

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: P563022

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563022
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-81-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 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: 6332.0 lumens
Efficiency: N/A
Efficacy: 95.1 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

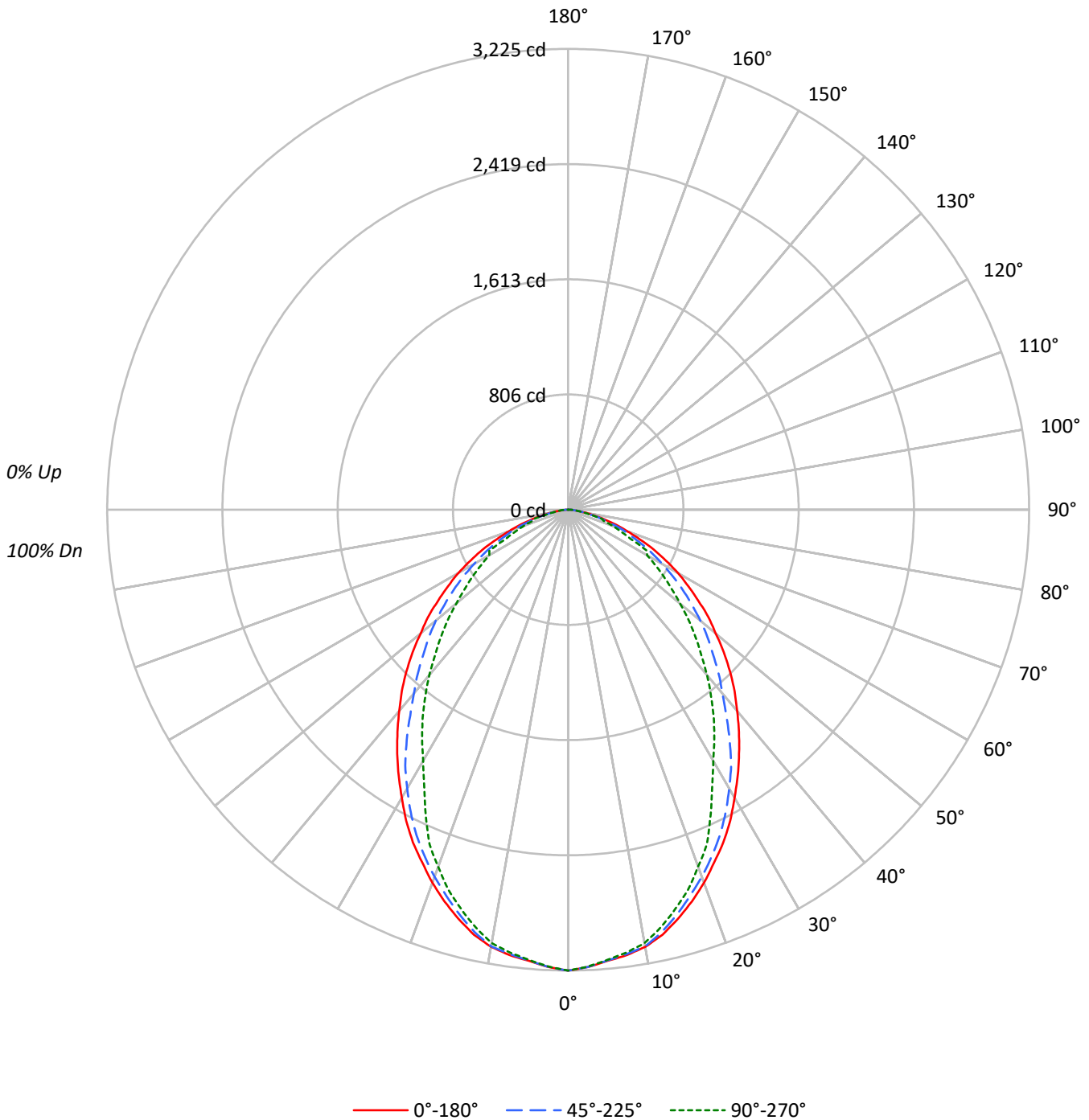
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4340	4340	4340
5°	4281	4276	4271
10°	4244	4239	4208
15°	4129	4088	4031
20°	3978	3914	3807
25°	3814	3731	3499
30°	3615	3499	3152
35°	3424	3234	2915
40°	3229	2947	2653
45°	3044	2725	2398
50°	2818	2529	2139
55°	2607	2292	1916
60°	2388	2047	1716
65°	2101	1793	1520
70°	1731	1570	1291
75°	1376	1202	1260
80°	924	867	809
85°	576	690	806

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3044 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.2	4.7
10°-20°	824.0	13.0
20°-30°	1140.8	18.0
30°-40°	1216.4	19.2
40°-50°	1109.7	17.5
50°-60°	869.4	13.7
60°-70°	566.6	8.9
70°-80°	251.0	4.0
80°-90°	53.9	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°	2265.0	35.8
0°-40°	3481.4	55.0
0°-60°	5460.5	86.2
0°-90°	6332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3225	3225	3225	3225	3225	
5°	3170	3166	3166	3162	3162	301
15°	2964	2964	2935	2905	2894	833
25°	2569	2554	2513	2424	2357	1180
35°	2084	2070	1969	1820	1775	1303
45°	1600	1566	1432	1312	1260	1232
55°	1111	1078	977	861	817	997
65°	660	623	563	574	477	650
75°	265	246	231	220	242	284
85°	37	41	45	48	52	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3225.4	3225.4	3225.4	3225.4	3225.4
2.5°	3203.1	3203.1	3203.1	3199.3	3199.3
5°	3169.5	3165.8	3165.8	3162.0	3162.0
7.5°	3143.4	3139.7	3135.9	3132.2	3124.8
10°	3106.1	3106.1	3102.4	3083.7	3080.0
12.5°	3046.5	3042.7	3027.8	3001.7	2994.2
15°	2964.4	2964.4	2934.6	2904.8	2893.6
17.5°	2874.9	2871.2	2833.9	2804.1	2789.2
20°	2778.0	2770.5	2733.2	2684.8	2658.7
22.5°	2669.8	2669.8	2625.1	2561.7	2535.6
25°	2569.2	2554.2	2513.2	2423.7	2356.6
27.5°	2453.6	2431.2	2386.4	2259.7	2181.4
30°	2326.8	2315.6	2252.2	2088.1	2028.5
32.5°	2207.5	2188.8	2121.7	1950.2	1901.7
35°	2084.4	2069.5	1968.8	1819.7	1774.9
37.5°	1961.4	1942.7	1815.9	1696.6	1640.7
40°	1838.3	1815.9	1678.0	1569.8	1510.2
42.5°	1722.7	1692.9	1558.7	1443.1	1375.9
45°	1599.7	1566.1	1431.9	1312.5	1260.3
47.5°	1476.6	1446.8	1323.7	1200.7	1141.0
50°	1346.1	1320.0	1208.1	1085.1	1021.7
52.5°	1238.0	1197.0	1088.8	965.8	913.6
55°	1111.2	1077.6	977.0	861.4	816.6
57.5°	995.6	962.0	868.8	760.7	723.4
60°	887.5	839.0	760.7	667.5	637.6
62.5°	768.1	730.9	663.7	585.4	622.7
65°	660.0	622.7	563.1	574.2	477.3
67.5°	540.7	522.0	469.8	417.6	402.7
70°	440.0	417.6	399.0	343.1	328.1
72.5°	350.5	328.1	302.0	272.2	261.0
75°	264.7	246.1	231.2	220.0	242.4
77.5°	182.7	175.3	164.1	152.9	149.2
80°	119.3	115.6	111.9	108.1	104.4
82.5°	70.8	70.8	70.8	70.8	70.8
85°	37.3	41.0	44.7	48.5	52.2
87.5°	22.4	22.4	26.1	29.8	33.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)