

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: P1219437

Luminaire Tested: FWLSC-D-16-UNV-50-35-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: P1219437
Test Lab: INNOVATION CENTER
Issue Date: 12/9/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FWLSC-D-16-UNV-50-35-OPL/84-IP6X
Description: FAILSAFE FWLDL LED FIXTURE WITH SCONE

Light Source:
Ballast/Driver: -

Summary

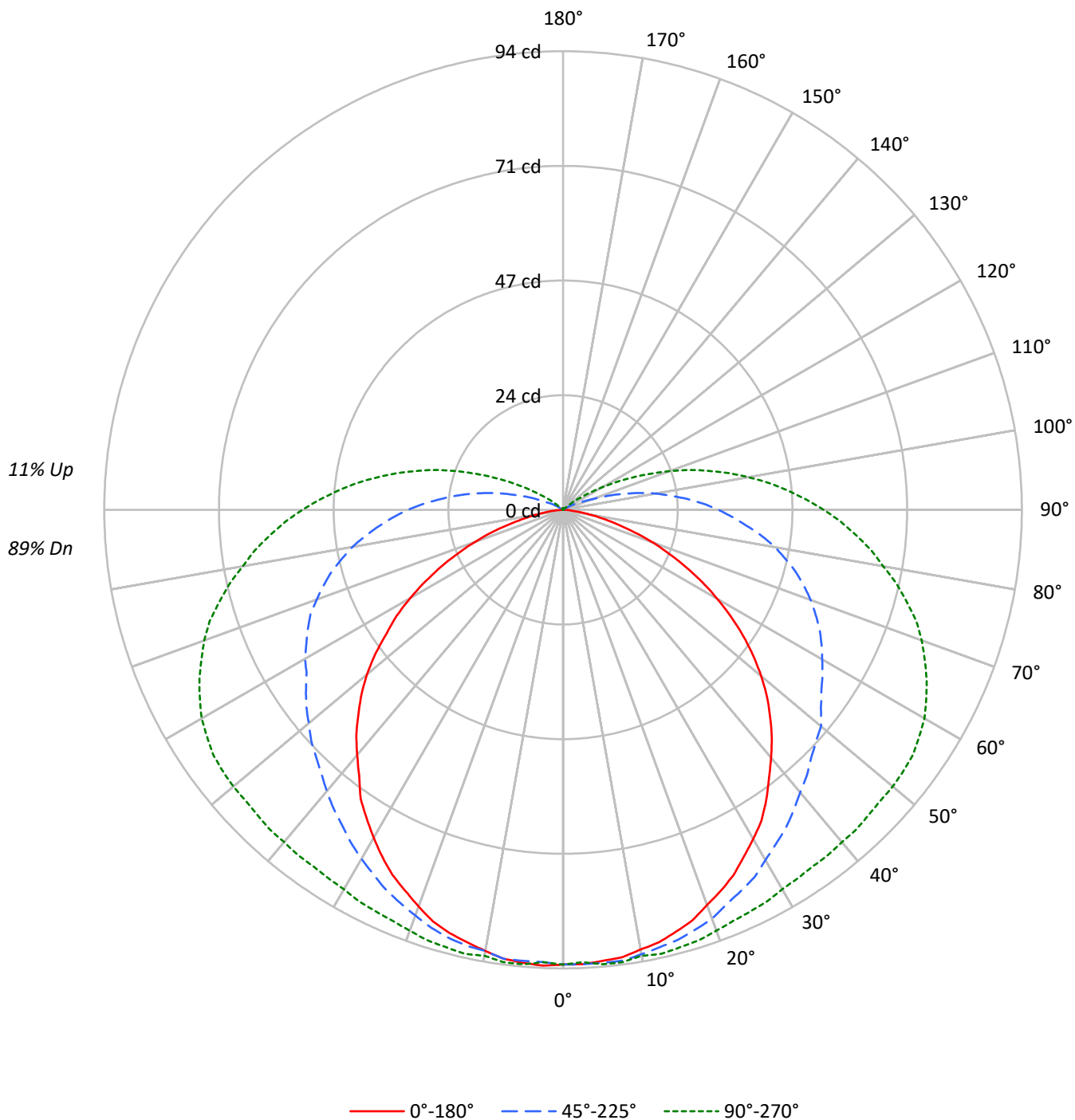
Lumens per Lamp: N/A
Luminaire Lumens: 429.9 lumens
Efficiency: N/A
Efficacy: 48.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.47 / 1.5
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1.33' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 8.9
Input Voltage (V): 120
Input Current (A_{in}): 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°	8.9	2.1
10°-20°	25.7	6.0
20°-30°	39.8	9.3
30°-40°	50.1	11.7
40°-50°	56.4	13.1
50°-60°	58.4	13.6
60°-70°	55.9	13.0
70°-80°	48.6	11.3
80°-90°	38.0	8.8
90°-100°	26.1	6.1
100°-110°	14.6	3.4
110°-120°	5.7	1.3
120°-130°	1.3	0.3
130°-140°	0.1	0.0
140°-150°	0.1	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	74.4	17.3
0°-40°	124.5	29.0
0°-60°	239.3	55.7
0°-90°	381.8	88.8
90°-120°	46.5	10.8
90°-150°	48.0	11.2
90°-180°	48.0	11.2
0°-180°	429.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	93	93	93	93	93	
5°	93	93	94	93	93	9
15°	90	91	93	91	90	25
25°	83	86	91	86	83	38
35°	73	80	89	79	72	45
45°	60	72	88	72	59	46
55°	45	65	88	64	44	40
65°	28	58	82	58	28	28
75°	12	49	73	49	11	13
85°	2	38	60	38	2	2
90°	0	32	53	32	0	0
95°	0	26	46	25	0	0
105°	0	13	31	13	0	0
115°	0	3	16	4	0	0
125°	0	0	4	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°	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2
2.5°	93.2	92.5	93.2	93.5	92.8	92.8	92.8	92.8	93.5
5°	92.8	92.5	93.2	94.2	93.5	93.2	92.8	92.5	93.2
7.5°	92.5	92.2	93.2	93.8	93.5	93.2	92.8	92.2	92.8
10°	91.5	91.5	92.5	93.5	92.8	92.5	91.8	91.5	91.8
12.5°	90.8	90.8	91.8	93.2	93.2	92.2	91.5	90.8	90.8
15°	89.5	89.5	91.2	92.8	92.8	92.2	90.8	89.8	89.8
17.5°	88.2	88.5	90.2	92.5	92.5	91.5	89.8	88.5	88.5
20°	86.2	86.9	89.2	91.5	91.8	90.5	88.5	86.9	86.5
22.5°	84.5	84.9	87.5	90.5	91.2	89.5	87.2	85.2	84.5
25°	82.6	83.2	86.2	89.8	90.8	88.9	85.9	83.2	82.6
27.5°	80.2	81.2	84.9	89.2	90.5	88.2	84.2	81.2	80.2
30°	77.9	78.9	82.9	87.9	89.8	86.9	82.6	78.9	77.6
32.5°	75.6	76.6	81.2	87.2	89.5	86.2	80.9	76.6	74.9
35°	72.6	73.9	79.6	86.5	89.2	85.5	78.9	73.9	72.3
37.5°	69.3	70.9	77.6	85.9	89.2	84.9	77.2	70.9	68.6
40°	66.3	68.0	75.6	85.2	88.9	84.2	75.3	68.0	65.6
42.5°	63.3	65.3	73.9	84.9	88.9	83.9	73.3	65.0	62.7
45°	60.0	62.3	71.9	84.2	88.5	83.2	71.6	62.0	59.3
47.5°	56.7	59.3	70.3	83.2	88.2	82.2	70.0	59.0	56.0
50°	53.0	56.0	69.0	82.6	88.2	81.6	68.0	56.0	52.4
52.5°	49.1	52.7	66.6	81.9	87.9	80.9	66.3	52.7	48.4
55°	45.1	49.7	64.6	81.2	87.5	80.2	64.3	49.4	44.1
57.5°	40.8	46.4	63.0	80.2	86.5	79.6	62.3	46.1	40.4
60°	36.5	43.4	61.3	78.9	85.5	78.2	61.0	43.1	36.1
62.5°	32.2	40.4	59.7	77.6	83.9	76.9	59.3	40.4	31.8
65°	27.8	37.8	58.0	75.6	82.2	74.9	57.7	37.5	27.5
67.5°	23.5	35.1	56.0	73.6	80.2	72.9	56.0	34.8	23.2
70°	19.6	31.8	54.0	71.3	78.2	70.6	53.7	31.5	19.2
72.5°	15.3	29.5	51.7	69.0	75.9	68.0	51.4	29.2	15.3
75°	11.6	27.2	49.4	66.0	72.9	65.6	49.1	26.9	11.3
77.5°	8.3	24.5	46.7	63.3	70.0	62.7	46.4	24.2	8.0
80°	5.6	21.9	44.1	60.3	66.6	60.0	43.8	21.9	5.3
82.5°	3.3	19.2	41.1	57.4	63.7	56.7	40.8	19.2	3.0
85°	1.7	16.6	37.8	54.0	60.3	53.7	37.8	16.6	1.7
87.5°	1.0	14.3	34.8	50.7	57.0	50.4	34.8	13.9	0.7
90°	0.0	11.6	31.8	47.4	53.4	47.1	31.8	11.3	0.0
92.5°	0.0	9.3	28.8	43.8	49.7	43.4	28.5	9.0	0.0
95°	0.0	7.0	25.5	40.4	46.1	40.1	25.2	7.0	0.0
97.5°	0.0	5.3	22.2	36.8	42.4	36.5	22.2	5.0	0.0
100°	0.0	3.6	19.2	32.8	38.5	32.8	18.9	3.6	0.0
102.5°	0.0	2.3	15.9	29.2	34.8	28.8	15.9	2.3	0.0
105°	0.0	1.3	12.6	25.5	30.8	25.5	12.9	1.7	0.0
107.5°	0.0	0.7	9.3	21.5	27.2	21.5	9.9	0.7	0.0
110°	0.0	0.0	6.3	17.6	23.2	17.9	7.6	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°	0.3	0.0	4.3	13.6	19.2	14.6	5.3	0.0	0.0
115°	0.3	0.0	3.0	10.3	15.6	11.3	3.6	0.0	0.0
117.5°	0.3	0.0	2.3	7.6	12.3	8.3	2.7	0.3	0.3
120°	0.0	0.0	1.0	5.6	9.3	6.3	1.3	0.3	0.3
122.5°	0.0	0.0	0.0	4.0	6.6	4.3	0.3	0.3	0.0
125°	0.0	0.0	0.0	2.7	4.3	3.0	0.3	0.3	0.3
127.5°	0.0	0.0	0.0	1.0	3.0	1.3	0.3	0.3	0.3
130°	0.0	0.0	0.0	0.0	1.0	0.0	0.3	0.3	0.3
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
137.5°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3
140°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3
142.5°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3
145°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.7	0.3
147.5°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.7	0.3
150°	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.7	0.3
152.5°	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.7	0.3
155°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.7	0.3
157.5°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3
160°	0.0	0.0	0.3	0.3	0.0	0.3	0.3	0.3	0.3
162.5°	0.3	0.0	0.3	0.3	0.3	0.0	0.3	0.3	0.3
165°	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.3	0.3
167.5°	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.3	0.3
170°	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.3
172.5°	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.3
175°	0.3	0.3	0.3	0.0	0.0	0.0	0.3	0.3	0.3
177.5°	0.3	0.3	0.3	0.0	0.0	0.0	0.3	0.3	0.3
180°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

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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	10.1	11.7	10.7	12.2	12.8	15.1	16.7	15.6	17.2	17.8
	3H	11.5	12.9	12.0	13.5	14.1	18.2	19.6	18.7	20.1	20.8
	4H	11.9	13.3	12.5	13.8	14.4	19.7	21.0	20.2	21.6	22.2
	6H	12.1	13.4	12.7	13.9	14.6	21.2	22.5	21.8	23.0	23.7
	8H	12.1	13.3	12.7	13.9	14.6	21.9	23.2	22.5	23.7	24.4
	12H	12.1	13.3	12.7	13.9	14.6	22.7	23.9	23.3	24.5	25.1
4H	2H	11.8	13.1	12.3	13.7	14.3	15.4	16.8	16.0	17.3	18.0
	3H	13.5	14.6	14.0	15.2	15.9	18.8	19.9	19.3	20.5	21.2
	4H	14.0	15.1	14.6	15.7	16.4	20.5	21.5	21.0	22.1	22.8
	6H	14.4	15.3	15.0	16.0	16.7	22.2	23.1	22.8	23.8	24.5
	8H	14.5	15.4	15.1	16.0	16.7	23.0	23.9	23.6	24.6	25.3
	12H	14.5	15.3	15.1	16.0	16.7	23.9	24.8	24.6	25.4	26.1
8H	4H	15.5	16.4	16.1	17.0	17.7	20.6	21.6	21.3	22.2	22.9
	6H	16.1	16.9	16.8	17.6	18.3	22.5	23.3	23.2	24.0	24.7
	8H	16.4	17.1	17.0	17.7	18.5	23.6	24.3	24.2	24.9	25.7
	12H	16.5	17.1	17.1	17.8	18.6	24.6	25.3	25.3	25.9	26.7
12H	4H	16.0	16.8	16.6	17.4	18.1	20.6	21.5	21.3	22.1	22.8
	6H	16.8	17.5	17.5	18.2	18.9	22.6	23.3	23.3	23.9	24.7
	8H	17.1	17.8	17.8	18.4	19.2	23.7	24.3	24.3	25.0	25.7

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