

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: P834258

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2HI-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834258
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-LD4-2HI-30-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

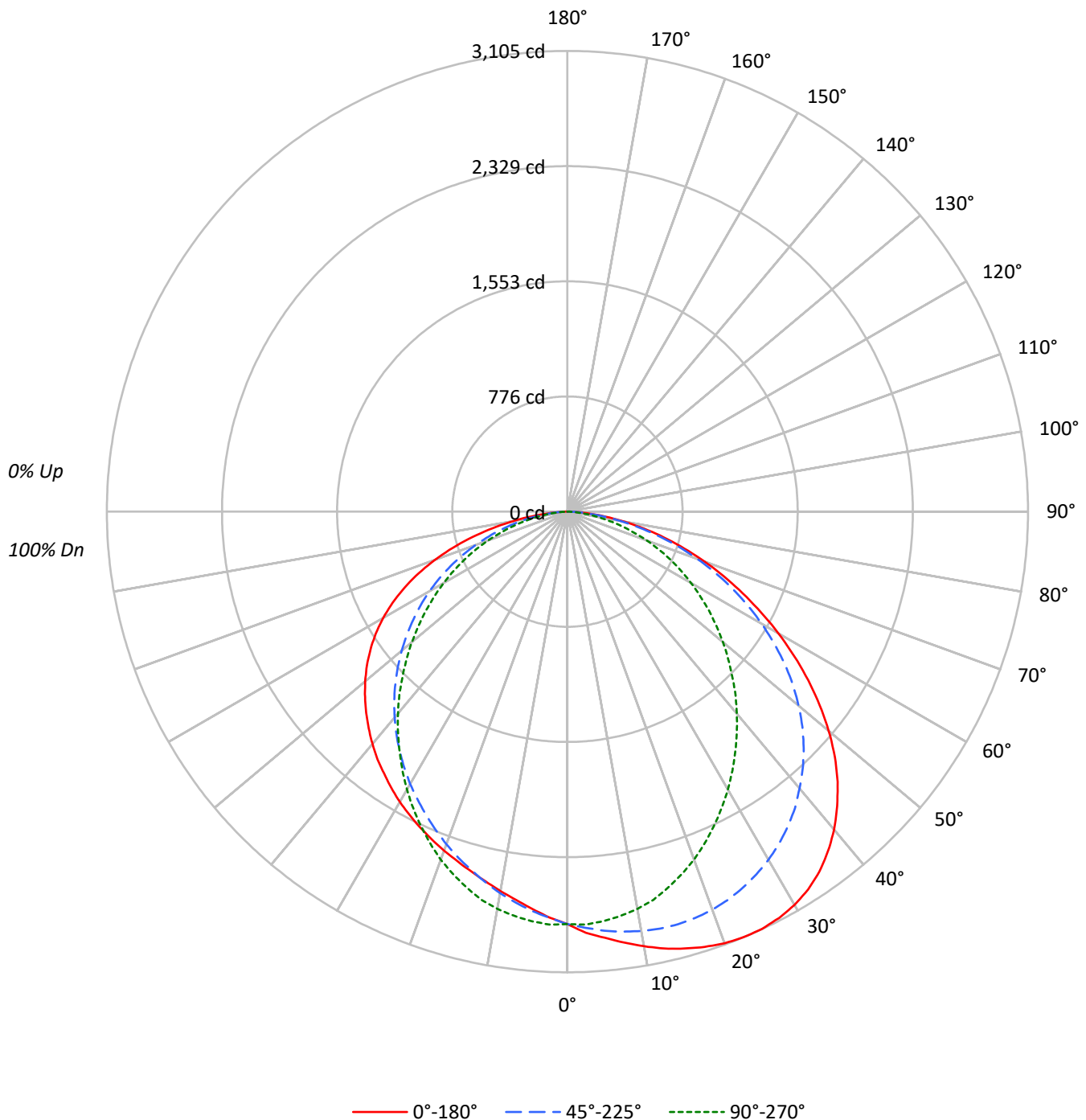
Lumens per Lamp: N/A
Luminaire Lumens: 8176.2 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7480	7480	7480
5°	7787	7484	7262
10°	8128	7427	7094
15°	8493	7309	6992
20°	8865	7147	6963
25°	9213	6940	6974
30°	9513	6723	7019
35°	9730	6482	7077
40°	9828	6243	7182
45°	9801	5979	7300
50°	9627	5728	7450
55°	9298	5464	7605
60°	8845	5183	7720
65°	8306	4867	7710
70°	7729	4489	7481
75°	7018	3942	6899
80°	6025	3239	5819
85°	4597	2214	3995

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.6	3.2
10°-20°	761.3	9.3
20°-30°	1166.3	14.3
30°-40°	1423.3	17.4
40°-50°	1488.5	18.2
50°-60°	1347.2	16.5
60°-70°	1020.3	12.5
70°-80°	568.6	7.0
80°-90°	137.1	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°	2191.2	26.8
0°-40°	3614.5	44.2
0°-60°	6450.2	78.9
0°-90°	8176.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8176.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2780	2780	2780	2780	2780	
5°	2883	2835	2770	2702	2688	278
15°	3049	2879	2623	2501	2510	865
25°	3103	2798	2337	2255	2349	1431
35°	2962	2591	1973	1971	2154	1849
45°	2575	2253	1571	1640	1918	1982
55°	1982	1789	1165	1267	1621	1768
65°	1304	1227	764	869	1211	1294
75°	675	637	379	453	664	716
85°	149	131	72	96	129	179
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°	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6
2.5°	2840.9	2827.6	2816.6	2820.9	2823.3	2814.8	2807.5	2808.7	2801.4	2815.4	2782.6
5°	2882.9	2870.7	2858.0	2862.8	2858.0	2845.2	2834.9	2831.8	2812.4	2820.3	2786.9
7.5°	2929.6	2916.3	2897.4	2902.9	2892.6	2868.9	2855.5	2847.6	2817.9	2818.5	2781.4
10°	2974.6	2963.1	2937.5	2941.2	2922.4	2890.8	2869.5	2858.6	2816.6	2810.6	2772.3
12.5°	3016.5	3000.7	2973.4	2975.2	2947.9	2905.9	2878.6	2862.8	2808.1	2789.9	2752.2
15°	3048.7	3033.5	3000.7	3000.1	2964.9	2910.2	2879.2	2857.3	2788.1	2759.5	2720.0
17.5°	3076.1	3062.1	3021.4	3020.2	2977.6	2908.4	2871.3	2844.0	2758.9	2723.7	2679.9
20°	3095.5	3081.5	3036.0	3031.7	2980.7	2899.3	2854.9	2820.3	2720.6	2678.7	2630.1
22.5°	3104.6	3090.6	3039.0	3032.9	2973.4	2881.0	2831.2	2790.5	2676.9	2622.2	2571.8
25°	3102.8	3089.4	3031.1	3025.0	2959.4	2853.7	2797.8	2751.0	2621.6	2557.2	2507.4
27.5°	3087.6	3077.3	3015.9	3008.0	2933.9	2816.6	2757.1	2705.5	2560.2	2488.6	2434.5
30°	3061.5	3053.6	2988.6	2981.3	2902.3	2775.9	2709.7	2650.2	2494.0	2413.2	2358.5
32.5°	3019.6	3012.3	2946.7	2940.0	2859.8	2723.7	2654.4	2593.1	2421.7	2332.4	2277.7
35°	2961.8	2957.6	2893.8	2886.5	2805.1	2664.1	2590.6	2523.2	2346.4	2245.5	2193.3
37.5°	2885.9	2885.9	2824.5	2816.6	2737.0	2591.2	2518.9	2447.2	2261.3	2154.4	2102.8
40°	2797.8	2805.7	2743.1	2735.2	2658.1	2512.9	2433.9	2358.5	2169.6	2058.4	2008.0
42.5°	2692.1	2699.4	2647.1	2639.8	2567.5	2422.3	2348.8	2266.8	2073.6	1960.6	1908.3
45°	2575.4	2585.2	2538.4	2532.9	2465.5	2323.3	2252.8	2169.6	1973.3	1858.5	1807.5
47.5°	2445.4	2458.2	2417.5	2414.4	2351.9	2221.8	2148.3	2063.9	1868.2	1752.2	1704.2
50°	2299.6	2317.8	2284.4	2284.4	2228.5	2099.1	2035.3	1950.9	1758.9	1642.8	1595.4
52.5°	2143.5	2166.5	2141.6	2142.2	2096.7	1980.6	1914.4	1831.8	1644.7	1530.4	1486.7
55°	1981.9	2004.3	1988.5	1991.0	1955.1	1849.4	1789.3	1707.2	1528.0	1416.8	1375.5
57.5°	1813.0	1837.3	1826.9	1831.8	1806.9	1712.1	1649.5	1577.8	1407.7	1297.7	1262.5
60°	1643.4	1666.5	1661.1	1667.7	1651.9	1569.9	1512.8	1438.7	1286.8	1181.1	1150.1
62.5°	1472.1	1493.4	1492.2	1499.5	1490.9	1422.9	1371.9	1308.7	1161.6	1064.4	1035.9
65°	1304.4	1322.7	1321.4	1329.3	1327.5	1272.8	1226.7	1168.9	1036.5	947.2	922.3
67.5°	1141.6	1156.8	1152.5	1161.6	1164.1	1120.3	1080.2	1028.6	917.4	830.5	809.3
70°	982.4	992.7	987.3	993.4	998.8	966.0	932.0	886.4	790.4	713.9	696.3
72.5°	826.3	833.6	825.1	831.1	836.0	812.3	784.4	744.9	665.3	599.1	584.5
75°	675.0	685.3	667.7	673.8	677.4	653.7	637.3	605.1	536.5	485.4	475.7
77.5°	528.6	534.7	524.9	522.5	524.9	507.9	495.2	470.2	418.6	376.7	370.6
80°	388.8	392.5	382.8	380.3	382.2	370.0	360.3	342.1	305.6	274.0	271.6
82.5°	260.6	262.5	254.0	251.5	252.7	249.1	237.6	224.8	207.8	181.1	180.4
85°	148.9	148.9	142.8	140.3	141.6	135.5	131.2	124.5	117.9	99.6	100.9
87.5°	54.7	54.7	51.6	51.0	57.1	50.4	48.6	45.6	47.4	37.7	40.1
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6	2779.6
2.5°	2791.7	2785.7	2780.2	2761.3	2769.2	2749.8	2748.6	2741.3	2735.8	2725.5	2738.9
5°	2782.6	2770.5	2754.7	2732.2	2738.9	2715.8	2710.9	2702.4	2695.1	2681.8	2692.1
7.5°	2768.0	2748.0	2723.1	2694.5	2703.6	2675.1	2667.8	2658.7	2652.6	2636.8	2645.9
10°	2746.8	2718.2	2689.0	2654.4	2661.1	2630.1	2621.0	2611.3	2605.8	2591.8	2601.0
12.5°	2714.0	2679.3	2639.8	2602.2	2609.5	2580.3	2568.1	2557.8	2556.0	2544.5	2555.4
15°	2671.4	2623.4	2582.7	2542.6	2551.1	2517.1	2511.6	2501.3	2504.4	2496.5	2509.8
17.5°	2617.4	2562.1	2517.7	2474.6	2483.1	2454.5	2450.3	2445.4	2448.5	2447.2	2461.8
20°	2556.6	2495.8	2444.8	2402.3	2407.1	2384.7	2386.5	2385.3	2391.3	2398.0	2418.1
22.5°	2487.9	2419.3	2365.8	2322.1	2329.4	2309.9	2318.4	2320.9	2331.2	2346.4	2371.9
25°	2410.8	2337.3	2281.4	2240.1	2246.7	2234.0	2248.6	2254.6	2271.0	2296.6	2322.7
27.5°	2330.0	2252.2	2192.7	2153.2	2165.9	2153.2	2175.1	2187.2	2212.1	2240.1	2272.3
30°	2244.3	2163.5	2102.1	2066.9	2079.1	2067.5	2102.8	2119.2	2144.1	2182.3	2220.6
32.5°	2154.4	2069.3	2009.2	1981.9	1990.4	1988.5	2028.0	2046.3	2079.7	2123.4	2164.1
35°	2062.1	1973.3	1912.6	1889.5	1899.8	1902.3	1949.7	1970.9	2007.4	2060.2	2104.0
37.5°	1966.7	1876.1	1816.6	1797.8	1806.9	1816.0	1871.3	1892.5	1933.9	1991.6	2039.6
40°	1867.6	1777.1	1718.8	1703.6	1712.7	1722.4	1782.6	1811.7	1856.7	1919.3	1971.5
42.5°	1767.4	1676.9	1620.4	1609.4	1618.5	1637.4	1701.2	1728.5	1775.9	1845.2	1902.9
45°	1665.3	1571.1	1521.9	1513.4	1523.1	1545.0	1607.6	1640.4	1690.8	1766.8	1828.7
47.5°	1562.0	1470.3	1423.5	1418.0	1427.8	1452.1	1521.3	1551.1	1604.6	1685.4	1752.2
50°	1457.5	1368.2	1323.3	1321.4	1330.6	1356.7	1422.9	1458.1	1513.4	1604.0	1672.6
52.5°	1351.8	1266.1	1225.4	1225.4	1233.9	1260.7	1327.5	1364.0	1421.1	1516.5	1592.4
55°	1246.1	1164.7	1125.8	1128.8	1141.0	1164.1	1229.1	1267.4	1325.1	1424.1	1504.3
57.5°	1140.4	1063.2	1028.0	1032.2	1043.8	1066.9	1130.7	1173.8	1226.1	1328.7	1410.7
60°	1035.9	963.0	932.0	936.9	947.2	970.3	1036.5	1073.6	1125.8	1230.3	1312.3
62.5°	930.2	863.9	834.8	840.9	850.0	873.1	935.6	971.5	1023.1	1125.8	1208.4
65°	825.7	764.3	739.4	745.5	754.0	775.2	834.2	868.8	918.0	1018.3	1097.2
67.5°	722.4	666.5	645.8	651.9	658.6	678.6	727.2	764.9	811.1	906.5	981.2
70°	620.3	570.5	552.3	558.3	564.4	582.6	625.2	659.8	702.3	789.8	859.1
72.5°	519.5	470.9	461.7	467.2	472.1	487.9	528.6	555.9	593.0	670.7	730.3
75°	421.0	379.1	373.0	378.5	382.8	394.9	428.9	452.6	483.6	551.1	599.7
77.5°	326.3	291.0	288.6	292.8	297.1	305.6	332.3	357.2	381.5	431.4	474.5
80°	237.6	209.0	209.0	213.3	212.0	222.4	241.2	261.2	278.9	314.7	346.3
82.5°	156.7	134.3	137.3	140.3	142.2	146.4	158.0	173.2	184.1	206.0	226.6
85°	86.9	71.7	74.7	77.2	75.9	80.8	86.9	96.0	101.5	111.8	122.7
87.5°	32.2	26.7	27.3	29.2	30.4	32.8	32.8	38.3	38.9	40.1	42.5
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°	2779.6	2779.6	2779.6
2.5°	2713.4	2727.9	2738.9
5°	2666.6	2678.7	2688.4
7.5°	2621.0	2631.9	2640.4
10°	2577.9	2590.0	2596.1
12.5°	2533.5	2547.5	2552.3
15°	2489.8	2503.7	2509.8
17.5°	2444.8	2463.0	2469.7
20°	2402.9	2426.0	2431.4
22.5°	2360.4	2384.1	2390.7
25°	2314.2	2342.1	2348.8
27.5°	2265.0	2298.4	2305.1
30°	2215.8	2252.2	2258.9
32.5°	2162.9	2202.4	2208.5
35°	2107.6	2147.1	2154.4
37.5°	2046.3	2089.4	2104.0
40°	1982.5	2029.2	2044.4
42.5°	1915.6	1966.7	1982.5
45°	1843.9	1899.8	1918.1
47.5°	1771.6	1834.8	1850.6
50°	1693.3	1760.7	1779.5
52.5°	1611.2	1684.8	1703.6
55°	1526.2	1600.3	1621.0
57.5°	1433.8	1510.4	1532.3
60°	1337.2	1413.8	1434.4
62.5°	1238.2	1307.5	1327.5
65°	1127.6	1192.6	1210.9
67.5°	1010.4	1069.9	1085.1
70°	885.8	937.5	950.8
72.5°	755.8	791.6	809.3
75°	621.5	650.1	663.5
77.5°	486.7	506.7	517.6
80°	354.8	366.4	375.5
82.5°	232.1	236.9	243.6
85°	125.2	125.2	129.4
87.5°	42.5	40.7	42.5
90°	0.0	0.0	0.0

(END OF REPORT)