

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: P590947

Luminaire Tested: FSR-24-2-LD4-4STD-40-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590947
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-40-UNV-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7423.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

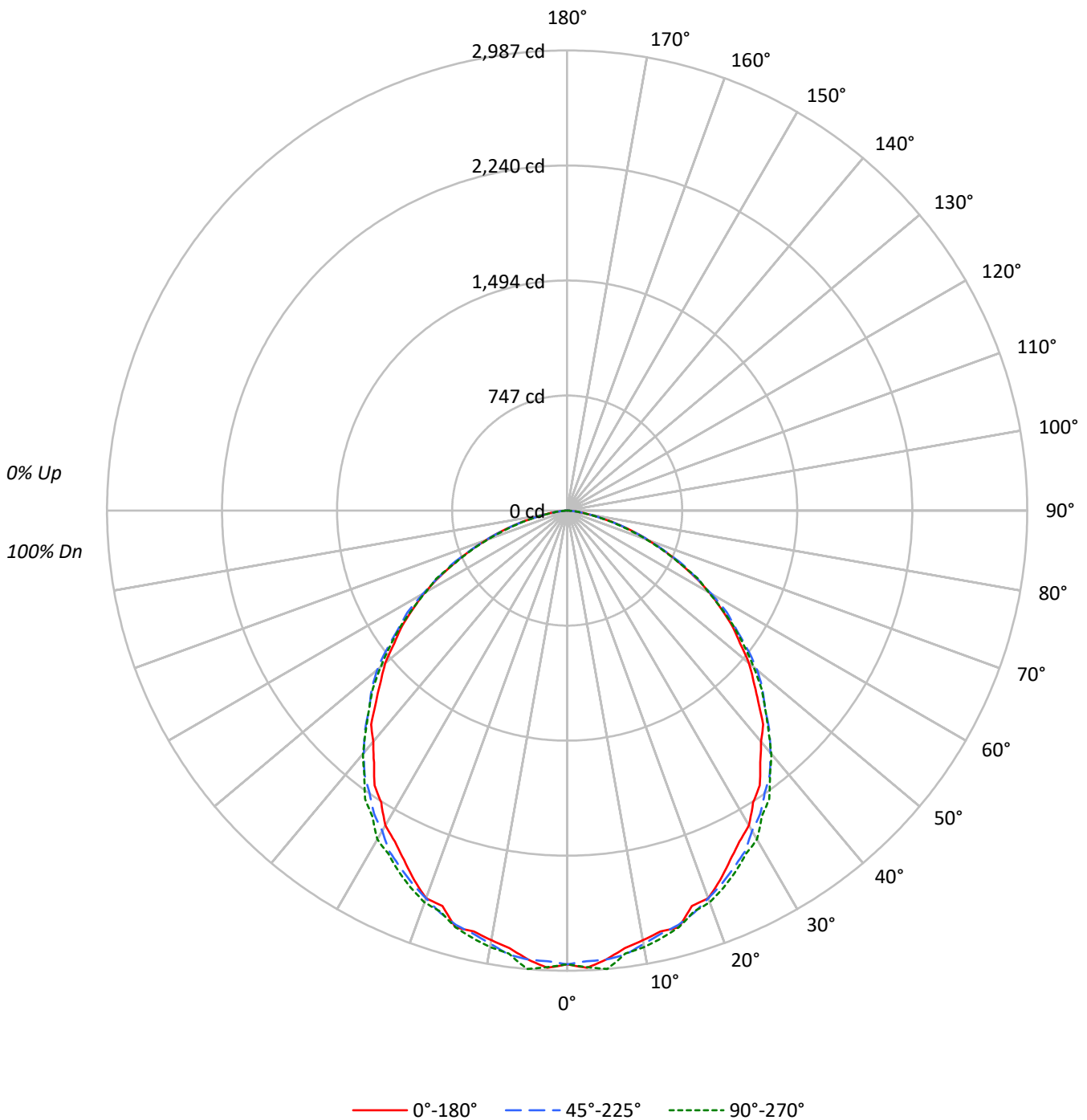
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590947

CATALOG NUMBER: FSR-24-2-LD4-4STD-40-UNV-81-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590947

CATALOG NUMBER: FSR-24-2-LD4-4STD-40-UNV-81-96-EDD

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°	7926	7926	7926
5°	7899	7903	8069
10°	7739	7807	7862
15°	7801	7758	7802
20°	7669	7669	7750
25°	7433	7595	7679
30°	7331	7460	7658
35°	7158	7345	7510
40°	6880	7211	7243
45°	6672	6909	6919
50°	6453	6744	6615
55°	6148	6267	6223
60°	5749	5807	5702
65°	5126	5257	5089
70°	4398	4413	4290
75°	3483	3476	3341
80°	2334	2269	2180
85°	1269	1257	1173

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7087 cd/sqm



TEST NUMBER: P590947

CATALOG NUMBER: FSR-24-2-LD4-4STD-40-UNV-81-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.0	3.7
10°-20°	785.2	10.6
20°-30°	1176.4	15.8
30°-40°	1394.2	18.8
40°-50°	1396.8	18.8
50°-60°	1185.7	16.0
60°-70°	799.4	10.8
70°-80°	351.2	4.7
80°-90°	57.1	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°	2238.6	30.2
0°-40°	3632.8	48.9
0°-60°	6215.3	83.7
0°-90°	7423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7423.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2945	2945	2945	2945	2945	
5°	2924	2918	2926	2917	2987	276
15°	2800	2768	2785	2799	2800	780
25°	2503	2517	2558	2592	2586	1157
35°	2179	2186	2236	2288	2286	1353
45°	1753	1786	1816	1862	1818	1356
55°	1310	1302	1336	1327	1326	1166
65°	805	794	826	794	799	801
75°	335	328	334	311	321	359
85°	41	40	41	40	38	60
90°	0	0	0	0	0	



TEST NUMBER: P590947

CATALOG NUMBER: FSR-24-2-LD4-4STD-40-UNV-81-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2945.3	2945.3	2945.3	2945.3	2945.3
2.5°	2970.7	2948.3	2927.4	2951.7	2966.6
5°	2924.3	2917.5	2925.5	2916.7	2987.1
7.5°	2864.3	2890.5	2905.7	2896.2	2900.4
10°	2832.3	2823.2	2857.0	2880.6	2877.2
12.5°	2798.1	2811.8	2813.7	2839.2	2841.4
15°	2800.0	2767.7	2784.8	2799.2	2800.4
17.5°	2691.2	2726.2	2738.0	2771.1	2730.0
20°	2677.9	2652.4	2677.9	2711.8	2706.4
22.5°	2596.2	2567.6	2622.4	2652.4	2650.5
25°	2503.4	2517.1	2558.1	2591.6	2586.3
27.5°	2422.0	2438.0	2496.5	2542.5	2512.9
30°	2359.2	2351.3	2400.7	2441.8	2464.6
32.5°	2247.1	2276.0	2333.8	2374.5	2352.8
35°	2179.0	2185.5	2236.0	2287.8	2286.2
37.5°	2060.0	2090.0	2161.1	2175.6	2162.3
40°	1958.4	1988.5	2052.7	2068.3	2061.9
42.5°	1883.5	1888.8	1944.0	1961.9	1933.3
45°	1753.1	1785.8	1815.5	1862.2	1818.1
47.5°	1642.0	1657.3	1721.1	1733.7	1710.5
50°	1541.3	1546.6	1610.9	1595.3	1580.1
52.5°	1414.6	1437.1	1473.2	1470.2	1452.3
55°	1310.4	1301.7	1335.9	1326.8	1326.4
57.5°	1185.3	1200.5	1228.7	1214.2	1191.0
60°	1068.2	1068.6	1078.9	1062.5	1059.5
62.5°	937.8	942.3	944.6	924.5	957.2
65°	805.1	794.4	825.6	794.0	799.3
67.5°	683.0	688.3	685.3	665.5	673.1
70°	559.0	565.9	560.9	538.5	545.3
72.5°	445.7	437.3	442.6	414.5	427.4
75°	335.0	328.2	334.3	310.7	321.3
77.5°	228.2	233.5	229.7	217.1	224.4
80°	150.6	146.4	146.4	139.2	140.7
82.5°	87.8	83.7	82.5	80.2	83.7
85°	41.1	39.9	40.7	39.5	38.0
87.5°	14.8	15.2	15.2	14.5	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)