

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: P834527

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834527
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-27-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

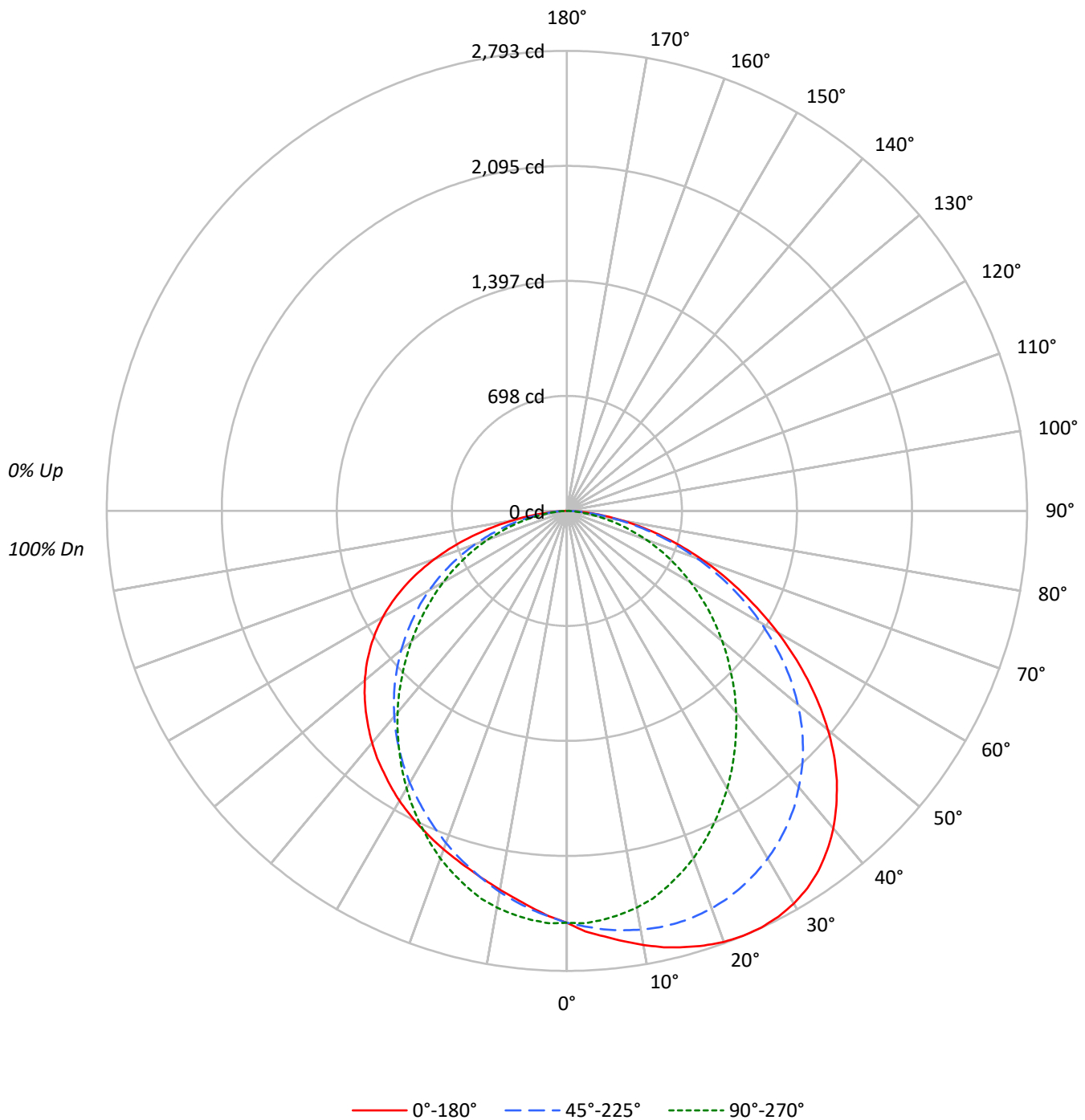
Lumens per Lamp: N/A
Luminaire Lumens: 7354.8 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	3364	3364	3364
5°	3502	3366	3266
10°	3656	3341	3191
15°	3820	3287	3145
20°	3987	3215	3132
25°	4144	3121	3137
30°	4279	3024	3157
35°	4376	2916	3183
40°	4420	2808	3230
45°	4408	2689	3283
50°	4330	2576	3351
55°	4182	2458	3420
60°	3978	2331	3472
65°	3736	2189	3468
70°	3476	2019	3365
75°	3157	1773	3103
80°	2710	1457	2617
85°	2067	996	1797

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.1	3.2
10°-20°	684.8	9.3
20°-30°	1049.1	14.3
30°-40°	1280.3	17.4
40°-50°	1339.0	18.2
50°-60°	1211.8	16.5
60°-70°	917.8	12.5
70°-80°	511.5	7.0
80°-90°	123.4	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°	1971.1	26.8
0°-40°	3251.4	44.2
0°-60°	5802.2	78.9
0°-90°	7354.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7354.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2500	2500	2500	2500	2500	
5°	2593	2550	2492	2431	2418	250
15°	2742	2590	2360	2250	2258	778
25°	2791	2517	2102	2028	2113	1288
35°	2664	2330	1775	1773	1938	1664
45°	2317	2026	1413	1476	1725	1782
55°	1783	1610	1048	1140	1458	1591
65°	1173	1103	688	782	1089	1164
75°	607	573	341	407	597	644
85°	134	118	64	86	116	161
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°	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3
2.5°	2555.5	2543.5	2533.7	2537.5	2539.7	2532.0	2525.5	2526.6	2520.0	2532.6	2503.1
5°	2593.2	2582.3	2570.8	2575.2	2570.8	2559.4	2550.1	2547.3	2529.9	2537.0	2506.9
7.5°	2635.3	2623.3	2606.4	2611.3	2602.0	2580.7	2568.7	2561.5	2534.8	2535.3	2502.0
10°	2675.8	2665.4	2642.4	2645.7	2628.8	2600.4	2581.2	2571.4	2533.7	2528.2	2493.8
12.5°	2713.5	2699.3	2674.7	2676.3	2651.7	2614.0	2589.4	2575.2	2526.0	2509.6	2475.7
15°	2742.4	2728.8	2699.3	2698.7	2667.0	2617.8	2590.0	2570.3	2508.0	2482.3	2446.8
17.5°	2767.0	2754.5	2717.9	2716.8	2678.5	2616.2	2582.9	2558.3	2481.8	2450.1	2410.7
20°	2784.5	2772.0	2731.0	2727.1	2681.2	2608.0	2568.1	2537.0	2447.3	2409.6	2365.9
22.5°	2792.7	2780.2	2733.7	2728.2	2674.7	2591.6	2546.8	2510.2	2408.0	2358.8	2313.4
25°	2791.1	2779.1	2726.6	2721.1	2662.1	2567.0	2516.7	2474.7	2358.2	2300.3	2255.5
27.5°	2777.4	2768.1	2712.9	2705.8	2639.2	2533.7	2480.1	2433.7	2303.0	2238.6	2189.9
30°	2753.9	2746.8	2688.3	2681.8	2610.7	2497.1	2437.5	2383.9	2243.5	2170.8	2121.6
32.5°	2716.2	2709.7	2650.6	2644.6	2572.5	2450.1	2387.8	2332.6	2178.4	2098.1	2048.9
35°	2664.3	2660.5	2603.1	2596.5	2523.3	2396.5	2330.4	2269.7	2110.7	2019.9	1972.9
37.5°	2596.0	2596.0	2540.8	2533.7	2462.1	2330.9	2265.9	2201.4	2034.2	1938.0	1891.5
40°	2516.7	2523.8	2467.5	2460.4	2391.0	2260.4	2189.4	2121.6	1951.6	1851.6	1806.3
42.5°	2421.6	2428.2	2381.2	2374.6	2309.6	2179.0	2112.9	2039.1	1865.3	1763.6	1716.6
45°	2316.7	2325.5	2283.4	2278.5	2217.8	2089.9	2026.5	1951.6	1775.1	1671.8	1625.9
47.5°	2199.8	2211.2	2174.6	2171.9	2115.6	1998.6	1932.5	1856.5	1680.6	1576.2	1533.0
50°	2068.6	2085.0	2054.9	2054.9	2004.6	1888.2	1830.8	1754.9	1582.2	1477.8	1435.2
52.5°	1928.1	1948.9	1926.5	1927.0	1886.0	1781.7	1722.1	1647.8	1479.4	1376.7	1337.3
55°	1782.8	1803.0	1788.8	1791.0	1758.7	1663.6	1609.5	1535.7	1374.5	1274.5	1237.3
57.5°	1630.8	1652.7	1643.4	1647.8	1625.4	1540.1	1483.8	1419.3	1266.3	1167.4	1135.7
60°	1478.3	1499.1	1494.2	1500.2	1486.0	1412.2	1360.8	1294.2	1157.5	1062.4	1034.6
62.5°	1324.2	1343.4	1342.3	1348.8	1341.2	1280.0	1234.0	1177.2	1045.0	957.5	931.8
65°	1173.4	1189.8	1188.7	1195.8	1194.2	1145.0	1103.4	1051.5	932.4	852.0	829.6
67.5°	1026.9	1040.6	1036.8	1045.0	1047.1	1007.8	971.7	925.3	825.2	747.1	728.0
70°	883.7	893.0	888.1	893.6	898.5	869.0	838.4	797.4	711.0	642.2	626.3
72.5°	743.3	749.8	742.2	747.6	752.0	730.7	705.6	670.0	598.4	538.9	525.8
75°	607.2	616.5	600.6	606.1	609.4	588.1	573.3	544.3	482.6	436.7	427.9
77.5°	475.5	480.9	472.2	470.0	472.2	456.9	445.4	423.0	376.6	338.8	333.4
80°	349.8	353.1	344.3	342.1	343.8	332.8	324.1	307.7	274.9	246.5	244.3
82.5°	234.5	236.1	228.4	226.3	227.4	224.1	213.7	202.2	186.9	162.9	162.3
85°	133.9	133.9	128.4	126.2	127.3	121.9	118.0	112.0	106.0	89.6	90.7
87.5°	49.2	49.2	46.5	45.9	51.4	45.4	43.7	41.0	42.6	33.9	36.1
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°	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3	2500.3
2.5°	2511.3	2505.8	2500.9	2483.9	2491.0	2473.6	2472.5	2465.9	2461.0	2451.7	2463.7
5°	2503.1	2492.1	2477.9	2457.7	2463.7	2443.0	2438.6	2430.9	2424.4	2412.3	2421.6
7.5°	2490.0	2471.9	2449.5	2423.8	2432.0	2406.3	2399.8	2391.6	2386.1	2371.9	2380.1
10°	2470.8	2445.1	2418.9	2387.8	2393.8	2365.9	2357.7	2349.0	2344.0	2331.5	2339.7
12.5°	2441.3	2410.2	2374.6	2340.8	2347.3	2321.1	2310.1	2300.9	2299.2	2288.8	2298.7
15°	2403.1	2359.9	2323.3	2287.2	2294.8	2264.2	2259.3	2250.0	2252.8	2245.7	2257.7
17.5°	2354.4	2304.7	2264.8	2226.0	2233.6	2207.9	2204.1	2199.8	2202.5	2201.4	2214.5
20°	2299.8	2245.1	2199.2	2160.9	2165.3	2145.1	2146.7	2145.6	2151.1	2157.1	2175.2
22.5°	2238.0	2176.3	2128.2	2088.8	2095.4	2077.9	2085.5	2087.7	2097.0	2110.7	2133.6
25°	2168.6	2102.5	2052.2	2015.0	2021.0	2009.6	2022.7	2028.1	2042.9	2065.9	2089.4
27.5°	2095.9	2026.0	1972.4	1936.9	1948.4	1936.9	1956.5	1967.5	1989.9	2015.0	2044.0
30°	2018.9	1946.2	1891.0	1859.3	1870.2	1859.8	1891.5	1906.3	1928.7	1963.1	1997.5
32.5°	1938.0	1861.5	1807.3	1782.8	1790.4	1788.8	1824.3	1840.7	1870.7	1910.1	1946.7
35°	1854.9	1775.1	1720.5	1699.7	1709.0	1711.2	1753.8	1772.9	1805.7	1853.3	1892.6
37.5°	1769.1	1687.7	1634.1	1617.2	1625.4	1633.6	1683.3	1702.4	1739.6	1791.5	1834.7
40°	1680.0	1598.6	1546.1	1532.4	1540.6	1549.4	1603.5	1629.7	1670.2	1726.5	1773.5
42.5°	1589.8	1508.4	1457.6	1447.7	1455.9	1472.9	1530.3	1554.9	1597.5	1659.8	1711.7
45°	1498.0	1413.3	1369.0	1361.4	1370.1	1389.8	1446.1	1475.6	1521.0	1589.3	1645.0
47.5°	1405.1	1322.6	1280.5	1275.6	1284.3	1306.2	1368.5	1395.3	1443.4	1516.1	1576.2
50°	1311.1	1230.8	1190.3	1188.7	1196.9	1220.4	1280.0	1311.7	1361.4	1442.8	1504.6
52.5°	1216.0	1139.0	1102.3	1102.3	1110.0	1134.0	1194.2	1226.9	1278.3	1364.1	1432.4
55°	1120.9	1047.7	1012.7	1015.4	1026.4	1047.1	1105.6	1140.0	1192.0	1281.0	1353.2
57.5°	1025.8	956.4	924.7	928.5	938.9	959.7	1017.1	1055.9	1102.9	1195.2	1269.0
60°	931.8	866.2	838.4	842.7	852.0	872.8	932.4	965.7	1012.7	1106.7	1180.5
62.5°	836.7	777.2	750.9	756.4	764.6	785.4	841.6	873.9	920.3	1012.7	1087.0
65°	742.7	687.5	665.1	670.6	678.2	697.4	750.4	781.5	825.8	916.0	987.0
67.5°	649.8	599.5	581.0	586.4	592.4	610.5	654.2	688.1	729.6	815.4	882.6
70°	558.0	513.2	496.8	502.3	507.7	524.1	562.4	593.5	631.8	710.5	772.8
72.5°	467.3	423.6	415.4	420.3	424.6	438.9	475.5	500.1	533.4	603.4	656.9
75°	378.7	341.0	335.6	340.5	344.3	355.2	385.8	407.2	435.0	495.7	539.4
77.5°	293.5	261.8	259.6	263.4	267.2	274.9	298.9	321.4	343.2	388.0	426.8
80°	213.7	188.0	188.0	191.8	190.7	200.0	217.0	235.0	250.9	283.1	311.5
82.5°	141.0	120.8	123.5	126.2	127.9	131.7	142.1	155.8	165.6	185.3	203.9
85°	78.2	64.5	67.2	69.4	68.3	72.7	78.2	86.4	91.3	100.6	110.4
87.5°	29.0	24.0	24.6	26.2	27.3	29.5	29.5	34.4	35.0	36.1	38.3
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°	2500.3	2500.3	2500.3
2.5°	2440.8	2453.9	2463.7
5°	2398.7	2409.6	2418.4
7.5°	2357.7	2367.5	2375.2
10°	2318.9	2329.8	2335.3
12.5°	2279.0	2291.6	2295.9
15°	2239.6	2252.2	2257.7
17.5°	2199.2	2215.6	2221.6
20°	2161.5	2182.3	2187.2
22.5°	2123.2	2144.6	2150.6
25°	2081.7	2106.8	2112.9
27.5°	2037.4	2067.5	2073.5
30°	1993.2	2026.0	2032.0
32.5°	1945.6	1981.1	1986.6
35°	1895.9	1931.4	1938.0
37.5°	1840.7	1879.5	1892.6
40°	1783.3	1825.4	1839.0
42.5°	1723.2	1769.1	1783.3
45°	1658.7	1709.0	1725.4
47.5°	1593.7	1650.5	1664.7
50°	1523.2	1583.8	1600.8
52.5°	1449.4	1515.5	1532.4
55°	1372.9	1439.5	1458.1
57.5°	1289.8	1358.7	1378.3
60°	1202.9	1271.8	1290.3
62.5°	1113.8	1176.1	1194.2
65°	1014.3	1072.8	1089.2
67.5°	908.9	962.4	976.1
70°	796.8	843.3	855.3
72.5°	679.9	712.1	728.0
75°	559.1	584.8	596.8
77.5°	437.8	455.8	465.6
80°	319.2	329.6	337.8
82.5°	208.8	213.1	219.2
85°	112.6	112.6	116.4
87.5°	38.3	36.6	38.3
90°	0.0	0.0	0.0

(END OF REPORT)