

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: P590157

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590157
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4796.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

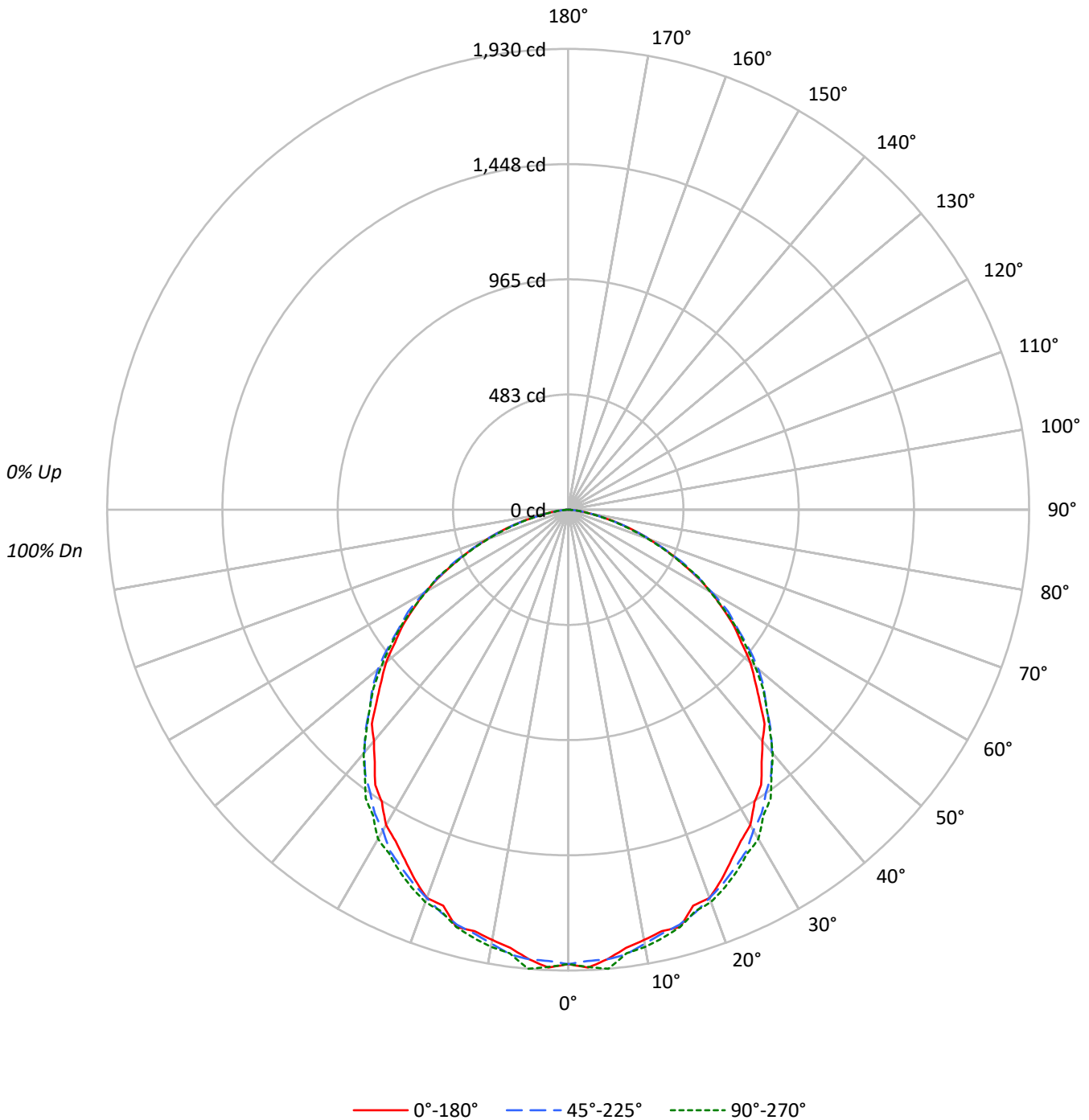
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5121	5121	5121
5°	5104	5106	5213
10°	5000	5044	5080
15°	5040	5012	5041
20°	4955	4955	5007
25°	4802	4907	4961
30°	4736	4820	4948
35°	4625	4746	4852
40°	4445	4659	4680
45°	4311	4464	4470
50°	4169	4357	4274
55°	3972	4049	4021
60°	3715	3751	3684
65°	3312	3396	3289
70°	2842	2851	2772
75°	2251	2246	2158
80°	1508	1466	1409
85°	818	812	760

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4579 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.0	3.7
10°-20°	507.3	10.6
20°-30°	760.1	15.8
30°-40°	900.8	18.8
40°-50°	902.5	18.8
50°-60°	766.1	16.0
60°-70°	516.5	10.8
70°-80°	226.9	4.7
80°-90°	36.9	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°	1446.4	30.2
0°-40°	2347.2	48.9
0°-60°	4015.7	83.7
0°-90°	4796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1903	1903	1903	1903	1903	
5°	1889	1885	1890	1884	1930	178
15°	1809	1788	1799	1809	1809	504
25°	1617	1626	1653	1674	1671	748
35°	1408	1412	1445	1478	1477	874
45°	1133	1154	1173	1203	1175	876
55°	847	841	863	857	857	753
65°	520	513	533	513	516	517
75°	216	212	216	201	208	232
85°	26	26	26	26	25	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1902.9	1902.9	1902.9	1902.9	1902.9
2.5°	1919.4	1904.9	1891.4	1907.1	1916.7
5°	1889.4	1885.0	1890.2	1884.5	1930.0
7.5°	1850.6	1867.6	1877.4	1871.2	1873.9
10°	1830.0	1824.1	1845.9	1861.2	1859.0
12.5°	1807.8	1816.7	1817.9	1834.4	1835.9
15°	1809.1	1788.2	1799.2	1808.6	1809.3
17.5°	1738.8	1761.4	1769.0	1790.4	1763.9
20°	1730.2	1713.7	1730.2	1752.1	1748.6
22.5°	1677.4	1659.0	1694.3	1713.7	1712.5
25°	1617.4	1626.3	1652.8	1674.4	1671.0
27.5°	1564.9	1575.2	1613.0	1642.7	1623.6
30°	1524.3	1519.2	1551.1	1577.6	1592.4
32.5°	1451.8	1470.5	1507.8	1534.1	1520.1
35°	1407.9	1412.0	1444.7	1478.1	1477.1
37.5°	1330.9	1350.4	1396.3	1405.6	1397.0
40°	1265.3	1284.8	1326.3	1336.4	1332.2
42.5°	1216.9	1220.4	1256.0	1267.6	1249.1
45°	1132.7	1153.8	1173.0	1203.2	1174.7
47.5°	1060.9	1070.8	1112.0	1120.1	1105.1
50°	995.8	999.3	1040.8	1030.7	1020.9
52.5°	914.0	928.5	951.8	949.9	938.3
55°	846.7	841.0	863.1	857.2	857.0
57.5°	765.8	775.7	793.9	784.5	769.5
60°	690.2	690.4	697.0	686.5	684.5
62.5°	605.9	608.8	610.3	597.3	618.4
65°	520.1	513.3	533.4	513.0	516.5
67.5°	441.3	444.7	442.7	430.0	434.9
70°	361.2	365.6	362.4	347.9	352.3
72.5°	288.0	282.6	286.0	267.8	276.2
75°	216.5	212.0	216.0	200.7	207.6
77.5°	147.4	150.9	148.4	140.3	145.0
80°	97.3	94.6	94.6	89.9	90.9
82.5°	56.8	54.1	53.3	51.8	54.1
85°	26.5	25.8	26.3	25.6	24.6
87.5°	9.6	9.8	9.8	9.3	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)