

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: P834599

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834599
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-LD4-2STD-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

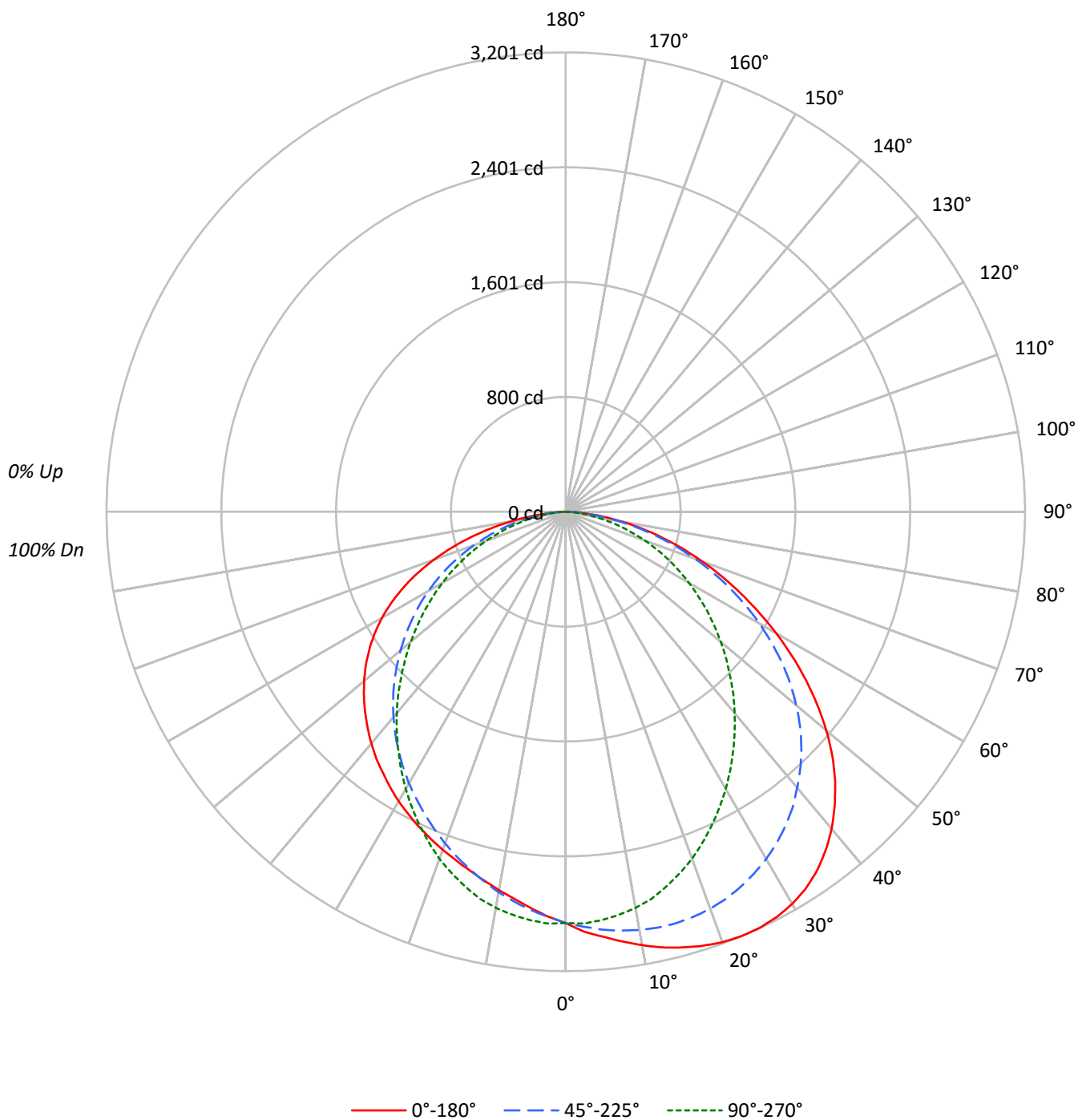
Lumens per Lamp: N/A
Luminaire Lumens: 8429.1 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3856	3856	3856
5°	4014	3858	3743
10°	4190	3829	3657
15°	4378	3767	3604
20°	4569	3684	3589
25°	4749	3577	3595
30°	4904	3465	3618
35°	5015	3342	3648
40°	5066	3218	3702
45°	5052	3082	3763
50°	4962	2952	3840
55°	4793	2817	3920
60°	4559	2672	3979
65°	4281	2508	3974
70°	3984	2314	3856
75°	3618	2032	3556
80°	3106	1670	2999
85°	2370	1141	2059

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.8	3.2
10°-20°	784.8	9.3
20°-30°	1202.4	14.3
30°-40°	1467.4	17.4
40°-50°	1534.5	18.2
50°-60°	1388.9	16.5
60°-70°	1051.8	12.5
70°-80°	586.2	7.0
80°-90°	141.4	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°	2259.0	26.8
0°-40°	3726.4	44.2
0°-60°	6649.7	78.9
0°-90°	8429.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8429.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2866	2866	2866	2866	2866	
5°	2972	2923	2856	2786	2772	287
15°	3143	2968	2705	2579	2588	891
25°	3199	2884	2410	2324	2422	1476
35°	3054	2671	2034	2032	2221	1907
45°	2655	2322	1620	1691	1977	2043
55°	2043	1845	1201	1307	1671	1823
65°	1345	1265	788	896	1248	1334
75°	696	657	391	467	684	738
85°	154	135	74	99	133	185
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°	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6
2.5°	2928.8	2915.0	2903.8	2908.1	2910.7	2901.9	2894.4	2895.6	2888.1	2902.5	2868.7
5°	2972.0	2959.5	2946.4	2951.4	2946.4	2933.2	2922.6	2919.4	2899.4	2907.5	2873.1
7.5°	3020.3	3006.5	2987.1	2992.7	2982.1	2957.6	2943.9	2935.7	2905.0	2905.6	2867.4
10°	3066.6	3054.7	3028.4	3032.2	3012.7	2980.2	2958.3	2947.0	2903.8	2897.5	2858.0
12.5°	3109.8	3093.5	3065.4	3067.2	3039.1	2995.8	2967.7	2951.4	2895.0	2876.2	2837.4
15°	3143.0	3127.4	3093.5	3092.9	3056.6	3000.2	2968.3	2945.7	2874.3	2844.9	2804.2
17.5°	3171.2	3156.8	3114.8	3113.6	3069.7	2998.3	2960.1	2931.9	2844.3	2807.9	2762.8
20°	3191.3	3176.9	3129.9	3125.5	3072.9	2988.9	2943.2	2907.5	2804.8	2761.6	2711.5
22.5°	3200.7	3186.2	3133.0	3126.7	3065.4	2970.2	2918.8	2876.8	2759.7	2703.3	2651.3
25°	3198.8	3185.0	3124.9	3118.6	3051.0	2942.0	2884.3	2836.1	2702.7	2636.3	2585.0
27.5°	3183.1	3172.5	3109.2	3101.1	3024.6	2903.8	2842.4	2789.1	2639.4	2565.5	2509.8
30°	3156.2	3148.0	3081.0	3073.5	2992.1	2861.8	2793.5	2732.1	2571.2	2487.9	2431.5
32.5°	3113.0	3105.4	3037.8	3030.9	2948.2	2807.9	2736.5	2673.3	2496.6	2404.6	2348.2
35°	3053.5	3049.1	2983.3	2975.8	2891.9	2746.5	2670.8	2601.2	2419.0	2315.0	2261.1
37.5°	2975.2	2975.2	2911.9	2903.8	2821.7	2671.4	2596.9	2522.9	2331.3	2221.0	2167.8
40°	2884.3	2892.5	2828.0	2819.8	2740.3	2590.6	2509.2	2431.5	2236.7	2122.1	2070.1
42.5°	2775.4	2782.9	2729.0	2721.5	2647.0	2497.3	2421.5	2336.9	2137.7	2021.2	1967.4
45°	2655.1	2665.1	2616.9	2611.3	2541.7	2395.2	2322.5	2236.7	2034.4	1916.0	1863.4
47.5°	2521.1	2534.2	2492.3	2489.1	2424.6	2290.6	2214.8	2127.7	1926.0	1806.4	1756.9
50°	2370.7	2389.5	2355.1	2355.1	2297.5	2164.0	2098.3	2011.2	1813.3	1693.7	1644.8
52.5°	2209.8	2233.6	2207.9	2208.5	2161.5	2041.9	1973.6	1888.4	1695.5	1577.8	1532.7
55°	2043.2	2066.3	2050.0	2052.6	2015.6	1906.6	1844.6	1760.0	1575.3	1460.7	1418.1
57.5°	1869.0	1894.1	1883.4	1888.4	1862.8	1765.1	1700.5	1626.6	1451.3	1337.9	1301.6
60°	1694.3	1718.1	1712.4	1719.3	1703.0	1618.5	1559.6	1483.2	1326.6	1217.6	1185.7
62.5°	1517.6	1539.6	1538.3	1545.8	1537.1	1466.9	1414.3	1349.2	1197.6	1097.4	1067.9
65°	1344.8	1363.6	1362.3	1370.5	1368.6	1312.2	1264.6	1205.1	1068.6	976.5	950.8
67.5°	1176.9	1192.6	1188.2	1197.6	1200.1	1155.0	1113.7	1060.4	945.8	856.2	834.3
70°	1012.8	1023.5	1017.8	1024.1	1029.7	995.9	960.8	913.8	814.9	736.0	717.8
72.5°	851.8	859.4	850.6	856.8	861.9	837.4	808.6	767.9	685.9	617.6	602.5
75°	695.9	706.5	688.4	694.6	698.4	674.0	657.0	623.8	553.1	500.5	490.4
77.5°	544.9	551.2	541.2	538.7	541.2	523.6	510.5	484.8	431.6	388.3	382.1
80°	400.9	404.6	394.6	392.1	394.0	381.4	371.4	352.6	315.1	282.5	280.0
82.5°	268.7	270.6	261.8	259.3	260.6	256.8	244.9	231.7	214.2	186.7	186.0
85°	153.5	153.5	147.2	144.7	145.9	139.7	135.3	128.4	121.5	102.7	104.0
87.5°	56.4	56.4	53.2	52.6	58.9	52.0	50.1	47.0	48.9	38.8	41.3
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6	2865.6
2.5°	2878.1	2871.8	2866.2	2846.8	2854.9	2834.9	2833.6	2826.1	2820.5	2809.8	2823.6
5°	2868.7	2856.2	2839.9	2816.7	2823.6	2799.8	2794.8	2786.0	2778.5	2764.7	2775.4
7.5°	2853.7	2833.0	2807.3	2777.9	2787.3	2757.8	2750.3	2740.9	2734.6	2718.4	2727.8
10°	2831.7	2802.3	2772.2	2736.5	2743.4	2711.5	2702.1	2692.1	2686.4	2672.0	2681.4
12.5°	2797.9	2762.2	2721.5	2682.7	2690.2	2660.1	2647.6	2636.9	2635.1	2623.2	2634.4
15°	2754.1	2704.6	2662.6	2621.3	2630.0	2595.0	2589.3	2578.7	2581.8	2573.7	2587.5
17.5°	2698.3	2641.3	2595.6	2551.1	2559.9	2530.5	2526.1	2521.1	2524.2	2522.9	2538.0
20°	2635.7	2573.1	2520.4	2476.6	2481.6	2458.4	2460.3	2459.1	2465.3	2472.2	2492.9
22.5°	2564.9	2494.1	2439.0	2393.9	2401.4	2381.4	2390.2	2392.7	2403.3	2419.0	2445.3
25°	2485.4	2409.6	2351.9	2309.4	2316.2	2303.1	2318.1	2324.4	2341.3	2367.6	2394.5
27.5°	2402.1	2321.9	2260.5	2219.8	2232.9	2219.8	2242.3	2254.9	2280.5	2309.4	2342.6
30°	2313.7	2230.4	2167.2	2130.8	2143.4	2131.5	2167.8	2184.7	2210.4	2249.9	2289.3
32.5°	2221.0	2133.4	2071.3	2043.2	2051.9	2050.0	2090.8	2109.6	2144.0	2189.1	2231.1
35°	2125.8	2034.4	1971.8	1948.0	1958.6	1961.1	2010.0	2031.9	2069.5	2124.0	2169.1
37.5°	2027.5	1934.2	1872.8	1853.4	1862.8	1872.2	1929.2	1951.1	1993.7	2053.2	2102.7
40°	1925.4	1832.1	1771.9	1756.3	1765.7	1775.7	1837.7	1867.8	1914.1	1978.6	2032.5
42.5°	1822.1	1728.7	1670.5	1659.2	1668.6	1688.0	1753.8	1782.0	1830.8	1902.2	1961.7
45°	1716.8	1619.7	1569.0	1560.2	1570.3	1592.8	1657.3	1691.1	1743.1	1821.4	1885.3
47.5°	1610.3	1515.8	1467.5	1461.9	1471.9	1497.0	1568.4	1599.1	1654.2	1737.5	1806.4
50°	1502.6	1410.5	1364.2	1362.3	1371.7	1398.6	1466.9	1503.2	1560.2	1653.6	1724.3
52.5°	1393.6	1305.3	1263.4	1263.4	1272.1	1299.7	1368.6	1406.2	1465.0	1563.4	1641.7
55°	1284.6	1200.7	1160.6	1163.8	1176.3	1200.1	1267.1	1306.6	1366.1	1468.2	1550.8
57.5°	1175.7	1096.1	1059.8	1064.2	1076.1	1099.9	1165.6	1210.1	1264.0	1369.8	1454.4
60°	1067.9	992.8	960.8	965.8	976.5	1000.3	1068.6	1106.8	1160.6	1268.4	1352.9
62.5°	958.9	890.7	860.6	866.9	876.3	900.1	964.6	1001.5	1054.8	1160.6	1245.8
65°	851.2	787.9	762.3	768.5	777.3	799.2	860.0	895.7	946.4	1049.8	1131.2
67.5°	744.7	687.1	665.8	672.1	679.0	699.6	749.7	788.6	836.2	934.5	1011.6
70°	639.5	588.1	569.4	575.6	581.9	600.7	644.5	680.2	724.1	814.3	885.7
72.5°	535.5	485.4	476.0	481.7	486.7	503.0	544.9	573.1	611.3	691.5	752.9
75°	434.1	390.8	384.6	390.2	394.6	407.1	442.2	466.6	498.6	568.1	618.2
77.5°	336.4	300.0	297.5	301.9	306.3	315.1	342.6	368.3	393.3	444.7	489.2
80°	244.9	215.5	215.5	219.8	218.6	229.2	248.7	269.3	287.5	324.4	357.0
82.5°	161.6	138.4	141.6	144.7	146.6	151.0	162.9	178.5	189.8	212.3	233.6
85°	89.6	73.9	77.0	79.5	78.3	83.3	89.6	99.0	104.6	115.2	126.5
87.5°	33.2	27.6	28.2	30.1	31.3	33.8	33.8	39.5	40.1	41.3	43.8
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°	2865.6	2865.6	2865.6
2.5°	2797.3	2812.3	2823.6
5°	2749.1	2761.6	2771.6
7.5°	2702.1	2713.4	2722.1
10°	2657.6	2670.1	2676.4
12.5°	2611.9	2626.3	2631.3
15°	2566.8	2581.2	2587.5
17.5°	2520.4	2539.2	2546.1
20°	2477.2	2501.0	2506.7
22.5°	2433.4	2457.8	2464.7
25°	2385.8	2414.6	2421.5
27.5°	2335.0	2369.5	2376.4
30°	2284.3	2321.9	2328.8
32.5°	2229.8	2270.5	2276.8
35°	2172.8	2213.5	2221.0
37.5°	2109.6	2154.0	2169.1
40°	2043.8	2092.0	2107.7
42.5°	1974.9	2027.5	2043.8
45°	1901.0	1958.6	1977.4
47.5°	1826.4	1891.6	1907.9
50°	1745.6	1815.2	1834.6
52.5°	1661.1	1736.9	1756.3
55°	1573.4	1649.8	1671.1
57.5°	1478.2	1557.1	1579.7
60°	1378.6	1457.5	1478.8
62.5°	1276.5	1347.9	1368.6
65°	1162.5	1229.5	1248.3
67.5°	1041.6	1103.0	1118.7
70°	913.2	966.5	980.2
72.5°	779.2	816.1	834.3
75°	640.8	670.2	684.0
77.5°	501.7	522.4	533.7
80°	365.8	377.7	387.1
82.5°	239.3	244.3	251.2
85°	129.0	129.0	133.4
87.5°	43.8	42.0	43.8
90°	0.0	0.0	0.0

(END OF REPORT)