

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: P590456

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590456
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-40-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6799.0 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

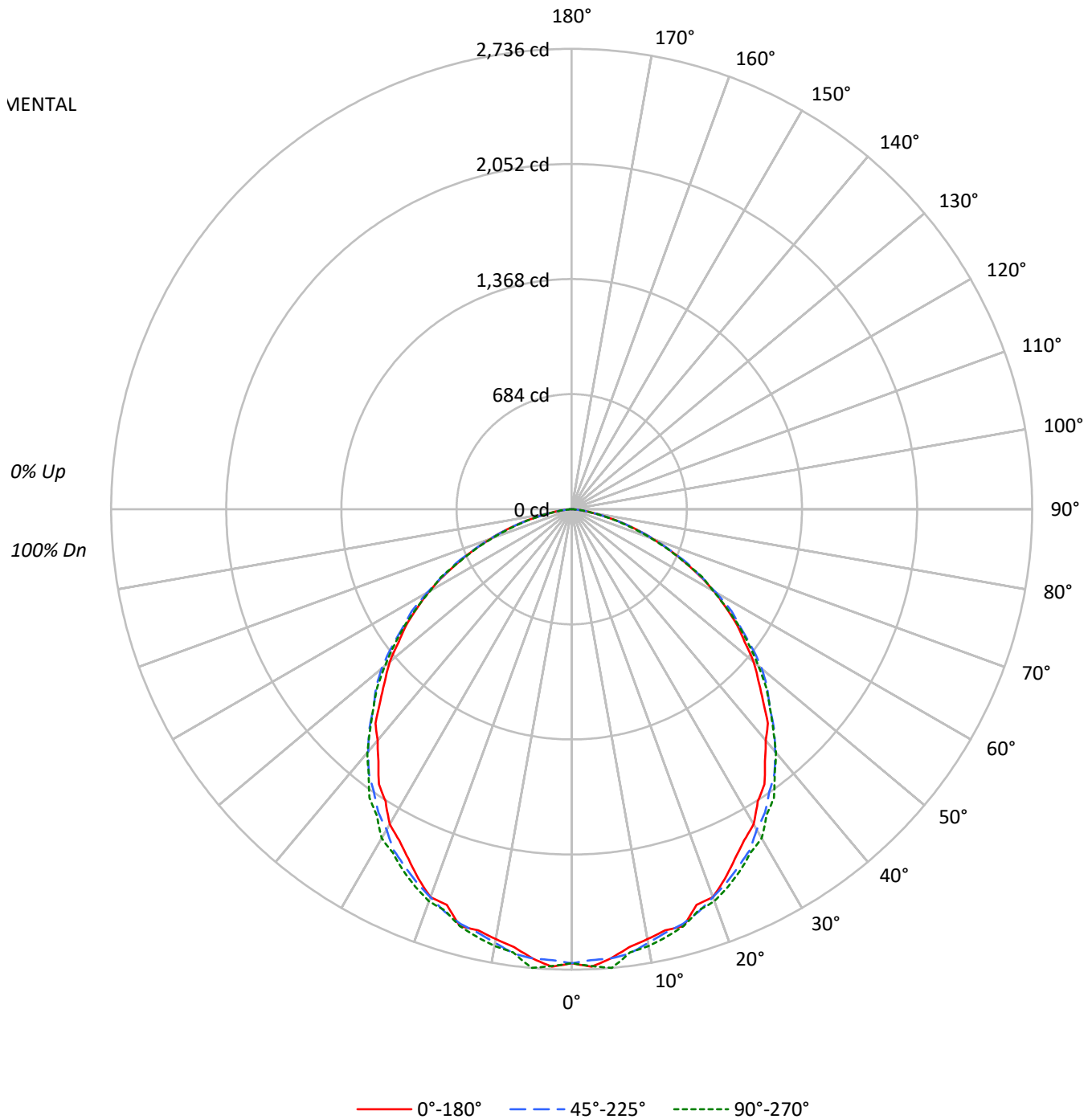
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7259	7259	7259
5°	7235	7238	7391
10°	7089	7151	7201
15°	7145	7106	7146
20°	7024	7024	7099
25°	6808	6957	7034
30°	6715	6833	7014
35°	6556	6728	6879
40°	6301	6605	6634
45°	6111	6328	6337
50°	5910	6177	6059
55°	5631	5741	5700
60°	5266	5318	5223
65°	4695	4815	4662
70°	4028	4043	3930
75°	3191	3184	3060
80°	2137	2078	1998
85°	1161	1152	1074

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6491 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.8	3.7
10°-20°	719.2	10.6
20°-30°	1077.5	15.8
30°-40°	1277.0	18.8
40°-50°	1279.4	18.8
50°-60°	1086.0	16.0
60°-70°	732.2	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°	2050.4	30.2
0°-40°	3327.4	48.9
0°-60°	5692.8	83.7
0°-90°	6799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6799.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2698	2698	2698	2698	2698	
5°	2678	2672	2680	2672	2736	253
15°	2565	2535	2551	2564	2565	715
25°	2293	2306	2343	2374	2369	1060
35°	1996	2002	2048	2095	2094	1239
45°	1606	1636	1663	1706	1665	1242
55°	1200	1192	1224	1215	1215	1068
65°	737	728	756	727	732	733
75°	307	301	306	285	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°	2697.7	2697.7	2697.7	2697.7	2697.7
2.5°	2721.0	2700.5	2681.3	2703.6	2717.2
5°	2678.5	2672.2	2679.6	2671.5	2736.0
7.5°	2623.5	2647.5	2661.4	2652.7	2656.6
10°	2594.2	2585.9	2616.9	2638.5	2635.3
12.5°	2562.9	2575.4	2577.2	2600.5	2602.6
15°	2564.6	2535.0	2550.7	2563.9	2565.0
17.5°	2465.0	2497.0	2507.8	2538.1	2500.5
20°	2452.8	2429.5	2452.8	2483.8	2478.9
22.5°	2377.9	2351.8	2402.0	2429.5	2427.7
25°	2292.9	2305.5	2343.1	2373.7	2368.9
27.5°	2218.4	2233.0	2286.7	2328.8	2301.6
30°	2160.9	2153.6	2198.9	2236.5	2257.4
32.5°	2058.2	2084.6	2137.6	2174.9	2155.0
35°	1995.8	2001.7	2048.1	2095.4	2094.0
37.5°	1886.8	1914.3	1979.5	1992.7	1980.5
40°	1793.8	1821.3	1880.2	1894.5	1888.5
42.5°	1725.2	1730.1	1780.6	1796.9	1770.8
45°	1605.7	1635.7	1662.8	1705.7	1665.3
47.5°	1504.0	1517.9	1576.5	1588.0	1566.7
50°	1411.7	1416.6	1475.4	1461.2	1447.2
52.5°	1295.7	1316.3	1349.4	1346.6	1330.2
55°	1200.3	1192.3	1223.6	1215.3	1214.9
57.5°	1085.7	1099.6	1125.4	1112.2	1090.9
60°	978.4	978.8	988.2	973.2	970.4
62.5°	858.9	863.1	865.2	846.7	876.7
65°	737.4	727.6	756.2	727.3	732.2
67.5°	625.6	630.4	627.7	609.5	616.5
70°	512.0	518.3	513.8	493.2	499.5
72.5°	408.2	400.6	405.4	379.7	391.5
75°	306.9	300.6	306.2	284.6	294.3
77.5°	209.0	213.9	210.4	198.9	205.5
80°	137.9	134.1	134.1	127.5	128.9
82.5°	80.5	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)