

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: P837737

Luminaire Tested: **ORLG-12-4-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: P837737
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-3LO-30-120-EDD
Description: 1FT 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

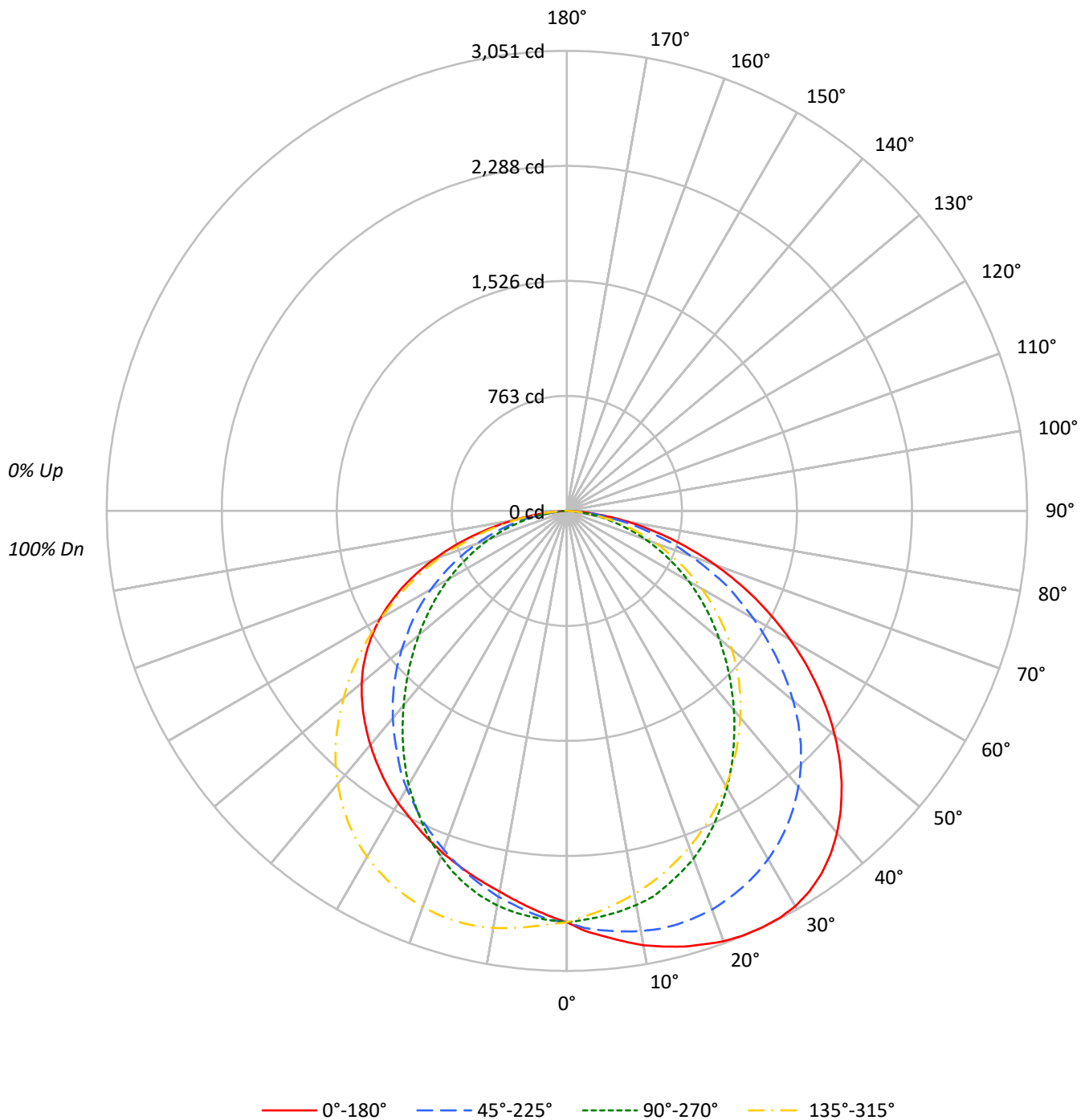
Lumens per Lamp: N/A
Luminaire Lumens: 8003.9 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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
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	89		90
2	99	91	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	88	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	74	62	53	47	59	52	46		57	51	46		56
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	47	38	32	59	46	38	32	45	37	32		43	37	32		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°	270°
0°	7341	7341	7341	7341
5°	7651	7289	7151	7301
10°	7992	7251	7006	7262
15°	8334	7159	6937	7161
20°	8698	7029	6907	6989
25°	9058	6832	6906	6763
30°	9408	6595	6953	6521
35°	9658	6324	7022	6224
40°	9787	6051	7120	5915
45°	9806	5776	7258	5631
50°	9713	5512	7436	5365
55°	9512	5267	7601	5120
60°	9213	5011	7703	4880
65°	8801	4716	7663	4607
70°	8221	4371	7390	4291
75°	7398	3897	6782	3877
80°	6272	3264	5700	3313
85°	4363	2161	3616	2220

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.0	3.2
10°-20°	750.0	9.4
20°-30°	1149.5	14.4
30°-40°	1397.7	17.5
40°-50°	1453.0	18.2
50°-60°	1312.5	16.4
60°-70°	997.8	12.5
70°-80°	556.3	7.0
80°-90°	128.1	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°	2158.5	27.0
0°-40°	3556.2	44.4
0°-60°	6321.7	79.0
0°-90°	8003.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8003.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2728	2728	2728	2728	2728	
5°	2832	2698	2647	2703	2832	273
15°	2992	2570	2490	2570	2992	848
25°	3051	2301	2326	2278	3051	1409
35°	2940	1925	2138	1894	2940	1836
45°	2577	1518	1907	1480	2577	1984
55°	2028	1123	1620	1091	2028	1810
65°	1382	741	1203	724	1382	1366
75°	712	375	652	373	712	756
85°	141	70	117	72	141	178
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°	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1
2.5°	2788.6	2747.8	2748.5	2784.1	2756.7	2770.1	2731.9	2746.6	2742.1	2745.3	2714.1
5°	2832.5	2788.6	2787.9	2818.5	2787.9	2793.7	2745.3	2754.8	2740.8	2731.9	2698.2
7.5°	2878.9	2835.0	2830.6	2857.3	2817.2	2812.7	2759.3	2759.3	2733.8	2711.6	2679.7
10°	2924.7	2879.6	2873.8	2894.2	2844.6	2829.9	2765.0	2754.8	2721.1	2688.0	2653.7
12.5°	2959.1	2913.3	2908.8	2921.6	2865.6	2838.8	2765.0	2745.3	2695.7	2649.2	2622.5
15°	2991.6	2944.5	2932.4	2938.7	2874.5	2838.8	2756.1	2725.6	2661.9	2600.8	2569.7
17.5°	3014.5	2969.3	2957.2	2956.6	2878.9	2828.0	2737.0	2695.0	2618.7	2544.8	2513.7
20°	3037.4	2992.2	2976.9	2965.5	2877.7	2813.4	2709.0	2652.4	2563.3	2480.6	2454.5
22.5°	3048.8	3002.4	2985.8	2968.7	2869.4	2786.7	2674.7	2602.7	2500.9	2402.3	2380.7
25°	3050.7	3003.0	2985.2	2960.4	2852.8	2754.8	2630.1	2542.9	2429.0	2319.6	2301.1
27.5°	3045.7	2993.5	2975.7	2945.7	2828.0	2716.0	2577.3	2474.8	2352.7	2231.7	2212.0
30°	3027.8	2975.0	2957.8	2919.0	2793.0	2668.3	2519.4	2399.1	2268.0	2139.5	2122.3
32.5°	2992.2	2940.7	2926.7	2887.8	2754.8	2612.9	2451.9	2317.7	2174.5	2051.6	2026.2
35°	2940.0	2888.5	2879.6	2838.8	2701.4	2546.7	2378.1	2228.6	2075.2	1949.8	1925.0
37.5°	2871.9	2828.7	2815.3	2775.2	2638.4	2471.7	2293.5	2131.8	1974.0	1839.1	1823.8
40°	2786.0	2745.3	2735.1	2699.5	2565.2	2388.3	2201.8	2031.9	1869.6	1744.3	1722.6
42.5°	2688.0	2649.8	2644.1	2607.2	2474.8	2296.0	2102.6	1928.2	1760.8	1639.9	1618.3
45°	2576.7	2539.7	2538.5	2503.5	2376.2	2193.6	1998.2	1823.2	1654.6	1529.2	1517.7
47.5°	2453.8	2420.7	2420.7	2388.3	2266.1	2080.9	1890.6	1713.7	1547.6	1436.9	1416.6
50°	2320.2	2289.0	2279.5	2263.6	2144.6	1958.1	1777.4	1606.8	1442.0	1336.4	1316.6
52.5°	2177.6	2150.9	2157.3	2128.0	2012.8	1830.2	1662.8	1486.6	1335.7	1239.6	1219.9
55°	2027.5	1989.3	1995.0	1984.2	1875.4	1698.5	1534.3	1387.3	1231.4	1141.0	1122.6
57.5°	1871.6	1821.9	1842.3	1835.9	1729.0	1563.6	1416.6	1274.6	1127.6	1044.3	1026.5
60°	1711.8	1664.1	1685.1	1679.4	1578.8	1428.6	1295.0	1163.3	1024.6	948.8	931.0
62.5°	1547.6	1503.7	1522.8	1518.4	1426.1	1290.6	1174.1	1053.2	920.8	852.7	836.2
65°	1382.2	1340.2	1357.4	1354.2	1268.9	1165.8	1050.0	939.3	816.5	757.3	740.7
67.5°	1212.9	1174.1	1190.0	1190.0	1111.7	1013.1	925.3	824.1	714.0	663.1	647.8
70°	1044.9	1008.6	1022.6	1021.4	955.2	875.0	799.3	708.9	610.3	568.3	555.5
72.5°	875.6	843.8	856.6	855.3	799.9	748.4	673.3	595.0	509.1	475.4	463.9
75°	711.5	681.5	693.6	692.4	647.2	598.8	548.5	483.6	409.8	386.3	374.8
77.5°	554.9	524.4	534.5	534.5	501.5	466.5	426.4	376.1	323.9	298.5	290.2
80°	404.7	390.1	385.0	385.6	363.4	340.5	320.1	271.7	233.5	216.4	210.6
82.5°	266.0	253.9	248.8	250.1	237.4	223.4	210.6	176.9	151.5	141.3	138.1
85°	141.3	132.4	127.9	131.1	128.5	120.9	114.5	91.6	75.7	71.9	70.0
87.5°	44.5	38.8	35.6	47.1	40.1	35.6	34.4	27.4	21.0	21.0	20.4
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1
2.5°	2724.3	2724.3	2699.5	2693.7	2691.2	2694.4	2669.6	2665.1	2700.7	2688.7	2661.3
5°	2702.7	2701.4	2666.4	2660.0	2660.0	2656.2	2628.2	2621.8	2657.5	2647.3	2617.4
7.5°	2675.9	2672.1	2630.7	2626.3	2619.9	2617.4	2586.2	2581.7	2612.3	2605.9	2577.9
10°	2643.5	2639.7	2590.7	2587.5	2580.5	2575.4	2546.1	2542.9	2574.1	2563.9	2541.7
12.5°	2600.8	2593.8	2543.6	2540.4	2534.7	2532.7	2504.1	2502.8	2537.2	2527.0	2503.5
15°	2544.8	2539.1	2483.1	2484.4	2485.0	2485.0	2462.1	2460.8	2494.6	2490.1	2464.7
17.5°	2483.1	2475.5	2422.0	2425.8	2430.3	2435.4	2417.6	2420.7	2456.4	2450.7	2427.7
20°	2413.1	2405.5	2353.3	2364.1	2373.7	2383.8	2372.4	2381.3	2414.4	2411.8	2394.7
22.5°	2334.8	2327.2	2278.8	2295.4	2311.3	2330.4	2325.3	2335.5	2370.5	2369.8	2354.6
25°	2239.4	2241.3	2198.6	2219.0	2245.7	2272.5	2274.4	2290.9	2329.7	2325.9	2311.9
27.5°	2150.3	2152.8	2107.6	2142.0	2177.6	2212.0	2220.3	2243.2	2282.6	2279.5	2267.4
30°	2056.7	2059.9	2016.0	2063.1	2106.4	2148.4	2166.2	2197.4	2237.5	2237.5	2224.7
32.5°	1959.4	1965.1	1919.3	1982.3	2032.6	2081.6	2112.7	2145.2	2191.0	2189.7	2178.9
35°	1859.5	1865.8	1823.8	1904.0	1954.3	2014.1	2052.9	2096.2	2136.9	2137.6	2129.3
37.5°	1757.6	1765.3	1727.1	1814.9	1872.2	1942.8	1992.5	2035.7	2080.9	2083.5	2075.8
40°	1656.5	1664.7	1631.6	1716.3	1788.8	1867.7	1925.0	1975.9	2025.6	2026.8	2021.7
42.5°	1555.3	1564.2	1539.4	1622.1	1704.2	1788.8	1856.3	1914.2	1965.1	1968.3	1962.6
45°	1456.6	1464.3	1446.5	1536.8	1615.7	1708.0	1785.6	1851.2	1902.7	1907.2	1905.3
47.5°	1358.6	1365.6	1349.7	1432.5	1523.5	1621.5	1711.2	1783.7	1838.5	1843.6	1842.3
50°	1262.6	1268.3	1251.1	1337.6	1428.0	1532.4	1625.9	1709.9	1771.0	1776.1	1775.5
52.5°	1167.1	1172.8	1158.2	1249.2	1331.3	1441.4	1543.2	1634.2	1694.6	1702.3	1703.6
55°	1074.8	1077.4	1065.9	1153.1	1232.6	1347.8	1464.9	1553.4	1613.8	1620.2	1624.0
57.5°	982.6	983.2	973.6	1057.0	1133.4	1251.1	1373.9	1466.8	1524.1	1530.5	1536.2
60°	890.9	890.3	879.5	960.3	1033.5	1149.9	1277.8	1370.1	1425.5	1431.2	1438.8
62.5°	799.9	798.0	788.5	862.9	931.6	1046.8	1175.4	1264.5	1317.3	1321.1	1331.3
65°	709.5	707.6	698.7	767.5	829.8	939.9	1065.9	1150.6	1198.3	1203.4	1201.5
67.5°	620.5	616.6	609.6	671.4	728.0	829.8	950.7	1031.6	1071.0	1075.5	1087.6
70°	531.4	526.9	511.0	576.5	626.2	717.2	829.8	901.7	934.8	939.3	937.4
72.5°	443.5	439.1	421.9	482.4	524.4	603.9	704.5	764.3	792.9	796.7	796.7
75°	358.3	355.7	344.9	390.7	425.7	490.6	575.9	625.5	647.8	652.3	651.0
77.5°	276.2	274.3	263.5	302.9	330.3	378.6	447.4	486.2	502.7	507.8	518.6
80°	197.9	197.3	180.1	218.9	231.0	271.7	322.0	351.9	360.8	367.8	375.5
82.5°	126.6	127.3	110.1	143.2	148.3	174.4	205.5	224.0	230.4	236.1	241.8
85°	61.7	64.3	54.7	75.7	76.4	89.7	103.1	110.1	112.6	117.1	122.2
87.5°	15.9	18.5	10.2	21.6	19.1	24.8	28.6	30.5	29.9	33.1	35.0
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°	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1
2.5°	2670.2	2690.6	2680.4	2713.5	2726.2	2705.8	2741.5	2742.1	2716.7	2746.6	2763.1
5°	2628.8	2649.8	2643.5	2677.8	2693.7	2675.9	2719.2	2727.5	2702.7	2736.4	2763.1
7.5°	2586.8	2611.7	2603.4	2638.4	2657.5	2643.5	2689.9	2703.3	2684.2	2721.1	2756.7
10°	2550.6	2571.6	2562.7	2599.6	2616.1	2604.7	2650.5	2675.3	2657.5	2702.7	2745.3
12.5°	2514.9	2532.1	2521.9	2552.5	2568.4	2553.7	2609.7	2632.7	2619.9	2667.0	2721.7
15°	2469.1	2488.2	2474.2	2501.6	2513.7	2500.9	2546.7	2586.2	2570.3	2621.8	2682.3
17.5°	2434.1	2444.9	2425.8	2447.5	2454.5	2437.3	2483.7	2522.6	2511.1	2567.1	2637.1
20°	2395.3	2404.2	2377.5	2389.6	2388.9	2367.3	2409.9	2448.1	2440.5	2502.2	2581.7
22.5°	2352.0	2356.5	2325.3	2327.8	2326.6	2290.9	2329.1	2367.9	2364.7	2427.1	2516.2
25°	2306.2	2306.8	2266.7	2265.5	2251.5	2209.5	2243.2	2287.1	2277.6	2345.0	2438.6
27.5°	2261.0	2254.6	2206.3	2194.8	2172.6	2122.3	2152.2	2191.6	2185.9	2252.1	2355.8
30°	2212.6	2204.4	2145.2	2124.2	2091.7	2033.8	2058.6	2095.6	2098.7	2156.6	2265.5
32.5°	2166.8	2145.8	2080.3	2049.7	2009.0	1941.6	1954.9	1992.5	1997.6	2056.1	2168.1
35°	2107.6	2093.6	2012.8	1960.6	1920.6	1846.7	1860.7	1886.8	1894.5	1951.7	2065.6
37.5°	2051.6	2029.4	1943.5	1879.8	1828.3	1750.6	1754.5	1781.2	1788.8	1846.7	1959.4
40°	1993.7	1961.9	1869.6	1795.2	1736.0	1654.6	1650.1	1678.1	1683.8	1740.5	1842.3
42.5°	1932.0	1893.8	1790.1	1708.6	1640.6	1557.8	1548.9	1573.1	1579.5	1634.8	1734.7
45°	1869.6	1823.8	1708.6	1619.6	1545.1	1460.5	1451.6	1470.0	1479.6	1531.7	1627.8
47.5°	1803.5	1750.0	1624.6	1525.4	1448.4	1363.7	1352.9	1371.4	1379.0	1430.6	1521.6
50°	1734.1	1669.2	1538.1	1428.6	1352.3	1268.9	1253.0	1274.6	1281.6	1330.0	1419.1
52.5°	1657.7	1585.8	1445.8	1331.3	1254.9	1175.4	1156.3	1177.3	1185.6	1232.6	1314.7
55°	1576.9	1499.3	1352.9	1241.6	1158.8	1081.2	1065.3	1073.6	1091.4	1135.9	1212.3
57.5°	1485.9	1408.9	1254.9	1141.6	1062.1	987.6	974.3	981.9	998.5	1041.7	1110.5
60°	1389.2	1307.7	1155.0	1041.7	964.7	894.1	882.0	889.0	906.8	946.3	1009.9
62.5°	1293.7	1202.1	1051.9	939.3	869.3	803.7	800.6	798.0	814.6	852.7	908.7
65°	1177.9	1090.1	944.4	837.5	773.8	714.6	701.9	707.6	723.5	758.5	817.1
67.5°	1053.8	974.3	834.3	735.6	679.0	626.2	615.4	617.9	634.5	665.0	715.9
70°	922.1	852.1	721.6	633.2	585.5	535.8	528.8	529.5	545.4	572.1	616.6
72.5°	784.0	721.0	607.7	532.0	492.5	456.9	450.5	442.9	457.5	480.5	518.6
75°	643.4	588.0	494.5	432.7	401.5	371.6	365.9	358.3	372.9	392.6	422.5
77.5°	501.5	456.9	384.4	336.6	312.5	290.2	285.1	276.8	291.5	306.1	329.6
80°	362.7	330.3	287.0	236.7	228.5	213.8	208.7	199.8	213.8	223.4	241.2
82.5°	234.2	212.5	187.7	152.7	151.5	140.6	138.1	127.9	140.6	146.4	159.7
85°	118.4	108.2	101.8	77.6	80.2	73.2	72.5	61.7	71.9	74.5	82.1
87.5°	33.7	35.6	31.8	19.1	24.2	22.9	22.9	16.5	22.9	22.9	26.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P837737

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-3LO-30-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1	2728.1
2.5°	2730.7	2741.5	2744.0	2743.4	2750.4	2788.6	2775.8	2788.6
5°	2737.0	2761.2	2767.6	2776.5	2787.9	2831.2	2817.2	2832.5
7.5°	2740.8	2777.1	2791.1	2808.3	2826.7	2875.1	2863.7	2878.9
10°	2740.8	2787.9	2808.3	2836.9	2861.7	2917.7	2906.9	2924.7
12.5°	2729.4	2789.8	2818.5	2858.6	2890.4	2950.8	2946.4	2959.1
15°	2705.8	2780.3	2819.7	2871.3	2910.7	2978.2	2976.3	2991.6
17.5°	2674.0	2763.7	2811.5	2876.4	2926.0	3001.7	3006.2	3014.5
20°	2633.9	2732.6	2794.9	2874.5	2936.8	3020.2	3025.9	3037.4
22.5°	2581.1	2695.0	2770.1	2866.2	2938.1	3027.8	3038.0	3048.8
25°	2518.7	2649.8	2737.7	2850.3	2931.7	3027.2	3041.2	3050.7
27.5°	2447.5	2591.3	2696.3	2824.8	2913.9	3017.0	3034.2	3045.7
30°	2364.7	2528.9	2649.2	2791.7	2889.7	2997.9	3016.4	3027.8
32.5°	2279.5	2460.2	2593.2	2749.1	2854.7	2967.4	2983.3	2992.2
35°	2186.6	2376.8	2525.7	2694.4	2809.6	2918.4	2930.5	2940.0
37.5°	2085.4	2286.5	2448.7	2632.7	2745.9	2850.3	2861.1	2871.9
40°	1981.0	2191.6	2362.2	2556.9	2670.2	2766.9	2778.4	2786.0
42.5°	1876.0	2086.6	2269.9	2467.8	2580.5	2673.4	2680.4	2688.0
45°	1769.7	1977.8	2166.2	2369.2	2480.6	2567.7	2570.3	2576.7
47.5°	1661.6	1865.2	2052.3	2256.6	2366.7	2446.2	2448.7	2453.8
50°	1552.7	1752.6	1930.7	2135.0	2242.6	2326.6	2315.1	2320.2
52.5°	1445.8	1634.2	1816.2	2003.9	2110.2	2184.6	2187.8	2177.6
55°	1340.8	1518.4	1685.7	1866.5	1967.6	2025.6	2023.6	2027.5
57.5°	1234.6	1401.3	1554.6	1720.1	1818.7	1873.5	1884.9	1871.6
60°	1126.4	1282.9	1420.4	1569.9	1665.4	1711.2	1724.6	1711.8
62.5°	1018.8	1162.6	1287.4	1417.8	1506.3	1562.9	1561.6	1547.6
65°	911.3	1041.7	1153.1	1263.8	1340.8	1397.5	1394.9	1382.2
67.5°	812.0	919.6	1019.5	1109.2	1176.0	1214.8	1228.2	1212.9
70°	702.5	795.5	883.3	955.2	1010.6	1045.6	1058.3	1044.9
72.5°	593.1	672.0	733.7	803.1	845.7	875.0	888.4	875.6
75°	484.9	549.8	600.1	654.2	684.1	708.9	724.2	711.5
77.5°	379.9	430.2	470.3	509.7	544.1	549.8	563.2	554.9
80°	280.0	316.3	345.5	371.6	396.5	399.0	409.8	404.7
82.5°	186.5	210.6	218.3	245.6	261.5	259.0	269.8	266.0
85°	98.6	113.3	126.6	134.9	143.8	135.5	145.1	141.3
87.5°	33.1	35.0	30.5	43.3	47.7	40.7	46.5	44.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)