

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: P561885

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561885
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-12-4-LD4-2STD-50-UNV-82-96-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6290.0 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

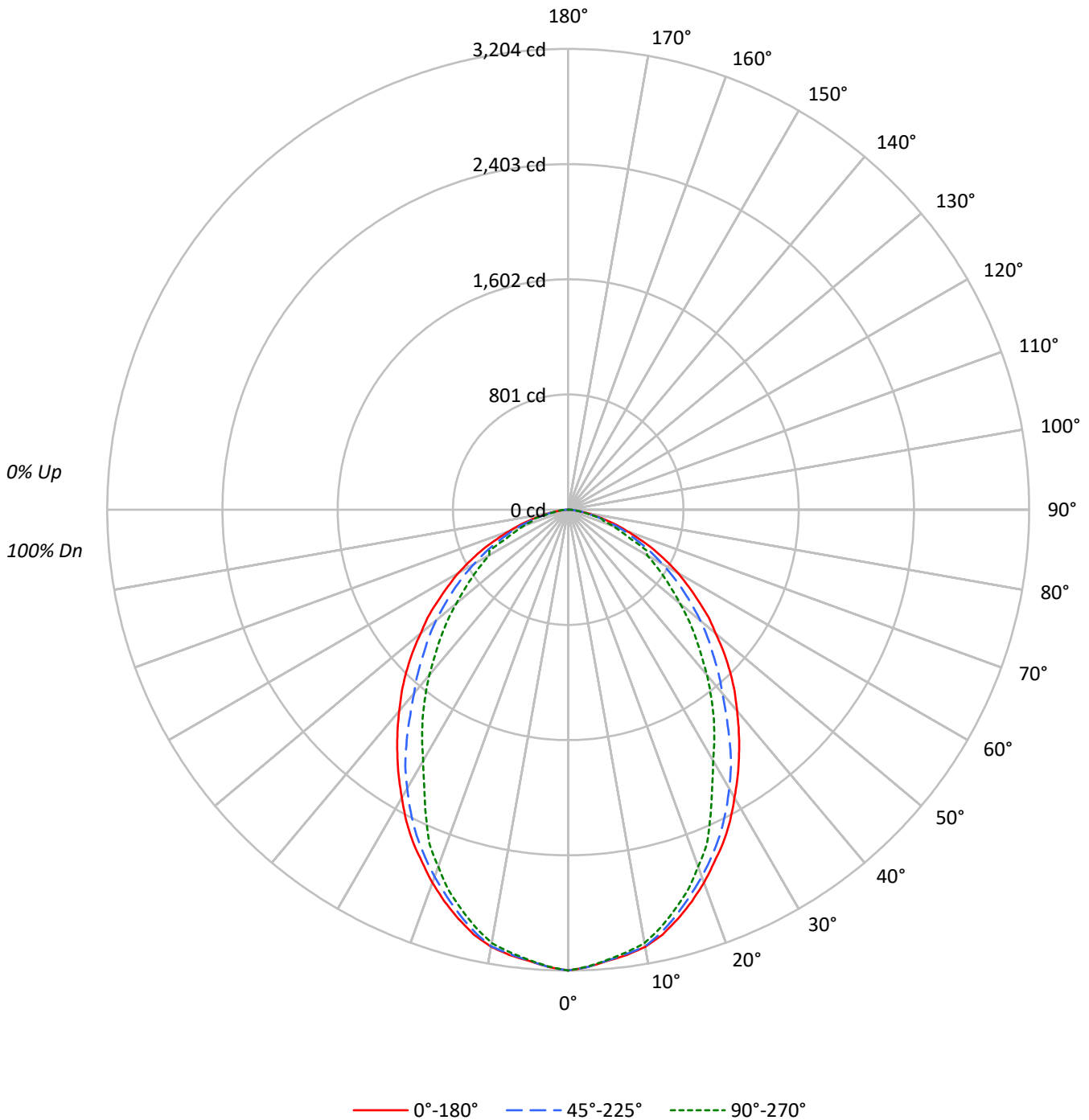
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100											100																	
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87											87																	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75											75																	
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65											65																	
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56											56																	
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50											50																	
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44											44																	
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40											40																	
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36											36																	
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33											33																	
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30											30																	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8622	8622	8622
5°	8505	8495	8485
10°	8431	8421	8360
15°	8204	8121	8008
20°	7903	7775	7563
25°	7578	7413	6951
30°	7182	6952	6261
35°	6802	6425	5792
40°	6415	5855	5270
45°	6048	5413	4765
50°	5598	5024	4249
55°	5179	4553	3806
60°	4745	4067	3409
65°	4174	3561	3019
70°	3439	3118	2565
75°	2734	2388	2504
80°	1836	1722	1607
85°	1142	1371	1602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.3	4.7
10°-20°	818.5	13.0
20°-30°	1133.2	18.0
30°-40°	1208.3	19.2
40°-50°	1102.3	17.5
50°-60°	863.6	13.7
60°-70°	562.8	8.9
70°-80°	249.4	4.0
80°-90°	53.5	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°	2250.0	35.8
0°-40°	3458.3	55.0
0°-60°	5424.2	86.2
0°-90°	6290.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6290.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3204	3204	3204	3204	3204	
5°	3148	3145	3145	3141	3141	299
15°	2945	2945	2915	2886	2874	828
25°	2552	2537	2497	2408	2341	1172
35°	2071	2056	1956	1808	1763	1295
45°	1589	1556	1422	1304	1252	1224
55°	1104	1070	970	856	811	990
65°	656	619	559	570	474	646
75°	263	244	230	218	241	282
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3204.0	3204.0	3204.0	3204.0	3204.0
2.5°	3181.8	3181.8	3181.8	3178.1	3178.1
5°	3148.5	3144.8	3144.8	3141.1	3141.1
7.5°	3122.6	3118.8	3115.1	3111.4	3104.0
10°	3085.5	3085.5	3081.8	3063.3	3059.6
12.5°	3026.2	3022.5	3007.7	2981.8	2974.4
15°	2944.8	2944.8	2915.1	2885.5	2874.4
17.5°	2855.9	2852.2	2815.1	2785.5	2770.7
20°	2759.6	2752.1	2715.1	2666.9	2641.0
22.5°	2652.1	2652.1	2607.7	2544.7	2518.8
25°	2552.1	2537.3	2496.6	2407.7	2341.0
27.5°	2437.3	2415.1	2370.6	2244.7	2166.9
30°	2311.4	2300.2	2237.3	2074.3	2015.0
32.5°	2192.8	2174.3	2107.6	1937.2	1889.1
35°	2070.6	2055.8	1955.8	1807.6	1763.1
37.5°	1948.4	1929.8	1803.9	1685.4	1629.8
40°	1826.1	1803.9	1666.8	1559.4	1500.2
42.5°	1711.3	1681.7	1548.3	1433.5	1366.8
45°	1589.1	1555.7	1422.4	1303.8	1252.0
47.5°	1466.8	1437.2	1315.0	1192.7	1133.5
50°	1337.2	1311.2	1200.1	1077.9	1014.9
52.5°	1229.8	1189.0	1081.6	959.4	907.5
55°	1103.8	1070.5	970.5	855.6	811.2
57.5°	989.0	955.7	863.1	755.6	718.6
60°	881.6	833.4	755.6	663.0	633.4
62.5°	763.0	726.0	659.3	581.5	618.6
65°	655.6	618.6	559.3	570.4	474.1
67.5°	537.1	518.6	466.7	414.9	400.0
70°	437.1	414.9	396.3	340.8	326.0
72.5°	348.2	326.0	300.0	270.4	259.3
75°	263.0	244.5	229.7	218.5	240.8
77.5°	181.5	174.1	163.0	151.9	148.2
80°	118.5	114.8	111.1	107.4	103.7
82.5°	70.4	70.4	70.4	70.4	70.4
85°	37.0	40.7	44.4	48.2	51.9
87.5°	22.2	22.2	25.9	29.6	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)