

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: P590482

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590482
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-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7283.0 lumens
Efficiency: N/A
Efficacy: 112.4 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

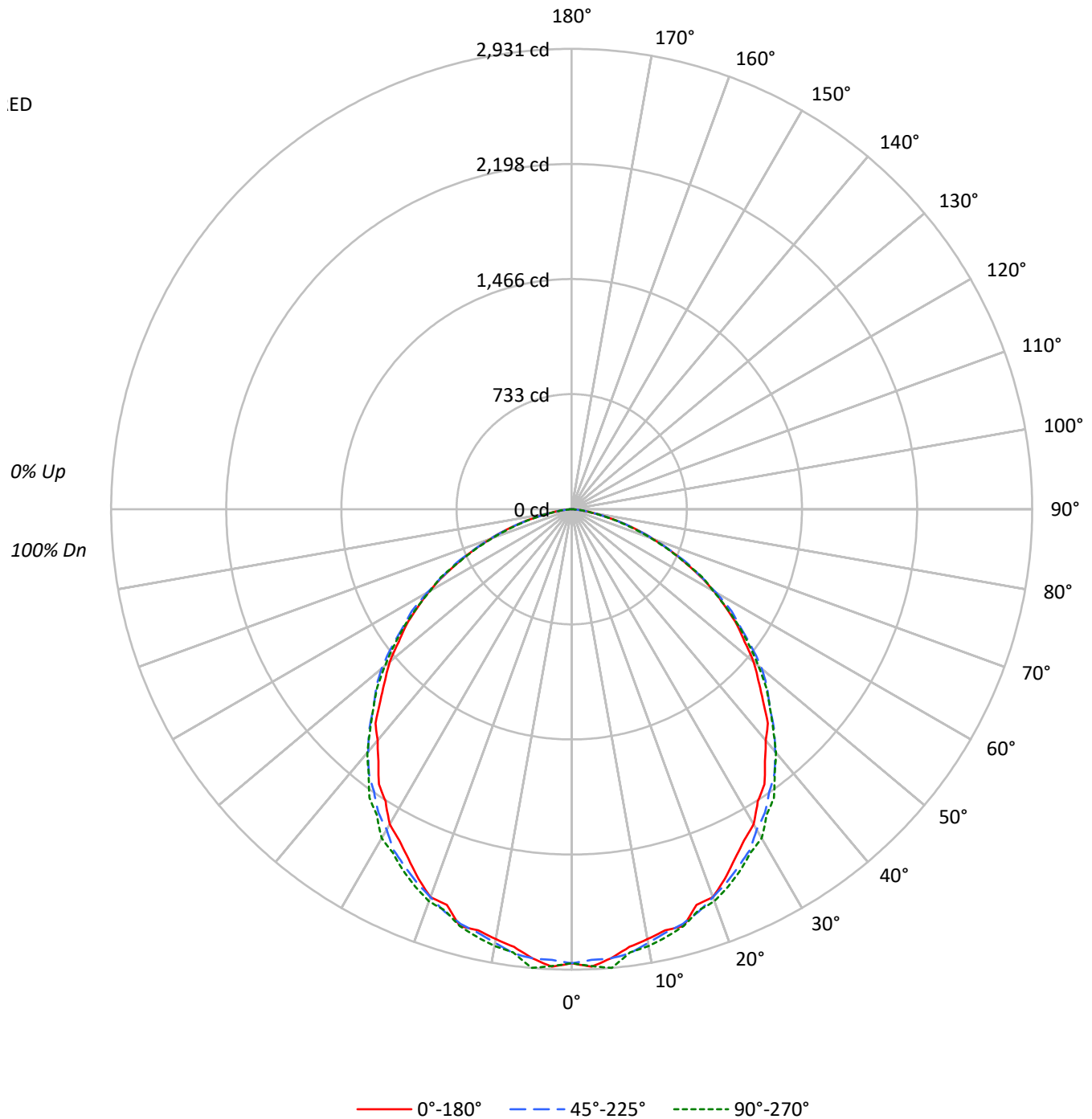
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	7776	7776	7776
5°	7750	7753	7917
10°	7593	7659	7714
15°	7653	7612	7655
20°	7524	7524	7604
25°	7293	7452	7534
30°	7193	7319	7514
35°	7023	7207	7369
40°	6750	7075	7106
45°	6546	6779	6788
50°	6331	6617	6490
55°	6032	6149	6106
60°	5641	5697	5595
65°	5030	5158	4994
70°	4316	4330	4209
75°	3418	3410	3278
80°	2290	2225	2139
85°	1244	1232	1152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6953 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.8	3.7
10°-20°	770.4	10.6
20°-30°	1154.2	15.8
30°-40°	1367.9	18.8
40°-50°	1370.5	18.8
50°-60°	1163.3	16.0
60°-70°	784.3	10.8
70°-80°	344.6	4.7
80°-90°	56.0	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°	2196.4	30.2
0°-40°	3564.3	48.9
0°-60°	6098.1	83.7
0°-90°	7283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7283.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2890	2890	2890	2890	2890	
5°	2869	2862	2870	2862	2931	270
15°	2747	2716	2732	2746	2748	765
25°	2456	2470	2510	2543	2538	1136
35°	2138	2144	2194	2245	2243	1327
45°	1720	1752	1781	1827	1784	1331
55°	1286	1277	1311	1302	1301	1144
65°	790	779	810	779	784	786
75°	329	322	328	305	315	352
85°	40	39	40	39	37	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2889.7	2889.7	2889.7	2889.7	2889.7
2.5°	2914.7	2892.7	2872.2	2896.1	2910.6
5°	2869.2	2862.5	2870.3	2861.7	2930.8
7.5°	2810.2	2836.0	2850.9	2841.6	2845.7
10°	2778.9	2769.9	2803.1	2826.3	2822.9
12.5°	2745.3	2758.8	2760.6	2785.6	2787.9
15°	2747.2	2715.5	2732.3	2746.4	2747.6
17.5°	2640.5	2674.8	2686.4	2718.8	2678.5
20°	2627.4	2602.4	2627.4	2660.6	2655.4
22.5°	2547.2	2519.2	2572.9	2602.4	2600.6
25°	2456.2	2469.6	2509.9	2542.7	2537.5
27.5°	2376.3	2392.0	2449.4	2494.6	2465.5
30°	2314.8	2306.9	2355.4	2395.7	2418.1
32.5°	2204.7	2233.0	2289.8	2329.7	2308.4
35°	2137.9	2144.2	2193.9	2244.6	2243.1
37.5°	2021.1	2050.6	2120.4	2134.5	2121.5
40°	1921.5	1951.0	2014.0	2029.3	2023.0
42.5°	1848.0	1853.2	1907.3	1924.9	1896.9
45°	1720.0	1752.1	1781.2	1827.1	1783.8
47.5°	1611.1	1626.0	1688.7	1701.0	1678.2
50°	1512.2	1517.4	1580.5	1565.2	1550.3
52.5°	1388.0	1410.0	1445.4	1442.4	1424.9
55°	1285.7	1277.1	1310.7	1301.8	1301.4
57.5°	1163.0	1177.9	1205.5	1191.3	1168.6
60°	1048.1	1048.4	1058.5	1042.5	1039.5
62.5°	920.1	924.6	926.8	907.0	939.1
65°	789.9	779.4	810.0	779.0	784.3
67.5°	670.1	675.3	672.3	652.9	660.4
70°	548.5	555.2	550.3	528.3	535.0
72.5°	437.3	429.1	434.3	406.7	419.4
75°	328.7	322.0	328.0	304.8	315.3
77.5°	223.9	229.1	225.4	213.0	220.1
80°	147.8	143.6	143.6	136.6	138.0
82.5°	86.2	82.1	81.0	78.7	82.1
85°	40.3	39.2	39.9	38.8	37.3
87.5°	14.6	14.9	14.9	14.2	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)