

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: P590151

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590151
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-LD4-2HI-35-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4314.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

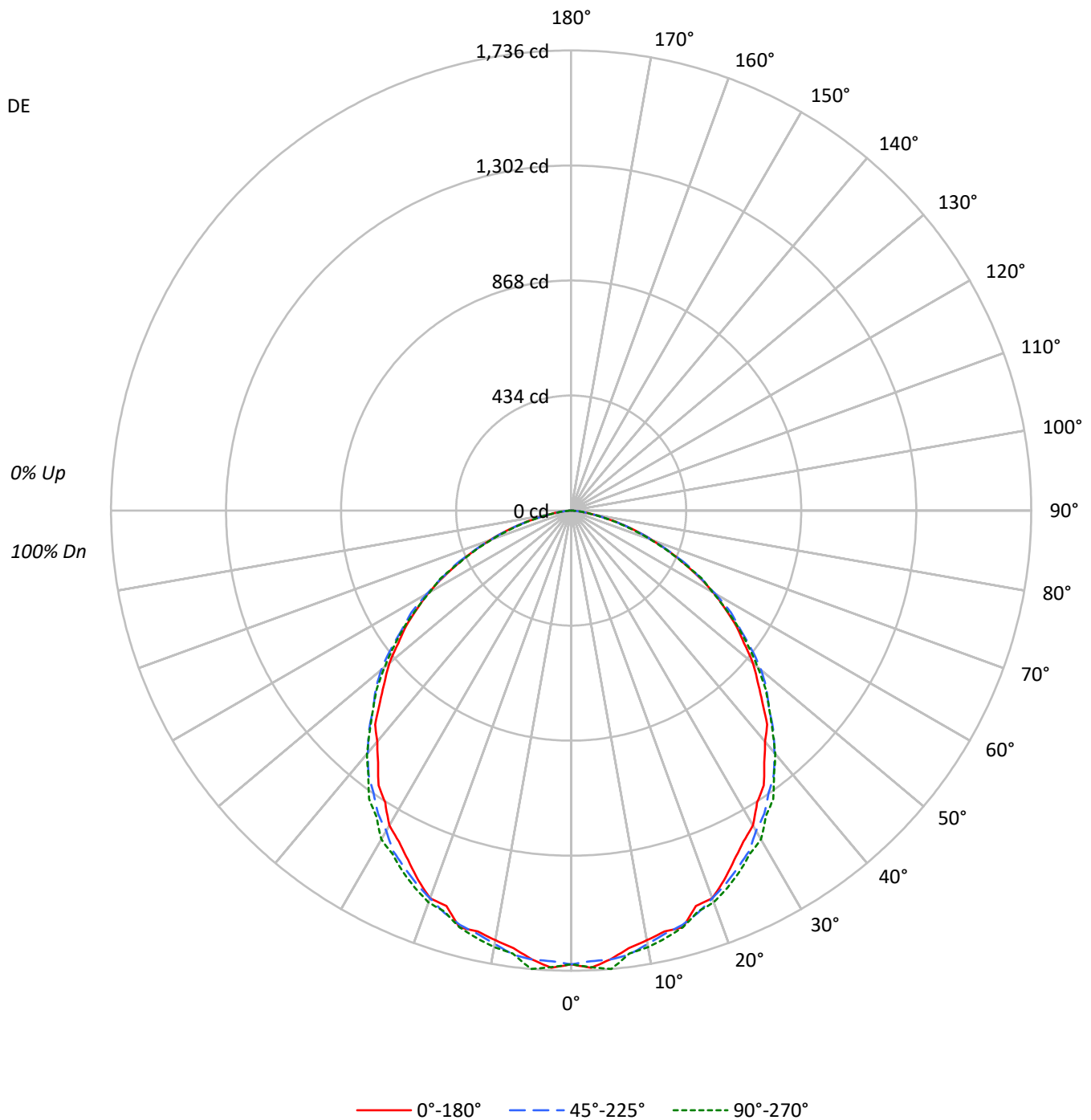
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	4606	4606	4606
5°	4591	4593	4689
10°	4498	4537	4569
15°	4534	4509	4534
20°	4457	4457	4504
25°	4320	4414	4463
30°	4260	4335	4451
35°	4160	4269	4365
40°	3998	4191	4209
45°	3877	4015	4021
50°	3750	3919	3844
55°	3573	3643	3617
60°	3341	3374	3314
65°	2979	3055	2958
70°	2556	2565	2493
75°	2024	2020	1941
80°	1356	1319	1268
85°	738	729	682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4119 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.0	3.7
10°-20°	456.3	10.6
20°-30°	683.7	15.8
30°-40°	810.3	18.8
40°-50°	811.8	18.8
50°-60°	689.1	16.0
60°-70°	464.6	10.8
70°-80°	204.1	4.7
80°-90°	33.2	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°	1301.0	30.2
0°-40°	2111.3	48.9
0°-60°	3612.1	83.7
0°-90°	4314.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4314.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1712	1712	1712	1712	1712	
5°	1700	1696	1700	1695	1736	160
15°	1627	1608	1618	1627	1628	453
25°	1455	1463	1487	1506	1503	673
35°	1266	1270	1300	1330	1329	786
45°	1019	1038	1055	1082	1057	788
55°	762	756	776	771	771	677
65°	468	462	480	462	465	465
75°	195	191	194	181	187	209
85°	24	23	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°	1711.7	1711.7	1711.7	1711.7	1711.7
2.5°	1726.5	1713.5	1701.3	1715.4	1724.1
5°	1699.5	1695.6	1700.2	1695.1	1736.0
7.5°	1664.6	1679.9	1688.7	1683.2	1685.6
10°	1646.0	1640.7	1660.4	1674.1	1672.1
12.5°	1626.2	1634.1	1635.2	1650.0	1651.4
15°	1627.3	1608.5	1618.4	1626.8	1627.5
17.5°	1564.1	1584.4	1591.2	1610.5	1586.6
20°	1556.3	1541.5	1556.3	1576.0	1572.9
22.5°	1508.8	1492.2	1524.1	1541.5	1540.4
25°	1454.9	1462.8	1486.7	1506.2	1503.1
27.5°	1407.6	1416.9	1450.9	1477.6	1460.4
30°	1371.1	1366.5	1395.2	1419.1	1432.3
32.5°	1305.9	1322.7	1356.3	1380.0	1367.4
35°	1266.4	1270.1	1299.5	1329.6	1328.7
37.5°	1197.2	1214.6	1256.0	1264.4	1256.6
40°	1138.2	1155.6	1193.0	1202.0	1198.3
42.5°	1094.6	1097.7	1129.8	1140.2	1123.6
45°	1018.8	1037.8	1055.1	1082.3	1056.6
47.5°	954.3	963.1	1000.3	1007.6	994.1
50°	895.7	898.8	936.2	927.1	918.3
52.5°	822.1	835.2	856.2	854.4	844.0
55°	761.6	756.5	776.4	771.1	770.9
57.5°	688.9	697.7	714.1	705.7	692.2
60°	620.8	621.0	627.0	617.5	615.7
62.5°	545.0	547.7	549.0	537.3	556.3
65°	467.9	461.7	479.8	461.5	464.6
67.5°	396.9	400.0	398.3	386.8	391.2
70°	324.9	328.9	326.0	312.9	316.9
72.5°	259.0	254.2	257.3	240.9	248.4
75°	194.7	190.7	194.3	180.6	186.7
77.5°	132.6	135.7	133.5	126.2	130.4
80°	87.5	85.1	85.1	80.9	81.8
82.5°	51.1	48.6	48.0	46.6	48.6
85°	23.9	23.2	23.6	23.0	22.1
87.5°	8.6	8.8	8.8	8.4	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)