

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: P590065

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590065
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1651.0 lumens
Efficiency: N/A
Efficacy: 99.5 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

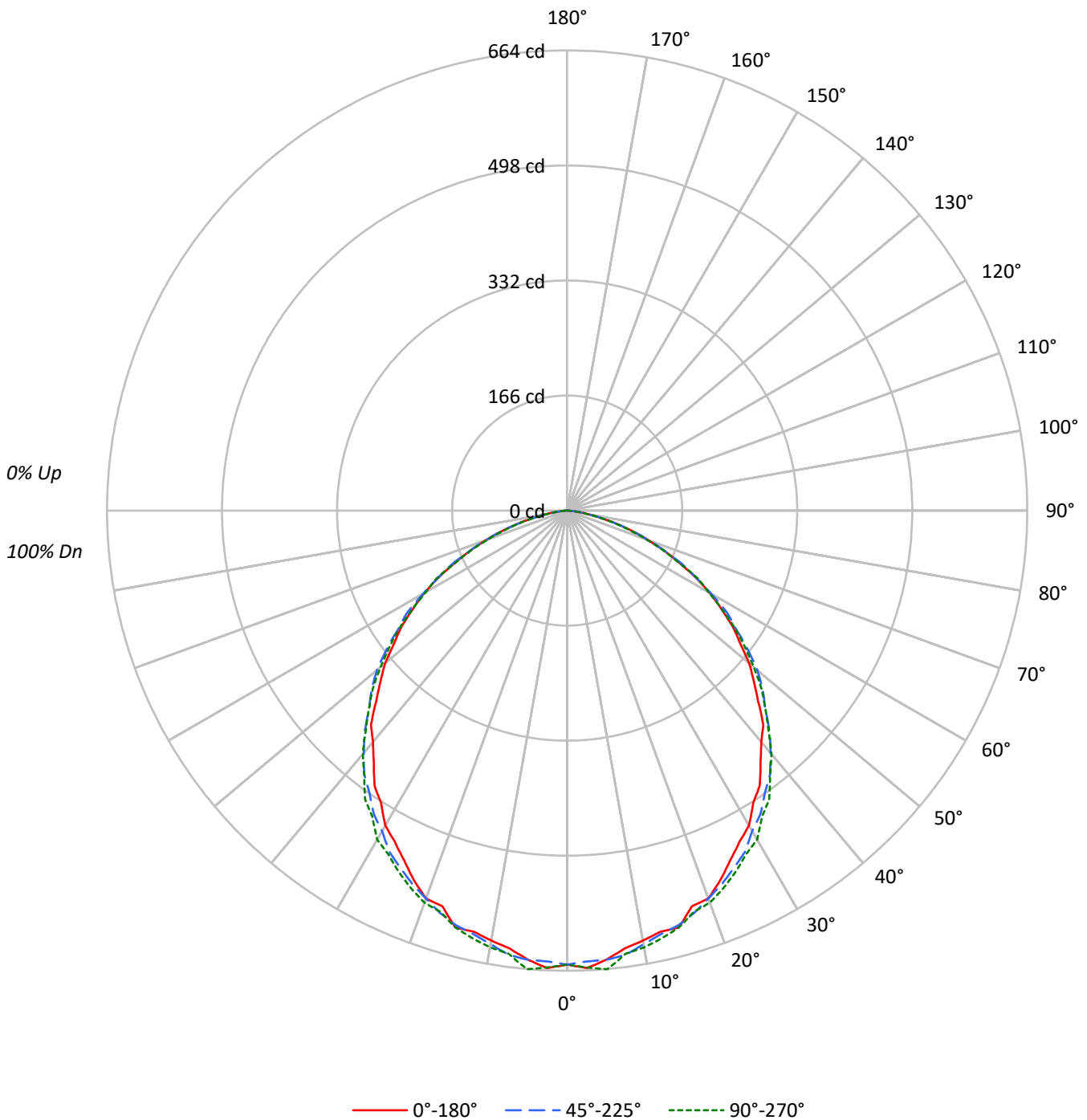
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1763	1763	1763
5°	1757	1758	1795
10°	1721	1736	1749
15°	1735	1726	1735
20°	1706	1706	1724
25°	1653	1689	1708
30°	1630	1659	1703
35°	1592	1634	1670
40°	1530	1604	1611
45°	1484	1537	1539
50°	1435	1500	1471
55°	1368	1394	1384
60°	1279	1292	1268
65°	1140	1169	1132
70°	978	982	954
75°	775	773	743
80°	519	505	485
85°	281	281	262

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1576 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.6	3.7
10°-20°	174.6	10.6
20°-30°	261.6	15.8
30°-40°	310.1	18.8
40°-50°	310.7	18.8
50°-60°	263.7	16.0
60°-70°	177.8	10.8
70°-80°	78.1	4.7
80°-90°	12.7	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°	497.9	30.2
0°-40°	808.0	48.9
0°-60°	1382.4	83.7
0°-90°	1651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	650	649	651	649	664	61
15°	623	616	619	623	623	174
25°	557	560	569	576	575	257
35°	485	486	497	509	508	301
45°	390	397	404	414	404	302
55°	292	290	297	295	295	259
65°	179	177	184	177	178	178
75°	74	73	74	69	72	80
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°	655.1	655.1	655.1	655.1	655.1
2.5°	660.7	655.8	651.1	656.5	659.8
5°	650.4	648.9	650.7	648.7	664.4
7.5°	637.1	642.9	646.3	644.2	645.1
10°	630.0	627.9	635.5	640.7	639.9
12.5°	622.3	625.4	625.8	631.5	632.0
15°	622.8	615.6	619.4	622.6	622.8
17.5°	598.6	606.4	609.0	616.3	607.2
20°	595.6	589.9	595.6	603.1	602.0
22.5°	577.4	571.1	583.3	589.9	589.5
25°	556.8	559.8	569.0	576.4	575.2
27.5°	538.7	542.2	555.3	565.5	558.9
30°	524.7	523.0	534.0	543.1	548.2
32.5°	499.8	506.2	519.1	528.1	523.3
35°	484.6	486.1	497.3	508.8	508.5
37.5°	458.2	464.9	480.7	483.9	480.9
40°	435.6	442.3	456.6	460.0	458.6
42.5°	418.9	420.1	432.4	436.4	430.0
45°	389.9	397.2	403.8	414.2	404.4
47.5°	365.2	368.6	382.8	385.6	380.4
50°	342.8	344.0	358.3	354.8	351.4
52.5°	314.6	319.6	327.7	327.0	323.0
55°	291.5	289.5	297.1	295.1	295.0
57.5°	263.6	267.0	273.3	270.1	264.9
60°	237.6	237.7	240.0	236.3	235.6
62.5°	208.6	209.6	210.1	205.6	212.9
65°	179.1	176.7	183.6	176.6	177.8
67.5°	151.9	153.1	152.4	148.0	149.7
70°	124.3	125.9	124.8	119.8	121.3
72.5°	99.1	97.3	98.5	92.2	95.1
75°	74.5	73.0	74.3	69.1	71.5
77.5°	50.7	51.9	51.1	48.3	49.9
80°	33.5	32.6	32.6	31.0	31.3
82.5°	19.5	18.6	18.4	17.8	18.6
85°	9.1	8.9	9.1	8.8	8.5
87.5°	3.3	3.4	3.4	3.2	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)