

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: P590607

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590607
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-LD4-3LO-50-UNV-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4360.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

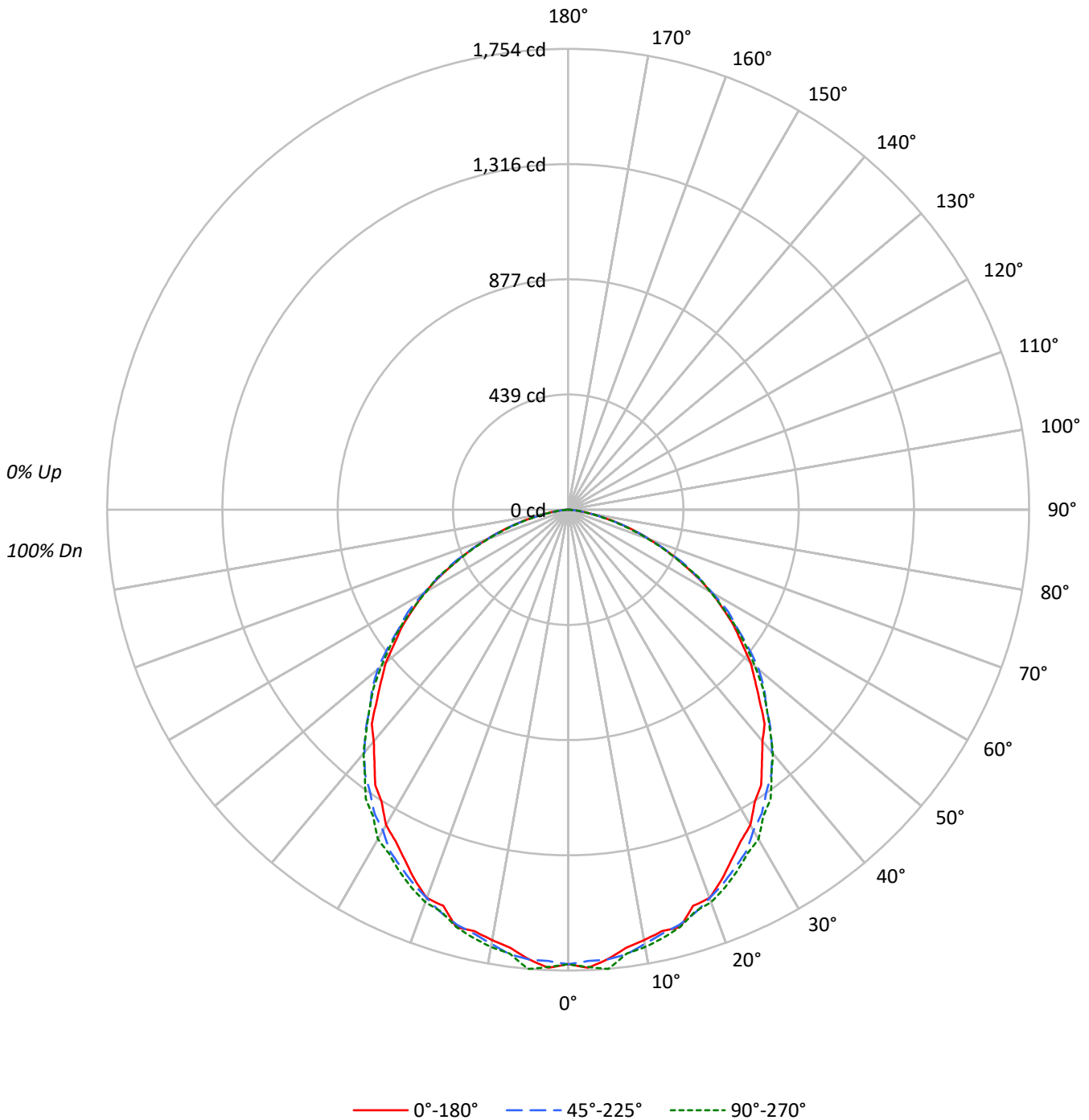
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4655	4655	4655
5°	4640	4642	4739
10°	4546	4585	4618
15°	4582	4557	4582
20°	4504	4504	4552
25°	4366	4461	4510
30°	4306	4382	4498
35°	4205	4315	4412
40°	4041	4235	4254
45°	3919	4058	4064
50°	3790	3961	3885
55°	3611	3681	3655
60°	3377	3411	3349
65°	3011	3088	2989
70°	2583	2592	2520
75°	2046	2041	1962
80°	1371	1333	1280
85°	744	738	689

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4163 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.7	3.7
10°-20°	461.2	10.6
20°-30°	691.0	15.8
30°-40°	818.9	18.8
40°-50°	820.4	18.8
50°-60°	696.4	16.0
60°-70°	469.5	10.8
70°-80°	206.3	4.7
80°-90°	33.5	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°	1314.9	30.2
0°-40°	2133.8	48.9
0°-60°	3650.6	83.7
0°-90°	4360.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4360.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1730	1730	1730	1730	1730	
5°	1718	1714	1718	1713	1754	162
15°	1645	1626	1636	1644	1645	458
25°	1470	1478	1503	1522	1519	680
35°	1280	1284	1313	1344	1343	795
45°	1030	1049	1066	1094	1068	797
55°	770	765	785	779	779	685
65°	473	467	485	466	470	470
75°	197	193	196	182	189	211
85°	24	24	24	23	22	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1729.9	1729.9	1729.9	1729.9	1729.9
2.5°	1744.9	1731.7	1719.4	1733.7	1742.4
5°	1717.7	1713.6	1718.3	1713.2	1754.5
7.5°	1682.4	1697.8	1706.7	1701.1	1703.6
10°	1663.6	1658.2	1678.1	1692.0	1690.0
12.5°	1643.5	1651.5	1652.7	1667.6	1669.0
15°	1644.6	1625.6	1635.7	1644.2	1644.8
17.5°	1580.7	1601.3	1608.2	1627.6	1603.5
20°	1572.9	1557.9	1572.9	1592.8	1589.7
22.5°	1524.9	1508.1	1540.3	1557.9	1556.8
25°	1470.4	1478.4	1502.6	1522.2	1519.1
27.5°	1422.6	1432.0	1466.4	1493.4	1476.0
30°	1385.7	1381.0	1410.1	1434.2	1447.6
32.5°	1319.8	1336.8	1370.8	1394.7	1381.9
35°	1279.9	1283.7	1313.4	1343.7	1342.9
37.5°	1210.0	1227.6	1269.4	1277.9	1270.0
40°	1150.3	1168.0	1205.7	1214.9	1211.1
42.5°	1106.3	1109.4	1141.8	1152.3	1135.6
45°	1029.7	1048.9	1066.3	1093.8	1067.9
47.5°	964.5	973.4	1010.9	1018.3	1004.7
50°	905.3	908.4	946.2	937.0	928.1
52.5°	830.9	844.1	865.3	863.5	853.0
55°	769.7	764.6	784.7	779.3	779.1
57.5°	696.2	705.2	721.7	713.2	699.6
60°	627.4	627.6	633.7	624.1	622.3
62.5°	550.8	553.5	554.8	543.0	562.2
65°	472.9	466.6	484.9	466.4	469.5
67.5°	401.2	404.3	402.5	390.9	395.4
70°	328.3	332.4	329.5	316.3	320.3
72.5°	261.8	256.9	260.0	243.5	251.1
75°	196.8	192.8	196.3	182.5	188.7
77.5°	134.0	137.1	134.9	127.5	131.8
80°	88.5	86.0	86.0	81.8	82.6
82.5°	51.6	49.1	48.5	47.1	49.1
85°	24.1	23.5	23.9	23.2	22.3
87.5°	8.7	8.9	8.9	8.5	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)