

Scaled data based on original data using
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: P563597

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563597
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3STD-50-UNV-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11323.0 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

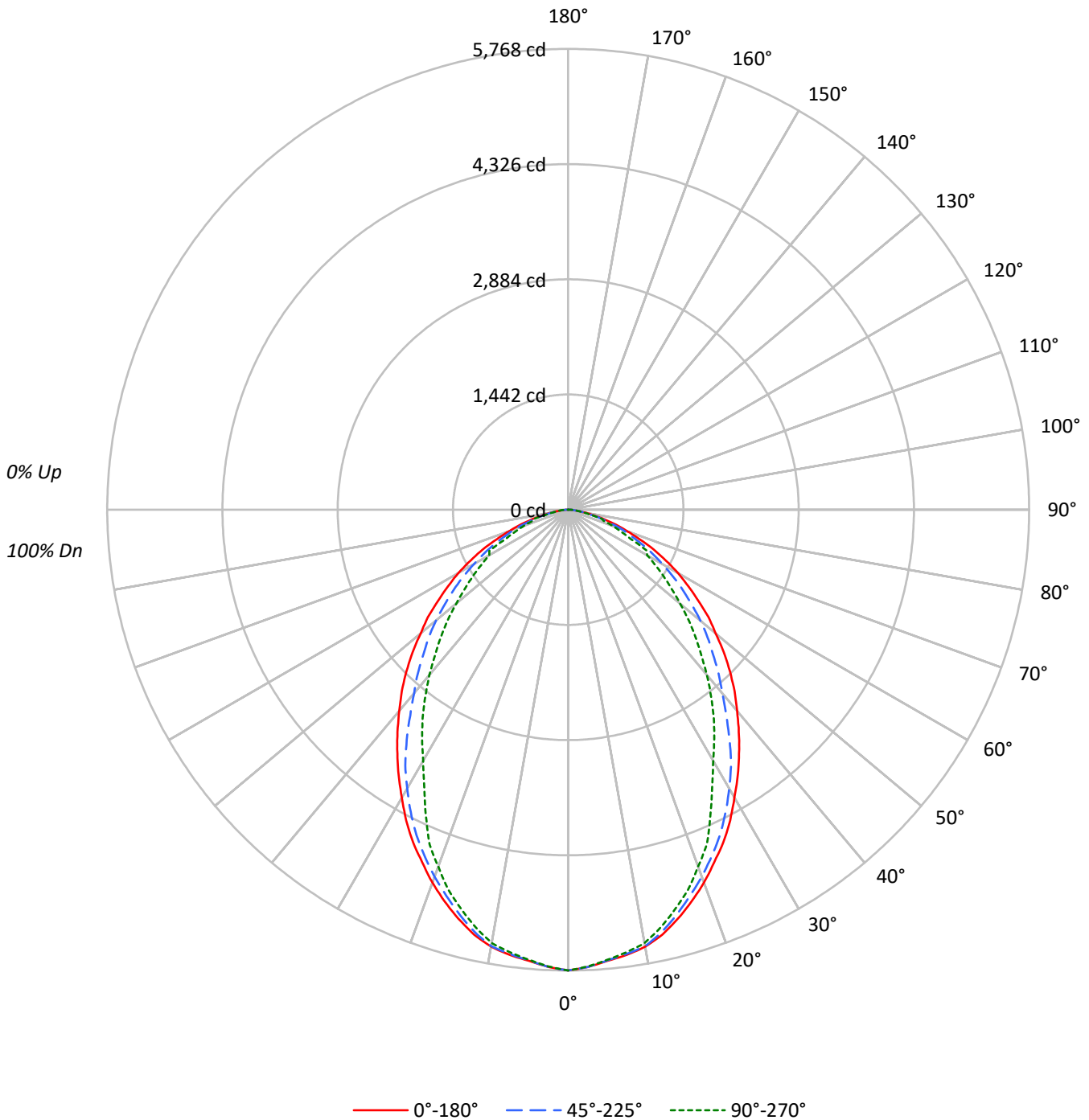
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7761	7761	7761
5°	7655	7646	7637
10°	7589	7580	7525
15°	7384	7310	7208
20°	7113	6998	6807
25°	6820	6672	6256
30°	6464	6257	5636
35°	6122	5783	5213
40°	5774	5270	4743
45°	5443	4872	4289
50°	5039	4522	3824
55°	4661	4098	3426
60°	4271	3661	3068
65°	3757	3206	2717
70°	3095	2807	2308
75°	2461	2149	2253
80°	1654	1550	1447
85°	1030	1235	1442

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5443 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	536.9	4.7
10°-20°	1473.5	13.0
20°-30°	2039.9	18.0
30°-40°	2175.2	19.2
40°-50°	1984.4	17.5
50°-60°	1554.6	13.7
60°-70°	1013.2	8.9
70°-80°	448.9	4.0
80°-90°	96.4	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4050.3	35.8
0°-40°	6225.5	55.0
0°-60°	9764.5	86.2
0°-90°	11323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11323.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5768	5768	5768	5768	5768	
5°	5668	5661	5661	5654	5654	538
15°	5301	5301	5248	5194	5174	1490
25°	4594	4568	4494	4334	4214	2109
35°	3727	3701	3521	3254	3174	2330
45°	2861	2800	2560	2347	2254	2203
55°	1987	1927	1747	1540	1460	1782
65°	1180	1114	1007	1027	854	1163
75°	473	440	413	393	433	507
85°	67	73	80	87	93	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5767.8	5767.8	5767.8	5767.8	5767.8
2.5°	5727.8	5727.8	5727.8	5721.1	5721.1
5°	5667.8	5661.1	5661.1	5654.4	5654.4
7.5°	5621.1	5614.4	5607.8	5601.1	5587.8
10°	5554.4	5554.4	5547.7	5514.4	5507.7
12.5°	5447.7	5441.1	5414.4	5367.7	5354.4
15°	5301.0	5301.0	5247.7	5194.3	5174.3
17.5°	5141.0	5134.3	5067.6	5014.3	4987.6
20°	4967.6	4954.3	4887.6	4800.9	4754.3
22.5°	4774.3	4774.3	4694.2	4580.9	4534.2
25°	4594.2	4567.6	4494.2	4334.2	4214.2
27.5°	4387.5	4347.5	4267.5	4040.8	3900.8
30°	4160.8	4140.8	4027.4	3734.1	3627.4
32.5°	3947.4	3914.1	3794.1	3487.3	3400.7
35°	3727.4	3700.7	3520.7	3254.0	3173.9
37.5°	3507.3	3474.0	3247.3	3033.9	2933.9
40°	3287.3	3247.3	3000.6	2807.2	2700.5
42.5°	3080.6	3027.3	2787.2	2580.5	2460.5
45°	2860.6	2800.5	2560.5	2347.1	2253.8
47.5°	2640.5	2587.2	2367.1	2147.1	2040.4
50°	2407.1	2360.5	2160.4	1940.4	1827.0
52.5°	2213.8	2140.4	1947.0	1727.0	1633.7
55°	1987.1	1927.0	1747.0	1540.3	1460.3
57.5°	1780.3	1720.3	1553.6	1360.3	1293.6
60°	1587.0	1500.3	1360.3	1193.6	1140.2
62.5°	1373.6	1306.9	1186.9	1046.9	1113.5
65°	1180.2	1113.5	1006.9	1026.9	853.5
67.5°	966.9	933.5	840.2	746.8	720.1
70°	786.8	746.8	713.5	613.5	586.8
72.5°	626.8	586.8	540.1	486.8	466.8
75°	473.4	440.1	413.4	393.4	433.4
77.5°	326.7	313.4	293.4	273.4	266.7
80°	213.4	206.7	200.0	193.4	186.7
82.5°	126.7	126.7	126.7	126.7	126.7
85°	66.7	73.3	80.0	86.7	93.4
87.5°	40.0	40.0	46.7	53.3	60.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)