

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: P590927

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590927
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-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7579.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

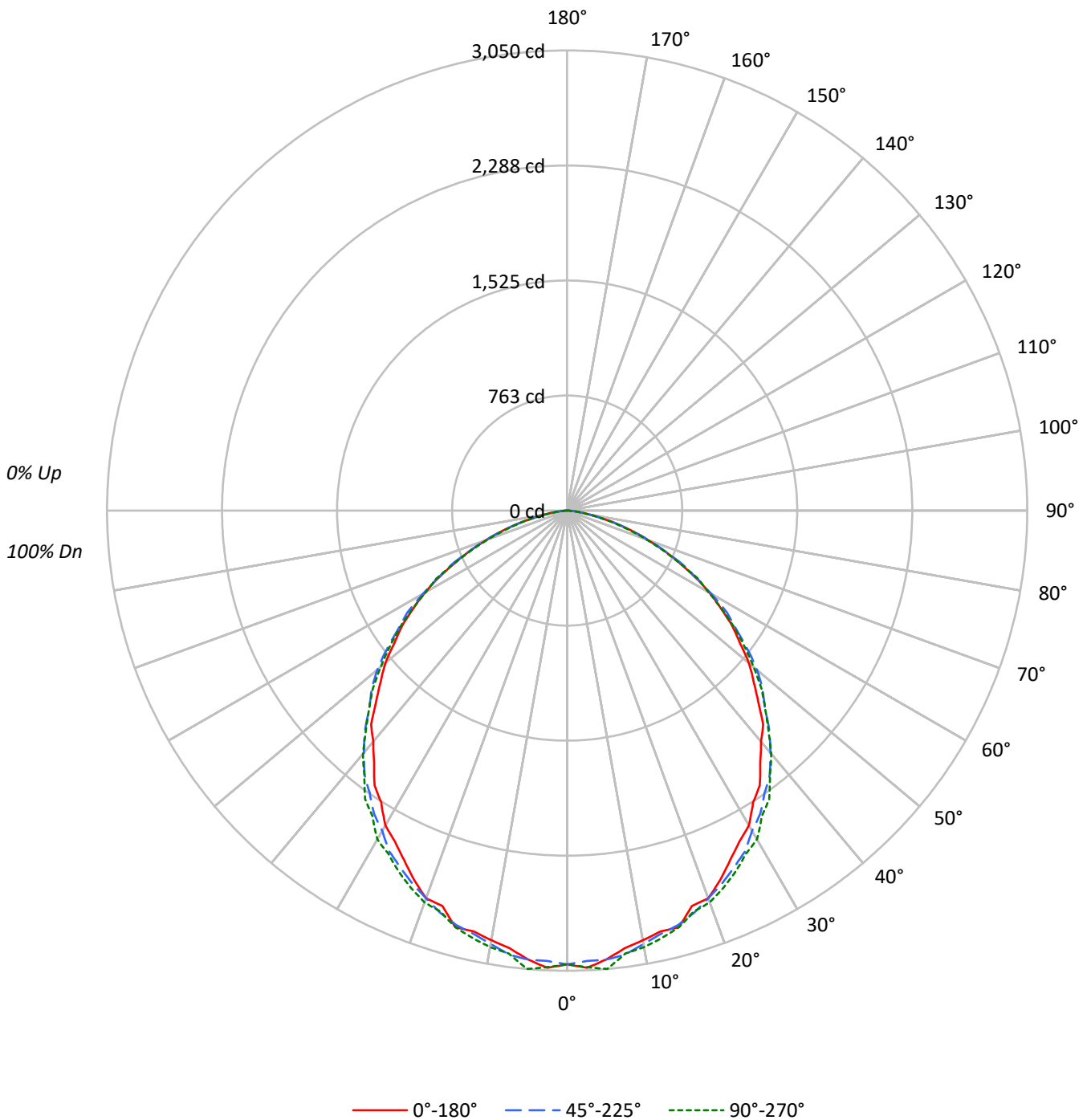
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	8092	8092	8092
5°	8065	8069	8239
10°	7902	7971	8027
15°	7964	7921	7965
20°	7830	7830	7913
25°	7589	7755	7840
30°	7485	7617	7819
35°	7309	7500	7668
40°	7024	7363	7395
45°	6812	7054	7064
50°	6588	6885	6754
55°	6277	6399	6354
60°	5870	5928	5822
65°	5234	5367	5196
70°	4491	4506	4381
75°	3557	3549	3411
80°	2383	2317	2227
85°	1294	1281	1198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7236 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.9	3.7
10°-20°	801.7	10.6
20°-30°	1201.1	15.8
30°-40°	1423.5	18.8
40°-50°	1426.2	18.8
50°-60°	1210.6	16.0
60°-70°	816.2	10.8
70°-80°	358.6	4.7
80°-90°	58.3	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°	2285.6	30.2
0°-40°	3709.2	48.9
0°-60°	6345.9	83.7
0°-90°	7579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3007	3007	3007	3007	3007	
5°	2986	2979	2987	2978	3050	281
15°	2859	2826	2843	2858	2859	797
25°	2556	2570	2612	2646	2641	1182
35°	2225	2231	2283	2336	2334	1381
45°	1790	1823	1854	1901	1856	1385
55°	1338	1329	1364	1355	1354	1190
65°	822	811	843	811	816	817
75°	342	335	341	317	328	367
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°	3007.2	3007.2	3007.2	3007.2	3007.2
2.5°	3033.2	3010.3	2988.9	3013.8	3028.9
5°	2985.8	2978.8	2987.0	2978.0	3049.9
7.5°	2924.5	2951.2	2966.8	2957.1	2961.3
10°	2891.8	2882.5	2917.1	2941.1	2937.7
12.5°	2856.9	2870.9	2872.8	2898.8	2901.2
15°	2858.8	2825.8	2843.3	2858.1	2859.2
17.5°	2747.8	2783.5	2795.5	2829.3	2787.4
20°	2734.2	2708.2	2734.2	2768.8	2763.3
22.5°	2650.7	2621.6	2677.5	2708.2	2706.2
25°	2556.0	2570.0	2611.9	2646.1	2640.6
27.5°	2472.9	2489.2	2549.0	2596.0	2565.7
30°	2408.8	2400.7	2451.2	2493.1	2516.4
32.5°	2294.3	2323.8	2382.8	2424.4	2402.2
35°	2224.8	2231.4	2283.0	2335.8	2334.3
37.5°	2103.3	2133.9	2206.5	2221.3	2207.7
40°	1999.6	2030.3	2095.9	2111.8	2105.2
42.5°	1923.1	1928.5	1984.8	2003.1	1974.0
45°	1789.9	1823.3	1853.6	1901.4	1856.3
47.5°	1676.6	1692.1	1757.3	1770.1	1746.4
50°	1573.7	1579.1	1644.7	1628.8	1613.3
52.5°	1444.4	1467.3	1504.2	1501.1	1482.8
55°	1338.0	1329.1	1364.0	1354.7	1354.3
57.5°	1210.2	1225.8	1254.5	1239.7	1216.1
60°	1090.7	1091.0	1101.5	1084.8	1081.7
62.5°	957.5	962.1	964.5	943.9	977.3
65°	822.0	811.1	842.9	810.7	816.1
67.5°	697.3	702.8	699.7	679.5	687.2
70°	570.8	577.7	572.7	549.8	556.8
72.5°	455.1	446.5	451.9	423.2	436.4
75°	342.1	335.1	341.3	317.2	328.1
77.5°	233.0	238.4	234.5	221.7	229.1
80°	153.8	149.5	149.5	142.1	143.7
82.5°	89.7	85.4	84.3	81.9	85.4
85°	41.9	40.8	41.5	40.4	38.8
87.5°	15.1	15.5	15.5	14.8	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)