

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: P834205

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834205
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-LD4-3LO-30-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

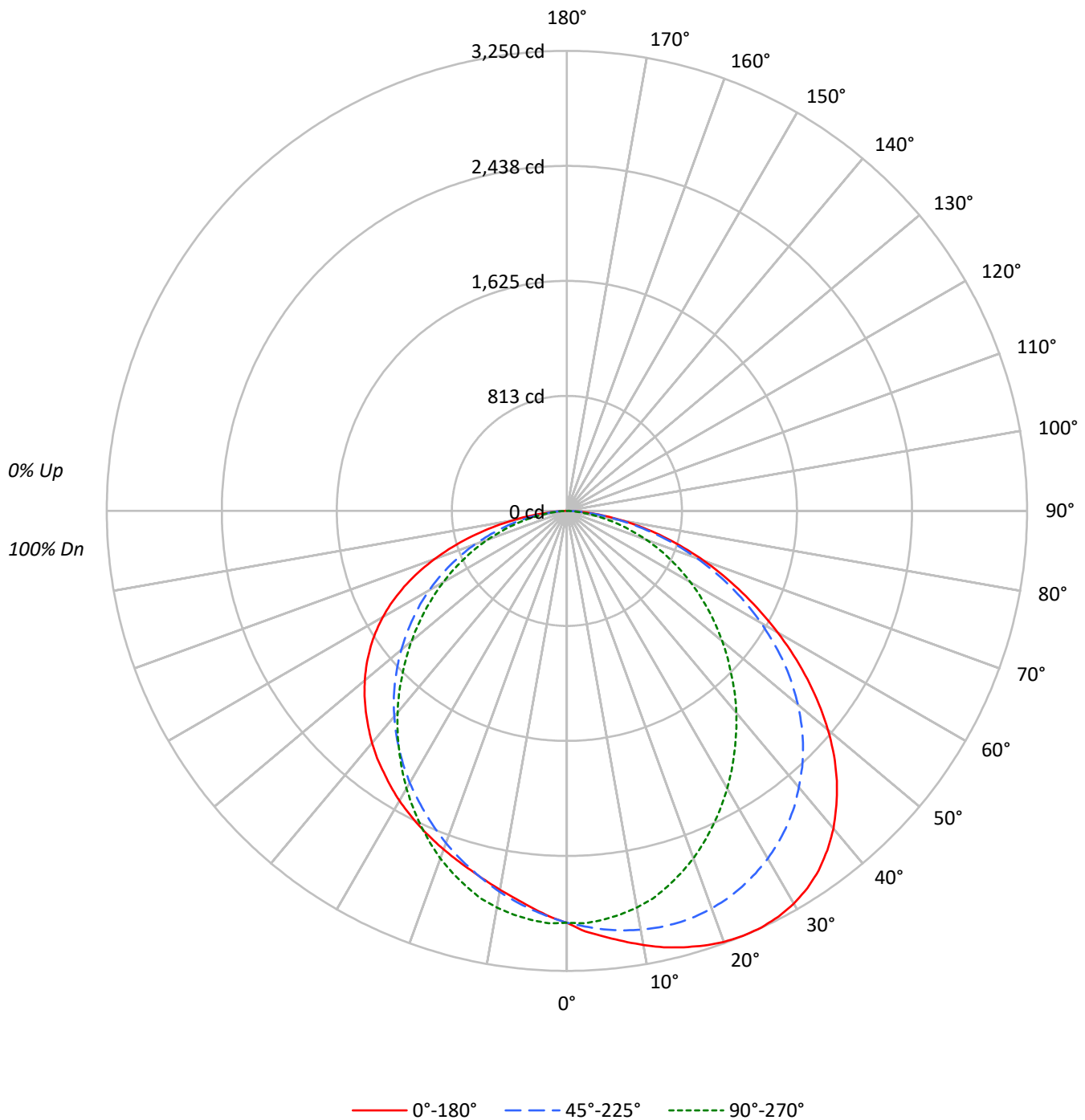
Lumens per Lamp: N/A
Luminaire Lumens: 8559.4 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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

Peachtree City, GA 30269



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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°	7830	7830	7830
5°	8152	7834	7603
10°	8509	7776	7426
15°	8891	7651	7320
20°	9280	7482	7289
25°	9644	7265	7301
30°	9959	7038	7348
35°	10186	6786	7409
40°	10289	6535	7518
45°	10261	6259	7642
50°	10078	5997	7799
55°	9734	5720	7961
60°	9260	5426	8082
65°	8695	5095	8071
70°	8092	4699	7832
75°	7347	4127	7222
80°	6309	3391	6092
85°	4810	2319	4184



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.0	3.2
10°-20°	797.0	9.3
20°-30°	1221.0	14.3
30°-40°	1490.0	17.4
40°-50°	1558.3	18.2
50°-60°	1410.3	16.5
60°-70°	1068.1	12.5
70°-80°	595.2	7.0
80°-90°	143.6	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°	2293.9	26.8
0°-40°	3784.0	44.2
0°-60°	6752.5	78.9
0°-90°	8559.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8559.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2910	2910	2910	2910	2910	
5°	3018	2968	2900	2829	2814	291
15°	3192	3014	2746	2619	2628	905
25°	3248	2929	2447	2360	2459	1498
35°	3101	2712	2066	2063	2255	1936
45°	2696	2358	1645	1717	2008	2074
55°	2075	1873	1219	1327	1697	1851
65°	1366	1284	800	910	1268	1355
75°	707	667	397	474	695	749
85°	156	137	75	100	136	188
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°	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9
2.5°	2974.1	2960.1	2948.7	2953.1	2955.7	2946.8	2939.1	2940.4	2932.8	2947.4	2913.0
5°	3018.0	3005.3	2991.9	2997.0	2991.9	2978.6	2967.7	2964.6	2944.2	2952.5	2917.5
7.5°	3067.0	3053.0	3033.3	3039.0	3028.2	3003.4	2989.4	2981.1	2949.9	2950.6	2911.8
10°	3114.0	3101.9	3075.2	3079.0	3059.3	3026.3	3004.0	2992.5	2948.7	2942.3	2902.2
12.5°	3157.9	3141.4	3112.8	3114.7	3086.0	3042.2	3013.5	2997.0	2939.8	2920.7	2881.2
15°	3191.6	3175.7	3141.4	3140.7	3103.9	3046.6	3014.2	2991.3	2918.8	2888.9	2847.5
17.5°	3220.2	3205.6	3163.0	3161.7	3117.2	3044.7	3005.9	2977.3	2888.2	2851.3	2805.6
20°	3240.6	3226.0	3178.3	3173.8	3120.4	3035.2	2988.7	2952.5	2848.2	2804.3	2753.4
22.5°	3250.1	3235.5	3181.4	3175.1	3112.8	3016.1	2963.9	2921.3	2802.4	2745.1	2692.3
25°	3248.2	3234.2	3173.2	3166.8	3098.1	2987.5	2928.9	2880.0	2744.5	2677.1	2624.9
27.5°	3232.3	3221.5	3157.3	3149.0	3071.4	2948.7	2886.3	2832.3	2680.3	2605.2	2548.6
30°	3205.0	3196.7	3128.7	3121.0	3038.3	2906.0	2836.7	2774.4	2610.9	2526.3	2469.1
32.5°	3161.1	3153.5	3084.8	3077.8	2993.8	2851.3	2778.8	2714.6	2535.2	2441.7	2384.5
35°	3100.7	3096.2	3029.4	3021.8	2936.6	2789.0	2712.1	2641.5	2456.4	2350.8	2296.1
37.5°	3021.2	3021.2	2956.9	2948.7	2865.3	2712.7	2637.0	2561.9	2367.3	2255.4	2201.3
40°	2928.9	2937.2	2871.7	2863.4	2782.7	2630.6	2548.0	2469.1	2271.3	2154.9	2102.1
42.5°	2818.3	2825.9	2771.2	2763.6	2687.9	2535.9	2458.9	2373.0	2170.8	2052.5	1997.8
45°	2696.2	2706.3	2657.4	2651.6	2581.0	2432.2	2358.4	2271.3	2065.8	1945.6	1892.2
47.5°	2560.0	2573.4	2530.8	2527.6	2462.1	2326.0	2249.0	2160.6	1955.8	1834.3	1784.1
50°	2407.4	2426.5	2391.5	2391.5	2333.0	2197.5	2130.7	2042.3	1841.3	1719.8	1670.2
52.5°	2243.9	2268.1	2242.0	2242.7	2195.0	2073.5	2004.1	1917.6	1721.7	1602.2	1556.4
55°	2074.7	2098.3	2081.7	2084.3	2046.8	1936.1	1873.1	1787.3	1599.6	1483.2	1440.0
57.5°	1897.9	1923.4	1912.6	1917.6	1891.6	1792.3	1726.8	1651.8	1473.7	1358.6	1321.7
60°	1720.5	1744.6	1738.9	1745.9	1729.4	1643.5	1583.7	1506.1	1347.1	1236.5	1204.0
62.5°	1541.1	1563.4	1562.1	1569.7	1560.8	1489.6	1436.2	1370.0	1216.1	1114.3	1084.4
65°	1365.6	1384.6	1383.4	1391.6	1389.7	1332.5	1284.2	1223.7	1085.1	991.6	965.5
67.5°	1195.1	1211.0	1206.6	1216.1	1218.6	1172.8	1130.9	1076.8	960.4	869.5	847.2
70°	1028.5	1039.3	1033.6	1039.9	1045.6	1011.3	975.7	928.0	827.5	747.3	728.9
72.5°	865.0	872.6	863.7	870.1	875.2	850.4	821.1	779.8	696.5	627.1	611.9
75°	706.6	717.4	699.0	705.4	709.2	684.4	667.2	633.5	561.6	508.2	498.0
77.5°	553.4	559.7	549.5	547.0	549.5	531.7	518.4	492.3	438.2	394.3	388.0
80°	407.1	410.9	400.7	398.2	400.1	387.3	377.2	358.1	319.9	286.9	284.3
82.5°	272.9	274.8	265.9	263.3	264.6	260.8	248.7	235.3	217.5	189.5	188.9
85°	155.8	155.8	149.5	146.9	148.2	141.8	137.4	130.4	123.4	104.3	105.6
87.5°	57.2	57.2	54.1	53.4	59.8	52.8	50.9	47.7	49.6	39.4	42.0
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°	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9	2909.9
2.5°	2922.6	2916.2	2910.5	2890.8	2899.0	2878.7	2877.4	2869.8	2864.1	2853.3	2867.2
5°	2913.0	2900.3	2883.8	2860.2	2867.2	2843.1	2838.0	2829.1	2821.5	2807.5	2818.3
7.5°	2897.8	2876.8	2850.7	2820.8	2830.4	2800.5	2792.8	2783.3	2776.9	2760.4	2769.9
10°	2875.5	2845.6	2815.1	2778.8	2785.8	2753.4	2743.9	2733.7	2728.0	2713.3	2722.9
12.5°	2841.2	2804.9	2763.6	2724.1	2731.8	2701.2	2688.5	2677.7	2675.8	2663.7	2675.2
15°	2796.6	2746.4	2703.8	2661.8	2670.7	2635.1	2629.4	2618.6	2621.7	2613.5	2627.5
17.5°	2740.0	2682.2	2635.7	2590.6	2599.5	2569.6	2565.1	2560.0	2563.2	2561.9	2577.2
20°	2676.4	2612.8	2559.4	2514.9	2520.0	2496.4	2498.3	2497.1	2503.4	2510.4	2531.4
22.5°	2604.6	2532.7	2476.7	2430.9	2438.6	2418.2	2427.1	2429.7	2440.5	2456.4	2483.1
25°	2523.8	2446.8	2388.3	2345.1	2352.1	2338.7	2354.0	2360.3	2377.5	2404.2	2431.6
27.5°	2439.2	2357.8	2295.5	2254.1	2267.5	2254.1	2277.0	2289.7	2315.8	2345.1	2378.8
30°	2349.5	2264.9	2200.7	2163.8	2176.5	2164.4	2201.3	2218.5	2244.6	2284.6	2324.7
32.5°	2255.4	2166.3	2103.4	2074.7	2083.7	2081.7	2123.1	2142.2	2177.1	2222.9	2265.6
35°	2158.7	2065.8	2002.2	1978.1	1988.9	1991.4	2041.0	2063.3	2101.5	2156.8	2202.6
37.5°	2058.8	1964.1	1901.7	1882.0	1891.6	1901.1	1959.0	1981.2	2024.5	2084.9	2135.2
40°	1955.2	1860.4	1799.3	1783.4	1793.0	1803.2	1866.1	1896.7	1943.7	2009.2	2063.9
42.5°	1850.2	1755.5	1696.3	1684.9	1694.4	1714.1	1780.9	1809.5	1859.1	1931.6	1992.1
45°	1743.4	1644.8	1593.3	1584.4	1594.5	1617.4	1682.9	1717.3	1770.1	1849.6	1914.5
47.5°	1635.2	1539.2	1490.2	1484.5	1494.7	1520.1	1592.6	1623.8	1679.8	1764.4	1834.3
50°	1525.8	1432.4	1385.3	1383.4	1392.9	1420.3	1489.6	1526.5	1584.4	1679.1	1751.0
52.5°	1415.2	1325.5	1282.9	1282.9	1291.8	1319.8	1389.7	1427.9	1487.7	1587.5	1667.0
55°	1304.5	1219.3	1178.6	1181.8	1194.5	1218.6	1286.7	1326.8	1387.2	1490.9	1574.8
57.5°	1193.8	1113.1	1076.2	1080.6	1092.7	1116.9	1183.7	1228.8	1283.5	1391.0	1476.9
60°	1084.4	1008.1	975.7	980.8	991.6	1015.7	1085.1	1123.9	1178.6	1288.0	1373.8
62.5°	973.8	904.4	873.9	880.3	889.8	914.0	979.5	1017.0	1071.1	1178.6	1265.1
65°	864.4	800.1	774.1	780.4	789.3	811.6	873.3	909.5	961.0	1066.0	1148.7
67.5°	756.2	697.7	676.1	682.5	689.5	710.5	761.3	800.8	849.1	949.0	1027.2
70°	649.4	597.2	578.2	584.5	590.9	610.0	654.5	690.7	735.3	826.8	899.4
72.5°	543.8	492.9	483.4	489.1	494.2	510.7	553.4	582.0	620.8	702.2	764.5
75°	440.8	396.9	390.5	396.2	400.7	413.4	449.0	473.8	506.3	576.9	627.8
77.5°	341.6	304.7	302.1	306.6	311.0	319.9	347.9	374.0	399.4	451.6	496.7
80°	248.7	218.8	218.8	223.2	222.0	232.8	252.5	273.5	291.9	329.5	362.5
82.5°	164.1	140.6	143.7	146.9	148.8	153.3	165.4	181.3	192.7	215.6	237.2
85°	91.0	75.1	78.2	80.8	79.5	84.6	91.0	100.5	106.2	117.0	128.5
87.5°	33.7	28.0	28.6	30.5	31.8	34.3	34.3	40.1	40.7	42.0	44.5
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°	2909.9	2909.9	2909.9
2.5°	2840.5	2855.8	2867.2
5°	2791.6	2804.3	2814.5
7.5°	2743.9	2755.3	2764.2
10°	2698.7	2711.4	2717.8
12.5°	2652.3	2666.9	2672.0
15°	2606.5	2621.1	2627.5
17.5°	2559.4	2578.5	2585.5
20°	2515.5	2539.7	2545.4
22.5°	2471.0	2495.8	2502.8
25°	2422.7	2451.9	2458.9
27.5°	2371.1	2406.1	2413.1
30°	2319.6	2357.8	2364.8
32.5°	2264.3	2305.6	2312.0
35°	2206.4	2247.7	2255.4
37.5°	2142.2	2187.3	2202.6
40°	2075.4	2124.4	2140.3
42.5°	2005.4	2058.8	2075.4
45°	1930.4	1988.9	2008.0
47.5°	1854.7	1920.8	1937.4
50°	1772.6	1843.2	1862.9
52.5°	1686.8	1763.7	1783.4
55°	1597.7	1675.3	1696.9
57.5°	1501.0	1581.2	1604.1
60°	1399.9	1480.1	1501.7
62.5°	1296.2	1368.7	1389.7
65°	1180.5	1248.5	1267.6
67.5°	1057.7	1120.1	1136.0
70°	927.3	981.4	995.4
72.5°	791.2	828.8	847.2
75°	650.7	680.6	694.6
77.5°	509.5	530.5	541.9
80°	371.4	383.5	393.1
82.5°	243.0	248.1	255.1
85°	131.0	131.0	135.5
87.5°	44.5	42.6	44.5
90°	0.0	0.0	0.0

(END OF REPORT)