

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: P590515

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590515
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-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7325.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

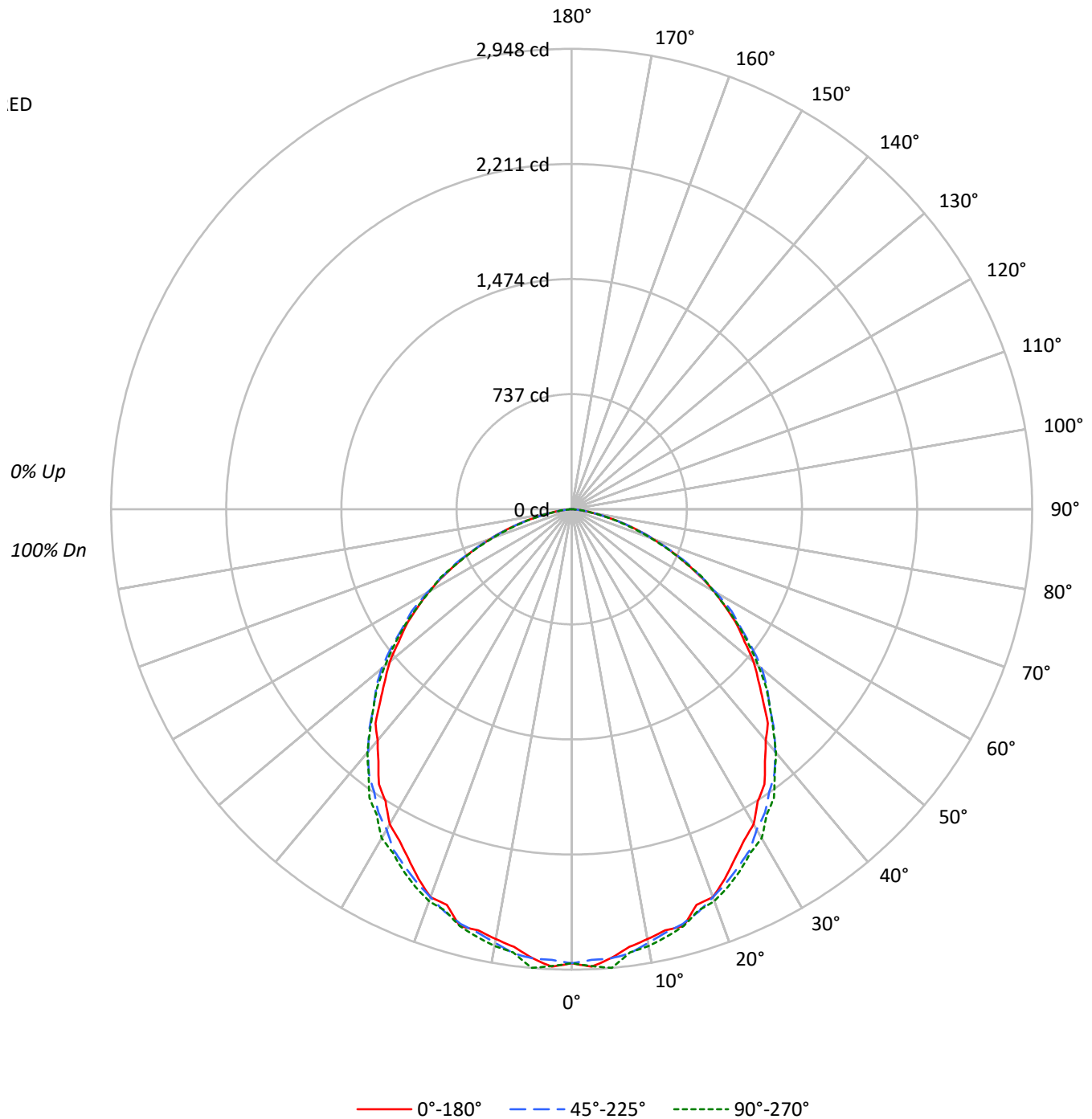
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7821	7821	7821
5°	7795	7798	7962
10°	7637	7704	7758
15°	7697	7656	7699
20°	7568	7568	7648
25°	7335	7495	7578
30°	7234	7361	7557
35°	7064	7249	7411
40°	6789	7116	7148
45°	6583	6818	6828
50°	6367	6655	6527
55°	6067	6185	6141
60°	5673	5730	5627
65°	5058	5188	5023
70°	4340	4355	4234
75°	3437	3430	3297
80°	2303	2239	2151
85°	1250	1241	1158

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6993 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.4	3.7
10°-20°	774.8	10.6
20°-30°	1160.8	15.8
30°-40°	1375.8	18.8
40°-50°	1378.4	18.8
50°-60°	1170.0	16.0
60°-70°	788.8	10.8
70°-80°	346.6	4.7
80°-90°	56.3	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°	2209.0	30.2
0°-40°	3584.9	48.9
0°-60°	6133.2	83.7
0°-90°	7325.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7325.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2906	2906	2906	2906	2906	
5°	2886	2879	2887	2878	2948	272
15°	2763	2731	2748	2762	2763	770
25°	2470	2484	2524	2557	2552	1142
35°	2150	2157	2206	2258	2256	1335
45°	1730	1762	1792	1838	1794	1338
55°	1293	1284	1318	1309	1309	1150
65°	794	784	815	784	789	790
75°	331	324	330	307	317	354
85°	40	39	40	39	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2906.4	2906.4	2906.4	2906.4	2906.4
2.5°	2931.5	2909.4	2888.7	2912.8	2927.4
5°	2885.7	2879.0	2886.9	2878.2	2947.7
7.5°	2826.4	2852.3	2867.3	2858.0	2862.1
10°	2794.9	2785.9	2819.3	2842.6	2839.2
12.5°	2761.2	2774.7	2776.5	2801.7	2803.9
15°	2763.0	2731.1	2748.0	2762.3	2763.4
17.5°	2655.7	2690.2	2701.9	2734.5	2694.0
20°	2642.6	2617.4	2642.6	2676.0	2670.7
22.5°	2561.9	2533.7	2587.8	2617.4	2615.5
25°	2470.3	2483.8	2524.4	2557.4	2552.1
27.5°	2390.0	2405.8	2463.6	2509.0	2479.7
30°	2328.1	2320.2	2369.0	2409.5	2432.0
32.5°	2217.4	2245.9	2303.0	2343.1	2321.7
35°	2150.2	2156.6	2206.5	2257.6	2256.1
37.5°	2032.8	2062.4	2132.6	2146.9	2133.7
40°	1932.6	1962.2	2025.6	2041.0	2034.7
42.5°	1858.7	1863.9	1918.3	1936.0	1907.8
45°	1729.9	1762.2	1791.5	1837.6	1794.1
47.5°	1620.4	1635.4	1698.4	1710.8	1687.9
50°	1520.9	1526.2	1589.6	1574.2	1559.2
52.5°	1396.0	1418.1	1453.8	1450.7	1433.1
55°	1293.1	1284.5	1318.3	1309.3	1308.9
57.5°	1169.7	1184.7	1212.5	1198.2	1175.3
60°	1054.1	1054.5	1064.6	1048.5	1045.5
62.5°	925.4	929.9	932.1	912.3	944.5
65°	794.4	783.9	814.7	783.5	788.8
67.5°	674.0	679.2	676.2	656.7	664.2
70°	551.6	558.4	553.5	531.4	538.1
72.5°	439.8	431.5	436.8	409.0	421.8
75°	330.6	323.8	329.9	306.6	317.1
77.5°	225.2	230.4	226.7	214.3	221.4
80°	148.6	144.5	144.5	137.3	138.8
82.5°	86.7	82.6	81.4	79.2	82.6
85°	40.5	39.4	40.2	39.0	37.5
87.5°	14.6	15.0	15.0	14.3	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)