

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: P563193

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563193
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-LD4-3HI-50-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12454.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

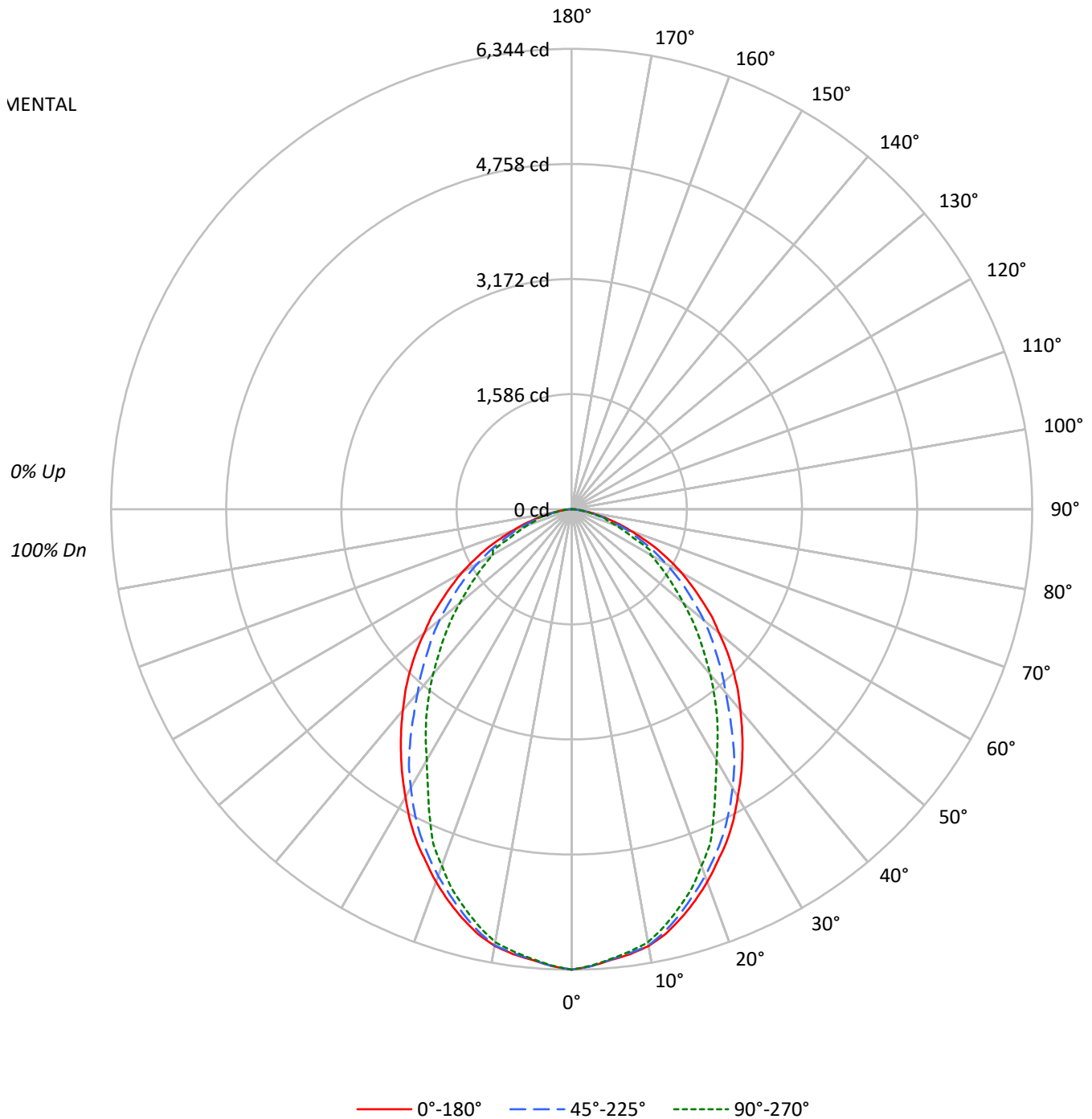
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8536	8536	8536
5°	8420	8410	8400
10°	8347	8337	8277
15°	8122	8040	7928
20°	7823	7697	7487
25°	7502	7338	6881
30°	7110	6882	6199
35°	6734	6360	5734
40°	6351	5797	5217
45°	5987	5359	4717
50°	5542	4974	4206
55°	5127	4507	3768
60°	4697	4026	3375
65°	4133	3526	2989
70°	3404	3087	2539
75°	2707	2364	2478
80°	1819	1705	1592
85°	1132	1359	1585

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5987 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	590.5	4.7
10°-20°	1620.7	13.0
20°-30°	2243.7	18.0
30°-40°	2392.4	19.2
40°-50°	2182.6	17.5
50°-60°	1709.9	13.7
60°-70°	1114.4	8.9
70°-80°	493.7	4.0
80°-90°	106.0	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°	4454.9	35.8
0°-40°	6847.3	55.0
0°-60°	10739.8	86.2
0°-90°	12454.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12454.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6344	6344	6344	6344	6344	
5°	6234	6227	6227	6219	6219	592
15°	5830	5830	5772	5713	5691	1639
25°	5053	5024	4943	4767	4635	2320
35°	4100	4070	3872	3579	3491	2563
45°	3146	3080	2816	2582	2479	2424
55°	2186	2120	1922	1694	1606	1960
65°	1298	1225	1107	1129	939	1279
75°	521	484	455	433	477	558
85°	73	81	88	95	103	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6343.9	6343.9	6343.9	6343.9	6343.9
2.5°	6299.9	6299.9	6299.9	6292.6	6292.6
5°	6233.9	6226.6	6226.6	6219.2	6219.2
7.5°	6182.6	6175.2	6167.9	6160.6	6145.9
10°	6109.2	6109.2	6101.9	6065.2	6057.9
12.5°	5991.9	5984.5	5955.2	5903.9	5889.2
15°	5830.5	5830.5	5771.8	5713.2	5691.2
17.5°	5654.5	5647.2	5573.8	5515.2	5485.8
20°	5463.8	5449.2	5375.8	5280.5	5229.1
22.5°	5251.1	5251.1	5163.1	5038.5	4987.1
25°	5053.1	5023.8	4943.1	4767.1	4635.1
27.5°	4825.8	4781.8	4693.8	4444.4	4290.4
30°	4576.4	4554.4	4429.7	4107.0	3989.7
32.5°	4341.7	4305.1	4173.0	3835.7	3740.3
35°	4099.7	4070.4	3872.3	3579.0	3491.0
37.5°	3857.7	3821.0	3571.7	3337.0	3227.0
40°	3615.7	3571.7	3300.3	3087.6	2970.3
42.5°	3388.3	3329.6	3065.6	2838.3	2706.2
45°	3146.3	3080.3	2816.3	2581.6	2478.9
47.5°	2904.3	2845.6	2603.6	2361.5	2244.2
50°	2647.6	2596.2	2376.2	2134.2	2009.5
52.5°	2434.9	2354.2	2141.5	1899.5	1796.8
55°	2185.5	2119.5	1921.5	1694.2	1606.1
57.5°	1958.2	1892.2	1708.8	1496.1	1422.8
60°	1745.5	1650.1	1496.1	1312.8	1254.1
62.5°	1510.8	1437.5	1305.5	1151.4	1224.8
65°	1298.1	1224.8	1107.4	1129.4	938.8
67.5°	1063.4	1026.8	924.1	821.4	792.1
70°	865.4	821.4	784.7	674.7	645.4
72.5°	689.4	645.4	594.1	535.4	513.4
75°	520.7	484.0	454.7	432.7	476.7
77.5°	359.4	344.7	322.7	300.7	293.4
80°	234.7	227.4	220.0	212.7	205.4
82.5°	139.3	139.3	139.3	139.3	139.3
85°	73.3	80.7	88.0	95.3	102.7
87.5°	44.0	44.0	51.3	58.7	66.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)