

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: P562904

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562904
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-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5128.0 lumens
Efficiency: N/A
Efficacy: 77.0 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

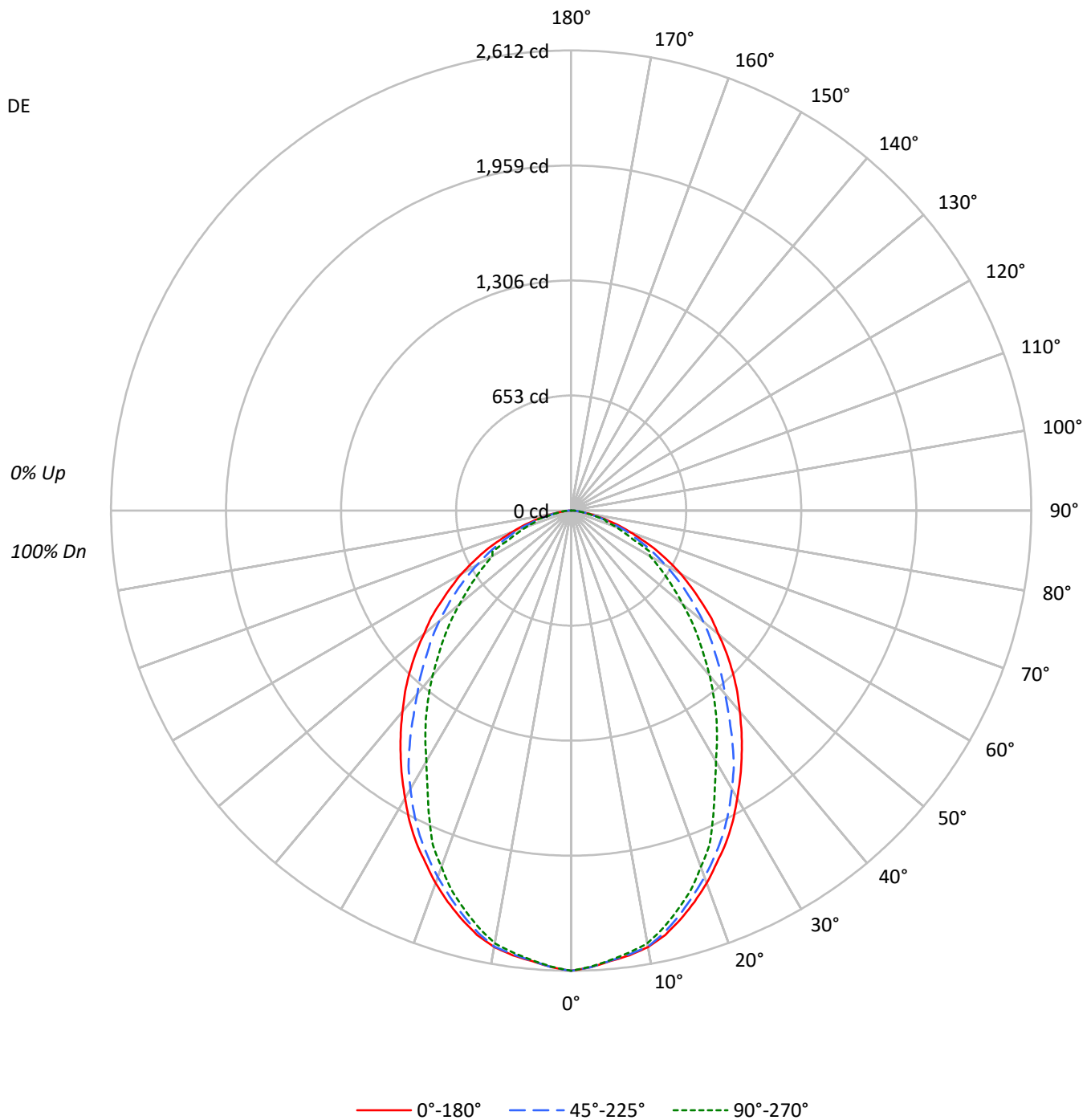
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	3515	3515	3515
5°	3467	3463	3459
10°	3437	3433	3408
15°	3344	3310	3264
20°	3221	3169	3083
25°	3089	3022	2833
30°	2928	2834	2552
35°	2773	2619	2361
40°	2615	2387	2148
45°	2465	2206	1942
50°	2282	2048	1732
55°	2111	1856	1551
60°	1934	1658	1390
65°	1702	1452	1230
70°	1402	1271	1045
75°	1115	973	1020
80°	748	702	656
85°	466	559	653

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2465 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.2	4.7
10°-20°	667.3	13.0
20°-30°	923.9	18.0
30°-40°	985.1	19.2
40°-50°	898.7	17.5
50°-60°	704.1	13.7
60°-70°	458.9	8.9
70°-80°	203.3	4.0
80°-90°	43.7	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°	1834.3	35.8
0°-40°	2819.4	55.0
0°-60°	4422.2	86.2
0°-90°	5128.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5128.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2612	2612	2612	2612	2612	
5°	2567	2564	2564	2561	2561	244
15°	2401	2401	2377	2352	2343	675
25°	2081	2069	2035	1963	1908	955
35°	1688	1676	1594	1474	1437	1055
45°	1296	1268	1160	1063	1021	998
55°	900	873	791	698	661	807
65°	534	504	456	465	386	527
75°	214	199	187	178	196	230
85°	30	33	36	39	42	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2612.1	2612.1	2612.1	2612.1	2612.1
2.5°	2594.0	2594.0	2594.0	2591.0	2591.0
5°	2566.8	2563.8	2563.8	2560.8	2560.8
7.5°	2545.7	2542.7	2539.7	2536.6	2530.6
10°	2515.5	2515.5	2512.5	2497.4	2494.4
12.5°	2467.2	2464.2	2452.1	2430.9	2424.9
15°	2400.7	2400.7	2376.6	2352.4	2343.4
17.5°	2328.3	2325.3	2295.1	2270.9	2258.8
20°	2249.8	2243.7	2213.5	2174.3	2153.1
22.5°	2162.2	2162.2	2125.9	2074.6	2053.5
25°	2080.6	2068.6	2035.4	1962.9	1908.5
27.5°	1987.0	1968.9	1932.7	1830.0	1766.6
30°	1884.4	1875.3	1824.0	1691.1	1642.8
32.5°	1787.7	1772.6	1718.3	1579.4	1540.1
35°	1688.1	1676.0	1594.5	1473.7	1437.4
37.5°	1588.4	1573.3	1470.6	1374.0	1328.7
40°	1488.8	1470.6	1358.9	1271.3	1223.0
42.5°	1395.2	1371.0	1262.3	1168.7	1114.3
45°	1295.5	1268.3	1159.6	1063.0	1020.7
47.5°	1195.8	1171.7	1072.0	972.4	924.1
50°	1090.2	1069.0	978.4	878.8	827.4
52.5°	1002.6	969.4	881.8	782.1	739.9
55°	899.9	872.7	791.2	697.6	661.3
57.5°	806.3	779.1	703.6	616.0	585.8
60°	718.7	679.5	616.0	540.5	516.4
62.5°	622.1	591.9	537.5	474.1	504.3
65°	534.5	504.3	456.0	465.1	386.5
67.5°	437.9	422.8	380.5	338.2	326.1
70°	356.3	338.2	323.1	277.8	265.7
72.5°	283.9	265.7	244.6	220.4	211.4
75°	214.4	199.3	187.2	178.2	196.3
77.5°	148.0	141.9	132.9	123.8	120.8
80°	96.6	93.6	90.6	87.6	84.6
82.5°	57.4	57.4	57.4	57.4	57.4
85°	30.2	33.2	36.2	39.3	42.3
87.5°	18.1	18.1	21.1	24.2	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)