

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: P838240

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-2HI-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: P838240
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-LD4-2HI-50-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

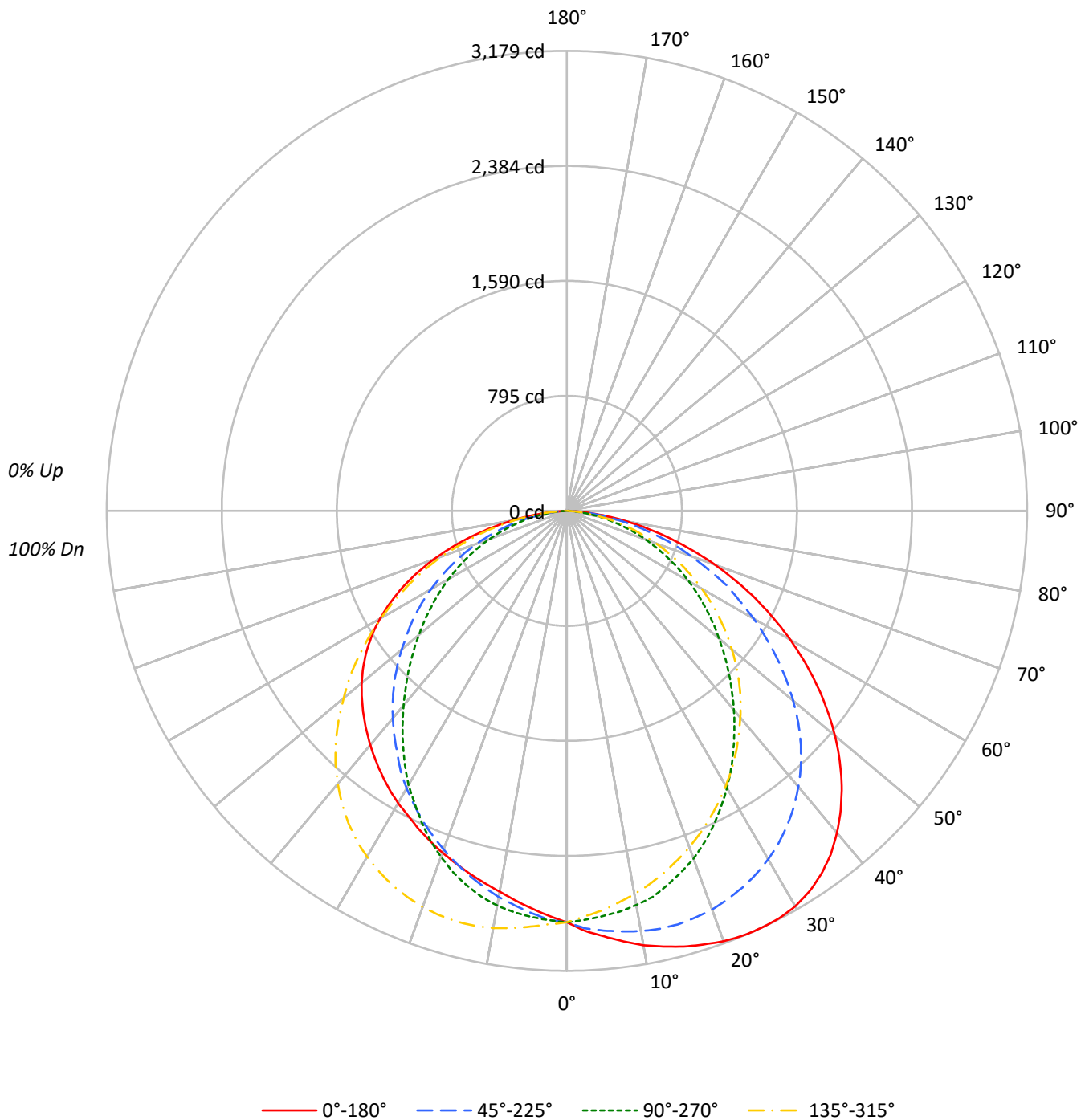
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8341.0 lumens
Efficiency: N/A
Efficacy: 94.8 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): 88
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	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	86	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	61	61	59
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	74	62	53	47	59	52	46	57	51	46	56	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	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	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°	270°
0°	3825	3825	3825	3825
5°	3987	3798	3726	3804
10°	4164	3778	3650	3784
15°	4343	3730	3615	3731
20°	4532	3662	3599	3641
25°	4720	3560	3598	3524
30°	4902	3436	3623	3398
35°	5032	3295	3659	3243
40°	5099	3153	3710	3082
45°	5109	3010	3782	2934
50°	5061	2872	3874	2796
55°	4956	2744	3961	2668
60°	4800	2611	4014	2543
65°	4586	2457	3992	2401
70°	4284	2277	3851	2236
75°	3854	2031	3533	2020
80°	3268	1701	2970	1726
85°	2272	1125	1883	1156

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.9	3.2
10°-20°	781.6	9.4
20°-30°	1197.9	14.4
30°-40°	1456.6	17.5
40°-50°	1514.2	18.2
50°-60°	1367.8	16.4
60°-70°	1039.8	12.5
70°-80°	579.7	7.0
80°-90°	133.5	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°	2249.4	27.0
0°-40°	3706.0	44.4
0°-60°	6587.9	79.0
0°-90°	8341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8341.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2843	2843	2843	2843	2843	
5°	2952	2812	2759	2816	2952	285
15°	3118	2678	2595	2678	3118	884
25°	3179	2398	2424	2374	3179	1468
35°	3064	2006	2228	1974	3064	1914
45°	2685	1582	1988	1542	2685	2067
55°	2113	1170	1688	1137	2113	1886
65°	1440	772	1254	754	1440	1423
75°	741	391	680	389	741	788
85°	147	73	122	75	147	185
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°	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0
2.5°	2906.0	2863.6	2864.2	2901.4	2872.8	2886.8	2847.0	2862.2	2857.6	2860.9	2828.4
5°	2951.8	2906.0	2905.3	2937.2	2905.3	2911.3	2860.9	2870.8	2856.3	2847.0	2811.8
7.5°	3000.2	2954.4	2949.8	2977.6	2935.8	2931.2	2875.5	2875.5	2849.0	2825.8	2792.6
10°	3047.9	3000.8	2994.9	3016.1	2964.4	2949.1	2881.5	2870.8	2835.7	2801.2	2765.4
12.5°	3083.7	3036.0	3031.3	3044.6	2986.2	2958.4	2881.5	2860.9	2809.2	2760.8	2732.9
15°	3117.5	3068.5	3055.9	3062.5	2995.5	2958.4	2872.2	2840.3	2774.0	2710.4	2677.9
17.5°	3141.4	3094.3	3081.7	3081.1	3000.2	2947.1	2852.3	2808.5	2728.9	2652.0	2619.5
20°	3165.3	3118.2	3102.3	3090.4	2998.8	2931.9	2823.1	2764.1	2671.2	2585.0	2557.8
22.5°	3177.2	3128.8	3111.6	3093.7	2990.2	2904.0	2787.3	2712.4	2606.2	2503.5	2480.9
25°	3179.2	3129.5	3110.9	3085.1	2973.0	2870.8	2740.9	2650.0	2531.3	2417.2	2398.0
27.5°	3173.9	3119.5	3101.0	3069.8	2947.1	2830.4	2685.8	2579.1	2451.7	2325.7	2305.2
30°	3155.3	3100.3	3082.4	3041.9	2910.6	2780.7	2625.5	2500.1	2363.5	2229.6	2211.7
32.5°	3118.2	3064.5	3049.9	3009.5	2870.8	2723.0	2555.2	2415.3	2266.0	2138.0	2111.5
35°	3063.8	3010.1	3000.8	2958.4	2815.1	2654.0	2478.3	2322.4	2162.6	2031.9	2006.1
37.5°	2992.9	2947.8	2933.9	2892.1	2749.5	2575.7	2390.1	2221.6	2057.1	1916.6	1900.6
40°	2903.3	2860.9	2850.3	2813.2	2673.2	2488.9	2294.6	2117.5	1948.4	1817.7	1795.2
42.5°	2801.2	2761.4	2755.5	2717.0	2579.1	2392.7	2191.1	2009.4	1835.0	1709.0	1686.4
45°	2685.2	2646.7	2645.4	2608.9	2476.3	2285.9	2082.3	1900.0	1724.2	1593.6	1581.7
47.5°	2557.2	2522.7	2522.7	2488.9	2361.5	2168.6	1970.3	1785.9	1612.8	1497.4	1476.2
50°	2417.9	2385.4	2375.5	2358.9	2234.9	2040.6	1852.2	1674.5	1502.7	1392.7	1372.1
52.5°	2269.4	2241.5	2248.1	2217.6	2097.6	1907.3	1732.9	1549.2	1392.0	1291.8	1271.3
55°	2112.8	2073.1	2079.0	2067.8	1954.4	1770.0	1598.9	1445.7	1283.2	1189.1	1169.8
57.5°	1950.4	1898.6	1919.9	1913.2	1801.8	1629.4	1476.2	1328.3	1175.1	1088.3	1069.7
60°	1783.9	1734.2	1756.1	1750.1	1645.3	1488.8	1349.5	1212.3	1067.7	988.8	970.2
62.5°	1612.8	1567.1	1587.0	1582.3	1486.2	1344.9	1223.5	1097.5	959.6	888.6	871.4
65°	1440.4	1396.6	1414.5	1411.2	1322.4	1214.9	1094.2	978.8	850.8	789.2	771.9
67.5°	1264.0	1223.5	1240.1	1240.1	1158.6	1055.8	964.2	858.8	744.1	691.0	675.1
70°	1088.9	1051.1	1065.7	1064.4	995.4	911.9	832.9	738.8	636.0	592.2	578.9
72.5°	912.5	879.4	892.6	891.3	833.6	779.9	701.6	620.1	530.5	495.4	483.4
75°	741.4	710.3	722.9	721.5	674.4	624.0	571.6	504.0	427.1	402.5	390.6
77.5°	578.3	546.4	557.1	557.1	522.6	486.1	444.3	391.9	337.6	311.0	302.4
80°	421.8	406.5	401.2	401.9	378.7	354.8	333.6	283.2	243.4	225.5	219.5
82.5°	277.2	264.6	259.3	260.6	247.4	232.8	219.5	184.4	157.8	147.2	143.9
85°	147.2	137.9	133.3	136.6	134.0	126.0	119.4	95.5	78.9	74.9	72.9
87.5°	46.4	40.5	37.1	49.1	41.8	37.1	35.8	28.5	21.9	21.9	21.2
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0
2.5°	2839.0	2839.0	2813.2	2807.2	2804.5	2807.8	2782.0	2777.3	2814.5	2801.9	2773.4
5°	2816.5	2815.1	2778.7	2772.0	2772.0	2768.1	2738.9	2732.2	2769.4	2758.8	2727.6
7.5°	2788.6	2784.6	2741.5	2736.9	2730.3	2727.6	2695.1	2690.5	2722.3	2715.7	2686.5
10°	2754.8	2750.8	2699.8	2696.4	2689.1	2683.8	2653.3	2650.0	2682.5	2671.9	2648.7
12.5°	2710.4	2703.1	2650.7	2647.4	2641.4	2639.4	2609.6	2608.2	2644.0	2633.4	2608.9
15°	2652.0	2646.0	2587.7	2589.0	2589.7	2589.7	2565.8	2564.5	2599.6	2595.0	2568.4
17.5°	2587.7	2579.7	2524.0	2528.0	2532.6	2537.9	2519.4	2522.7	2559.8	2553.9	2530.0
20°	2514.7	2506.8	2452.4	2463.7	2473.6	2484.2	2472.3	2481.6	2516.1	2513.4	2495.5
22.5°	2433.2	2425.2	2374.8	2392.0	2408.6	2428.5	2423.2	2433.8	2470.3	2469.6	2453.7
25°	2333.7	2335.7	2291.2	2312.5	2340.3	2368.2	2370.2	2387.4	2427.9	2423.9	2409.3
27.5°	2240.8	2243.5	2196.4	2232.2	2269.4	2305.2	2313.8	2337.7	2378.8	2375.5	2362.9
30°	2143.4	2146.7	2100.9	2150.0	2195.1	2238.9	2257.4	2289.9	2331.7	2331.7	2318.4
32.5°	2041.9	2047.9	2000.1	2065.8	2118.2	2169.2	2201.7	2235.5	2283.3	2282.0	2270.7
35°	1937.8	1944.4	1900.6	1984.2	2036.6	2098.9	2139.4	2184.5	2226.9	2227.6	2219.0
37.5°	1831.7	1839.6	1799.8	1891.4	1951.0	2024.6	2076.4	2121.5	2168.6	2171.2	2163.3
40°	1726.2	1734.8	1700.4	1788.6	1864.2	1946.4	2006.1	2059.1	2110.9	2112.2	2106.9
42.5°	1620.8	1630.1	1604.2	1690.4	1776.0	1864.2	1934.5	1994.8	2047.9	2051.2	2045.2
45°	1518.0	1525.9	1507.4	1601.5	1683.8	1779.9	1860.8	1929.2	1982.9	1987.5	1985.5
47.5°	1415.9	1423.2	1406.6	1492.8	1587.6	1689.7	1783.3	1858.9	1915.9	1921.2	1919.9
50°	1315.7	1321.7	1303.8	1394.0	1488.1	1596.9	1694.4	1781.9	1845.6	1850.9	1850.2
52.5°	1216.2	1222.2	1207.0	1301.8	1387.3	1502.1	1608.2	1703.0	1766.0	1774.0	1775.3
55°	1120.1	1122.7	1110.8	1201.7	1284.6	1404.6	1526.6	1618.8	1681.8	1688.4	1692.4
57.5°	1023.9	1024.6	1014.6	1101.5	1181.1	1303.8	1431.8	1528.6	1588.3	1594.9	1600.9
60°	928.4	927.8	916.5	1000.7	1077.0	1198.3	1331.6	1427.8	1485.5	1491.5	1499.4
62.5°	833.6	831.6	821.7	899.3	970.9	1090.9	1224.9	1317.7	1372.8	1376.7	1387.3
65°	739.4	737.4	728.2	799.8	864.8	979.5	1110.8	1199.0	1248.7	1254.0	1252.1
67.5°	646.6	642.6	635.3	699.6	758.7	864.8	990.8	1075.0	1116.1	1120.8	1133.4
70°	553.7	549.1	532.5	600.8	652.6	747.4	864.8	939.7	974.2	978.8	976.8
72.5°	462.2	457.6	439.7	502.7	546.4	629.3	734.1	796.5	826.3	830.3	830.3
75°	373.4	370.7	359.4	407.2	443.7	511.3	600.2	651.9	675.1	679.7	678.4
77.5°	287.8	285.8	274.6	315.7	344.2	394.6	466.2	506.7	523.9	529.2	540.5
80°	206.2	205.6	187.7	228.1	240.7	283.2	335.6	366.7	376.0	383.3	391.3
82.5°	132.0	132.6	114.7	149.2	154.5	181.7	214.2	233.4	240.1	246.0	252.0
85°	64.3	67.0	57.0	78.9	79.6	93.5	107.4	114.7	117.4	122.0	127.3
87.5°	16.6	19.2	10.6	22.5	19.9	25.9	29.8	31.8	31.2	34.5	36.5
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°	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0
2.5°	2782.6	2803.9	2793.3	2827.7	2841.0	2819.8	2856.9	2857.6	2831.1	2862.2	2879.5
5°	2739.5	2761.4	2754.8	2790.6	2807.2	2788.6	2833.7	2842.3	2816.5	2851.6	2879.5
7.5°	2695.8	2721.6	2713.0	2749.5	2769.4	2754.8	2803.2	2817.1	2797.2	2835.7	2872.8
10°	2658.0	2679.9	2670.6	2709.0	2726.3	2714.3	2762.1	2788.0	2769.4	2816.5	2860.9
12.5°	2620.8	2638.7	2628.1	2660.0	2676.5	2661.3	2719.6	2743.5	2730.3	2779.3	2836.4
15°	2573.1	2593.0	2578.4	2606.9	2619.5	2606.2	2654.0	2695.1	2678.5	2732.2	2795.2
17.5°	2536.6	2547.9	2528.0	2550.5	2557.8	2539.9	2588.3	2628.8	2616.9	2675.2	2748.2
20°	2496.2	2505.4	2477.6	2490.2	2489.5	2467.0	2511.4	2551.2	2543.2	2607.6	2690.5
22.5°	2451.1	2455.7	2423.2	2425.9	2424.5	2387.4	2427.2	2467.6	2464.3	2529.3	2622.2
25°	2403.3	2404.0	2362.2	2360.9	2346.3	2302.5	2337.7	2383.4	2373.5	2443.8	2541.3
27.5°	2356.2	2349.6	2299.2	2287.3	2264.1	2211.7	2242.8	2283.9	2278.0	2346.9	2455.0
30°	2305.8	2297.2	2235.5	2213.7	2179.8	2119.5	2145.3	2183.8	2187.1	2247.5	2360.9
32.5°	2258.1	2236.2	2167.9	2136.1	2093.6	2023.3	2037.2	2076.4	2081.7	2142.7	2259.4
35°	2196.4	2181.8	2097.6	2043.2	2001.4	1924.5	1939.1	1966.3	1974.2	2033.9	2152.6
37.5°	2138.0	2114.8	2025.3	1959.0	1905.3	1824.4	1828.4	1856.2	1864.2	1924.5	2041.9
40°	2077.7	2044.5	1948.4	1870.8	1809.1	1724.2	1719.6	1748.8	1754.7	1813.8	1919.9
42.5°	2013.4	1973.6	1865.5	1780.6	1709.6	1623.4	1614.1	1639.3	1646.0	1703.7	1807.8
45°	1948.4	1900.6	1780.6	1687.8	1610.2	1522.0	1512.7	1531.9	1541.9	1596.2	1696.4
47.5°	1879.4	1823.7	1693.1	1589.6	1509.4	1421.2	1409.9	1429.1	1437.1	1490.8	1585.6
50°	1807.1	1739.5	1602.9	1488.8	1409.2	1322.4	1305.8	1328.3	1335.6	1386.0	1478.9
52.5°	1727.5	1652.6	1506.7	1387.3	1307.8	1224.9	1205.0	1226.9	1235.5	1284.6	1370.1
55°	1643.3	1562.4	1409.9	1293.8	1207.6	1126.7	1110.1	1118.8	1137.3	1183.8	1263.3
57.5°	1548.5	1468.3	1307.8	1189.7	1106.8	1029.2	1015.3	1023.3	1040.5	1085.6	1157.2
60°	1447.7	1362.8	1203.6	1085.6	1005.4	931.7	919.1	926.4	945.0	986.1	1052.4
62.5°	1348.2	1252.7	1096.2	978.8	905.9	837.6	834.3	831.6	848.9	888.6	947.0
65°	1227.5	1136.0	984.1	872.7	806.4	744.7	731.5	737.4	754.0	790.5	851.5
67.5°	1098.2	1015.3	869.4	766.6	707.6	652.6	641.3	643.9	661.2	693.0	746.1
70°	960.9	888.0	752.0	659.9	610.1	558.4	551.1	551.8	568.3	596.2	642.6
72.5°	817.0	751.4	633.3	554.4	513.3	476.2	469.5	461.6	476.8	500.7	540.5
75°	670.5	612.8	515.3	451.0	418.5	387.3	381.3	373.4	388.6	409.2	440.3
77.5°	522.6	476.2	400.6	350.8	325.6	302.4	297.1	288.5	303.7	319.0	343.5
80°	378.0	344.2	299.1	246.7	238.1	222.8	217.5	208.2	222.8	232.8	251.3
82.5°	244.0	221.5	195.6	159.2	157.8	146.6	143.9	133.3	146.6	152.5	166.5
85°	123.3	112.7	106.1	80.9	83.6	76.3	75.6	64.3	74.9	77.6	85.5
87.5°	35.1	37.1	33.2	19.9	25.2	23.9	23.9	17.2	23.9	23.9	27.2
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: P838240

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-2HI-50-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0	2843.0
2.5°	2845.6	2856.9	2859.6	2858.9	2866.2	2906.0	2892.7	2906.0
5°	2852.3	2877.5	2884.1	2893.4	2905.3	2950.4	2935.8	2951.8
7.5°	2856.3	2894.1	2908.6	2926.6	2945.8	2996.2	2984.3	3000.2
10°	2856.3	2905.3	2926.6	2956.4	2982.3	3040.6	3029.3	3047.9
12.5°	2844.3	2907.3	2937.2	2978.9	3012.1	3075.1	3070.5	3083.7
15°	2819.8	2897.4	2938.5	2992.2	3033.3	3103.6	3101.6	3117.5
17.5°	2786.6	2880.1	2929.9	2997.5	3049.2	3128.2	3132.8	3141.4
20°	2744.8	2847.6	2912.6	2995.5	3060.5	3147.4	3153.4	3165.3
22.5°	2689.8	2808.5	2886.8	2986.9	3061.8	3155.3	3166.0	3177.2
25°	2624.8	2761.4	2852.9	2970.3	3055.2	3154.7	3169.3	3179.2
27.5°	2550.5	2700.4	2809.8	2943.8	3036.6	3144.1	3162.0	3173.9
30°	2464.3	2635.4	2760.8	2909.3	3011.4	3124.2	3143.4	3155.3
32.5°	2375.5	2563.8	2702.4	2864.9	2975.0	3092.3	3108.9	3118.2
35°	2278.6	2476.9	2632.1	2807.8	2927.9	3041.3	3053.9	3063.8
37.5°	2173.2	2382.8	2551.9	2743.5	2861.6	2970.3	2981.6	2992.9
40°	2064.4	2283.9	2461.7	2664.6	2782.6	2883.4	2895.4	2903.3
42.5°	1955.0	2174.5	2365.5	2571.8	2689.1	2786.0	2793.3	2801.2
45°	1844.3	2061.1	2257.4	2469.0	2585.0	2675.9	2678.5	2685.2
47.5°	1731.5	1943.7	2138.7	2351.6	2466.3	2549.2	2551.9	2557.2
50°	1618.1	1826.4	2012.0	2224.9	2337.0	2424.5	2412.6	2417.9
52.5°	1506.7	1703.0	1892.7	2088.3	2199.1	2276.7	2280.0	2269.4
55°	1397.3	1582.3	1756.7	1945.1	2050.5	2110.9	2108.9	2112.8
57.5°	1286.5	1460.3	1620.1	1792.5	1895.3	1952.4	1964.3	1950.4
60°	1173.8	1336.9	1480.2	1636.0	1735.5	1783.3	1797.2	1783.9
62.5°	1061.7	1211.6	1341.6	1477.5	1569.7	1628.7	1627.4	1612.8
65°	949.7	1085.6	1201.7	1317.0	1397.3	1456.3	1453.7	1440.4
67.5°	846.2	958.3	1062.4	1155.9	1225.5	1266.0	1279.9	1264.0
70°	732.1	829.0	920.5	995.4	1053.1	1089.6	1102.8	1088.9
72.5°	618.1	700.3	764.6	836.9	881.3	911.9	925.8	912.5
75°	505.3	573.0	625.4	681.7	712.9	738.8	754.7	741.4
77.5°	395.9	448.3	490.1	531.2	567.0	573.0	586.9	578.3
80°	291.8	329.6	360.1	387.3	413.2	415.8	427.1	421.8
82.5°	194.3	219.5	227.5	256.0	272.6	269.9	281.2	277.2
85°	102.8	118.0	132.0	140.6	149.9	141.3	151.2	147.2
87.5°	34.5	36.5	31.8	45.1	49.7	42.4	48.4	46.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)