

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: P563037

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563037
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7390.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

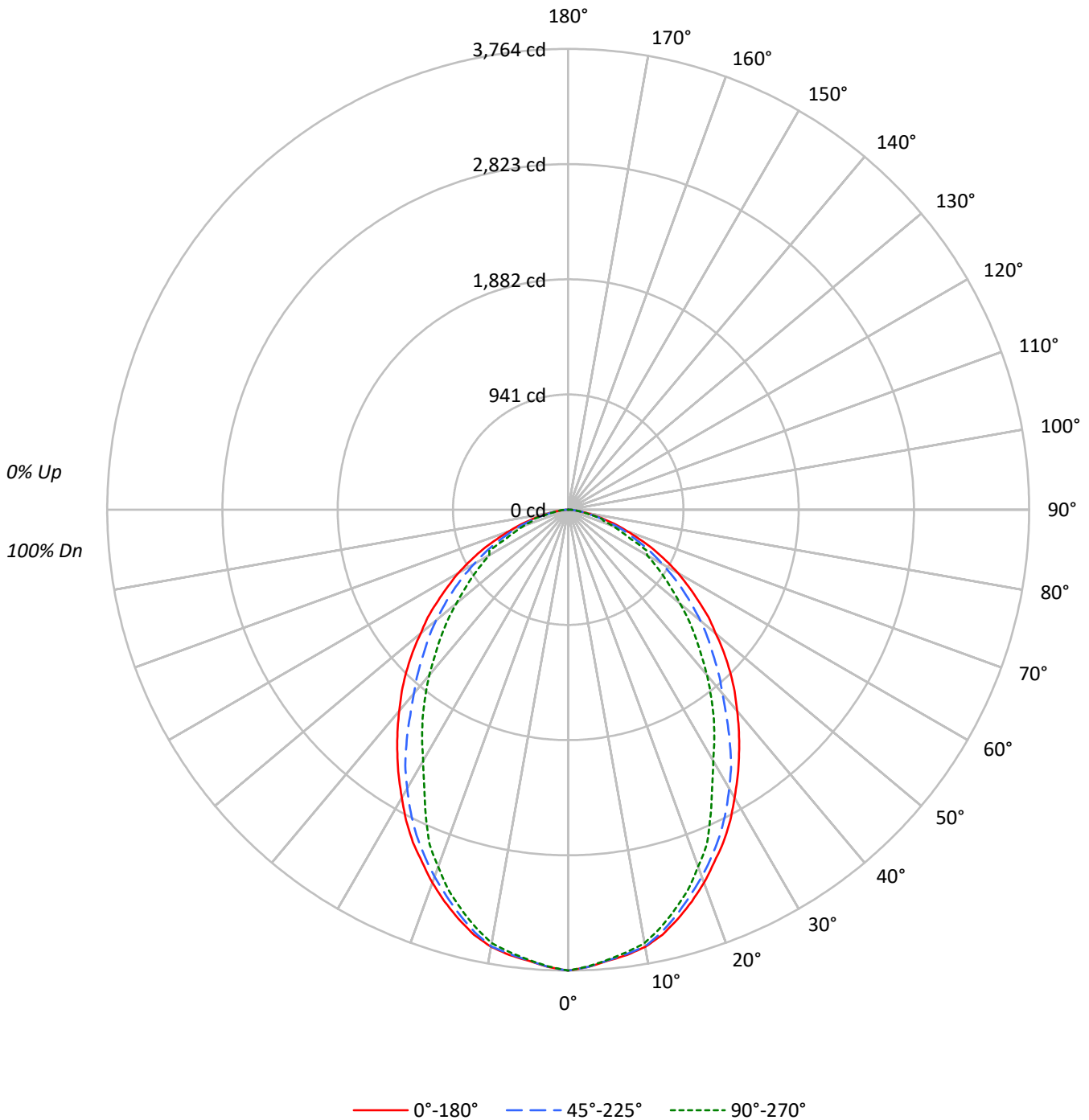
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563037

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-82-96-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P563037

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-82-96-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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5065	5065	5065
5°	4996	4990	4984
10°	4953	4947	4911
15°	4819	4771	4704
20°	4642	4567	4443
25°	4451	4355	4083
30°	4219	4084	3678
35°	3996	3774	3403
40°	3768	3440	3096
45°	3553	3180	2799
50°	3288	2951	2496
55°	3042	2675	2236
60°	2787	2389	2003
65°	2452	2092	1773
70°	2020	1832	1507
75°	1606	1403	1471
80°	1079	1012	945
85°	672	806	940

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3553 cd/sqm



TEST NUMBER: P563037

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.4	4.7
10°-20°	961.7	13.0
20°-30°	1331.4	18.0
30°-40°	1419.6	19.2
40°-50°	1295.1	17.5
50°-60°	1014.6	13.7
60°-70°	661.3	8.9
70°-80°	293.0	4.0
80°-90°	62.9	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°	2643.5	35.8
0°-40°	4063.1	55.0
0°-60°	6372.8	86.2
0°-90°	7390.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7390.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3764	3764	3764	3764	3764	
5°	3699	3695	3695	3690	3690	351
15°	3460	3460	3425	3390	3377	973
25°	2998	2981	2933	2829	2750	1377
35°	2433	2415	2298	2124	2072	1521
45°	1867	1828	1671	1532	1471	1438
55°	1297	1258	1140	1005	953	1163
65°	770	727	657	670	557	759
75°	309	287	270	257	283	331
85°	44	48	52	57	61	60
90°	0	0	0	0	0	



TEST NUMBER: P563037

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3764.4	3764.4	3764.4	3764.4	3764.4
2.5°	3738.3	3738.3	3738.3	3733.9	3733.9
5°	3699.1	3694.7	3694.7	3690.4	3690.4
7.5°	3668.6	3664.3	3659.9	3655.6	3646.9
10°	3625.1	3625.1	3620.8	3599.0	3594.6
12.5°	3555.5	3551.1	3533.7	3503.3	3494.6
15°	3459.7	3459.7	3424.9	3390.1	3377.1
17.5°	3355.3	3350.9	3307.4	3272.6	3255.2
20°	3242.1	3233.4	3189.9	3133.3	3102.9
22.5°	3115.9	3115.9	3063.7	2989.7	2959.3
25°	2998.4	2981.0	2933.2	2828.7	2750.4
27.5°	2863.5	2837.4	2785.2	2637.2	2545.8
30°	2715.6	2702.5	2628.5	2437.0	2367.4
32.5°	2576.3	2554.5	2476.2	2276.0	2219.5
35°	2432.7	2415.3	2297.8	2123.7	2071.5
37.5°	2289.1	2267.3	2119.4	1980.1	1914.8
40°	2145.5	2119.4	1958.3	1832.1	1762.5
42.5°	2010.6	1975.7	1819.1	1684.2	1605.8
45°	1867.0	1827.8	1671.1	1531.9	1470.9
47.5°	1723.3	1688.5	1544.9	1401.3	1331.7
50°	1571.0	1540.6	1410.0	1266.4	1192.4
52.5°	1444.8	1397.0	1270.7	1127.1	1066.2
55°	1296.9	1257.7	1140.2	1005.3	953.1
57.5°	1161.9	1122.8	1014.0	887.8	844.3
60°	1035.7	979.2	887.8	779.0	744.2
62.5°	896.5	853.0	774.6	683.2	726.8
65°	770.3	726.8	657.1	670.2	557.0
67.5°	631.0	609.3	548.3	487.4	470.0
70°	513.5	487.4	465.7	400.4	383.0
72.5°	409.1	383.0	352.5	317.7	304.6
75°	309.0	287.2	269.8	256.8	282.9
77.5°	213.2	204.5	191.5	178.4	174.1
80°	139.3	134.9	130.6	126.2	121.9
82.5°	82.7	82.7	82.7	82.7	82.7
85°	43.5	47.9	52.2	56.6	60.9
87.5°	26.1	26.1	30.5	34.8	39.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)