

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: P590608

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590608
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-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4218.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

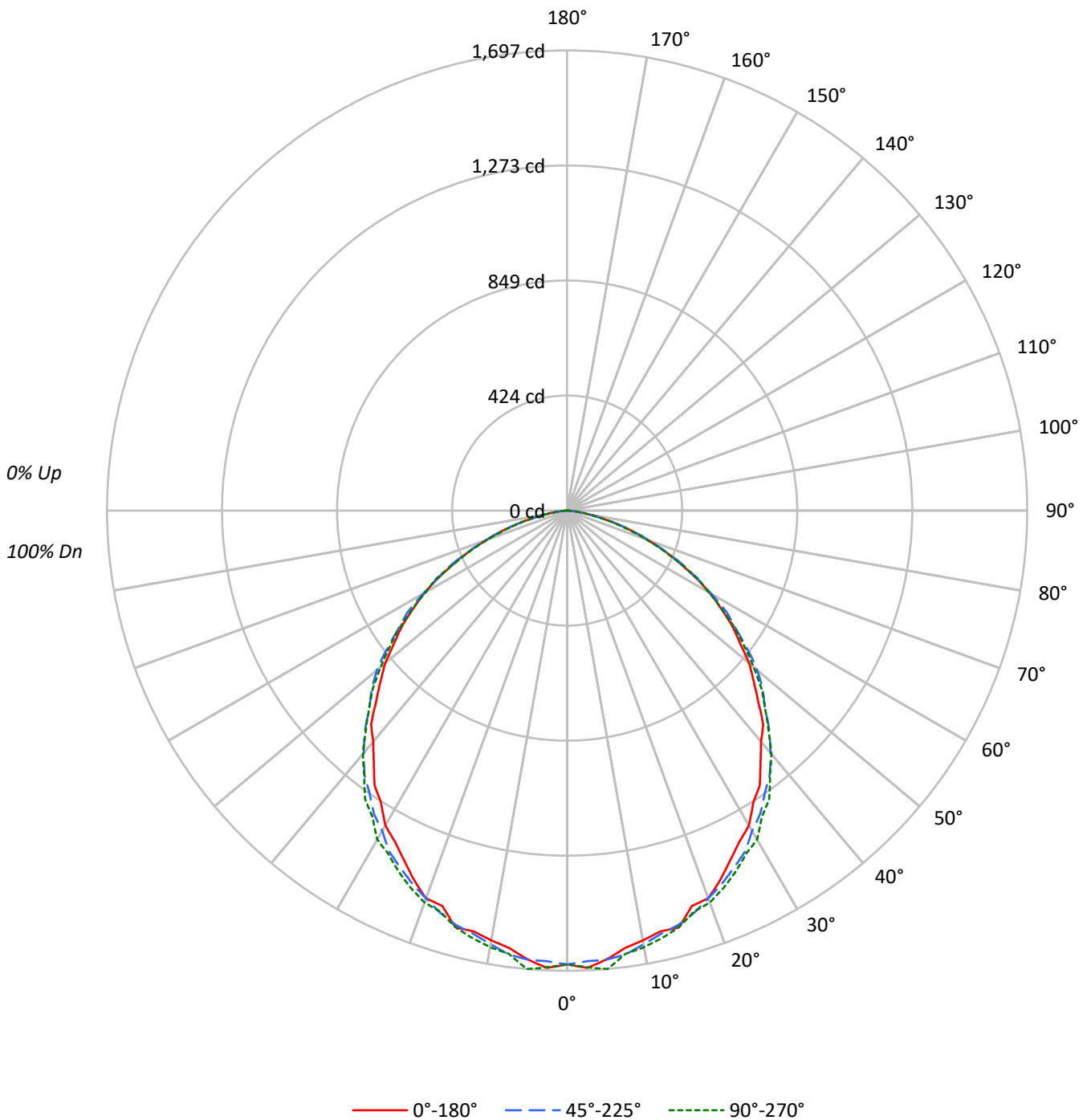
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4504	4504	4504
5°	4489	4491	4585
10°	4398	4436	4467
15°	4433	4408	4433
20°	4358	4358	4404
25°	4224	4316	4363
30°	4166	4239	4352
35°	4068	4174	4268
40°	3909	4097	4116
45°	3791	3926	3932
50°	3666	3832	3759
55°	3493	3561	3536
60°	3267	3299	3240
65°	2913	2987	2892
70°	2499	2507	2438
75°	1980	1974	1899
80°	1327	1289	1240
85°	719	713	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4027 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.4	3.7
10°-20°	446.2	10.6
20°-30°	668.5	15.8
30°-40°	792.2	18.8
40°-50°	793.7	18.8
50°-60°	673.7	16.0
60°-70°	454.2	10.8
70°-80°	199.6	4.7
80°-90°	32.4	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°	1272.0	30.2
0°-40°	2064.3	48.9
0°-60°	3531.7	83.7
0°-90°	4218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4218.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1674	1674	1674	1674	1674	
5°	1662	1658	1662	1657	1697	157
15°	1591	1573	1582	1591	1591	443
25°	1422	1430	1454	1473	1470	658
35°	1238	1242	1271	1300	1299	769
45°	996	1015	1032	1058	1033	771
55°	745	740	759	754	754	662
65°	458	451	469	451	454	455
75°	190	186	190	176	183	204
85°	23	23	23	22	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1673.6	1673.6	1673.6	1673.6	1673.6
2.5°	1688.1	1675.3	1663.4	1677.3	1685.7
5°	1661.7	1657.8	1662.4	1657.4	1697.4
7.5°	1627.6	1642.5	1651.1	1645.7	1648.1
10°	1609.4	1604.2	1623.5	1636.9	1634.9
12.5°	1590.0	1597.7	1598.8	1613.3	1614.6
15°	1591.1	1572.7	1582.4	1590.6	1591.3
17.5°	1529.2	1549.1	1555.8	1574.6	1551.3
20°	1521.7	1507.2	1521.7	1540.9	1537.9
22.5°	1475.2	1459.0	1490.1	1507.2	1506.1
25°	1422.5	1430.3	1453.6	1472.6	1469.6
27.5°	1376.3	1385.3	1418.6	1444.8	1427.9
30°	1340.6	1336.1	1364.2	1387.5	1400.5
32.5°	1276.9	1293.3	1326.1	1349.2	1336.9
35°	1238.2	1241.9	1270.6	1300.0	1299.1
37.5°	1170.5	1187.6	1228.0	1236.2	1228.7
40°	1112.8	1129.9	1166.4	1175.3	1171.6
42.5°	1070.3	1073.3	1104.6	1114.8	1098.6
45°	996.2	1014.7	1031.6	1058.2	1033.1
47.5°	933.1	941.7	978.0	985.1	972.0
50°	875.8	878.8	915.3	906.5	897.8
52.5°	803.8	816.6	837.1	835.4	825.2
55°	744.6	739.7	759.1	753.9	753.7
57.5°	673.5	682.2	698.2	690.0	676.8
60°	607.0	607.2	613.0	603.7	602.0
62.5°	532.9	535.5	536.8	525.3	543.9
65°	457.5	451.4	469.1	451.2	454.2
67.5°	388.1	391.1	389.4	378.2	382.5
70°	317.6	321.5	318.7	306.0	309.9
72.5°	253.3	248.5	251.5	235.5	242.9
75°	190.4	186.5	189.9	176.5	182.6
77.5°	129.7	132.7	130.5	123.4	127.5
80°	85.6	83.2	83.2	79.1	80.0
82.5°	49.9	47.5	46.9	45.6	47.5
85°	23.3	22.7	23.1	22.5	21.6
87.5°	8.4	8.6	8.6	8.2	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)