

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: P590162

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590162
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-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4807.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

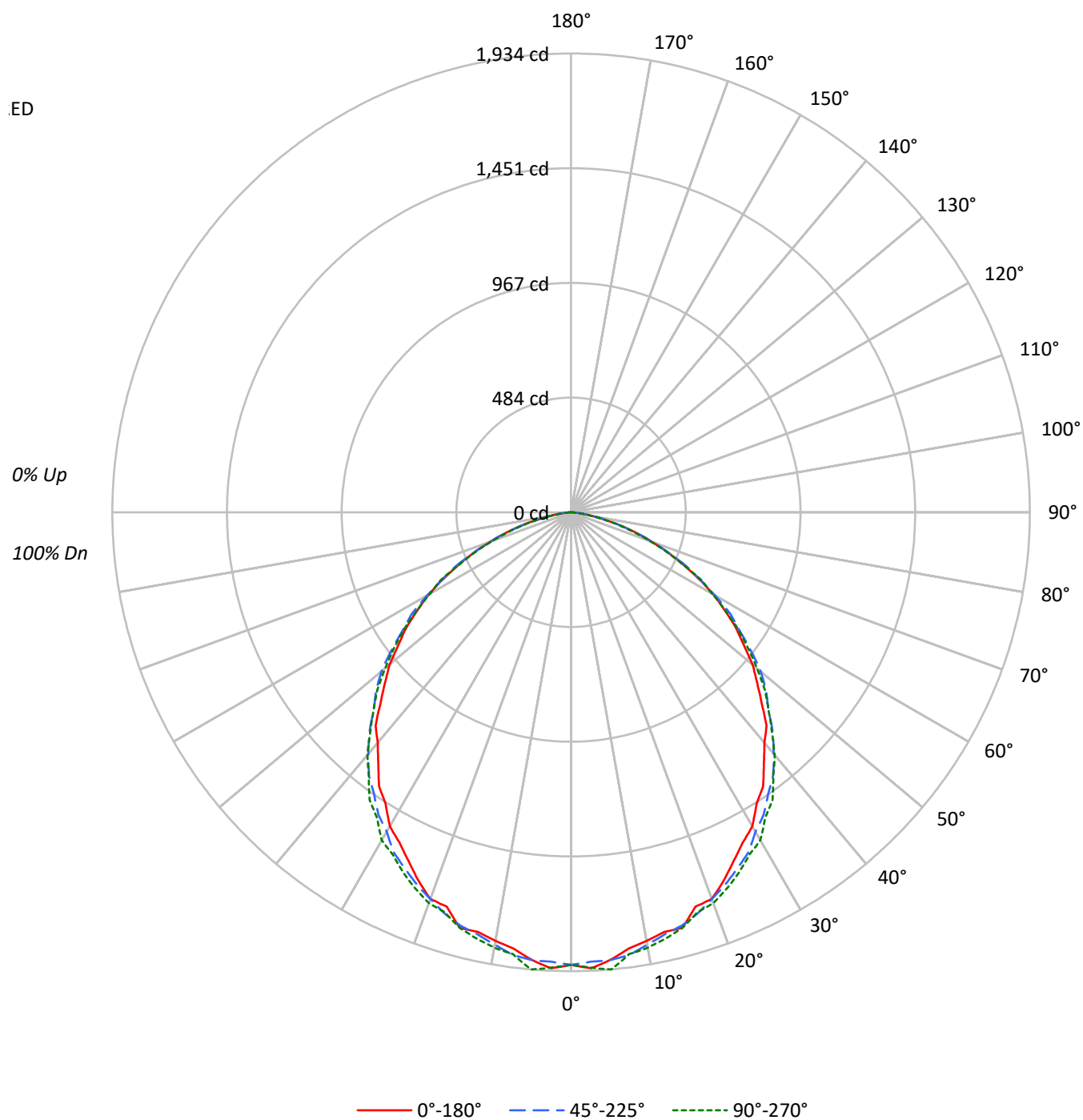
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	5133	5133	5133
5°	5116	5118	5225
10°	5012	5056	5091
15°	5051	5024	5052
20°	4966	4966	5019
25°	4813	4919	4973
30°	4747	4831	4959
35°	4636	4757	4864
40°	4455	4670	4690
45°	4321	4474	4481
50°	4178	4367	4284
55°	3981	4059	4030
60°	3723	3760	3693
65°	3319	3404	3296
70°	2848	2858	2778
75°	2256	2251	2164
80°	1511	1469	1412
85°	821	812	760

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 4589 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.4	3.7
10°-20°	508.5	10.6
20°-30°	761.8	15.8
30°-40°	902.9	18.8
40°-50°	904.6	18.8
50°-60°	767.8	16.0
60°-70°	517.7	10.8
70°-80°	227.5	4.7
80°-90°	37.0	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°	1449.7	30.2
0°-40°	2352.6	48.9
0°-60°	4024.9	83.7
0°-90°	4807.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4807.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1907	1907	1907	1907	1907	
5°	1894	1889	1894	1889	1934	179
15°	1813	1792	1803	1813	1814	505
25°	1621	1630	1657	1678	1675	749
35°	1411	1415	1448	1482	1480	876
45°	1135	1156	1176	1206	1177	878
55°	849	843	865	859	859	755
65°	521	514	535	514	518	518
75°	217	212	216	201	208	233
85°	27	26	26	26	25	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1907.3	1907.3	1907.3	1907.3	1907.3
2.5°	1923.8	1909.3	1895.7	1911.5	1921.1
5°	1893.8	1889.3	1894.5	1888.8	1934.4
7.5°	1854.8	1871.8	1881.7	1875.5	1878.2
10°	1834.2	1828.2	1850.2	1865.4	1863.2
12.5°	1812.0	1820.9	1822.1	1838.6	1840.1
15°	1813.2	1792.3	1803.4	1812.7	1813.5
17.5°	1742.8	1765.4	1773.1	1794.5	1767.9
20°	1734.2	1717.7	1734.2	1756.1	1752.6
22.5°	1681.2	1662.8	1698.2	1717.7	1716.4
25°	1621.1	1630.0	1656.6	1678.3	1674.8
27.5°	1568.4	1578.8	1616.7	1646.5	1627.3
30°	1527.8	1522.6	1554.6	1581.2	1596.0
32.5°	1455.2	1473.9	1511.3	1537.7	1523.6
35°	1411.1	1415.3	1448.0	1481.5	1480.5
37.5°	1334.0	1353.5	1399.5	1408.9	1400.2
40°	1268.2	1287.7	1329.3	1339.4	1335.2
42.5°	1219.7	1223.2	1258.9	1270.5	1252.0
45°	1135.3	1156.4	1175.7	1205.9	1177.4
47.5°	1063.4	1073.2	1114.6	1122.7	1107.7
50°	998.1	1001.5	1043.2	1033.1	1023.2
52.5°	916.1	930.6	954.0	952.0	940.5
55°	848.6	843.0	865.1	859.2	859.0
57.5°	767.6	777.4	795.7	786.3	771.3
60°	691.7	692.0	698.6	688.1	686.1
62.5°	607.3	610.2	611.7	598.7	619.8
65°	521.3	514.4	534.6	514.2	517.6
67.5°	442.3	445.7	443.8	431.0	435.9
70°	362.0	366.4	363.2	348.7	353.1
72.5°	288.6	283.2	286.6	268.4	276.8
75°	217.0	212.5	216.5	201.2	208.1
77.5°	147.8	151.2	148.7	140.6	145.3
80°	97.5	94.8	94.8	90.1	91.1
82.5°	56.9	54.2	53.4	52.0	54.2
85°	26.6	25.9	26.3	25.6	24.6
87.5°	9.6	9.9	9.9	9.4	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)