

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: P590437

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590437
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-35-UNV-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6677.0 lumens
Efficiency: N/A
Efficacy: 103.0 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

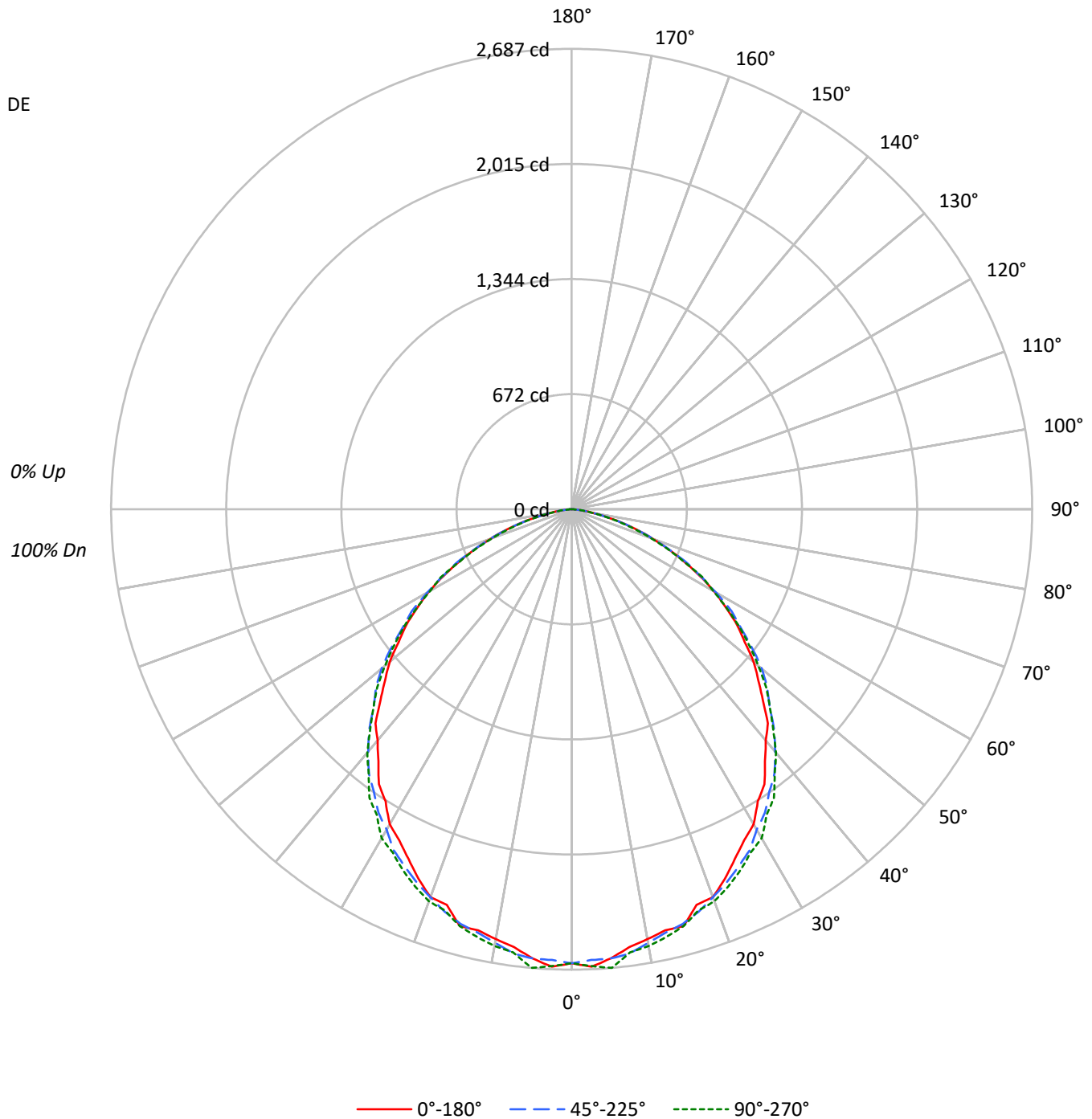
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7129	7129	7129
5°	7106	7108	7258
10°	6962	7022	7072
15°	7017	6978	7017
20°	6898	6898	6972
25°	6686	6832	6907
30°	6594	6710	6889
35°	6439	6607	6756
40°	6188	6486	6515
45°	6001	6215	6224
50°	5804	6066	5950
55°	5530	5638	5598
60°	5172	5223	5129
65°	4611	4728	4578
70°	3956	3969	3859
75°	3134	3126	3005
80°	2100	2041	1962
85°	1139	1130	1056

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6375 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.2	3.7
10°-20°	706.3	10.6
20°-30°	1058.1	15.8
30°-40°	1254.1	18.8
40°-50°	1256.4	18.8
50°-60°	1066.5	16.0
60°-70°	719.0	10.8
70°-80°	316.0	4.7
80°-90°	51.3	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°	2013.6	30.2
0°-40°	3267.7	48.9
0°-60°	5590.7	83.7
0°-90°	6677.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6677.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2649	2649	2649	2649	2649	
5°	2630	2624	2632	2624	2687	248
15°	2519	2490	2505	2518	2519	702
25°	2252	2264	2301	2331	2326	1041
35°	1960	1966	2011	2058	2056	1217
45°	1577	1606	1633	1675	1635	1220
55°	1179	1171	1202	1194	1193	1049
65°	724	715	743	714	719	720
75°	301	295	301	280	289	323
85°	37	36	37	36	34	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2649.3	2649.3	2649.3	2649.3	2649.3
2.5°	2672.2	2652.0	2633.2	2655.1	2668.4
5°	2630.5	2624.3	2631.5	2623.6	2686.9
7.5°	2576.4	2600.0	2613.7	2605.1	2608.9
10°	2547.7	2539.5	2569.9	2591.1	2588.0
12.5°	2516.9	2529.2	2530.9	2553.8	2555.9
15°	2518.6	2489.5	2504.9	2517.9	2518.9
17.5°	2420.8	2452.2	2462.8	2492.6	2455.7
20°	2408.8	2385.9	2408.8	2439.2	2434.5
22.5°	2335.3	2309.6	2358.9	2385.9	2384.2
25°	2251.8	2264.1	2301.0	2331.1	2326.4
27.5°	2178.6	2193.0	2245.6	2287.0	2260.3
30°	2122.1	2115.0	2159.4	2196.4	2216.9
32.5°	2021.2	2047.2	2099.2	2135.8	2116.3
35°	1960.0	1965.8	2011.3	2057.8	2056.5
37.5°	1852.9	1880.0	1943.9	1956.9	1945.0
40°	1761.6	1788.6	1846.4	1860.5	1854.7
42.5°	1694.2	1699.0	1748.6	1764.7	1739.0
45°	1576.9	1606.3	1633.0	1675.1	1635.4
47.5°	1477.0	1490.7	1548.2	1559.5	1538.6
50°	1386.4	1391.2	1449.0	1434.9	1421.3
52.5°	1272.5	1292.6	1325.1	1322.4	1306.3
55°	1178.7	1170.9	1201.7	1193.5	1193.1
57.5°	1066.2	1079.9	1105.2	1092.2	1071.3
60°	960.9	961.2	970.4	955.7	953.0
62.5°	843.5	847.6	849.7	831.6	861.0
65°	724.1	714.6	742.6	714.2	719.0
67.5°	614.3	619.1	616.4	598.6	605.4
70°	502.8	509.0	504.5	484.4	490.5
72.5°	400.9	393.4	398.2	372.8	384.5
75°	301.4	295.2	300.7	279.5	289.0
77.5°	205.2	210.0	206.6	195.3	201.8
80°	135.5	131.7	131.7	125.2	126.6
82.5°	79.0	75.3	74.2	72.2	75.3
85°	36.9	35.9	36.6	35.6	34.2
87.5°	13.3	13.7	13.7	13.0	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)