

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: P560221

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560221
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-12-2-LD4-2HI-35-UNV-82-96-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3450.0 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

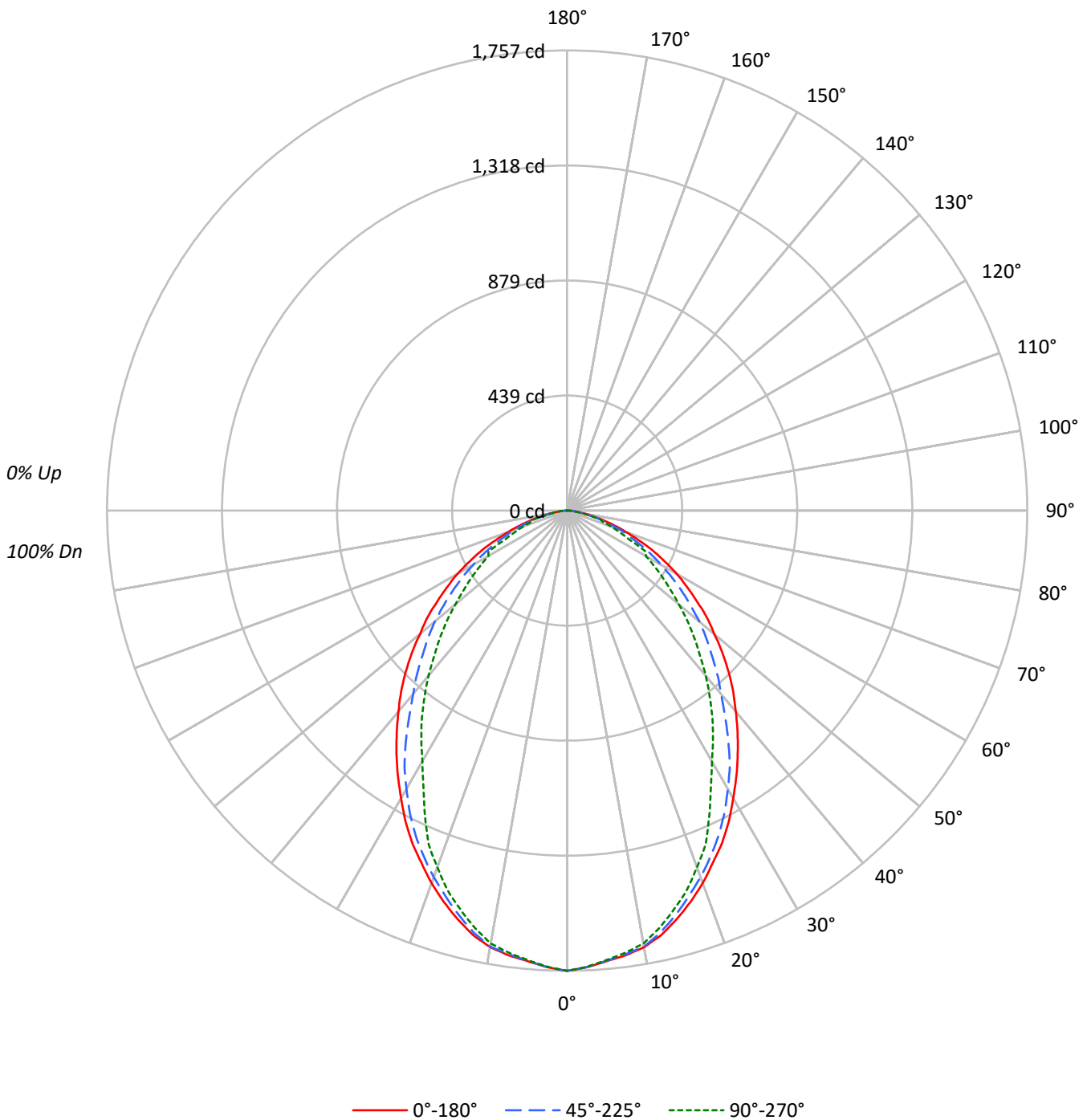
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9458	9458	9458
5°	9330	9319	9307
10°	9249	9237	9171
15°	9000	8909	8785
20°	8669	8529	8297
25°	8312	8131	7625
30°	7879	7626	6868
35°	7462	7048	6354
40°	7037	6423	5781
45°	6634	5938	5227
50°	6141	5512	4661
55°	5681	4995	4175
60°	5204	4462	3739
65°	4579	3907	3312
70°	3772	3421	2814
75°	2999	2620	2747
80°	2015	1888	1764
85°	1254	1507	1754

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6634 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.6	4.7
10°-20°	449.0	13.0
20°-30°	621.5	18.0
30°-40°	662.7	19.2
40°-50°	604.6	17.5
50°-60°	473.7	13.7
60°-70°	308.7	8.9
70°-80°	136.8	4.0
80°-90°	29.4	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°	1234.1	35.8
0°-40°	1896.8	55.0
0°-60°	2975.1	86.2
0°-90°	3450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1757	1757	1757	1757	1757	
5°	1727	1725	1725	1723	1723	164
15°	1615	1615	1599	1583	1577	454
25°	1400	1392	1369	1321	1284	643
35°	1136	1128	1073	991	967	710
45°	872	853	780	715	687	671
55°	605	587	532	469	445	543
65°	360	339	307	313	260	354
75°	144	134	126	120	132	155
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1757.4	1757.4	1757.4	1757.4	1757.4
2.5°	1745.2	1745.2	1745.2	1743.2	1743.2
5°	1726.9	1724.9	1724.9	1722.8	1722.8
7.5°	1712.7	1710.7	1708.6	1706.6	1702.5
10°	1692.4	1692.4	1690.3	1680.2	1678.1
12.5°	1659.9	1657.8	1649.7	1635.5	1631.4
15°	1615.2	1615.2	1598.9	1582.7	1576.6
17.5°	1566.4	1564.4	1544.1	1527.8	1519.7
20°	1513.6	1509.5	1489.2	1462.8	1448.6
22.5°	1454.7	1454.7	1430.3	1395.7	1381.5
25°	1399.8	1391.7	1369.3	1320.6	1284.0
27.5°	1336.8	1324.6	1300.3	1231.2	1188.5
30°	1267.8	1261.7	1227.1	1137.7	1105.2
32.5°	1202.7	1192.6	1156.0	1062.6	1036.1
35°	1135.7	1127.6	1072.7	991.4	967.1
37.5°	1068.7	1058.5	989.4	924.4	893.9
40°	1001.6	989.4	914.2	855.3	822.8
42.5°	938.6	922.4	849.2	786.3	749.7
45°	871.6	853.3	780.2	715.1	686.7
47.5°	804.5	788.3	721.2	654.2	621.7
50°	733.4	719.2	658.3	591.2	556.7
52.5°	674.5	652.2	593.2	526.2	497.8
55°	605.4	587.1	532.3	469.3	444.9
57.5°	542.5	524.2	473.4	414.5	394.1
60°	483.5	457.1	414.5	363.7	347.4
62.5°	418.5	398.2	361.6	319.0	339.3
65°	359.6	339.3	306.8	312.9	260.1
67.5°	294.6	284.4	256.0	227.5	219.4
70°	239.7	227.5	217.4	186.9	178.8
72.5°	191.0	178.8	164.6	148.3	142.2
75°	144.2	134.1	126.0	119.9	132.1
77.5°	99.6	95.5	89.4	83.3	81.3
80°	65.0	63.0	60.9	58.9	56.9
82.5°	38.6	38.6	38.6	38.6	38.6
85°	20.3	22.3	24.4	26.4	28.4
87.5°	12.2	12.2	14.2	16.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)