

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: P590542

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-93-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590542
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-35-UNV-93-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4293.0 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

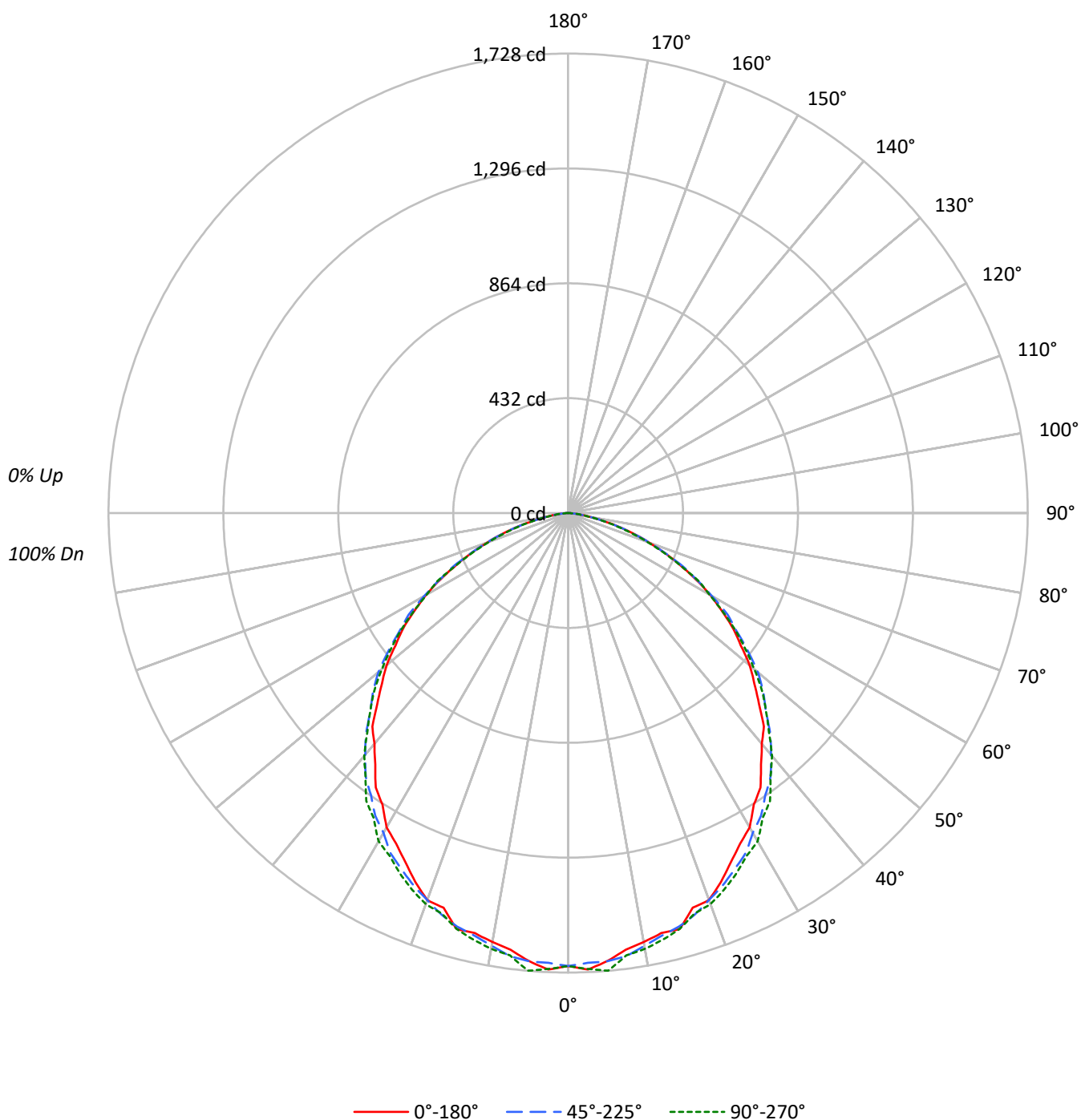
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	4584	4584	4584
5°	4569	4570	4666
10°	4476	4515	4547
15°	4511	4487	4512
20°	4435	4435	4482
25°	4299	4393	4441
30°	4240	4314	4429
35°	4140	4248	4344
40°	3979	4170	4189
45°	3859	3996	4002
50°	3732	3900	3826
55°	3556	3625	3599
60°	3325	3358	3298
65°	2965	3040	2944
70°	2544	2552	2482
75°	2015	2010	1932
80°	1350	1313	1261
85°	735	726	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 4099 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.2	3.7
10°-20°	454.1	10.6
20°-30°	680.3	15.8
30°-40°	806.3	18.8
40°-50°	807.8	18.8
50°-60°	685.7	16.0
60°-70°	462.3	10.8
70°-80°	203.1	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°	1294.7	30.2
0°-40°	2101.0	48.9
0°-60°	3594.5	83.7
0°-90°	4293.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4293.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1703	1703	1703	1703	1703	
5°	1691	1687	1692	1687	1728	159
15°	1619	1601	1610	1619	1620	451
25°	1448	1456	1480	1499	1496	669
35°	1260	1264	1293	1323	1322	782
45°	1014	1033	1050	1077	1052	784
55°	758	753	773	767	767	674
65°	466	459	478	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°	1703.4	1703.4	1703.4	1703.4	1703.4
2.5°	1718.1	1705.1	1693.0	1707.1	1715.7
5°	1691.3	1687.3	1691.9	1686.9	1727.5
7.5°	1656.5	1671.7	1680.5	1675.0	1677.4
10°	1638.0	1632.8	1652.3	1666.0	1664.0
12.5°	1618.2	1626.2	1627.3	1642.0	1643.3
15°	1619.3	1600.6	1610.5	1618.9	1619.6
17.5°	1556.4	1576.7	1583.5	1602.6	1578.9
20°	1548.7	1534.0	1548.7	1568.3	1565.2
22.5°	1501.5	1485.0	1516.6	1534.0	1532.9
25°	1447.8	1455.7	1479.5	1498.8	1495.7
27.5°	1400.7	1410.0	1443.8	1470.4	1453.3
30°	1364.4	1359.8	1388.4	1412.2	1425.4
32.5°	1299.6	1316.3	1349.7	1373.2	1360.7
35°	1260.2	1263.9	1293.2	1323.1	1322.2
37.5°	1191.4	1208.7	1249.9	1258.2	1250.5
40°	1132.6	1150.0	1187.2	1196.2	1192.5
42.5°	1089.3	1092.4	1124.3	1134.6	1118.1
45°	1013.9	1032.8	1049.9	1077.0	1051.5
47.5°	949.7	958.5	995.4	1002.7	989.2
50°	891.4	894.5	931.6	922.6	913.8
52.5°	818.1	831.1	852.0	850.2	839.9
55°	757.9	752.8	772.6	767.3	767.1
57.5°	685.5	694.3	710.6	702.2	688.8
60°	617.8	618.0	623.9	614.5	612.7
62.5°	542.3	545.0	546.3	534.6	553.6
65°	465.6	459.4	477.5	459.2	462.3
67.5°	395.0	398.1	396.3	384.9	389.3
70°	323.3	327.3	324.4	311.4	315.4
72.5°	257.8	252.9	256.0	239.7	247.2
75°	193.8	189.8	193.3	179.7	185.8
77.5°	132.0	135.0	132.8	125.6	129.8
80°	87.1	84.7	84.7	80.5	81.4
82.5°	50.8	48.4	47.7	46.4	48.4
85°	23.8	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)