

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: P590640

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590640
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-35-UNV-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5500.0 lumens
Efficiency: N/A
Efficacy: 110.0 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

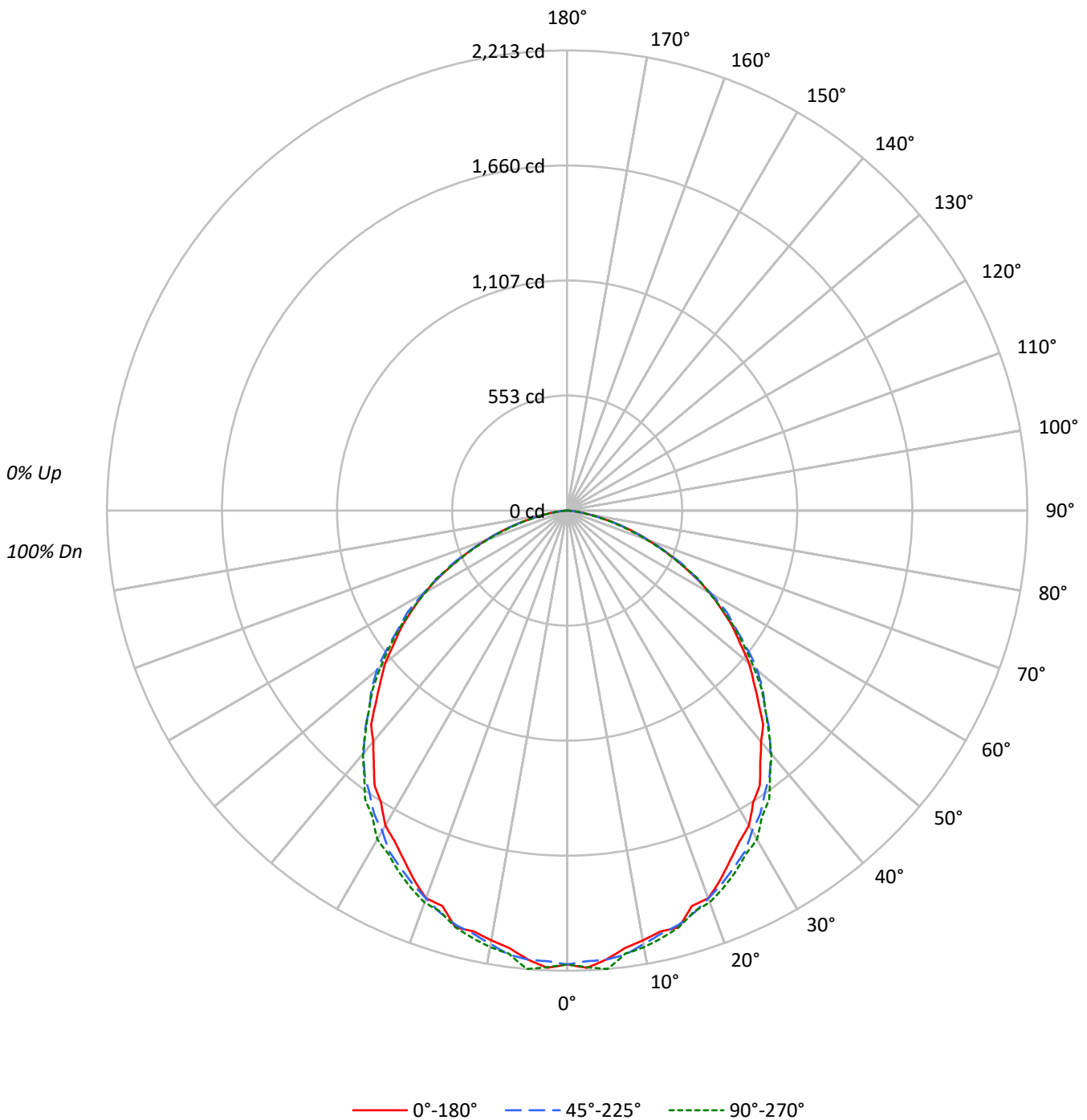
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5873	5873	5873
5°	5853	5855	5979
10°	5734	5784	5825
15°	5780	5748	5780
20°	5682	5682	5743
25°	5508	5628	5690
30°	5432	5527	5674
35°	5304	5443	5565
40°	5097	5343	5367
45°	4943	5119	5127
50°	4781	4997	4901
55°	4556	4644	4611
60°	4260	4302	4225
65°	3798	3895	3771
70°	3259	3270	3179
75°	2581	2575	2476
80°	1729	1681	1616
85°	939	929	871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5251 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.3	3.7
10°-20°	581.8	10.6
20°-30°	871.6	15.8
30°-40°	1033.0	18.8
40°-50°	1035.0	18.8
50°-60°	878.5	16.0
60°-70°	592.3	10.8
70°-80°	260.3	4.7
80°-90°	42.3	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°	1658.7	30.2
0°-40°	2691.7	48.9
0°-60°	4605.2	83.7
0°-90°	5500.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5500.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2182	2182	2182	2182	2182	
5°	2167	2162	2168	2161	2213	204
15°	2075	2051	2063	2074	2075	578
25°	1855	1865	1895	1920	1916	858
35°	1614	1619	1657	1695	1694	1002
45°	1299	1323	1345	1380	1347	1005
55°	971	964	990	983	983	864
65°	596	589	612	588	592	593
75°	248	243	248	230	238	266
85°	30	30	30	29	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2182.3	2182.3	2182.3	2182.3	2182.3
2.5°	2201.1	2184.5	2169.0	2187.1	2198.0
5°	2166.8	2161.7	2167.6	2161.1	2213.3
7.5°	2122.2	2141.7	2153.0	2145.9	2149.0
10°	2098.6	2091.8	2116.9	2134.4	2131.8
12.5°	2073.2	2083.4	2084.8	2103.6	2105.3
15°	2074.6	2050.7	2063.4	2074.1	2074.9
17.5°	1994.0	2020.0	2028.7	2053.2	2022.8
20°	1984.2	1965.3	1984.2	2009.3	2005.3
22.5°	1923.6	1902.5	1943.0	1965.3	1963.9
25°	1854.9	1865.0	1895.4	1920.2	1916.3
27.5°	1794.6	1806.4	1849.8	1883.9	1861.9
30°	1748.1	1742.1	1778.8	1809.2	1826.1
32.5°	1664.9	1686.4	1729.2	1759.3	1743.3
35°	1614.5	1619.3	1656.8	1695.1	1694.0
37.5°	1526.3	1548.6	1601.3	1612.0	1602.1
40°	1451.1	1473.3	1521.0	1532.5	1527.7
42.5°	1395.6	1399.5	1440.4	1453.6	1432.5
45°	1298.9	1323.2	1345.1	1379.8	1347.1
47.5°	1216.7	1227.9	1275.3	1284.6	1267.4
50°	1142.0	1145.9	1193.6	1182.0	1170.7
52.5°	1048.2	1064.8	1091.6	1089.3	1076.1
55°	971.0	964.5	989.8	983.1	982.8
57.5°	878.3	889.5	910.4	899.7	882.5
60°	791.5	791.8	799.4	787.2	785.0
62.5°	694.8	698.2	699.9	685.0	709.2
65°	596.5	588.6	611.7	588.3	592.3
67.5°	506.0	510.0	507.7	493.1	498.7
70°	414.2	419.3	415.6	399.0	404.0
72.5°	330.2	324.0	328.0	307.1	316.7
75°	248.2	243.2	247.7	230.2	238.1
77.5°	169.1	173.0	170.2	160.9	166.2
80°	111.6	108.5	108.5	103.1	104.3
82.5°	65.1	62.0	61.1	59.5	62.0
85°	30.4	29.6	30.1	29.3	28.2
87.5°	11.0	11.3	11.3	10.7	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)