



## 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, black or painted aluminum. Consult factory for custom colors.

**OPTICS** — Four LED lumen packages and five available color temperature options (2700K, 3000K, 3500K, 4000K and 5000K) — 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 eldoLED driver provides "natural dimming" with smooth, continuous and flicker-free operation to 0.1% dim levels. Acuity luminaires incorporating eldoLED LED drivers perform within the recommended operating areas for flicker as a function of frequency and modulation (%) outlined in IEEE Standard 1789-2015 (IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers), in typical operating conditions at representative dimming levels. 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 Intelligent Luminaire Charts 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.

**WARRANTY** — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/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.

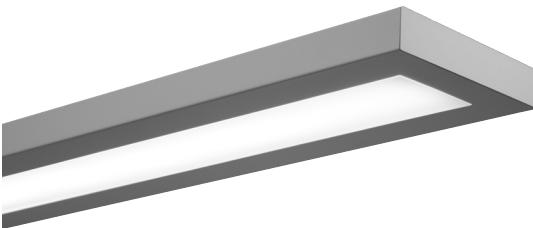
Catalog  
Number

Notes

Type

# GRAD LINEAR

I/D



eldoLED **Declare.**

# GRAD LINEAR I/D | Suspended

## 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
GRD	LLP Linear longest possible LSL Linear same length	__FT Indicate luminaire row length in 4' increments. Ex: 12FT	MSL4 4' section(s) MSL8 8' section(s)	80CRI 80+ CRI	30K 3000K 35K 3500K 40K 4000K 50K 5000K	ID800LMF <sup>16</sup> 800 nominal lumens per foot ID900LMF <sup>15</sup> 900 nominal lumens per foot ID1000LMF 1000 nominal lumens per foot ID1300LMF 1300 nominal lumens per foot ID1500LMF 1500 nominal lumens per foot

Indirect/direct intensity ratio	Minimum dimming level	Control input	Voltage	Wiring option	Emergency options <sup>8</sup>
80/20 Std. 80% up/ 20% down	MIN1 Constant current, dimming to 1%	ZT <sup>2</sup> 0-10V NLIGHT <sup>3</sup> nLight enabled ECO <sup>4</sup> Lutron Ecosystem Interface	120 120V 277 277V	SCT Single circuit	(blank) None 1EC (1) Emergency circuit module 2EC (2) Emergency circuit modules __EC __ Emergency circuit modules __E10W __IOTA 10W Emergency Battery Pack, Constant Power, Certified in CA Title 20 MAEDBS, User-Selectable Self-Diagnostic, AC Activate with Integral Test Switch
20/80 20% up/ 80% down *Nominal Distribution. Refer to photometric tests for exact distribution	MIN10 <sup>1</sup> Constant current, dimming to 10%				

Mounting type <sup>9</sup> /	Overall suspension	Color	Fusing	Territory compliance	Cover
F1/ T-bar ceiling (universal mounting bracket)	12F 12" fixed 18F 18" fixed	72A 72" adjustable 96A 96" adjustable	C110 Painted aluminum (low gloss)	(blank) None	(blank) None
F1A/ T-bar ceiling (UMB with integrated J-box)	24F 24" fixed 24A 24" adjustable	144A 144" adjustable 192A 192" adjustable	C210 White white (fine textured)	GLR Fast blow GMF Slow blow	CSA <sup>7</sup> Manufactured to Canadian standards
F2/ Hard ceiling (horizontal J-box)	36A 36" adjustable 48A 48" adjustable	240A 240" adjustable	C202 <sup>6</sup> Black (fine textured) C099 <sup>13</sup> Custom color		(blank) DU Dust cover

Canopy	Junction box	Slope	Primary Sensor <sup>5</sup>	Secondary Sensor <sup>3</sup>	Option
(blank) None	(blank) None	(blank) None	(blank) No factory-installed, integrated sensor	(blank) No factory-installed, integrated sensor	IND <sup>10</sup> Individual luminaire (factory installed end caps and power cord; hanging hardware in box)
MCS <sup>11</sup> Matching canopy at support for aesthetics	OJB <sup>11</sup> Offset J-box at feed	SLP <sup>12</sup> Sloped ceiling	PDT_ Dual technology occupancy sensor. PIR & microphonics sensor	SPDT_ Dual technology occupancy sensor. PIR & microphonics sensor	
MCSJ <sup>11,14</sup> Matching canopy for J-box mounting at non-power feed support locations			ADC_ Daylight Dimming Sensor	SADC_ Daylight Dimming Sensor	
BLK <sup>6</sup> Black cord, cord manager and canopy			APDT_ Dual technology occupancy sensor and daylight dimming sensor	SAPDT_ Dual technology occupancy sensor and daylight dimming sensor	

### 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. BLK not available with NLIGHT or IND option
- 7 CSA with EC Consult factory

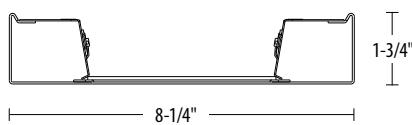
- 8 Separate feed required. 4FT MSL4 Individual fixture with EC consult factory
- 9 F1 & F1A Mount uses standard 3 1/2" canopy on feed and 2" canopy on support F2 Mount uses standard 5" canopy on feed and 2" canopy on support. All feed cords, cord managers and canopies are standard white. They are not painted to match fixture color.
- 10 Not available with F1A or SLP or fixed cables (12F, 18F & 24F). Not available with LSL (Linear Same Length). Not available with BLK option
- 11 MCS or MCSJ & OJB cannot be chosen together

- 12 When SLP is chosen need to choose F2 mount and OJB
- 13 C099 for pricing only. Custom color chip and requested finish needs to be sent in to your Customer Care Rep and matched up with our paint department and customer approved before order is entered. Standard finish choice is Textured (C099)
- 14 MCSJ available with F2 Mount only
- 15 Available with MIN10 ZT combination ONLY
- 16 Not available with MIN10 ZT combination

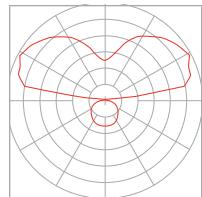
# GRAD LINEAR I/D | Suspended

## DIMENSIONS

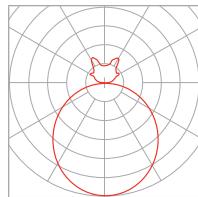
All dimensions are inches (centimeters) unless otherwise specified.



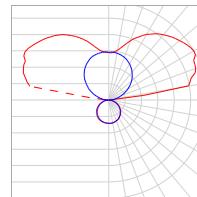
## PHOTOMETRICS



**ID800LMF 80/20 80CRI 35K**  
200 lm/W  
3925 delivered lumens per 4' section



**ID800LMF 20/80 80CRI 35K**  
147 lm/W  
2895 delivered lumens per 4' section



**ID800LMF 80/20 80CRI 30K**  
197 lm/W  
3896 delivered lumens per 4' section

## Fixture Performance

	3000K				3500K				4000K			
	ID800LMF	ID1000LMF	ID1300LMF	ID1500LMF	ID800LMF	ID1000LMF	ID1300LMF	ID1500LMF	ID800LMF	ID1000LMF	ID1300LMF	ID1500LMF
<b>Total Delivered Lumens Per Foot</b>	967	1213	1579	1807	981	1230	1601	1833	995	1248	1624	1859
<b>Input Watts Per Foot</b>	4.9	5.9	7.7	9	4.9	5.9	7.9	9	4.9	5.9	7.7	9
<b>Lumens Per Watt</b>	197	205	205	200	200	208	205	203	202	208	208	206

\*AT 80/20 Indirect/Direct Intensity Ratio

\*Please pull the appropriate IES file for the hard data number for your luminaire selection

### How to Calculate Delivered Lumens in Emergency Mode

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

$$\text{Delivered Lumens} = 1.25 \times P \times LPW$$

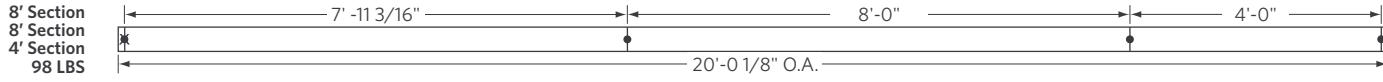
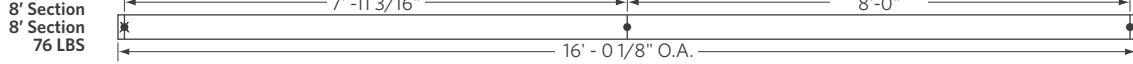
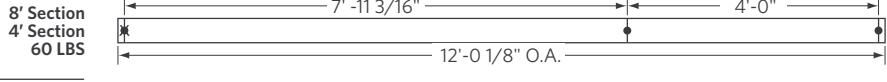
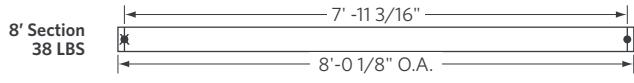
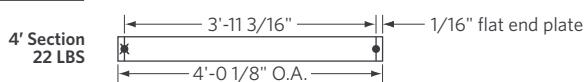
P = Output power of emergency driver. P = 10W for E10WLCP option.

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.

## Weights and Support Spacing

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

### STANDARD SECTIONS



### Key:

- Support location
- ✖ Support location with feed

### PLAN VIEW

#### 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 run would be achieved with 5, 4 FT long segments equaling 20 FT (nominal).

#### 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.

## INTELLIGENT LUMINAIRE CHARTS

Choose nomenclature from these columns					
Driver Configurations	Minimum Dimming Level	Control Input	Driver	Dimming Range	Notes
	MIN1	+	ZT	= eldoLED EcoDrive	100% to 1%
	MIN1	+	NLIGHT	= eldoLED EcoDrive	100% to 1%
	MIN10	+	ZT	= eldoLED EcoDrive	100% to 10%
	MIN1	+	ECO	= eldoLED EcoDrive	100% to 1%

Control + Sensor Configurations	Control Input	Sensor	Sensor	Notes
	ZT	ADC	SensorSwitch MSD EZ ADC	0-10V control Daylight Sensor
	ZT	PDT	SensorSwitch MSD PDT 7 EZ	0-10V control Occupancy sensor
	ZT	APDT	SensorSwitch MSD PDT 7 EZ ADC	0-10V control Daylight with Occupancy sensor
	NLIGHT	ADC	SensorSwitch NES ADCX	nLight control Daylight Sensor
	NLIGHT	PDT	SensorSwitch NES PDT 7	nLight control Occupancy sensor
	NLIGHT	APDT	SensorSwitch NES PDT 7 ADCX	nLight control Daylight with Occupancy Sensor

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@Peerless@AcuityBrands.com](mailto:TechSupport@Peerless@AcuityBrands.com).

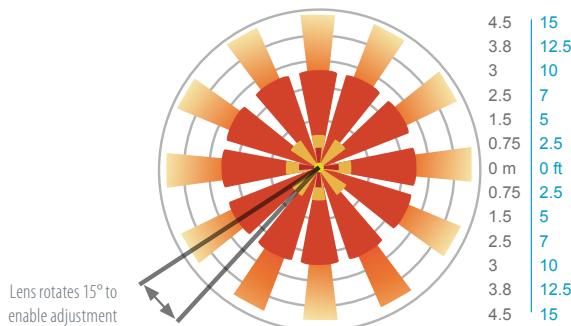
## OCCUPANCY DETECTION COVERAGE

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.

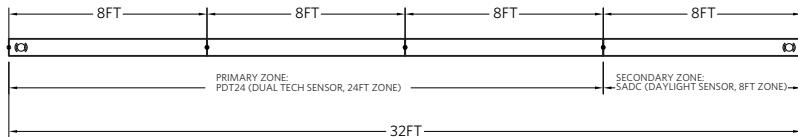
Initial detection of walking motion into long coverage segment will occur at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m). Lens assembly rotates 15° to enable adjustment in order to line up long segments.



## **INTEGRATED SENSOR LAYOUT**

**CORRECT:**

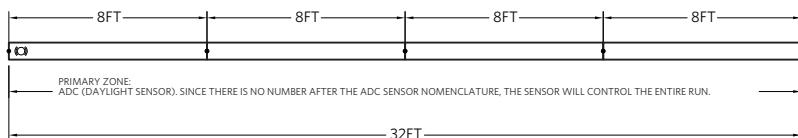
32FT MSL8 RUN WITH 2 SENSORS WITH PRIMARY ZONE 24FT AND SECONDARY ZONE 8FT -- PDT24 SADC8



## **Notes:**

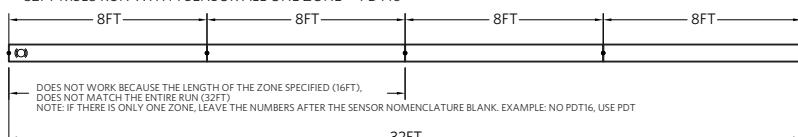
- Only one sensor per zone
  - At the most, the entire run can only have 2 sensors (thus 2 sensors zones at the most)
  - Sensor zones can not split fixture sections
  - No overlapping zones
  - One nLight or NLTAIR2 device per zone or per sensor,  
for multiple zones without sensors contact factory

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

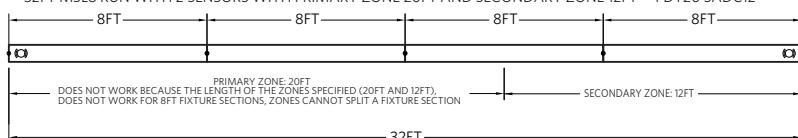


**INCORRECT:**

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



## Most Common Mounting Types and Options

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

### Mounting Type

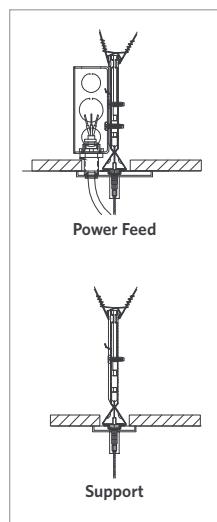
- F1/ For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications.
- F2/ For use with recessed or surface mount horizontal J-box applications.
- F1A/ For use with most T-Bar and screw slot grid ceilings. Designed for on-grid and off-grid applications. Comes complete with vertical J-box with built-in wire way. See also CP.

### Mounting Options

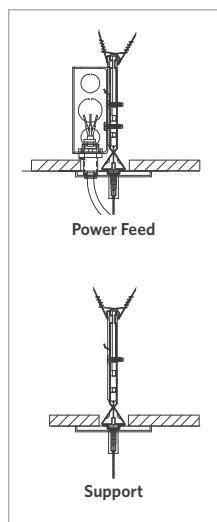
- |         |   |
|---------|---|
| MCS     | Matching canopy at support for aesthetics.                              |
| MCSJ    | Matching canopy for J-box mounting at non-power feed support locations. |
| OJB     | Offset J-box at feed.   |
| SLP OJB | Sloped ceiling couplers and offset J-box option at feed.                |

For more detailed mounting drawings and information, see [peerlesslighting.acuitybrands.com/resources/product-resources](http://peerlesslighting.acuitybrands.com/resources/product-resources)

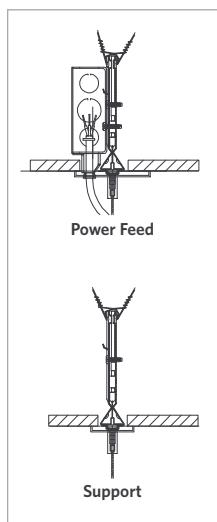
F1/



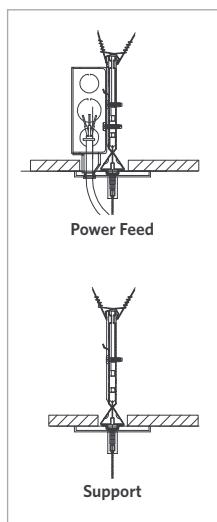
F1/MCS



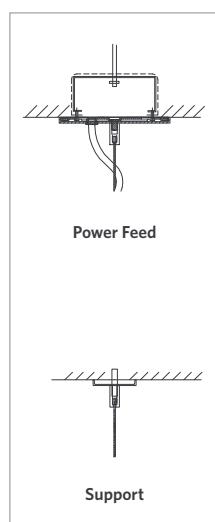
F1A/



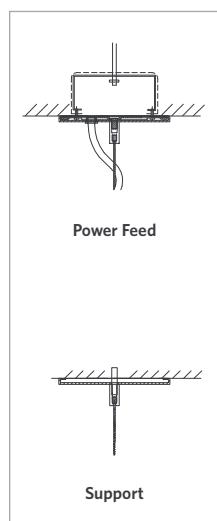
F1A/MCS



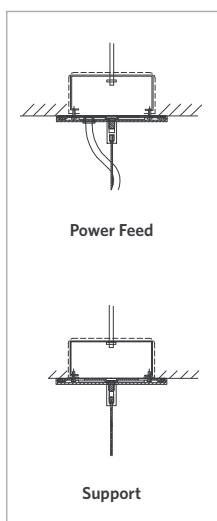
F2/



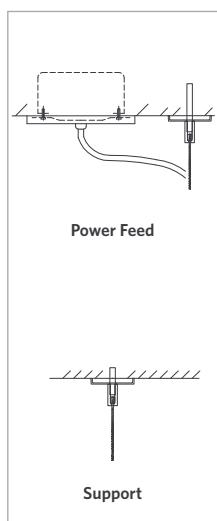
F2/MCS



F2/MCSJ



F2/OJB



F2/SLP OJB

