

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: P562720

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562720
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-LD4-2LO-35-UNV-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4886.0 lumens
Efficiency: N/A
Efficacy: 104.4 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

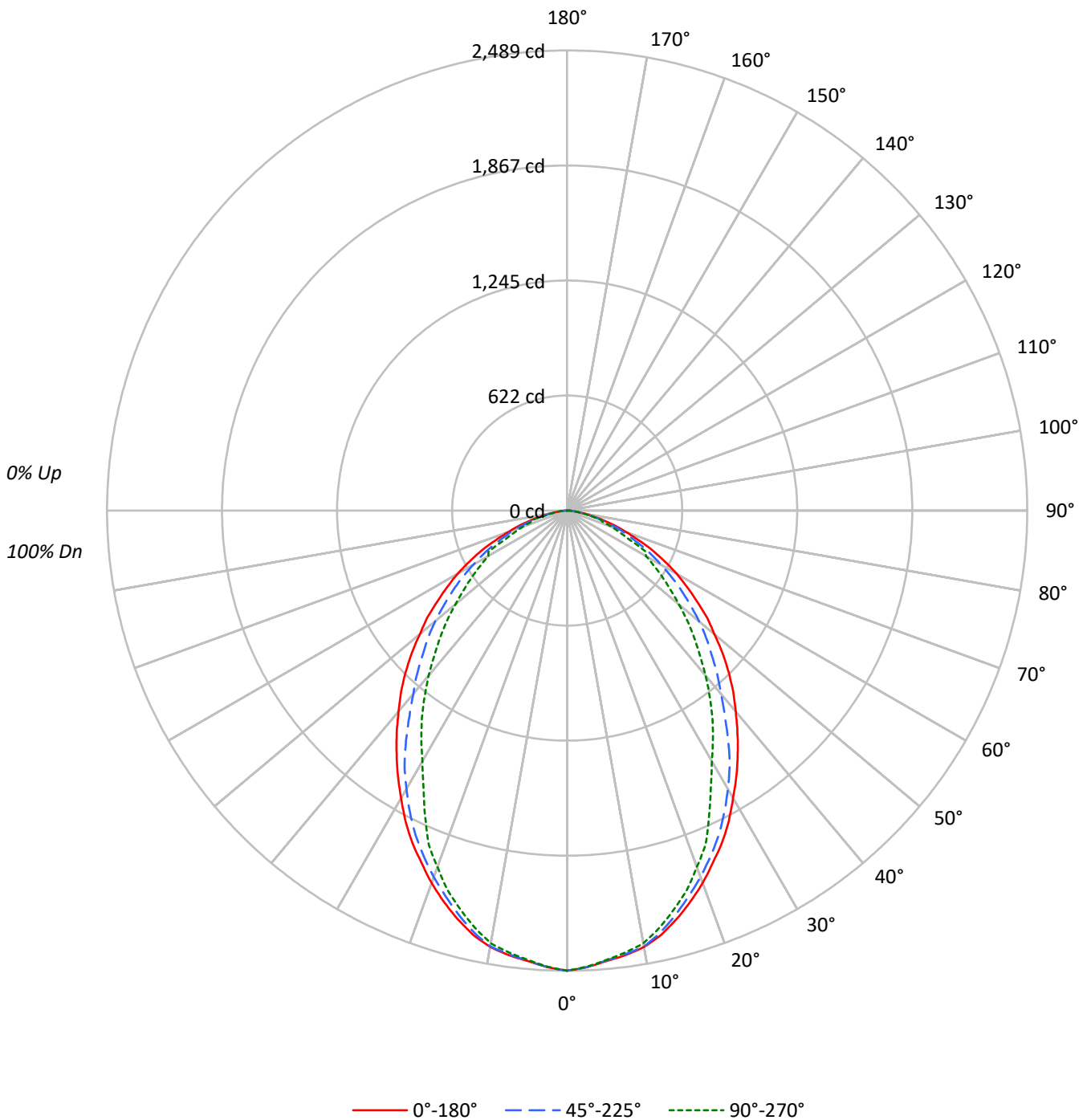
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3349	3349	3349
5°	3303	3299	3295
10°	3275	3271	3247
15°	3186	3154	3110
20°	3069	3020	2937
25°	2943	2879	2700
30°	2789	2700	2432
35°	2642	2495	2250
40°	2491	2274	2047
45°	2349	2102	1850
50°	2174	1951	1650
55°	2011	1768	1478
60°	1843	1580	1324
65°	1621	1383	1173
70°	1336	1211	996
75°	1062	927	972
80°	714	669	625
85°	445	533	622

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2349 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.7	4.7
10°-20°	635.8	13.0
20°-30°	880.3	18.0
30°-40°	938.6	19.2
40°-50°	856.3	17.5
50°-60°	670.8	13.7
60°-70°	437.2	8.9
70°-80°	193.7	4.0
80°-90°	41.6	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°	1747.8	35.8
0°-40°	2686.4	55.0
0°-60°	4213.5	86.2
0°-90°	4886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4886.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2489	2489	2489	2489	2489	
5°	2446	2443	2443	2440	2440	232
15°	2288	2288	2264	2241	2233	643
25°	1982	1971	1939	1870	1818	910
35°	1608	1597	1519	1404	1370	1006
45°	1234	1208	1105	1013	972	951
55°	857	832	754	665	630	769
65°	509	480	434	443	368	502
75°	204	190	178	170	187	219
85°	29	32	34	37	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2488.9	2488.9	2488.9	2488.9	2488.9
2.5°	2471.6	2471.6	2471.6	2468.7	2468.7
5°	2445.7	2442.8	2442.8	2439.9	2439.9
7.5°	2425.6	2422.7	2419.8	2416.9	2411.2
10°	2396.8	2396.8	2393.9	2379.5	2376.6
12.5°	2350.8	2347.9	2336.4	2316.2	2310.5
15°	2287.5	2287.5	2264.4	2241.4	2232.8
17.5°	2218.4	2215.5	2186.7	2163.7	2152.2
20°	2143.6	2137.8	2109.1	2071.7	2051.5
22.5°	2060.1	2060.1	2025.6	1976.7	1956.6
25°	1982.5	1970.9	1939.3	1870.2	1818.5
27.5°	1893.3	1876.0	1841.5	1743.6	1683.2
30°	1795.4	1786.8	1737.9	1611.3	1565.3
32.5°	1703.4	1689.0	1637.2	1504.8	1467.4
35°	1608.4	1596.9	1519.2	1404.1	1369.6
37.5°	1513.5	1499.1	1401.2	1309.2	1266.0
40°	1418.5	1401.2	1294.8	1211.3	1165.3
42.5°	1329.3	1306.3	1202.7	1113.5	1061.7
45°	1234.4	1208.5	1104.9	1012.8	972.5
47.5°	1139.4	1116.4	1021.4	926.5	880.5
50°	1038.7	1018.6	932.2	837.3	788.4
52.5°	955.3	923.6	840.2	745.2	704.9
55°	857.4	831.5	753.9	664.7	630.1
57.5°	768.2	742.3	670.4	587.0	558.2
60°	684.8	647.4	587.0	515.0	492.0
62.5°	592.7	564.0	512.2	451.7	480.5
65°	509.3	480.5	434.5	443.1	368.3
67.5°	417.2	402.8	362.5	322.3	310.7
70°	339.5	322.3	307.9	264.7	253.2
72.5°	270.5	253.2	233.1	210.0	201.4
75°	204.3	189.9	178.4	169.8	187.0
77.5°	141.0	135.2	126.6	118.0	115.1
80°	92.1	89.2	86.3	83.4	80.6
82.5°	54.7	54.7	54.7	54.7	54.7
85°	28.8	31.7	34.5	37.4	40.3
87.5°	17.3	17.3	20.1	23.0	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)