

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: P590491

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590491
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-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7310.0 lumens
Efficiency: N/A
Efficacy: 112.8 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

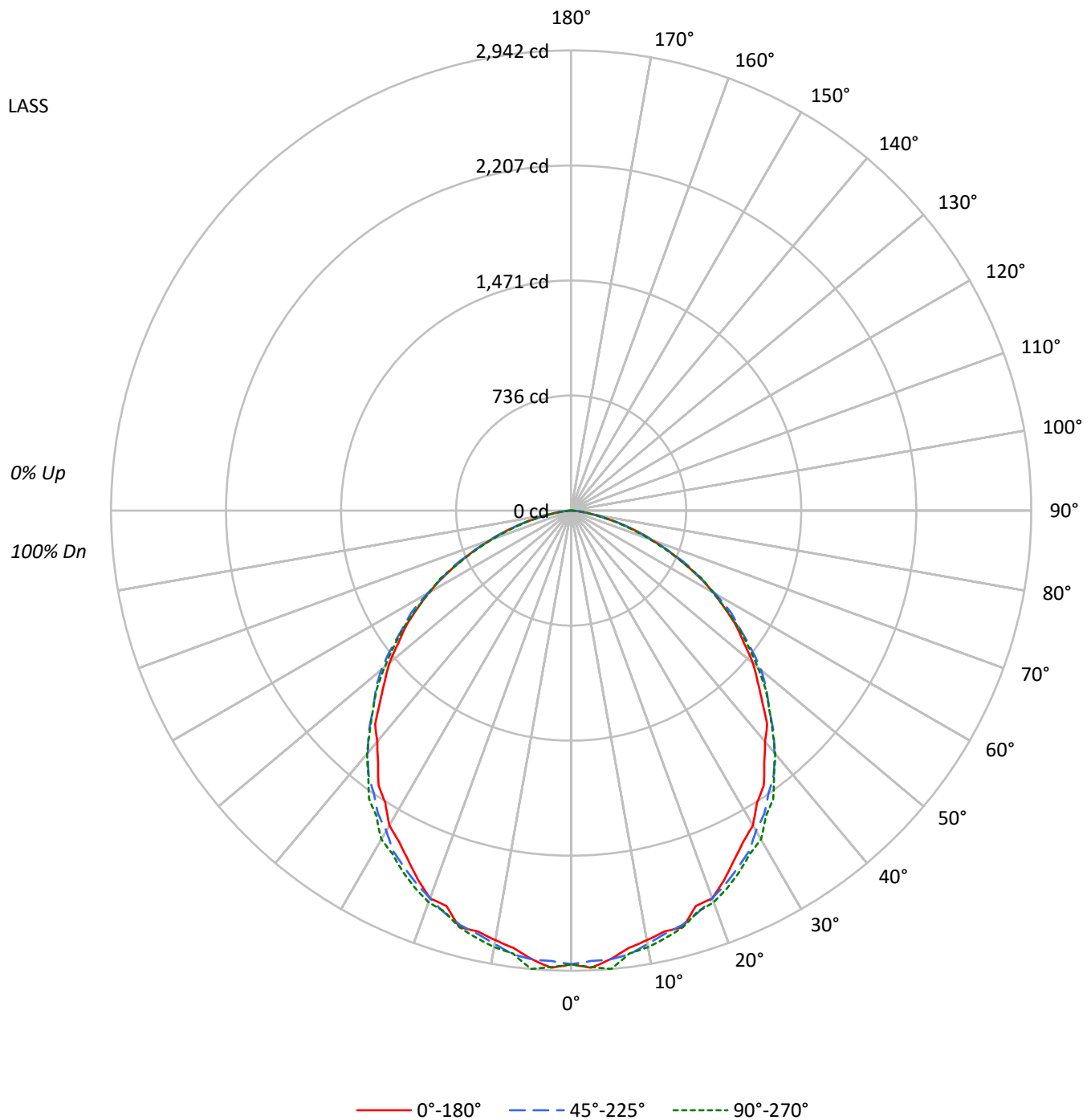
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7805	7805	7805
5°	7779	7782	7946
10°	7621	7688	7742
15°	7682	7640	7683
20°	7552	7552	7632
25°	7320	7480	7562
30°	7219	7346	7542
35°	7049	7234	7396
40°	6775	7101	7133
45°	6570	6804	6814
50°	6354	6641	6514
55°	6054	6172	6128
60°	5661	5718	5615
65°	5048	5177	5012
70°	4331	4346	4225
75°	3430	3423	3290
80°	2298	2235	2148
85°	1247	1238	1155

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6979 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.8	3.7
10°-20°	773.2	10.6
20°-30°	1158.5	15.8
30°-40°	1373.0	18.8
40°-50°	1375.5	18.8
50°-60°	1167.6	16.0
60°-70°	787.2	10.8
70°-80°	345.9	4.7
80°-90°	56.2	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°	2204.5	30.2
0°-40°	3577.5	48.9
0°-60°	6120.7	83.7
0°-90°	7310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7310.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2900	2900	2900	2900	2900	
5°	2880	2873	2881	2872	2942	271
15°	2757	2726	2742	2757	2758	768
25°	2465	2479	2519	2552	2547	1140
35°	2146	2152	2202	2253	2251	1332
45°	1726	1759	1788	1834	1790	1335
55°	1290	1282	1316	1307	1306	1148
65°	793	782	813	782	787	788
75°	330	323	329	306	316	354
85°	40	39	40	39	37	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2900.4	2900.4	2900.4	2900.4	2900.4
2.5°	2925.5	2903.4	2882.8	2906.8	2921.4
5°	2879.8	2873.1	2880.9	2872.3	2941.6
7.5°	2820.7	2846.5	2861.5	2852.1	2856.2
10°	2789.2	2780.2	2813.5	2836.8	2833.4
12.5°	2755.5	2769.0	2770.8	2795.9	2798.2
15°	2757.4	2725.5	2742.4	2756.6	2757.7
17.5°	2650.3	2684.7	2696.3	2728.9	2688.5
20°	2637.2	2612.1	2637.2	2670.5	2665.2
22.5°	2556.6	2528.6	2582.5	2612.1	2610.2
25°	2465.3	2478.7	2519.2	2552.1	2546.9
27.5°	2385.1	2400.9	2458.5	2503.8	2474.6
30°	2323.3	2315.5	2364.2	2404.6	2427.1
32.5°	2212.9	2241.3	2298.2	2338.3	2317.0
35°	2145.8	2152.2	2202.0	2252.9	2251.4
37.5°	2028.6	2058.2	2128.2	2142.5	2129.3
40°	1928.6	1958.2	2021.5	2036.8	2030.5
42.5°	1854.8	1860.1	1914.4	1932.0	1903.9
45°	1726.4	1758.6	1787.8	1833.9	1790.4
47.5°	1617.0	1632.0	1694.9	1707.3	1684.5
50°	1517.8	1523.0	1586.3	1571.0	1556.0
52.5°	1393.1	1415.2	1450.8	1447.8	1430.2
55°	1290.5	1281.9	1315.6	1306.6	1306.2
57.5°	1167.3	1182.3	1210.0	1195.7	1172.9
60°	1051.9	1052.3	1062.4	1046.3	1043.3
62.5°	923.5	928.0	930.2	910.4	942.6
65°	792.8	782.3	813.0	781.9	787.2
67.5°	672.6	677.8	674.8	655.4	662.8
70°	550.5	557.2	552.4	530.3	537.0
72.5°	438.9	430.7	435.9	408.2	420.9
75°	329.9	323.2	329.2	306.0	316.4
77.5°	224.7	229.9	226.2	213.8	220.9
80°	148.3	144.2	144.2	137.1	138.6
82.5°	86.5	82.4	81.3	79.0	82.4
85°	40.4	39.3	40.1	38.9	37.4
87.5°	14.6	15.0	15.0	14.2	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)