

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: P590639

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590639
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-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5684.0 lumens
Efficiency: N/A
Efficacy: 113.7 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

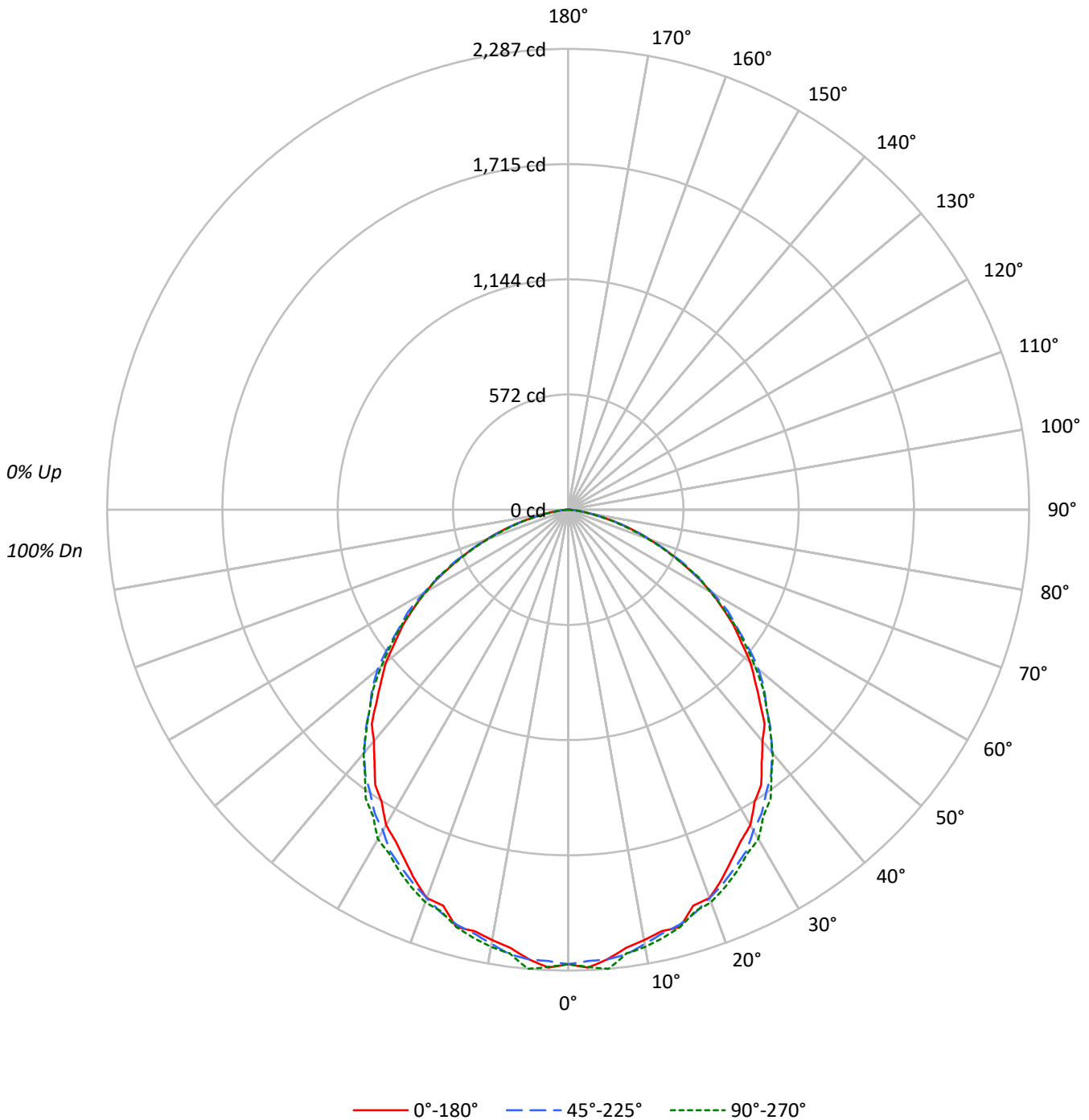
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
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°	6069	6069	6069
5°	6049	6051	6179
10°	5926	5978	6020
15°	5973	5941	5974
20°	5872	5872	5935
25°	5692	5816	5880
30°	5613	5712	5864
35°	5481	5625	5751
40°	5268	5521	5546
45°	5109	5290	5298
50°	4941	5164	5065
55°	4708	4799	4765
60°	4402	4446	4366
65°	3925	4025	3897
70°	3367	3379	3286
75°	2667	2662	2559
80°	1787	1737	1669
85°	969	963	898

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5427 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.1	3.7
10°-20°	601.2	10.6
20°-30°	900.8	15.8
30°-40°	1067.6	18.8
40°-50°	1069.6	18.8
50°-60°	907.9	16.0
60°-70°	612.1	10.8
70°-80°	269.0	4.7
80°-90°	43.7	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°	1714.2	30.2
0°-40°	2781.8	48.9
0°-60°	4759.2	83.7
0°-90°	5684.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5684.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2255	2255	2255	2255	2255	
5°	2239	2234	2240	2233	2287	211
15°	2144	2119	2132	2144	2144	597
25°	1917	1927	1959	1984	1980	886
35°	1668	1674	1712	1752	1751	1036
45°	1342	1367	1390	1426	1392	1038
55°	1003	997	1023	1016	1016	893
65°	616	608	632	608	612	613
75°	256	251	256	238	246	275
85°	31	31	31	30	29	46
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2255.3	2255.3	2255.3	2255.3	2255.3
2.5°	2274.8	2257.6	2241.6	2260.2	2271.6
5°	2239.3	2234.0	2240.1	2233.4	2287.3
7.5°	2193.2	2213.3	2225.0	2217.7	2220.9
10°	2168.8	2161.8	2187.7	2205.8	2203.1
12.5°	2142.6	2153.1	2154.5	2174.0	2175.8
15°	2144.0	2119.3	2132.4	2143.5	2144.3
17.5°	2060.8	2087.5	2096.6	2121.9	2090.5
20°	2050.6	2031.1	2050.6	2076.5	2072.4
22.5°	1988.0	1966.1	2008.0	2031.1	2029.6
25°	1916.9	1927.4	1958.8	1984.5	1980.4
27.5°	1854.6	1866.8	1911.7	1946.9	1924.2
30°	1806.5	1800.4	1838.3	1869.7	1887.2
32.5°	1720.6	1742.8	1787.0	1818.2	1801.6
35°	1668.5	1673.5	1712.2	1751.8	1750.6
37.5°	1577.4	1600.4	1654.8	1665.9	1655.7
40°	1499.6	1522.6	1571.8	1583.8	1578.8
42.5°	1442.3	1446.3	1488.6	1502.2	1480.4
45°	1342.4	1367.4	1390.1	1426.0	1392.2
47.5°	1257.4	1269.0	1317.9	1327.5	1309.8
50°	1180.2	1184.3	1233.5	1221.5	1209.9
52.5°	1083.2	1100.4	1128.1	1125.7	1112.1
55°	1003.4	996.7	1023.0	1016.0	1015.7
57.5°	907.6	919.3	940.8	929.8	912.0
60°	818.0	818.2	826.1	813.6	811.3
62.5°	718.1	721.6	723.3	707.9	732.9
65°	616.4	608.3	632.2	608.0	612.1
67.5°	523.0	527.1	524.7	509.6	515.4
70°	428.0	433.3	429.5	412.3	417.6
72.5°	341.3	334.9	338.9	317.4	327.3
75°	256.5	251.3	256.0	237.9	246.1
77.5°	174.7	178.8	175.9	166.3	171.8
80°	115.3	112.1	112.1	106.6	107.7
82.5°	67.3	64.1	63.2	61.4	64.1
85°	31.4	30.6	31.2	30.3	29.1
87.5°	11.4	11.6	11.6	11.1	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)