

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P1219438

Luminaire Tested: FWLSC-D-16-UNV-75-35-OPL/84-IP6X

Issue Date: 12/9/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
Report Number: P1219438
Test Lab: INNOVATION CENTER
Issue Date: 12/9/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FWLSC-D-16-UNV-75-35-OPL/84-IP6X
Description: FAILSAFE FWLDL LED FIXTURE WITH SCONE

Light Source:
Ballast/Driver: -

Summary

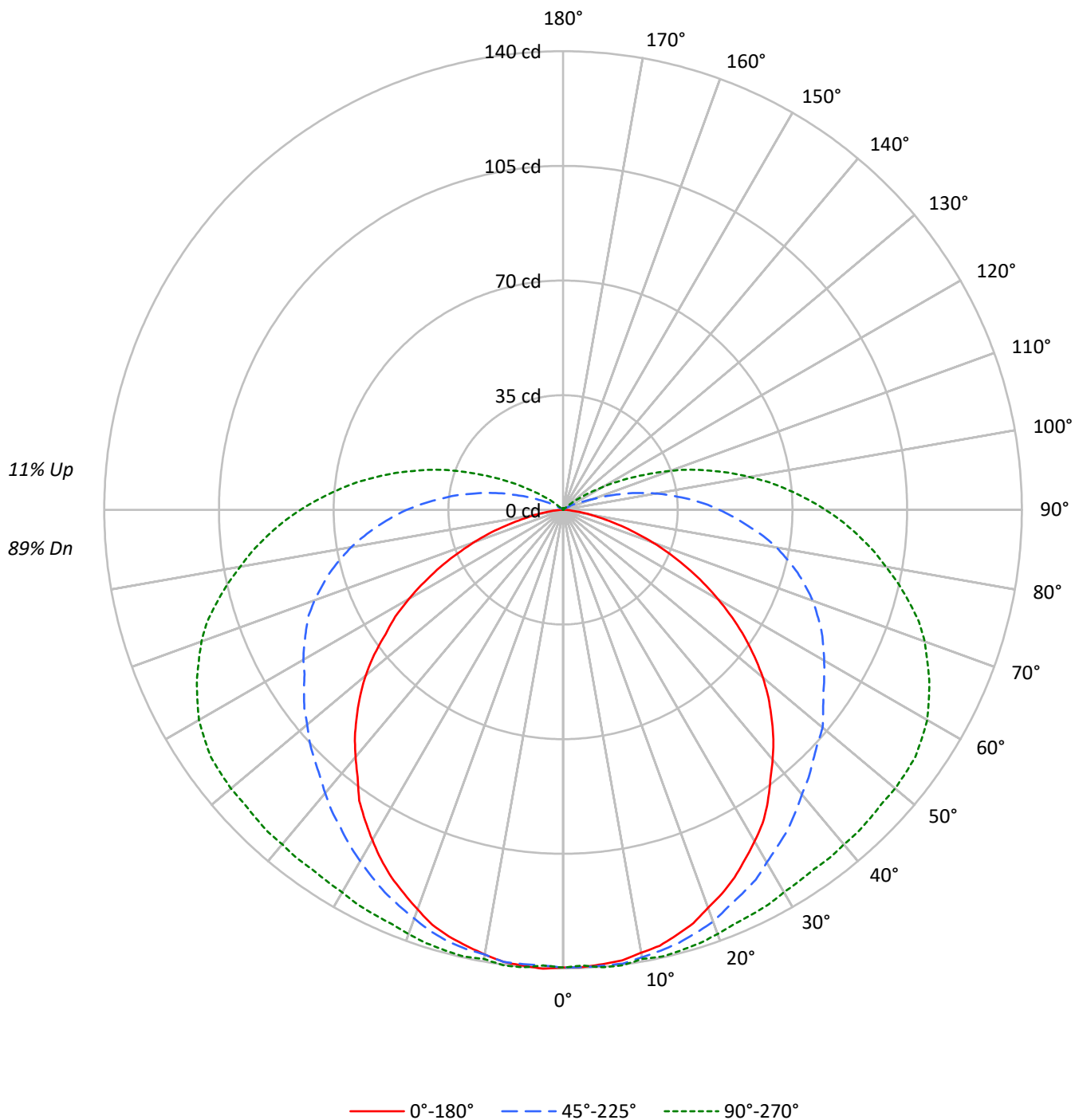
Lumens per Lamp: N/A
Luminaire Lumens: 645.0 lumens
Efficiency: N/A
Efficacy: 48.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.47 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1.33' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 13.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: >0.9
Total Harmonic Distortion (THDi): <20
Frequency (hertz): 60
Stabilization Time: HR
Operation Time: HR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.3	2.1
10°-20°	38.6	6.0
20°-30°	59.8	9.3
30°-40°	75.2	11.7
40°-50°	84.6	13.1
50°-60°	87.6	13.6
60°-70°	83.8	13.0
70°-80°	72.9	11.3
80°-90°	57.0	8.8
90°-100°	39.2	6.1
100°-110°	22.0	3.4
110°-120°	8.6	1.3
120°-130°	1.9	0.3
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	111.6	17.3
0°-40°	186.8	29.0
0°-60°	359.0	55.7
0°-90°	572.7	88.8
90°-120°	69.7	10.8
90°-150°	72.0	11.2
90°-180°	72.0	11.2
0°-180°	645.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	140	140	140	140	140	
5°	139	140	140	139	140	13
15°	134	137	139	136	135	38
25°	124	129	136	129	124	57
35°	109	119	134	118	108	68
45°	90	108	133	107	89	69
55°	68	97	131	96	66	60
65°	42	87	123	86	41	41
75°	17	74	109	74	17	19
85°	2	57	90	57	2	3
90°	0	48	80	48	0	0
95°	0	38	69	38	0	0
105°	0	19	46	19	0	0
115°	0	4	23	6	0	0
125°	0	0	6	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	139.7	139.7	139.7	139.7	139.7	139.7	139.7	139.7	139.7
2.5°	139.7	138.7	139.7	140.2	139.2	139.2	139.2	139.2	140.2
5°	139.2	138.7	139.7	141.2	140.2	139.7	139.2	138.7	139.7
7.5°	138.7	138.2	139.7	140.7	140.2	139.7	139.2	138.2	139.2
10°	137.3	137.3	138.7	140.2	139.2	138.7	137.8	137.3	137.8
12.5°	136.3	136.3	137.8	139.7	139.7	138.2	137.3	136.3	136.3
15°	134.3	134.3	136.8	139.2	139.2	138.2	136.3	134.8	134.8
17.5°	132.3	132.8	135.3	138.7	138.7	137.3	134.8	132.8	132.8
20°	129.3	130.3	133.8	137.3	137.8	135.8	132.8	130.3	129.8
22.5°	126.8	127.3	131.3	135.8	136.8	134.3	130.8	127.8	126.8
25°	123.8	124.8	129.3	134.8	136.3	133.3	128.8	124.8	123.8
27.5°	120.3	121.8	127.3	133.8	135.8	132.3	126.3	121.8	120.3
30°	116.9	118.4	124.3	131.8	134.8	130.3	123.8	118.4	116.4
32.5°	113.4	114.9	121.8	130.8	134.3	129.3	121.3	114.9	112.4
35°	108.9	110.9	119.4	129.8	133.8	128.3	118.4	110.9	108.4
37.5°	103.9	106.4	116.4	128.8	133.8	127.3	115.9	106.4	102.9
40°	99.5	101.9	113.4	127.8	133.3	126.3	112.9	101.9	98.5
42.5°	95.0	98.0	110.9	127.3	133.3	125.8	109.9	97.5	94.0
45°	90.0	93.5	107.9	126.3	132.8	124.8	107.4	93.0	89.0
47.5°	85.0	89.0	105.4	124.8	132.3	123.3	104.9	88.5	84.0
50°	79.6	84.0	103.4	123.8	132.3	122.3	101.9	84.0	78.6
52.5°	73.6	79.1	100.0	122.8	131.8	121.3	99.5	79.1	72.6
55°	67.6	74.6	97.0	121.8	131.3	120.3	96.5	74.1	66.1
57.5°	61.2	69.6	94.5	120.3	129.8	119.4	93.5	69.1	60.7
60°	54.7	65.1	92.0	118.4	128.3	117.4	91.5	64.6	54.2
62.5°	48.2	60.7	89.5	116.4	125.8	115.4	89.0	60.7	47.7
65°	41.8	56.7	87.0	113.4	123.3	112.4	86.5	56.2	41.3
67.5°	35.3	52.7	84.0	110.4	120.3	109.4	84.0	52.2	34.8
70°	29.3	47.7	81.1	106.9	117.4	105.9	80.6	47.2	28.8
72.5°	22.9	44.3	77.6	103.4	113.9	101.9	77.1	43.8	22.9
75°	17.4	40.8	74.1	99.0	109.4	98.5	73.6	40.3	16.9
77.5°	12.4	36.8	70.1	95.0	104.9	94.0	69.6	36.3	11.9
80°	8.5	32.8	66.1	90.5	100.0	90.0	65.6	32.8	8.0
82.5°	5.0	28.8	61.7	86.0	95.5	85.0	61.2	28.8	4.5
85°	2.5	24.9	56.7	81.1	90.5	80.6	56.7	24.9	2.5
87.5°	1.5	21.4	52.2	76.1	85.5	75.6	52.2	20.9	1.0
90°	0.0	17.4	47.7	71.1	80.1	70.6	47.7	16.9	0.0
92.5°	0.0	13.9	43.3	65.6	74.6	65.1	42.8	13.4	0.0
95°	0.0	10.4	38.3	60.7	69.1	60.2	37.8	10.4	0.0
97.5°	0.0	8.0	33.3	55.2	63.7	54.7	33.3	7.5	0.0
100°	0.0	5.5	28.8	49.2	57.7	49.2	28.3	5.5	0.0
102.5°	0.0	3.5	23.9	43.8	52.2	43.3	23.9	3.5	0.0
105°	0.0	2.0	18.9	38.3	46.2	38.3	19.4	2.5	0.0
107.5°	0.0	1.0	13.9	32.3	40.8	32.3	14.9	1.0	0.0
110°	0.0	0.0	9.4	26.4	34.8	26.9	11.4	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	0.5	0.0	6.5	20.4	28.8	21.9	8.0	0.0	0.0
115°	0.5	0.0	4.5	15.4	23.4	16.9	5.5	0.0	0.0
117.5°	0.5	0.0	3.5	11.4	18.4	12.4	4.0	0.5	0.5
120°	0.0	0.0	1.5	8.5	13.9	9.4	2.0	0.5	0.5
122.5°	0.0	0.0	0.0	6.0	9.9	6.5	0.5	0.5	0.0
125°	0.0	0.0	0.0	4.0	6.5	4.5	0.5	0.5	0.5
127.5°	0.0	0.0	0.0	1.5	4.5	2.0	0.5	0.5	0.5
130°	0.0	0.0	0.0	0.0	1.5	0.0	0.5	0.5	0.5
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
137.5°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5
140°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5
142.5°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5
145°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.0	0.5
147.5°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.0	0.5
150°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.0	0.5
152.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.0	0.5
155°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	1.0	0.5
157.5°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5
160°	0.0	0.0	0.5	0.5	0.0	0.5	0.5	0.5	0.5
162.5°	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5
165°	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5
167.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5
170°	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.5	0.5
172.5°	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.5	0.5
175°	0.5	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.5
177.5°	0.5	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.5
180°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room Dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	11.5	13.1	12.1	13.6	14.2	16.5	18.1	17.1	18.6	19.2
	3H	12.9	14.3	13.4	14.9	15.5	19.6	21.0	20.1	21.6	22.2
	4H	13.3	14.7	13.9	15.2	15.8	21.1	22.4	21.7	23.0	23.6
	6H	13.5	14.8	14.1	15.3	16.0	22.6	23.9	23.2	24.4	25.1
	8H	13.5	14.7	14.1	15.3	16.0	23.3	24.6	23.9	25.2	25.8
	12H	13.5	14.7	14.1	15.3	16.0	24.1	25.3	24.7	25.9	26.5
4H	2H	13.2	14.6	13.8	15.1	15.7	16.8	18.2	17.4	18.8	19.4
	3H	14.9	16.0	15.4	16.6	17.3	20.2	21.3	20.7	21.9	22.6
	4H	15.4	16.5	16.0	17.1	17.8	21.9	22.9	22.4	23.5	24.2
	6H	15.8	16.8	16.4	17.4	18.1	23.6	24.6	24.2	25.2	25.9
	8H	15.9	16.8	16.5	17.4	18.1	24.4	25.4	25.1	26.0	26.7
	12H	15.9	16.7	16.5	17.4	18.1	25.3	26.2	26.0	26.8	27.5
8H	4H	16.9	17.8	17.5	18.5	19.2	22.1	23.0	22.7	23.6	24.3
	6H	17.6	18.3	18.2	19.0	19.7	24.0	24.7	24.6	25.4	26.1
	8H	17.8	18.5	18.4	19.1	19.9	25.0	25.7	25.6	26.3	27.1
	12H	17.9	18.5	18.5	19.2	20.0	26.1	26.7	26.7	27.4	28.1
12H	4H	17.4	18.2	18.0	18.8	19.6	22.1	22.9	22.7	23.5	24.2
	6H	18.2	18.9	18.9	19.6	20.3	24.0	24.7	24.7	25.4	26.1
	8H	18.5	19.2	19.2	19.8	20.6	25.1	25.7	25.7	26.4	27.2

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