

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: P590605

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590605
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-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4499.0 lumens
Efficiency: N/A
Efficacy: 128.2 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

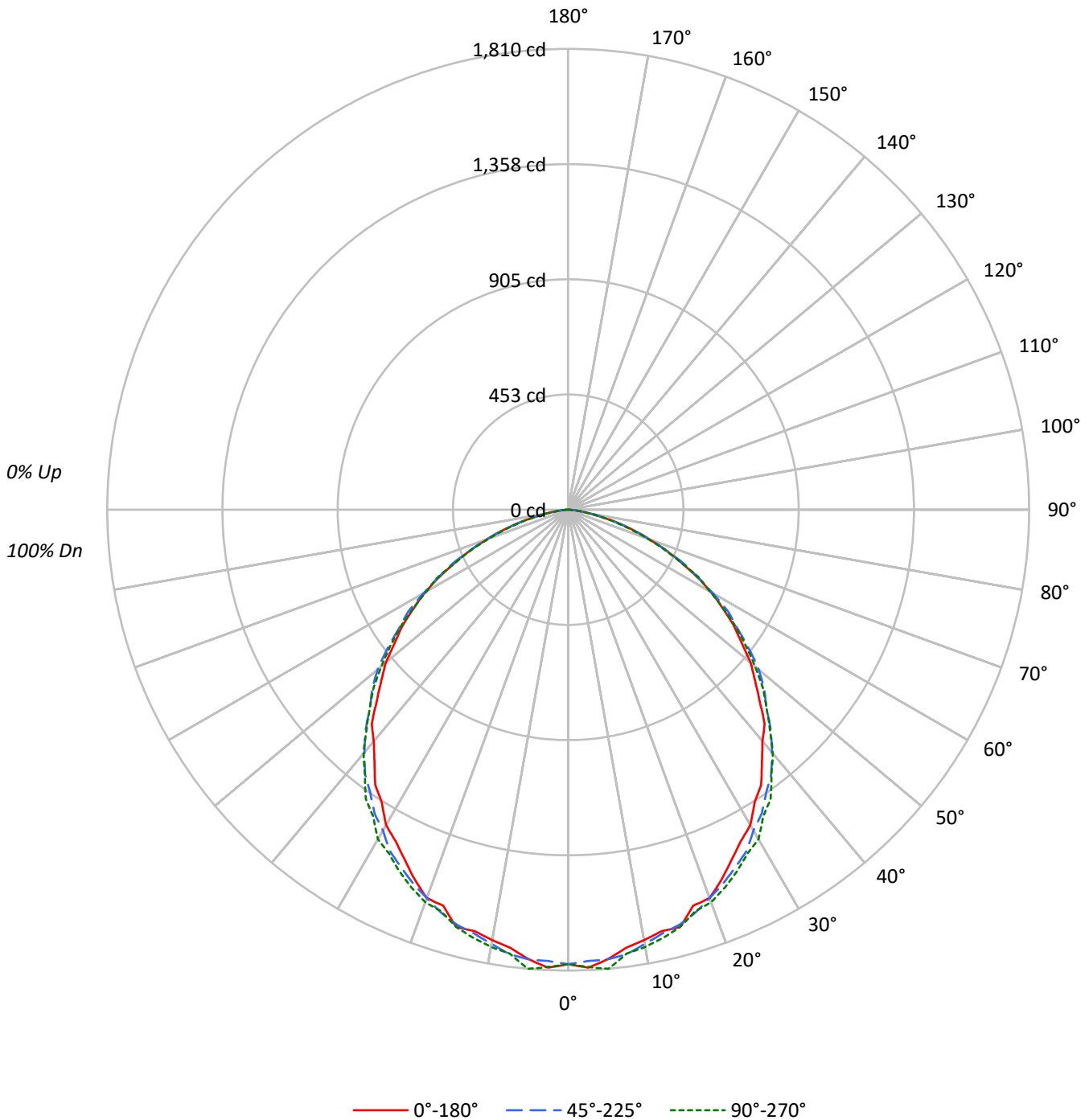
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4804	4804	4804
5°	4788	4790	4890
10°	4691	4732	4765
15°	4728	4702	4729
20°	4648	4648	4697
25°	4505	4604	4654
30°	4443	4521	4642
35°	4339	4452	4552
40°	4170	4370	4390
45°	4043	4187	4193
50°	3911	4087	4009
55°	3726	3799	3772
60°	3484	3519	3456
65°	3107	3186	3085
70°	2666	2675	2600
75°	2112	2106	2025
80°	1415	1375	1322
85°	769	763	710

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4295 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.9	3.7
10°-20°	475.9	10.6
20°-30°	713.0	15.8
30°-40°	845.0	18.8
40°-50°	846.6	18.8
50°-60°	718.6	16.0
60°-70°	484.5	10.8
70°-80°	212.9	4.7
80°-90°	34.6	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°	1356.8	30.2
0°-40°	2201.8	48.9
0°-60°	3767.0	83.7
0°-90°	4499.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4499.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1785	1785	1785	1785	1785	
5°	1772	1768	1773	1768	1810	167
15°	1697	1678	1688	1697	1697	473
25°	1517	1526	1550	1571	1568	701
35°	1321	1325	1355	1387	1386	820
45°	1062	1082	1100	1129	1102	822
55°	794	789	810	804	804	706
65°	488	482	500	481	484	485
75°	203	199	203	188	195	218
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1785.1	1785.1	1785.1	1785.1	1785.1
2.5°	1800.5	1786.9	1774.3	1789.0	1798.0
5°	1772.4	1768.3	1773.1	1767.8	1810.4
7.5°	1736.0	1751.9	1761.1	1755.4	1757.9
10°	1716.6	1711.1	1731.6	1745.9	1743.8
12.5°	1695.9	1704.2	1705.3	1720.8	1722.2
15°	1697.0	1677.5	1687.8	1696.6	1697.3
17.5°	1631.1	1652.3	1659.5	1679.5	1654.6
20°	1623.1	1607.6	1623.1	1643.6	1640.3
22.5°	1573.5	1556.2	1589.4	1607.6	1606.5
25°	1517.3	1525.6	1550.5	1570.7	1567.5
27.5°	1467.9	1477.6	1513.1	1541.0	1523.0
30°	1429.9	1425.1	1455.0	1479.9	1493.8
32.5°	1361.9	1379.4	1414.5	1439.1	1426.0
35°	1320.7	1324.6	1355.2	1386.6	1385.7
37.5°	1248.5	1266.7	1309.8	1318.6	1310.5
40°	1187.0	1205.2	1244.1	1253.6	1249.7
42.5°	1141.6	1144.8	1178.2	1189.1	1171.8
45°	1062.5	1082.3	1100.3	1128.7	1101.9
47.5°	995.2	1004.4	1043.2	1050.8	1036.7
50°	934.1	937.4	976.3	966.9	957.7
52.5°	857.4	871.0	892.9	891.0	880.2
55°	794.2	788.9	809.7	804.2	803.9
57.5°	718.4	727.6	744.7	735.9	721.9
60°	647.4	647.7	653.9	644.0	642.1
62.5°	568.4	571.1	572.5	560.3	580.1
65°	487.9	481.5	500.4	481.2	484.5
67.5°	413.9	417.2	415.3	403.3	408.0
70°	338.8	343.0	340.0	326.4	330.5
72.5°	270.1	265.1	268.3	251.2	259.1
75°	203.1	198.9	202.6	188.3	194.8
77.5°	138.3	141.5	139.2	131.6	136.0
80°	91.3	88.7	88.7	84.4	85.3
82.5°	53.2	50.7	50.0	48.6	50.7
85°	24.9	24.2	24.7	24.0	23.0
87.5°	9.0	9.2	9.2	8.8	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)