

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: P563048

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563048
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-LD4-2STD-50-UNV-93-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5901.0 lumens
Efficiency: N/A
Efficacy: 88.6 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

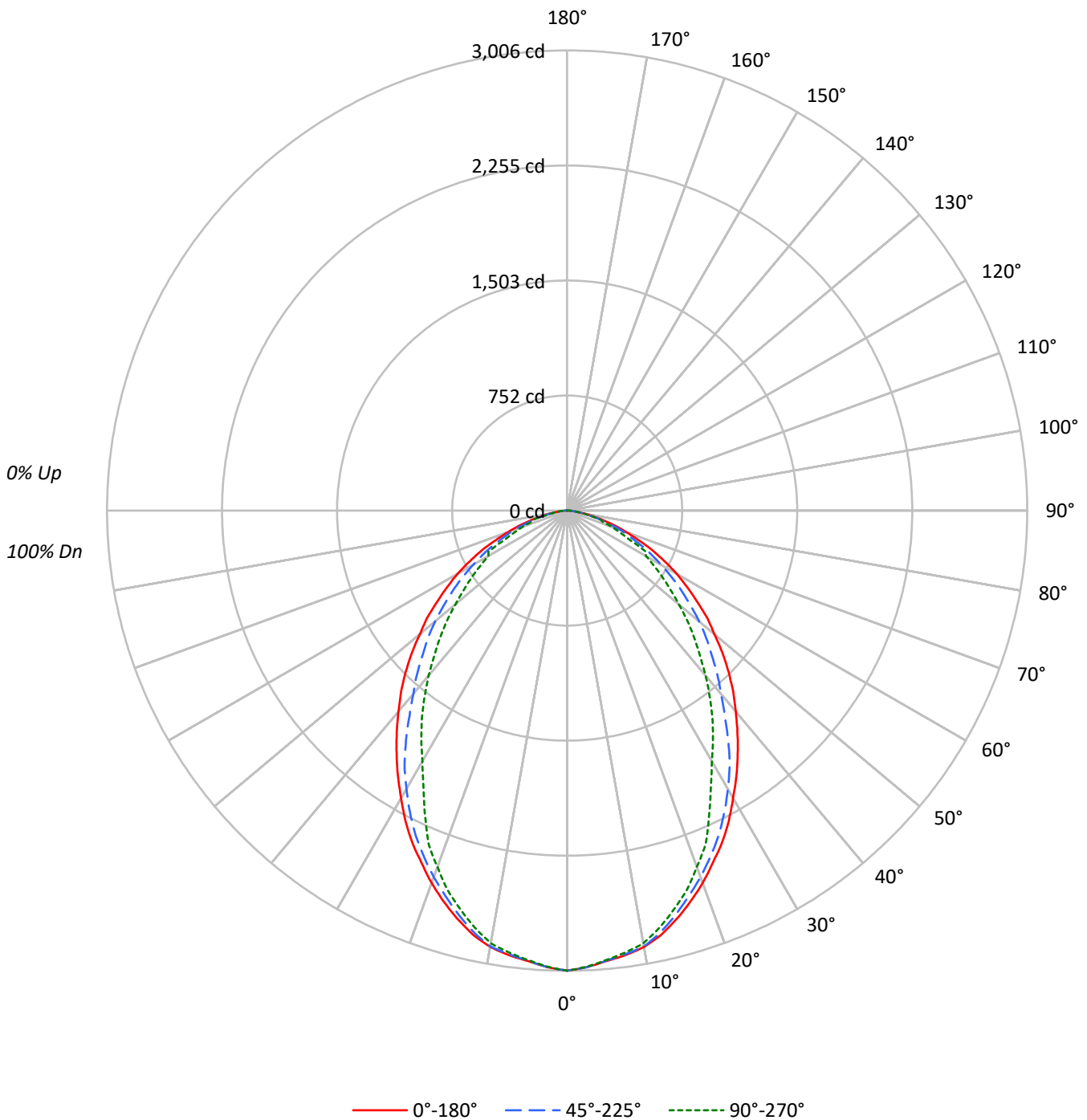
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563048

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-88-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563048

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-88-EDD-90

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°	4044	4044	4044
5°	3989	3985	3980
10°	3955	3950	3922
15°	3848	3809	3756
20°	3707	3647	3548
25°	3555	3477	3260
30°	3369	3261	2937
35°	3191	3014	2717
40°	3009	2747	2472
45°	2837	2539	2235
50°	2626	2357	1993
55°	2429	2136	1785
60°	2226	1908	1599
65°	1958	1670	1416
70°	1613	1463	1203
75°	1282	1120	1174
80°	862	808	754
85°	537	644	752

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2837 cd/sqm



TEST NUMBER: P563048

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.8	4.7
10°-20°	767.9	13.0
20°-30°	1063.1	18.0
30°-40°	1133.6	19.2
40°-50°	1034.2	17.5
50°-60°	810.2	13.7
60°-70°	528.0	8.9
70°-80°	234.0	4.0
80°-90°	50.2	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°	2110.8	35.8
0°-40°	3244.4	55.0
0°-60°	5088.8	86.2
0°-90°	5901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3006	3006	3006	3006	3006	
5°	2954	2950	2950	2947	2947	280
15°	2763	2763	2735	2707	2697	777
25°	2394	2380	2342	2259	2196	1099
35°	1942	1929	1835	1696	1654	1214
45°	1491	1460	1334	1223	1175	1148
55°	1036	1004	910	803	761	929
65°	615	580	525	535	445	606
75°	247	229	216	205	226	264
85°	35	38	42	45	49	48
90°	0	0	0	0	0	



TEST NUMBER: P563048

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3005.9	3005.9	3005.9	3005.9	3005.9
2.5°	2985.0	2985.0	2985.0	2981.6	2981.6
5°	2953.8	2950.3	2950.3	2946.8	2946.8
7.5°	2929.4	2926.0	2922.5	2919.0	2912.1
10°	2894.7	2894.7	2891.2	2873.8	2870.4
12.5°	2839.1	2835.6	2821.7	2797.4	2790.4
15°	2762.6	2762.6	2734.8	2707.0	2696.6
17.5°	2679.2	2675.8	2641.0	2613.2	2599.3
20°	2588.9	2581.9	2547.2	2502.0	2477.7
22.5°	2488.1	2488.1	2446.4	2387.3	2363.0
25°	2394.3	2380.4	2342.2	2258.8	2196.2
27.5°	2286.6	2265.7	2224.0	2105.9	2032.9
30°	2168.4	2158.0	2098.9	1946.0	1890.4
32.5°	2057.2	2039.8	1977.3	1817.4	1772.3
35°	1942.5	1928.6	1834.8	1695.8	1654.1
37.5°	1827.9	1810.5	1692.3	1581.1	1529.0
40°	1713.2	1692.3	1563.8	1463.0	1407.4
42.5°	1605.5	1577.7	1452.6	1344.8	1282.3
45°	1490.8	1459.5	1334.4	1223.2	1174.6
47.5°	1376.1	1348.3	1233.6	1119.0	1063.4
50°	1254.5	1230.2	1125.9	1011.2	952.2
52.5°	1153.7	1115.5	1014.7	900.0	851.4
55°	1035.6	1004.3	910.5	802.7	761.0
57.5°	927.8	896.6	809.7	708.9	674.2
60°	827.1	781.9	708.9	622.0	594.2
62.5°	715.9	681.1	618.6	545.6	580.3
65°	615.1	580.3	524.7	535.2	444.8
67.5°	503.9	486.5	437.9	389.2	375.3
70°	410.1	389.2	371.8	319.7	305.8
72.5°	326.7	305.8	281.5	253.7	243.3
75°	246.7	229.4	215.5	205.0	225.9
77.5°	170.3	163.3	152.9	142.5	139.0
80°	111.2	107.7	104.3	100.8	97.3
82.5°	66.0	66.0	66.0	66.0	66.0
85°	34.8	38.2	41.7	45.2	48.7
87.5°	20.9	20.9	24.3	27.8	31.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)