

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: P590097

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590097
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1STD-40-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1667.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

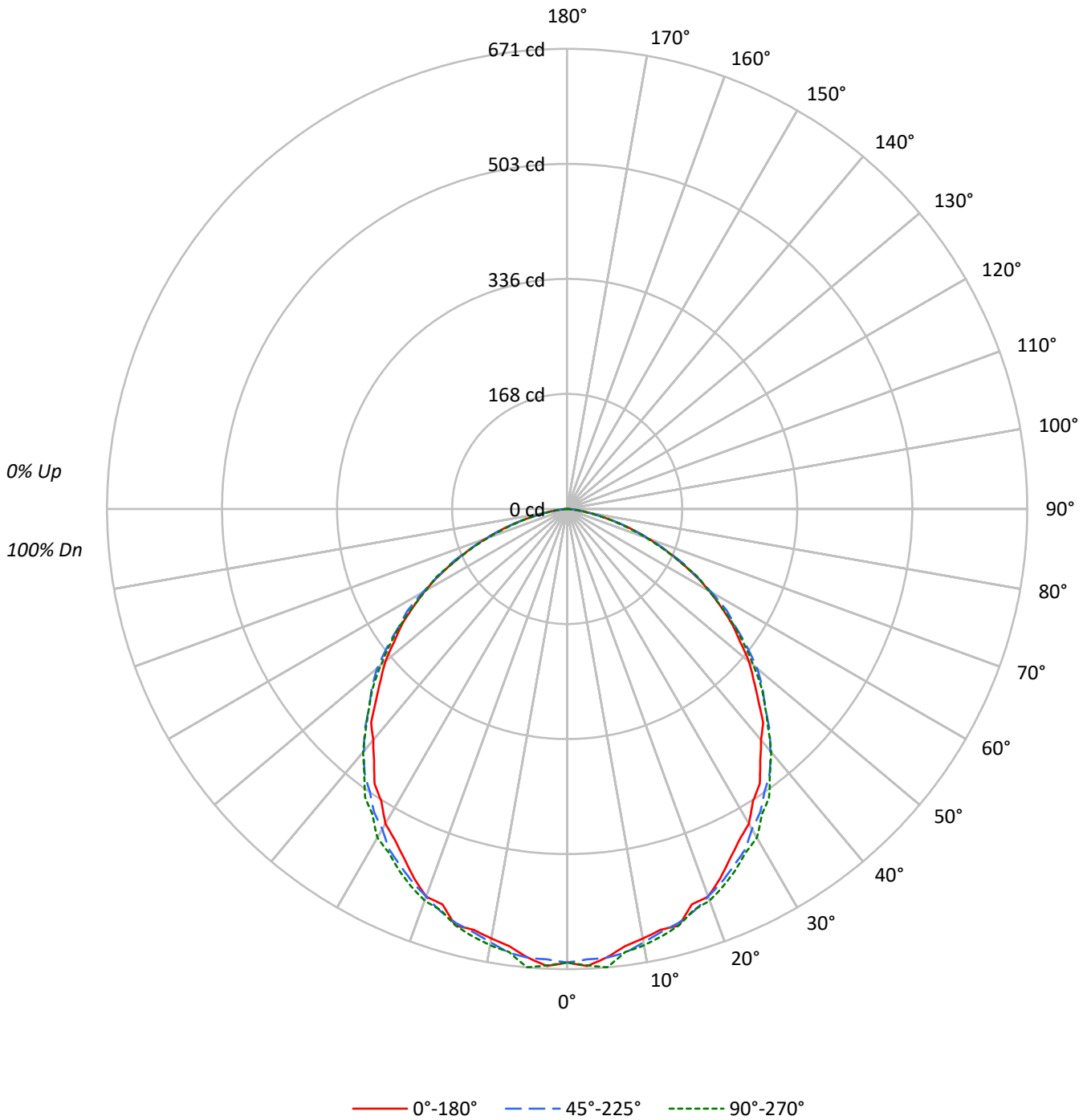
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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	0													
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						100													
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86						86													
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73						73													
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62						62													
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53						53													
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46						46													
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41						41													
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36						36													
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32						32													
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29						29													
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26						26													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1780	1780	1780
5°	1774	1775	1812
10°	1738	1753	1765
15°	1752	1742	1752
20°	1722	1722	1741
25°	1669	1706	1724
30°	1646	1675	1720
35°	1607	1650	1687
40°	1545	1619	1626
45°	1498	1552	1554
50°	1449	1515	1485
55°	1381	1407	1398
60°	1291	1304	1280
65°	1151	1181	1143
70°	987	991	964
75°	782	781	751
80°	524	510	490
85°	284	281	262

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1592 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.2	3.7
10°-20°	176.3	10.6
20°-30°	264.2	15.8
30°-40°	313.1	18.8
40°-50°	313.7	18.8
50°-60°	266.3	16.0
60°-70°	179.5	10.8
70°-80°	78.9	4.7
80°-90°	12.8	0.8
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°	502.7	30.2
0°-40°	815.8	48.9
0°-60°	1395.8	83.7
0°-90°	1667.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1667.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	661	661	661	661	661	
5°	657	655	657	655	671	62
15°	629	622	625	629	629	175
25°	562	565	574	582	581	260
35°	489	491	502	514	513	304
45°	394	401	408	418	408	305
55°	294	292	300	298	298	262
65°	181	178	185	178	180	180
75°	75	74	75	70	72	81
85°	9	9	9	9	8	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	661.4	661.4	661.4	661.4	661.4
2.5°	667.1	662.1	657.4	662.9	666.2
5°	656.7	655.2	657.0	655.0	670.8
7.5°	643.2	649.1	652.5	650.4	651.3
10°	636.1	634.0	641.6	646.9	646.1
12.5°	628.4	631.4	631.9	637.6	638.1
15°	628.8	621.5	625.4	628.6	628.9
17.5°	604.4	612.2	614.9	622.3	613.1
20°	601.4	595.7	601.4	609.0	607.8
22.5°	583.0	576.6	588.9	595.7	595.2
25°	562.2	565.3	574.5	582.0	580.8
27.5°	543.9	547.5	560.7	571.0	564.3
30°	529.8	528.0	539.1	548.4	553.5
32.5°	504.6	511.1	524.1	533.2	528.4
35°	489.3	490.8	502.2	513.8	513.4
37.5°	462.6	469.4	485.3	488.6	485.6
40°	439.8	446.6	461.0	464.5	463.0
42.5°	423.0	424.2	436.6	440.6	434.2
45°	393.7	401.0	407.7	418.2	408.3
47.5°	368.8	372.2	386.5	389.3	384.1
50°	346.1	347.3	361.8	358.3	354.8
52.5°	317.7	322.7	330.8	330.2	326.1
55°	294.3	292.3	300.0	298.0	297.9
57.5°	266.2	269.6	275.9	272.7	267.5
60°	239.9	240.0	242.3	238.6	237.9
62.5°	210.6	211.6	212.1	207.6	215.0
65°	180.8	178.4	185.4	178.3	179.5
67.5°	153.4	154.6	153.9	149.5	151.2
70°	125.5	127.1	126.0	120.9	122.5
72.5°	100.1	98.2	99.4	93.1	96.0
75°	75.2	73.7	75.1	69.8	72.2
77.5°	51.2	52.4	51.6	48.8	50.4
80°	33.8	32.9	32.9	31.3	31.6
82.5°	19.7	18.8	18.5	18.0	18.8
85°	9.2	9.0	9.1	8.9	8.5
87.5°	3.3	3.4	3.4	3.2	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)