

# LLE Family

## Intelligent Linear Luminaire

Date: \_\_\_\_\_

Quantity: \_\_\_\_\_

Company: \_\_\_\_\_

Project: \_\_\_\_\_

The Digital Lumens LLE luminaire family of high-performance linear luminaires paired with a standalone DLA-LLE (Dense Motion Sensor Digital Light Agent) offer flexible group or individual luminaire control and high-quality lighting ideal for a broad range of low-to-intermediate height applications.



### Key Features & Benefits

- Digital Lumens' signature intelligence—occupancy sensing, daylight sensing, logging of all key energy and occupancy data
- Lumen output from 3,987 to 6,525 lm
- Control flexibility for individual or group management
- End-to-end linear linking capability
- SiteWorx Tune compatible

### Maximize Energy Savings

With SiteWorx Tune, customize and apply industry-leading lighting control strategies — including daylight harvesting and off-hour setback — to achieve up to 90% energy savings. Accessible via web and mobile applications, intuitive software provides easy management of lighting system settings and comprehensive reporting tools to maximize energy savings, safety, and visual comfort.

### Instrument for the IIoT

With Digital Lumens intelligent LED luminaires and Digital Light Agent (DLA) lighting controls, your facility is immediately instrumented with SiteWorx, an easily expandable Industrial IoT solution that enables rapid deployment of additional sensor-based applications that extend beyond lighting to deliver even greater operational insight and create new value streams.

### Quality and Reliability

Digital Lumens products are designed and manufactured to satisfy the highest standards of customers worldwide and deliver performance, reliability, and long life.

As an OSRAM business, Digital Lumens solutions are supported by a global network of partners and product specialists.

Our Brand

 DIGITAL LUMENS

**OSRAM**

## Specifications

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### SENSING AND CONTROL

#### Onboard Intelligence

- Built-in sensing with data logging
- Energy and fault monitoring
- Protective temperature monitoring and control

#### Native Sensing

- Integrated PIR occupancy sensor
- Integrated daylight sensor

#### Wireless Networking

- IEEE 802.15.4 Wireless Mesh

#### Control Capabilities

- On-demand adjustments via mobile and web applications
- kWh and occupancy logging
- Daylight harvesting

#### Dimming

- 0% – 100%, continuous
- PAR1789-compliant with modulation > 1.25 kHz

### PERFORMANCE

#### Unified Glare Rating<sup>1</sup>

- 20

#### Power Factor

- 0.9 minimum

#### Surge Protection

- Per IEC 61547
- 1 kV line-line / 2 kV line-earth

#### Wiring

- Direct wiring with 0.5 in (1.3 cm) trade-size knockout

### ENVIRONMENTAL

#### IP Rating

- IP40

#### Operating Temperature

- -14° – 104°F (-10° – 40°C)

#### Maximum Storage Temperature

- 104°F (40°C)

#### Operating Humidity

- 0% – 95%, non-condensing

#### Photobiological Safety

- Exempt group per IEC 62471

### PHYSICAL

#### Mounting Options

- Aircraft Cable or Fixed Mount (suitable for ceiling)

#### Luminaire Frame & Power Enclosure

- Powder-coated steel and aluminum
- PC / ABS end caps

#### Optic Material

- Optical grade PC lens

#### Optic Option

- Diffuse

### WARRANTY

- 10-Year Limited Warranty (Luminaire)

### CERTIFICATIONS

- UL/cUL, UL-NOM, CE, FCC Part 15 Class B, CISPR 15, Design Lights Consortium (DLC) Premium



## Accessories

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Part Number	Description
LHHAS	Aircraft Cable Hanging Hardware
LHHRM	Fixed Mount Hanging Hardware

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# LLE-B1-ST

## Specifications

### PERFORMANCE

5,000 K CCT<sup>2</sup>

4,000 K CCT<sup>2</sup>

Lumen Output (nominal)  
— 4,157 lm

Lumen Output (nominal)  
— 3,987 lm

Power Consumption  
— 33 W

Power Consumption  
— 33 W

Efficacy  
— 126 lm/W

Efficacy  
— 119 lm/W

CRI  
— 80 minimum, 82 typical

CRI  
— 80 minimum, 82 typical

Input Ratings  
— 100 – 277 VAC, 50/60,  
0.27 A (maximum)

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— 100 – 277 VAC, 50/60,  
0.27 A (maximum)

### PHYSICAL

#### Dimensions (H x W x D)

- Luminaire  
4.0 x 3.7 x 48.5 inch (109 x 93 x 1,232 mm)
- Luminaire & DLA-LLE  
4.9 x 3.8 x 51.3 inch (12.4 x 9.7 x 1,302 mm)

#### Weight

- Luminaire - 6.6 lbs (3 kg)
- Luminaire & DLA-LLE - 7.1 lbs (3.2 kg)

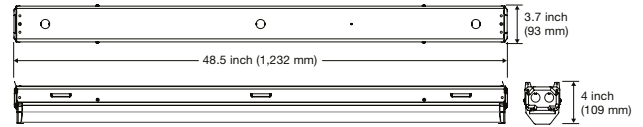
### SPACING CRITERIA

Optic Type	Fixed
Diffuse	1.24

### LUMEN MAINTENANCE & DRIVER LIFETIME<sup>3,4</sup>

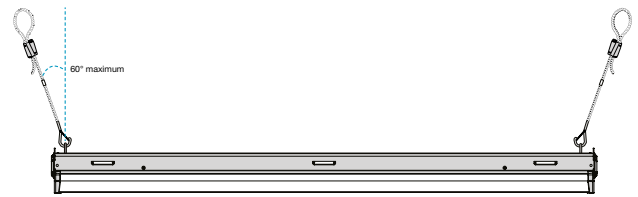
	25°C	50°C
L <sup>90</sup> (10k)	— > 41,000	— > 39,000
L <sub>80</sub> (10k)	— > 85,000	— > 83,000
L <sub>70</sub> (10k)	— > 136,000	— > 133,000
Driver Lifetime	— 120,000	— 120,000

## Dimensions



## Hardware

### Aircraft Mount



### Fixed Mount



## Illuminance at Distance

### Diffuse Optic

	Center Beam fc	Beam Spread	
4 ft	72	15 ft	10 ft
8 ft	18	31 ft	20 ft
12 ft	8	46 ft	29 ft
16 ft	5	61 ft	39 ft
20 ft	3	77 ft	49 ft

Horizontal      Vertical

# LLE-D1-ST

## Specifications

### PERFORMANCE

5,000 K CCT <sup>2</sup>	4,000 K CCT <sup>2</sup>
<b>Lumen Output (nominal)</b> — 6,525 lm	<b>Lumen Output (nominal)</b> — 6,265 lm
<b>Power Consumption</b> — 52 W	<b>Power Consumption</b> — 51 W
<b>Efficacy</b> — 125 lm/W	<b>Efficacy</b> — 123 lm/W
<b>CRI</b> — 80 minimum, 82 typical	<b>CRI</b> — 80 minimum, 82 typical
<b>Input Ratings</b> — 100 – 277 VAC, 50/60, 0.5 A (maximum)	<b>Input Ratings</b> — 100 – 277 VAC, 50/60, 0.5 A (maximum)

### PHYSICAL

#### Dimensions (H x W x D)

- Luminaire - 4.0 x 3.7 x 48.5 inch (109 x 93 x 1,232 mm)
- Luminaire & DLA-LLE - 4.9 x 3.8 x 51.3 inch (124 x 97 x 1,302 mm)

#### Weight

- Luminaire - 7.3 lbs (3.3 kg)
- Luminaire & DLA-LLE - 7.7 lbs (3.5 kg)

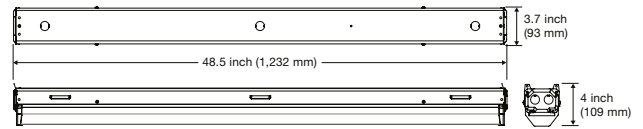
### SPACING CRITERIA

Optic Type	Fixed
Diffuse	1.32

### LUMEN MAINTENANCE & DRIVER LIFETIME<sup>3,4</sup>

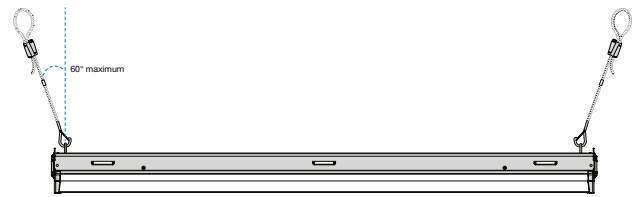
	25°C	50°C
<b>L<sup>90</sup> (10k)</b>	— > 41,000	— > 39,000
<b>L<sub>80</sub> (10k)</b>	— > 85,000	— > 83,000
<b>L<sub>70</sub> (10k)</b>	— > 136,000	— > 133,000
<b>Driver Lifetime</b>	— 120,000	— 120,000

## Dimensions



## Hardware

### Aircraft Mount



### Fixed Mount



## Illuminance at Distance

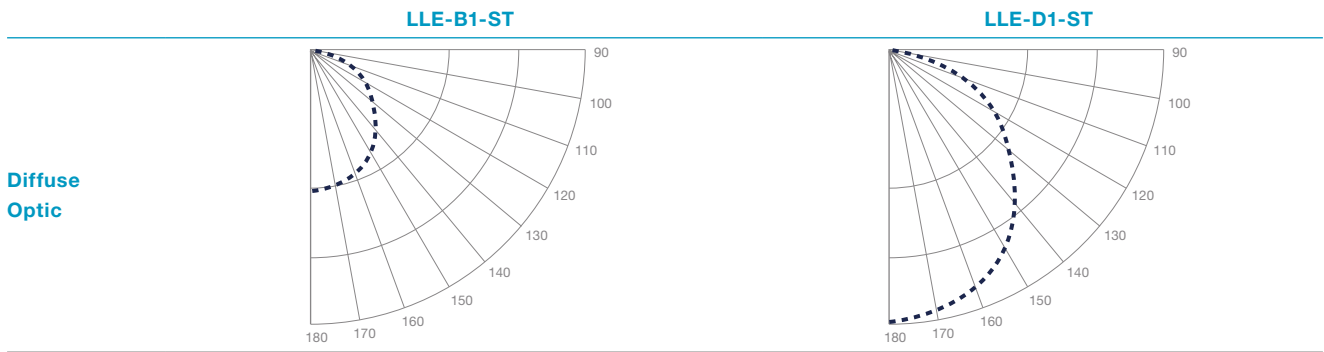
### Diffuse Optic

	Center Beam fc	Beam Spread	
4 ft	118	15 ft	10 ft
8 ft	29	31 ft	20 ft
12 ft	13	46 ft	30 ft
16 ft	7	61 ft	39 ft
20 ft	5	77 ft	49 ft

Horizontal      Vertical

# Polar Candela Distribution

Fixed Axis -----



## Ordering Information

The table below provides guidelines for encoding item numbers when ordering LLE luminaires. Select a luminaire type (lumen output), optic, and CCT, and then use the hyphenated character codes to build a part number.

Note: For short/standard lead times, select options in **bold**.

Luminaire	Voltage	Optic	CRI/CCT
<b>LLE-B1</b>	<b>-ST</b> Standard	<b>-D</b> Diffuse	<b>-840</b> 80 CRI / 82 TYP 4,000 K CCT
<b>LLE-D1</b>			<b>-850</b> 80 CRI / 82 TYP 5,000 K CCT

Footnotes:

- <sup>1</sup> Calculated in nominal application environment.
- <sup>2</sup> Nominal CCT, as defined by ANSI C78.377-2008
- <sup>3</sup> LEDs are driven lower to enhance efficiency and increase lifetime of the LEDs. Drivers are tested at ambient (25°C), 100% continuous duty. Driver design target is always minimum >50,000 hours at 25°C.
- <sup>4</sup> LM-79, LM-80 tests and reports are performed in accordance to IESNA standards, per TM-21. Lumen maintenance calculated in hours (L70 via TM-21) based on continuous operation.

# DLA-LLE

## Specifications

### PERFORMANCE

Input Rating  
— 12-24 VDC

Power Consumption  
— < 0.5 W

Connections  
— DC (Power)  
— DALI (Data)

### PHYSICAL

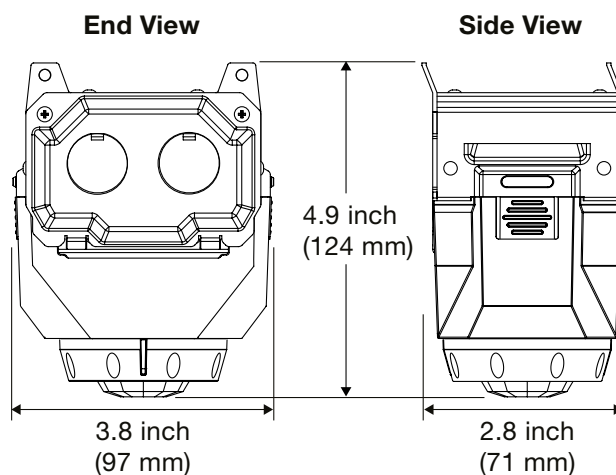
Power Enclosure  
— PC / ABS, powder-coated aluminum

Luminaire Limit  
— 15 LLEs per DLA-LLE

Dimensions (H x W x D)  
— 4.9 x 3.8 x 2.8 inch (124 x 97 x 71 mm)

Weight  
— 11.3 oz (0.3 kg)

## Dimensions

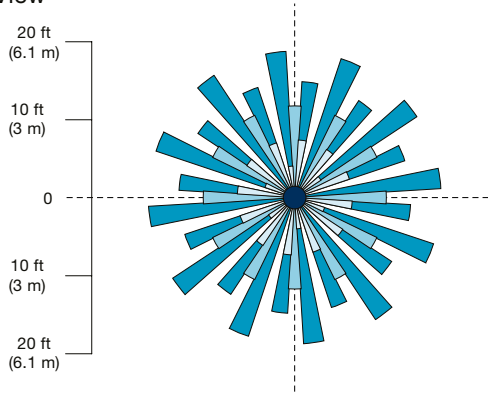


## Ordering Information

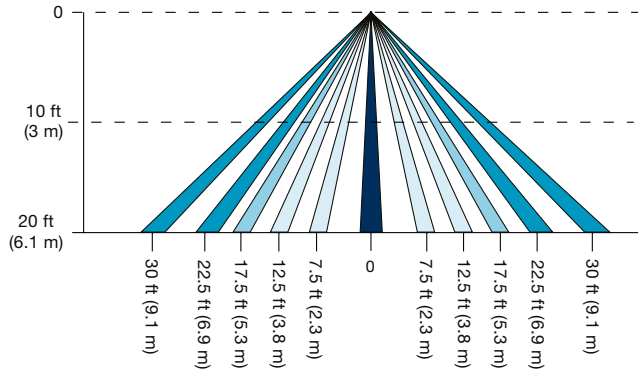
Category	Part Number	Description
Modular Control	DLA-LLE	Digital Light Agent for LLE, Dense Motion Sensor

# Sensor Coverage

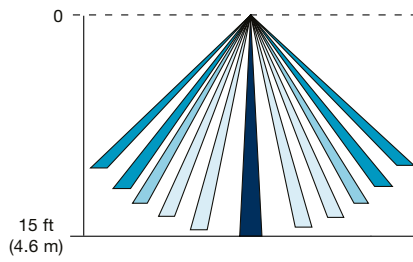
Top View



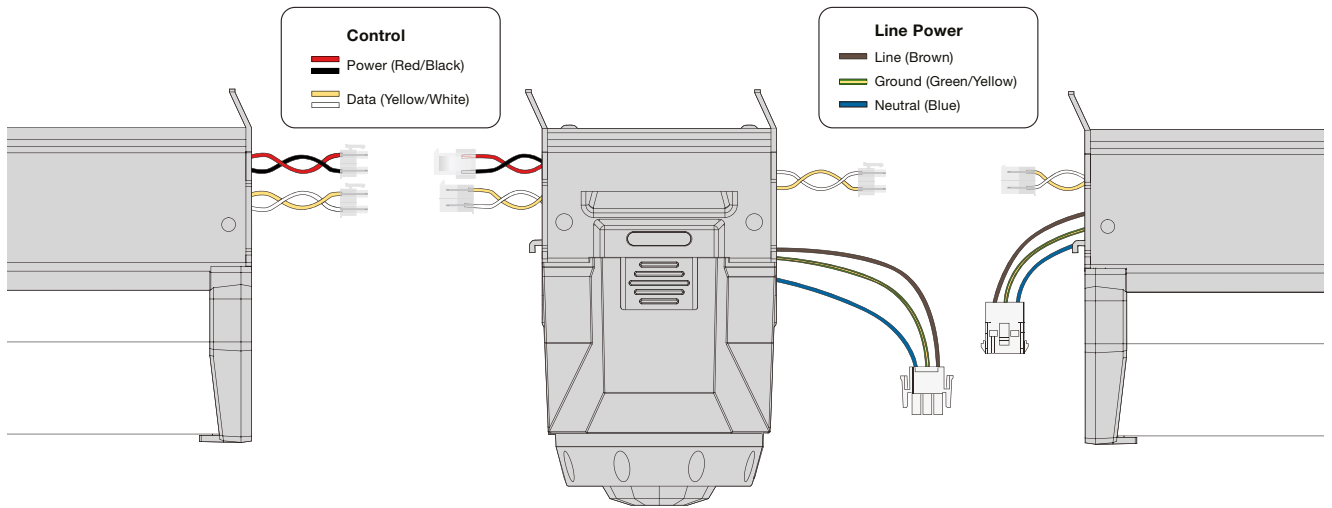
Side View



Side View (Wall Mount)



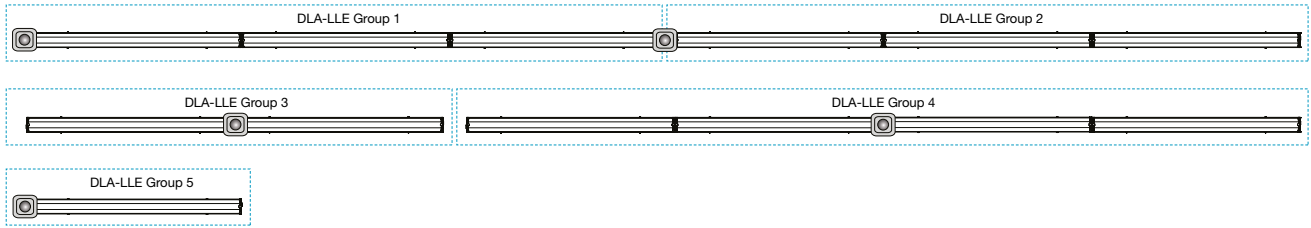
# Wiring Schematic



# DLA-LLE

## Luminaire/Control Schematic

Luminaires can be installed and wired end-to-end in a multi-luminaire run, or as standalone units. Each LLE luminaire has wireless control built in and can be coordinated to a standalone DLA-LLE. Each DLA-LLE can control a single or a group of LLE luminaires providing flexible control options through cooperative control via the SiteWorx® Tune Application.



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