

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: P564200

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564200
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-LD4-4STD-50-UNV-93-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11801.0 lumens
Efficiency: N/A
Efficacy: 88.6 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

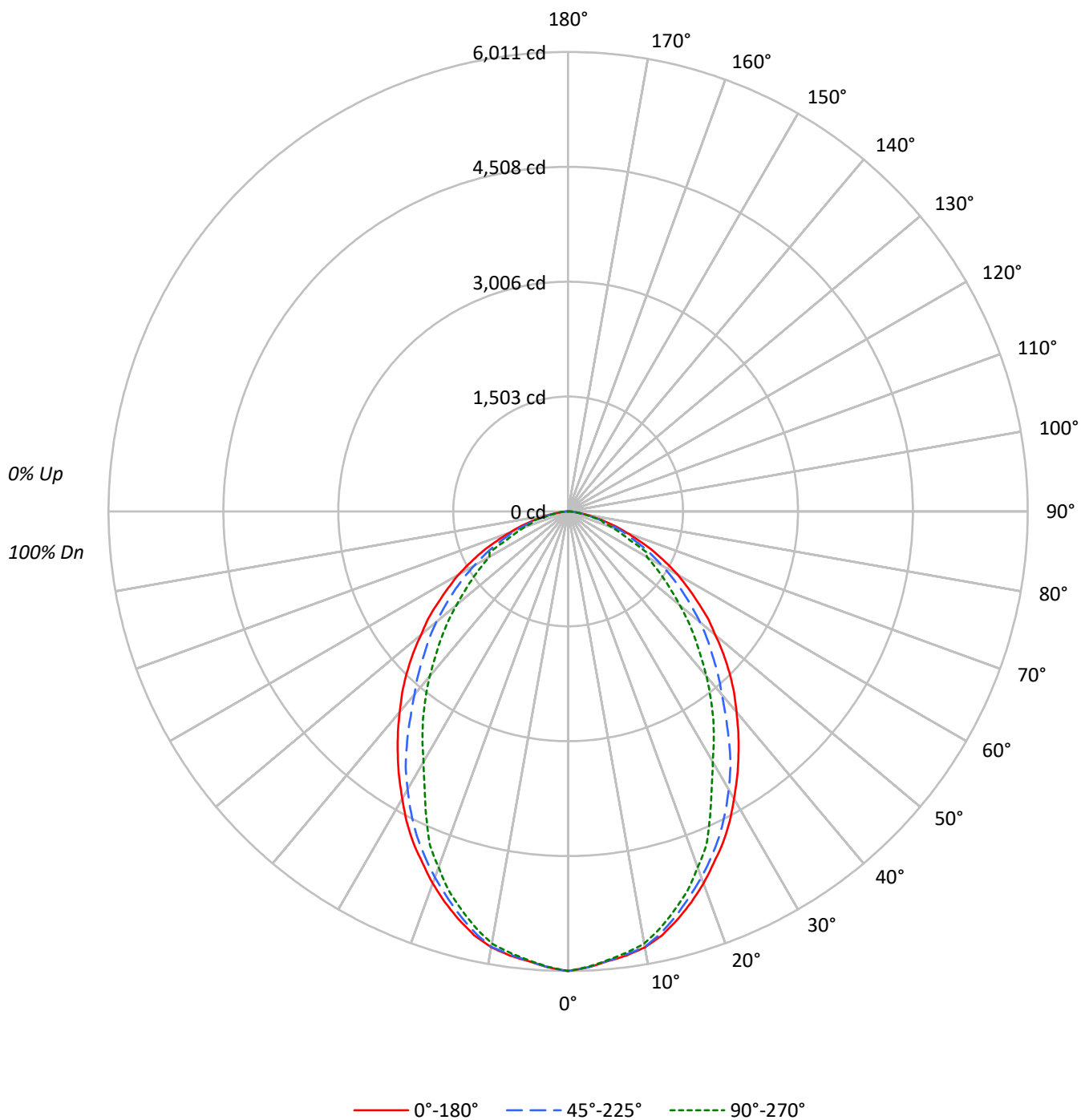
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8088	8088	8088
5°	7978	7969	7959
10°	7909	7899	7843
15°	7696	7618	7512
20°	7413	7294	7095
25°	7108	6954	6520
30°	6737	6521	5874
35°	6381	6027	5433
40°	6018	5493	4943
45°	5673	5078	4470
50°	5251	4713	3986
55°	4858	4271	3570
60°	4451	3815	3198
65°	3916	3341	2832
70°	3226	2925	2406
75°	2565	2240	2348
80°	1723	1616	1508
85°	1073	1288	1502

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5673 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.6	4.7
10°-20°	1535.7	13.0
20°-30°	2126.1	18.0
30°-40°	2267.0	19.2
40°-50°	2068.2	17.5
50°-60°	1620.2	13.7
60°-70°	1056.0	8.9
70°-80°	467.8	4.0
80°-90°	100.4	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°	4221.3	35.8
0°-40°	6488.3	55.0
0°-60°	10176.7	86.2
0°-90°	11801.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11801.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6011	6011	6011	6011	6011	
5°	5907	5900	5900	5893	5893	561
15°	5525	5525	5469	5414	5393	1553
25°	4788	4760	4684	4517	4392	2198
35°	3885	3857	3669	3391	3308	2429
45°	2981	2919	2669	2446	2349	2296
55°	2071	2008	1821	1605	1522	1857
65°	1230	1161	1049	1070	890	1212
75°	493	459	431	410	452	529
85°	70	76	83	90	97	96
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6011.3	6011.3	6011.3	6011.3	6011.3
2.5°	5969.6	5969.6	5969.6	5962.6	5962.6
5°	5907.0	5900.1	5900.1	5893.1	5893.1
7.5°	5858.4	5851.4	5844.5	5837.5	5823.6
10°	5788.9	5788.9	5781.9	5747.2	5740.2
12.5°	5677.7	5670.7	5643.0	5594.3	5580.4
15°	5524.8	5524.8	5469.2	5413.6	5392.8
17.5°	5358.0	5351.1	5281.6	5226.0	5198.2
20°	5177.3	5163.4	5093.9	5003.6	4955.0
22.5°	4975.8	4975.8	4892.4	4774.3	4725.6
25°	4788.2	4760.4	4683.9	4517.1	4392.1
27.5°	4572.7	4531.0	4447.6	4211.4	4065.4
30°	4336.5	4315.6	4197.5	3891.7	3780.5
32.5°	4114.1	4079.3	3954.2	3634.6	3544.2
35°	3884.7	3856.9	3669.3	3391.3	3307.9
37.5°	3655.4	3620.7	3384.4	3162.0	3057.8
40°	3426.1	3384.4	3127.3	2925.7	2814.5
42.5°	3210.6	3155.0	2904.9	2689.4	2564.3
45°	2981.3	2918.8	2668.6	2446.2	2348.9
47.5°	2752.0	2696.4	2467.1	2237.7	2126.5
50°	2508.8	2460.1	2251.6	2022.3	1904.1
52.5°	2307.2	2230.8	2029.2	1799.9	1702.6
55°	2070.9	2008.4	1820.8	1605.3	1521.9
57.5°	1855.5	1793.0	1619.2	1417.7	1348.2
60°	1654.0	1563.6	1417.7	1244.0	1188.4
62.5°	1431.6	1362.1	1237.0	1091.1	1160.6
65°	1230.1	1160.6	1049.4	1070.2	889.5
67.5°	1007.7	972.9	875.6	778.3	750.5
70°	820.0	778.3	743.6	639.3	611.6
72.5°	653.2	611.6	562.9	507.3	486.5
75°	493.4	458.7	430.9	410.0	451.7
77.5°	340.5	326.6	305.8	284.9	278.0
80°	222.4	215.4	208.5	201.5	194.6
82.5°	132.0	132.0	132.0	132.0	132.0
85°	69.5	76.4	83.4	90.3	97.3
87.5°	41.7	41.7	48.6	55.6	62.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)