

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: P562850

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562850
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-50-UNV-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5115.0 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

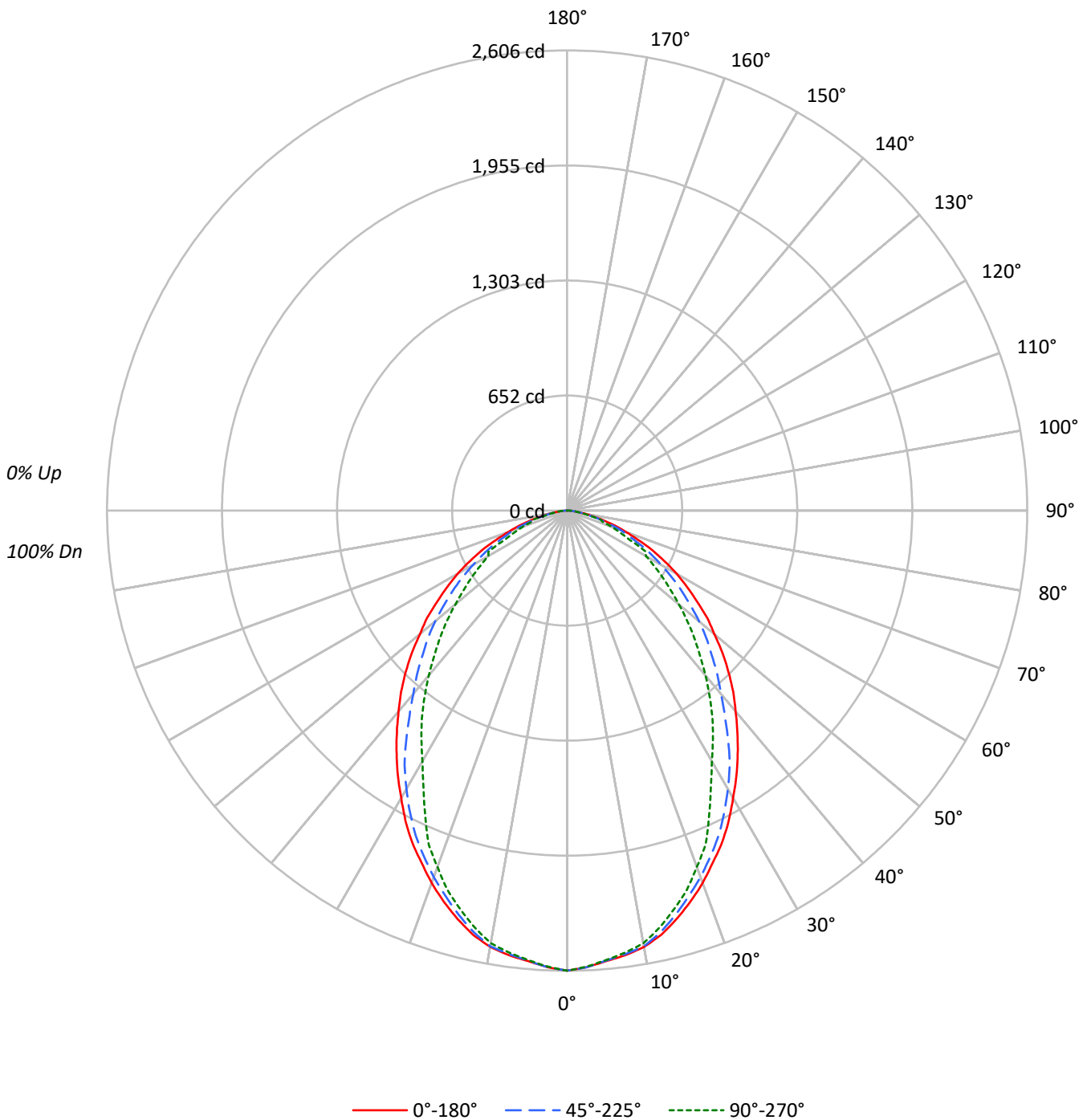
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3506	3506	3506
5°	3458	3454	3450
10°	3428	3424	3399
15°	3336	3302	3256
20°	3213	3161	3075
25°	3081	3014	2826
30°	2920	2827	2546
35°	2766	2612	2355
40°	2608	2381	2143
45°	2459	2201	1937
50°	2276	2043	1728
55°	2106	1851	1548
60°	1929	1654	1386
65°	1698	1448	1228
70°	1398	1268	1043
75°	1112	971	1018
80°	747	700	653
85°	465	557	651

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2459 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.5	4.7
10°-20°	665.6	13.0
20°-30°	921.5	18.0
30°-40°	982.6	19.2
40°-50°	896.4	17.5
50°-60°	702.3	13.7
60°-70°	457.7	8.9
70°-80°	202.8	4.0
80°-90°	43.5	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°	1829.7	35.8
0°-40°	2812.3	55.0
0°-60°	4411.0	86.2
0°-90°	5115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5115.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2606	2606	2606	2606	2606	
5°	2560	2557	2557	2554	2554	243
15°	2395	2395	2371	2346	2337	673
25°	2075	2063	2030	1958	1904	953
35°	1684	1672	1590	1470	1434	1053
45°	1292	1265	1157	1060	1018	995
55°	898	870	789	696	660	805
65°	533	503	455	464	386	525
75°	214	199	187	178	196	229
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°	2605.5	2605.5	2605.5	2605.5	2605.5
2.5°	2587.4	2587.4	2587.4	2584.4	2584.4
5°	2560.3	2557.3	2557.3	2554.3	2554.3
7.5°	2539.2	2536.2	2533.2	2530.2	2524.2
10°	2509.1	2509.1	2506.1	2491.1	2488.0
12.5°	2460.9	2457.9	2445.9	2424.8	2418.8
15°	2394.7	2394.7	2370.6	2346.5	2337.4
17.5°	2322.4	2319.4	2289.2	2265.1	2253.1
20°	2244.1	2238.0	2207.9	2168.8	2147.7
22.5°	2156.7	2156.7	2120.6	2069.3	2048.3
25°	2075.4	2063.3	2030.2	1957.9	1903.7
27.5°	1982.0	1963.9	1927.8	1825.4	1762.1
30°	1879.6	1870.5	1819.3	1686.8	1638.6
32.5°	1783.2	1768.1	1713.9	1575.4	1536.2
35°	1683.8	1671.7	1590.4	1469.9	1433.8
37.5°	1584.4	1569.3	1466.9	1370.5	1325.3
40°	1485.0	1466.9	1355.5	1268.1	1219.9
42.5°	1391.6	1367.5	1259.1	1165.7	1111.5
45°	1292.2	1265.1	1156.7	1060.3	1018.1
47.5°	1192.8	1168.7	1069.3	969.9	921.7
50°	1087.4	1066.3	975.9	876.5	825.3
52.5°	1000.0	966.9	879.5	780.1	738.0
55°	897.6	870.5	789.2	695.8	659.7
57.5°	804.2	777.1	701.8	614.5	584.4
60°	716.9	677.7	614.5	539.2	515.1
62.5°	620.5	590.4	536.2	472.9	503.0
65°	533.2	503.0	454.8	463.9	385.6
67.5°	436.8	421.7	379.5	337.4	325.3
70°	355.4	337.4	322.3	277.1	265.1
72.5°	283.1	265.1	244.0	219.9	210.9
75°	213.9	198.8	186.8	177.7	195.8
77.5°	147.6	141.6	132.5	123.5	120.5
80°	96.4	93.4	90.4	87.4	84.3
82.5°	57.2	57.2	57.2	57.2	57.2
85°	30.1	33.1	36.1	39.2	42.2
87.5°	18.1	18.1	21.1	24.1	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)