

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: P590894

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-93-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590894
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4LO-50-UNV-93-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5879.0 lumens
Efficiency: N/A
Efficacy: 125.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

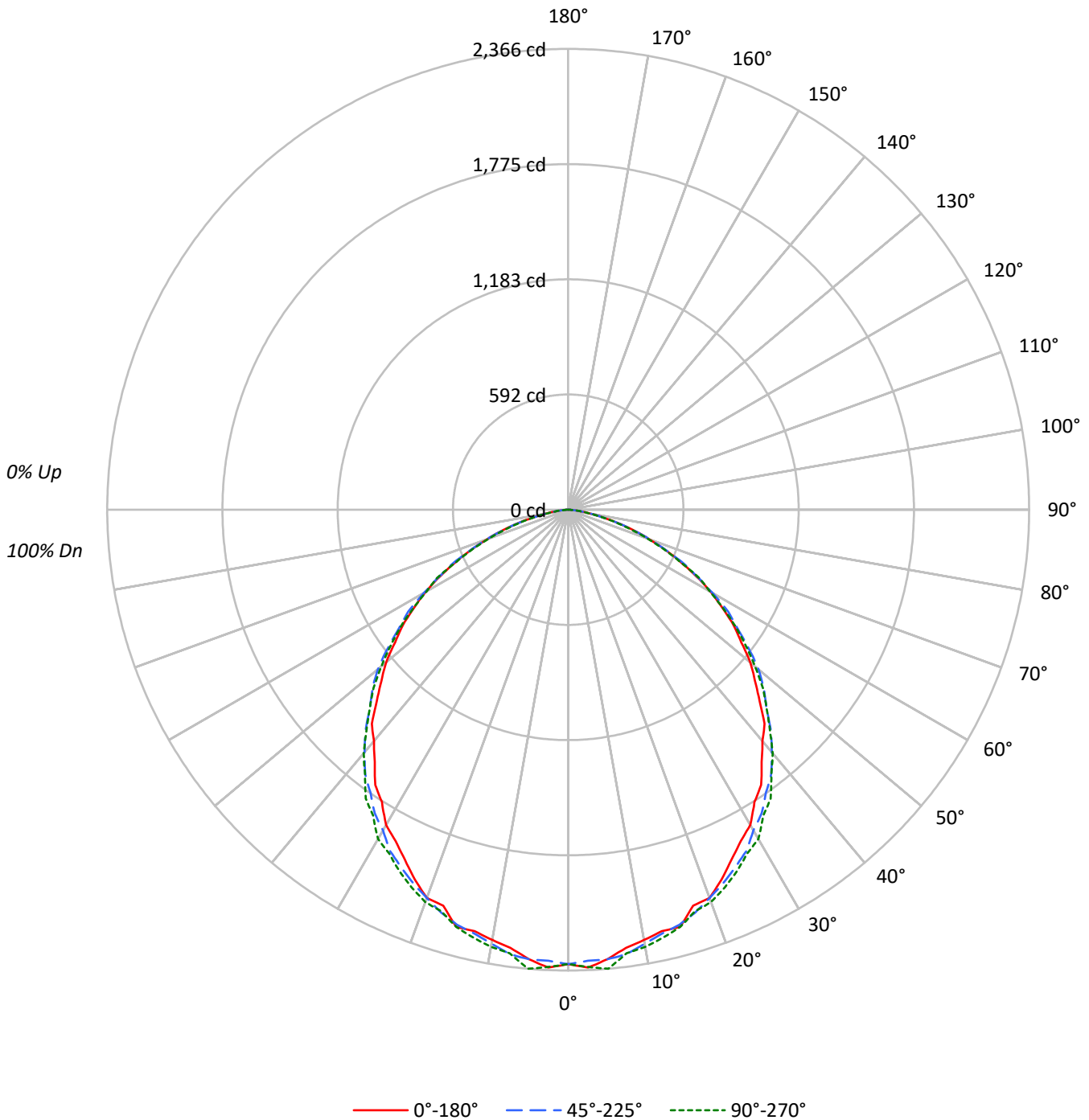
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6277	6277	6277
5°	6256	6259	6391
10°	6130	6183	6227
15°	6178	6144	6179
20°	6074	6074	6138
25°	5887	6016	6082
30°	5806	5908	6065
35°	5669	5818	5948
40°	5449	5711	5736
45°	5284	5472	5480
50°	5110	5341	5239
55°	4869	4964	4929
60°	4553	4598	4516
65°	4060	4164	4031
70°	3483	3495	3398
75°	2758	2752	2646
80°	1849	1798	1726
85°	1003	994	929

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5613 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.4	3.7
10°-20°	621.9	10.6
20°-30°	931.7	15.8
30°-40°	1104.2	18.8
40°-50°	1106.3	18.8
50°-60°	939.0	16.0
60°-70°	633.1	10.8
70°-80°	278.2	4.7
80°-90°	45.2	0.8
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°	1773.0	30.2
0°-40°	2877.2	48.9
0°-60°	4922.5	83.7
0°-90°	5879.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5879.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2333	2333	2333	2333	2333	
5°	2316	2311	2317	2310	2366	218
15°	2218	2192	2206	2217	2218	618
25°	1983	1994	2026	2052	2048	917
35°	1726	1731	1771	1812	1811	1072
45°	1388	1414	1438	1475	1440	1074
55°	1038	1031	1058	1051	1050	923
65°	638	629	654	629	633	634
75°	265	260	265	246	254	284
85°	32	32	32	31	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2332.6	2332.6	2332.6	2332.6	2332.6
2.5°	2352.8	2335.0	2318.5	2337.8	2349.5
5°	2316.1	2310.7	2317.0	2310.1	2365.8
7.5°	2268.5	2289.3	2301.3	2293.8	2297.1
10°	2243.2	2236.0	2262.8	2281.4	2278.7
12.5°	2216.1	2226.9	2228.4	2248.6	2250.4
15°	2217.6	2192.0	2205.5	2217.0	2217.9
17.5°	2131.5	2159.2	2168.5	2194.7	2162.2
20°	2120.9	2100.7	2120.9	2147.7	2143.5
22.5°	2056.2	2033.6	2076.9	2100.7	2099.2
25°	1982.7	1993.5	2026.0	2052.5	2048.3
27.5°	1918.2	1930.9	1977.2	2013.7	1990.2
30°	1868.5	1862.2	1901.3	1933.9	1951.9
32.5°	1779.7	1802.6	1848.3	1880.6	1863.4
35°	1725.8	1730.9	1770.9	1811.9	1810.7
37.5°	1631.5	1655.3	1711.6	1723.1	1712.5
40°	1551.1	1574.9	1625.8	1638.1	1633.0
42.5°	1491.7	1496.0	1539.6	1553.8	1531.2
45°	1388.4	1414.3	1437.8	1474.9	1439.9
47.5°	1300.5	1312.5	1363.1	1373.1	1354.7
50°	1220.7	1224.9	1275.8	1263.4	1251.4
52.5°	1120.4	1138.2	1166.8	1164.4	1150.2
55°	1037.9	1030.9	1058.0	1050.8	1050.5
57.5°	938.8	950.8	973.1	961.7	943.3
60°	846.0	846.3	854.4	841.5	839.1
62.5°	742.7	746.3	748.1	732.2	758.1
65°	637.6	629.2	653.9	628.9	633.1
67.5°	540.9	545.1	542.7	527.1	533.1
70°	442.7	448.2	444.2	426.5	431.9
72.5°	353.0	346.4	350.6	328.3	338.5
75°	265.3	259.9	264.7	246.1	254.5
77.5°	180.7	184.9	181.9	172.0	177.7
80°	119.3	116.0	116.0	110.2	111.4
82.5°	69.6	66.3	65.4	63.5	66.3
85°	32.5	31.6	32.2	31.3	30.1
87.5°	11.7	12.0	12.0	11.4	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)