

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: P590914

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590914
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-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7432.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

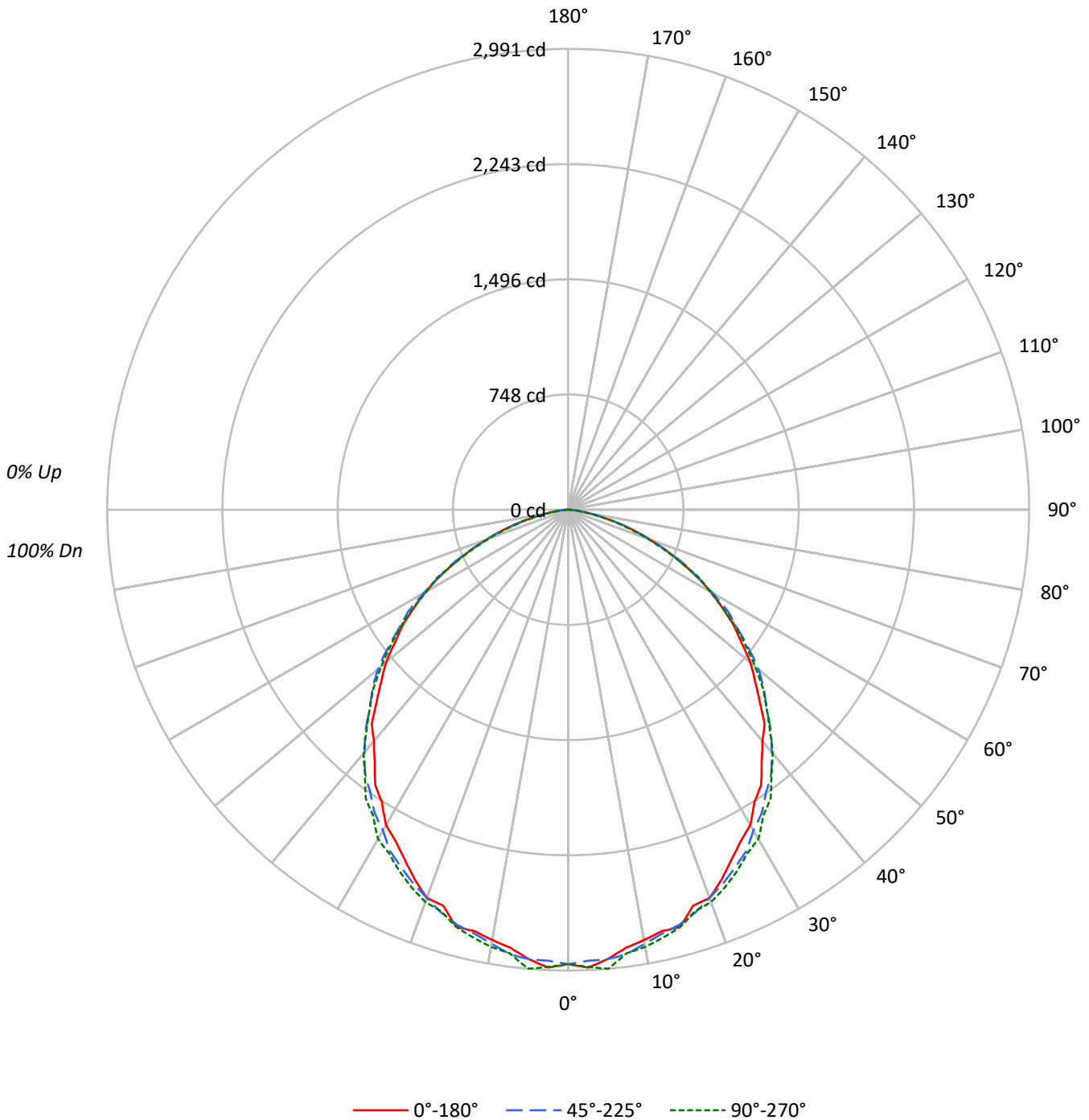
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590914

CATALOG NUMBER: FSR-24-2-LD4-4STD-35-UNV-81-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590914

CATALOG NUMBER: FSR-24-2-LD4-4STD-35-UNV-81-94-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	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°	7935	7935	7935
5°	7909	7912	8079
10°	7749	7816	7871
15°	7810	7768	7811
20°	7678	7678	7760
25°	7442	7605	7688
30°	7340	7469	7668
35°	7167	7355	7520
40°	6888	7220	7252
45°	6680	6917	6927
50°	6460	6752	6623
55°	6155	6275	6230
60°	5756	5814	5709
65°	5132	5263	5096
70°	4404	4419	4296
75°	3487	3480	3345
80°	2337	2272	2183
85°	1269	1257	1176

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7096 cd/sqm



TEST NUMBER: P590914

CATALOG NUMBER: FSR-24-2-LD4-4STD-35-UNV-81-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.4	3.7
10°-20°	786.1	10.6
20°-30°	1177.8	15.8
30°-40°	1395.9	18.8
40°-50°	1398.5	18.8
50°-60°	1187.1	16.0
60°-70°	800.3	10.8
70°-80°	351.7	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°	2241.3	30.2
0°-40°	3637.2	48.9
0°-60°	6222.8	83.7
0°-90°	7432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7432.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2949	2949	2949	2949	2949	
5°	2928	2921	2929	2920	2991	276
15°	2803	2771	2788	2803	2804	781
25°	2506	2520	2561	2595	2589	1159
35°	2182	2188	2239	2290	2289	1355
45°	1755	1788	1818	1864	1820	1358
55°	1312	1303	1338	1328	1328	1167
65°	806	795	827	795	800	802
75°	335	329	335	311	322	359
85°	41	40	41	40	38	60
90°	0	0	0	0	0	



TEST NUMBER: P590914

CATALOG NUMBER: FSR-24-2-LD4-4STD-35-UNV-81-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2948.8	2948.8	2948.8	2948.8	2948.8
2.5°	2974.3	2951.9	2930.9	2955.3	2970.2
5°	2927.9	2921.0	2929.0	2920.3	2990.7
7.5°	2867.7	2894.0	2909.2	2899.7	2903.9
10°	2835.8	2826.6	2860.5	2884.1	2880.7
12.5°	2801.5	2815.2	2817.1	2842.6	2844.9
15°	2803.4	2771.0	2788.2	2802.6	2803.8
17.5°	2694.5	2729.5	2741.3	2774.5	2733.3
20°	2681.2	2655.7	2681.2	2715.1	2709.7
22.5°	2599.3	2570.8	2625.6	2655.7	2653.8
25°	2506.4	2520.1	2561.2	2594.7	2589.4
27.5°	2424.9	2440.9	2499.6	2545.6	2515.9
30°	2362.1	2354.1	2403.6	2444.7	2467.6
32.5°	2249.8	2278.7	2336.6	2377.3	2355.6
35°	2181.6	2188.1	2238.8	2290.5	2289.0
37.5°	2062.5	2092.5	2163.7	2178.2	2164.9
40°	1960.8	1990.9	2055.2	2070.8	2064.4
42.5°	1885.8	1891.1	1946.3	1964.2	1935.7
45°	1755.2	1788.0	1817.7	1864.5	1820.3
47.5°	1644.0	1659.3	1723.2	1735.8	1712.6
50°	1543.1	1548.5	1612.8	1597.2	1582.0
52.5°	1416.4	1438.8	1475.0	1471.9	1454.0
55°	1312.0	1303.3	1337.5	1328.4	1328.0
57.5°	1186.8	1202.0	1230.2	1215.7	1192.5
60°	1069.5	1069.9	1080.2	1063.8	1060.7
62.5°	938.9	943.5	945.8	925.6	958.3
65°	806.0	795.4	826.6	795.0	800.3
67.5°	683.8	689.1	686.1	666.3	673.9
70°	559.7	566.5	561.6	539.1	546.0
72.5°	446.2	437.9	443.2	415.0	428.0
75°	335.4	328.6	334.7	311.1	321.7
77.5°	228.4	233.8	230.0	217.4	224.6
80°	150.8	146.6	146.6	139.4	140.9
82.5°	88.0	83.8	82.6	80.3	83.8
85°	41.1	40.0	40.7	39.6	38.1
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)