

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: P562917

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562917
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-35-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7579.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

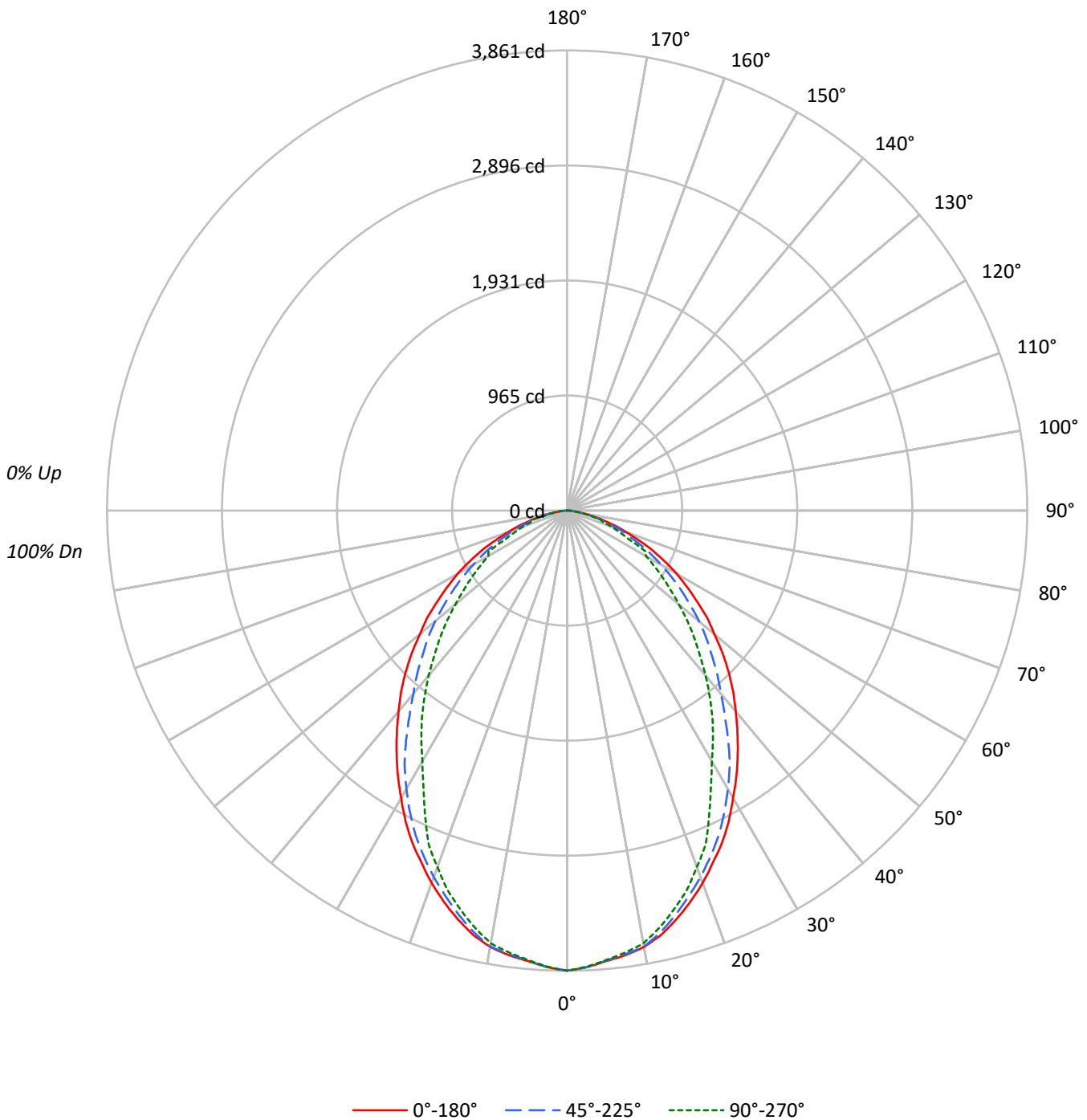
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5194	5194	5194
5°	5124	5118	5112
10°	5079	5073	5037
15°	4942	4893	4824
20°	4761	4684	4556
25°	4565	4466	4188
30°	4327	4188	3772
35°	4098	3871	3490
40°	3865	3528	3175
45°	3643	3261	2871
50°	3373	3027	2560
55°	3120	2743	2293
60°	2858	2450	2054
65°	2515	2145	1819
70°	2072	1879	1545
75°	1647	1438	1508
80°	1106	1038	969
85°	689	827	965

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3643 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.4	4.7
10°-20°	986.3	13.0
20°-30°	1365.4	18.0
30°-40°	1455.9	19.2
40°-50°	1328.2	17.5
50°-60°	1040.6	13.7
60°-70°	678.2	8.9
70°-80°	300.5	4.0
80°-90°	64.5	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°	2711.1	35.8
0°-40°	4167.0	55.0
0°-60°	6535.8	86.2
0°-90°	7579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3861	3861	3861	3861	3861	
5°	3794	3789	3789	3785	3785	360
15°	3548	3548	3512	3477	3463	998
25°	3075	3057	3008	2901	2821	1412
35°	2495	2477	2357	2178	2124	1560
45°	1915	1874	1714	1571	1509	1475
55°	1330	1290	1169	1031	977	1193
65°	790	745	674	687	571	779
75°	317	295	277	263	290	340
85°	45	49	54	58	62	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3860.6	3860.6	3860.6	3860.6	3860.6
2.5°	3833.9	3833.9	3833.9	3829.4	3829.4
5°	3793.7	3789.2	3789.2	3784.8	3784.8
7.5°	3762.5	3758.0	3753.5	3749.1	3740.1
10°	3717.8	3717.8	3713.4	3691.0	3686.6
12.5°	3646.4	3641.9	3624.1	3592.9	3583.9
15°	3548.2	3548.2	3512.5	3476.8	3463.4
17.5°	3441.1	3436.6	3392.0	3356.3	3338.5
20°	3325.1	3316.1	3271.5	3213.5	3182.2
22.5°	3195.6	3195.6	3142.1	3066.2	3035.0
25°	3075.1	3057.3	3008.2	2901.1	2820.7
27.5°	2936.8	2910.0	2856.4	2704.7	2611.0
30°	2785.0	2771.6	2695.8	2499.4	2428.0
32.5°	2642.2	2619.9	2539.5	2334.2	2276.2
35°	2494.9	2477.1	2356.6	2178.0	2124.5
37.5°	2347.6	2325.3	2173.6	2030.7	1963.8
40°	2200.3	2173.6	2008.4	1879.0	1807.6
42.5°	2062.0	2026.3	1865.6	1727.2	1646.9
45°	1914.7	1874.5	1713.9	1571.0	1508.6
47.5°	1767.4	1731.7	1584.4	1437.1	1365.7
50°	1611.2	1580.0	1446.1	1298.8	1222.9
52.5°	1481.8	1432.7	1303.2	1156.0	1093.5
55°	1330.0	1289.9	1169.4	1031.0	977.4
57.5°	1191.7	1151.5	1039.9	910.5	865.9
60°	1062.2	1004.2	910.5	798.9	763.2
62.5°	919.4	874.8	794.4	700.7	745.3
65°	790.0	745.3	673.9	687.3	571.3
67.5°	647.2	624.8	562.4	499.9	482.0
70°	526.7	499.9	477.6	410.6	392.8
72.5°	419.5	392.8	361.5	325.8	312.4
75°	316.9	294.6	276.7	263.3	290.1
77.5°	218.7	209.8	196.4	183.0	178.5
80°	142.8	138.4	133.9	129.4	125.0
82.5°	84.8	84.8	84.8	84.8	84.8
85°	44.6	49.1	53.6	58.0	62.5
87.5°	26.8	26.8	31.2	35.7	40.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)