

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: P562866

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562866
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6401.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

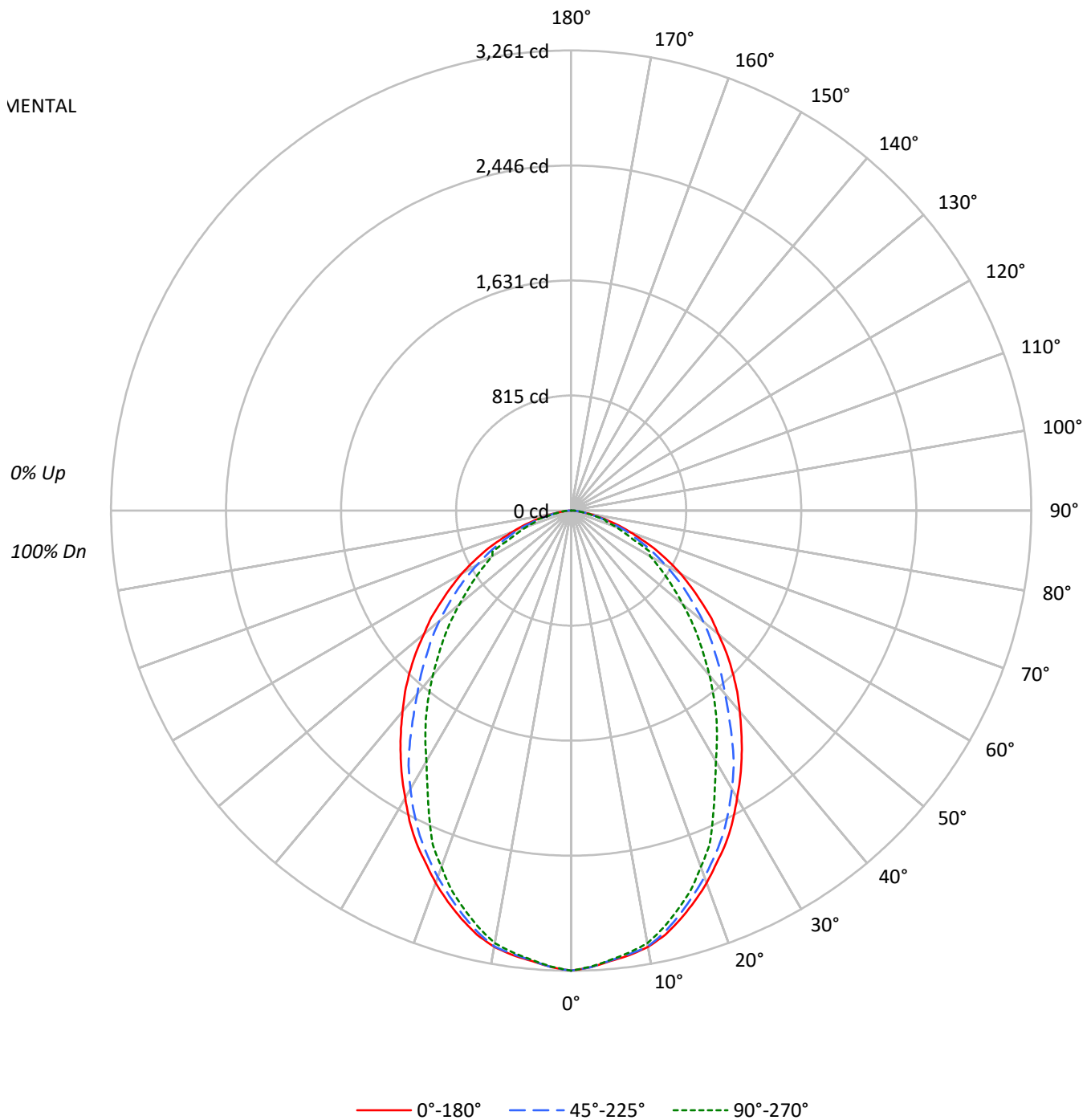
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4387	4387	4387
5°	4327	4322	4317
10°	4290	4285	4254
15°	4174	4132	4075
20°	4021	3956	3848
25°	3856	3772	3537
30°	3654	3537	3186
35°	3461	3269	2947
40°	3264	2979	2681
45°	3077	2754	2424
50°	2848	2556	2162
55°	2635	2317	1936
60°	2414	2069	1735
65°	2124	1812	1536
70°	1750	1587	1305
75°	1391	1215	1274
80°	934	876	817
85°	582	698	815

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3077 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.5	4.7
10°-20°	833.0	13.0
20°-30°	1153.2	18.0
30°-40°	1229.6	19.2
40°-50°	1121.8	17.5
50°-60°	878.8	13.7
60°-70°	572.8	8.9
70°-80°	253.8	4.0
80°-90°	54.5	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°	2289.7	35.8
0°-40°	3519.3	55.0
0°-60°	5520.0	86.2
0°-90°	6401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6401.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3261	3261	3261	3261	3261	
5°	3204	3200	3200	3196	3196	304
15°	2997	2997	2967	2936	2925	842
25°	2597	2582	2541	2450	2382	1192
35°	2107	2092	1990	1840	1794	1317
45°	1617	1583	1448	1327	1274	1246
55°	1123	1089	988	871	826	1008
65°	667	630	569	580	482	658
75°	268	249	234	222	245	287
85°	38	42	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3260.6	3260.6	3260.6	3260.6	3260.6
2.5°	3238.0	3238.0	3238.0	3234.2	3234.2
5°	3204.0	3200.3	3200.3	3196.5	3196.5
7.5°	3177.7	3173.9	3170.1	3166.3	3158.8
10°	3140.0	3140.0	3136.2	3117.3	3113.6
12.5°	3079.6	3075.9	3060.8	3034.4	3026.9
15°	2996.7	2996.7	2966.6	2936.4	2925.1
17.5°	2906.3	2902.5	2864.8	2834.6	2819.6
20°	2808.2	2800.7	2763.0	2714.0	2687.6
22.5°	2698.9	2698.9	2653.7	2589.6	2563.2
25°	2597.2	2582.1	2540.6	2450.1	2382.3
27.5°	2480.3	2457.7	2412.5	2284.3	2205.1
30°	2352.1	2340.8	2276.8	2110.9	2050.6
32.5°	2231.5	2212.7	2144.8	1971.4	1922.4
35°	2107.1	2092.1	1990.3	1839.5	1794.3
37.5°	1982.7	1963.9	1835.7	1715.1	1658.6
40°	1858.3	1835.7	1696.3	1586.9	1526.6
42.5°	1741.5	1711.3	1575.6	1458.8	1390.9
45°	1617.1	1583.2	1447.5	1326.9	1274.1
47.5°	1492.7	1462.6	1338.2	1213.8	1153.5
50°	1360.8	1334.4	1221.3	1096.9	1032.8
52.5°	1251.5	1210.0	1100.7	976.3	923.5
55°	1123.3	1089.4	987.6	870.7	825.5
57.5°	1006.4	972.5	878.3	769.0	731.3
60°	897.1	848.1	769.0	674.7	644.6
62.5°	776.5	738.8	671.0	591.8	629.5
65°	667.2	629.5	569.2	580.5	482.5
67.5°	546.6	527.7	475.0	422.2	407.1
70°	444.8	422.2	403.3	346.8	331.7
72.5°	354.3	331.7	305.3	275.2	263.9
75°	267.6	248.8	233.7	222.4	245.0
77.5°	184.7	177.2	165.9	154.5	150.8
80°	120.6	116.9	113.1	109.3	105.5
82.5°	71.6	71.6	71.6	71.6	71.6
85°	37.7	41.5	45.2	49.0	52.8
87.5°	22.6	22.6	26.4	30.2	33.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)