

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: P590477

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590477
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-40-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7266.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

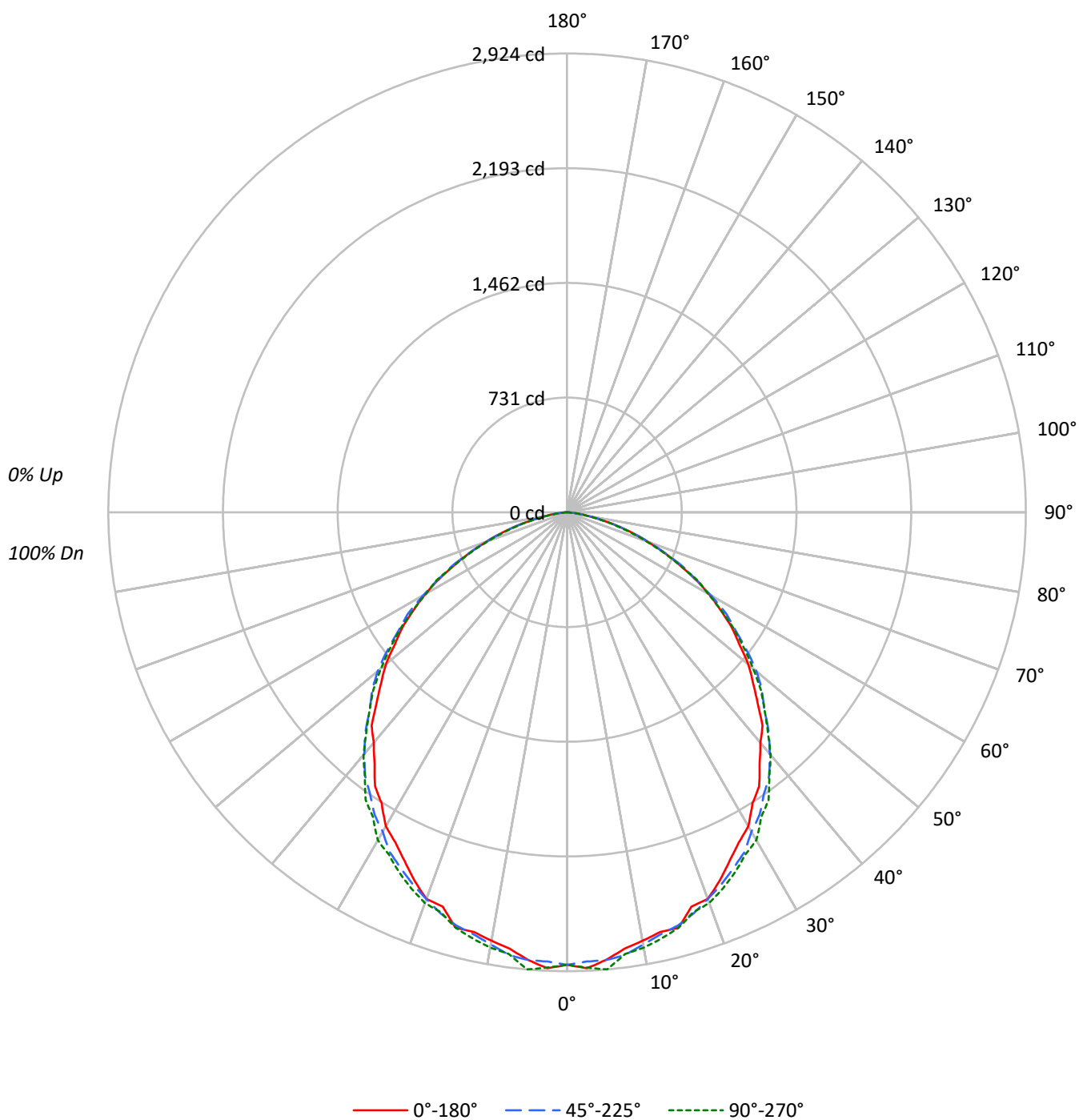
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	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°	7758	7758	7758
5°	7732	7735	7898
10°	7576	7642	7696
15°	7636	7594	7636
20°	7507	7507	7586
25°	7276	7435	7517
30°	7176	7302	7496
35°	7007	7190	7352
40°	6734	7058	7090
45°	6530	6763	6773
50°	6316	6601	6475
55°	6018	6135	6092
60°	5627	5683	5581
65°	5018	5145	4982
70°	4305	4319	4200
75°	3409	3402	3270
80°	2284	2221	2134
85°	1241	1229	1149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 6937 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.2	3.7
10°-20°	768.6	10.6
20°-30°	1151.5	15.8
30°-40°	1364.7	18.8
40°-50°	1367.3	18.8
50°-60°	1160.6	16.0
60°-70°	782.5	10.8
70°-80°	343.8	4.7
80°-90°	55.9	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°	2191.2	30.2
0°-40°	3556.0	48.9
0°-60°	6083.8	83.7
0°-90°	7266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2883	2883	2883	2883	2883	
5°	2862	2856	2864	2855	2924	270
15°	2741	2709	2726	2740	2741	764
25°	2450	2464	2504	2537	2532	1133
35°	2133	2139	2189	2239	2238	1324
45°	1716	1748	1777	1823	1780	1327
55°	1283	1274	1308	1299	1298	1141
65°	788	778	808	777	782	784
75°	328	321	327	304	314	351
85°	40	39	40	39	37	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2883.0	2883.0	2883.0	2883.0	2883.0
2.5°	2907.9	2885.9	2865.5	2889.3	2903.8
5°	2862.5	2855.8	2863.6	2855.0	2923.9
7.5°	2803.7	2829.4	2844.3	2834.9	2839.0
10°	2772.4	2763.5	2796.6	2819.7	2816.3
12.5°	2738.9	2752.3	2754.2	2779.1	2781.3
15°	2740.8	2709.1	2725.9	2740.0	2741.1
17.5°	2634.3	2668.6	2680.1	2712.5	2672.3
20°	2621.3	2596.3	2621.3	2654.4	2649.2
22.5°	2541.3	2513.3	2566.9	2596.3	2594.5
25°	2450.4	2463.8	2504.0	2536.8	2531.6
27.5°	2370.8	2386.4	2443.7	2488.8	2459.7
30°	2309.4	2301.5	2349.9	2390.1	2412.5
32.5°	2199.5	2227.8	2284.4	2324.2	2303.0
35°	2132.9	2139.2	2188.7	2239.4	2237.9
37.5°	2016.4	2045.8	2115.4	2129.6	2116.5
40°	1917.0	1946.4	2009.3	2024.6	2018.3
42.5°	1843.7	1848.9	1902.9	1920.4	1892.4
45°	1716.0	1748.0	1777.1	1822.8	1779.7
47.5°	1607.3	1622.2	1684.7	1697.0	1674.3
50°	1508.7	1513.9	1576.8	1561.5	1546.6
52.5°	1384.7	1406.7	1442.0	1439.1	1421.6
55°	1282.7	1274.2	1307.7	1298.7	1298.4
57.5°	1160.3	1175.1	1202.7	1188.5	1165.8
60°	1045.6	1046.0	1056.0	1040.0	1037.0
62.5°	917.9	922.4	924.6	904.9	936.9
65°	788.0	777.6	808.1	777.2	782.4
67.5°	668.5	673.7	670.8	651.4	658.9
70°	547.2	553.9	549.0	527.1	533.8
72.5°	436.3	428.1	433.3	405.7	418.4
75°	327.9	321.2	327.2	304.1	314.5
77.5°	223.3	228.6	224.8	212.5	219.6
80°	147.4	143.3	143.3	136.2	137.7
82.5°	86.0	81.9	80.8	78.5	81.9
85°	40.2	39.1	39.8	38.7	37.2
87.5°	14.5	14.9	14.9	14.1	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)