

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: P590507

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590507
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-LD4-3HI-50-UNV-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 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: 6798.0 lumens
Efficiency: N/A
Efficacy: 104.9 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

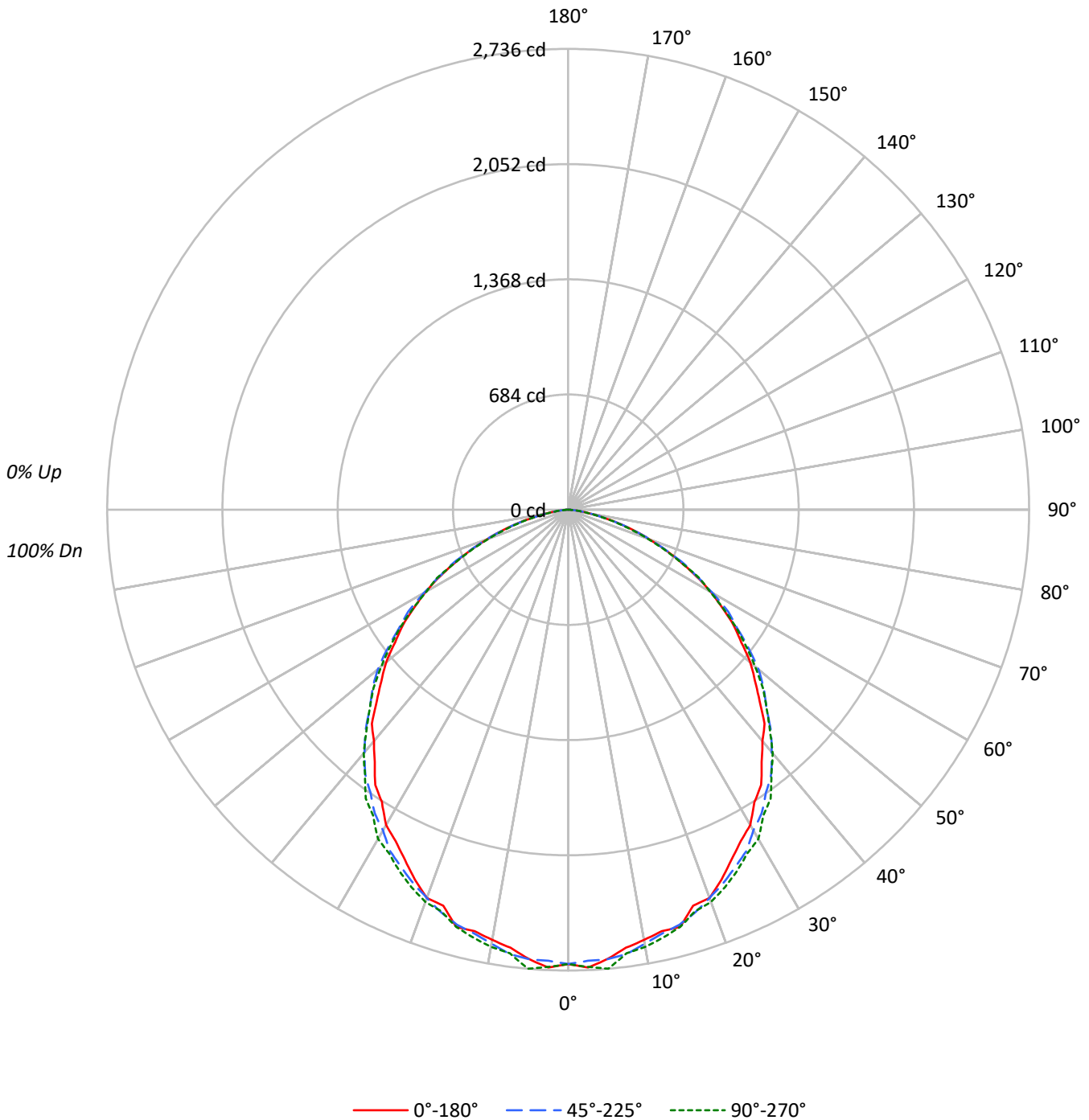
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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									86																			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73									73																			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62									62																			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53									53																			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46									46																			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41									41																			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36									36																			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32									32																			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29									29																			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26									26																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7258	7258	7258
5°	7234	7237	7390
10°	7088	7150	7200
15°	7144	7105	7145
20°	7023	7023	7098
25°	6807	6956	7032
30°	6714	6832	7013
35°	6555	6727	6878
40°	6300	6604	6633
45°	6110	6327	6336
50°	5909	6176	6058
55°	5630	5740	5699
60°	5265	5317	5222
65°	4695	4814	4661
70°	4028	4042	3929
75°	3190	3183	3060
80°	2137	2078	1998
85°	1161	1152	1074

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6490 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.7	3.7
10°-20°	719.1	10.6
20°-30°	1077.3	15.8
30°-40°	1276.8	18.8
40°-50°	1279.2	18.8
50°-60°	1085.8	16.0
60°-70°	732.1	10.8
70°-80°	321.7	4.7
80°-90°	52.3	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°	2050.1	30.2
0°-40°	3327.0	48.9
0°-60°	5692.0	83.7
0°-90°	6798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6798.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2697	2697	2697	2697	2697	
5°	2678	2672	2679	2671	2736	252
15°	2564	2535	2550	2564	2565	714
25°	2293	2305	2343	2373	2368	1060
35°	1996	2002	2048	2095	2094	1239
45°	1606	1635	1663	1705	1665	1242
55°	1200	1192	1223	1215	1215	1068
65°	737	728	756	727	732	733
75°	307	300	306	284	294	329
85°	38	37	37	36	35	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2697.3	2697.3	2697.3	2697.3	2697.3
2.5°	2720.6	2700.1	2680.9	2703.2	2716.8
5°	2678.1	2671.9	2679.2	2671.2	2735.6
7.5°	2623.1	2647.1	2661.1	2652.3	2656.2
10°	2593.8	2585.5	2616.5	2638.1	2634.9
12.5°	2562.5	2575.0	2576.8	2600.1	2602.2
15°	2564.2	2534.6	2550.3	2563.5	2564.6
17.5°	2464.6	2496.7	2507.5	2537.8	2500.2
20°	2452.4	2429.1	2452.4	2483.4	2478.6
22.5°	2377.6	2351.5	2401.6	2429.1	2427.4
25°	2292.6	2305.1	2342.7	2373.4	2368.5
27.5°	2218.1	2232.7	2286.3	2328.5	2301.3
30°	2160.6	2153.3	2198.6	2236.2	2257.1
32.5°	2057.9	2084.3	2137.3	2174.5	2154.7
35°	1995.5	2001.5	2047.8	2095.1	2093.7
37.5°	1886.5	1914.0	1979.2	1992.4	1980.2
40°	1793.5	1821.1	1879.9	1894.2	1888.3
42.5°	1724.9	1729.8	1780.3	1796.7	1770.6
45°	1605.5	1635.4	1662.6	1705.4	1665.0
47.5°	1503.8	1517.7	1576.2	1587.7	1566.5
50°	1411.5	1416.4	1475.2	1461.0	1447.0
52.5°	1295.5	1316.1	1349.2	1346.4	1330.0
55°	1200.1	1192.1	1223.4	1215.1	1214.7
57.5°	1085.5	1099.5	1125.2	1112.0	1090.8
60°	978.3	978.6	988.0	973.0	970.3
62.5°	858.8	863.0	865.1	846.6	876.6
65°	737.3	727.5	756.1	727.2	732.0
67.5°	625.5	630.4	627.6	609.5	616.4
70°	511.9	518.2	513.7	493.1	499.4
72.5°	408.2	400.5	405.4	379.6	391.4
75°	306.8	300.5	306.1	284.5	294.3
77.5°	209.0	213.8	210.3	198.9	205.5
80°	137.9	134.1	134.1	127.5	128.9
82.5°	80.4	76.6	75.6	73.5	76.6
85°	37.6	36.6	37.3	36.2	34.8
87.5°	13.6	13.9	13.9	13.2	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)