

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: P590484

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590484
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-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 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: 6944.0 lumens
Efficiency: N/A
Efficacy: 107.2 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

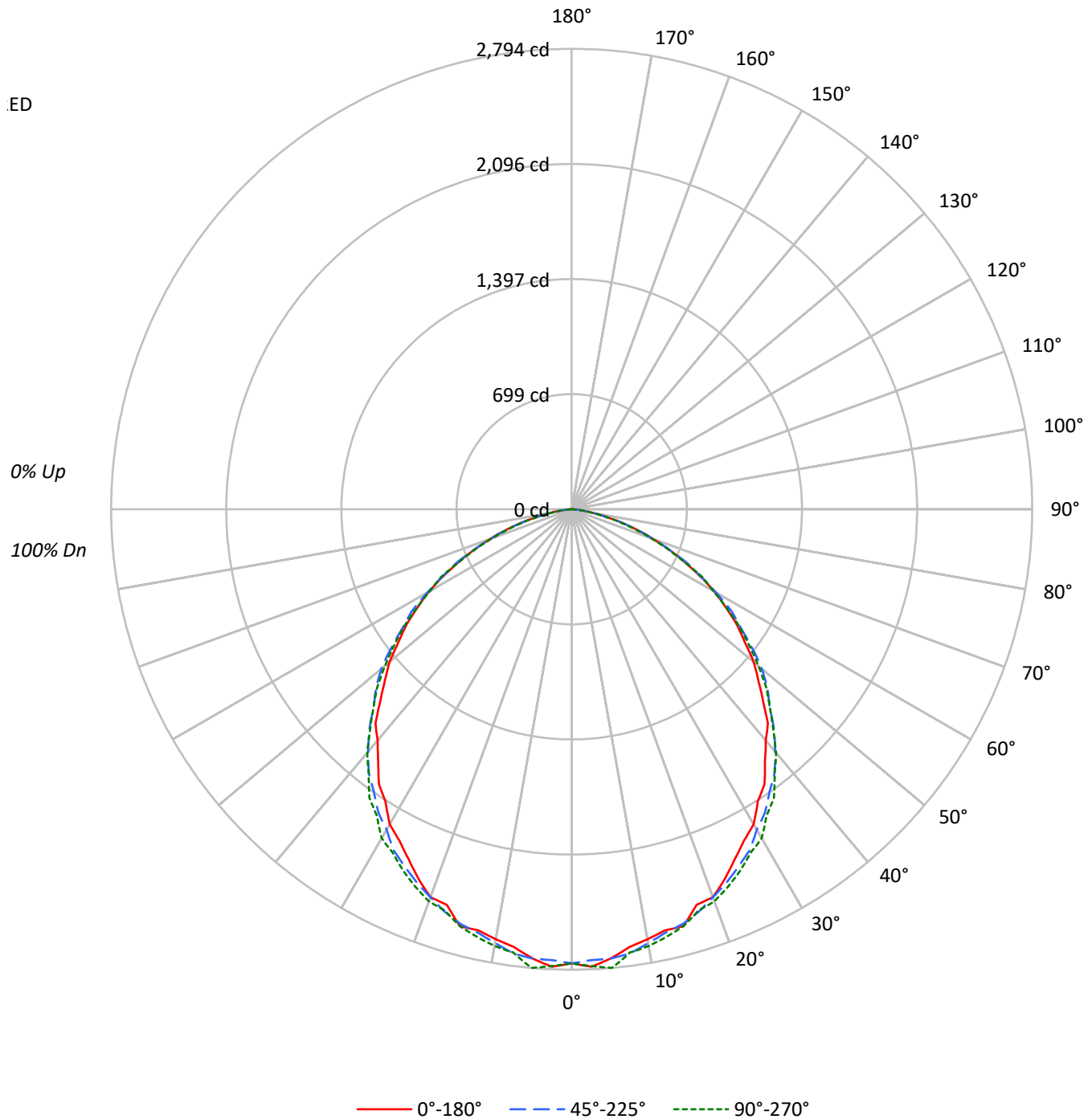
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7414	7414	7414
5°	7390	7393	7548
10°	7240	7303	7355
15°	7297	7258	7298
20°	7174	7174	7250
25°	6953	7106	7184
30°	6858	6978	7164
35°	6696	6871	7026
40°	6436	6746	6776
45°	6241	6463	6473
50°	6036	6309	6188
55°	5751	5863	5821
60°	5378	5431	5334
65°	4795	4918	4762
70°	4114	4128	4013
75°	3258	3251	3125
80°	2183	2123	2039
85°	1186	1176	1099

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6630 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.2	3.7
10°-20°	734.5	10.6
20°-30°	1100.5	15.8
30°-40°	1304.3	18.8
40°-50°	1306.7	18.8
50°-60°	1109.2	16.0
60°-70°	747.8	10.8
70°-80°	328.6	4.7
80°-90°	53.4	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°	2094.1	30.2
0°-40°	3398.4	48.9
0°-60°	5814.2	83.7
0°-90°	6944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2755	2755	2755	2755	2755	
5°	2736	2729	2737	2728	2794	258
15°	2619	2589	2605	2619	2620	730
25°	2342	2355	2393	2424	2419	1083
35°	2038	2044	2092	2140	2139	1266
45°	1640	1671	1698	1742	1701	1269
55°	1226	1218	1250	1241	1241	1090
65°	753	743	772	743	748	749
75°	313	307	313	291	301	336
85°	38	37	38	37	36	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2755.2	2755.2	2755.2	2755.2	2755.2
2.5°	2779.0	2758.0	2738.5	2761.3	2775.1
5°	2735.6	2729.2	2736.7	2728.5	2794.3
7.5°	2679.4	2704.0	2718.2	2709.3	2713.2
10°	2649.5	2641.0	2672.7	2694.7	2691.5
12.5°	2617.5	2630.3	2632.1	2656.0	2658.1
15°	2619.3	2589.1	2605.1	2618.6	2619.7
17.5°	2517.6	2550.3	2561.3	2592.3	2553.9
20°	2505.1	2481.3	2505.1	2536.8	2531.8
22.5°	2428.6	2402.0	2453.2	2481.3	2479.5
25°	2341.8	2354.6	2393.1	2424.4	2419.4
27.5°	2265.7	2280.6	2335.4	2378.5	2350.7
30°	2207.0	2199.5	2245.8	2284.2	2305.5
32.5°	2102.1	2129.1	2183.2	2221.2	2201.0
35°	2038.4	2044.4	2091.7	2140.1	2138.7
37.5°	1927.0	1955.1	2021.7	2035.2	2022.7
40°	1832.1	1860.2	1920.3	1934.9	1928.8
42.5°	1762.0	1767.0	1818.5	1835.3	1808.6
45°	1640.0	1670.6	1698.3	1742.1	1700.8
47.5°	1536.1	1550.3	1610.1	1621.8	1600.1
50°	1441.8	1446.8	1506.9	1492.3	1478.1
52.5°	1323.4	1344.3	1378.1	1375.3	1358.6
55°	1225.9	1217.7	1249.7	1241.2	1240.8
57.5°	1108.8	1123.1	1149.4	1135.9	1114.2
60°	999.3	999.6	1009.2	993.9	991.1
62.5°	877.3	881.5	883.7	864.8	895.4
65°	753.1	743.1	772.3	742.8	747.8
67.5°	638.9	643.9	641.0	622.5	629.7
70°	522.9	529.3	524.7	503.7	510.1
72.5°	416.9	409.1	414.1	387.8	399.9
75°	313.4	307.0	312.7	290.6	300.6
77.5°	213.4	218.4	214.9	203.1	209.9
80°	140.9	137.0	137.0	130.2	131.6
82.5°	82.2	78.3	77.2	75.1	78.3
85°	38.4	37.4	38.1	37.0	35.6
87.5°	13.9	14.2	14.2	13.5	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)