

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: P835346

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD-90**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P835346
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

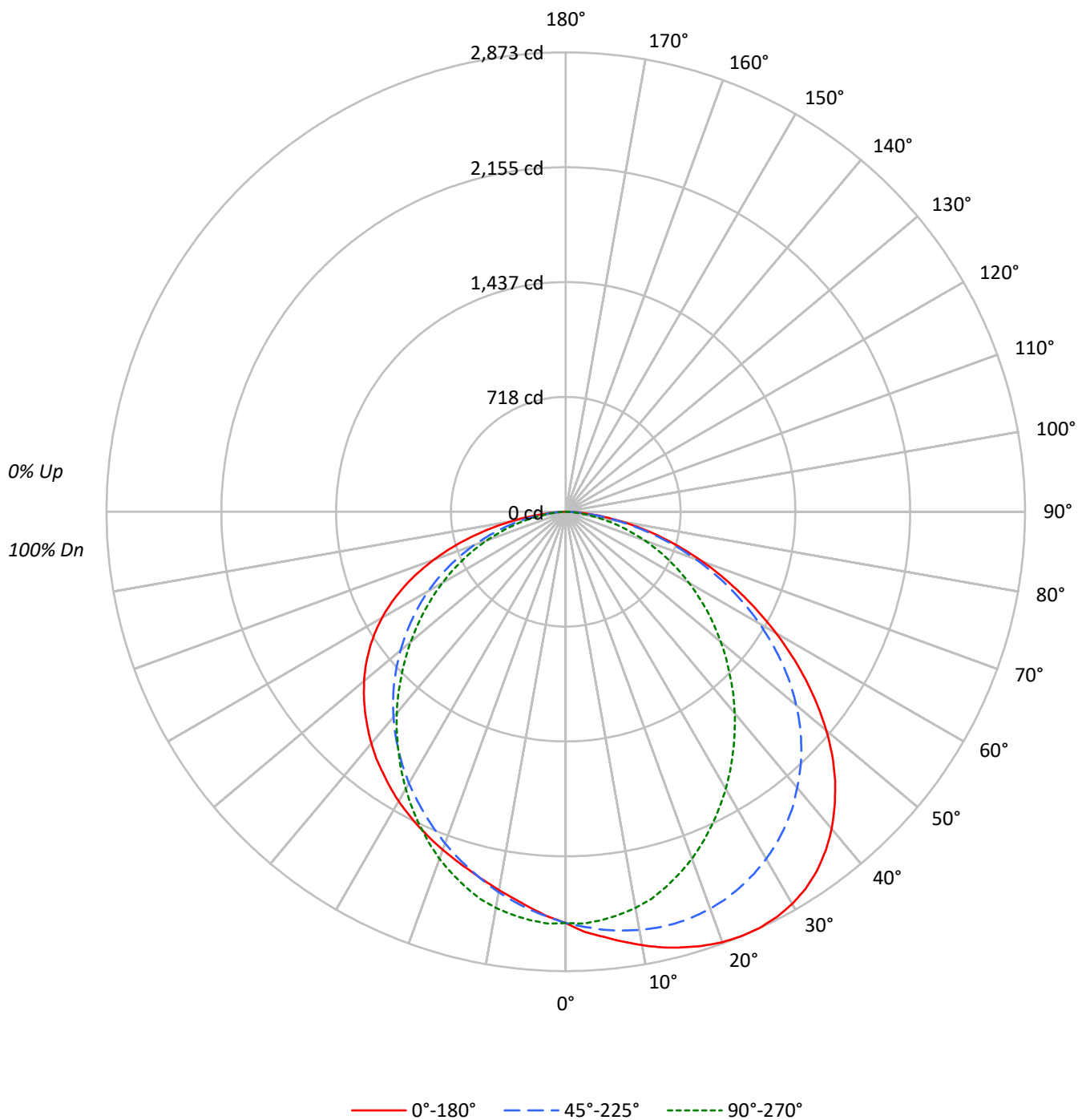
Lumens per Lamp: N/A
Luminaire Lumens: 7565.5 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 83.2
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



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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°	6921	6921	6921
5°	7206	6925	6720
10°	7521	6873	6564
15°	7859	6763	6470
20°	8202	6613	6443
25°	8525	6421	6453
30°	8802	6220	6495
35°	9003	5999	6549
40°	9094	5776	6645
45°	9069	5533	6754
50°	8908	5300	6893
55°	8603	5056	7037
60°	8184	4796	7143
65°	7685	4503	7134
70°	7152	4153	6922
75°	6494	3647	6383
80°	5576	2997	5384
85°	4252	2047	3696

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.9	3.2
10°-20°	704.4	9.3
20°-30°	1079.2	14.3
30°-40°	1317.0	17.4
40°-50°	1377.3	18.2
50°-60°	1246.6	16.5
60°-70°	944.1	12.5
70°-80°	526.1	7.0
80°-90°	126.9	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°	2027.6	26.8
0°-40°	3344.6	44.2
0°-60°	5968.5	78.9
0°-90°	7565.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7565.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2572	2572	2572	2572	2572	
5°	2668	2623	2564	2501	2488	257
15°	2821	2664	2428	2314	2322	800
25°	2871	2589	2163	2086	2173	1324
35°	2741	2397	1826	1824	1994	1711
45°	2383	2085	1454	1518	1775	1834
55°	1834	1656	1078	1173	1500	1636
65°	1207	1135	707	804	1120	1197
75°	625	590	351	419	614	662
85°	138	121	66	89	120	166
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°	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0
2.5°	2628.8	2616.4	2606.3	2610.2	2612.5	2604.6	2597.8	2599.0	2592.2	2605.1	2574.8
5°	2667.5	2656.3	2644.5	2649.0	2644.5	2632.7	2623.1	2620.3	2602.3	2609.6	2578.7
7.5°	2710.8	2698.5	2681.0	2686.1	2676.5	2654.6	2642.2	2634.9	2607.4	2608.0	2573.7
10°	2752.4	2741.8	2718.1	2721.5	2704.1	2674.9	2655.2	2645.1	2606.3	2600.6	2565.2
12.5°	2791.2	2776.6	2751.3	2753.0	2727.7	2688.9	2663.6	2649.0	2598.4	2581.5	2546.7
15°	2821.0	2807.0	2776.6	2776.0	2743.4	2692.8	2664.2	2643.9	2579.8	2553.4	2516.9
17.5°	2846.3	2833.4	2795.7	2794.6	2755.2	2691.2	2656.9	2631.6	2552.9	2520.3	2479.8
20°	2864.3	2851.4	2809.2	2805.3	2758.1	2682.7	2641.7	2609.6	2517.4	2478.7	2433.7
22.5°	2872.7	2859.8	2812.0	2806.4	2751.3	2665.9	2619.8	2582.1	2477.0	2426.4	2379.7
25°	2871.1	2858.7	2804.7	2799.1	2738.4	2640.6	2588.8	2545.6	2425.8	2366.2	2320.1
27.5°	2857.0	2847.4	2790.7	2783.4	2714.8	2606.3	2551.2	2503.4	2369.0	2302.7	2252.7
30°	2832.8	2825.5	2765.4	2758.6	2685.5	2568.6	2507.3	2452.2	2307.8	2233.0	2182.4
32.5°	2794.0	2787.3	2726.6	2720.4	2646.2	2520.3	2456.2	2399.4	2240.9	2158.2	2107.6
35°	2740.6	2736.7	2677.7	2670.9	2595.6	2465.2	2397.1	2334.7	2171.1	2077.8	2029.5
37.5°	2670.4	2670.4	2613.6	2606.3	2532.6	2397.7	2330.8	2264.5	2092.4	1993.5	1945.7
40°	2588.8	2596.2	2538.2	2530.9	2459.5	2325.2	2252.1	2182.4	2007.5	1904.7	1858.0
42.5°	2491.0	2497.8	2449.4	2442.7	2375.8	2241.4	2173.4	2097.5	1918.7	1814.2	1765.8
45°	2383.1	2392.1	2348.8	2343.7	2281.3	2149.8	2084.6	2007.5	1826.0	1719.7	1672.5
47.5°	2262.8	2274.6	2236.9	2234.1	2176.2	2055.9	1987.9	1909.7	1728.7	1621.3	1576.9
50°	2127.9	2144.7	2113.8	2113.8	2062.1	1942.3	1883.3	1805.2	1627.5	1520.1	1476.3
52.5°	1983.4	2004.7	1981.7	1982.2	1940.1	1832.7	1771.4	1695.0	1521.8	1416.1	1375.7
55°	1833.8	1854.6	1840.0	1842.3	1809.1	1711.3	1655.6	1579.7	1413.9	1311.0	1272.8
57.5°	1677.5	1700.0	1690.5	1695.0	1671.9	1584.2	1526.3	1460.0	1302.6	1200.8	1168.2
60°	1520.7	1542.1	1537.0	1543.2	1528.6	1452.7	1399.8	1331.2	1190.7	1092.9	1064.2
62.5°	1362.2	1381.8	1380.7	1387.5	1379.6	1316.6	1269.4	1210.9	1074.9	984.9	958.5
65°	1207.0	1223.9	1222.7	1230.1	1228.4	1177.8	1135.0	1081.6	959.1	876.4	853.4
67.5°	1056.3	1070.4	1066.5	1074.9	1077.1	1036.7	999.6	951.8	848.9	768.5	748.8
70°	909.0	918.6	913.5	919.2	924.2	893.9	862.4	820.2	731.4	660.6	644.3
72.5°	764.6	771.3	763.4	769.1	773.6	751.6	725.8	689.2	615.6	554.3	540.8
75°	624.6	634.1	617.8	623.5	626.8	604.9	589.7	559.9	496.4	449.2	440.2
77.5°	489.1	494.7	485.7	483.5	485.7	470.0	458.2	435.1	387.3	348.6	342.9
80°	359.8	363.2	354.2	351.9	353.6	342.4	333.4	316.5	282.8	253.5	251.3
82.5°	241.2	242.9	235.0	232.7	233.9	230.5	219.8	208.0	192.3	167.5	167.0
85°	137.7	137.7	132.1	129.9	131.0	125.4	121.4	115.2	109.1	92.2	93.3
87.5°	50.6	50.6	47.8	47.2	52.8	46.7	45.0	42.2	43.9	34.9	37.1
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°	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0	2572.0
2.5°	2583.2	2577.6	2572.5	2555.1	2562.4	2544.4	2543.3	2536.6	2531.5	2521.9	2534.3
5°	2574.8	2563.5	2548.9	2528.1	2534.3	2512.9	2508.5	2500.6	2493.8	2481.5	2491.0
7.5°	2561.3	2542.7	2519.7	2493.3	2501.7	2475.3	2468.5	2460.1	2454.5	2439.9	2448.3
10°	2541.6	2515.2	2488.2	2456.2	2462.4	2433.7	2425.2	2416.3	2411.2	2398.3	2406.7
12.5°	2511.3	2479.2	2442.7	2407.8	2414.6	2387.6	2376.3	2366.8	2365.1	2354.4	2364.5
15°	2471.9	2427.5	2389.8	2352.7	2360.6	2329.1	2324.1	2314.5	2317.3	2310.0	2322.4
17.5°	2421.9	2370.7	2329.7	2289.8	2297.6	2271.2	2267.3	2262.8	2265.6	2264.5	2278.0
20°	2365.7	2309.4	2262.2	2222.9	2227.4	2206.6	2208.2	2207.1	2212.7	2218.9	2237.5
22.5°	2302.1	2238.6	2189.1	2148.7	2155.4	2137.4	2145.3	2147.5	2157.1	2171.1	2194.8
25°	2230.7	2162.7	2111.0	2072.8	2078.9	2067.1	2080.6	2086.3	2101.4	2125.0	2149.2
27.5°	2156.0	2084.0	2028.9	1992.4	2004.2	1992.4	2012.6	2023.9	2046.9	2072.8	2102.6
30°	2076.7	2001.9	1945.1	1912.5	1923.8	1913.1	1945.7	1960.9	1983.9	2019.4	2054.8
32.5°	1993.5	1914.8	1859.1	1833.8	1841.7	1840.0	1876.6	1893.4	1924.3	1964.8	2002.5
35°	1908.0	1826.0	1769.7	1748.4	1757.9	1760.2	1804.0	1823.7	1857.4	1906.4	1946.8
37.5°	1819.8	1736.0	1680.9	1663.5	1671.9	1680.4	1731.5	1751.2	1789.4	1842.8	1887.2
40°	1728.1	1644.4	1590.4	1576.4	1584.8	1593.8	1649.4	1676.4	1718.0	1775.9	1824.3
42.5°	1635.4	1551.6	1499.3	1489.2	1497.6	1515.1	1574.1	1599.4	1643.3	1707.3	1760.8
45°	1540.9	1453.8	1408.3	1400.4	1409.4	1429.6	1487.5	1517.9	1564.5	1634.8	1692.2
47.5°	1445.4	1360.5	1317.2	1312.1	1321.1	1343.6	1407.7	1435.2	1484.7	1559.5	1621.3
50°	1348.7	1266.0	1224.4	1222.7	1231.2	1255.3	1316.6	1349.2	1400.4	1484.2	1547.7
52.5°	1250.9	1171.6	1133.9	1133.9	1141.8	1166.5	1228.4	1262.1	1314.9	1403.2	1473.5
55°	1153.0	1077.7	1041.7	1044.5	1055.8	1077.1	1137.3	1172.7	1226.1	1317.8	1392.0
57.5°	1055.2	983.8	951.2	955.1	965.8	987.2	1046.2	1086.1	1134.5	1229.5	1305.4
60°	958.5	891.1	862.4	866.9	876.4	897.8	959.1	993.4	1041.7	1138.4	1214.3
62.5°	860.7	799.4	772.4	778.1	786.5	807.9	865.8	898.9	946.7	1041.7	1118.2
65°	764.0	707.2	684.2	689.8	697.7	717.3	771.9	803.9	849.5	942.2	1015.3
67.5°	668.4	616.7	597.6	603.2	609.4	628.0	672.9	707.8	750.5	838.8	907.9
70°	574.0	527.9	511.0	516.6	522.3	539.1	578.5	610.5	649.9	730.8	794.9
72.5°	480.7	435.7	427.3	432.3	436.8	451.4	489.1	514.4	548.7	620.6	675.7
75°	389.6	350.8	345.2	350.2	354.2	365.4	396.9	418.8	447.5	509.9	554.9
77.5°	301.9	269.3	267.0	271.0	274.9	282.8	307.5	330.6	353.0	399.1	439.1
80°	219.8	193.4	193.4	197.3	196.2	205.8	223.2	241.7	258.0	291.2	320.4
82.5°	145.0	124.2	127.1	129.9	131.6	135.5	146.2	160.2	170.3	190.6	209.7
85°	80.4	66.3	69.1	71.4	70.3	74.8	80.4	88.8	93.9	103.4	113.6
87.5°	29.8	24.7	25.3	27.0	28.1	30.4	30.4	35.4	36.0	37.1	39.4
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°	2572.0	2572.0	2572.0
2.5°	2510.7	2524.2	2534.3
5°	2467.4	2478.7	2487.6
7.5°	2425.2	2435.4	2443.2
10°	2385.3	2396.6	2402.2
12.5°	2344.3	2357.2	2361.7
15°	2303.8	2316.7	2322.4
17.5°	2262.2	2279.1	2285.3
20°	2223.4	2244.8	2249.8
22.5°	2184.1	2206.0	2212.2
25°	2141.3	2167.2	2173.4
27.5°	2095.8	2126.7	2132.9
30°	2050.3	2084.0	2090.2
32.5°	2001.4	2037.9	2043.5
35°	1950.2	1986.7	1993.5
37.5°	1893.4	1933.3	1946.8
40°	1834.4	1877.7	1891.7
42.5°	1772.6	1819.8	1834.4
45°	1706.2	1757.9	1774.8
47.5°	1639.3	1697.8	1712.4
50°	1566.8	1629.2	1646.6
52.5°	1490.9	1558.9	1576.4
55°	1412.2	1480.8	1499.9
57.5°	1326.7	1397.6	1417.8
60°	1237.4	1308.2	1327.3
62.5°	1145.7	1209.8	1228.4
65°	1043.4	1103.6	1120.4
67.5°	934.9	990.0	1004.1
70°	819.7	867.4	879.8
72.5°	699.4	732.5	748.8
75°	575.1	601.5	613.9
77.5°	450.3	468.9	479.0
80°	328.3	339.0	347.4
82.5°	214.8	219.3	225.4
85°	115.8	115.8	119.7
87.5°	39.4	37.7	39.4
90°	0.0	0.0	0.0

(END OF REPORT)