

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: P563023

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563023
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-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 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: 7278.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

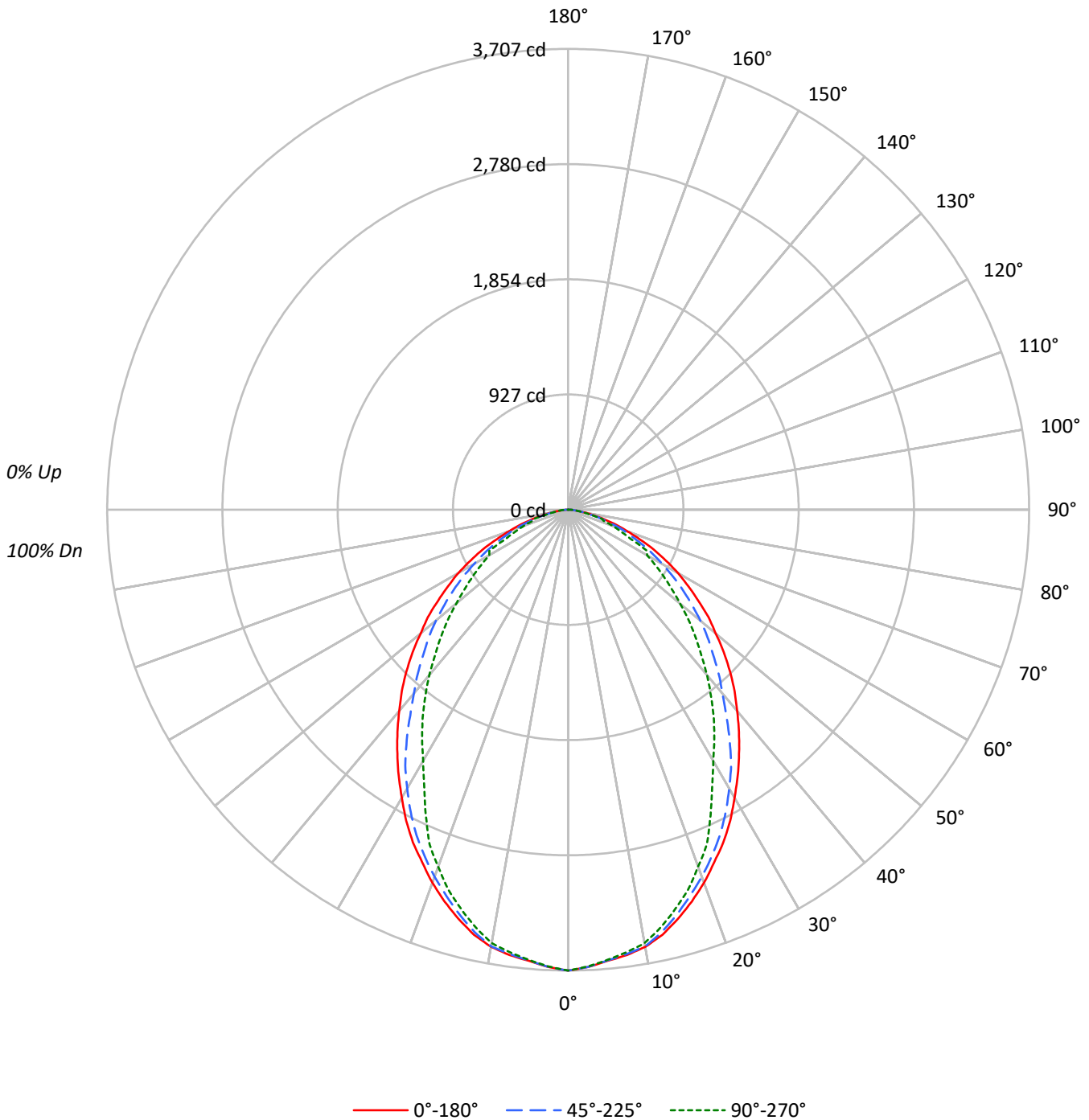
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4988	4988	4988
5°	4920	4915	4909
10°	4878	4872	4837
15°	4746	4698	4633
20°	4572	4498	4376
25°	4384	4289	4021
30°	4155	4022	3622
35°	3935	3717	3351
40°	3711	3388	3049
45°	3499	3132	2756
50°	3239	2907	2458
55°	2996	2634	2202
60°	2745	2353	1972
65°	2415	2060	1747
70°	1989	1804	1484
75°	1582	1381	1448
80°	1062	996	930
85°	662	794	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3499 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.1	4.7
10°-20°	947.1	13.0
20°-30°	1311.2	18.0
30°-40°	1398.1	19.2
40°-50°	1275.5	17.5
50°-60°	999.2	13.7
60°-70°	651.2	8.9
70°-80°	288.5	4.0
80°-90°	61.9	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°	2603.4	35.8
0°-40°	4001.5	55.0
0°-60°	6276.2	86.2
0°-90°	7278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7278.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3707	3707	3707	3707	3707	
5°	3643	3639	3639	3634	3634	346
15°	3407	3407	3373	3339	3326	958
25°	2953	2936	2889	2786	2709	1356
35°	2396	2379	2263	2092	2040	1498
45°	1839	1800	1646	1509	1449	1416
55°	1277	1239	1123	990	939	1146
65°	759	716	647	660	549	748
75°	304	283	266	253	279	326
85°	43	47	51	56	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3707.3	3707.3	3707.3	3707.3	3707.3
2.5°	3681.6	3681.6	3681.6	3677.3	3677.3
5°	3643.0	3638.7	3638.7	3634.5	3634.5
7.5°	3613.0	3608.7	3604.5	3600.2	3591.6
10°	3570.2	3570.2	3565.9	3544.5	3540.2
12.5°	3501.6	3497.3	3480.2	3450.2	3441.6
15°	3407.3	3407.3	3373.0	3338.7	3325.9
17.5°	3304.4	3300.2	3257.3	3223.0	3205.9
20°	3193.0	3184.4	3141.6	3085.9	3055.9
22.5°	3068.7	3068.7	3017.3	2944.4	2914.4
25°	2953.0	2935.9	2888.7	2785.8	2708.7
27.5°	2820.1	2794.4	2743.0	2597.3	2507.3
30°	2674.4	2661.6	2588.7	2400.1	2331.5
32.5°	2537.3	2515.8	2438.7	2241.5	2185.8
35°	2395.8	2378.7	2263.0	2091.5	2040.1
37.5°	2254.4	2233.0	2087.2	1950.1	1885.8
40°	2113.0	2087.2	1928.7	1804.4	1735.8
42.5°	1980.1	1945.8	1791.5	1658.6	1581.5
45°	1838.7	1800.1	1645.8	1508.6	1448.6
47.5°	1697.2	1662.9	1521.5	1380.1	1311.5
50°	1547.2	1517.2	1388.6	1247.2	1174.3
52.5°	1422.9	1375.8	1251.5	1110.1	1050.0
55°	1277.2	1238.6	1122.9	990.0	938.6
57.5°	1144.3	1105.8	998.6	874.3	831.5
60°	1020.0	964.3	874.3	767.2	732.9
62.5°	882.9	840.0	762.9	672.9	715.7
65°	758.6	715.7	647.2	660.0	548.6
67.5°	621.5	600.0	540.0	480.0	462.9
70°	505.7	480.0	458.6	394.3	377.2
72.5°	402.9	377.2	347.2	312.9	300.0
75°	304.3	282.9	265.7	252.9	278.6
77.5°	210.0	201.4	188.6	175.7	171.4
80°	137.1	132.9	128.6	124.3	120.0
82.5°	81.4	81.4	81.4	81.4	81.4
85°	42.9	47.1	51.4	55.7	60.0
87.5°	25.7	25.7	30.0	34.3	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)