

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: P590509

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590509
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-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7389.0 lumens
Efficiency: N/A
Efficacy: 114.0 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

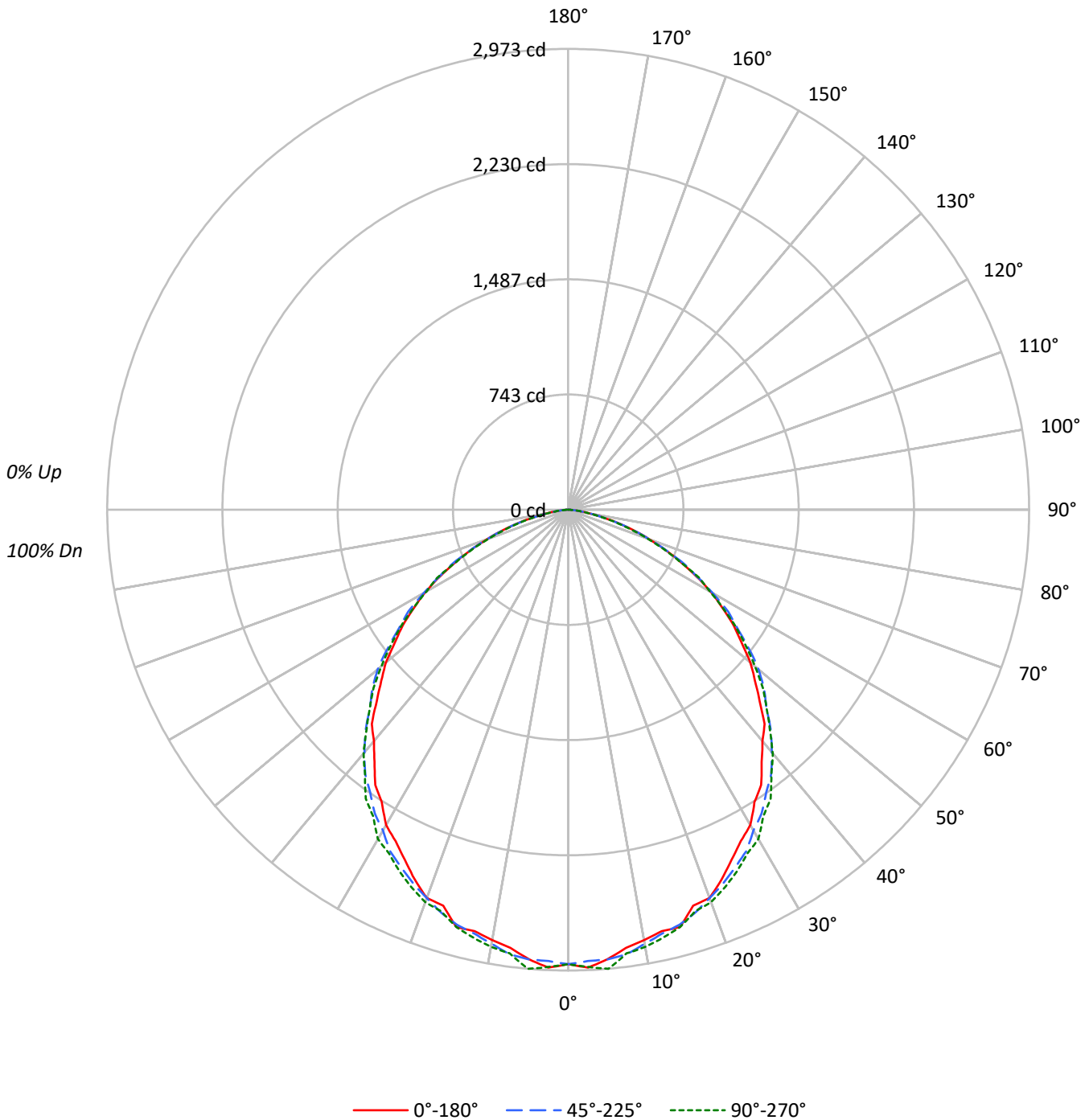
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7889	7889	7889
5°	7863	7866	8032
10°	7704	7771	7826
15°	7765	7723	7766
20°	7634	7634	7715
25°	7399	7561	7644
30°	7297	7425	7623
35°	7125	7312	7476
40°	6848	7178	7210
45°	6641	6877	6887
50°	6423	6713	6584
55°	6120	6239	6194
60°	5723	5780	5676
65°	5103	5233	5067
70°	4378	4393	4271
75°	3467	3459	3326
80°	2323	2258	2171
85°	1263	1250	1170

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7054 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	275.8	3.7
10°-20°	781.6	10.6
20°-30°	1171.0	15.8
30°-40°	1387.8	18.8
40°-50°	1390.4	18.8
50°-60°	1180.2	16.0
60°-70°	795.7	10.8
70°-80°	349.6	4.7
80°-90°	56.8	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°	2228.3	30.2
0°-40°	3616.2	48.9
0°-60°	6186.8	83.7
0°-90°	7389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7389.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2932	2932	2932	2932	2932	
5°	2911	2904	2912	2903	2973	274
15°	2787	2755	2772	2786	2788	777
25°	2492	2506	2546	2580	2574	1152
35°	2169	2176	2226	2277	2276	1347
45°	1745	1778	1807	1854	1810	1350
55°	1304	1296	1330	1321	1320	1160
65°	801	791	822	790	796	797
75°	334	327	333	309	320	357
85°	41	40	40	39	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2931.8	2931.8	2931.8	2931.8	2931.8
2.5°	2957.1	2934.8	2914.0	2938.2	2953.0
5°	2910.9	2904.1	2912.1	2903.4	2973.4
7.5°	2851.1	2877.3	2892.4	2882.9	2887.1
10°	2819.3	2810.3	2843.9	2867.4	2864.0
12.5°	2785.3	2798.9	2800.8	2826.2	2828.4
15°	2787.2	2755.0	2772.0	2786.4	2787.5
17.5°	2678.9	2713.7	2725.5	2758.4	2717.5
20°	2665.7	2640.3	2665.7	2699.3	2694.0
22.5°	2584.3	2555.9	2610.4	2640.3	2638.4
25°	2491.9	2505.5	2546.4	2579.7	2574.4
27.5°	2410.9	2426.8	2485.1	2530.9	2501.4
30°	2348.4	2340.5	2389.7	2430.6	2453.3
32.5°	2236.8	2265.5	2323.1	2363.6	2342.0
35°	2169.0	2175.5	2225.8	2277.3	2275.8
37.5°	2050.5	2080.4	2151.2	2165.6	2152.4
40°	1949.5	1979.4	2043.3	2058.9	2052.4
42.5°	1874.9	1880.2	1935.1	1952.9	1924.5
45°	1745.1	1777.6	1807.1	1853.7	1809.8
47.5°	1634.5	1649.7	1713.3	1725.7	1702.7
50°	1534.2	1539.5	1603.5	1588.0	1572.8
52.5°	1408.2	1430.5	1466.5	1463.4	1445.6
55°	1304.4	1295.7	1329.8	1320.7	1320.3
57.5°	1179.9	1195.0	1223.1	1208.7	1185.6
60°	1063.3	1063.7	1073.9	1057.6	1054.6
62.5°	933.5	938.0	940.3	920.2	952.8
65°	801.4	790.8	821.8	790.4	795.7
67.5°	679.9	685.2	682.1	662.4	670.0
70°	556.4	563.3	558.3	536.0	542.8
72.5°	443.6	435.3	440.6	412.6	425.5
75°	333.5	326.7	332.7	309.3	319.9
77.5°	227.1	232.4	228.6	216.1	223.3
80°	149.9	145.7	145.7	138.5	140.1
82.5°	87.4	83.3	82.1	79.9	83.3
85°	40.9	39.7	40.5	39.4	37.9
87.5°	14.8	15.1	15.1	14.4	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)