

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: P563036

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563036
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-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6429.0 lumens
Efficiency: N/A
Efficacy: 96.5 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

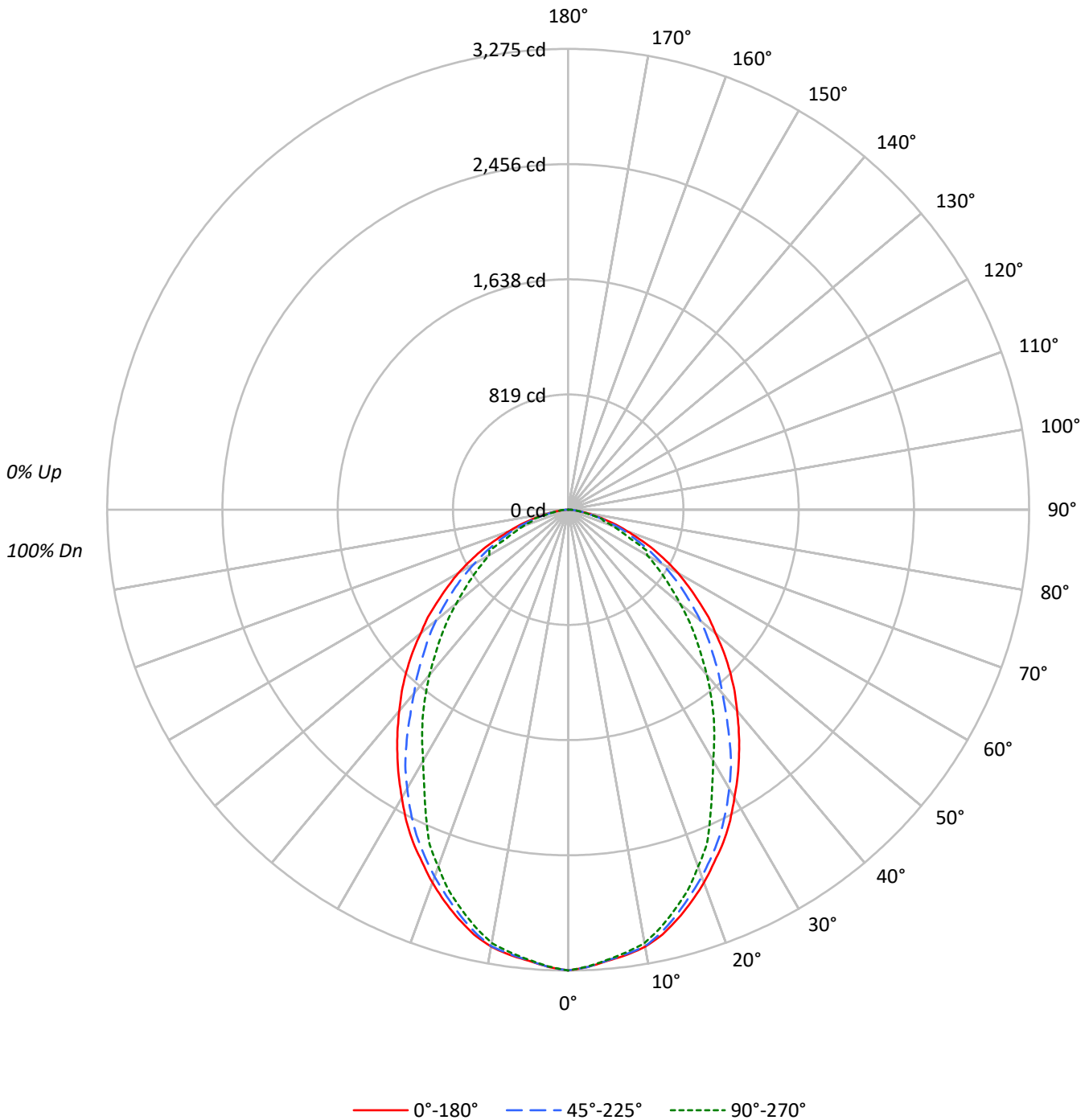
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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°	4406	4406	4406
5°	4346	4341	4336
10°	4309	4304	4273
15°	4193	4150	4092
20°	4039	3973	3865
25°	3873	3788	3552
30°	3670	3553	3200
35°	3476	3283	2960
40°	3278	2992	2693
45°	3091	2766	2435
50°	2861	2568	2171
55°	2647	2327	1945
60°	2425	2078	1742
65°	2133	1820	1543
70°	1757	1594	1311
75°	1397	1220	1279
80°	939	880	821
85°	585	701	818

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3091 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.8	4.7
10°-20°	836.6	13.0
20°-30°	1158.2	18.0
30°-40°	1235.0	19.2
40°-50°	1126.7	17.5
50°-60°	882.7	13.7
60°-70°	575.3	8.9
70°-80°	254.9	4.0
80°-90°	54.7	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°	2299.7	35.8
0°-40°	3534.7	55.0
0°-60°	5544.1	86.2
0°-90°	6429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6429.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3275	3275	3275	3275	3275	
5°	3218	3214	3214	3210	3210	305
15°	3010	3010	2980	2949	2938	846
25°	2608	2593	2552	2461	2393	1198
35°	2116	2101	1999	1848	1802	1323
45°	1624	1590	1454	1333	1280	1251
55°	1128	1094	992	875	829	1012
65°	670	632	572	583	485	660
75°	269	250	235	223	246	288
85°	38	42	45	49	53	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3274.8	3274.8	3274.8	3274.8	3274.8
2.5°	3252.1	3252.1	3252.1	3248.3	3248.3
5°	3218.1	3214.3	3214.3	3210.5	3210.5
7.5°	3191.6	3187.8	3184.0	3180.2	3172.6
10°	3153.7	3153.7	3149.9	3131.0	3127.2
12.5°	3093.1	3089.3	3074.2	3047.7	3040.1
15°	3009.8	3009.8	2979.5	2949.3	2937.9
17.5°	2919.0	2915.2	2877.3	2847.0	2831.9
20°	2820.5	2813.0	2775.1	2725.9	2699.4
22.5°	2710.7	2710.7	2665.3	2600.9	2574.4
25°	2608.5	2593.4	2551.7	2460.9	2392.7
27.5°	2491.2	2468.4	2423.0	2294.3	2214.8
30°	2362.4	2351.1	2286.7	2120.1	2059.6
32.5°	2241.3	2222.4	2154.2	1980.1	1930.8
35°	2116.3	2101.2	1999.0	1847.5	1802.1
37.5°	1991.4	1972.5	1843.8	1722.6	1665.8
40°	1866.5	1843.8	1703.7	1593.9	1533.3
42.5°	1749.1	1718.8	1582.5	1465.2	1397.0
45°	1624.2	1590.1	1453.8	1332.7	1279.7
47.5°	1499.2	1468.9	1344.0	1219.1	1158.5
50°	1366.7	1340.2	1226.6	1101.7	1037.4
52.5°	1256.9	1215.3	1105.5	980.6	927.6
55°	1128.2	1094.1	991.9	874.6	829.1
57.5°	1010.8	976.8	882.1	772.3	734.5
60°	901.1	851.8	772.3	677.7	647.4
62.5°	779.9	742.0	673.9	594.4	632.3
65°	670.1	632.3	571.7	583.0	484.6
67.5°	549.0	530.0	477.0	424.0	408.9
70°	446.7	424.0	405.1	348.3	333.2
72.5°	355.9	333.2	306.7	276.4	265.0
75°	268.8	249.9	234.7	223.4	246.1
77.5°	185.5	177.9	166.6	155.2	151.4
80°	121.2	117.4	113.6	109.8	106.0
82.5°	71.9	71.9	71.9	71.9	71.9
85°	37.9	41.6	45.4	49.2	53.0
87.5°	22.7	22.7	26.5	30.3	34.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)