

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: P590969

Luminaire Tested: FSR-24-2-LD4-4STD-50-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590969
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-50-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6769.0 lumens
Efficiency: N/A
Efficacy: 101.6 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

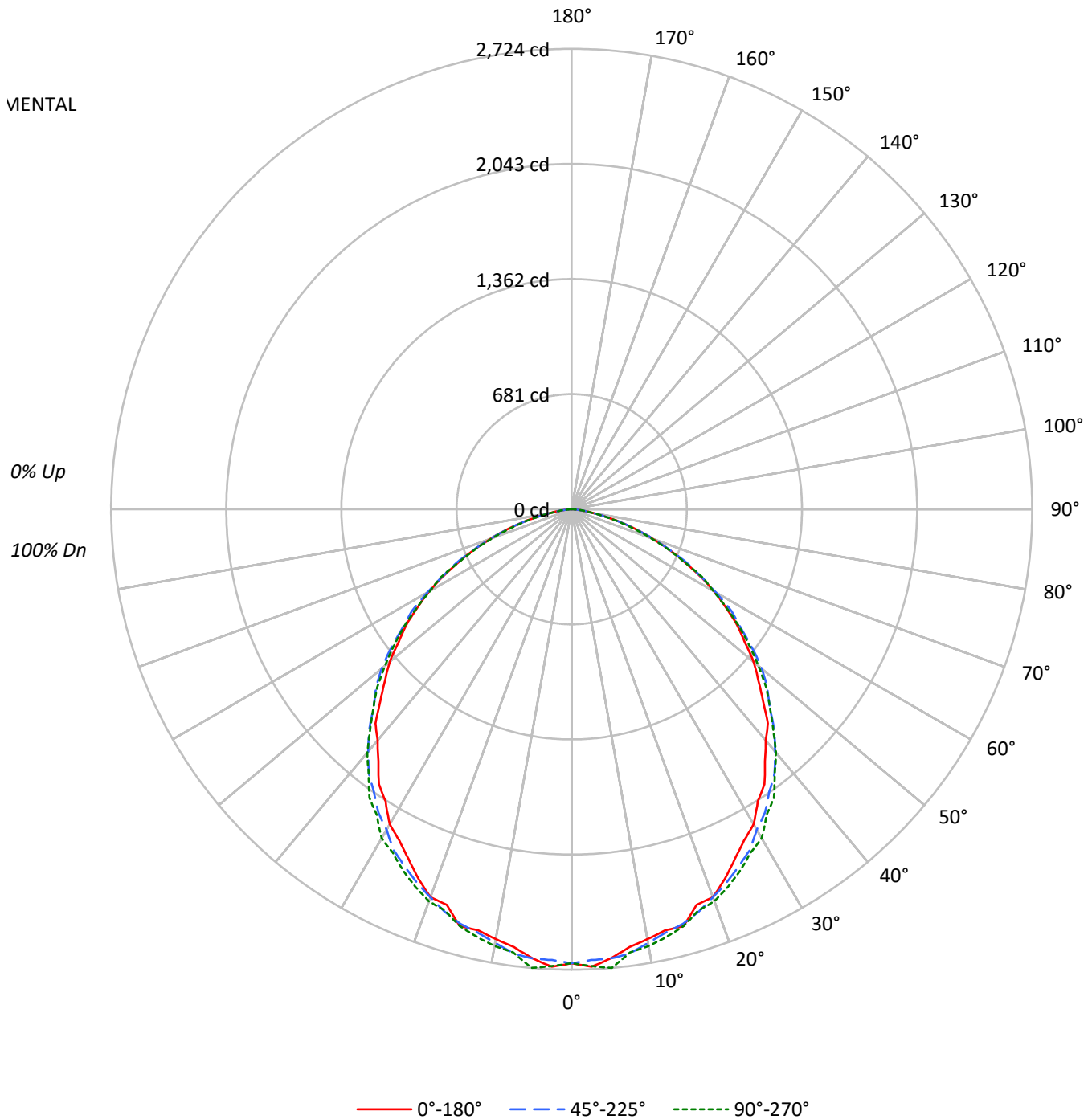
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7227	7227	7227
5°	7203	7206	7358
10°	7057	7119	7169
15°	7113	7075	7114
20°	6993	6993	7068
25°	6778	6926	7002
30°	6685	6802	6983
35°	6527	6698	6849
40°	6274	6576	6605
45°	6084	6300	6309
50°	5884	6149	6032
55°	5606	5715	5674
60°	5243	5295	5200
65°	4674	4793	4641
70°	4011	4024	3913
75°	3176	3169	3046
80°	2128	2069	1988
85°	1158	1145	1071

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.6	3.7
10°-20°	716.0	10.6
20°-30°	1072.7	15.8
30°-40°	1271.4	18.8
40°-50°	1273.7	18.8
50°-60°	1081.2	16.0
60°-70°	728.9	10.8
70°-80°	320.3	4.7
80°-90°	52.1	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°	2041.4	30.2
0°-40°	3312.8	48.9
0°-60°	5667.7	83.7
0°-90°	6769.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6769.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2686	2686	2686	2686	2686	
5°	2667	2660	2668	2660	2724	251
15°	2553	2524	2539	2553	2554	711
25°	2283	2295	2333	2363	2358	1055
35°	1987	1993	2039	2086	2085	1234
45°	1599	1628	1656	1698	1658	1237
55°	1195	1187	1218	1210	1210	1063
65°	734	724	753	724	729	730
75°	306	299	305	283	293	327
85°	38	36	37	36	35	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2685.8	2685.8	2685.8	2685.8	2685.8
2.5°	2709.0	2688.5	2669.5	2691.7	2705.2
5°	2666.7	2660.5	2667.7	2659.8	2723.9
7.5°	2611.9	2635.8	2649.7	2641.0	2644.8
10°	2582.8	2574.5	2605.3	2626.8	2623.7
12.5°	2551.6	2564.1	2565.8	2589.0	2591.1
15°	2553.3	2523.8	2539.4	2552.6	2553.6
17.5°	2454.1	2486.0	2496.8	2526.9	2489.5
20°	2442.0	2418.8	2442.0	2472.8	2468.0
22.5°	2367.4	2341.4	2391.4	2418.8	2417.0
25°	2282.8	2295.3	2332.8	2363.3	2358.4
27.5°	2208.6	2223.2	2276.6	2318.5	2291.5
30°	2151.4	2144.1	2189.2	2226.6	2247.4
32.5°	2049.1	2075.4	2128.2	2165.3	2145.5
35°	1987.0	1992.9	2039.0	2086.2	2084.8
37.5°	1878.5	1905.9	1970.7	1983.9	1971.8
40°	1785.9	1813.3	1871.9	1886.1	1880.2
42.5°	1717.6	1722.4	1772.7	1789.0	1763.0
45°	1598.6	1628.5	1655.5	1698.2	1657.9
47.5°	1497.4	1511.2	1569.5	1580.9	1559.8
50°	1405.5	1410.3	1468.9	1454.7	1440.8
52.5°	1290.0	1310.5	1343.4	1340.6	1324.3
55°	1195.0	1187.0	1218.2	1209.9	1209.5
57.5°	1080.9	1094.8	1120.4	1107.3	1086.1
60°	974.1	974.4	983.8	968.9	966.1
62.5°	855.1	859.3	861.4	843.0	872.8
65°	734.1	724.4	752.8	724.1	728.9
67.5°	622.8	627.7	624.9	606.9	613.8
70°	509.8	516.0	511.5	491.0	497.3
72.5°	406.4	398.8	403.6	378.0	389.8
75°	305.5	299.3	304.8	283.3	293.0
77.5°	208.1	212.9	209.5	198.0	204.6
80°	137.3	133.5	133.5	126.9	128.3
82.5°	80.1	76.3	75.3	73.2	76.3
85°	37.5	36.4	37.1	36.1	34.7
87.5°	13.5	13.9	13.9	13.2	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)