

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: P563827

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563827
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-LD4-4LO-35-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11425.0 lumens
Efficiency: N/A
Efficacy: 122.1 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

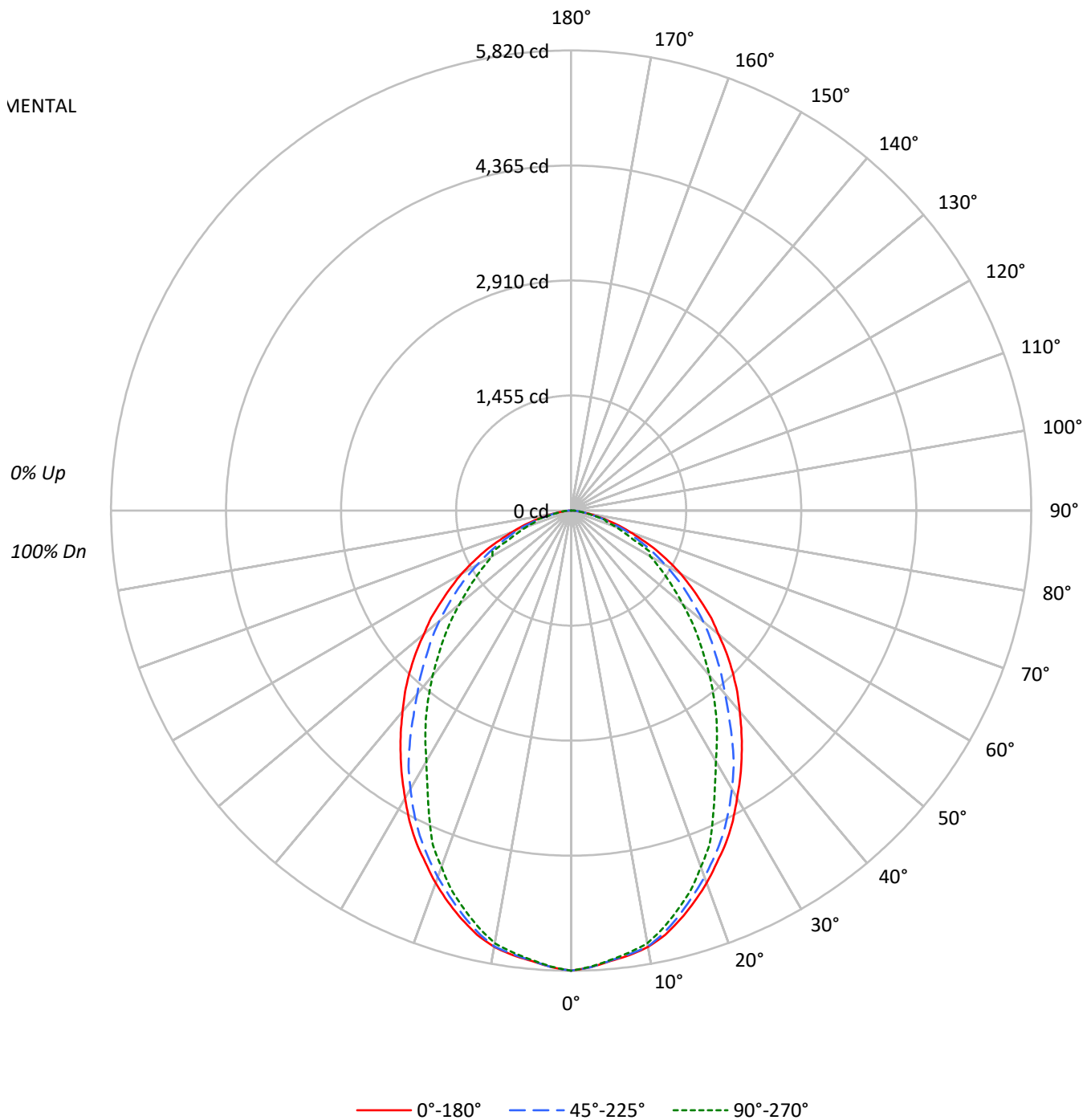
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7830	7830	7830
5°	7724	7715	7706
10°	7657	7648	7593
15°	7451	7376	7272
20°	7177	7061	6869
25°	6882	6732	6313
30°	6523	6314	5686
35°	6178	5835	5260
40°	5826	5318	4786
45°	5492	4916	4327
50°	5084	4563	3859
55°	4703	4135	3456
60°	4309	3693	3096
65°	3791	3234	2742
70°	3123	2832	2329
75°	2483	2168	2273
80°	1668	1564	1460
85°	1039	1246	1454

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5492 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	541.7	4.7
10°-20°	1486.8	13.0
20°-30°	2058.3	18.0
30°-40°	2194.8	19.2
40°-50°	2002.3	17.5
50°-60°	1568.6	13.7
60°-70°	1022.3	8.9
70°-80°	452.9	4.0
80°-90°	97.2	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°	4086.8	35.8
0°-40°	6281.6	55.0
0°-60°	9852.5	86.2
0°-90°	11425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11425.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5820	5820	5820	5820	5820	
5°	5719	5712	5712	5705	5705	543
15°	5349	5349	5295	5241	5221	1504
25°	4636	4609	4535	4373	4252	2128
35°	3761	3734	3552	3283	3202	2351
45°	2886	2826	2584	2368	2274	2223
55°	2005	1944	1763	1554	1473	1798
65°	1191	1124	1016	1036	861	1174
75°	478	444	417	397	437	512
85°	67	74	81	88	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5819.7	5819.7	5819.7	5819.7	5819.7
2.5°	5779.4	5779.4	5779.4	5772.6	5772.6
5°	5718.8	5712.1	5712.1	5705.4	5705.4
7.5°	5671.7	5665.0	5658.3	5651.5	5638.1
10°	5604.4	5604.4	5597.7	5564.1	5557.3
12.5°	5496.8	5490.1	5463.2	5416.1	5402.6
15°	5348.8	5348.8	5295.0	5241.1	5220.9
17.5°	5187.3	5180.6	5113.3	5059.5	5032.6
20°	5012.4	4998.9	4931.6	4844.2	4797.1
22.5°	4817.3	4817.3	4736.5	4622.2	4575.1
25°	4635.6	4608.7	4534.7	4373.2	4252.1
27.5°	4427.0	4386.7	4305.9	4077.2	3935.9
30°	4198.3	4178.1	4063.7	3767.7	3660.0
32.5°	3983.0	3949.4	3828.2	3518.8	3431.3
35°	3761.0	3734.1	3552.4	3283.3	3202.5
37.5°	3538.9	3505.3	3276.5	3061.3	2960.3
40°	3316.9	3276.5	3027.6	2832.5	2724.9
42.5°	3108.3	3054.5	2812.3	2603.7	2482.6
45°	2886.3	2825.8	2583.6	2368.3	2274.1
47.5°	2664.3	2610.5	2388.4	2166.4	2058.8
50°	2428.8	2381.7	2179.9	1957.9	1843.5
52.5°	2233.7	2159.7	1964.6	1742.6	1648.4
55°	2005.0	1944.4	1762.7	1554.2	1473.4
57.5°	1796.4	1735.8	1567.6	1372.5	1305.2
60°	1601.3	1513.8	1372.5	1204.3	1150.5
62.5°	1386.0	1318.7	1197.6	1056.3	1123.6
65°	1190.9	1123.6	1015.9	1036.1	861.2
67.5°	975.6	941.9	847.7	753.5	726.6
70°	793.9	753.5	719.9	619.0	592.1
72.5°	632.4	592.1	545.0	491.1	471.0
75°	477.7	444.0	417.1	397.0	437.3
77.5°	329.7	316.2	296.0	275.8	269.1
80°	215.3	208.6	201.8	195.1	188.4
82.5°	127.8	127.8	127.8	127.8	127.8
85°	67.3	74.0	80.7	87.5	94.2
87.5°	40.4	40.4	47.1	53.8	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)