

Fixture shown with optional integrated occupancy sensor and cable kit. (sold separately)

## ABOUT THE SERIES

The award winning Lusio® Essentials Series is a family of high efficacy LED fixtures for high and medium bay applications that provide premium performance, quality and versatility. With nearly 50% lower power consumption compared to traditional fluorescent and HID light sources, these fixtures are designed to lower your total cost of ownership (TCO). Separated finned aluminum heat sinks promote heat transfer from the LEDs and extend their useful life.

## INTENDED USE

Manufacturing, Aircraft Hangars, Warehouses, Convention Centers and Other Large Indoor Spaces		
Target Mounting Heights	Comparable Traditional Light Source	Reduction in Power Consumption over Traditional Light Source
20-40 Feet (6-12m)	4-Lamp T5HO or 250W Metal Halide	53-62%

## FIXTURE PERFORMANCE

	WATTAGE <sup>1</sup>	LUMENS <sup>1</sup>	EFFICACY <sup>1</sup>	CRI <sup>2</sup>
NL - NO LENS				
4000K/5000K	113	13,160	116	75
CA - CLEAR ACRYLIC LENS				
4000K/5000K	113	13,067	115	75
FP - FROSTED POLYCARBONATE LENS				
4000K/5000K	113	11,613	102	75

<sup>1</sup> Typical at 120V and 77°F (25°C). <sup>2</sup> Typical CRI.

## DIMENSIONS

INS (CMS) • LBS (KGS)

LENGTH <sup>1</sup>	WIDTH <sup>1</sup>	DEPTH <sup>1</sup>	WEIGHT	WEIGHT WITH BATTERY BACK-UP
23-1/4 (59.1)	14 (35.6)	2-1/4 (5.7)	10 (4.5)	14 (6.4)

<sup>1</sup> Dimensions listed are for the fixture only. See dimensional drawings for measurements with mounting hardware.

## POWER FACTOR

120V	0.997
277V	0.952
347V	0.988
480V	0.969

## TOTAL HARMONIC DISTORTION

120V	6.5%
277V	11.9%
347V	10.3%
480V	10.8%

## FEATURES & SPECIFICATIONS

### POWER AND CONTROL

- **POWER INPUT:** 120-480V (50/60Hz)
- **DIMMING:** 0-10V dimming standard. Capable of dimming down to 10%.
- **OCCUPANCY SENSORS:** Optional factory installed occupancy sensors are available. See accessories ordering information.
- **EMERGENCY BATTERY BACK-UP:** For 120-277V fixtures only, optional factory installed battery back-ups are available that produce 1,900-2,100 lumens for a minimum of 90 minutes.

### LUMEN MAINTENANCE

- **L70 LIFE:** 90% lumen maintenance at 70,000 hours (77°F/25°C ambient); L70 predicted life is more than 200,000 hours.

### FIXTURE

- **ENVIRONMENT:** Dry/Damp. For interior applications (IP30).
- **HEAT SINKS:** Extruded aluminum heat sinks provide optimal thermal management, decreasing LED junction temperature and ensuring long life.
- **POWER SUPPLY ACCESS:** Center channel cover is hinged for easy access to power supplies and quick wiring.
- **MOUNTING:** Fixture is cable ready and has a center opening to accept a 1/2" stem mount. Cable, stem or surface mount options.
- **LENSES:** Recommended UV stable clear acrylic or frosted polycarbonate. Also available without a lens. Consult acrylic/polycarbonate chemical resistance chart for guidance in selecting the appropriate lensing material for your application.
- **WIRE GUARDS:** Optional wire guards can be field installed. See accessories ordering information.
- **WARRANTY:** Limited 5-year warranty.
- **AMBIENT OPERATING TEMPERATURES:** Cable, Loop/Hook, and Stem Mounted Fixtures -31° to 131°F (-35° to 55°C)  
Fixtures with Emergency Battery Back-ups and Surface Mounted Fixtures -31° to 122°F (-35° to 50°C)

### LISTINGS AND CERTIFICATIONS

- UL | cUL listed for safety (UL 1598)
- UL | cUL dry/damp location listed
- RoHS Compliant
- FCC Class B
- Lighting Facts (U.S. Department of Energy) Certified
- DesignLights™ Consortium Approved



**ORDERING EXAMPLE:**

ES2-UL-4MS-50-WIDE-CA-CRM-120-10V-OCCN-CORDN-EMBN

ES2	UL	4MS		WIDE	
<b>SERIES</b>	<b>COMPLIANCE</b>	<b>MODEL</b>	<b>COLOR TEMP</b>	<b>DISTRIBUTION</b>	<b>LENS</b>
	<b>UL</b> UL Listed	<b>4MS</b> 4 Modules Short	<b>40</b> 4000K  <b>50</b> 5000K	<b>WIDE</b> Wide Distribution	<b>CA</b> Clear acrylic lens  <b>FP</b> Frosted polycarbonate lens  <b>NL</b> No lens
		10V			
<b>MOUNTING</b>	<b>VOLTAGE</b>	<b>DIMMING</b>	<b>OCC SENSORS</b>	<b>CORD &amp; PLUG</b>	<b>BATTERY BACK-UP</b>
<b>CRM</b> Fixture is cable-ready and has a center opening to accept a 1/2-inch stem mount.	<b>120</b> 120V	<b>10V</b> 0-10V Interface	<b>OCCN</b> No OCC Sensor	<b>CORDN</b> No cord. No plug	<b>EMBN</b> No EMB
<b>MBR<sup>1</sup></b> Kit includes bracket for surface or stem mounting. Attaches to junction box for surface mounting. Accepts 3/4" rigid conduit for single-point stem mounting.	<b>208</b> 208V		<b>OCC20<sup>1</sup></b> 20' Mounting Heights	<b>C6W<sup>1</sup></b> 6ft cord, 15A, no plug	<b>EMB<sup>1</sup></b> Emergency battery back-up for a minimum of 90 minutes when power is interrupted. Test button and MBR features are included with EMB.
<b>220</b> 220V			<b>OCC40<sup>1</sup></b> 40' Mounting Heights	<b>C15W<sup>1</sup></b> 15ft cord, 15A, no plug	
<b>240</b> 240V			<b>OCCDIM20<sup>1</sup></b> 20' Mounting Heights	<b>C515<sup>1</sup></b> 6ft cord, 15A, straight plug 120V (5-15P)	
<b>277</b> 277V			<b>OCCDIM40<sup>1</sup></b> 40' Mounting Heights	<b>CL515<sup>1</sup></b> 6ft cord, 15A, locking plug 120V (L5-15P)	
<b>347</b> 347V				<b>CL715<sup>1</sup></b> 6ft cord, 15A, locking plug 277V (L7-15P)	
<b>480</b> 480V				<b>CL720<sup>1</sup></b> 6ft cord, 20A, locking plug 277V (L7-20P)	
				<b>CL2420<sup>1</sup></b> 6ft cord, 20A, locking plug 347V (L24-20P)	
				<b>CL820<sup>1</sup></b> 6ft cord, 20A, locking plug 480V (L8-20P)	
	<i>Note: If specific voltage is unknown, select 120 for low voltage and 480 for high voltage.</i>		<i>Note: Dimmable occupancy sensors only available for 120-277V and require a Wireless Programmer for set up. See accessories.</i>		<i>Note: EMB only available for 120-277V.</i>

<sup>1</sup> Optional add-on. See price list for pricing.

**ACCESSORIES:** Must be ordered separately. Packaged separately.

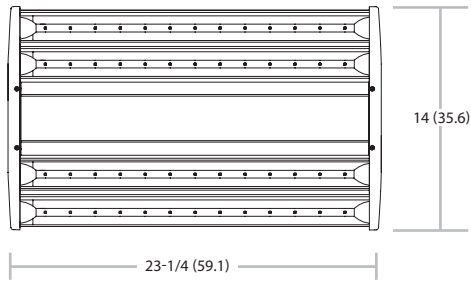
Type	Part Number	Description
WIRELESS PROGRAMMER FOR DIMMABLE OCCUPANCY SENSOR(S)	OCCDIMPROG	Handheld wireless programmer required to setup 120-277V dimmable occupancy sensor(s).
CABLE KIT	CABLEKIT	Kit includes 10 ft Gripple aircraft cable and "Y" snap hook (one pair).
CABLE KIT	SAFETYCABLE	Kit includes 5 ft Gripple aircraft cable with single snap hook.
WIRE GUARDS	ES2-WG-4MS	Wire guard protects light modules from impact. Kit includes mounting hardware.

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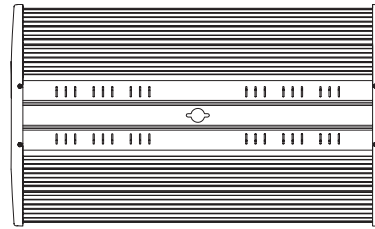
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**DIMENSIONS: INS (CMS)**

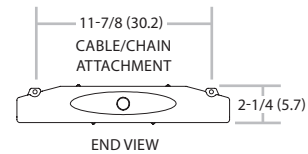
**BOTTOM VIEW**



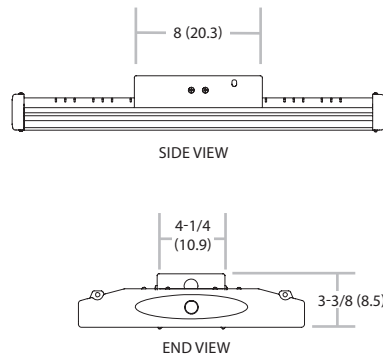
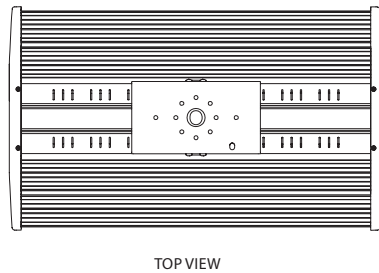
**TOP VIEW**



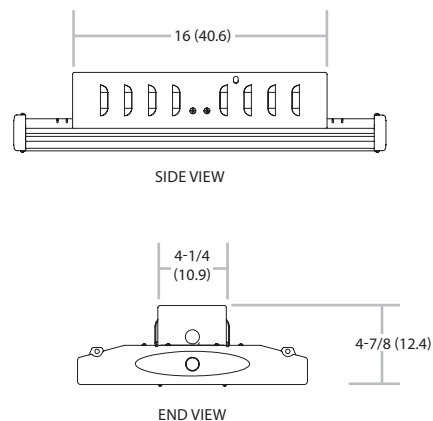
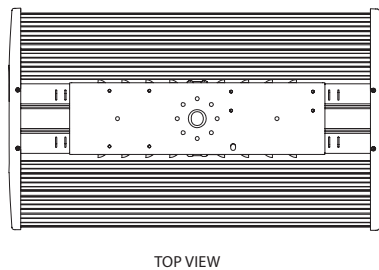
**CABLE READY MOUNT (CRM)**



**WITH OPTIONAL MBR FOR SURFACE/STEM MOUNT**



**WITH OPTIONAL MBR FOR EMERGENCY BATTERY BACK-UP**



CLEAR ACRYLIC LENS

DESCRIPTION

Wide distribution maximizes spacing, provides high uniformity and LED protection. Typically used for mounting heights of 20-40 feet (6-12m).

FIXTURE DATA

Part Number: ES2-UL-4MS-50-WIDE-CA
CCT: 5000K

Fixture Lumen Output: 13,067 lms
Fixture Wattage: 113.7W
Fixture Efficacy Rating: 115 lm/W

Spacing Criteria

Table with Spacing Criteria: Diagonal 1.46, Lateral Plane 0°-180° 90°-270° 1.3 1.3

CCT LIGHT OUTPUT CONVERSIONS

4000K: 1.00
Test date: 28-JUNE-2013
Tests done in accordance with LM79. Consult factory for LM79 and IES files.

ZONAL LUMEN SUMMARY

Table with Zonal Lumen Summary: Zone, Lumens, % Fixture

CANDELA DISTRIBUTION ARRAY

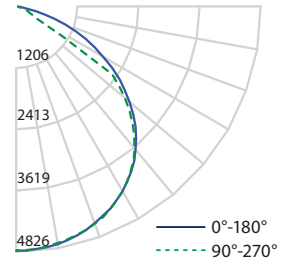
Table with Candela Distribution Array: Average Luminance Angle, 0°, 45°, 90°

COEFFICIENTS OF UTILIZATION

Table with Coefficients of Utilization: RC, RW, 80, 70, 50, 30, 10, 0

RCR=Room Cavity Ratio RC=Effective Ceiling Cavity Reflectance RW=Wall Reflectance
Effective Floor Cavity Reflectance = 20%

CANDELA PLOT



Clear acrylic lens

FROSTED POLYCARBONATE LENS

DESCRIPTION

Semi-diffused frosted lens provides glare control and LED protection. Typically used for mounting heights of 20-40 feet (6-12m).

FIXTURE DATA

Part Number: ES2-UL-4MS-50-WIDE-FP
CCT: 5000K

Fixture Lumen Output: 11,613 lms
Fixture Wattage: 113.7W
Fixture Efficacy Rating: 102 lm/W

Spacing Criteria

Table with Spacing Criteria: Diagonal 1.24, Lateral Plane 0°-180° 90°-270° 1.14 1.16

CCT LIGHT OUTPUT CONVERSIONS

4000K: 1.00
Test date: 28-JUNE-2013
Tests done in accordance with LM79. Consult factory for LM79 and IES files.

ZONAL LUMEN SUMMARY

Table with Zonal Lumen Summary: Zone, Lumens, % Fixture

CANDELA DISTRIBUTION ARRAY

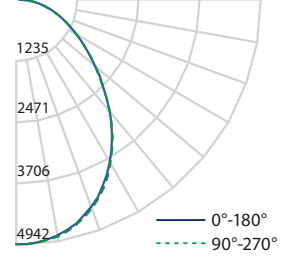
Table with Candela Distribution Array: Average Luminance Angle, 0°, 45°, 90°

COEFFICIENTS OF UTILIZATION

Table with Coefficients of Utilization: RC, RW, 80, 70, 50, 30, 10, 0

RCR=Room Cavity Ratio RC=Effective Ceiling Cavity Reflectance RW=Wall Reflectance
Effective Floor Cavity Reflectance = 20%

CANDELA PLOT



Frosted polycarbonate lens

NO LENS

DESCRIPTION

Wide distribution maximizes spacing and provides high uniformity. Typically used for mounting heights of 20-40 feet (6-12m).

FIXTURE DATA

Part Number: ES2-UL-4MS-50-WIDE-NL
CCT: 5000K

Fixture Lumen Output: 13,160 lms
Fixture Wattage: 113.7W
Fixture Efficacy Rating: 116 lm/W

Spacing Criteria

Table with Spacing Criteria: Diagonal 1.48, Lateral Plane 0°-180° 90°-270° 1.3 1.3

CCT LIGHT OUTPUT CONVERSIONS

4000K: 1.00
Test date: 28-JUNE-2013
Tests done in accordance with LM79. Consult factory for LM79 and IES files.

ZONAL LUMEN SUMMARY

Table with Zonal Lumen Summary: Zone, Lumens, % Fixture

CANDELA DISTRIBUTION ARRAY

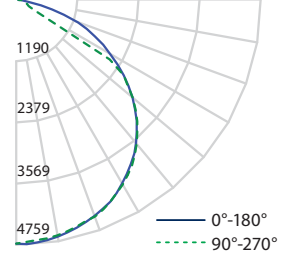
Table with Candela Distribution Array: Average Luminance Angle, 0°, 45°, 90°

COEFFICIENTS OF UTILIZATION

Table with Coefficients of Utilization: RC, RW, 80, 70, 50, 30, 10, 0

RCR=Room Cavity Ratio RC=Effective Ceiling Cavity Reflectance RW=Wall Reflectance
Effective Floor Cavity Reflectance = 20%

CANDELA PLOT



No lens

PHOTOMETRIC AND DISTRIBUTION DATA IS TYPICAL FOR THIS FIXTURE. PERFORMANCE WILL VARY DEPENDING ON LED AND POWER SUPPLY. THIS FIXTURE IS MANUFACTURED TO AN OVERALL PERFORMANCE TOLERANCE OF +/- 6%.