
All dimensions are inches (centimeters) unless otherwise specified.



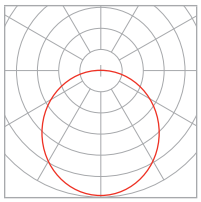

## PHOTOMETRICS



**ID800LMF 80/20 80CRI 35K**
137 lm/W
3401 delivered lumens per 4' section



**ID800LMF 20/80 80CRI 35K**
105 lm/W
2621 delivered lumens per 4' section



**ID800LMF 0/100 80CRI 35K**
94 lm/W
2335 delivered lumens per 4' section

## Fixture Performance

| | 3000K | | | | 3500K | | | | 4000K | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 800LMF | 1000LMF | 1300LMF | 1500LMF | 800LMF | 1000LMF | 1300LMF | 1500LMF | 800LMF | 1000LMF | 1300LMF | 1500LMF |
| **Lumen Output** | 3303 | 4033 | 4843 | 5841 | 3401 | 4153 | 4987 | 6015 | 3456 | 4220 | 5067 | 6111 |
| **Input Watts** | 25 | 32 | 40 | 51 | 25 | 32 | 40 | 51 | 25 | 32 | 40 | 51 |
| **Lumens/Watt** | 133 | 125 | 121 | 115 | 137 | 129 | 124 | 119 | 139 | 131 | 126 | 121 |

*AT 80/20 Indirect/Direct Intensity Ratio

**How to Calculate Delivered Lumens in Emergency Mode**

Use the formula below to determine the delivered lumens in emergency mode

**Delivered Lumens = 1.25 x P x LPW**

P = Ouput power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet. LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.



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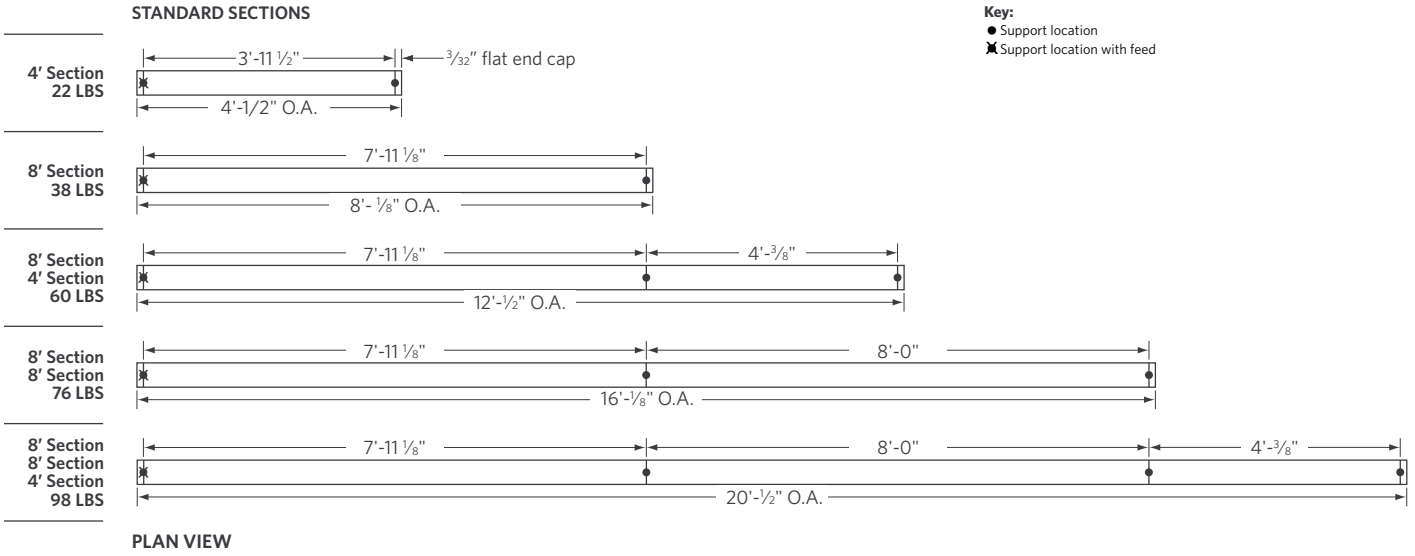
## Weights and Support Spacing

Suspension spacing equals section length. Default location shown. Consult factory for stem mounting suspension spacing and alternate locations.




### Linear Plan:

Lithonia Lighting offers the ability to provide a continuous run plan to suit your requirements by optionally offering three different methods of configuration.

**LSL- Linear Same Length:**
In this configuration, each segment is the same length and is standardized based on the longest length available and is the only option provided. Because it is dependent on one segment length there are mathematical limitations on what overall row lengths can be achieved. Example: 20 FT row would be achieved with 5, 4 FT long segments equaling 20 FT (nominal).

**LCB- Linear Center Balanced:**
This configuration incorporates the longest center segment(s) along with any additional lengths required to fill the run length, added to the run ends. Example: 20 FT run would have 2, 4 FT segments (one at each end) and 1, 8 FT segment in the center.

**LLP- Linear Longest Possible**
In this configuration, the longest length available is optimized, resulting in the fewest segments and mounting locations. Caution, should be used where balanced appearance is a concern. Example: 20 FT run would have 2, 8 FT segment and 1, 4 FT segment at the end of the run.



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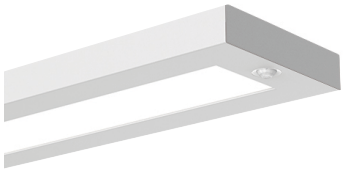
## INTEGRATED SENSOR OPTIONS

| Dimming Driver | Integrated Sensor | Daylight Dimming | Daylight Dimming and/or Occupancy Detection | nLight Wired Networking | nLight Wireless Networking | Link to Spec Sheet |
|---|---|---|---|---|---|---|
| NLIGHT | ADC | X | | X | | https://www.acuitybrands.com/products/detail/147312/nLight/nES-ADCX/Dimming-Photocell-Embedded-Low-Volt/-/media/products/nLight/147312/document/nES_ADCX-Form_pdf.pdf |
| NLIGHT | PDT | | X | X | | https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf |
| NLIGHT | APD | X | X | X | | https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf |
| ZT | ADC | X | | | | https://www.acuitybrands.com/products/detail/147312/nLight/nES-ADCX/Dimming-Photocell-Embedded-Low-Volt/-/media/products/nLight/147312/document/nES_ADCX-Form_pdf.pdf |
| ZT | PDT | | X | | | https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf |
| ZT | APD | X | X | | | https://www.acuitybrands.com/products/detail/147187/nLight/nES-7-Family/Micro-360176-Embedded-Low-Volt-PIR/-/media/products/nLight/147187/document/nes_7-Form_pdf.pdf |



Daylight harvesting deactivated by default and field programmed per sequence of operations for PDT sensor options.

Luminaires specified with nLight system networking ship with one RJ-45 connector integrated into the luminaire, 10' of Cat-5e cable and a splitter to control the entire luminaire row (depending on wattage/voltage limitations). For multiple zones, please contact TechSupport@PeerlessLighting.com.

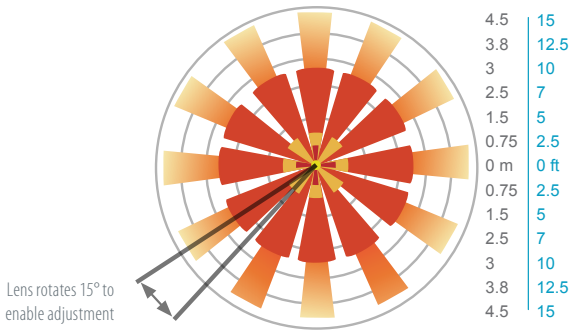
## OCCUPANCY DETECTION COVERAGE

At the 7.5 ft (2.9 m) hanging height of a typical pendant mount fixture the sensor provides 10 ft (3.05 m) radial detection of small motion. At a 9 ft (2.74 m) hanging height the radius is 12 ft (3.66 m) for small motion.

Adequate for walking motion detection from mounting heights between 7.5 ft (2.29 m) and 20 ft (6.10 m).

Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor.

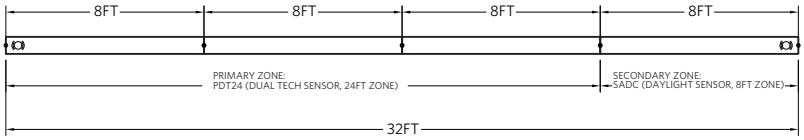
Initial detection of walking motion into long coverage segment will occur at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m). Lens assembly rotates 15° to enable adjustment in order to line up long segments.



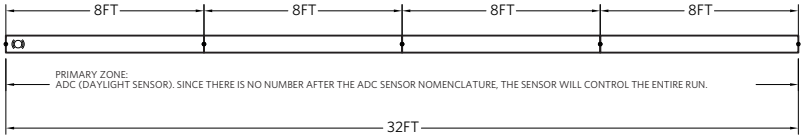
# INTEGRATED SENSOR LAYOUT

**CORRECT:**

32FT MSL8 RUN WITH 2 SENSORS WITH PRIMARY ZONE 24FT AND SECONDARY ZONE 8FT -- PDT24 SADC8

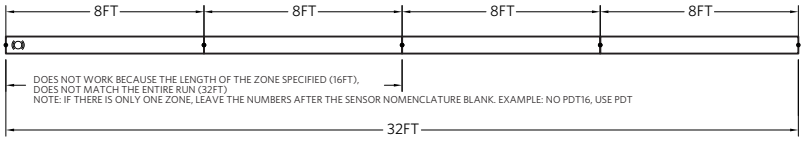



32FT MSL8 RUN WITH 1 SENSOR ALL ONE ZONE -- ADC

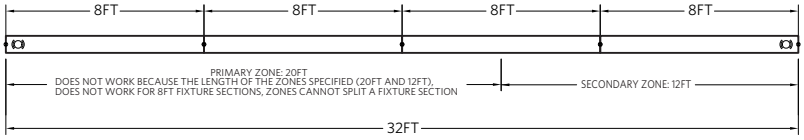



**INCORRECT:**

32FT MSL8 RUN WITH 1 SENSOR ALL ONE ZONE -- PDT16




32FT MSL8 RUN WITH 2 SENSORS WITH PRIMARY ZONE 20FT AND SECONDARY ZONE 12FT -- PDT20 SADC12




**Notes:**

- Only one sensor per zone
- At the most, the entire run can only have 2 sensors (thus 2 sensors zones at the most)
- Sensor zone can not split fixture sections
- No overlapping zones
- One nLight or NLTAIR2 device per zone or per sensor, for multiple zones without sensors contact factory



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## Most Common Mounting Types and Options

Options available for this specific luminaire are checked in the boxes below.

**Mounting Type**

**F1/** For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications.

**F2/** For use with recessed or surface mount horizontal J-box applications.

**F1A/** For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications. Comes complete with vertical J-box with built-in wire way. See also CP.

**Mounting Options**

**MCS** Matching canopy at support for aesthetics.

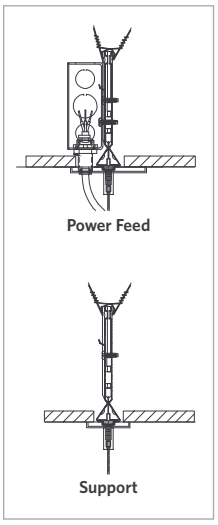
**MCSJ** Matching canopy for J-box mounting at non-power feed support locations.

**OJB** Offset J-box at feed.

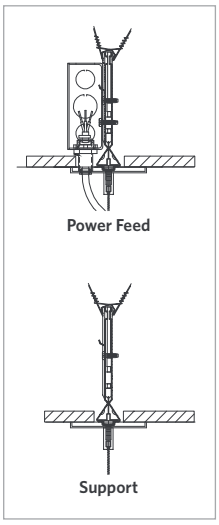
**SLP OJB** Sloped ceiling couplers and offset J-box option at feed.

For more detailed mounting drawings and information, see peerlesslighting.acuitybrands.com/resources

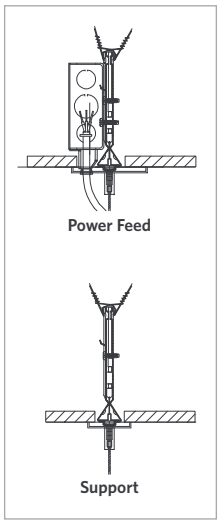
☑ F1/



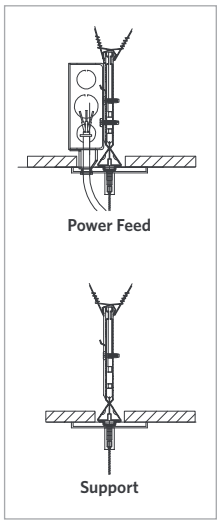

☑ F1/MCS



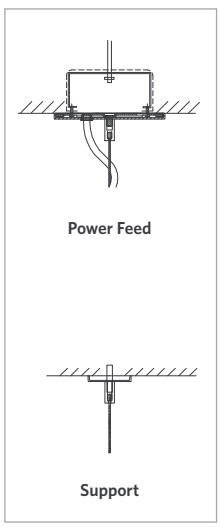

☑ F1A/



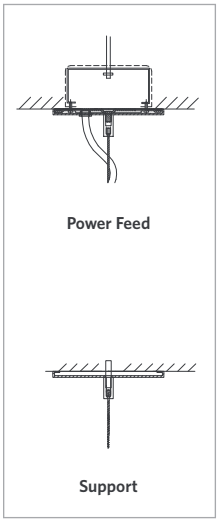

☑ F1A/MCS



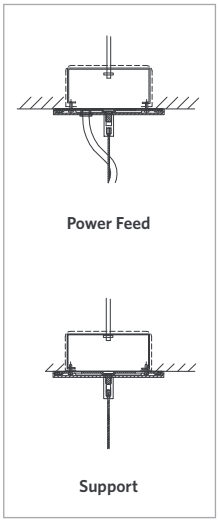

☑ F2/



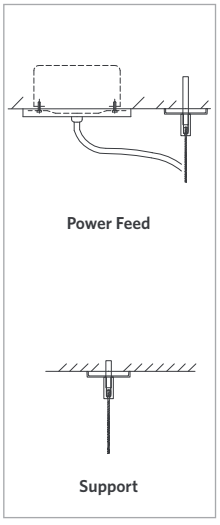

☑ F2/MCS




☑ F2/MCSJ




☑ F2/OJB




☑ F2/SLP OJB