

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: P838132

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-2HI-50-120-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: P838132
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
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

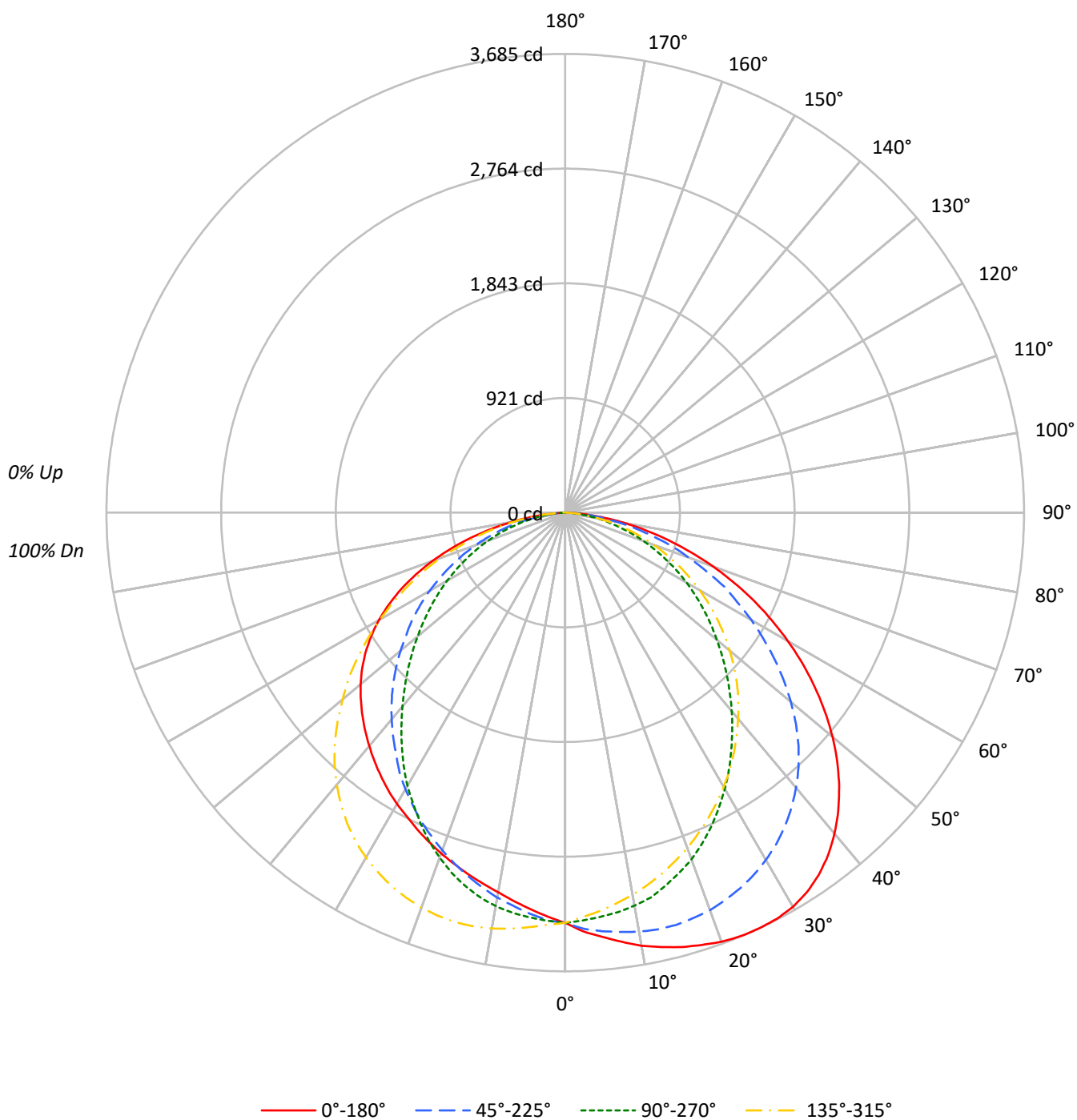
Lumens per Lamp: N/A
Luminaire Lumens: 9667.9 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P838132

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

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838132

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

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°	4434	4434	4434	4434
5°	4621	4402	4319	4409
10°	4827	4379	4231	4386
15°	5033	4324	4190	4325
20°	5253	4245	4171	4221
25°	5471	4126	4171	4084
30°	5682	3983	4199	3939
35°	5833	3819	4241	3759
40°	5911	3655	4300	3572
45°	5922	3488	4384	3401
50°	5866	3329	4491	3240
55°	5745	3181	4591	3092
60°	5564	3026	4652	2948
65°	5316	2848	4628	2783
70°	4965	2640	4463	2592
75°	4468	2353	4096	2341
80°	3788	1971	3443	2001
85°	2634	1306	2183	1342

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838132

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	312.9	3.2
10°-20°	906.0	9.4
20°-30°	1388.5	14.4
30°-40°	1688.3	17.5
40°-50°	1755.1	18.2
50°-60°	1585.3	16.4
60°-70°	1205.3	12.5
70°-80°	671.9	7.0
80°-90°	154.7	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°	2607.3	27.0
0°-40°	4295.6	44.4
0°-60°	7636.0	79.0
0°-90°	9667.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9667.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3295	3295	3295	3295	3295	
5°	3421	3259	3198	3264	3421	330
15°	3614	3104	3008	3105	3614	1025
25°	3685	2780	2810	2751	3685	1702
35°	3551	2325	2582	2288	3551	2218
45°	3112	1833	2304	1787	3112	2396
55°	2449	1356	1957	1318	2449	2186
65°	1670	895	1454	874	1670	1650
75°	859	453	788	450	859	913
85°	171	85	141	87	171	215
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838132

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3
2.5°	3368.3	3319.1	3319.9	3362.9	3329.9	3346.0	3299.9	3317.6	3312.2	3316.0	3278.4
5°	3421.4	3368.3	3367.5	3404.4	3367.5	3374.5	3316.0	3327.6	3310.7	3299.9	3259.2
7.5°	3477.5	3424.4	3419.0	3451.3	3402.9	3397.5	3333.0	3333.0	3302.2	3275.3	3236.9
10°	3532.8	3478.2	3471.3	3495.9	3436.0	3418.3	3339.9	3327.6	3286.8	3246.9	3205.4
12.5°	3574.3	3519.0	3513.6	3529.0	3461.3	3429.0	3339.9	3316.0	3256.1	3200.0	3167.7
15°	3613.5	3556.6	3542.0	3549.7	3472.1	3429.0	3329.1	3292.2	3215.3	3141.6	3103.9
17.5°	3641.2	3586.6	3572.0	3571.2	3477.5	3416.0	3306.1	3255.3	3163.1	3073.9	3036.2
20°	3668.9	3614.3	3595.8	3582.0	3475.9	3398.3	3272.2	3203.8	3096.2	2996.3	2964.8
22.5°	3682.7	3626.6	3606.6	3585.8	3465.9	3366.0	3230.7	3143.9	3020.9	2901.7	2875.6
25°	3685.0	3627.4	3605.8	3575.9	3446.0	3327.6	3176.9	3071.6	2934.0	2801.8	2779.5
27.5°	3678.9	3615.8	3594.3	3558.2	3416.0	3280.7	3113.1	2989.4	2841.8	2695.7	2671.9
30°	3657.3	3593.5	3572.8	3525.9	3373.7	3223.0	3043.2	2897.9	2739.5	2584.3	2563.5
32.5°	3614.3	3552.0	3535.1	3488.2	3327.6	3156.2	2961.7	2799.5	2626.5	2478.2	2447.4
35°	3551.3	3489.0	3478.2	3429.0	3263.0	3076.2	2872.5	2691.9	2506.6	2355.2	2325.2
37.5°	3469.0	3416.7	3400.6	3352.2	3186.9	2985.5	2770.3	2575.0	2384.4	2221.5	2203.0
40°	3365.2	3316.0	3303.7	3260.7	3098.5	2884.8	2659.6	2454.4	2258.4	2106.9	2080.8
42.5°	3246.9	3200.7	3193.8	3149.2	2989.4	2773.4	2539.7	2329.1	2126.9	1980.9	1954.7
45°	3112.3	3067.8	3066.2	3024.0	2870.2	2649.6	2413.6	2202.2	1998.5	1847.1	1833.3
47.5°	2964.0	2924.0	2924.0	2884.8	2737.2	2513.6	2283.7	2070.0	1869.4	1735.7	1711.1
50°	2802.6	2764.9	2753.4	2734.2	2590.4	2365.2	2146.9	1940.9	1741.8	1614.2	1590.4
52.5°	2630.4	2598.1	2605.8	2570.4	2431.3	2210.7	2008.5	1795.6	1613.4	1497.4	1473.5
55°	2449.0	2402.9	2409.8	2396.7	2265.3	2051.6	1853.3	1675.7	1487.4	1378.2	1355.9
57.5°	2260.7	2200.7	2225.3	2217.6	2088.5	1888.6	1711.1	1539.6	1362.1	1261.4	1239.9
60°	2067.7	2010.1	2035.4	2028.5	1907.1	1725.7	1564.2	1405.1	1237.6	1146.1	1124.6
62.5°	1869.4	1816.4	1839.4	1834.0	1722.6	1558.9	1418.2	1272.1	1112.3	1030.0	1010.0
65°	1669.6	1618.8	1639.6	1635.7	1532.7	1408.2	1268.3	1134.6	986.2	914.7	894.7
67.5°	1465.1	1418.2	1437.4	1437.4	1342.9	1223.7	1117.6	995.4	862.4	801.0	782.5
70°	1262.2	1218.3	1235.3	1233.7	1153.8	1056.9	965.5	856.3	737.2	686.4	671.0
72.5°	1057.7	1019.3	1034.6	1033.1	966.2	904.0	813.3	718.7	614.9	574.2	560.4
75°	859.4	823.2	837.9	836.3	781.7	723.3	662.6	584.2	495.0	466.6	452.7
77.5°	670.3	633.4	645.7	645.7	605.7	563.4	515.0	454.3	391.3	360.5	350.5
80°	488.9	471.2	465.0	465.8	438.9	411.2	386.6	328.2	282.1	261.3	254.4
82.5°	321.3	306.7	300.6	302.1	286.7	269.8	254.4	213.7	182.9	170.6	166.8
85°	170.6	159.9	154.5	158.3	155.3	146.0	138.4	110.7	91.5	86.9	84.6
87.5°	53.8	46.9	43.0	56.9	48.4	43.0	41.5	33.1	25.4	25.4	24.6
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: P838132

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

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3
2.5°	3290.7	3290.7	3260.7	3253.8	3250.7	3254.6	3224.6	3219.2	3262.2	3247.6	3214.6
5°	3264.5	3263.0	3220.7	3213.0	3213.0	3208.4	3174.6	3166.9	3210.0	3197.7	3161.5
7.5°	3232.3	3227.6	3177.7	3172.3	3164.6	3161.5	3123.9	3118.5	3155.4	3147.7	3113.9
10°	3193.1	3188.4	3129.3	3125.4	3117.0	3110.8	3075.5	3071.6	3109.3	3097.0	3070.1
12.5°	3141.6	3133.1	3072.4	3068.5	3061.6	3059.3	3024.7	3023.2	3064.7	3052.4	3024.0
15°	3073.9	3067.0	2999.4	3000.9	3001.7	3001.7	2974.0	2972.4	3013.2	3007.8	2977.1
17.5°	2999.4	2990.1	2925.6	2930.2	2935.6	2941.7	2920.2	2924.0	2967.1	2960.2	2932.5
20°	2914.8	2905.6	2842.5	2855.6	2867.1	2879.4	2865.6	2876.4	2916.3	2913.3	2892.5
22.5°	2820.3	2811.0	2752.6	2772.6	2791.8	2814.9	2808.7	2821.0	2863.3	2862.5	2844.1
25°	2705.0	2707.3	2655.8	2680.4	2712.6	2744.9	2747.2	2767.2	2814.1	2809.5	2792.6
27.5°	2597.3	2600.4	2545.8	2587.3	2630.4	2671.9	2681.9	2709.6	2757.2	2753.4	2738.8
30°	2484.3	2488.2	2435.1	2492.0	2544.3	2595.0	2616.6	2654.2	2702.6	2702.6	2687.3
32.5°	2366.7	2373.7	2318.3	2394.4	2455.1	2514.3	2552.0	2591.2	2646.5	2645.0	2631.9
35°	2246.1	2253.7	2203.0	2299.9	2360.6	2432.8	2479.7	2532.0	2581.2	2582.0	2572.0
37.5°	2123.1	2132.3	2086.2	2192.2	2261.4	2346.8	2406.7	2459.0	2513.6	2516.6	2507.4
40°	2000.8	2010.8	1970.9	2073.1	2160.7	2256.0	2325.2	2386.7	2446.7	2448.2	2442.1
42.5°	1878.6	1889.4	1859.4	1959.3	2058.5	2160.7	2242.2	2312.2	2373.7	2377.5	2370.6
45°	1759.5	1768.7	1747.2	1856.3	1951.7	2063.1	2156.9	2236.1	2298.3	2303.7	2301.4
47.5°	1641.1	1649.6	1630.4	1730.3	1840.2	1958.6	2067.0	2154.6	2220.7	2226.8	2225.3
50°	1525.0	1532.0	1511.2	1615.7	1724.9	1851.0	1964.0	2065.4	2139.2	2145.4	2144.6
52.5°	1409.7	1416.7	1399.0	1508.9	1608.1	1741.0	1864.0	1973.9	2047.0	2056.2	2057.7
55°	1298.3	1301.4	1287.5	1392.8	1488.9	1628.0	1769.5	1876.3	1949.3	1957.0	1961.6
57.5°	1186.8	1187.6	1176.1	1276.8	1369.0	1511.2	1659.6	1771.8	1841.0	1848.7	1855.6
60°	1076.1	1075.4	1062.3	1159.9	1248.3	1389.0	1543.5	1654.9	1721.8	1728.7	1738.0
62.5°	966.2	963.9	952.4	1042.3	1125.3	1264.5	1419.7	1527.3	1591.1	1595.8	1608.1
65°	857.1	854.8	844.0	927.0	1002.3	1135.3	1287.5	1389.8	1447.4	1453.6	1451.3
67.5°	749.5	744.8	736.4	810.9	879.4	1002.3	1148.4	1246.0	1293.7	1299.1	1313.7
70°	641.8	636.5	617.2	696.4	756.4	866.3	1002.3	1089.2	1129.2	1134.6	1132.3
72.5°	535.8	530.4	509.6	582.7	633.4	729.5	850.9	923.2	957.8	962.4	962.4
75°	432.8	429.7	416.6	472.0	514.2	592.6	695.6	755.6	782.5	787.9	786.4
77.5°	333.6	331.3	318.2	365.9	398.9	457.4	540.4	587.3	607.2	613.4	626.5
80°	239.1	238.3	217.5	264.4	279.0	328.2	388.9	425.1	435.8	444.3	453.5
82.5°	153.0	153.7	133.0	173.0	179.1	210.6	248.3	270.6	278.3	285.2	292.1
85°	74.6	77.6	66.1	91.5	92.2	108.4	124.5	133.0	136.1	141.4	147.6
87.5°	19.2	22.3	12.3	26.1	23.1	30.0	34.6	36.9	36.1	40.0	42.3
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: P838132

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

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3
2.5°	3225.3	3249.9	3237.6	3277.6	3293.0	3268.4	3311.4	3312.2	3281.5	3317.6	3337.6
5°	3175.4	3200.7	3193.1	3234.6	3253.8	3232.3	3284.5	3294.5	3264.5	3305.3	3337.6
7.5°	3124.6	3154.6	3144.6	3186.9	3210.0	3193.1	3249.2	3265.3	3242.3	3286.8	3329.9
10°	3080.8	3106.2	3095.4	3140.0	3160.0	3146.2	3201.5	3231.5	3210.0	3264.5	3316.0
12.5°	3037.8	3058.5	3046.2	3083.1	3102.4	3084.7	3152.3	3180.0	3164.6	3221.5	3287.6
15°	2982.4	3005.5	2988.6	3021.6	3036.2	3020.9	3076.2	3123.9	3104.7	3166.9	3239.9
17.5°	2940.2	2953.2	2930.2	2956.3	2964.8	2944.0	3000.1	3047.0	3033.2	3100.8	3185.4
20°	2893.3	2904.0	2871.8	2886.4	2885.6	2859.5	2911.0	2957.1	2947.9	3022.4	3118.5
22.5°	2841.0	2846.4	2808.7	2811.8	2810.3	2767.2	2813.3	2860.2	2856.4	2931.7	3039.3
25°	2785.7	2786.4	2738.0	2736.5	2719.6	2668.8	2709.6	2762.6	2751.1	2832.6	2945.5
27.5°	2731.1	2723.4	2665.0	2651.1	2624.2	2563.5	2599.6	2647.3	2640.4	2720.3	2845.6
30°	2672.7	2662.7	2591.2	2565.8	2526.6	2456.7	2486.6	2531.2	2535.1	2605.0	2736.5
32.5°	2617.3	2592.0	2512.8	2475.9	2426.7	2345.2	2361.4	2406.7	2412.9	2483.6	2618.9
35°	2545.8	2528.9	2431.3	2368.3	2319.8	2230.7	2247.6	2279.1	2288.3	2357.5	2495.1
37.5°	2478.2	2451.3	2347.5	2270.7	2208.4	2114.6	2119.2	2151.5	2160.7	2230.7	2366.7
40°	2408.2	2369.8	2258.4	2168.4	2096.9	1998.5	1993.2	2027.0	2033.9	2102.3	2225.3
42.5°	2333.7	2287.6	2162.3	2063.9	1981.6	1881.7	1870.9	1900.2	1907.8	1974.7	2095.4
45°	2258.4	2203.0	2063.9	1956.3	1866.3	1764.1	1753.3	1775.6	1787.2	1850.2	1966.3
47.5°	2178.4	2113.8	1962.4	1842.5	1749.5	1647.3	1634.2	1656.5	1665.7	1728.0	1837.9
50°	2094.6	2016.2	1857.9	1725.7	1633.4	1532.7	1513.5	1539.6	1548.1	1606.5	1714.1
52.5°	2002.4	1915.5	1746.4	1608.1	1515.8	1419.7	1396.7	1422.0	1432.0	1488.9	1588.1
55°	1904.8	1811.0	1634.2	1499.7	1399.7	1306.0	1286.8	1296.7	1318.3	1372.1	1464.3
57.5°	1794.8	1701.8	1515.8	1379.0	1282.9	1193.0	1176.8	1186.1	1206.0	1258.3	1341.3
60°	1678.0	1579.6	1395.1	1258.3	1165.3	1080.0	1065.4	1073.8	1095.4	1143.0	1219.9
62.5°	1562.7	1452.0	1270.6	1134.6	1050.0	970.8	967.0	963.9	983.9	1030.0	1097.7
65°	1422.8	1316.7	1140.7	1011.6	934.7	863.2	847.8	854.8	874.0	916.3	987.0
67.5°	1272.9	1176.8	1007.7	888.6	820.2	756.4	743.3	746.4	766.4	803.3	864.8
70°	1113.8	1029.3	871.7	764.8	707.2	647.2	638.8	639.5	658.8	691.0	744.8
72.5°	947.0	870.9	734.1	642.6	595.0	551.9	544.2	535.0	552.7	580.3	626.5
75°	777.1	710.3	597.3	522.7	485.0	448.9	442.0	432.8	450.4	474.3	510.4
77.5°	605.7	551.9	464.3	406.6	377.4	350.5	344.4	334.4	352.1	369.7	398.2
80°	438.1	398.9	346.7	285.9	276.0	258.3	252.1	241.4	258.3	269.8	291.3
82.5°	282.9	256.7	226.8	184.5	182.9	169.9	166.8	154.5	169.9	176.8	192.9
85°	143.0	130.7	123.0	93.8	96.9	88.4	87.6	74.6	86.9	89.9	99.2
87.5°	40.7	43.0	38.4	23.1	29.2	27.7	27.7	20.0	27.7	27.7	31.5
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: P838132

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

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3	3295.3
2.5°	3298.4	3311.4	3314.5	3313.7	3322.2	3368.3	3352.9	3368.3
5°	3306.1	3335.3	3342.9	3353.7	3367.5	3419.8	3402.9	3421.4
7.5°	3310.7	3354.5	3371.4	3392.1	3414.4	3472.9	3459.0	3477.5
10°	3310.7	3367.5	3392.1	3426.7	3456.7	3524.4	3511.3	3532.8
12.5°	3296.8	3369.9	3404.4	3452.9	3491.3	3564.3	3558.9	3574.3
15°	3268.4	3358.3	3406.0	3468.2	3515.9	3597.4	3595.1	3613.5
17.5°	3230.0	3338.3	3396.0	3474.4	3534.3	3625.8	3631.2	3641.2
20°	3181.5	3300.7	3376.0	3472.1	3547.4	3648.1	3655.0	3668.9
22.5°	3117.7	3255.3	3346.0	3462.1	3549.0	3657.3	3669.6	3682.7
25°	3042.4	3200.7	3306.8	3442.9	3541.3	3656.6	3673.5	3685.0
27.5°	2956.3	3130.0	3256.9	3412.1	3519.7	3644.3	3665.0	3678.9
30°	2856.4	3054.7	3200.0	3372.2	3490.5	3621.2	3643.5	3657.3
32.5°	2753.4	2971.7	3132.3	3320.7	3448.3	3584.3	3603.5	3614.3
35°	2641.2	2871.0	3050.9	3254.6	3393.7	3525.1	3539.7	3551.3
37.5°	2518.9	2761.8	2957.8	3180.0	3316.8	3442.9	3455.9	3469.0
40°	2392.9	2647.3	2853.3	3088.5	3225.3	3342.2	3356.0	3365.2
42.5°	2266.0	2520.5	2741.8	2980.9	3117.0	3229.2	3237.6	3246.9
45°	2137.7	2389.0	2616.6	2861.8	2996.3	3101.6	3104.7	3112.3
47.5°	2007.0	2253.0	2479.0	2725.7	2858.7	2954.8	2957.8	2964.0
50°	1875.6	2116.9	2332.1	2578.9	2708.8	2810.3	2796.4	2802.6
52.5°	1746.4	1973.9	2193.8	2420.5	2548.9	2638.8	2642.7	2630.4
55°	1619.6	1834.0	2036.2	2254.5	2376.7	2446.7	2444.4	2449.0
57.5°	1491.2	1692.6	1877.9	2077.7	2196.9	2263.0	2276.8	2260.7
60°	1360.5	1549.6	1715.7	1896.3	2011.6	2067.0	2083.1	2067.7
62.5°	1230.6	1404.4	1555.0	1712.6	1819.4	1887.9	1886.3	1869.4
65°	1100.7	1258.3	1392.8	1526.6	1619.6	1688.0	1684.9	1669.6
67.5°	980.8	1110.7	1231.4	1339.8	1420.5	1467.4	1483.5	1465.1
70°	848.6	960.8	1066.9	1153.8	1220.6	1262.9	1278.3	1262.2
72.5°	716.4	811.7	886.3	970.1	1021.6	1056.9	1073.1	1057.7
75°	585.7	664.1	724.9	790.2	826.3	856.3	874.7	859.4
77.5°	458.9	519.6	568.0	615.7	657.2	664.1	680.3	670.3
80°	338.2	382.0	417.4	448.9	478.9	482.0	495.0	488.9
82.5°	225.2	254.4	263.7	296.7	315.9	312.8	325.9	321.3
85°	119.1	136.8	153.0	163.0	173.7	163.7	175.3	170.6
87.5°	40.0	42.3	36.9	52.3	57.7	49.2	56.1	53.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)