

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: P590903

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590903
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-LD4-4STD-35-UNV-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7563.0 lumens
Efficiency: N/A
Efficacy: 113.6 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

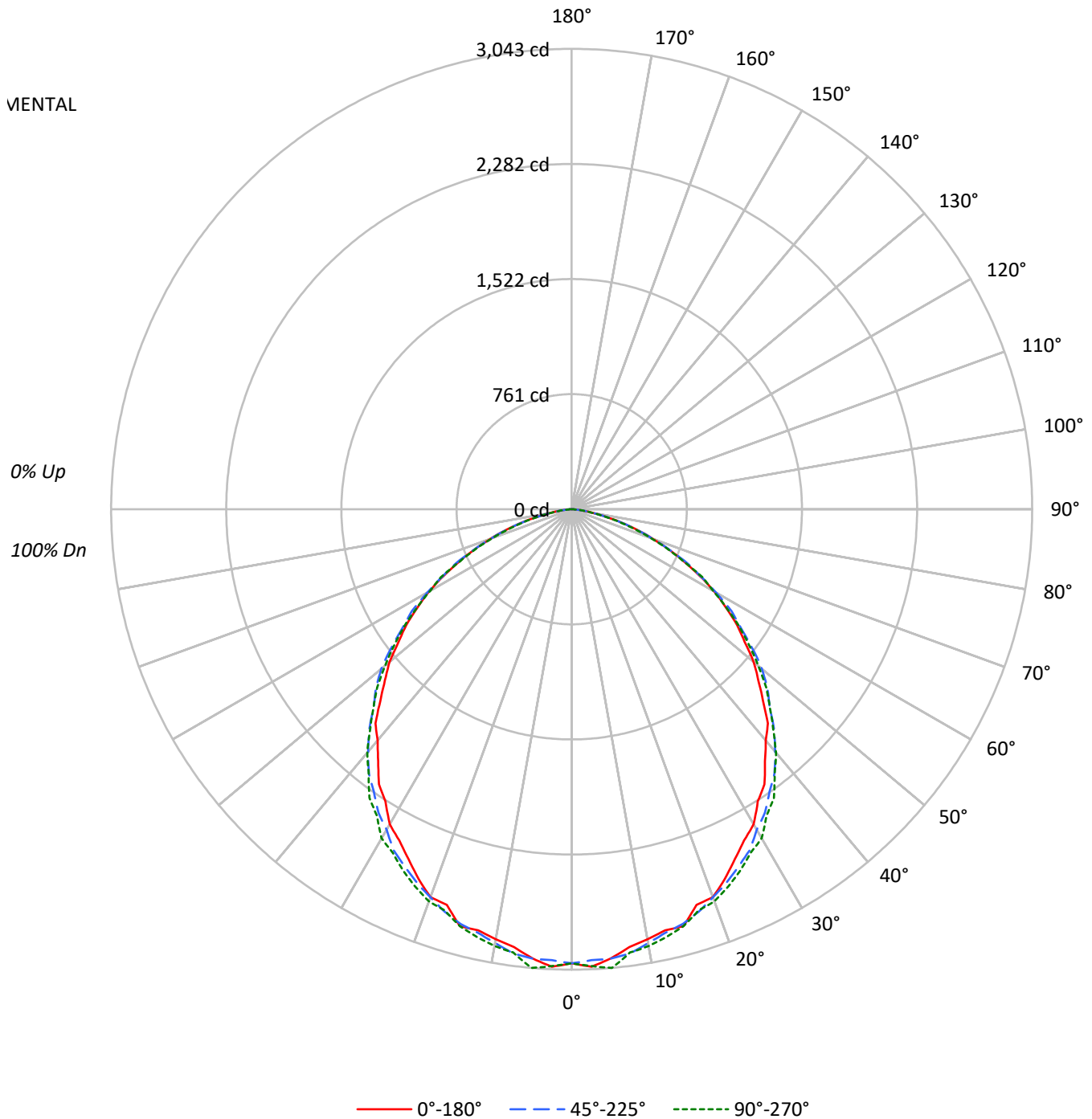
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
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°	8075	8075	8075
5°	8048	8052	8221
10°	7885	7954	8010
15°	7948	7904	7949
20°	7813	7813	7897
25°	7573	7739	7824
30°	7469	7600	7803
35°	7293	7484	7652
40°	7009	7347	7380
45°	6797	7039	7050
50°	6574	6871	6740
55°	6264	6386	6340
60°	5857	5916	5809
65°	5223	5356	5186
70°	4482	4497	4371
75°	3549	3541	3404
80°	2377	2312	2222
85°	1291	1281	1195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7220 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.3	3.7
10°-20°	800.0	10.6
20°-30°	1198.6	15.8
30°-40°	1420.5	18.8
40°-50°	1423.2	18.8
50°-60°	1208.0	16.0
60°-70°	814.4	10.8
70°-80°	357.9	4.7
80°-90°	58.2	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°	2280.8	30.2
0°-40°	3701.3	48.9
0°-60°	6332.5	83.7
0°-90°	7563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7563.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3001	3001	3001	3001	3001	
5°	2980	2972	2981	2972	3043	281
15°	2853	2820	2837	2852	2853	795
25°	2551	2564	2606	2640	2635	1179
35°	2220	2227	2278	2331	2329	1378
45°	1786	1820	1850	1897	1852	1382
55°	1335	1326	1361	1352	1351	1188
65°	820	809	841	809	814	816
75°	341	334	341	316	327	366
85°	42	41	42	40	39	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3000.8	3000.8	3000.8	3000.8	3000.8
2.5°	3026.8	3003.9	2982.6	3007.4	3022.5
5°	2979.5	2972.5	2980.7	2971.7	3043.4
7.5°	2918.3	2945.0	2960.5	2950.8	2955.1
10°	2885.7	2876.4	2910.9	2934.9	2931.5
12.5°	2850.9	2864.8	2866.7	2892.7	2895.0
15°	2852.8	2819.9	2837.3	2852.0	2853.2
17.5°	2742.0	2777.6	2789.6	2823.4	2781.5
20°	2728.4	2702.5	2728.4	2762.9	2757.5
22.5°	2645.1	2616.1	2671.9	2702.5	2700.5
25°	2550.6	2564.5	2606.4	2640.5	2635.1
27.5°	2467.7	2483.9	2543.6	2590.5	2560.3
30°	2403.7	2395.6	2446.0	2487.8	2511.1
32.5°	2289.4	2318.9	2377.8	2419.2	2397.2
35°	2220.1	2226.7	2278.2	2330.9	2329.4
37.5°	2098.8	2129.4	2201.9	2216.6	2203.0
40°	1995.4	2026.0	2091.5	2107.3	2100.8
42.5°	1919.0	1924.5	1980.6	1998.9	1969.8
45°	1786.1	1819.5	1849.7	1897.3	1852.4
47.5°	1673.0	1688.5	1753.6	1766.4	1742.8
50°	1570.3	1575.8	1641.2	1625.4	1609.9
52.5°	1441.3	1464.2	1501.0	1497.9	1479.7
55°	1335.2	1326.2	1361.1	1351.8	1351.4
57.5°	1207.7	1223.2	1251.9	1237.1	1213.5
60°	1088.3	1088.7	1099.2	1082.5	1079.4
62.5°	955.5	960.1	962.4	941.9	975.2
65°	820.2	809.4	841.2	809.0	814.4
67.5°	695.9	701.3	698.2	678.0	685.8
70°	569.6	576.5	571.5	548.6	555.6
72.5°	454.1	445.6	451.0	422.3	435.5
75°	341.3	334.4	340.6	316.5	327.4
77.5°	232.5	237.9	234.0	221.2	228.6
80°	153.4	149.2	149.2	141.8	143.4
82.5°	89.5	85.2	84.1	81.8	85.2
85°	41.8	40.7	41.5	40.3	38.7
87.5°	15.1	15.5	15.5	14.7	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)