

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: P835310

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835310
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-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

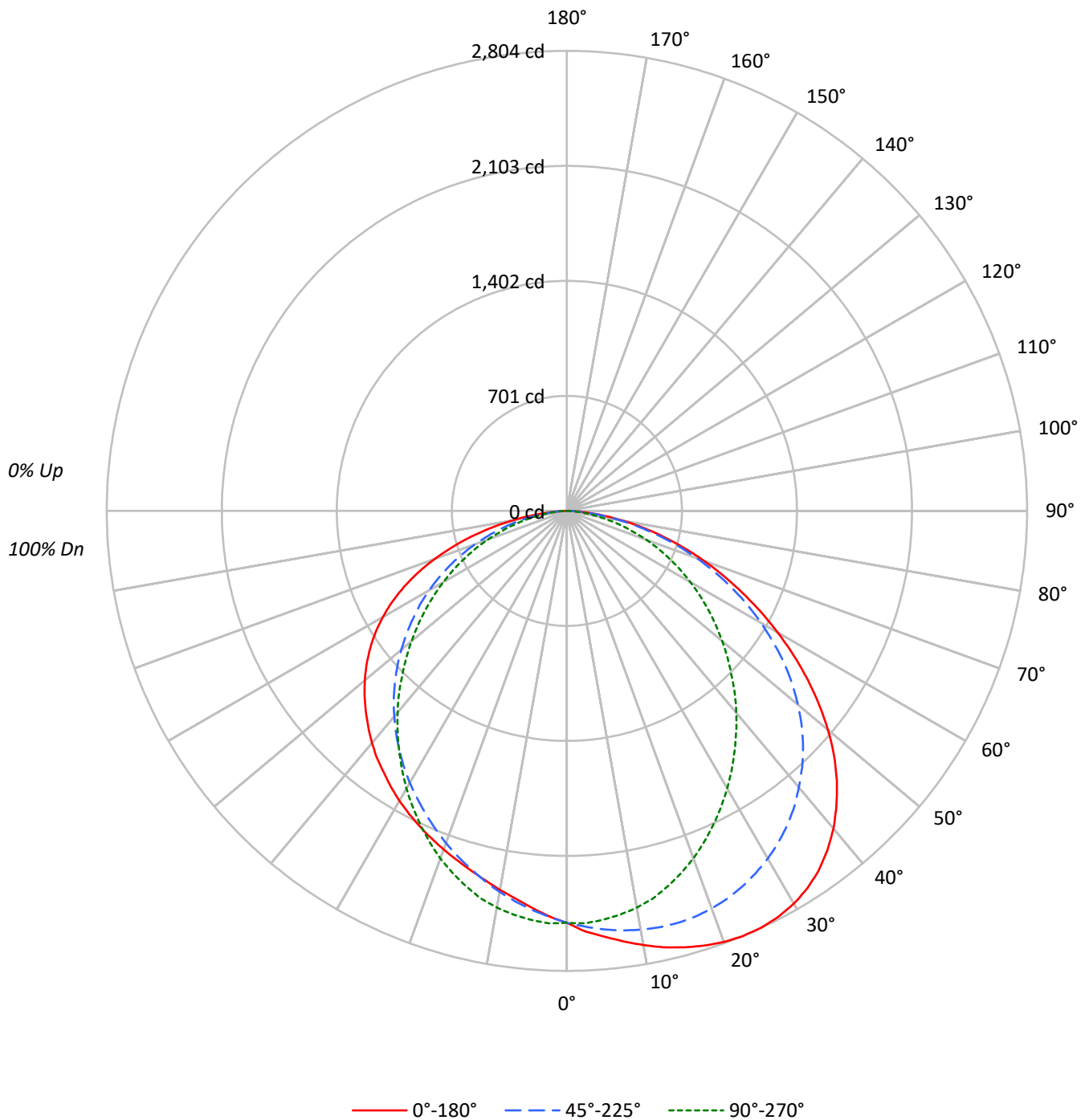
Lumens per Lamp: N/A
Luminaire Lumens: 7385.4 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P835310

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6756	6756	6756
5°	7034	6760	6560
10°	7342	6709	6408
15°	7672	6602	6316
20°	8007	6456	6289
25°	8322	6269	6299
30°	8593	6073	6340
35°	8789	5856	6393
40°	8878	5639	6487
45°	8853	5401	6593
50°	8696	5174	6729
55°	8399	4936	6869
60°	7990	4681	6973
65°	7503	4396	6964
70°	6982	4054	6758
75°	6339	3560	6231
80°	5442	2926	5256
85°	4153	2001	3609

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.1	3.2
10°-20°	687.7	9.3
20°-30°	1053.5	14.3
30°-40°	1285.7	17.4
40°-50°	1344.5	18.2
50°-60°	1216.9	16.5
60°-70°	921.6	12.5
70°-80°	513.6	7.0
80°-90°	123.9	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°	1979.3	26.8
0°-40°	3264.9	44.2
0°-60°	5826.3	78.9
0°-90°	7385.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7385.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2511	2511	2511	2511	2511	
5°	2604	2561	2502	2441	2428	251
15°	2754	2601	2370	2259	2267	781
25°	2803	2527	2111	2037	2122	1293
35°	2675	2340	1782	1780	1946	1671
45°	2326	2035	1419	1482	1732	1790
55°	1790	1616	1052	1145	1464	1597
65°	1178	1108	690	785	1094	1169
75°	610	576	342	409	599	647
85°	134	118	65	87	117	162
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°	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7
2.5°	2566.2	2554.1	2544.2	2548.1	2550.3	2542.6	2536.0	2537.1	2530.5	2543.1	2513.5
5°	2604.0	2593.1	2581.5	2585.9	2581.5	2570.0	2560.7	2557.9	2540.4	2547.5	2517.3
7.5°	2646.3	2634.2	2617.2	2622.1	2612.8	2591.4	2579.3	2572.2	2545.3	2545.9	2512.4
10°	2686.9	2676.5	2653.4	2656.7	2639.7	2611.2	2592.0	2582.1	2544.2	2538.7	2504.2
12.5°	2724.8	2710.5	2685.8	2687.5	2662.8	2624.9	2600.2	2585.9	2536.5	2520.1	2486.0
15°	2753.9	2740.1	2710.5	2710.0	2678.1	2628.7	2600.7	2581.0	2518.4	2492.6	2457.0
17.5°	2778.6	2765.9	2729.2	2728.1	2689.6	2627.1	2593.6	2568.9	2492.1	2460.3	2420.7
20°	2796.1	2783.5	2742.3	2738.5	2692.4	2618.9	2578.8	2547.5	2457.5	2419.6	2375.7
22.5°	2804.3	2791.7	2745.1	2739.6	2685.8	2602.4	2557.4	2520.6	2418.0	2368.6	2323.1
25°	2802.7	2790.6	2737.9	2732.5	2673.2	2577.7	2527.2	2484.9	2368.1	2309.9	2264.9
27.5°	2789.0	2779.6	2724.2	2717.1	2650.1	2544.2	2490.4	2443.8	2312.6	2247.9	2199.0
30°	2765.4	2758.2	2699.5	2692.9	2621.6	2507.4	2447.6	2393.8	2252.8	2179.8	2130.4
32.5°	2727.5	2720.9	2661.7	2655.6	2583.2	2460.3	2397.7	2342.3	2187.5	2106.8	2057.4
35°	2675.4	2671.5	2613.9	2607.3	2533.8	2406.5	2340.1	2279.1	2119.4	2028.3	1981.2
37.5°	2606.8	2606.8	2551.4	2544.2	2472.3	2340.6	2275.3	2210.5	2042.6	1946.0	1899.4
40°	2527.2	2534.3	2477.8	2470.7	2401.0	2269.8	2198.5	2130.4	1959.7	1859.3	1813.8
42.5°	2431.7	2438.3	2391.1	2384.5	2319.2	2188.0	2121.6	2047.6	1873.0	1771.0	1723.8
45°	2326.3	2335.1	2292.9	2287.9	2227.0	2098.6	2034.9	1959.7	1782.5	1678.8	1632.7
47.5°	2208.9	2220.4	2183.7	2180.9	2124.4	2006.9	1940.5	1864.3	1687.5	1582.7	1539.4
50°	2077.2	2093.7	2063.5	2063.5	2013.0	1896.1	1838.5	1762.2	1588.8	1483.9	1441.1
52.5°	1936.2	1957.0	1934.5	1935.1	1893.9	1789.1	1729.3	1654.6	1485.6	1382.4	1342.9
55°	1790.2	1810.5	1796.2	1798.4	1766.0	1670.5	1616.2	1542.1	1380.2	1279.8	1242.5
57.5°	1637.6	1659.6	1650.2	1654.6	1632.1	1546.5	1490.0	1425.2	1271.6	1172.2	1140.4
60°	1484.5	1505.3	1500.4	1506.4	1492.2	1418.1	1366.5	1299.5	1162.3	1066.9	1038.9
62.5°	1329.7	1348.9	1347.8	1354.4	1346.7	1285.3	1239.2	1182.1	1049.3	961.5	935.7
65°	1178.3	1194.7	1193.6	1200.8	1199.1	1149.7	1108.0	1055.9	936.2	855.6	833.1
67.5°	1031.2	1044.9	1041.1	1049.3	1051.5	1012.0	975.8	929.1	828.7	750.2	731.0
70°	887.4	896.7	891.8	897.3	902.2	872.6	841.9	800.7	714.0	644.8	628.9
72.5°	746.4	752.9	745.3	750.8	755.1	733.7	708.5	672.8	600.9	541.1	527.9
75°	609.7	619.0	603.1	608.6	611.9	590.5	575.7	546.6	484.6	438.5	429.7
77.5°	477.5	482.9	474.2	472.0	474.2	458.8	447.3	424.8	378.1	340.3	334.8
80°	351.2	354.5	345.7	343.5	345.2	334.2	325.4	309.0	276.0	247.5	245.3
82.5°	235.4	237.1	229.4	227.2	228.3	225.0	214.6	203.1	187.7	163.5	163.0
85°	134.5	134.5	129.0	126.8	127.9	122.4	118.5	112.5	106.5	90.0	91.1
87.5°	49.4	49.4	46.6	46.1	51.6	45.6	43.9	41.2	42.8	34.0	36.2
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°	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7	2510.7
2.5°	2521.7	2516.2	2511.3	2494.3	2501.4	2483.8	2482.8	2476.2	2471.2	2461.9	2474.0
5°	2513.5	2502.5	2488.2	2467.9	2474.0	2453.1	2448.7	2441.0	2434.5	2422.4	2431.7
7.5°	2500.3	2482.2	2459.7	2433.9	2442.1	2416.3	2409.8	2401.5	2396.0	2381.8	2390.0
10°	2481.1	2455.3	2429.0	2397.7	2403.7	2375.7	2367.5	2358.7	2353.8	2341.2	2349.4
12.5°	2451.5	2420.2	2384.5	2350.5	2357.1	2330.7	2319.8	2310.4	2308.8	2298.4	2308.2
15°	2413.1	2369.7	2332.9	2296.7	2304.4	2273.7	2268.7	2259.4	2262.1	2255.0	2267.1
17.5°	2364.2	2314.3	2274.2	2235.2	2242.9	2217.1	2213.3	2208.9	2211.6	2210.5	2223.7
20°	2309.3	2254.5	2208.4	2169.9	2174.3	2154.0	2155.7	2154.6	2160.1	2166.1	2184.2
22.5°	2247.3	2185.3	2137.0	2097.5	2104.1	2086.5	2094.2	2096.4	2105.7	2119.4	2142.5
25°	2177.6	2111.2	2060.7	2023.4	2029.4	2017.9	2031.1	2036.6	2051.4	2074.4	2098.0
27.5°	2104.6	2034.4	1980.6	1944.9	1956.5	1944.9	1964.7	1975.7	1998.2	2023.4	2052.5
30°	2027.3	1954.3	1898.8	1867.0	1878.0	1867.6	1899.4	1914.2	1936.7	1971.3	2005.8
32.5°	1946.0	1869.2	1814.9	1790.2	1797.9	1796.2	1831.9	1848.3	1878.5	1918.0	1954.8
35°	1862.6	1782.5	1727.6	1706.8	1716.1	1718.3	1761.1	1780.3	1813.2	1861.0	1900.5
37.5°	1776.5	1694.7	1640.9	1623.9	1632.1	1640.3	1690.3	1709.5	1746.8	1799.0	1842.3
40°	1687.0	1605.2	1552.5	1538.8	1547.1	1555.8	1610.2	1636.5	1677.1	1733.6	1780.8
42.5°	1596.4	1514.7	1463.6	1453.8	1462.0	1479.0	1536.6	1561.3	1604.1	1666.7	1718.8
45°	1504.2	1419.2	1374.7	1367.0	1375.8	1395.6	1452.1	1481.7	1527.3	1595.9	1651.9
47.5°	1411.0	1328.1	1285.8	1280.9	1289.7	1311.6	1374.2	1401.1	1449.4	1522.4	1582.7
50°	1316.6	1235.9	1195.3	1193.6	1201.9	1225.5	1285.3	1317.1	1367.0	1448.8	1510.8
52.5°	1221.1	1143.7	1106.9	1106.9	1114.6	1138.8	1199.1	1232.0	1283.6	1369.8	1438.4
55°	1125.6	1052.0	1016.9	1019.7	1030.6	1051.5	1110.2	1144.8	1196.9	1286.4	1358.8
57.5°	1030.1	960.4	928.6	932.4	942.8	963.7	1021.3	1060.3	1107.5	1200.2	1274.3
60°	935.7	869.8	841.9	846.2	855.6	876.4	936.2	969.7	1016.9	1111.3	1185.4
62.5°	840.2	780.4	754.0	759.5	767.8	788.6	845.1	877.5	924.2	1016.9	1091.6
65°	745.8	690.4	667.9	673.4	681.1	700.3	753.5	784.8	829.2	919.8	991.1
67.5°	652.5	602.0	583.4	588.9	594.9	613.0	656.9	690.9	732.6	818.8	886.3
70°	560.3	515.3	498.9	504.3	509.8	526.3	564.7	596.0	634.4	713.4	776.0
72.5°	469.2	425.3	417.1	422.0	426.4	440.7	477.5	502.1	535.6	605.9	659.7
75°	380.3	342.4	337.0	341.9	345.7	356.7	387.4	408.9	436.8	497.8	541.7
77.5°	294.7	262.9	260.7	264.5	268.4	276.0	300.2	322.7	344.6	389.6	428.6
80°	214.6	188.8	188.8	192.6	191.5	200.9	217.9	236.0	251.9	284.3	312.8
82.5°	141.6	121.3	124.0	126.8	128.4	132.3	142.7	156.4	166.3	186.0	204.7
85°	78.5	64.8	67.5	69.7	68.6	73.0	78.5	86.7	91.6	101.0	110.9
87.5°	29.1	24.1	24.7	26.3	27.4	29.6	29.6	34.6	35.1	36.2	38.4
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°	2510.7	2510.7	2510.7
2.5°	2450.9	2464.1	2474.0
5°	2408.7	2419.6	2428.4
7.5°	2367.5	2377.4	2385.1
10°	2328.5	2339.5	2345.0
12.5°	2288.5	2301.1	2305.5
15°	2249.0	2261.6	2267.1
17.5°	2208.4	2224.8	2230.9
20°	2170.5	2191.3	2196.3
22.5°	2132.1	2153.5	2159.5
25°	2090.4	2115.6	2121.6
27.5°	2045.9	2076.1	2082.1
30°	2001.5	2034.4	2040.4
32.5°	1953.7	1989.4	1994.9
35°	1903.8	1939.4	1946.0
37.5°	1848.3	1887.3	1900.5
40°	1790.7	1833.0	1846.7
42.5°	1730.4	1776.5	1790.7
45°	1665.6	1716.1	1732.5
47.5°	1600.3	1657.4	1671.6
50°	1529.5	1590.4	1607.4
52.5°	1455.4	1521.8	1538.8
55°	1378.6	1445.5	1464.2
57.5°	1295.2	1364.3	1384.1
60°	1207.9	1277.0	1295.7
62.5°	1118.4	1181.0	1199.1
65°	1018.6	1077.3	1093.7
67.5°	912.6	966.4	980.1
70°	800.1	846.8	858.9
72.5°	682.7	715.1	731.0
75°	561.4	587.2	599.3
77.5°	439.6	457.7	467.6
80°	320.5	330.9	339.2
82.5°	209.6	214.0	220.1
85°	113.1	113.1	116.9
87.5°	38.4	36.8	38.4
90°	0.0	0.0	0.0

(END OF REPORT)