

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: P590512

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590512
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-LD4-3HI-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6929.0 lumens
Efficiency: N/A
Efficacy: 106.9 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

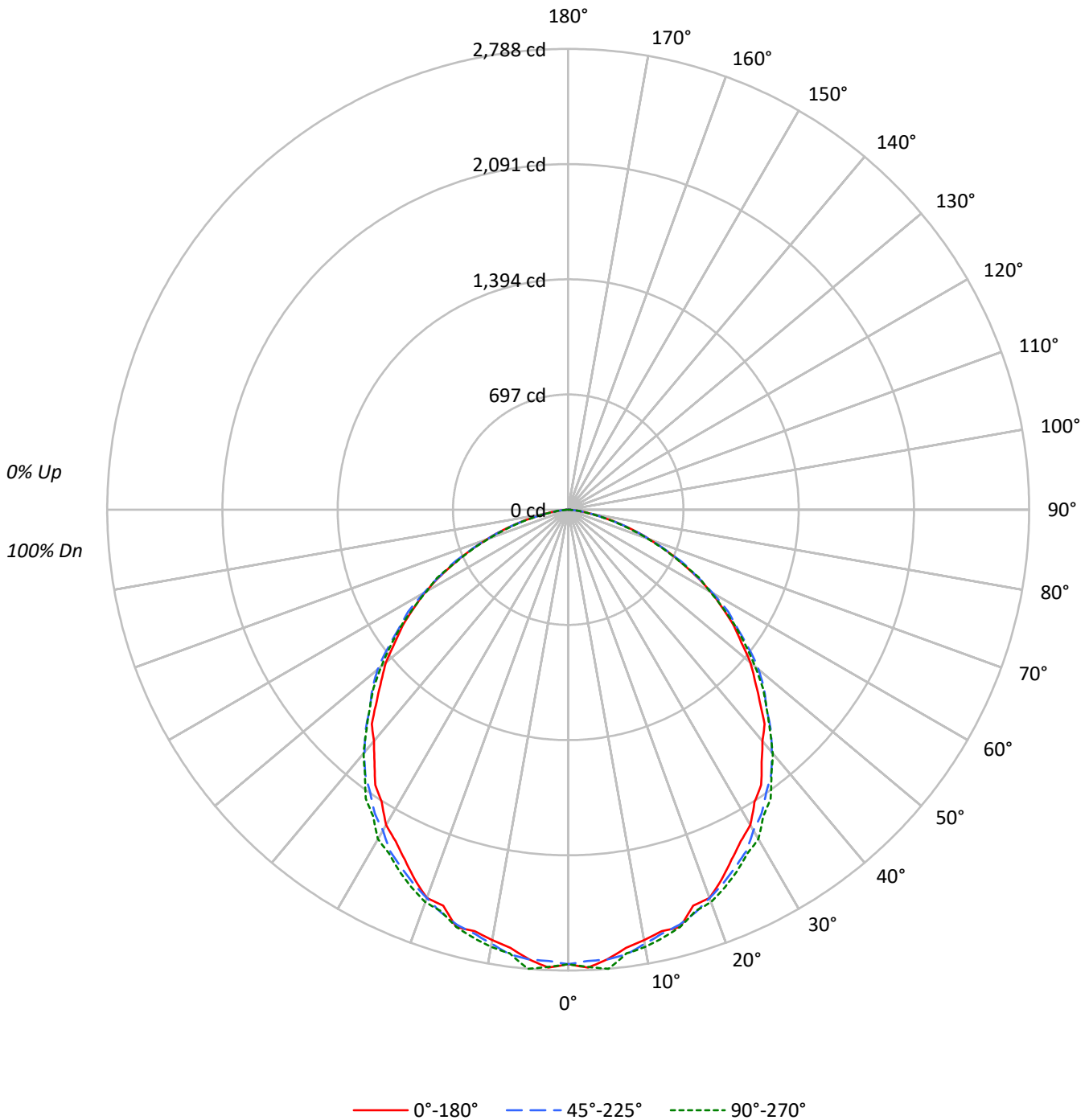
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590512

CATALOG NUMBER: FSR-24-2-LD4-3HI-50-UNV-93-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590512

CATALOG NUMBER: FSR-24-2-LD4-3HI-50-UNV-93-87-EDD

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	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°	7398	7398	7398
5°	7374	7377	7532
10°	7224	7287	7339
15°	7282	7242	7282
20°	7158	7158	7235
25°	6938	7090	7168
30°	6843	6963	7149
35°	6682	6857	7011
40°	6422	6731	6761
45°	6228	6449	6459
50°	6023	6295	6175
55°	5739	5850	5809
60°	5366	5420	5322
65°	4785	4907	4751
70°	4105	4120	4005
75°	3251	3244	3119
80°	2179	2118	2035
85°	1183	1173	1096

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6615 cd/sqm



TEST NUMBER: P590512

CATALOG NUMBER: FSR-24-2-LD4-3HI-50-UNV-93-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.6	3.7
10°-20°	732.9	10.6
20°-30°	1098.1	15.8
30°-40°	1301.4	18.8
40°-50°	1303.9	18.8
50°-60°	1106.8	16.0
60°-70°	746.2	10.8
70°-80°	327.9	4.7
80°-90°	53.3	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°	2089.6	30.2
0°-40°	3391.1	48.9
0°-60°	5801.7	83.7
0°-90°	6929.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6929.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2749	2749	2749	2749	2749	
5°	2730	2723	2731	2723	2788	257
15°	2614	2584	2600	2613	2614	728
25°	2337	2350	2388	2419	2414	1080
35°	2034	2040	2087	2136	2134	1263
45°	1636	1667	1695	1738	1697	1266
55°	1223	1215	1247	1238	1238	1088
65°	752	742	771	741	746	747
75°	313	306	312	290	300	335
85°	38	37	38	37	36	56
90°	0	0	0	0	0	



TEST NUMBER: P590512

CATALOG NUMBER: FSR-24-2-LD4-3HI-50-UNV-93-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2749.3	2749.3	2749.3	2749.3	2749.3
2.5°	2773.0	2752.1	2732.6	2755.3	2769.1
5°	2729.7	2723.3	2730.8	2722.6	2788.3
7.5°	2673.6	2698.1	2712.3	2703.5	2707.4
10°	2643.8	2635.3	2666.9	2688.9	2685.7
12.5°	2611.9	2624.7	2626.4	2650.2	2652.3
15°	2613.7	2583.5	2599.5	2612.9	2614.0
17.5°	2512.1	2544.8	2555.8	2586.7	2548.3
20°	2499.7	2475.9	2499.7	2531.3	2526.3
22.5°	2423.4	2396.8	2447.9	2475.9	2474.1
25°	2336.8	2349.6	2387.9	2419.1	2414.2
27.5°	2260.8	2275.7	2330.4	2373.3	2345.6
30°	2202.2	2194.8	2240.9	2279.3	2300.6
32.5°	2097.5	2124.5	2178.5	2216.4	2196.2
35°	2034.0	2040.0	2087.2	2135.5	2134.1
37.5°	1922.9	1950.9	2017.3	2030.8	2018.4
40°	1828.1	1856.1	1916.1	1930.7	1924.7
42.5°	1758.2	1763.1	1814.6	1831.3	1804.7
45°	1636.4	1666.9	1694.6	1738.3	1697.1
47.5°	1532.8	1547.0	1606.6	1618.3	1596.7
50°	1438.7	1443.7	1503.7	1489.1	1474.9
52.5°	1320.5	1341.4	1375.2	1372.3	1355.6
55°	1223.2	1215.1	1247.0	1238.5	1238.1
57.5°	1106.4	1120.6	1146.9	1133.4	1111.8
60°	997.1	997.5	1007.1	991.8	988.9
62.5°	875.4	879.6	881.7	862.9	893.5
65°	751.5	741.5	770.6	741.2	746.1
67.5°	637.5	642.5	639.7	621.2	628.3
70°	521.8	528.2	523.6	502.6	509.0
72.5°	416.0	408.2	413.2	386.9	399.0
75°	312.7	306.3	312.0	290.0	300.0
77.5°	213.0	218.0	214.4	202.7	209.4
80°	140.6	136.7	136.7	129.9	131.3
82.5°	82.0	78.1	77.0	74.9	78.1
85°	38.3	37.3	38.0	36.9	35.5
87.5°	13.8	14.2	14.2	13.5	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)