

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: P590673

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590673
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-LD4-3STD-40-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5002.0 lumens
Efficiency: N/A
Efficacy: 100.0 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

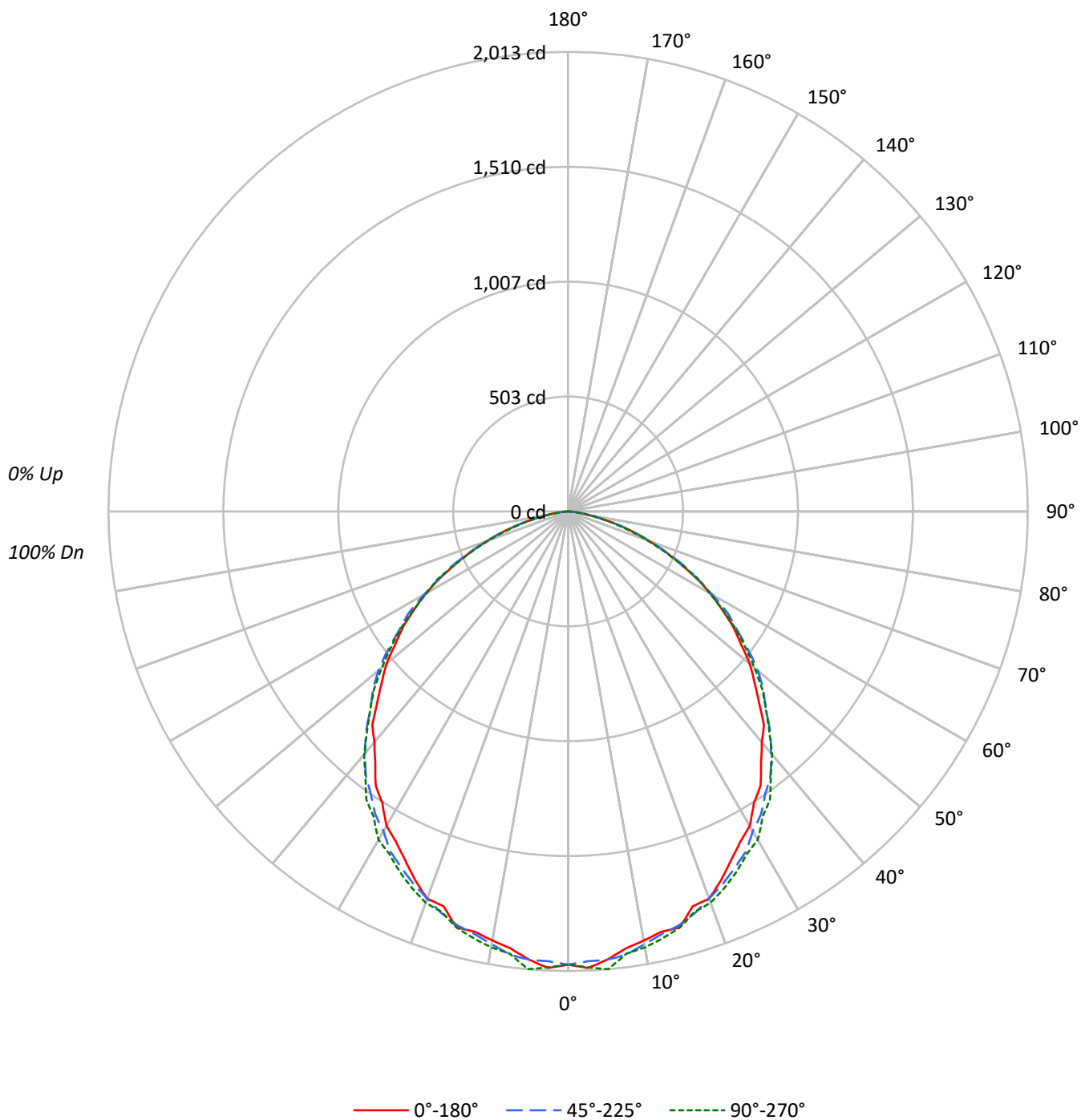
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5341	5341	5341
5°	5323	5325	5437
10°	5215	5261	5298
15°	5256	5228	5257
20°	5168	5168	5222
25°	5009	5118	5175
30°	4940	5027	5161
35°	4823	4950	5061
40°	4636	4859	4881
45°	4496	4655	4662
50°	4348	4544	4457
55°	4143	4223	4193
60°	3874	3913	3842
65°	3454	3542	3429
70°	2964	2974	2891
75°	2348	2341	2251
80°	1573	1530	1469
85°	855	846	790

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 4776 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.7	3.7
10°-20°	529.1	10.6
20°-30°	792.7	15.8
30°-40°	939.5	18.8
40°-50°	941.2	18.8
50°-60°	799.0	16.0
60°-70°	538.7	10.8
70°-80°	236.7	4.7
80°-90°	38.5	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°	1508.5	30.2
0°-40°	2448.0	48.9
0°-60°	4188.2	83.7
0°-90°	5002.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5002.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1985	1985	1985	1985	1985	
5°	1971	1966	1971	1965	2013	186
15°	1887	1865	1876	1886	1887	526
25°	1687	1696	1724	1746	1743	780
35°	1468	1473	1507	1542	1541	912
45°	1181	1203	1223	1255	1225	914
55°	883	877	900	894	894	786
65°	542	535	556	535	539	540
75°	226	221	225	209	216	242
85°	28	27	27	27	26	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1984.7	1984.7	1984.7	1984.7	1984.7
2.5°	2001.8	1986.7	1972.6	1989.0	1999.0
5°	1970.6	1966.0	1971.3	1965.4	2012.9
7.5°	1930.1	1947.8	1958.0	1951.6	1954.4
10°	1908.6	1902.4	1925.2	1941.1	1938.8
12.5°	1885.5	1894.7	1896.0	1913.2	1914.7
15°	1886.8	1865.0	1876.5	1886.3	1887.0
17.5°	1813.5	1837.1	1845.0	1867.3	1839.6
20°	1804.5	1787.4	1804.5	1827.3	1823.7
22.5°	1749.4	1730.2	1767.1	1787.4	1786.1
25°	1686.9	1696.1	1723.8	1746.4	1742.8
27.5°	1632.1	1642.8	1682.3	1713.3	1693.3
30°	1589.8	1584.4	1617.7	1645.4	1660.8
32.5°	1514.2	1533.7	1572.6	1600.0	1585.4
35°	1468.3	1472.7	1506.8	1541.6	1540.6
37.5°	1388.1	1408.4	1456.3	1466.0	1457.0
40°	1319.7	1339.9	1383.2	1393.8	1389.4
42.5°	1269.2	1272.8	1310.0	1322.0	1302.8
45°	1181.3	1203.4	1223.3	1254.9	1225.1
47.5°	1106.5	1116.7	1159.8	1168.3	1152.6
50°	1038.6	1042.2	1085.5	1075.0	1064.7
52.5°	953.3	968.4	992.7	990.7	978.6
55°	883.0	877.1	900.2	894.1	893.8
57.5°	798.7	809.0	827.9	818.2	802.6
60°	719.8	720.1	727.0	716.0	713.9
62.5°	631.9	635.0	636.5	622.9	645.0
65°	542.5	535.3	556.3	535.1	538.6
67.5°	460.2	463.8	461.8	448.4	453.6
70°	376.7	381.3	378.0	362.9	367.5
72.5°	300.3	294.7	298.3	279.3	288.0
75°	225.8	221.1	225.2	209.4	216.5
77.5°	153.8	157.3	154.8	146.3	151.2
80°	101.5	98.7	98.7	93.8	94.8
82.5°	59.2	56.4	55.6	54.1	56.4
85°	27.7	26.9	27.4	26.7	25.6
87.5°	10.0	10.3	10.3	9.7	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)