

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: P834547

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834547
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-3LO-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

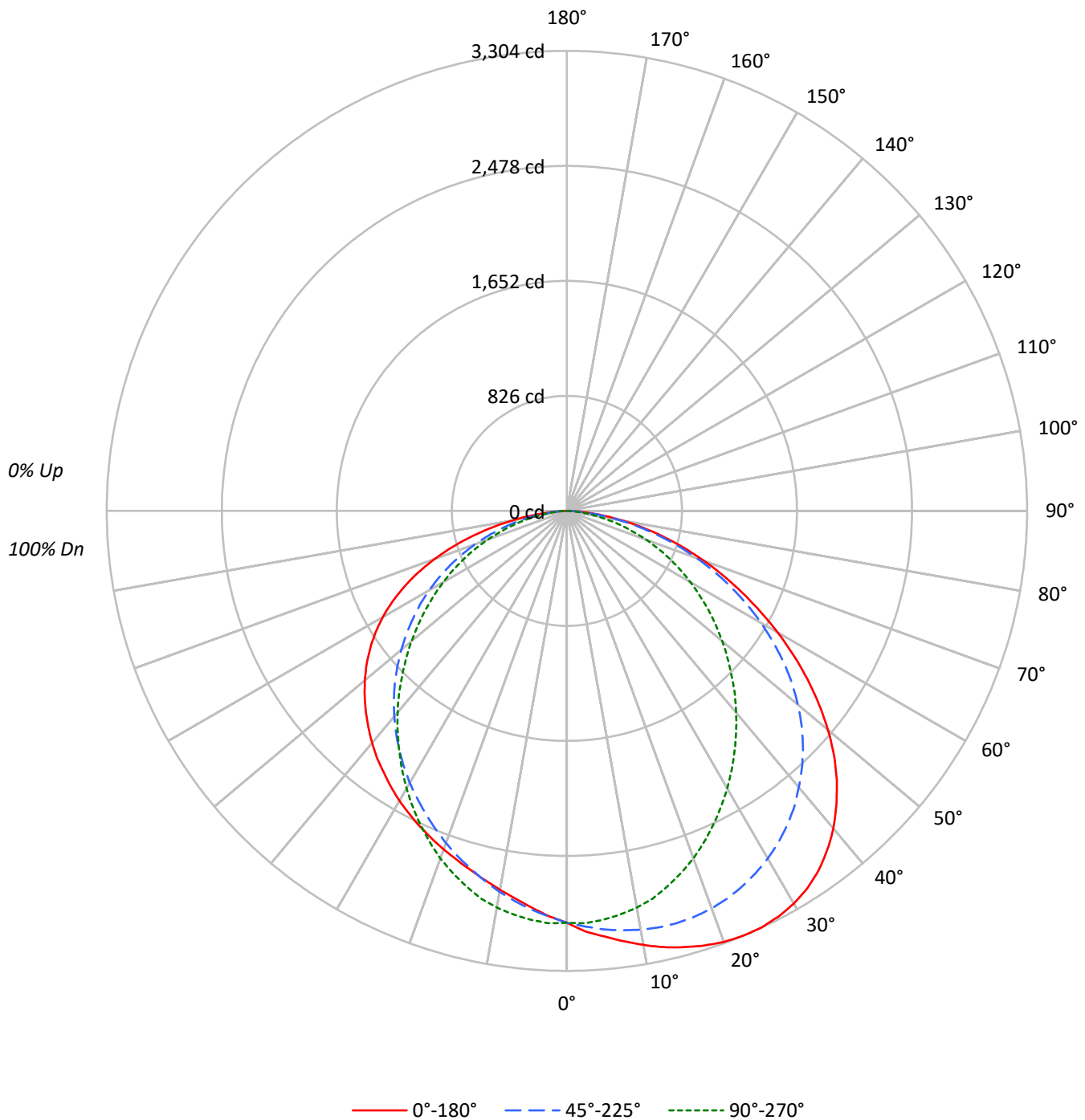
Lumens per Lamp: N/A
Luminaire Lumens: 8700.4 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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
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°	3980	3980	3980
5°	4143	3982	3864
10°	4325	3952	3774
15°	4519	3889	3720
20°	4716	3803	3705
25°	4902	3692	3711
30°	5061	3577	3734
35°	5177	3449	3766
40°	5229	3321	3821
45°	5215	3181	3884
50°	5122	3048	3964
55°	4947	2907	4046
60°	4706	2757	4108
65°	4419	2589	4102
70°	4113	2388	3980
75°	3734	2097	3670
80°	3206	1723	3095
85°	2445	1178	2126

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	280.5	3.2
10°-20°	810.1	9.3
20°-30°	1241.1	14.3
30°-40°	1514.6	17.4
40°-50°	1583.9	18.2
50°-60°	1433.5	16.5
60°-70°	1085.7	12.5
70°-80°	605.0	7.0
80°-90°	145.9	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°	2331.7	26.8
0°-40°	3846.3	44.2
0°-60°	6863.7	78.9
0°-90°	8700.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8700.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2958	2958	2958	2958	2958	
5°	3068	3017	2948	2876	2861	296
15°	3244	3064	2792	2662	2671	920
25°	3302	2977	2487	2399	2499	1523
35°	3152	2757	2100	2097	2292	1968
45°	2740	2397	1672	1746	2041	2109
55°	2109	1904	1239	1349	1725	1882
65°	1388	1305	813	924	1288	1377
75°	718	678	403	482	706	762
85°	158	140	76	102	138	191
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°	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8
2.5°	3023.1	3008.8	2997.2	3001.7	3004.3	2995.3	2987.5	2988.8	2981.0	2995.9	2961.0
5°	3067.7	3054.7	3041.2	3046.3	3041.2	3027.6	3016.6	3013.4	2992.7	3001.1	2965.5
7.5°	3117.5	3103.2	3083.2	3089.0	3078.0	3052.8	3038.6	3030.2	2998.5	2999.1	2959.7
10°	3165.3	3153.0	3125.9	3129.7	3109.7	3076.1	3053.4	3041.8	2997.2	2990.7	2950.0
12.5°	3209.9	3193.1	3164.0	3165.9	3136.8	3092.2	3063.1	3046.3	2988.2	2968.8	2928.7
15°	3244.2	3228.0	3193.1	3192.4	3155.0	3096.8	3063.8	3040.5	2966.8	2936.4	2894.4
17.5°	3273.3	3258.4	3215.1	3213.8	3168.5	3094.8	3055.4	3026.3	2935.8	2898.3	2851.7
20°	3293.9	3279.1	3230.6	3226.1	3171.8	3085.1	3037.9	3001.1	2895.1	2850.4	2798.7
22.5°	3303.6	3288.8	3233.8	3227.4	3164.0	3065.7	3012.7	2969.4	2848.5	2790.3	2736.7
25°	3301.7	3287.5	3225.4	3219.0	3149.1	3036.6	2977.2	2927.4	2789.7	2721.1	2668.1
27.5°	3285.5	3274.6	3209.3	3200.9	3122.0	2997.2	2933.8	2878.9	2724.4	2648.1	2590.6
30°	3257.7	3249.3	3180.2	3172.4	3088.4	2953.9	2883.4	2820.1	2653.9	2567.9	2509.7
32.5°	3213.1	3205.4	3135.6	3128.4	3043.1	2898.3	2824.6	2759.3	2577.0	2481.9	2423.8
35°	3151.7	3147.2	3079.3	3071.6	2984.9	2834.9	2756.7	2684.9	2496.8	2389.5	2333.9
37.5°	3070.9	3070.9	3005.6	2997.2	2912.5	2757.3	2680.4	2604.1	2406.3	2292.5	2237.6
40°	2977.2	2985.6	2919.0	2910.6	2828.5	2674.0	2589.9	2509.7	2308.7	2190.4	2136.7
42.5°	2864.7	2872.4	2816.8	2809.1	2732.1	2577.6	2499.4	2412.1	2206.5	2086.3	2030.7
45°	2740.5	2750.9	2701.1	2695.3	2623.5	2472.2	2397.2	2308.7	2099.9	1977.7	1923.4
47.5°	2602.2	2615.8	2572.4	2569.2	2502.6	2364.3	2286.0	2196.2	1988.0	1864.5	1813.5
50°	2447.0	2466.4	2430.9	2430.9	2371.4	2233.7	2165.8	2075.9	1871.6	1748.2	1697.7
52.5°	2280.9	2305.4	2278.9	2279.6	2231.1	2107.6	2037.1	1949.2	1750.1	1628.5	1582.0
55°	2108.9	2132.8	2116.0	2118.6	2080.5	1968.0	1904.0	1816.7	1626.0	1507.7	1463.7
57.5°	1929.2	1955.0	1944.0	1949.2	1922.7	1821.9	1755.3	1679.0	1498.0	1380.9	1343.4
60°	1748.8	1773.4	1767.5	1774.7	1757.9	1670.6	1609.8	1530.9	1369.3	1256.8	1223.8
62.5°	1566.5	1589.1	1587.8	1595.6	1586.5	1514.1	1459.8	1392.6	1236.1	1132.7	1102.3
65°	1388.0	1407.4	1406.2	1414.6	1412.6	1354.4	1305.3	1243.9	1102.9	1007.9	981.4
67.5°	1214.8	1230.9	1226.4	1236.1	1238.7	1192.2	1149.5	1094.5	976.2	883.8	861.1
70°	1045.4	1056.4	1050.6	1057.0	1062.9	1027.9	991.7	943.3	841.1	759.6	740.9
72.5°	879.2	887.0	878.0	884.4	889.6	864.4	834.6	792.6	707.9	637.5	621.9
75°	718.3	729.3	710.5	717.0	720.9	695.6	678.2	643.9	570.9	516.6	506.2
77.5°	562.5	568.9	558.6	556.0	558.6	540.5	526.9	500.4	445.4	400.8	394.4
80°	413.8	417.6	407.3	404.7	406.7	393.7	383.4	364.0	325.2	291.6	289.0
82.5°	277.4	279.3	270.2	267.7	268.9	265.1	252.8	239.2	221.1	192.7	192.0
85°	158.4	158.4	151.9	149.3	150.6	144.2	139.6	132.5	125.4	106.0	107.3
87.5°	58.2	58.2	55.0	54.3	60.8	53.7	51.7	48.5	50.4	40.1	42.7
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°	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8	2957.8
2.5°	2970.7	2964.2	2958.4	2938.4	2946.8	2926.1	2924.8	2917.0	2911.2	2900.2	2914.5
5°	2961.0	2948.1	2931.3	2907.3	2914.5	2889.9	2884.7	2875.7	2867.9	2853.7	2864.7
7.5°	2945.5	2924.1	2897.6	2867.3	2877.0	2846.6	2838.8	2829.1	2822.6	2805.8	2815.5
10°	2922.9	2892.5	2861.4	2824.6	2831.7	2798.7	2789.0	2778.7	2772.9	2758.0	2767.7
12.5°	2887.9	2851.1	2809.1	2769.0	2776.7	2745.7	2732.8	2721.8	2719.9	2707.6	2719.2
15°	2842.7	2791.6	2748.3	2705.6	2714.7	2678.5	2672.7	2661.7	2664.9	2656.5	2670.7
17.5°	2785.1	2726.3	2679.1	2633.2	2642.3	2611.9	2607.4	2602.2	2605.4	2604.1	2619.6
20°	2720.5	2655.8	2601.5	2556.3	2561.5	2537.5	2539.5	2538.2	2544.6	2551.8	2573.1
22.5°	2647.4	2574.4	2517.5	2470.9	2478.7	2458.0	2467.1	2469.7	2480.6	2496.8	2524.0
25°	2565.3	2487.1	2427.6	2383.7	2390.8	2377.2	2392.7	2399.2	2416.6	2443.8	2471.6
27.5°	2479.4	2396.6	2333.2	2291.2	2304.8	2291.2	2314.5	2327.4	2353.9	2383.7	2417.9
30°	2388.2	2302.2	2236.9	2199.4	2212.3	2200.1	2237.6	2255.0	2281.5	2322.3	2363.0
32.5°	2292.5	2202.0	2138.0	2108.9	2118.0	2116.0	2158.0	2177.4	2213.0	2259.5	2302.9
35°	2194.2	2099.9	2035.2	2010.6	2021.6	2024.2	2074.6	2097.3	2136.1	2192.3	2238.9
37.5°	2092.7	1996.4	1933.1	1913.0	1922.7	1932.4	1991.2	2013.9	2057.8	2119.2	2170.3
40°	1987.4	1891.0	1829.0	1812.8	1822.5	1832.8	1896.8	1927.9	1975.7	2042.3	2097.9
42.5°	1880.7	1784.4	1724.2	1712.6	1722.3	1742.3	1810.2	1839.3	1889.7	1963.4	2024.9
45°	1772.1	1671.9	1619.5	1610.4	1620.8	1644.1	1710.7	1745.6	1799.2	1880.0	1946.0
47.5°	1662.2	1564.5	1514.8	1508.9	1519.3	1545.2	1618.9	1650.5	1707.4	1793.4	1864.5
50°	1551.0	1455.9	1408.1	1406.2	1415.8	1443.6	1514.1	1551.6	1610.4	1706.8	1779.8
52.5°	1438.5	1347.3	1304.0	1304.0	1313.1	1341.5	1412.6	1451.4	1512.2	1613.7	1694.5
55°	1326.0	1239.4	1198.0	1201.2	1214.1	1238.7	1307.9	1348.6	1410.0	1515.4	1600.7
57.5°	1213.5	1131.4	1093.9	1098.4	1110.7	1135.3	1203.1	1249.1	1304.6	1413.9	1501.2
60°	1102.3	1024.7	991.7	996.9	1007.9	1032.5	1102.9	1142.4	1198.0	1309.2	1396.5
62.5°	989.8	919.3	888.3	894.8	904.5	929.0	995.6	1033.8	1088.7	1198.0	1285.9
65°	878.6	813.3	786.8	793.3	802.3	824.9	887.7	924.5	976.9	1083.5	1167.6
67.5°	768.7	709.2	687.2	693.7	700.8	722.1	773.9	814.0	863.1	964.6	1044.1
70°	660.1	607.1	587.7	594.1	600.6	620.0	665.3	702.1	747.4	840.5	914.2
72.5°	552.8	501.0	491.3	497.2	502.3	519.1	562.5	591.6	631.0	713.7	777.1
75°	448.0	403.4	397.0	402.8	407.3	420.2	456.4	481.6	514.6	586.4	638.1
77.5°	347.2	309.7	307.1	311.6	316.1	325.2	353.6	380.1	406.0	459.0	504.9
80°	252.8	222.4	222.4	226.9	225.6	236.6	256.7	278.0	296.7	334.9	368.5
82.5°	166.8	142.9	146.1	149.3	151.3	155.8	168.1	184.3	195.9	219.2	241.1
85°	92.5	76.3	79.5	82.1	80.8	86.0	92.5	102.1	108.0	119.0	130.6
87.5°	34.3	28.4	29.1	31.0	32.3	34.9	34.9	40.7	41.4	42.7	45.3
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°	2957.8	2957.8	2957.8
2.5°	2887.3	2902.8	2914.5
5°	2837.5	2850.4	2860.8
7.5°	2789.0	2800.7	2809.7
10°	2743.1	2756.1	2762.5
12.5°	2695.9	2710.8	2716.0
15°	2649.4	2664.3	2670.7
17.5°	2601.5	2620.9	2628.0
20°	2556.9	2581.5	2587.3
22.5°	2511.7	2536.9	2544.0
25°	2462.5	2492.3	2499.4
27.5°	2410.2	2445.7	2452.8
30°	2357.8	2396.6	2403.7
32.5°	2301.6	2343.6	2350.1
35°	2242.7	2284.8	2292.5
37.5°	2177.4	2223.3	2238.9
40°	2109.6	2159.3	2175.5
42.5°	2038.4	2092.7	2109.6
45°	1962.1	2021.6	2041.0
47.5°	1885.2	1952.4	1969.3
50°	1801.8	1873.6	1893.6
52.5°	1714.5	1792.8	1812.8
55°	1624.0	1702.9	1724.9
57.5°	1525.8	1607.2	1630.5
60°	1423.0	1504.4	1526.4
62.5°	1317.6	1391.3	1412.6
65°	1199.9	1269.1	1288.5
67.5°	1075.1	1138.5	1154.7
70°	942.6	997.6	1011.8
72.5°	804.3	842.4	861.1
75°	661.4	691.8	706.0
77.5°	517.9	539.2	550.8
80°	377.6	389.8	399.5
82.5°	247.0	252.1	259.2
85°	133.2	133.2	137.7
87.5°	45.3	43.3	45.3
90°	0.0	0.0	0.0

(END OF REPORT)