

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: P590508

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-82-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590508
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-82-97-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 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: 6695.0 lumens
Efficiency: N/A
Efficacy: 103.3 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

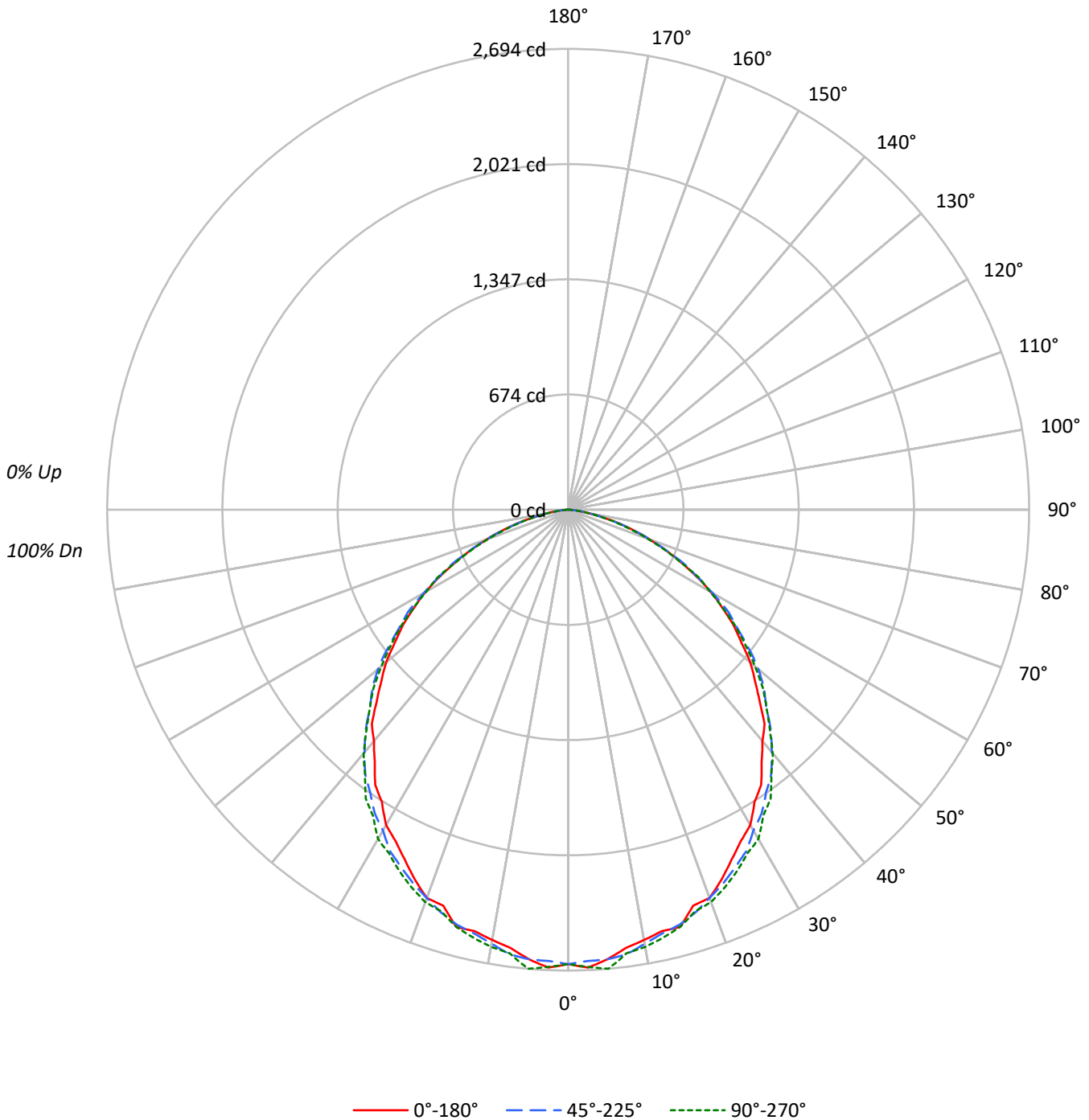
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7148	7148	7148
5°	7125	7128	7277
10°	6980	7041	7091
15°	7036	6997	7036
20°	6917	6917	6990
25°	6704	6850	6926
30°	6612	6728	6907
35°	6456	6625	6774
40°	6205	6504	6533
45°	6017	6231	6240
50°	5820	6082	5966
55°	5545	5653	5613
60°	5185	5237	5143
65°	4623	4741	4591
70°	3967	3980	3869
75°	3142	3135	3013
80°	2104	2046	1967
85°	1142	1133	1059

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6392 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.9	3.7
10°-20°	708.2	10.6
20°-30°	1061.0	15.8
30°-40°	1257.5	18.8
40°-50°	1259.8	18.8
50°-60°	1069.4	16.0
60°-70°	721.0	10.8
70°-80°	316.8	4.7
80°-90°	51.5	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°	2019.0	30.2
0°-40°	3276.5	48.9
0°-60°	5605.7	83.7
0°-90°	6695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6695.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2656	2656	2656	2656	2656	
5°	2638	2631	2639	2631	2694	249
15°	2525	2496	2512	2525	2526	704
25°	2258	2270	2307	2337	2333	1044
35°	1965	1971	2017	2063	2062	1220
45°	1581	1611	1637	1680	1640	1223
55°	1182	1174	1205	1197	1196	1051
65°	726	716	745	716	721	722
75°	302	296	302	280	290	324
85°	37	36	37	36	34	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2656.4	2656.4	2656.4	2656.4	2656.4
2.5°	2679.4	2659.2	2640.3	2662.2	2675.6
5°	2637.5	2631.4	2638.6	2630.7	2694.1
7.5°	2583.4	2607.0	2620.7	2612.2	2615.9
10°	2554.5	2546.3	2576.8	2598.1	2595.0
12.5°	2523.7	2536.0	2537.7	2560.7	2562.8
15°	2525.4	2496.2	2511.7	2524.7	2525.7
17.5°	2427.3	2458.8	2469.5	2499.3	2462.3
20°	2415.3	2392.3	2415.3	2445.8	2441.0
22.5°	2341.5	2315.8	2365.2	2392.3	2390.6
25°	2257.9	2270.2	2307.2	2337.4	2332.6
27.5°	2184.5	2198.9	2251.7	2293.2	2266.4
30°	2127.9	2120.7	2165.3	2202.3	2222.9
32.5°	2026.7	2052.8	2104.9	2141.6	2122.0
35°	1965.3	1971.1	2016.7	2063.4	2062.0
37.5°	1857.9	1885.0	1949.2	1962.2	1950.2
40°	1766.4	1793.5	1851.4	1865.5	1859.7
42.5°	1698.8	1703.6	1753.3	1769.5	1743.7
45°	1581.2	1610.7	1637.4	1679.6	1639.8
47.5°	1481.0	1494.7	1552.3	1563.7	1542.7
50°	1390.1	1394.9	1452.9	1438.8	1425.1
52.5°	1275.9	1296.1	1328.7	1326.0	1309.9
55°	1181.9	1174.0	1204.9	1196.7	1196.3
57.5°	1069.1	1082.8	1108.2	1095.1	1074.2
60°	963.4	963.8	973.0	958.3	955.6
62.5°	845.8	849.9	852.0	833.8	863.3
65°	726.1	716.5	744.6	716.1	721.0
67.5°	616.0	620.8	618.1	600.2	607.1
70°	504.2	510.4	505.9	485.7	491.8
72.5°	402.0	394.4	399.2	373.9	385.5
75°	302.2	296.0	301.5	280.2	289.8
77.5°	205.8	210.6	207.2	195.8	202.4
80°	135.8	132.0	132.0	125.5	126.9
82.5°	79.2	75.5	74.4	72.4	75.5
85°	37.0	36.0	36.7	35.7	34.3
87.5°	13.4	13.7	13.7	13.0	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)