

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: P562701

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562701
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2LO-35-UNV-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 5488.0 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

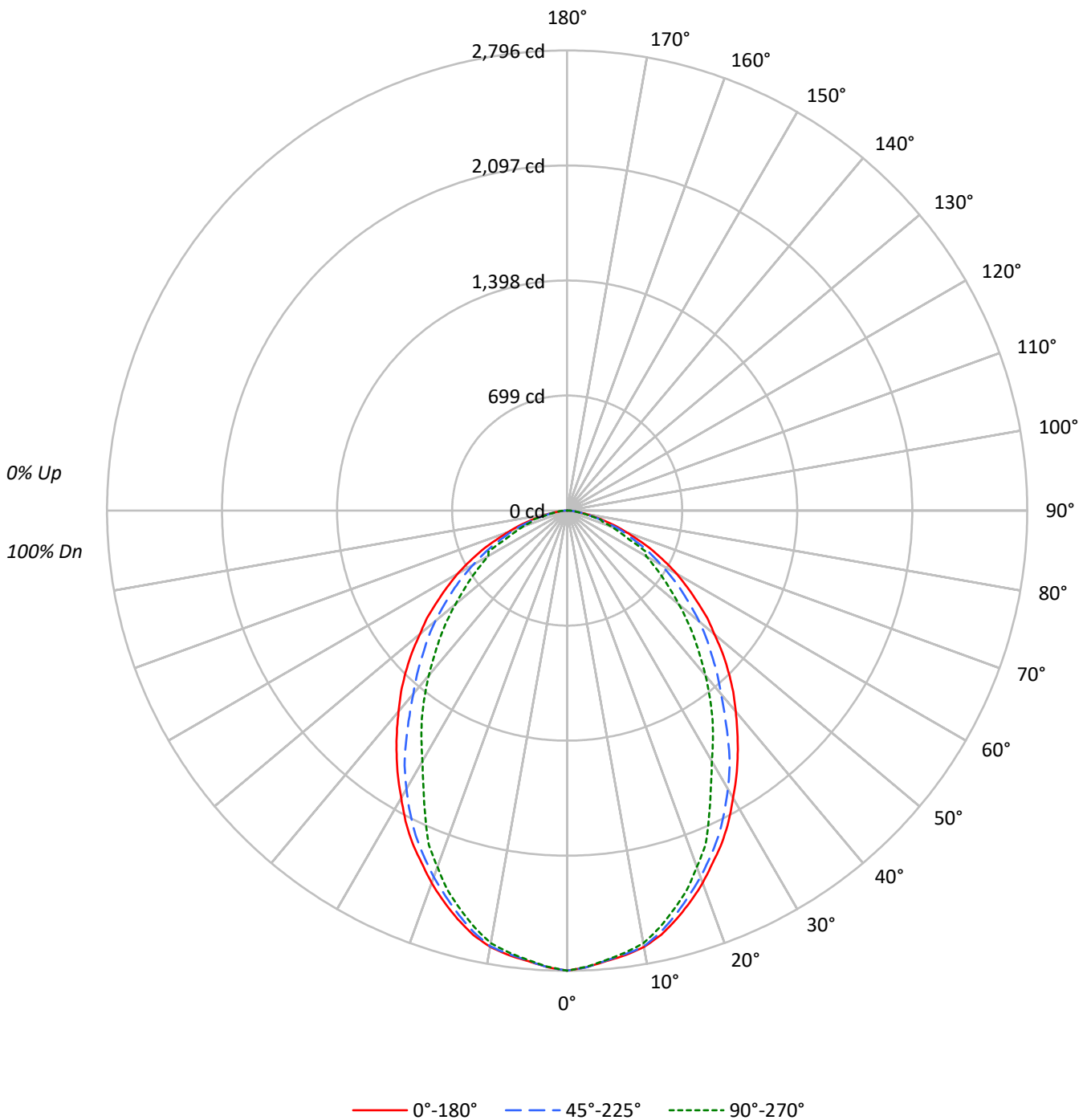
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562701

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-81-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562701

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-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													100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3761	3761	3761
5°	3710	3706	3702
10°	3678	3674	3647
15°	3579	3543	3493
20°	3447	3392	3299
25°	3306	3234	3032
30°	3133	3033	2731
35°	2967	2803	2527
40°	2798	2554	2299
45°	2638	2361	2079
50°	2442	2192	1854
55°	2259	1986	1660
60°	2070	1774	1487
65°	1821	1554	1317
70°	1500	1360	1119
75°	1193	1042	1092
80°	801	752	701
85°	499	599	698

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2638 cd/sqm



TEST NUMBER: P562701

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-81-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.2	4.7
10°-20°	714.2	13.0
20°-30°	988.7	18.0
30°-40°	1054.3	19.2
40°-50°	961.8	17.5
50°-60°	753.5	13.7
60°-70°	491.1	8.9
70°-80°	217.6	4.0
80°-90°	46.7	0.9
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°	1963.1	35.8
0°-40°	3017.4	55.0
0°-60°	4732.6	86.2
0°-90°	5488.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5488.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2796	2796	2796	2796	2796	
5°	2747	2744	2744	2741	2741	261
15°	2569	2569	2543	2518	2508	722
25°	2227	2214	2178	2101	2042	1022
35°	1807	1794	1706	1577	1538	1129
45°	1386	1357	1241	1138	1092	1068
55°	963	934	847	746	708	864
65°	572	540	488	498	414	564
75°	230	213	200	191	210	246
85°	32	36	39	42	45	45
90°	0	0	0	0	0	



TEST NUMBER: P562701

CATALOG NUMBER: FSR-24-4-LD4-2LO-35-UNV-81-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2795.5	2795.5	2795.5	2795.5	2795.5
2.5°	2776.1	2776.1	2776.1	2772.9	2772.9
5°	2747.0	2743.8	2743.8	2740.6	2740.6
7.5°	2724.4	2721.2	2718.0	2714.7	2708.3
10°	2692.1	2692.1	2688.9	2672.7	2669.5
12.5°	2640.4	2637.2	2624.2	2601.6	2595.1
15°	2569.3	2569.3	2543.4	2517.6	2507.9
17.5°	2491.7	2488.5	2456.2	2430.3	2417.4
20°	2407.7	2401.2	2368.9	2326.9	2304.3
22.5°	2314.0	2314.0	2275.2	2220.3	2197.6
25°	2226.7	2213.8	2178.2	2100.7	2042.5
27.5°	2126.5	2107.1	2068.4	1958.5	1890.6
30°	2016.6	2007.0	1952.0	1809.8	1758.1
32.5°	1913.2	1897.1	1838.9	1690.2	1648.2
35°	1806.6	1793.7	1706.4	1577.1	1538.3
37.5°	1699.9	1683.8	1573.9	1470.5	1422.0
40°	1593.3	1573.9	1454.3	1360.6	1308.9
42.5°	1493.1	1467.2	1350.9	1250.7	1192.5
45°	1386.4	1357.4	1241.0	1137.6	1092.4
47.5°	1279.8	1253.9	1147.3	1040.6	988.9
50°	1166.7	1144.1	1047.1	940.5	885.5
52.5°	1073.0	1037.4	943.7	837.0	791.8
55°	963.1	934.0	846.7	746.5	707.8
57.5°	862.9	833.8	753.0	659.3	627.0
60°	769.2	727.2	659.3	578.5	552.6
62.5°	665.8	633.4	575.3	507.4	539.7
65°	572.0	539.7	488.0	497.7	413.7
67.5°	468.6	452.5	407.2	362.0	349.0
70°	381.4	362.0	345.8	297.3	284.4
72.5°	303.8	284.4	261.8	235.9	226.2
75°	229.5	213.3	200.4	190.7	210.1
77.5°	158.4	151.9	142.2	132.5	129.3
80°	103.4	100.2	97.0	93.7	90.5
82.5°	61.4	61.4	61.4	61.4	61.4
85°	32.3	35.5	38.8	42.0	45.2
87.5°	19.4	19.4	22.6	25.9	29.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)