

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: P562890

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562890
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-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6218.0 lumens
Efficiency: N/A
Efficacy: 93.4 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

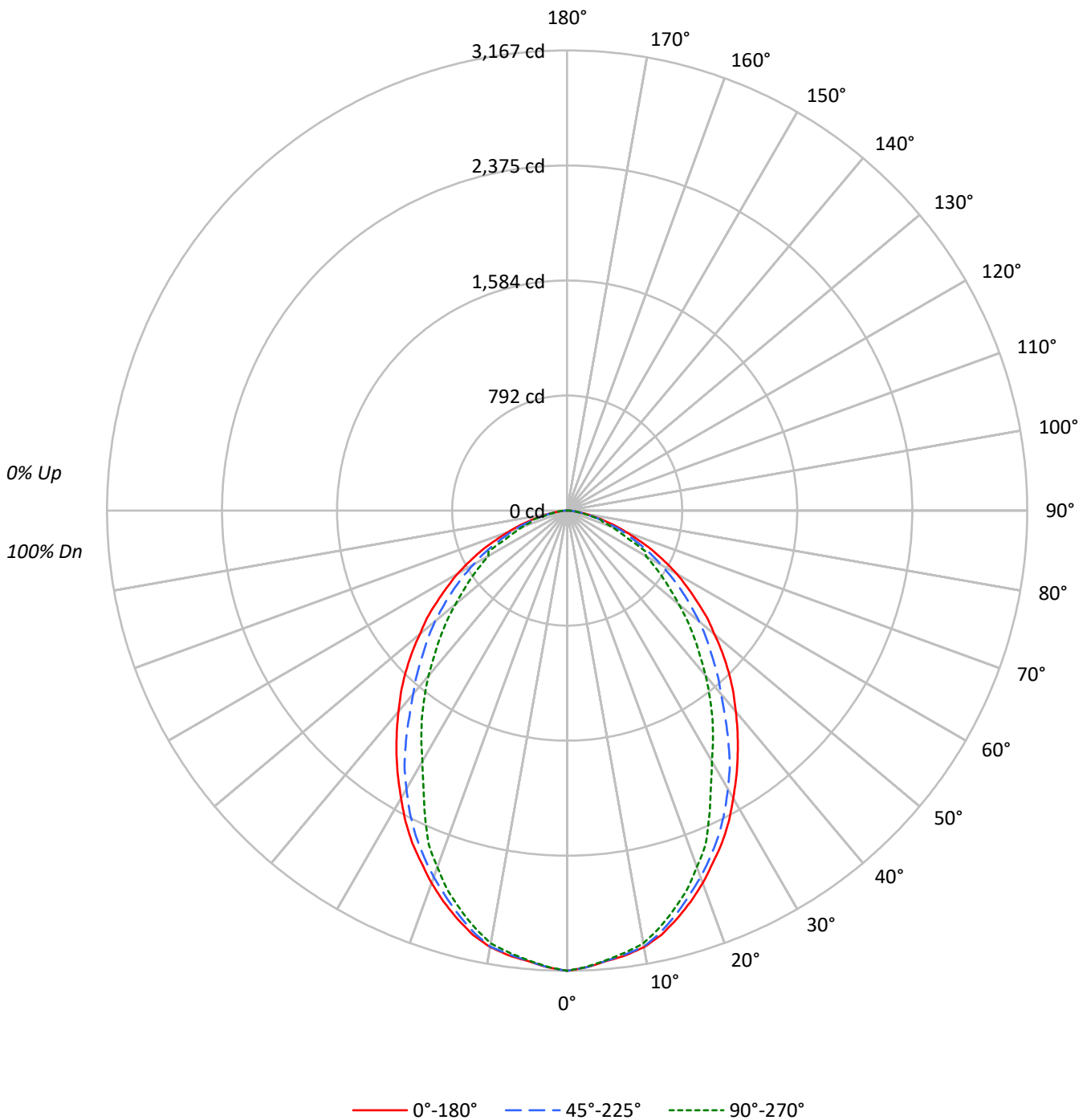
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4262	4262	4262
5°	4204	4199	4194
10°	4167	4162	4132
15°	4055	4014	3958
20°	3906	3843	3738
25°	3745	3664	3436
30°	3550	3436	3095
35°	3362	3176	2863
40°	3171	2894	2605
45°	2989	2676	2355
50°	2767	2483	2100
55°	2560	2251	1881
60°	2345	2010	1685
65°	2063	1760	1492
70°	1700	1541	1268
75°	1352	1180	1237
80°	908	852	794
85°	565	678	792

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2989 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.8	4.7
10°-20°	809.2	13.0
20°-30°	1120.2	18.0
30°-40°	1194.5	19.2
40°-50°	1089.7	17.5
50°-60°	853.7	13.7
60°-70°	556.4	8.9
70°-80°	246.5	4.0
80°-90°	52.9	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°	2224.2	35.8
0°-40°	3418.7	55.0
0°-60°	5362.2	86.2
0°-90°	6218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6218.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3167	3167	3167	3167	3167	
5°	3112	3109	3109	3105	3105	295
15°	2911	2911	2882	2852	2842	818
25°	2523	2508	2468	2380	2314	1158
35°	2047	2032	1933	1787	1743	1280
45°	1571	1538	1406	1289	1238	1210
55°	1091	1058	959	846	802	979
65°	648	612	553	564	469	639
75°	260	242	227	216	238	279
85°	37	40	44	48	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3167.4	3167.4	3167.4	3167.4	3167.4
2.5°	3145.4	3145.4	3145.4	3141.7	3141.7
5°	3112.4	3108.8	3108.8	3105.1	3105.1
7.5°	3086.8	3083.1	3079.5	3075.8	3068.5
10°	3050.2	3050.2	3046.5	3028.2	3024.6
12.5°	2991.6	2987.9	2973.3	2947.7	2940.3
15°	2911.0	2911.0	2881.8	2852.5	2841.5
17.5°	2823.2	2819.5	2782.9	2753.6	2738.9
20°	2728.0	2720.6	2684.0	2636.4	2610.8
22.5°	2621.8	2621.8	2577.8	2515.6	2490.0
25°	2522.9	2508.3	2468.0	2380.1	2314.2
27.5°	2409.4	2387.4	2343.5	2219.0	2142.1
30°	2284.9	2273.9	2211.7	2050.5	1992.0
32.5°	2167.7	2149.4	2083.5	1915.1	1867.5
35°	2046.9	2032.2	1933.4	1786.9	1743.0
37.5°	1926.1	1907.7	1783.2	1666.1	1611.1
40°	1805.2	1783.2	1647.8	1541.6	1483.0
42.5°	1691.7	1662.4	1530.6	1417.1	1351.2
45°	1570.9	1537.9	1406.1	1288.9	1237.7
47.5°	1450.0	1420.7	1299.9	1179.1	1120.5
50°	1321.9	1296.2	1186.4	1065.6	1003.3
52.5°	1215.7	1175.4	1069.2	948.4	897.1
55°	1091.2	1058.2	959.4	845.9	801.9
57.5°	977.7	944.7	853.2	747.0	710.4
60°	871.5	823.9	747.0	655.4	626.1
62.5°	754.3	717.7	651.8	574.9	611.5
65°	648.1	611.5	552.9	563.9	468.7
67.5°	530.9	512.6	461.4	410.1	395.5
70°	432.1	410.1	391.8	336.9	322.2
72.5°	344.2	322.2	296.6	267.3	256.3
75°	260.0	241.7	227.0	216.0	238.0
77.5°	179.4	172.1	161.1	150.1	146.5
80°	117.2	113.5	109.9	106.2	102.5
82.5°	69.6	69.6	69.6	69.6	69.6
85°	36.6	40.3	43.9	47.6	51.3
87.5°	22.0	22.0	25.6	29.3	33.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)