

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: P837818

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-3LO-50-120-EDD-90**

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: P837818
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-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

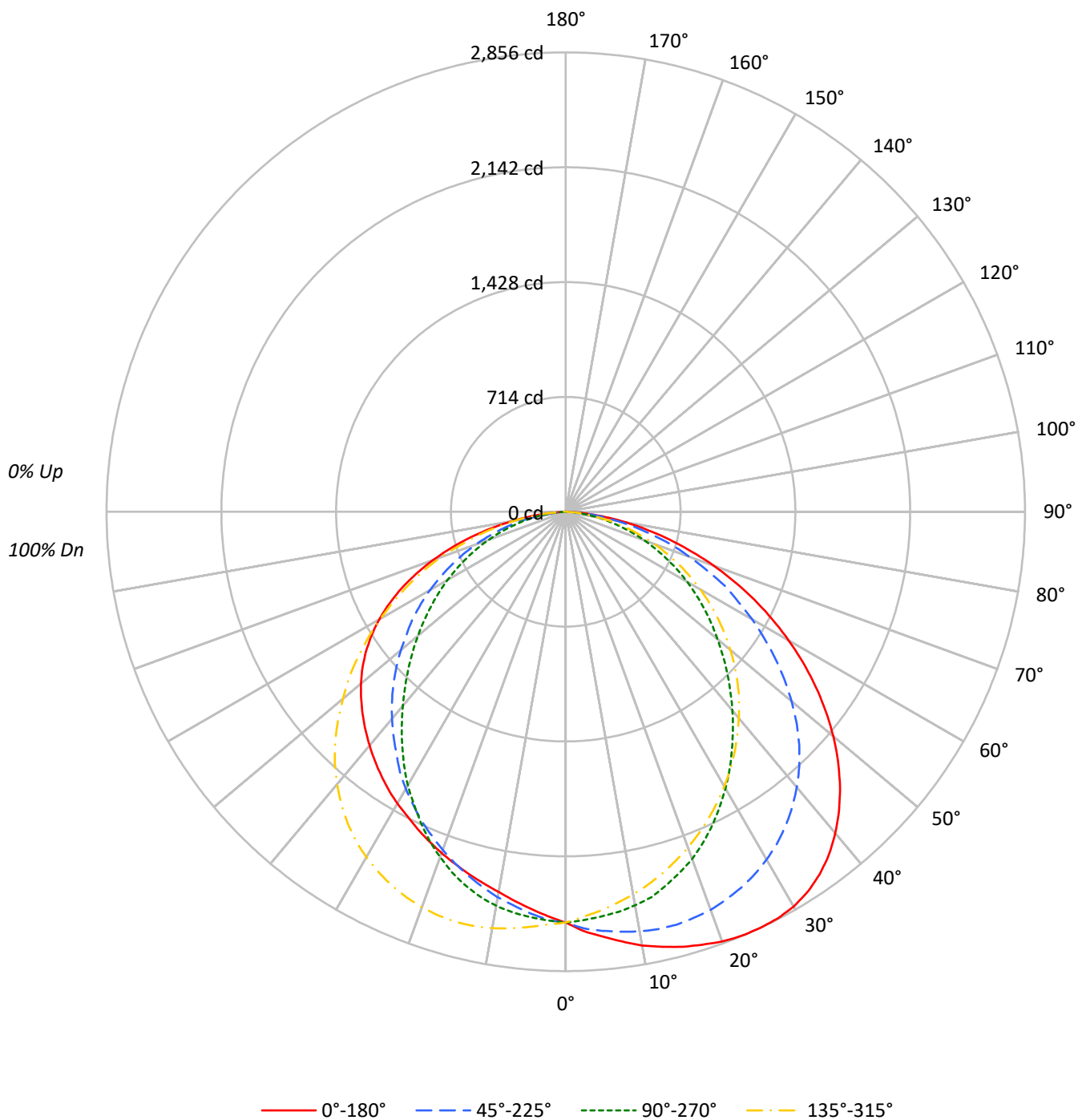
Lumens per Lamp: N/A
Luminaire Lumens: 7493.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	6873	6873	6873	6873
5°	7163	6823	6695	6834
10°	7482	6788	6559	6798
15°	7802	6702	6495	6703
20°	8143	6580	6466	6543
25°	8480	6396	6465	6331
30°	8808	6174	6509	6105
35°	9042	5920	6574	5826
40°	9162	5665	6666	5537
45°	9180	5407	6795	5271
50°	9093	5160	6961	5023
55°	8905	4930	7116	4793
60°	8625	4691	7211	4569
65°	8239	4416	7174	4313
70°	7696	4092	6918	4017
75°	6924	3648	6348	3630
80°	5872	3056	5336	3102
85°	4085	2022	3384	2078

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.5	3.2
10°-20°	702.2	9.4
20°-30°	1076.1	14.4
30°-40°	1308.5	17.5
40°-50°	1360.2	18.2
50°-60°	1228.7	16.4
60°-70°	934.1	12.5
70°-80°	520.8	7.0
80°-90°	119.9	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°	2020.8	27.0
0°-40°	3329.2	44.4
0°-60°	5918.2	79.0
0°-90°	7493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7493.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2554	2554	2554	2554	2554	
5°	2652	2526	2478	2530	2652	256
15°	2801	2406	2331	2406	2801	794
25°	2856	2154	2178	2132	2856	1319
35°	2752	1802	2001	1774	2752	1719
45°	2412	1421	1786	1385	2412	1857
55°	1898	1051	1517	1022	1898	1694
65°	1294	694	1127	677	1294	1279
75°	666	351	611	349	666	707
85°	132	66	110	67	132	167
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°	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0
2.5°	2610.6	2572.4	2573.0	2606.4	2580.8	2593.3	2557.5	2571.2	2567.1	2570.1	2540.9
5°	2651.7	2610.6	2610.0	2638.6	2610.0	2615.3	2570.1	2579.0	2565.9	2557.5	2526.0
7.5°	2695.2	2654.1	2649.9	2674.9	2637.4	2633.2	2583.2	2583.2	2559.3	2538.5	2508.7
10°	2738.1	2695.8	2690.4	2709.5	2663.0	2649.3	2588.5	2579.0	2547.4	2516.4	2484.3
12.5°	2770.2	2727.3	2723.2	2735.1	2682.7	2657.6	2588.5	2570.1	2523.6	2480.1	2455.1
15°	2800.6	2756.5	2745.2	2751.2	2691.0	2657.6	2580.2	2551.6	2492.0	2434.8	2405.6
17.5°	2822.1	2779.8	2768.4	2767.8	2695.2	2647.5	2562.3	2523.0	2451.5	2382.4	2353.2
20°	2843.5	2801.2	2786.9	2776.2	2694.0	2633.8	2536.1	2483.1	2399.7	2322.2	2297.8
22.5°	2854.2	2810.7	2795.3	2779.2	2686.2	2608.8	2503.9	2436.6	2341.3	2248.9	2228.7
25°	2856.0	2811.3	2794.7	2771.4	2670.7	2579.0	2462.2	2380.6	2274.0	2171.5	2154.2
27.5°	2851.3	2802.4	2785.7	2757.7	2647.5	2542.7	2412.8	2316.9	2202.5	2089.3	2070.8
30°	2834.6	2785.1	2769.0	2732.7	2614.7	2498.0	2358.6	2246.0	2123.2	2002.9	1986.8
32.5°	2801.2	2753.0	2739.8	2703.5	2579.0	2446.1	2295.4	2169.7	2035.7	1920.7	1896.9
35°	2752.4	2704.1	2695.8	2657.6	2529.0	2384.2	2226.3	2086.3	1942.7	1825.4	1802.1
37.5°	2688.6	2648.1	2635.6	2598.1	2470.0	2313.9	2147.1	1995.8	1848.0	1721.7	1707.4
40°	2608.2	2570.1	2560.5	2527.2	2401.5	2235.8	2061.3	1902.2	1750.3	1632.9	1612.7
42.5°	2516.4	2480.7	2475.3	2440.8	2316.9	2149.5	1968.4	1805.1	1648.4	1535.2	1515.0
45°	2412.2	2377.6	2376.4	2343.7	2224.5	2053.5	1870.6	1706.8	1548.9	1431.6	1420.9
47.5°	2297.2	2266.2	2266.2	2235.8	2121.5	1948.1	1770.0	1604.3	1448.9	1345.2	1326.1
50°	2172.1	2142.9	2134.0	2119.1	2007.7	1833.1	1663.9	1504.3	1350.0	1251.1	1232.6
52.5°	2038.7	2013.6	2019.6	1992.2	1884.4	1713.4	1556.7	1391.7	1250.5	1160.5	1142.0
55°	1898.1	1862.3	1867.7	1857.5	1755.7	1590.1	1436.3	1298.7	1152.8	1068.2	1050.9
57.5°	1752.1	1705.6	1724.7	1718.7	1618.6	1463.8	1326.1	1193.3	1055.7	977.6	960.9
60°	1602.6	1557.9	1577.5	1572.2	1478.1	1337.5	1212.3	1089.0	959.2	888.3	871.6
62.5°	1448.9	1407.8	1425.6	1421.5	1335.1	1208.2	1099.2	986.0	862.0	798.3	782.8
65°	1294.0	1254.6	1270.7	1267.8	1187.9	1091.4	983.0	879.3	764.3	708.9	693.5
67.5°	1135.5	1099.2	1114.0	1114.0	1040.8	948.4	866.2	771.5	668.4	620.8	606.5
70°	978.2	944.3	957.4	956.2	894.2	819.2	748.3	663.7	571.3	532.0	520.1
72.5°	819.7	790.0	801.9	800.7	748.9	700.6	630.3	557.0	476.6	445.0	434.3
75°	666.0	638.0	649.4	648.2	605.9	560.6	513.5	452.8	383.7	361.6	350.9
77.5°	519.5	490.9	500.4	500.4	469.4	436.7	399.2	352.1	303.2	279.4	271.7
80°	378.9	365.2	360.4	361.0	340.2	318.7	299.7	254.4	218.6	202.6	197.2
82.5°	249.0	237.7	232.9	234.1	222.2	209.1	197.2	165.6	141.8	132.3	129.3
85°	132.3	123.9	119.7	122.7	120.3	113.2	107.2	85.8	70.9	67.3	65.5
87.5°	41.7	36.3	33.4	44.1	37.5	33.4	32.2	25.6	19.7	19.7	19.1
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0
2.5°	2550.4	2550.4	2527.2	2521.8	2519.4	2522.4	2499.2	2495.0	2528.4	2517.0	2491.4
5°	2530.1	2529.0	2496.2	2490.2	2490.2	2486.7	2460.4	2454.5	2487.8	2478.3	2450.3
7.5°	2505.1	2501.5	2462.8	2458.7	2452.7	2450.3	2421.1	2417.0	2445.5	2439.6	2413.4
10°	2474.7	2471.2	2425.3	2422.3	2415.8	2411.0	2383.6	2380.6	2409.8	2400.3	2379.4
12.5°	2434.8	2428.3	2381.2	2378.2	2372.9	2371.1	2344.3	2343.1	2375.2	2365.7	2343.7
15°	2382.4	2377.0	2324.6	2325.8	2326.4	2326.4	2304.9	2303.8	2335.3	2331.2	2307.3
17.5°	2324.6	2317.5	2267.4	2271.0	2275.2	2279.9	2263.2	2266.2	2299.6	2294.2	2272.8
20°	2259.1	2251.9	2203.1	2213.2	2222.1	2231.7	2220.9	2229.3	2260.3	2257.9	2241.8
22.5°	2185.8	2178.7	2133.4	2148.9	2163.8	2181.6	2176.9	2186.4	2219.2	2218.6	2204.3
25°	2096.4	2098.2	2058.3	2077.4	2102.4	2127.4	2129.2	2144.7	2181.0	2177.5	2164.4
27.5°	2013.0	2015.4	1973.1	2005.3	2038.7	2070.8	2078.6	2100.0	2136.9	2134.0	2122.7
30°	1925.5	1928.4	1887.3	1931.4	1971.9	2011.2	2027.9	2057.1	2094.7	2094.7	2082.7
32.5°	1834.3	1839.7	1796.8	1855.8	1902.8	1948.7	1977.9	2008.3	2051.2	2050.0	2039.8
35°	1740.8	1746.7	1707.4	1782.5	1829.5	1885.5	1921.9	1962.4	2000.5	2001.1	1993.4
37.5°	1645.5	1652.6	1616.9	1699.1	1752.7	1818.8	1865.3	1905.8	1948.1	1950.5	1943.3
40°	1550.7	1558.5	1527.5	1606.7	1674.6	1748.5	1802.1	1849.8	1896.3	1897.5	1892.7
42.5°	1456.0	1464.3	1441.1	1518.6	1595.4	1674.6	1737.8	1792.0	1839.7	1842.6	1837.3
45°	1363.7	1370.8	1354.1	1438.7	1512.6	1599.0	1671.7	1733.0	1781.3	1785.5	1783.7
47.5°	1271.9	1278.5	1263.6	1341.0	1426.2	1518.0	1602.0	1669.9	1721.1	1725.9	1724.7
50°	1182.0	1187.3	1171.2	1252.3	1336.9	1434.6	1522.1	1600.8	1658.0	1662.7	1662.1
52.5°	1092.6	1098.0	1084.3	1169.5	1246.3	1349.4	1444.7	1529.9	1586.5	1593.6	1594.8
55°	1006.2	1008.6	997.9	1079.5	1154.0	1261.8	1371.4	1454.2	1510.8	1516.8	1520.3
57.5°	919.8	920.4	911.5	989.5	1061.0	1171.2	1286.2	1373.2	1426.8	1432.8	1438.1
60°	834.0	833.5	823.3	899.0	967.5	1076.5	1196.3	1282.6	1334.5	1339.8	1347.0
62.5°	748.9	747.1	738.1	807.8	872.2	980.0	1100.3	1183.8	1233.2	1236.8	1246.3
65°	664.3	662.5	654.1	718.5	776.9	879.9	997.9	1077.1	1121.8	1126.6	1124.8
67.5°	580.9	577.3	570.7	628.5	681.5	776.9	890.0	965.7	1002.6	1006.8	1018.1
70°	497.4	493.3	478.4	539.7	586.2	671.4	776.9	844.2	875.2	879.3	877.5
72.5°	415.2	411.1	395.0	451.6	490.9	565.4	659.5	715.5	742.3	745.9	745.9
75°	335.4	333.0	322.9	365.8	398.6	459.3	539.2	585.6	606.5	610.6	609.5
77.5°	258.6	256.8	246.6	283.6	309.2	354.5	418.8	455.2	470.6	475.4	485.5
80°	185.3	184.7	168.6	204.9	216.3	254.4	301.4	329.4	337.8	344.3	351.5
82.5°	118.6	119.1	103.1	134.0	138.8	163.2	192.4	209.7	215.7	221.0	226.4
85°	57.8	60.2	51.2	70.9	71.5	84.0	96.5	103.1	105.4	109.6	114.4
87.5°	14.9	17.3	9.5	20.3	17.9	23.2	26.8	28.6	28.0	31.0	32.8
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°	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0
2.5°	2499.8	2518.8	2509.3	2540.3	2552.2	2533.1	2566.5	2567.1	2543.2	2571.2	2586.7
5°	2461.0	2480.7	2474.7	2506.9	2521.8	2505.1	2545.6	2553.4	2530.1	2561.7	2586.7
7.5°	2421.7	2445.0	2437.2	2470.0	2487.8	2474.7	2518.2	2530.7	2512.9	2547.4	2580.8
10°	2387.8	2407.4	2399.1	2433.6	2449.1	2438.4	2481.3	2504.5	2487.8	2530.1	2570.1
12.5°	2354.4	2370.5	2361.0	2389.5	2404.4	2390.7	2443.2	2464.6	2452.7	2496.8	2548.0
15°	2311.5	2329.4	2316.3	2341.9	2353.2	2341.3	2384.2	2421.1	2406.2	2454.5	2511.1
17.5°	2278.7	2288.9	2271.0	2291.2	2297.8	2281.7	2325.2	2361.5	2350.8	2403.2	2468.8
20°	2242.4	2250.7	2225.7	2237.0	2236.4	2216.2	2256.1	2291.8	2284.7	2342.5	2417.0
22.5°	2201.9	2206.1	2176.9	2179.2	2178.1	2144.7	2180.4	2216.8	2213.8	2272.2	2355.6
25°	2159.0	2159.6	2122.1	2120.9	2107.8	2068.4	2100.0	2141.1	2132.2	2195.3	2282.9
27.5°	2116.7	2110.7	2065.5	2054.7	2033.9	1986.8	2014.8	2051.8	2046.4	2108.4	2205.5
30°	2071.4	2063.7	2008.3	1988.6	1958.2	1904.0	1927.2	1961.8	1964.8	2019.0	2120.9
32.5°	2028.5	2008.9	1947.5	1918.9	1880.8	1817.6	1830.1	1865.3	1870.1	1924.9	2029.7
35°	1973.1	1960.0	1884.4	1835.5	1798.0	1728.9	1742.0	1766.4	1773.5	1827.2	1933.8
37.5°	1920.7	1899.8	1819.4	1759.8	1711.6	1638.9	1642.5	1667.5	1674.6	1728.9	1834.3
40°	1866.5	1836.7	1750.3	1680.6	1625.2	1548.9	1544.8	1571.0	1576.3	1629.4	1724.7
42.5°	1808.7	1772.9	1675.8	1599.6	1535.8	1458.4	1450.1	1472.7	1478.6	1530.5	1624.0
45°	1750.3	1707.4	1599.6	1516.2	1446.5	1367.2	1358.9	1376.2	1385.1	1434.0	1523.9
47.5°	1688.4	1638.3	1520.9	1428.0	1355.9	1276.7	1266.6	1283.8	1291.0	1339.2	1424.4
50°	1623.4	1562.6	1439.9	1337.5	1266.0	1187.9	1173.0	1193.3	1199.8	1245.1	1328.5
52.5°	1551.9	1484.6	1353.5	1246.3	1174.8	1100.3	1082.5	1102.1	1109.9	1154.0	1230.8
55°	1476.3	1403.6	1266.6	1162.3	1084.9	1012.2	997.3	1005.0	1021.7	1063.4	1134.9
57.5°	1391.1	1319.0	1174.8	1068.8	994.3	924.6	912.1	919.2	934.7	975.2	1039.6
60°	1300.5	1224.3	1081.3	975.2	903.2	837.0	825.7	832.3	848.9	885.9	945.5
62.5°	1211.2	1125.4	984.8	879.3	813.8	752.4	749.5	747.1	762.6	798.3	850.7
65°	1102.7	1020.5	884.1	784.0	724.4	669.0	657.1	662.5	677.4	710.1	764.9
67.5°	986.6	912.1	781.0	688.7	635.7	586.2	576.1	578.5	594.0	622.6	670.2
70°	863.2	797.7	675.6	592.8	548.1	501.6	495.1	495.7	510.6	535.6	577.3
72.5°	734.0	675.0	568.9	498.0	461.1	427.7	421.8	414.6	428.3	449.8	485.5
75°	602.3	550.5	462.9	405.1	375.9	347.9	342.6	335.4	349.1	367.6	395.6
77.5°	469.4	427.7	359.8	315.2	292.5	271.7	266.9	259.2	272.9	286.6	308.6
80°	339.6	309.2	268.7	221.6	213.9	200.2	195.4	187.1	200.2	209.1	225.8
82.5°	219.2	199.0	175.7	143.0	141.8	131.7	129.3	119.7	131.7	137.0	149.5
85°	110.8	101.3	95.3	72.7	75.1	68.5	67.9	57.8	67.3	69.7	76.9
87.5°	31.6	33.4	29.8	17.9	22.6	21.4	21.4	15.5	21.4	21.4	24.4
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: P837818

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-3LO-50-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0	2554.0
2.5°	2556.4	2566.5	2568.9	2568.3	2574.8	2610.6	2598.7	2610.6
5°	2562.3	2585.0	2590.9	2599.2	2610.0	2650.5	2637.4	2651.7
7.5°	2565.9	2599.8	2613.0	2629.0	2646.3	2691.6	2680.9	2695.2
10°	2565.9	2610.0	2629.0	2655.8	2679.1	2731.5	2721.4	2738.1
12.5°	2555.2	2611.8	2638.6	2676.1	2705.9	2762.5	2758.3	2770.2
15°	2533.1	2602.8	2639.8	2688.0	2725.0	2788.1	2786.3	2800.6
17.5°	2503.3	2587.3	2632.0	2692.8	2739.3	2810.1	2814.3	2822.1
20°	2465.8	2558.1	2616.5	2691.0	2749.4	2827.4	2832.8	2843.5
22.5°	2416.4	2523.0	2593.3	2683.3	2750.6	2834.6	2844.1	2854.2
25°	2358.0	2480.7	2562.9	2668.4	2744.6	2834.0	2847.1	2856.0
27.5°	2291.2	2425.9	2524.2	2644.5	2727.9	2824.4	2840.5	2851.3
30°	2213.8	2367.5	2480.1	2613.5	2705.3	2806.6	2823.8	2834.6
32.5°	2134.0	2303.2	2427.7	2573.6	2672.5	2778.0	2792.9	2801.2
35°	2047.0	2225.1	2364.5	2522.4	2630.2	2732.1	2743.4	2752.4
37.5°	1952.3	2140.5	2292.4	2464.6	2570.7	2668.4	2678.5	2688.6
40°	1854.6	2051.8	2211.4	2393.7	2499.8	2590.3	2601.0	2608.2
42.5°	1756.3	1953.5	2125.0	2310.3	2415.8	2502.7	2509.3	2516.4
45°	1656.8	1851.6	2027.9	2218.0	2322.2	2403.8	2406.2	2412.2
47.5°	1555.5	1746.1	1921.3	2112.5	2215.6	2290.1	2292.4	2297.2
50°	1453.6	1640.7	1807.5	1998.7	2099.4	2178.1	2167.3	2172.1
52.5°	1353.5	1529.9	1700.3	1876.0	1975.5	2045.2	2048.2	2038.7
55°	1255.2	1421.5	1578.1	1747.3	1842.1	1896.3	1894.5	1898.1
57.5°	1155.8	1311.8	1455.4	1610.3	1702.6	1753.9	1764.6	1752.1
60°	1054.5	1201.0	1329.7	1469.7	1559.1	1602.0	1614.5	1602.6
62.5°	953.8	1088.4	1205.2	1327.3	1410.1	1463.2	1462.0	1448.9
65°	853.1	975.2	1079.5	1183.2	1255.2	1308.3	1305.9	1294.0
67.5°	760.2	860.9	954.4	1038.4	1100.9	1137.3	1149.8	1135.5
70°	657.7	744.7	826.9	894.2	946.0	978.8	990.7	978.2
72.5°	555.2	629.1	686.9	751.8	791.7	819.2	831.7	819.7
75°	454.0	514.7	561.8	612.4	640.4	663.7	678.0	666.0
77.5°	355.7	402.7	440.3	477.2	509.4	514.7	527.2	519.5
80°	262.1	296.1	323.5	347.9	371.2	373.5	383.7	378.9
82.5°	174.6	197.2	204.3	230.0	244.9	242.5	252.6	249.0
85°	92.3	106.0	118.6	126.3	134.6	126.9	135.8	132.3
87.5°	31.0	32.8	28.6	40.5	44.7	38.1	43.5	41.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)