

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: P590588

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590588
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4291.0 lumens
Efficiency: N/A
Efficacy: 122.3 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

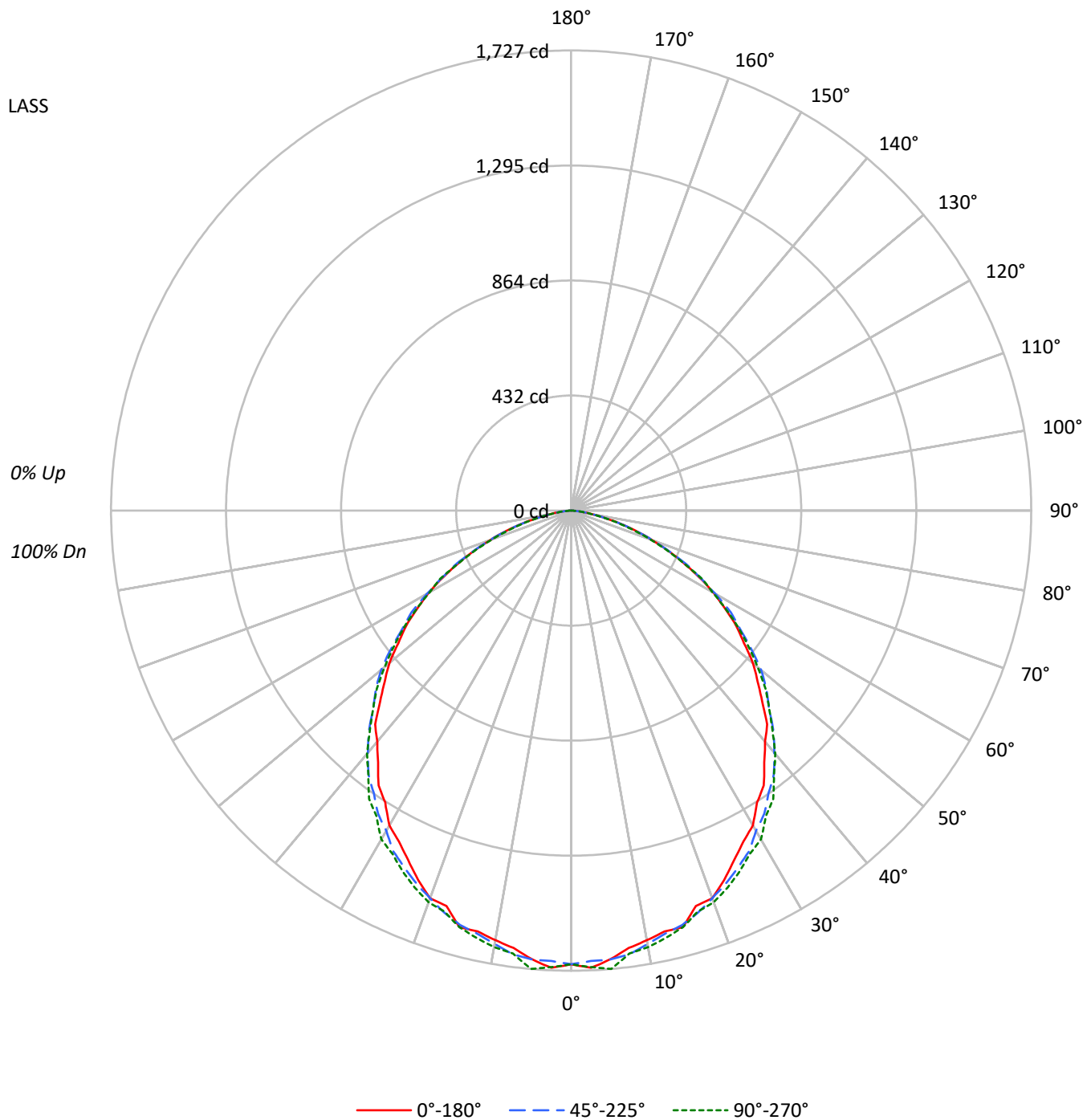
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4582	4582	4582
5°	4566	4568	4664
10°	4474	4513	4545
15°	4509	4485	4510
20°	4433	4433	4480
25°	4297	4391	4439
30°	4238	4312	4427
35°	4138	4246	4342
40°	3977	4168	4187
45°	3857	3994	4000
50°	3730	3898	3824
55°	3554	3623	3598
60°	3323	3356	3296
65°	2963	3039	2942
70°	2542	2551	2480
75°	2014	2009	1932
80°	1350	1311	1260
85°	732	726	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4097 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.2	3.7
10°-20°	453.9	10.6
20°-30°	680.0	15.8
30°-40°	806.0	18.8
40°-50°	807.5	18.8
50°-60°	685.4	16.0
60°-70°	462.1	10.8
70°-80°	203.0	4.7
80°-90°	33.0	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°	1294.1	30.2
0°-40°	2100.0	48.9
0°-60°	3592.9	83.7
0°-90°	4291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1703	1703	1703	1703	1703	
5°	1690	1686	1691	1686	1727	159
15°	1619	1600	1610	1618	1619	451
25°	1447	1455	1479	1498	1495	669
35°	1260	1263	1293	1322	1322	782
45°	1013	1032	1050	1076	1051	784
55°	758	752	772	767	767	674
65°	465	459	477	459	462	463
75°	194	190	193	180	186	208
85°	24	23	24	23	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1702.6	1702.6	1702.6	1702.6	1702.6
2.5°	1717.3	1704.3	1692.2	1706.3	1714.9
5°	1690.5	1686.5	1691.1	1686.1	1726.7
7.5°	1655.7	1670.9	1679.7	1674.2	1676.6
10°	1637.3	1632.0	1651.6	1665.2	1663.2
12.5°	1617.5	1625.4	1626.5	1641.2	1642.5
15°	1618.6	1599.9	1609.8	1618.1	1618.8
17.5°	1555.7	1575.9	1582.8	1601.9	1578.1
20°	1548.0	1533.3	1548.0	1567.6	1564.5
22.5°	1500.8	1484.3	1515.9	1533.3	1532.2
25°	1447.1	1455.0	1478.8	1498.1	1495.0
27.5°	1400.1	1409.3	1443.2	1469.8	1452.6
30°	1363.8	1359.2	1387.8	1411.5	1424.7
32.5°	1299.0	1315.7	1349.1	1372.6	1360.1
35°	1259.6	1263.3	1292.6	1322.5	1321.6
37.5°	1190.8	1208.2	1249.3	1257.6	1249.9
40°	1132.1	1149.5	1186.6	1195.6	1191.9
42.5°	1088.8	1091.9	1123.8	1134.1	1117.6
45°	1013.4	1032.3	1049.5	1076.5	1051.0
47.5°	949.2	958.0	994.9	1002.2	988.8
50°	891.0	894.0	931.2	922.2	913.4
52.5°	817.8	830.7	851.6	849.9	839.5
55°	757.5	752.5	772.3	767.0	766.8
57.5°	685.2	694.0	710.3	701.9	688.5
60°	617.5	617.7	623.6	614.2	612.4
62.5°	542.1	544.7	546.1	534.4	553.3
65°	465.4	459.2	477.2	459.0	462.1
67.5°	394.8	397.9	396.1	384.7	389.1
70°	323.1	327.1	324.2	311.3	315.2
72.5°	257.6	252.8	255.9	239.6	247.1
75°	193.7	189.7	193.2	179.6	185.8
77.5°	131.9	135.0	132.8	125.5	129.7
80°	87.1	84.6	84.6	80.5	81.3
82.5°	50.8	48.4	47.7	46.4	48.4
85°	23.7	23.1	23.5	22.9	22.0
87.5°	8.6	8.8	8.8	8.4	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)