



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)	6-Lamp T8 or 320W Metal Halide	40-53%

## FIXTURE PERFORMANCE

	WATTAGE <sup>1</sup>	LUMENS <sup>1</sup>	EFFICACY <sup>1</sup>	CRI <sup>2</sup>
NL - NO LENS				
4000K/5000K	175	19,627	112	75
CA - CLEAR ACRYLIC LENS				
4000K/5000K	175	18,500	108	75
FP - FROSTED POLYCARBONATE LENS				
4000K/5000K	175	17,321	99	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)	18-3/4 (47.6)	2-1/4 (5.7)	14 (6.4)	18 (8.1)

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

## POWER FACTOR

120V	0.994
277V	0.927
347V	0.983
480V	0.955

## TOTAL HARMONIC DISTORTION

120V	7.8%
277V	13.1%
347V	12.2%
480V	13.4%

## 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



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**ORDERING EXAMPLE:**

ES2-UL-6MS-50-WIDE-CA-CRM-120-10V-OCCN-CORDN-EMBN

ES2	UL	6MS		WIDE	
SERIES	COMPLIANCE	MODEL	COLOR TEMP	DISTRIBUTION	LENS
	<b>UL</b> UL Listed	<b>6MS</b> 6 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			
MOUNTING	VOLTAGE	DIMMING	OCC SENSORS	CORD & PLUG	BATTERY BACK-UP
<p><b>CRM</b> Fixture is cable-ready and has a center opening to accept a 1/2-inch stem mount.</p> <p><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.</p> <p><b>HOOK<sup>1</sup></b> Hook for 1/2" opening in center channel of fixture and one pair of cables for leveling.</p>	<p><b>120</b> 120V</p> <p><b>208</b> 208V</p> <p><b>220</b> 220V</p> <p><b>240</b> 240V</p> <p><b>277</b> 277V</p> <p><b>347</b> 347V</p> <p><b>480</b> 480V</p> <p><small>Note: If specific voltage is unknown, select 120 for low voltage and 480 for high voltage.</small></p>	<p><b>10V</b> 0-10V Interface</p>	<p><b>OCCN</b> No OCC Sensor</p> <p><b>OCC20<sup>1</sup></b> 20' Mounting Heights</p> <p><b>OCC40<sup>1</sup></b> 40' Mounting Heights</p> <p><b>OCCDIM20<sup>1</sup></b> 20' Mounting Heights</p> <p><b>OCCDIM40<sup>1</sup></b> 40' Mounting Heights</p> <p><small>Note: Dimmable occupancy sensors only available for 120-277V and require a Wireless Programmer for set up. See accessories.</small></p>	<p><b>CORDN</b> No cord. No plug</p> <p><b>C6W<sup>1</sup></b> 6ft cord, 15A, no plug</p> <p><b>C15W<sup>1</sup></b> 15ft cord, 15A, no plug</p> <p><b>C515<sup>1</sup></b> 6ft cord, 15A, straight plug 120V (5-15P)</p> <p><b>CL515<sup>1</sup></b> 6ft cord, 15A, locking plug 120V (L5-15P)</p> <p><b>CL715<sup>1</sup></b> 6ft cord, 15A, locking plug 277V (L7-15P)</p> <p><b>CL720<sup>1</sup></b> 6ft cord, 20A, locking plug 277V (L7-20P)</p> <p><b>CL2420<sup>1</sup></b> 6ft cord, 20A, locking plug 347V (L24-20P)</p> <p><b>CL820<sup>1</sup></b> 6ft cord, 20A, locking plug 480V (L8-20P)</p>	<p><b>EMBN</b> No EMB</p> <p><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.</p> <p><small>Note: EMB only available for 120-277V.</small></p>

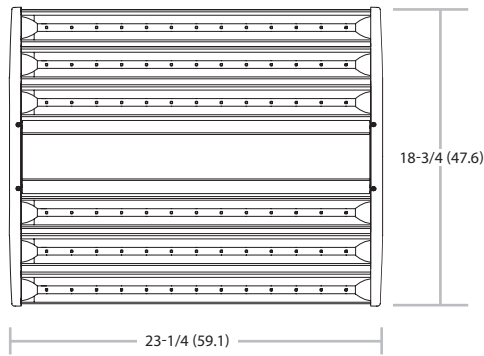
<sup>1</sup>Optional add-on. See price list for pricing.

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

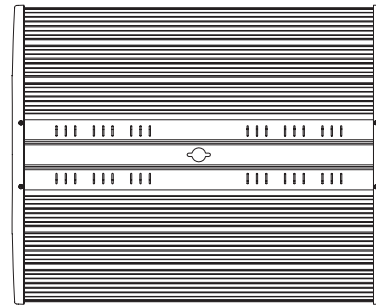
Type	Part Number	Description
WIRELESS PROGRAMMER FOR DIMMABLE OCCUPANCY SENSOR(S)	OCCDIMPROG	Handheld wireless programmer required to setup 120-277V dimmable occupancy sensor(s).
CABLE KIT	CABLEKIT	Kit includes 10 ft Gripple aircraft cable and "Y" snap hook (one pair).
CABLE KIT	SAFETYCABLE	Kit includes 5 ft Gripple aircraft cable with single snap hook.
WIRE GUARDS	ES2-WG-6MS	Wire guard protects light modules from impact. Kit includes mounting hardware.

**DIMENSIONS: INS (CMS)**

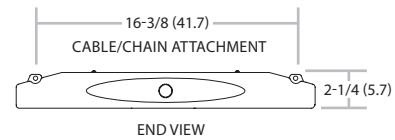
**BOTTOM VIEW**



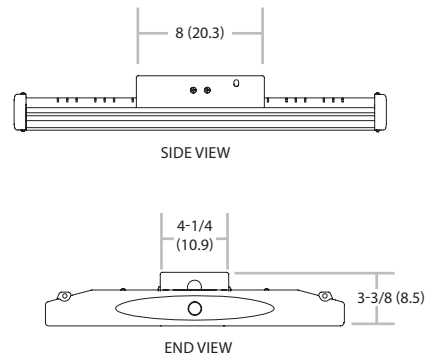
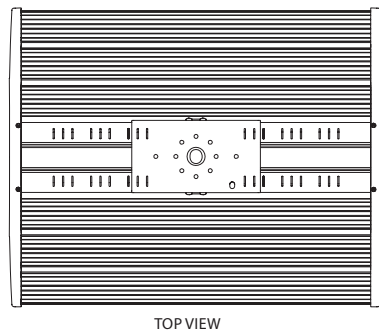
**TOP VIEW**



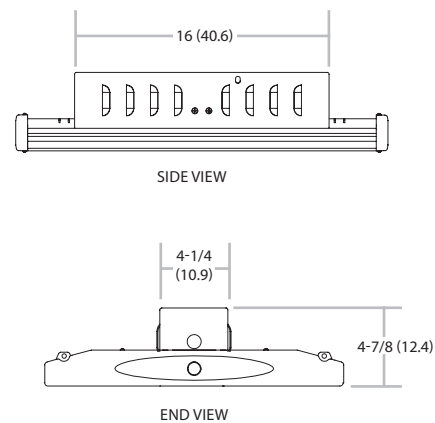
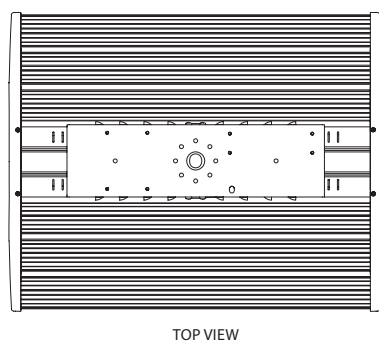
**CABLE READY MOUNT (CRM)**



**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-6MS-50-WIDE-CA

**CCT:** 5000K

**Fixture Lumen Output:** 19,489 lms

**Fixture Wattage:** 174.5W

**Fixture Efficacy Rating:** 112 lm/W

**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**

ZONE	LUMENS	% FIXTURE
0° - 30°	5,726.3	29%
0° - 40°	9,532.6	49%
0° - 60°	17,014.7	87%
0° - 90°	19,488.6	100%
0° - 180°	19,488.6	100%

**CANDELA DISTRIBUTION ARRAY**

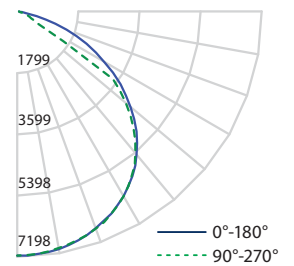
	0°	45°	90°
0°	7,169	7,169	7,169
10°	7,074	7,062	7,053
20°	6,765	6,784	6,786
30°	6,250	6,319	6,258
40°	5,466	5,576	5,415
50°	4,364	4,444	4,182
60°	2,980	2,896	619
70°	1,546	341	342
80°	263	127	126
90°	61	62	62

**COEFFICIENTS OF UTILIZATION**

RC	80				70				50				30				10				0
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100		
1	110	106	102	99	107	104	100	97	99	97	94	96	96	93	91	92	90	89	87		
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74	74		
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63	63		
4	85	74	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54	54		
5	78	66	57	51	76	65	57	51	63	56	50	61	54	50	59	53	49	47	47		
6	72	59	51	44	70	58	50	44	57	49	44	55	48	44	53	48	43	41	41		
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36	36		
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32	32		
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29	29		
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26	26		

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-6MS-50-WIDE-FP

**CCT:** 5000K

**Fixture Lumen Output:** 17,321 lms

**Fixture Wattage:** 175W

**Fixture Efficacy Rating:** 99 lm/W

**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**

ZONE	LUMENS	% FIXTURE
0° - 30°	5,528.1	32%
0° - 40°	8,708.2	50%
0° - 60°	13,998.4	81%
0° - 90°	17,320.7	100%
0° - 180°	17,320.7	100%

**CANDELA DISTRIBUTION ARRAY**

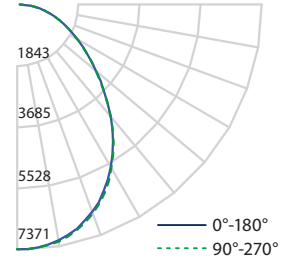
	0°	45°	90°
0°	7,355	7,355	7,355
10°	7,147	7,197	7,224
20°	6,534	6,628	6,678
30°	5,525	5,646	5,690
40°	4,262	4,376	4,386
50°	3,035	3,112	3,105
60°	2,056	2,109	2,110
70°	1,305	1,349	1,363
80°	676	698	729
90°	56	70	92

**COEFFICIENTS OF UTILIZATION**

RC	80				70				50				30				10				0
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84	84		
2	100	91	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71	71		
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61	61		
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52	52		
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46	46		
6	72	59	50	44	70	58	50	44	56	49	43	55	48	43	53	47	43	41	41		
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36	36		
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35	33	33		
9	58	45	37	32	57	45	37	32	44	37	32	43	36	32	42	36	31	30	30		
10	55	42	34	29	54	41	34	29	41	34	29	40	33	29	39	33	29	27	27		

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-6MS-50-WIDE-NL

**CCT:** 5000K

**Fixture Lumen Output:** 19,627 lms

**Fixture Wattage:** 175W

**Fixture Efficacy Rating:** 112 lm/W

**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**

ZONE	LUMENS	% FIXTURE
0° - 30°	5,652.5	29%
0° - 40°	9,436.3	48%
0° - 60°	17,067.1	87%
0° - 90°	19,627.4	100%
0° - 180°	19,627.4	100%

**CANDELA DISTRIBUTION ARRAY**

	0°	45°	90°
0°	7,069	7,069	7,069
10°	6,961	6,946	6,929
20°	6,657	6,648	6,685
30°	6,149	6,200	6,183
40°	5,406	5,530	5,439
50°	4,404	4,567	4,400
60°	3,154	3,271	636
70°	1,902	310	321
80°	346	179	183
90°	63	64	63

**COEFFICIENTS OF UTILIZATION**

RC	80				70				50				30				10				0
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100		
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86		
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73	73		
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62	62		
4	85	73	65	58	82	72	64	58	69	63	57	67	61	56	65	60	56	54	54		
5	78	65	57	50	76	64	56	50	62	55	50	60	54	49	58	53	49	46	46		
6	72	59	50	44	70	58	50	44	56	49	43	55	48	43	53	47	43	41	41		
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36	36		
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