

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: P563017

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563017
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-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6430.0 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

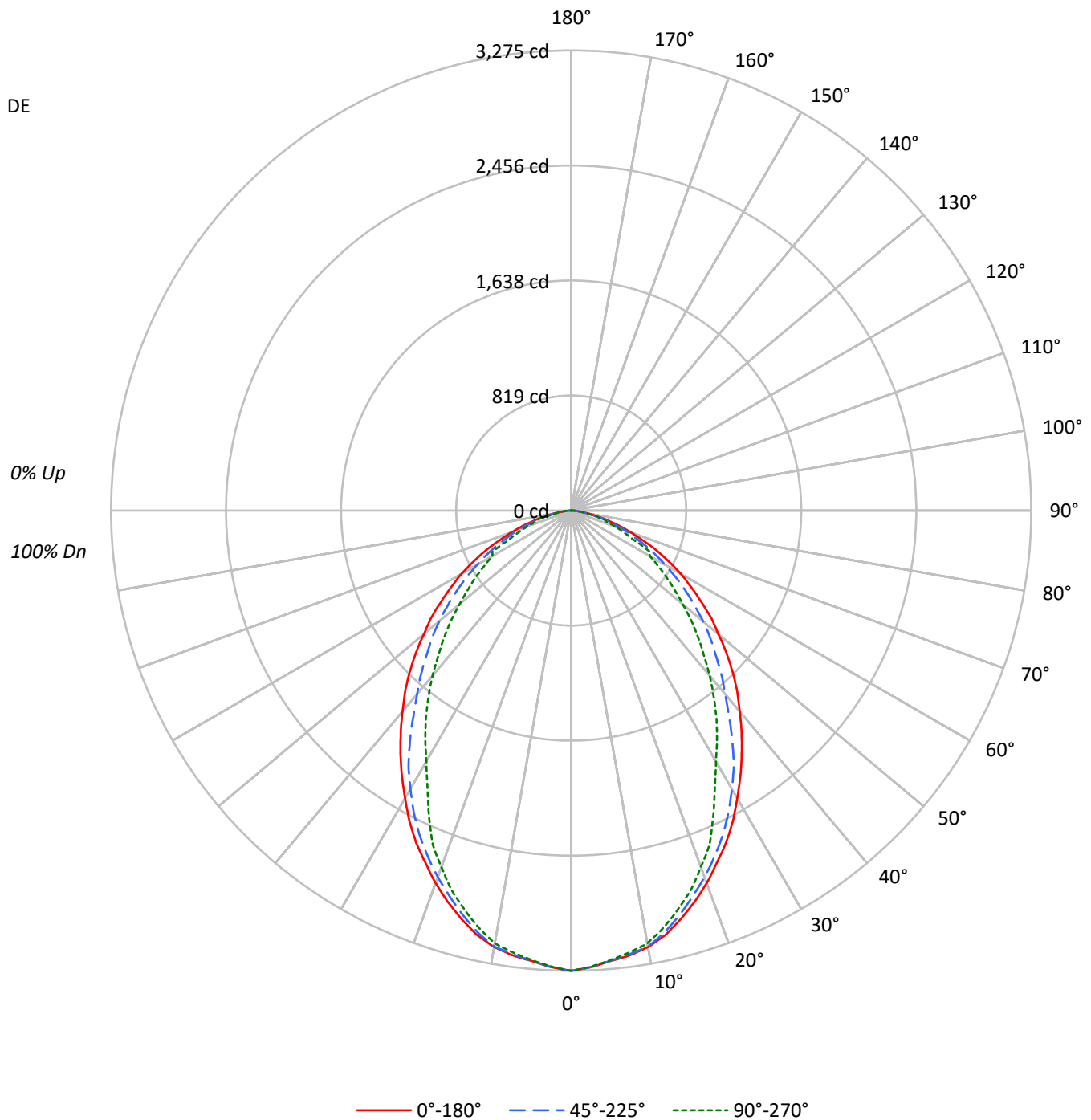
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4407	4407	4407
5°	4347	4342	4337
10°	4309	4304	4273
15°	4193	4151	4093
20°	4039	3974	3866
25°	3873	3789	3553
30°	3671	3553	3200
35°	3477	3284	2961
40°	3279	2993	2693
45°	3091	2767	2435
50°	2861	2568	2172
55°	2647	2327	1945
60°	2425	2079	1742
65°	2134	1820	1543
70°	1758	1594	1311
75°	1397	1221	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°	304.9	4.7
10°-20°	836.7	13.0
20°-30°	1158.4	18.0
30°-40°	1235.2	19.2
40°-50°	1126.9	17.5
50°-60°	882.8	13.7
60°-70°	575.4	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°	2300.1	35.8
0°-40°	3535.3	55.0
0°-60°	5545.0	86.2
0°-90°	6430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3275	3275	3275	3275	3275	
5°	3219	3215	3215	3211	3211	306
15°	3010	3010	2980	2950	2938	846
25°	2609	2594	2552	2461	2393	1198
35°	2117	2102	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°	3275.4	3275.4	3275.4	3275.4	3275.4
2.5°	3252.6	3252.6	3252.6	3248.9	3248.9
5°	3218.6	3214.8	3214.8	3211.0	3211.0
7.5°	3192.1	3188.3	3184.5	3180.7	3173.1
10°	3154.2	3154.2	3150.4	3131.5	3127.7
12.5°	3093.6	3089.8	3074.7	3048.2	3040.6
15°	3010.3	3010.3	2980.0	2949.7	2938.4
17.5°	2919.4	2915.6	2877.8	2847.5	2832.3
20°	2821.0	2813.4	2775.5	2726.3	2699.8
22.5°	2711.2	2711.2	2665.7	2601.4	2574.8
25°	2608.9	2593.8	2552.1	2461.3	2393.1
27.5°	2491.5	2468.8	2423.4	2294.6	2215.1
30°	2362.8	2351.4	2287.1	2120.5	2059.9
32.5°	2241.6	2222.7	2154.5	1980.4	1931.1
35°	2116.7	2101.5	1999.3	1847.8	1802.4
37.5°	1991.7	1972.8	1844.0	1722.9	1666.1
40°	1866.8	1844.0	1703.9	1594.1	1533.5
42.5°	1749.4	1719.1	1582.8	1465.4	1397.2
45°	1624.4	1590.3	1454.0	1332.9	1279.9
47.5°	1499.5	1469.2	1344.2	1219.3	1158.7
50°	1366.9	1340.4	1226.8	1101.9	1037.5
52.5°	1257.1	1215.5	1105.7	980.7	927.7
55°	1128.4	1094.3	992.1	874.7	829.3
57.5°	1011.0	976.9	882.3	772.5	734.6
60°	901.2	852.0	772.5	677.8	647.5
62.5°	780.0	742.2	674.0	594.5	632.4
65°	670.2	632.4	571.8	583.1	484.7
67.5°	549.0	530.1	477.1	424.1	408.9
70°	446.8	424.1	405.2	348.4	333.2
72.5°	355.9	333.2	306.7	276.4	265.1
75°	268.8	249.9	234.8	223.4	246.1
77.5°	185.5	178.0	166.6	155.2	151.5
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	41.7	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)