

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: P590463

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590463
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-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6676.0 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

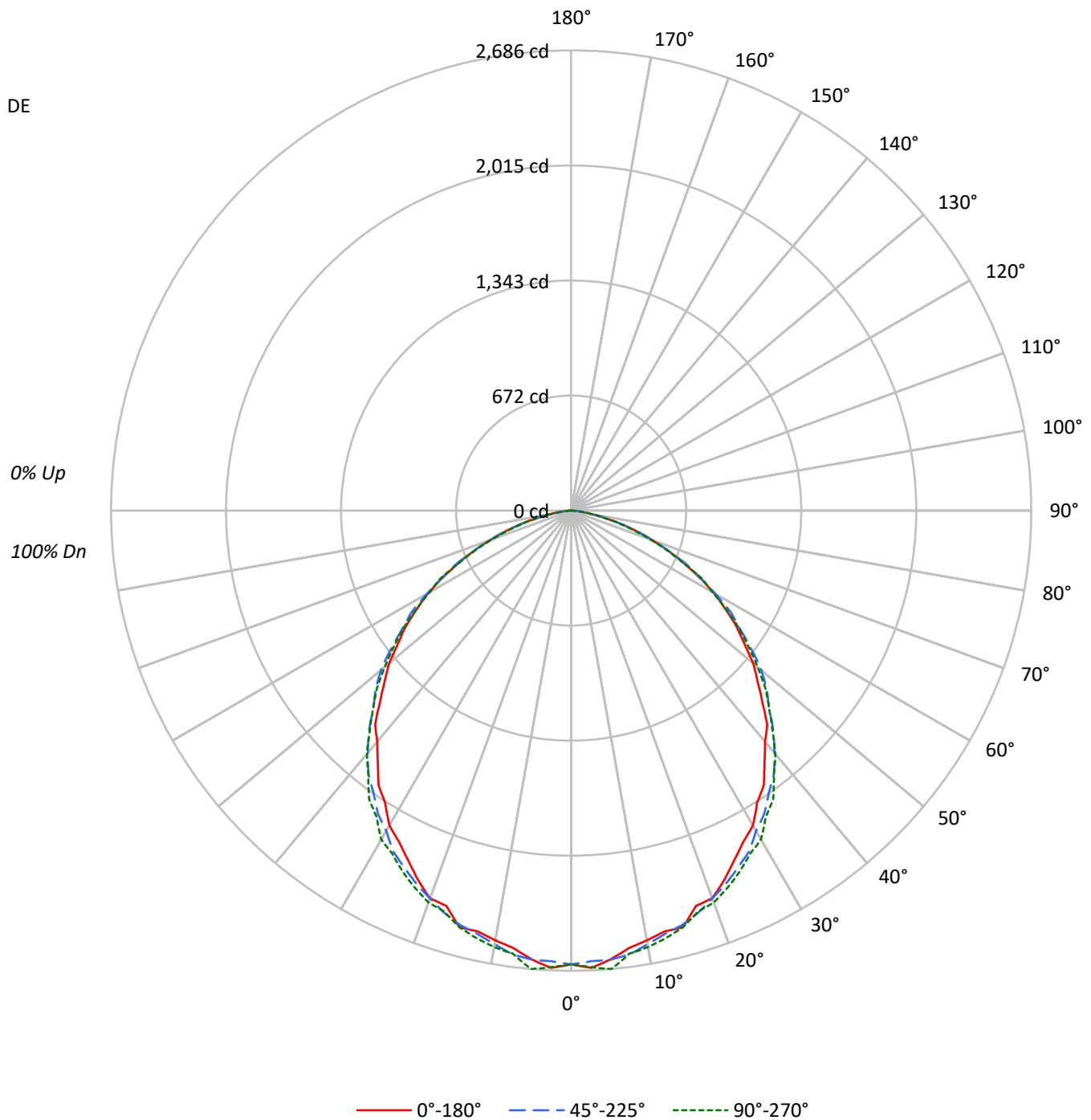
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7128	7128	7128
5°	7105	7107	7257
10°	6960	7021	7071
15°	7015	6977	7017
20°	6897	6897	6970
25°	6685	6831	6906
30°	6593	6709	6888
35°	6438	6606	6755
40°	6187	6485	6514
45°	6000	6214	6223
50°	5803	6065	5949
55°	5529	5637	5597
60°	5170	5222	5128
65°	4610	4728	4578
70°	3956	3969	3858
75°	3133	3125	3005
80°	2098	2041	1960
85°	1139	1130	1056

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6374 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.2	3.7
10°-20°	706.2	10.6
20°-30°	1058.0	15.8
30°-40°	1253.9	18.8
40°-50°	1256.3	18.8
50°-60°	1066.3	16.0
60°-70°	718.9	10.8
70°-80°	315.9	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°	2013.3	30.2
0°-40°	3267.2	48.9
0°-60°	5589.8	83.7
0°-90°	6676.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6676.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2649	2649	2649	2649	2649	
5°	2630	2624	2631	2623	2686	248
15°	2518	2489	2504	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	1193	1193	1048
65°	724	714	742	714	719	720
75°	301	295	301	279	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°	2648.9	2648.9	2648.9	2648.9	2648.9
2.5°	2671.8	2651.6	2632.8	2654.7	2668.0
5°	2630.1	2623.9	2631.1	2623.2	2686.5
7.5°	2576.0	2599.6	2613.3	2604.7	2608.5
10°	2547.3	2539.1	2569.5	2590.7	2587.6
12.5°	2516.5	2528.8	2530.5	2553.4	2555.5
15°	2518.2	2489.1	2504.5	2517.5	2518.6
17.5°	2420.4	2451.9	2462.5	2492.2	2455.3
20°	2408.4	2385.5	2408.4	2438.9	2434.1
22.5°	2334.9	2309.3	2358.5	2385.5	2383.8
25°	2251.5	2263.8	2300.7	2330.8	2326.0
27.5°	2178.3	2192.6	2245.3	2286.7	2260.0
30°	2121.8	2114.6	2159.1	2196.0	2216.6
32.5°	2020.9	2046.9	2098.9	2135.5	2116.0
35°	1959.7	1965.5	2011.0	2057.5	2056.2
37.5°	1852.7	1879.7	1943.6	1956.6	1944.7
40°	1761.4	1788.4	1846.2	1860.2	1854.4
42.5°	1694.0	1698.8	1748.4	1764.4	1738.8
45°	1576.7	1606.1	1632.8	1674.8	1635.2
47.5°	1476.8	1490.5	1547.9	1559.2	1538.4
50°	1386.2	1391.0	1448.8	1434.7	1421.1
52.5°	1272.3	1292.5	1324.9	1322.2	1306.1
55°	1178.6	1170.7	1201.5	1193.3	1192.9
57.5°	1066.0	1079.7	1105.0	1092.0	1071.2
60°	960.7	961.0	970.3	955.6	952.8
62.5°	843.4	847.5	849.6	831.4	860.8
65°	724.0	714.5	742.5	714.1	718.9
67.5°	614.3	619.0	616.3	598.5	605.4
70°	502.8	508.9	504.5	484.3	490.4
72.5°	400.8	393.3	398.1	372.8	384.4
75°	301.3	295.2	300.6	279.4	289.0
77.5°	205.2	210.0	206.6	195.3	201.8
80°	135.4	131.7	131.7	125.2	126.5
82.5°	79.0	75.2	74.2	72.2	75.2
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)