

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: P838079

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-3LO-30-120-EDD**

Issue Date: 5/21/2024

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

**Test Information**

Test Method: LM-79-08
Report Number: P838079
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2R-LD4-3LO-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

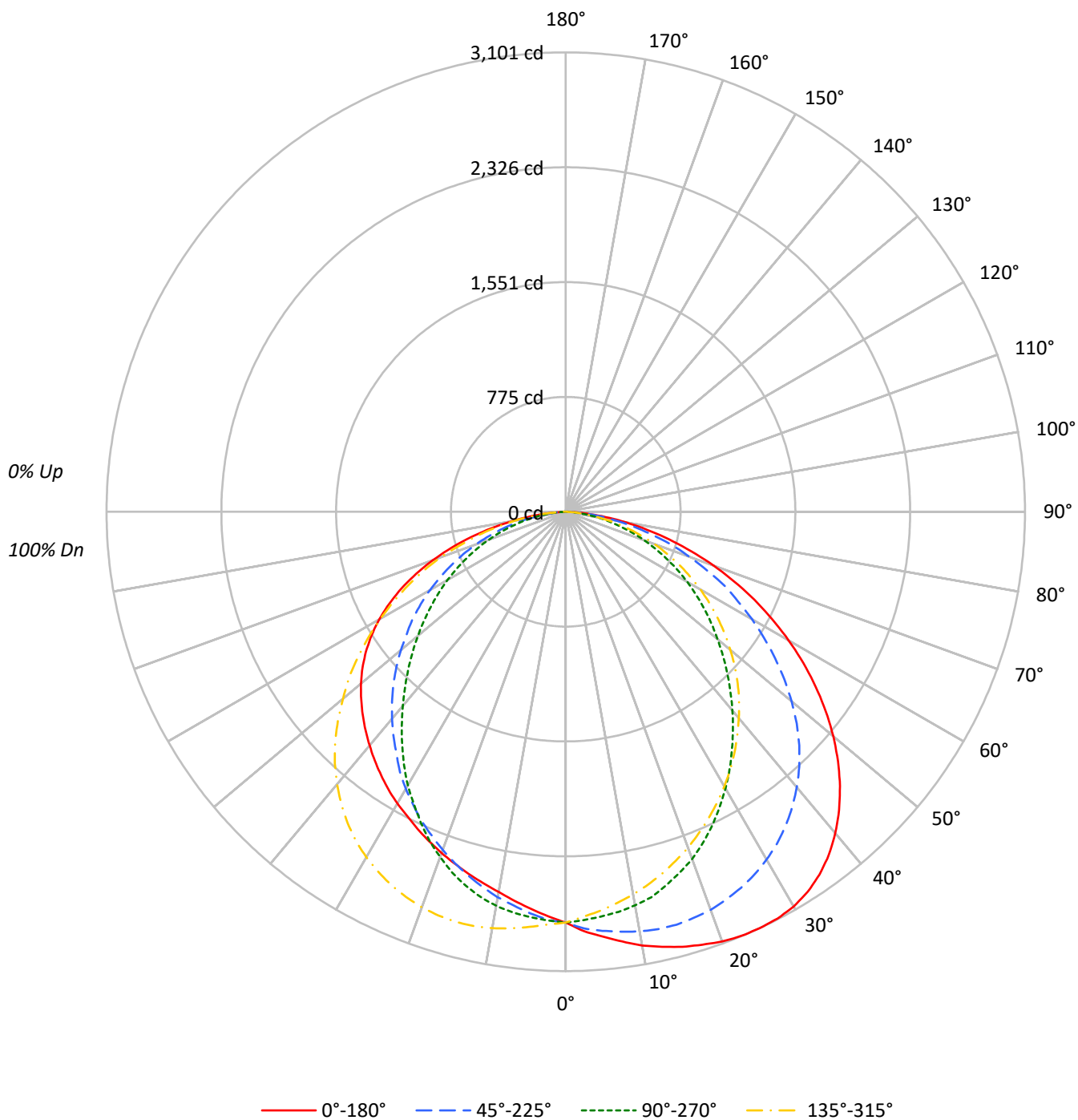
Lumens per Lamp: N/A
Luminaire Lumens: 8135.7 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: 25 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	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	89	90	88	86	84		
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	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°	270°
0°	3731	3731	3731	3731
5°	3889	3704	3634	3710
10°	4062	3685	3561	3691
15°	4236	3638	3526	3639
20°	4421	3572	3510	3552
25°	4604	3472	3510	3437
30°	4782	3352	3533	3314
35°	4909	3214	3569	3163
40°	4974	3075	3619	3006
45°	4984	2935	3689	2862
50°	4937	2801	3779	2727
55°	4834	2677	3863	2602
60°	4682	2546	3915	2481
65°	4473	2397	3894	2342
70°	4178	2222	3756	2181
75°	3760	1981	3447	1971
80°	3188	1659	2897	1684
85°	2217	1099	1837	1129

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.3	3.2
10°-20°	762.4	9.4
20°-30°	1168.4	14.4
30°-40°	1420.7	17.5
40°-50°	1476.9	18.2
50°-60°	1334.1	16.4
60°-70°	1014.3	12.5
70°-80°	565.4	7.0
80°-90°	130.2	1.6
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°	2194.1	27.0
0°-40°	3614.8	44.4
0°-60°	6425.8	79.0
0°-90°	8135.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8135.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2773	2773	2773	2773	2773	
5°	2879	2743	2691	2747	2879	278
15°	3041	2612	2531	2613	3041	862
25°	3101	2339	2364	2315	3101	1432
35°	2988	1957	2173	1926	2988	1867
45°	2619	1543	1939	1504	2619	2016
55°	2061	1141	1647	1109	2061	1840
65°	1405	753	1223	736	1405	1388
75°	723	381	663	379	723	768
85°	144	71	119	73	144	181
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0
2.5°	2834.5	2793.1	2793.7	2829.9	2802.1	2815.7	2776.9	2791.8	2787.3	2790.5	2758.8
5°	2879.1	2834.5	2833.8	2864.9	2833.8	2839.6	2790.5	2800.2	2786.0	2776.9	2742.6
7.5°	2926.3	2881.7	2877.2	2904.3	2863.6	2859.1	2804.7	2804.7	2778.8	2756.2	2723.9
10°	2972.9	2927.0	2921.1	2941.8	2891.4	2876.5	2810.5	2800.2	2765.9	2732.3	2697.3
12.5°	3007.8	2961.3	2956.7	2969.7	2912.7	2885.6	2810.5	2790.5	2740.0	2692.8	2665.6
15°	3040.8	2992.9	2980.7	2987.1	2921.8	2885.6	2801.5	2770.4	2705.7	2643.7	2612.0
17.5°	3064.1	3018.2	3005.9	3005.2	2926.3	2874.6	2782.1	2739.4	2661.8	2586.7	2555.0
20°	3087.4	3041.5	3025.9	3014.3	2925.0	2859.7	2753.6	2696.0	2605.5	2521.4	2494.9
22.5°	3099.0	3051.8	3035.0	3017.5	2916.6	2832.5	2718.7	2645.6	2542.1	2441.8	2419.8
25°	3101.0	3052.5	3034.3	3009.1	2899.8	2800.2	2673.4	2584.8	2469.0	2357.7	2339.0
27.5°	3095.8	3042.8	3024.6	2994.2	2874.6	2760.7	2619.7	2515.6	2391.4	2268.5	2248.4
30°	3077.7	3024.0	3006.5	2967.1	2839.0	2712.2	2560.9	2438.6	2305.4	2174.7	2157.2
32.5°	3041.5	2989.1	2974.8	2935.4	2800.2	2655.9	2492.3	2355.8	2210.3	2085.4	2059.6
35°	2988.4	2936.0	2927.0	2885.6	2745.9	2588.7	2417.3	2265.2	2109.4	1981.9	1956.7
37.5°	2919.2	2875.2	2861.6	2820.9	2681.8	2512.3	2331.2	2166.9	2006.5	1869.4	1853.9
40°	2831.9	2790.5	2780.1	2743.9	2607.4	2427.6	2238.1	2065.4	1900.4	1773.0	1751.0
42.5°	2732.3	2693.5	2687.6	2650.1	2515.6	2333.8	2137.2	1959.9	1789.8	1666.9	1644.9
45°	2619.1	2581.6	2580.3	2544.7	2415.3	2229.7	2031.1	1853.2	1681.8	1554.4	1542.7
47.5°	2494.2	2460.6	2460.6	2427.6	2303.4	2115.2	1921.8	1742.0	1573.1	1460.6	1439.9
50°	2358.4	2326.7	2317.0	2300.8	2179.9	1990.3	1806.6	1633.3	1465.7	1358.4	1338.3
52.5°	2213.5	2186.3	2192.8	2163.0	2046.0	1860.3	1690.2	1511.0	1357.7	1260.1	1240.0
55°	2060.8	2022.0	2027.9	2016.9	1906.2	1726.4	1559.5	1410.1	1251.6	1159.8	1141.0
57.5°	1902.4	1851.9	1872.6	1866.1	1757.5	1589.3	1439.9	1295.6	1146.2	1061.5	1043.4
60°	1740.0	1691.5	1712.8	1707.0	1604.8	1452.2	1316.3	1182.4	1041.4	964.4	946.3
62.5°	1573.1	1528.5	1547.9	1543.4	1449.6	1311.8	1193.4	1070.5	936.0	866.8	850.0
65°	1404.9	1362.3	1379.7	1376.5	1289.8	1185.0	1067.3	954.7	829.9	769.7	752.9
67.5°	1232.9	1193.4	1209.6	1209.6	1130.0	1029.8	940.5	837.7	725.8	674.0	658.5
70°	1062.1	1025.2	1039.5	1038.2	970.9	889.4	812.4	720.6	620.3	577.6	564.7
72.5°	890.1	857.7	870.7	869.4	813.1	760.7	684.4	604.8	517.5	483.2	471.5
75°	723.2	692.8	705.1	703.8	657.8	608.7	557.6	491.6	416.6	392.6	381.0
77.5°	564.0	533.0	543.3	543.3	509.7	474.1	433.4	382.3	329.2	303.4	295.0
80°	411.4	396.5	391.3	392.0	369.3	346.1	325.4	276.2	237.4	219.9	214.1
82.5°	270.4	258.1	252.9	254.2	241.3	227.0	214.1	179.8	153.9	143.6	140.4
85°	143.6	134.5	130.0	133.2	130.7	122.9	116.4	93.1	77.0	73.1	71.2
87.5°	45.3	39.5	36.2	47.9	40.8	36.2	34.9	27.8	21.3	21.3	20.7
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0
2.5°	2769.1	2769.1	2743.9	2738.1	2735.5	2738.7	2713.5	2709.0	2745.2	2732.9	2705.1
5°	2747.1	2745.9	2710.3	2703.8	2703.8	2699.9	2671.5	2665.0	2701.2	2690.9	2660.5
7.5°	2720.0	2716.1	2674.1	2669.5	2663.1	2660.5	2628.8	2624.2	2655.3	2648.8	2620.4
10°	2687.0	2683.1	2633.3	2630.1	2623.0	2617.8	2588.0	2584.8	2616.5	2606.1	2583.5
12.5°	2643.7	2636.5	2585.4	2582.2	2576.4	2574.4	2545.3	2544.0	2579.0	2568.6	2544.7
15°	2586.7	2580.9	2524.0	2525.3	2525.9	2525.9	2502.6	2501.3	2535.6	2531.1	2505.2
17.5°	2524.0	2516.2	2461.9	2465.8	2470.3	2475.5	2457.4	2460.6	2496.8	2491.0	2467.7
20°	2452.8	2445.1	2392.0	2403.0	2412.7	2423.1	2411.4	2420.5	2454.1	2451.5	2434.1
22.5°	2373.3	2365.5	2316.3	2333.2	2349.3	2368.7	2363.6	2373.9	2409.5	2408.8	2393.3
25°	2276.2	2278.2	2234.8	2255.5	2282.7	2309.9	2311.8	2328.6	2368.1	2364.2	2350.0
27.5°	2185.7	2188.3	2142.3	2177.3	2213.5	2248.4	2256.8	2280.1	2320.2	2317.0	2304.7
30°	2090.6	2093.8	2049.2	2097.1	2141.1	2183.7	2201.9	2233.6	2274.3	2274.3	2261.4
32.5°	1991.6	1997.5	1950.9	2014.9	2066.0	2115.8	2147.5	2180.5	2227.1	2225.8	2214.8
35°	1890.1	1896.5	1853.9	1935.4	1986.5	2047.3	2086.7	2130.7	2172.1	2172.7	2164.3
37.5°	1786.6	1794.3	1755.5	1844.8	1903.0	1974.8	2025.3	2069.3	2115.2	2117.8	2110.0
40°	1683.7	1692.1	1658.5	1744.5	1818.3	1898.5	1956.7	2008.5	2058.9	2060.2	2055.0
42.5°	1580.9	1589.9	1564.7	1648.8	1732.2	1818.3	1886.8	1945.7	1997.5	2000.7	1994.9
45°	1480.6	1488.4	1470.3	1562.1	1642.3	1736.1	1815.0	1881.7	1934.1	1938.6	1936.7
47.5°	1381.0	1388.1	1372.0	1456.0	1548.5	1648.2	1739.4	1813.1	1868.7	1873.9	1872.6
50°	1283.3	1289.2	1271.7	1359.7	1451.5	1557.6	1652.7	1738.1	1800.2	1805.3	1804.7
52.5°	1186.3	1192.1	1177.3	1269.8	1353.2	1465.1	1568.6	1661.1	1722.5	1730.3	1731.6
55°	1092.5	1095.1	1083.5	1172.1	1252.9	1370.0	1489.0	1578.9	1640.4	1646.9	1650.7
57.5°	998.7	999.4	989.7	1074.4	1152.0	1271.7	1396.5	1491.0	1549.2	1555.7	1561.5
60°	905.6	904.9	893.9	976.1	1050.5	1168.8	1298.9	1392.7	1448.9	1454.8	1462.5
62.5°	813.1	811.1	801.4	877.1	947.0	1064.1	1194.7	1285.3	1339.0	1342.8	1353.2
65°	721.2	719.3	710.2	780.1	843.5	955.4	1083.5	1169.5	1218.0	1223.2	1221.2
67.5°	630.7	626.8	619.7	682.4	740.0	843.5	966.4	1048.5	1088.6	1093.2	1105.5
70°	540.1	535.6	519.4	586.0	636.5	729.0	843.5	916.6	950.2	954.7	952.8
72.5°	450.9	446.3	428.9	490.3	533.0	613.9	716.1	776.9	806.0	809.8	809.8
75°	364.2	361.6	350.6	397.2	432.7	498.7	585.4	635.8	658.5	663.0	661.7
77.5°	280.7	278.8	267.8	307.9	335.7	384.9	454.7	494.2	511.0	516.2	527.2
80°	201.2	200.5	183.1	222.5	234.8	276.2	327.3	357.7	366.8	373.9	381.6
82.5°	128.7	129.4	111.9	145.5	150.7	177.2	208.9	227.7	234.2	240.0	245.8
85°	62.7	65.3	55.6	77.0	77.6	91.2	104.8	111.9	114.5	119.0	124.2
87.5°	16.2	18.8	10.3	22.0	19.4	25.2	29.1	31.0	30.4	33.6	35.6
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0
2.5°	2714.2	2734.9	2724.5	2758.1	2771.1	2750.4	2786.6	2787.3	2761.4	2791.8	2808.6
5°	2672.1	2693.5	2687.0	2721.9	2738.1	2720.0	2764.0	2772.4	2747.1	2781.4	2808.6
7.5°	2629.4	2654.6	2646.2	2681.8	2701.2	2687.0	2734.2	2747.8	2728.4	2765.9	2802.1
10°	2592.6	2613.9	2604.8	2642.4	2659.2	2647.5	2694.1	2719.3	2701.2	2747.1	2790.5
12.5°	2556.3	2573.8	2563.4	2594.5	2610.7	2595.8	2652.7	2676.0	2663.1	2710.9	2766.6
15°	2509.8	2529.2	2514.9	2542.7	2555.0	2542.1	2588.7	2628.8	2612.6	2665.0	2726.4
17.5°	2474.2	2485.2	2465.8	2487.8	2494.9	2477.4	2524.6	2564.1	2552.4	2609.4	2680.5
20°	2434.7	2443.8	2416.6	2428.9	2428.3	2406.3	2449.6	2488.4	2480.6	2543.4	2624.2
22.5°	2390.7	2395.3	2363.6	2366.2	2364.9	2328.6	2367.4	2406.9	2403.7	2467.1	2557.6
25°	2344.2	2344.8	2304.1	2302.8	2288.5	2245.8	2280.1	2324.8	2315.1	2383.6	2478.7
27.5°	2298.2	2291.8	2242.6	2231.0	2208.3	2157.2	2187.6	2227.7	2221.9	2289.2	2394.6
30°	2249.1	2240.7	2180.5	2159.2	2126.2	2067.3	2092.5	2130.1	2133.3	2192.2	2302.8
32.5°	2202.5	2181.2	2114.5	2083.5	2042.1	1973.5	1987.1	2025.3	2030.4	2090.0	2203.8
35°	2142.3	2128.1	2046.0	1992.9	1952.2	1877.1	1891.4	1917.9	1925.7	1983.9	2099.7
37.5°	2085.4	2062.8	1975.5	1910.8	1858.4	1779.5	1783.3	1810.5	1818.3	1877.1	1991.6
40°	2026.6	1994.2	1900.4	1824.7	1764.6	1681.8	1677.3	1705.7	1711.5	1769.1	1872.6
42.5°	1963.8	1925.0	1819.6	1736.8	1667.6	1583.5	1574.4	1599.0	1605.5	1661.7	1763.3
45°	1900.4	1853.9	1736.8	1646.2	1570.5	1484.5	1475.5	1494.2	1503.9	1557.0	1654.6
47.5°	1833.2	1778.8	1651.4	1550.5	1472.2	1386.2	1375.2	1393.9	1401.7	1454.1	1546.6
50°	1762.7	1696.7	1563.4	1452.2	1374.5	1289.8	1273.6	1295.6	1302.7	1351.9	1442.5
52.5°	1685.0	1611.9	1469.6	1353.2	1275.6	1194.7	1175.3	1196.7	1205.1	1252.9	1336.4
55°	1602.9	1524.0	1375.2	1262.0	1177.9	1099.0	1082.8	1091.2	1109.3	1154.6	1232.2
57.5°	1510.4	1432.1	1275.6	1160.4	1079.6	1003.9	990.3	998.1	1014.9	1058.9	1128.7
60°	1412.1	1329.3	1174.0	1058.9	980.6	908.8	896.5	903.6	921.8	961.9	1026.5
62.5°	1315.0	1221.9	1069.2	954.7	883.6	817.0	813.7	811.1	828.0	866.8	923.7
65°	1197.3	1108.0	959.9	851.2	786.6	726.4	713.5	719.3	735.5	771.0	830.5
67.5°	1071.2	990.3	848.0	747.8	690.2	636.5	625.5	628.1	644.9	676.0	727.7
70°	937.3	866.1	733.5	643.6	595.1	544.6	537.5	538.2	554.3	581.5	626.8
72.5°	796.9	732.9	617.7	540.8	500.7	464.4	458.0	450.2	465.1	488.4	527.2
75°	654.0	597.7	502.6	439.9	408.2	377.8	371.9	364.2	379.1	399.1	429.5
77.5°	509.7	464.4	390.7	342.2	317.6	295.0	289.8	281.4	296.3	311.1	335.1
80°	368.7	335.7	291.7	240.6	232.2	217.3	212.2	203.1	217.3	227.0	245.2
82.5°	238.0	216.0	190.8	155.2	153.9	143.0	140.4	130.0	143.0	148.8	162.4
85°	120.3	110.0	103.5	78.9	81.5	74.4	73.7	62.7	73.1	75.7	83.4
87.5°	34.3	36.2	32.3	19.4	24.6	23.3	23.3	16.8	23.3	23.3	26.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838079

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3LO-30-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0	2773.0
2.5°	2775.6	2786.6	2789.2	2788.5	2795.7	2834.5	2821.5	2834.5
5°	2782.1	2806.7	2813.1	2822.2	2833.8	2877.8	2863.6	2879.1
7.5°	2786.0	2822.8	2837.1	2854.5	2873.3	2922.4	2910.8	2926.3
10°	2786.0	2833.8	2854.5	2883.6	2908.9	2965.8	2954.8	2972.9
12.5°	2774.3	2835.8	2864.9	2905.6	2938.0	2999.4	2994.9	3007.8
15°	2750.4	2826.1	2866.2	2918.6	2958.7	3027.2	3025.3	3040.8
17.5°	2718.0	2809.2	2857.8	2923.7	2974.2	3051.2	3055.7	3064.1
20°	2677.3	2777.5	2840.9	2921.8	2985.2	3069.9	3075.7	3087.4
22.5°	2623.6	2739.4	2815.7	2913.4	2986.5	3077.7	3088.0	3099.0
25°	2560.2	2693.5	2782.7	2897.2	2980.0	3077.0	3091.3	3101.0
27.5°	2487.8	2633.9	2740.7	2871.3	2961.9	3066.7	3084.2	3095.8
30°	2403.7	2570.6	2692.8	2837.7	2937.3	3047.3	3066.0	3077.7
32.5°	2317.0	2500.7	2635.9	2794.4	2901.7	3016.2	3032.4	3041.5
35°	2222.6	2416.0	2567.3	2738.7	2855.8	2966.4	2978.7	2988.4
37.5°	2119.7	2324.1	2489.1	2676.0	2791.1	2897.2	2908.2	2919.2
40°	2013.6	2227.7	2401.1	2599.0	2714.2	2812.5	2824.1	2831.9
42.5°	1906.9	2121.0	2307.3	2508.5	2623.0	2717.4	2724.5	2732.3
45°	1798.9	2010.4	2201.9	2408.2	2521.4	2610.0	2612.6	2619.1
47.5°	1688.9	1895.9	2086.1	2293.7	2405.6	2486.5	2489.1	2494.2
50°	1578.3	1781.4	1962.5	2170.2	2279.5	2364.9	2353.2	2358.4
52.5°	1469.6	1661.1	1846.1	2036.9	2144.9	2220.6	2223.9	2213.5
55°	1362.9	1543.4	1713.5	1897.2	2000.0	2058.9	2057.0	2060.8
57.5°	1254.9	1424.4	1580.2	1748.4	1848.7	1904.3	1916.0	1902.4
60°	1144.9	1304.0	1443.8	1595.8	1692.8	1739.4	1752.9	1740.0
62.5°	1035.6	1181.8	1308.6	1441.2	1531.1	1588.6	1587.4	1573.1
65°	926.3	1058.9	1172.1	1284.6	1362.9	1420.5	1417.9	1404.9
67.5°	825.4	934.7	1036.2	1127.4	1195.4	1234.8	1248.4	1232.9
70°	714.1	808.6	897.8	970.9	1027.2	1062.8	1075.7	1062.1
72.5°	602.9	683.1	745.8	816.3	859.7	889.4	903.0	890.1
75°	492.9	558.9	610.0	665.0	695.4	720.6	736.1	723.2
77.5°	386.2	437.3	478.0	518.1	553.1	558.9	572.5	564.0
80°	284.6	321.5	351.2	377.8	403.0	405.6	416.6	411.4
82.5°	189.5	214.1	221.9	249.7	265.9	263.3	274.3	270.4
85°	100.3	115.1	128.7	137.1	146.2	137.8	147.5	143.6
87.5°	33.6	35.6	31.0	44.0	48.5	41.4	47.2	45.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)