

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: P590613

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590613
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-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC 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: 5854.0 lumens
Efficiency: N/A
Efficacy: 117.1 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

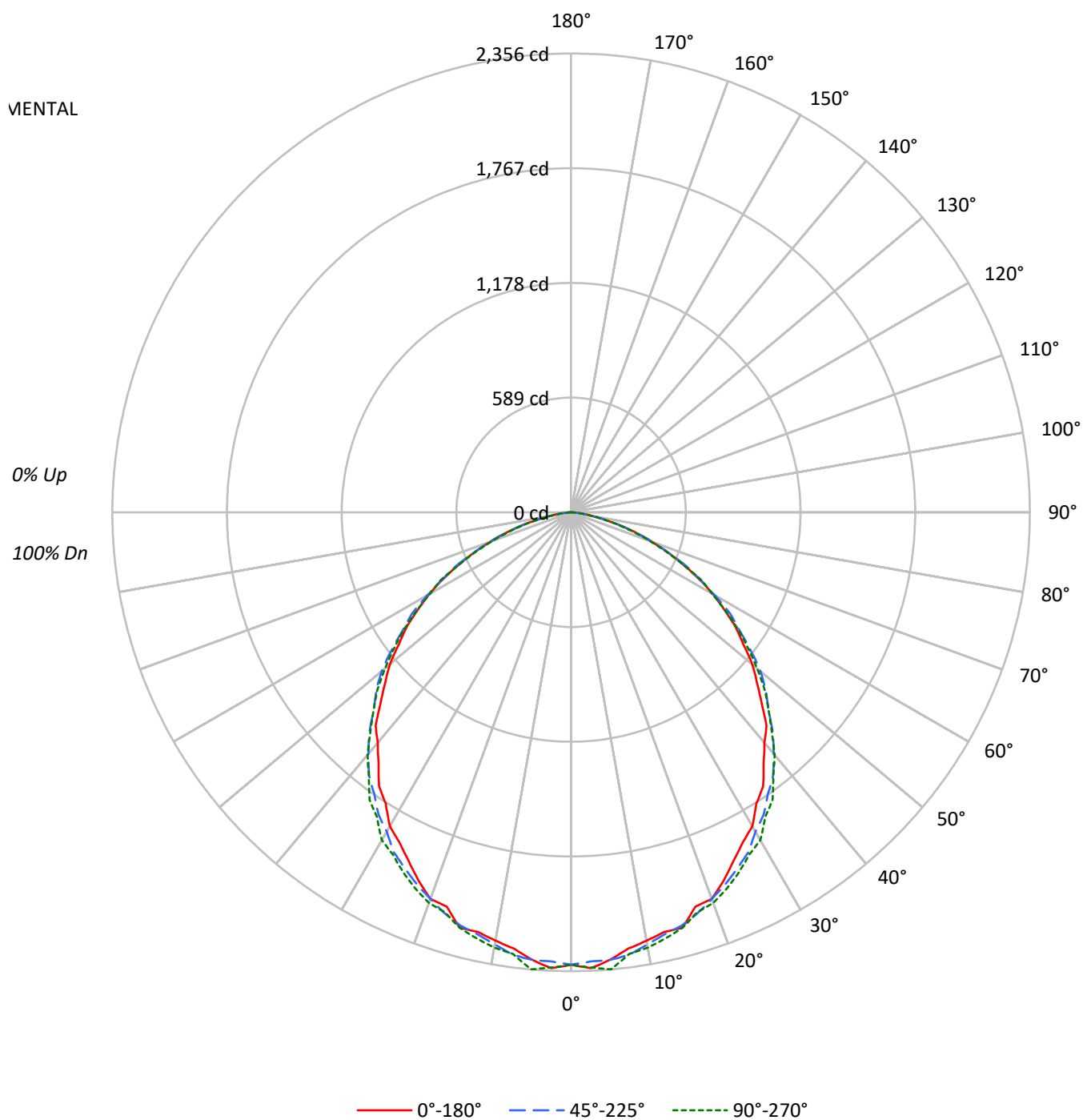
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6250	6250	6250
5°	6230	6232	6363
10°	6103	6157	6200
15°	6152	6118	6153
20°	6048	6048	6112
25°	5862	5990	6056
30°	5781	5883	6039
35°	5645	5793	5923
40°	5426	5687	5712
45°	5261	5449	5456
50°	5089	5318	5217
55°	4849	4943	4907
60°	4534	4579	4497
65°	4043	4146	4014
70°	3469	3481	3384
75°	2747	2741	2635
80°	1841	1790	1720
85°	1000	991	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 5589 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.5	3.7
10°-20°	619.2	10.6
20°-30°	927.7	15.8
30°-40°	1099.5	18.8
40°-50°	1101.6	18.8
50°-60°	935.0	16.0
60°-70°	630.4	10.8
70°-80°	277.0	4.7
80°-90°	45.0	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°	1765.4	30.2
0°-40°	2865.0	48.9
0°-60°	4901.6	83.7
0°-90°	5854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5854.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2323	2323	2323	2323	2323	
5°	2306	2301	2307	2300	2356	217
15°	2208	2183	2196	2208	2208	615
25°	1974	1985	2017	2044	2040	913
35°	1718	1724	1763	1804	1803	1067
45°	1382	1408	1432	1469	1434	1069
55°	1034	1027	1054	1046	1046	919
65°	635	626	651	626	630	631
75°	264	259	264	245	253	283
85°	32	32	32	31	30	47
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2322.7	2322.7	2322.7	2322.7	2322.7
2.5°	2342.8	2325.1	2308.6	2327.8	2339.5
5°	2306.2	2300.8	2307.1	2300.2	2355.7
7.5°	2258.8	2279.5	2291.5	2284.0	2287.3
10°	2233.6	2226.5	2253.1	2271.7	2269.0
12.5°	2206.7	2217.5	2219.0	2239.0	2240.8
15°	2208.2	2182.7	2196.2	2207.6	2208.5
17.5°	2122.4	2150.0	2159.3	2185.4	2153.0
20°	2111.9	2091.8	2111.9	2138.6	2134.4
22.5°	2047.4	2024.9	2068.1	2091.8	2090.3
25°	1974.2	1985.0	2017.4	2043.8	2039.6
27.5°	1910.1	1922.7	1968.8	2005.1	1981.7
30°	1860.6	1854.3	1893.3	1925.7	1943.6
32.5°	1772.1	1794.9	1840.5	1872.6	1855.5
35°	1718.4	1723.5	1763.4	1804.2	1803.0
37.5°	1624.6	1648.2	1704.3	1715.7	1705.2
40°	1544.5	1568.2	1618.9	1631.2	1626.1
42.5°	1485.4	1489.6	1533.1	1547.2	1524.7
45°	1382.5	1408.3	1431.7	1468.6	1433.8
47.5°	1295.0	1307.0	1357.3	1367.2	1348.9
50°	1215.5	1219.7	1270.4	1258.1	1246.1
52.5°	1115.6	1133.3	1161.8	1159.4	1145.3
55°	1033.5	1026.6	1053.5	1046.3	1046.0
57.5°	934.8	946.8	969.0	957.6	939.3
60°	842.4	842.7	850.8	837.9	835.5
62.5°	739.6	743.2	744.9	729.1	754.8
65°	634.9	626.5	651.1	626.2	630.4
67.5°	538.6	542.8	540.4	524.8	530.8
70°	440.9	446.3	442.4	424.7	430.1
72.5°	351.5	344.9	349.1	326.9	337.1
75°	264.2	258.8	263.6	245.0	253.4
77.5°	179.9	184.1	181.1	171.2	176.9
80°	118.8	115.5	115.5	109.8	111.0
82.5°	69.3	66.0	65.1	63.3	66.0
85°	32.4	31.5	32.1	31.2	30.0
87.5°	11.7	12.0	12.0	11.4	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)