

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: P837801

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-3STD-35-120-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: P837801
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-LD4-3STD-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

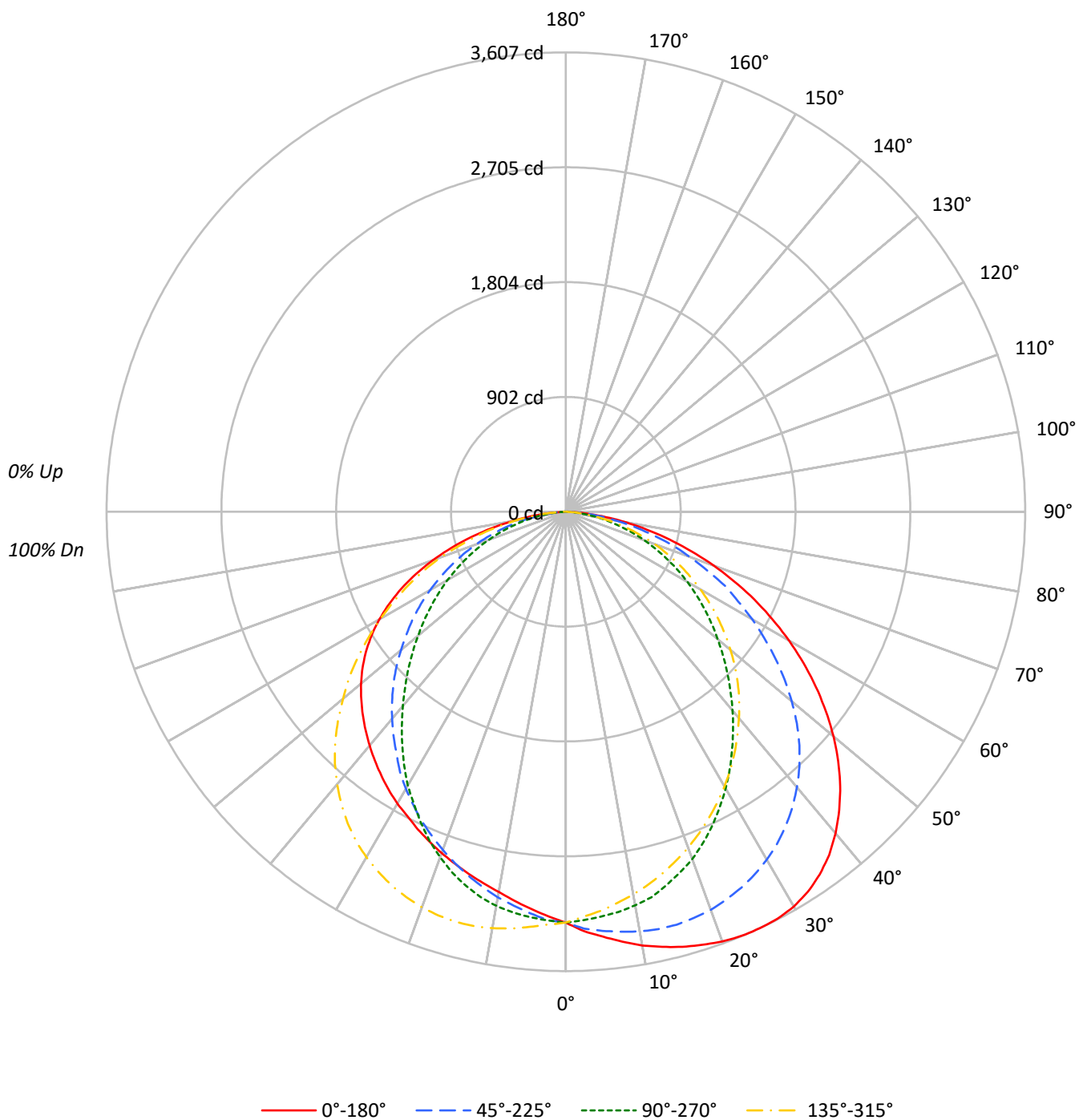
Lumens per Lamp: N/A
Luminaire Lumens: 9464.1 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	8681	8681	8681	8681
5°	9047	8618	8455	8632
10°	9450	8574	8284	8586
15°	9855	8465	8203	8467
20°	10285	8311	8167	8264
25°	10711	8079	8166	7996
30°	11125	7798	8221	7711
35°	11420	7477	8303	7359
40°	11572	7155	8419	6994
45°	11595	6830	8582	6658
50°	11485	6517	8792	6345
55°	11247	6227	8988	6054
60°	10894	5925	9108	5771
65°	10406	5577	9060	5447
70°	9721	5168	8738	5074
75°	8747	4608	8019	4584
80°	7417	3860	6740	3918
85°	5156	2556	4276	2624

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.3	3.2
10°-20°	886.9	9.4
20°-30°	1359.2	14.4
30°-40°	1652.7	17.5
40°-50°	1718.1	18.2
50°-60°	1551.9	16.4
60°-70°	1179.9	12.5
70°-80°	657.8	7.0
80°-90°	151.4	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°	2552.3	27.0
0°-40°	4205.0	44.4
0°-60°	7475.0	79.0
0°-90°	9464.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9464.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3226	3226	3226	3226	3226	
5°	3349	3190	3130	3196	3349	323
15°	3537	3038	2944	3039	3537	1003
25°	3607	2721	2750	2693	3607	1666
35°	3476	2276	2528	2240	3476	2171
45°	3047	1795	2255	1750	3047	2346
55°	2397	1327	1916	1290	2397	2140
65°	1634	876	1423	856	1634	1615
75°	841	443	771	441	841	894
85°	167	83	138	85	167	210
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°	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8
2.5°	3297.3	3249.1	3249.9	3292.0	3259.7	3275.5	3230.3	3247.6	3242.4	3246.1	3209.3
5°	3349.2	3297.3	3296.5	3332.7	3296.5	3303.3	3246.1	3257.4	3240.9	3230.3	3190.4
7.5°	3404.1	3352.2	3347.0	3378.6	3331.2	3325.9	3262.7	3262.7	3232.6	3206.2	3168.6
10°	3458.3	3404.9	3398.1	3422.2	3363.5	3346.2	3269.4	3257.4	3217.5	3178.4	3137.8
12.5°	3499.0	3444.8	3439.5	3454.6	3388.3	3356.7	3269.4	3246.1	3187.4	3132.5	3100.9
15°	3537.3	3481.6	3467.3	3474.9	3398.9	3356.7	3258.9	3222.8	3147.6	3075.3	3038.4
17.5°	3564.4	3511.0	3496.7	3495.9	3404.1	3343.9	3236.3	3186.7	3096.4	3009.1	2972.2
20°	3591.5	3538.1	3520.0	3506.5	3402.6	3326.6	3203.2	3136.3	3030.9	2933.1	2902.2
22.5°	3605.0	3550.1	3530.6	3510.2	3392.9	3295.0	3162.6	3077.6	2957.2	2840.5	2815.0
25°	3607.3	3550.9	3529.8	3500.5	3373.3	3257.4	3109.9	3006.8	2872.1	2742.7	2720.9
27.5°	3601.3	3539.6	3518.5	3483.1	3343.9	3211.5	3047.5	2926.3	2781.9	2638.9	2615.6
30°	3580.2	3517.8	3497.4	3451.5	3302.6	3155.1	2979.0	2836.8	2681.8	2529.8	2509.5
32.5°	3538.1	3477.1	3460.6	3414.7	3257.4	3089.6	2899.2	2740.5	2571.2	2425.9	2395.8
35°	3476.4	3415.4	3404.9	3356.7	3194.2	3011.4	2812.0	2635.1	2453.8	2305.5	2276.2
37.5°	3395.9	3344.7	3328.9	3281.5	3119.7	2922.6	2711.9	2520.7	2334.1	2174.6	2156.6
40°	3294.3	3246.1	3234.1	3191.9	3033.2	2824.0	2603.5	2402.6	2210.7	2062.5	2036.9
42.5°	3178.4	3133.3	3126.5	3082.8	2926.3	2714.9	2486.1	2280.0	2082.1	1939.1	1913.5
45°	3046.7	3003.1	3001.6	2960.2	2809.7	2593.7	2362.7	2155.8	1956.4	1808.2	1794.6
47.5°	2901.5	2862.4	2862.4	2824.0	2679.5	2460.6	2235.6	2026.4	1830.0	1699.1	1675.0
50°	2743.5	2706.6	2695.3	2676.5	2535.8	2315.3	2101.6	1900.0	1705.1	1580.2	1556.8
52.5°	2574.9	2543.3	2550.8	2516.2	2380.0	2164.1	1966.2	1757.8	1579.4	1465.8	1442.5
55°	2397.3	2352.2	2359.0	2346.2	2217.5	2008.3	1814.2	1640.4	1456.0	1349.2	1327.3
57.5°	2213.0	2154.3	2178.4	2170.9	2044.4	1848.8	1675.0	1507.2	1333.4	1234.8	1213.7
60°	2024.1	1967.7	1992.5	1985.7	1866.9	1689.3	1531.3	1375.5	1211.5	1121.9	1100.9
62.5°	1830.0	1778.1	1800.6	1795.4	1686.3	1526.0	1388.3	1245.3	1088.8	1008.3	988.7
65°	1634.3	1584.7	1605.0	1601.2	1500.4	1378.5	1241.6	1110.6	965.4	895.4	875.9
67.5°	1434.2	1388.3	1407.1	1407.1	1314.6	1197.9	1094.1	974.4	844.3	784.1	766.0
70°	1235.5	1192.7	1209.2	1207.7	1129.4	1034.6	945.1	838.2	721.6	671.9	656.9
72.5°	1035.4	997.8	1012.8	1011.3	945.8	884.9	796.1	703.6	602.0	562.1	548.5
75°	841.3	805.9	820.2	818.7	765.3	708.1	648.6	571.9	484.6	456.7	443.2
77.5°	656.1	620.0	632.1	632.1	592.9	551.6	504.1	444.7	383.0	352.9	343.1
80°	478.6	461.3	455.2	456.0	429.7	402.6	378.5	321.3	276.2	255.8	249.1
82.5°	314.5	300.2	294.2	295.7	280.7	264.1	249.1	209.2	179.1	167.0	163.3
85°	167.0	156.5	151.2	155.0	152.0	143.0	135.4	108.4	89.5	85.0	82.8
87.5°	52.7	45.9	42.1	55.7	47.4	42.1	40.6	32.4	24.8	24.8	24.1
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°	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8
2.5°	3221.3	3221.3	3191.9	3185.2	3182.2	3185.9	3156.6	3151.3	3193.5	3179.2	3146.8
5°	3195.7	3194.2	3152.8	3145.3	3145.3	3140.8	3107.7	3100.1	3142.3	3130.2	3094.9
7.5°	3164.1	3159.6	3110.7	3105.4	3097.9	3094.9	3058.0	3052.7	3088.9	3081.3	3048.2
10°	3125.7	3121.2	3063.3	3059.5	3051.2	3045.2	3010.6	3006.8	3043.7	3031.7	3005.3
12.5°	3075.3	3067.0	3007.6	3003.8	2997.1	2994.8	2960.9	2959.4	3000.1	2988.0	2960.2
15°	3009.1	3002.3	2936.1	2937.6	2938.4	2938.4	2911.3	2909.8	2949.7	2944.4	2914.3
17.5°	2936.1	2927.1	2863.9	2868.4	2873.7	2879.7	2858.6	2862.4	2904.5	2897.7	2870.6
20°	2853.3	2844.3	2782.6	2795.4	2806.7	2818.7	2805.2	2815.7	2854.8	2851.8	2831.5
22.5°	2760.8	2751.8	2694.6	2714.1	2732.9	2755.5	2749.5	2761.5	2802.9	2802.2	2784.1
25°	2647.9	2650.2	2599.8	2623.8	2655.4	2687.0	2689.3	2708.9	2754.8	2750.3	2733.7
27.5°	2542.6	2545.6	2492.2	2532.8	2574.9	2615.6	2625.3	2652.4	2699.1	2695.3	2681.0
30°	2432.0	2435.7	2383.8	2439.5	2490.7	2540.3	2561.4	2598.3	2645.7	2645.7	2630.6
32.5°	2316.8	2323.6	2269.4	2343.9	2403.4	2461.3	2498.2	2536.6	2590.7	2589.2	2576.4
35°	2198.7	2206.2	2156.6	2251.4	2310.8	2381.5	2427.4	2478.6	2526.8	2527.5	2517.7
37.5°	2078.3	2087.3	2042.2	2146.0	2213.7	2297.3	2356.0	2407.1	2460.6	2463.6	2454.5
40°	1958.7	1968.4	1929.3	2029.4	2115.2	2208.5	2276.2	2336.4	2395.1	2396.6	2390.6
42.5°	1839.0	1849.6	1820.2	1918.0	2015.1	2115.2	2194.9	2263.4	2323.6	2327.4	2320.6
45°	1722.4	1731.4	1710.3	1817.2	1910.5	2019.6	2111.4	2188.9	2249.9	2255.1	2252.9
47.5°	1606.5	1614.8	1596.0	1693.8	1801.4	1917.3	2023.4	2109.2	2173.9	2179.9	2178.4
50°	1492.9	1499.7	1479.3	1581.7	1688.5	1811.9	1922.5	2021.9	2094.1	2100.1	2099.4
52.5°	1380.0	1386.8	1369.5	1477.1	1574.2	1704.3	1824.7	1932.3	2003.8	2012.8	2014.3
55°	1270.9	1273.9	1260.4	1363.5	1457.5	1593.7	1732.2	1836.8	1908.2	1915.8	1920.3
57.5°	1161.8	1162.6	1151.3	1249.8	1340.1	1479.3	1624.6	1734.4	1802.1	1809.7	1816.4
60°	1053.4	1052.7	1039.9	1135.5	1222.0	1359.7	1510.9	1620.1	1685.5	1692.3	1701.3
62.5°	945.8	943.6	932.3	1020.3	1101.6	1237.8	1389.8	1495.1	1557.6	1562.1	1574.2
65°	839.0	836.7	826.2	907.5	981.2	1111.4	1260.4	1360.5	1416.9	1422.9	1420.6
67.5°	733.7	729.1	720.9	793.8	860.8	981.2	1124.2	1219.7	1266.4	1271.7	1286.0
70°	628.3	623.0	604.2	681.7	740.4	848.0	981.2	1066.2	1105.4	1110.6	1108.4
72.5°	524.5	519.2	498.9	570.4	620.0	714.1	833.0	903.7	937.6	942.1	942.1
75°	423.6	420.6	407.8	462.0	503.4	580.1	681.0	739.7	766.0	771.3	769.8
77.5°	326.6	324.3	311.5	358.2	390.5	447.7	529.0	574.9	594.4	600.5	613.3
80°	234.0	233.3	212.9	258.8	273.1	321.3	380.7	416.1	426.6	434.9	444.0
82.5°	149.7	150.5	130.2	169.3	175.3	206.2	243.0	264.9	272.4	279.2	285.9
85°	73.0	76.0	64.7	89.5	90.3	106.1	121.9	130.2	133.2	138.5	144.5
87.5°	18.8	21.8	12.0	25.6	22.6	29.3	33.9	36.1	35.4	39.1	41.4
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8
2.5°	3157.3	3181.4	3169.4	3208.5	3223.5	3199.5	3241.6	3242.4	3212.3	3247.6	3267.2
5°	3108.4	3133.3	3125.7	3166.4	3185.2	3164.1	3215.3	3225.1	3195.7	3235.6	3267.2
7.5°	3058.8	3088.1	3078.3	3119.7	3142.3	3125.7	3180.7	3196.5	3173.9	3217.5	3259.7
10°	3015.9	3040.7	3030.2	3073.8	3093.4	3079.8	3134.0	3163.4	3142.3	3195.7	3246.1
12.5°	2973.7	2994.0	2982.0	3018.1	3036.9	3019.6	3085.8	3112.9	3097.9	3153.6	3218.3
15°	2919.6	2942.1	2925.6	2957.9	2972.2	2957.2	3011.4	3058.0	3039.2	3100.1	3171.6
17.5°	2878.2	2891.0	2868.4	2894.0	2902.2	2881.9	2936.9	2982.8	2969.2	3035.4	3118.2
20°	2832.3	2842.8	2811.2	2825.5	2824.7	2799.2	2849.6	2894.7	2885.7	2958.7	3052.7
22.5°	2781.1	2786.4	2749.5	2752.5	2751.0	2708.9	2754.0	2799.9	2796.2	2869.9	2975.2
25°	2726.9	2727.7	2680.3	2678.8	2662.2	2612.5	2652.4	2704.3	2693.1	2772.8	2883.4
27.5°	2673.5	2666.0	2608.8	2595.2	2568.9	2509.5	2544.8	2591.5	2584.7	2663.0	2785.6
30°	2616.3	2606.5	2536.6	2511.7	2473.3	2404.9	2434.2	2477.9	2481.6	2550.1	2678.8
32.5°	2562.1	2537.3	2459.8	2423.7	2375.5	2295.8	2311.6	2356.0	2362.0	2431.2	2563.6
35°	2492.2	2475.6	2380.0	2318.3	2270.9	2183.6	2200.2	2231.1	2240.1	2307.8	2442.5
37.5°	2425.9	2399.6	2298.0	2222.8	2161.8	2070.0	2074.5	2106.1	2115.2	2183.6	2316.8
40°	2357.5	2319.8	2210.7	2122.7	2052.7	1956.4	1951.1	1984.2	1991.0	2058.0	2178.4
42.5°	2284.5	2239.3	2116.7	2020.4	1939.8	1842.0	1831.5	1860.1	1867.6	1933.1	2051.2
45°	2210.7	2156.6	2020.4	1915.0	1827.0	1726.9	1716.4	1738.2	1749.5	1811.2	1924.8
47.5°	2132.5	2069.3	1921.0	1803.7	1712.6	1612.5	1599.7	1621.6	1630.6	1691.5	1799.1
50°	2050.5	1973.7	1818.7	1689.3	1599.0	1500.4	1481.6	1507.2	1515.5	1572.6	1678.0
52.5°	1960.2	1875.1	1709.6	1574.2	1483.9	1389.8	1367.2	1392.1	1401.8	1457.5	1554.6
55°	1864.6	1772.8	1599.7	1468.1	1370.2	1278.4	1259.6	1269.4	1290.5	1343.1	1433.4
57.5°	1757.0	1666.0	1483.9	1349.9	1255.9	1167.8	1152.0	1161.0	1180.6	1231.8	1313.0
60°	1642.6	1546.3	1365.7	1231.8	1140.7	1057.2	1042.9	1051.2	1072.3	1118.9	1194.2
62.5°	1529.8	1421.4	1243.8	1110.6	1027.9	950.4	946.6	943.6	963.2	1008.3	1074.5
65°	1392.8	1289.0	1116.7	990.2	915.0	845.0	830.0	836.7	855.5	896.9	966.2
67.5°	1246.1	1152.0	986.5	869.8	802.9	740.4	727.6	730.6	750.2	786.3	846.5
70°	1090.3	1007.5	853.3	748.7	692.3	633.6	625.3	626.0	644.9	676.5	729.1
72.5°	927.0	852.5	718.6	629.1	582.4	540.3	532.7	523.7	541.0	568.1	613.3
75°	760.7	695.3	584.7	511.7	474.8	439.4	432.7	423.6	440.9	464.3	499.6
77.5°	592.9	540.3	454.5	398.1	369.5	343.1	337.1	327.3	344.6	361.9	389.8
80°	428.9	390.5	339.4	279.9	270.1	252.8	246.8	236.3	252.8	264.1	285.2
82.5°	276.9	251.3	222.0	180.6	179.1	166.3	163.3	151.2	166.3	173.1	188.9
85°	140.0	127.9	120.4	91.8	94.8	86.5	85.8	73.0	85.0	88.0	97.1
87.5°	39.9	42.1	37.6	22.6	28.6	27.1	27.1	19.6	27.1	27.1	30.9
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: P837801

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-3STD-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8	3225.8
2.5°	3228.8	3241.6	3244.6	3243.9	3252.1	3297.3	3282.2	3297.3
5°	3236.3	3264.9	3272.5	3283.0	3296.5	3347.7	3331.2	3349.2
7.5°	3240.9	3283.7	3300.3	3320.6	3342.4	3399.6	3386.1	3404.1
10°	3240.9	3296.5	3320.6	3354.5	3383.8	3450.0	3437.2	3458.3
12.5°	3227.3	3298.8	3332.7	3380.1	3417.7	3489.2	3483.9	3499.0
15°	3199.5	3287.5	3334.2	3395.1	3441.8	3521.5	3519.3	3537.3
17.5°	3161.8	3267.9	3324.4	3401.1	3459.8	3549.4	3554.6	3564.4
20°	3114.4	3231.1	3304.8	3398.9	3472.6	3571.2	3578.0	3591.5
22.5°	3052.0	3186.7	3275.5	3389.1	3474.1	3580.2	3592.3	3605.0
25°	2978.2	3133.3	3237.1	3370.3	3466.6	3579.5	3596.0	3607.3
27.5°	2894.0	3064.0	3188.2	3340.2	3445.5	3567.4	3587.7	3601.3
30°	2796.2	2990.3	3132.5	3301.1	3416.9	3544.9	3566.7	3580.2
32.5°	2695.3	2909.0	3066.3	3250.6	3375.5	3508.7	3527.5	3538.1
35°	2585.5	2810.4	2986.5	3185.9	3322.1	3450.8	3465.1	3476.4
37.5°	2465.8	2703.6	2895.5	3112.9	3246.9	3370.3	3383.1	3395.9
40°	2342.4	2591.5	2793.1	3023.4	3157.3	3271.7	3285.3	3294.3
42.5°	2218.3	2467.3	2684.0	2918.0	3051.2	3161.1	3169.4	3178.4
45°	2092.6	2338.7	2561.4	2801.4	2933.1	3036.2	3039.2	3046.7
47.5°	1964.7	2205.5	2426.7	2668.2	2798.4	2892.5	2895.5	2901.5
50°	1836.0	2072.3	2283.0	2524.5	2651.7	2751.0	2737.5	2743.5
52.5°	1709.6	1932.3	2147.5	2369.5	2495.2	2583.2	2587.0	2574.9
55°	1585.4	1795.4	1993.3	2207.0	2326.6	2395.1	2392.8	2397.3
57.5°	1459.8	1656.9	1838.3	2033.9	2150.5	2215.2	2228.8	2213.0
60°	1331.9	1517.0	1679.5	1856.3	1969.2	2023.4	2039.2	2024.1
62.5°	1204.7	1374.7	1522.2	1676.5	1781.1	1848.0	1846.5	1830.0
65°	1077.5	1231.8	1363.5	1494.4	1585.4	1652.4	1649.4	1634.3
67.5°	960.1	1087.3	1205.4	1311.5	1390.6	1436.5	1452.3	1434.2
70°	830.7	940.6	1044.4	1129.4	1194.9	1236.3	1251.3	1235.5
72.5°	701.3	794.6	867.6	949.6	1000.0	1034.6	1050.4	1035.4
75°	573.4	650.1	709.6	773.5	808.9	838.2	856.3	841.3
77.5°	449.2	508.7	556.1	602.7	643.4	650.1	665.9	656.1
80°	331.1	374.0	408.6	439.4	468.8	471.8	484.6	478.6
82.5°	220.5	249.1	258.1	290.5	309.3	306.3	319.0	314.5
85°	116.6	133.9	149.7	159.5	170.1	160.3	171.6	167.0
87.5°	39.1	41.4	36.1	51.2	56.4	48.2	54.9	52.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)