

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P834230

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834230
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-2STD-50-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

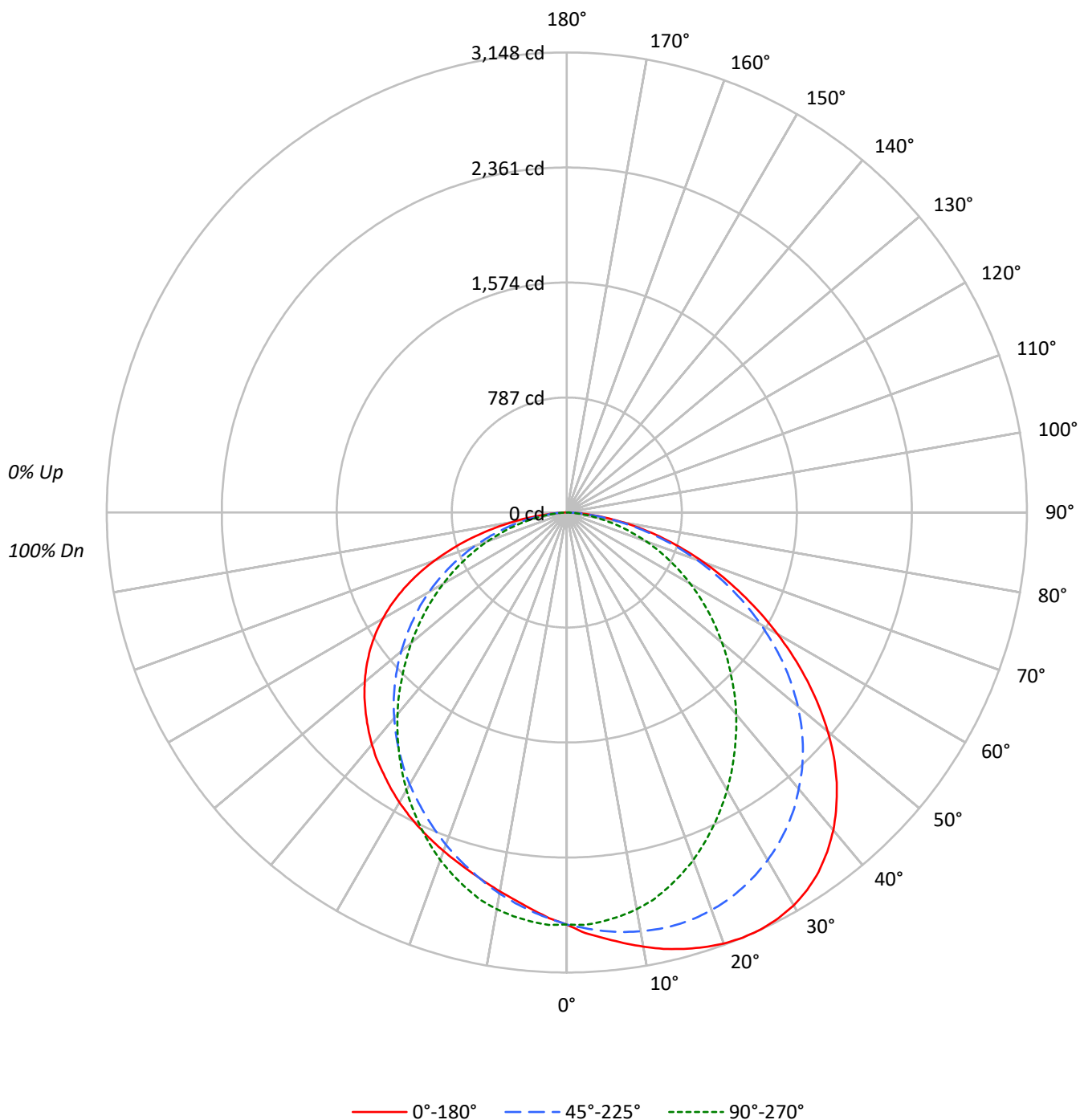
Lumens per Lamp: N/A
Luminaire Lumens: 8291.9 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): 120
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: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7586	7586	7586
5°	7897	7590	7365
10°	8243	7533	7194
15°	8614	7412	7091
20°	8990	7249	7061
25°	9343	7038	7073
30°	9647	6818	7118
35°	9867	6574	7178
40°	9967	6331	7283
45°	9940	6064	7403
50°	9763	5809	7555
55°	9430	5542	7712
60°	8970	5256	7829
65°	8423	4935	7819
70°	7839	4552	7587
75°	7117	3998	6995
80°	6110	3285	5901
85°	4662	2245	4051

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.4	3.2
10°-20°	772.1	9.3
20°-30°	1182.8	14.3
30°-40°	1443.5	17.4
40°-50°	1509.5	18.2
50°-60°	1366.2	16.5
60°-70°	1034.7	12.5
70°-80°	576.6	7.0
80°-90°	139.1	1.7
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°	2222.2	26.8
0°-40°	3665.7	44.2
0°-60°	6541.5	78.9
0°-90°	8291.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8291.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2819	2819	2819	2819	2819	
5°	2924	2875	2810	2741	2726	282
15°	3092	2920	2660	2537	2545	877
25°	3147	2837	2370	2286	2382	1452
35°	3004	2627	2001	1999	2185	1876
45°	2612	2285	1593	1664	1945	2010
55°	2010	1815	1181	1285	1644	1793
65°	1323	1244	775	881	1228	1312
75°	684	646	384	459	673	726
85°	151	133	73	97	131	182
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9
2.5°	2881.1	2867.6	2856.5	2860.8	2863.3	2854.6	2847.2	2848.5	2841.1	2855.3	2822.0
5°	2923.6	2911.3	2898.4	2903.3	2898.4	2885.4	2875.0	2871.9	2852.2	2860.2	2826.3
7.5°	2971.1	2957.5	2938.4	2944.0	2933.5	2909.5	2895.9	2887.9	2857.7	2858.3	2820.7
10°	3016.7	3005.0	2979.1	2982.8	2963.7	2931.7	2910.1	2899.0	2856.5	2850.3	2811.5
12.5°	3059.2	3043.2	3015.5	3017.3	2989.6	2947.1	2919.3	2903.3	2847.9	2829.4	2791.2
15°	3091.9	3076.5	3043.2	3042.6	3006.8	2951.4	2920.0	2897.8	2827.5	2798.6	2758.5
17.5°	3119.6	3105.4	3064.1	3062.9	3019.8	2949.5	2911.9	2884.2	2798.0	2762.2	2717.9
20°	3139.3	3125.1	3078.9	3074.6	3022.8	2940.3	2895.3	2860.2	2759.1	2716.6	2667.3
22.5°	3148.5	3134.4	3082.0	3075.8	3015.5	2921.8	2871.3	2830.0	2714.8	2659.3	2608.2
25°	3146.7	3133.1	3074.0	3067.8	3001.3	2894.1	2837.4	2789.9	2658.7	2593.4	2542.9
27.5°	3131.3	3120.8	3058.6	3050.6	2975.4	2856.5	2796.1	2743.7	2596.5	2523.8	2468.9
30°	3104.8	3096.8	3030.9	3023.5	2943.4	2815.2	2748.0	2687.7	2529.3	2447.4	2391.9
32.5°	3062.3	3054.9	2988.3	2981.6	2900.2	2762.2	2692.0	2629.7	2456.0	2365.4	2310.0
35°	3003.7	2999.4	2934.7	2927.3	2844.8	2701.8	2627.3	2558.9	2379.6	2277.3	2224.3
37.5°	2926.7	2926.7	2864.5	2856.5	2775.8	2627.9	2554.6	2481.9	2293.3	2184.9	2132.5
40°	2837.4	2845.4	2781.9	2773.9	2695.7	2548.4	2468.3	2391.9	2200.3	2087.5	2036.4
42.5°	2730.2	2737.6	2684.6	2677.2	2603.9	2456.6	2382.0	2298.9	2102.9	1988.3	1935.3
45°	2611.9	2621.7	2574.3	2568.7	2500.4	2356.2	2284.7	2200.3	2001.3	1884.8	1833.1
47.5°	2480.0	2493.0	2451.7	2448.6	2385.1	2253.3	2178.7	2093.1	1894.7	1777.0	1728.3
50°	2332.1	2350.6	2316.7	2316.7	2260.1	2128.8	2064.1	1978.5	1783.8	1666.1	1618.0
52.5°	2173.8	2197.2	2171.9	2172.6	2126.3	2008.7	1941.5	1857.7	1667.9	1552.1	1507.7
55°	2009.9	2032.7	2016.7	2019.1	1982.8	1875.6	1814.6	1731.4	1549.6	1436.9	1395.0
57.5°	1838.6	1863.2	1852.8	1857.7	1832.4	1736.3	1672.9	1600.2	1427.6	1316.1	1280.4
60°	1666.7	1690.1	1684.6	1691.3	1675.3	1592.1	1534.2	1459.1	1305.0	1197.8	1166.4
62.5°	1492.9	1514.5	1513.3	1520.7	1512.0	1443.0	1391.3	1327.2	1178.1	1079.5	1050.5
65°	1322.9	1341.4	1340.1	1348.1	1346.3	1290.8	1244.0	1185.5	1051.2	960.6	935.3
67.5°	1157.8	1173.2	1168.8	1178.1	1180.5	1136.2	1095.5	1043.1	930.4	842.3	820.7
70°	996.3	1006.8	1001.2	1007.4	1013.0	979.7	945.2	899.0	801.6	724.0	706.1
72.5°	838.0	845.4	836.7	842.9	847.8	823.8	795.5	755.4	674.7	607.5	592.7
75°	684.5	695.0	677.2	683.3	687.0	663.0	646.3	613.7	544.1	492.3	482.4
77.5°	536.1	542.2	532.4	529.9	532.4	515.1	502.2	476.9	424.5	382.0	375.9
80°	394.3	398.0	388.2	385.7	387.6	375.2	365.4	346.9	309.9	277.9	275.4
82.5°	264.3	266.2	257.6	255.1	256.3	252.6	240.9	228.0	210.7	183.6	183.0
85°	151.0	151.0	144.8	142.3	143.6	137.4	133.1	126.3	119.5	101.0	102.3
87.5°	55.5	55.5	52.4	51.8	57.9	51.1	49.3	46.2	48.1	38.2	40.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9	2818.9
2.5°	2831.2	2825.1	2819.5	2800.4	2808.4	2788.7	2787.5	2780.1	2774.5	2764.1	2777.6
5°	2822.0	2809.7	2793.6	2770.8	2777.6	2754.2	2749.3	2740.6	2733.3	2719.7	2730.2
7.5°	2807.2	2786.9	2761.6	2732.6	2741.9	2712.9	2705.5	2696.3	2690.1	2674.1	2683.3
10°	2785.6	2756.7	2727.1	2692.0	2698.8	2667.3	2658.1	2648.2	2642.7	2628.5	2637.8
12.5°	2752.4	2717.2	2677.2	2639.0	2646.4	2616.8	2604.5	2594.0	2592.2	2580.4	2591.5
15°	2709.2	2660.5	2619.3	2578.6	2587.2	2552.7	2547.2	2536.7	2539.8	2531.8	2545.3
17.5°	2654.4	2598.3	2553.3	2509.6	2518.2	2489.3	2484.9	2480.0	2483.1	2481.9	2496.7
20°	2592.8	2531.2	2479.4	2436.3	2441.2	2418.4	2420.3	2419.0	2425.2	2432.0	2452.3
22.5°	2523.1	2453.5	2399.3	2354.9	2362.3	2342.6	2351.2	2353.7	2364.2	2379.6	2405.5
25°	2444.9	2370.3	2313.7	2271.8	2278.5	2265.6	2280.4	2286.5	2303.2	2329.1	2355.6
27.5°	2362.9	2284.1	2223.7	2183.6	2196.6	2183.6	2205.8	2218.2	2243.4	2271.8	2304.4
30°	2276.1	2194.1	2131.9	2096.2	2108.5	2096.8	2132.5	2149.1	2174.4	2213.2	2252.0
32.5°	2184.9	2098.6	2037.6	2009.9	2018.5	2016.7	2056.7	2075.2	2109.1	2153.5	2194.7
35°	2091.2	2001.3	1939.7	1916.2	1926.7	1929.2	1977.2	1998.8	2035.8	2089.4	2133.7
37.5°	1994.5	1902.7	1842.3	1823.2	1832.4	1841.7	1897.8	1919.3	1961.2	2019.8	2068.4
40°	1894.1	1802.2	1743.1	1727.7	1736.9	1746.8	1807.8	1837.4	1883.0	1946.4	1999.4
42.5°	1792.4	1700.6	1643.3	1632.2	1641.4	1660.5	1725.2	1753.0	1801.0	1871.3	1929.8
45°	1688.9	1593.4	1543.5	1534.8	1544.7	1566.9	1630.3	1663.6	1714.8	1791.8	1854.6
47.5°	1584.1	1491.1	1443.6	1438.1	1448.0	1472.6	1542.8	1573.0	1627.3	1709.2	1777.0
50°	1478.2	1387.6	1342.0	1340.1	1349.4	1375.9	1443.0	1478.8	1534.8	1626.6	1696.3
52.5°	1370.9	1284.1	1242.8	1242.8	1251.4	1278.5	1346.3	1383.3	1441.2	1537.9	1614.9
55°	1263.7	1181.2	1141.7	1144.8	1157.1	1180.5	1246.5	1285.3	1343.8	1444.3	1525.6
57.5°	1156.5	1078.3	1042.5	1046.8	1058.6	1082.0	1146.7	1190.4	1243.4	1347.5	1430.7
60°	1050.5	976.6	945.2	950.1	960.6	984.0	1051.2	1088.7	1141.7	1247.7	1330.9
62.5°	943.3	876.2	846.6	852.8	862.0	885.4	948.9	985.2	1037.6	1141.7	1225.5
65°	837.4	775.1	749.9	756.0	764.6	786.2	846.0	881.1	931.0	1032.7	1112.8
67.5°	732.6	675.9	655.0	661.1	667.9	688.2	737.5	775.7	822.6	919.3	995.1
70°	629.1	578.6	560.1	566.2	572.4	590.9	634.0	669.1	712.3	801.0	871.2
72.5°	526.8	477.5	468.3	473.8	478.8	494.8	536.1	563.8	601.4	680.2	740.6
75°	427.0	384.5	378.3	383.9	388.2	400.5	435.0	459.0	490.5	558.9	608.1
77.5°	330.9	295.1	292.7	297.0	301.3	309.9	337.0	362.3	386.9	437.5	481.2
80°	240.9	212.0	212.0	216.3	215.0	225.5	244.6	264.9	282.8	319.2	351.2
82.5°	159.0	136.2	139.3	142.3	144.2	148.5	160.2	175.6	186.7	208.9	229.8
85°	88.1	72.7	75.8	78.3	77.0	81.9	88.1	97.4	102.9	113.4	124.5
87.5°	32.7	27.1	27.7	29.6	30.8	33.3	33.3	38.8	39.4	40.7	43.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	2818.9	2818.9	2818.9
2.5°	2751.7	2766.5	2777.6
5°	2704.3	2716.6	2726.5
7.5°	2658.1	2669.2	2677.8
10°	2614.3	2626.7	2632.8
12.5°	2569.4	2583.5	2588.5
15°	2525.0	2539.2	2545.3
17.5°	2479.4	2497.9	2504.7
20°	2436.9	2460.3	2465.8
22.5°	2393.8	2417.8	2424.6
25°	2346.9	2375.3	2382.0
27.5°	2297.0	2330.9	2337.7
30°	2247.1	2284.1	2290.9
32.5°	2193.5	2233.6	2239.7
35°	2137.4	2177.5	2184.9
37.5°	2075.2	2119.0	2133.7
40°	2010.5	2058.0	2073.4
42.5°	1942.7	1994.5	2010.5
45°	1870.0	1926.7	1945.2
47.5°	1796.7	1860.8	1876.8
50°	1717.2	1785.6	1804.7
52.5°	1634.0	1708.6	1727.7
55°	1547.8	1622.9	1643.9
57.5°	1454.1	1531.8	1553.9
60°	1356.2	1433.8	1454.7
62.5°	1255.7	1326.0	1346.3
65°	1143.6	1209.5	1228.0
67.5°	1024.7	1085.0	1100.4
70°	898.4	950.7	964.3
72.5°	766.5	802.8	820.7
75°	630.3	659.3	672.8
77.5°	493.5	513.9	525.0
80°	359.8	371.5	380.8
82.5°	235.4	240.3	247.1
85°	126.9	126.9	131.2
87.5°	43.1	41.3	43.1
90°	0.0	0.0	0.0

(END OF REPORT)