

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: P563047

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563047
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-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7532.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

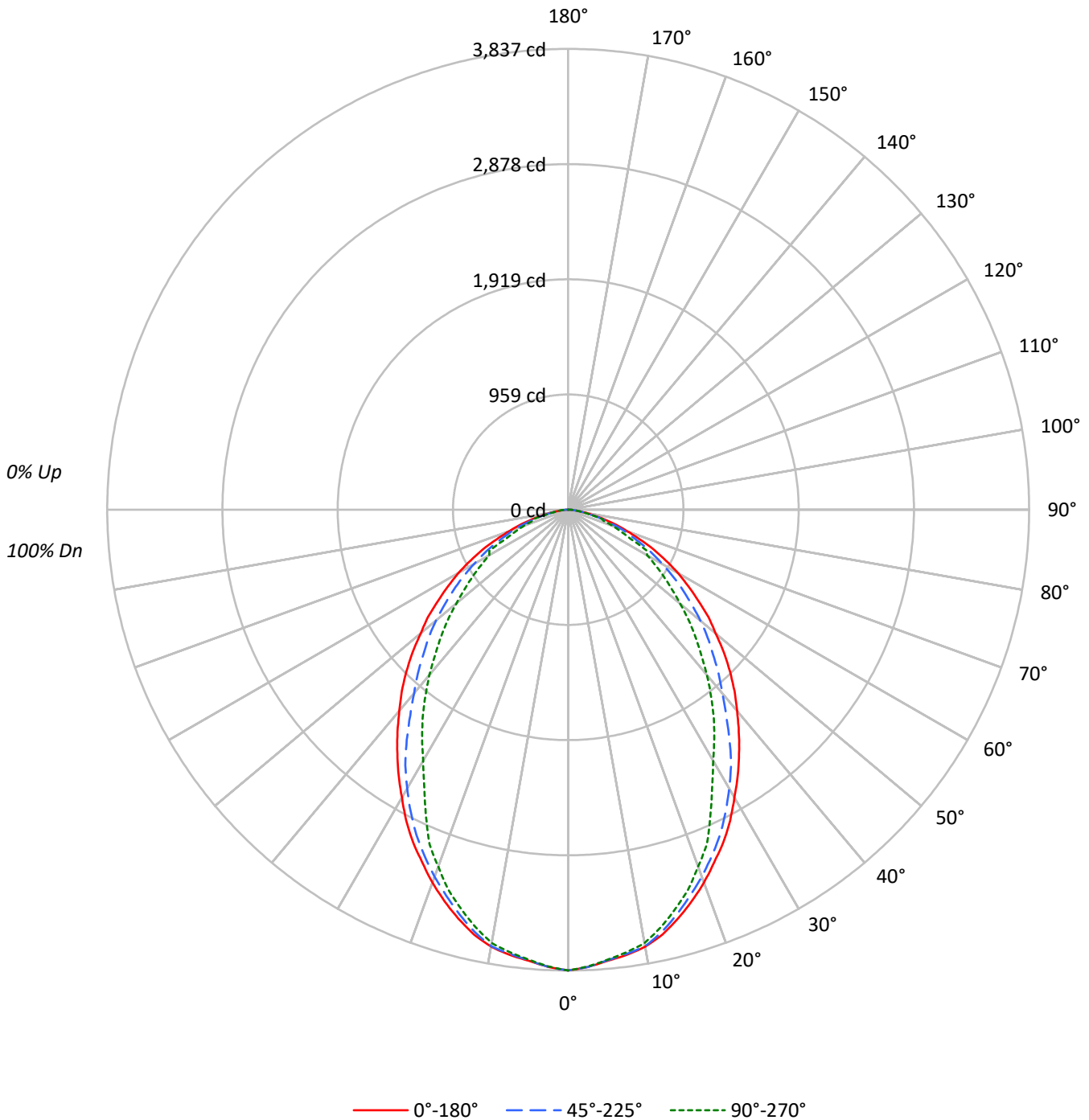
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5162	5162	5162
5°	5092	5086	5080
10°	5048	5042	5006
15°	4912	4862	4794
20°	4731	4655	4528
25°	4537	4438	4162
30°	4300	4162	3749
35°	4073	3847	3468
40°	3841	3506	3155
45°	3621	3241	2853
50°	3352	3008	2544
55°	3101	2726	2279
60°	2841	2435	2041
65°	2500	2132	1807
70°	2059	1867	1535
75°	1637	1430	1499
80°	1099	1031	962
85°	685	821	959

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3621 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.1	4.7
10°-20°	980.2	13.0
20°-30°	1357.0	18.0
30°-40°	1446.9	19.2
40°-50°	1320.0	17.5
50°-60°	1034.1	13.7
60°-70°	674.0	8.9
70°-80°	298.6	4.0
80°-90°	64.1	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°	2694.3	35.8
0°-40°	4141.2	55.0
0°-60°	6495.3	86.2
0°-90°	7532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3837	3837	3837	3837	3837	
5°	3770	3766	3766	3761	3761	358
15°	3526	3526	3491	3455	3442	991
25°	3056	3038	2990	2883	2803	1403
35°	2479	2462	2342	2164	2111	1550
45°	1903	1863	1703	1561	1499	1466
55°	1322	1282	1162	1025	971	1186
65°	785	741	670	683	568	774
75°	315	293	275	262	288	337
85°	44	49	53	58	62	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3836.7	3836.7	3836.7	3836.7	3836.7
2.5°	3810.1	3810.1	3810.1	3805.7	3805.7
5°	3770.2	3765.7	3765.7	3761.3	3761.3
7.5°	3739.1	3734.7	3730.2	3725.8	3716.9
10°	3694.8	3694.8	3690.3	3668.2	3663.7
12.5°	3623.8	3619.4	3601.6	3570.6	3561.7
15°	3526.2	3526.2	3490.7	3455.2	3441.9
17.5°	3419.8	3415.3	3371.0	3335.5	3317.7
20°	3304.4	3295.6	3251.2	3193.6	3162.5
22.5°	3175.8	3175.8	3122.6	3047.2	3016.1
25°	3056.1	3038.3	2989.5	2883.1	2803.2
27.5°	2918.6	2891.9	2838.7	2687.9	2594.8
30°	2767.7	2754.4	2679.0	2483.9	2412.9
32.5°	2625.8	2603.6	2523.8	2319.8	2262.1
35°	2479.4	2461.7	2341.9	2164.5	2111.3
37.5°	2333.1	2310.9	2160.1	2018.1	1951.6
40°	2186.7	2160.1	1996.0	1867.3	1796.4
42.5°	2049.2	2013.7	1854.0	1716.5	1636.7
45°	1902.8	1862.9	1703.2	1561.3	1499.2
47.5°	1756.5	1721.0	1574.6	1428.2	1357.3
50°	1601.2	1570.2	1437.1	1290.7	1215.3
52.5°	1472.6	1423.8	1295.2	1148.8	1086.7
55°	1321.8	1281.9	1162.1	1024.6	971.4
57.5°	1184.3	1144.4	1033.5	904.8	860.5
60°	1055.6	998.0	904.8	794.0	758.5
62.5°	913.7	869.4	789.5	696.4	740.7
65°	785.1	740.7	669.8	683.1	567.7
67.5°	643.1	621.0	558.9	496.8	479.0
70°	523.4	496.8	474.6	408.1	390.3
72.5°	416.9	390.3	359.3	323.8	310.5
75°	314.9	292.7	275.0	261.7	288.3
77.5°	217.3	208.5	195.2	181.9	177.4
80°	141.9	137.5	133.1	128.6	124.2
82.5°	84.3	84.3	84.3	84.3	84.3
85°	44.4	48.8	53.2	57.7	62.1
87.5°	26.6	26.6	31.0	35.5	39.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)