

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: P590459

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590459
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-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7188.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

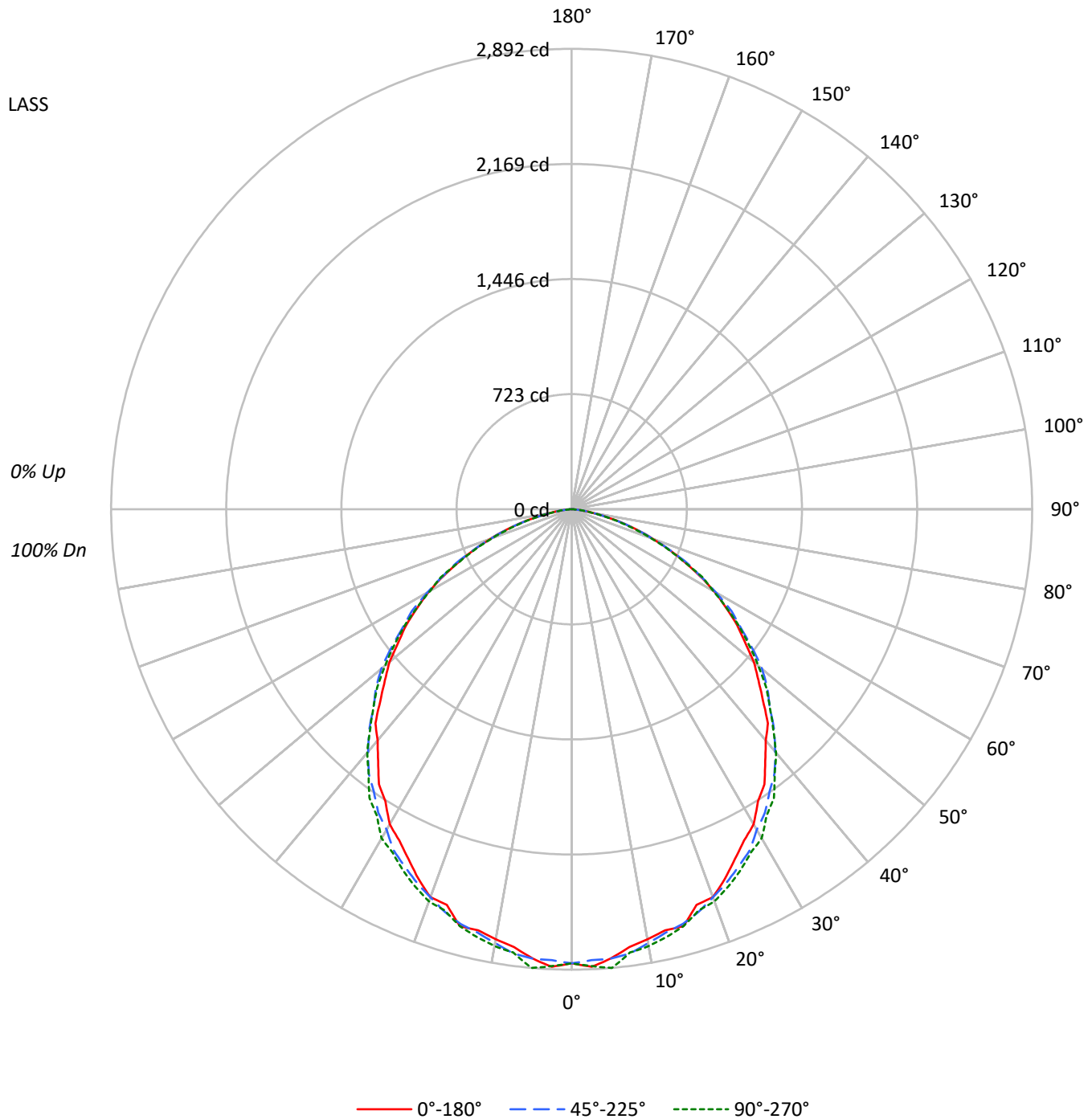
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7675	7675	7675
5°	7649	7652	7813
10°	7494	7560	7613
15°	7553	7512	7555
20°	7426	7426	7505
25°	7198	7355	7436
30°	7099	7223	7416
35°	6932	7113	7273
40°	6662	6983	7014
45°	6460	6690	6700
50°	6248	6530	6405
55°	5954	6069	6026
60°	5567	5623	5521
65°	4964	5090	4928
70°	4259	4274	4155
75°	3373	3366	3236
80°	2259	2197	2111
85°	1229	1216	1136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6863 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.3	3.7
10°-20°	760.3	10.6
20°-30°	1139.1	15.8
30°-40°	1350.1	18.8
40°-50°	1352.6	18.8
50°-60°	1148.1	16.0
60°-70°	774.1	10.8
70°-80°	340.1	4.7
80°-90°	55.3	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°	2167.7	30.2
0°-40°	3517.8	48.9
0°-60°	6018.5	83.7
0°-90°	7188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7188.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2852	2852	2852	2852	2852	
5°	2832	2825	2833	2824	2892	267
15°	2711	2680	2697	2711	2712	755
25°	2424	2437	2477	2510	2504	1121
35°	2110	2116	2165	2215	2214	1310
45°	1698	1729	1758	1803	1761	1313
55°	1269	1260	1294	1285	1284	1129
65°	780	769	799	769	774	775
75°	324	318	324	301	311	348
85°	40	39	39	38	37	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2852.0	2852.0	2852.0	2852.0	2852.0
2.5°	2876.7	2855.0	2834.7	2858.3	2872.6
5°	2831.8	2825.1	2832.9	2824.4	2892.5
7.5°	2773.6	2799.0	2813.7	2804.5	2808.6
10°	2742.6	2733.8	2766.6	2789.4	2786.1
12.5°	2709.5	2722.8	2724.6	2749.3	2751.5
15°	2711.3	2680.0	2696.6	2710.6	2711.7
17.5°	2606.0	2639.9	2651.3	2683.4	2643.6
20°	2593.1	2568.5	2593.1	2625.9	2620.8
22.5°	2514.0	2486.4	2539.4	2568.5	2566.6
25°	2424.1	2437.4	2477.1	2509.6	2504.4
27.5°	2345.3	2360.8	2417.5	2462.1	2433.3
30°	2284.6	2276.8	2324.7	2364.5	2386.6
32.5°	2175.9	2203.9	2259.9	2299.3	2278.3
35°	2110.0	2116.3	2165.2	2215.3	2213.9
37.5°	1994.8	2023.8	2092.7	2106.7	2093.8
40°	1896.4	1925.5	1987.8	2002.9	1996.6
42.5°	1823.9	1829.0	1882.4	1899.7	1872.1
45°	1697.6	1729.3	1758.0	1803.3	1760.6
47.5°	1590.1	1604.8	1666.7	1678.8	1656.3
50°	1492.5	1497.6	1559.9	1544.8	1530.0
52.5°	1369.9	1391.6	1426.6	1423.6	1406.3
55°	1269.0	1260.5	1293.6	1284.8	1284.4
57.5°	1147.8	1162.5	1189.8	1175.8	1153.3
60°	1034.4	1034.8	1044.7	1028.9	1025.9
62.5°	908.1	912.5	914.7	895.2	926.9
65°	779.6	769.3	799.4	768.9	774.0
67.5°	661.4	666.5	663.6	644.4	651.8
70°	541.3	547.9	543.2	521.4	528.1
72.5°	431.6	423.5	428.6	401.4	413.9
75°	324.4	317.8	323.7	300.9	311.2
77.5°	220.9	226.1	222.4	210.3	217.3
80°	145.8	141.8	141.8	134.8	136.2
82.5°	85.1	81.0	79.9	77.7	81.0
85°	39.8	38.7	39.4	38.3	36.8
87.5°	14.4	14.7	14.7	14.0	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)