

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P212759

Luminaire Tested: **LD4B50D010TE EU4B30508035 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212759
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29201)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B50D010TE EU4B30508035 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4839.9 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

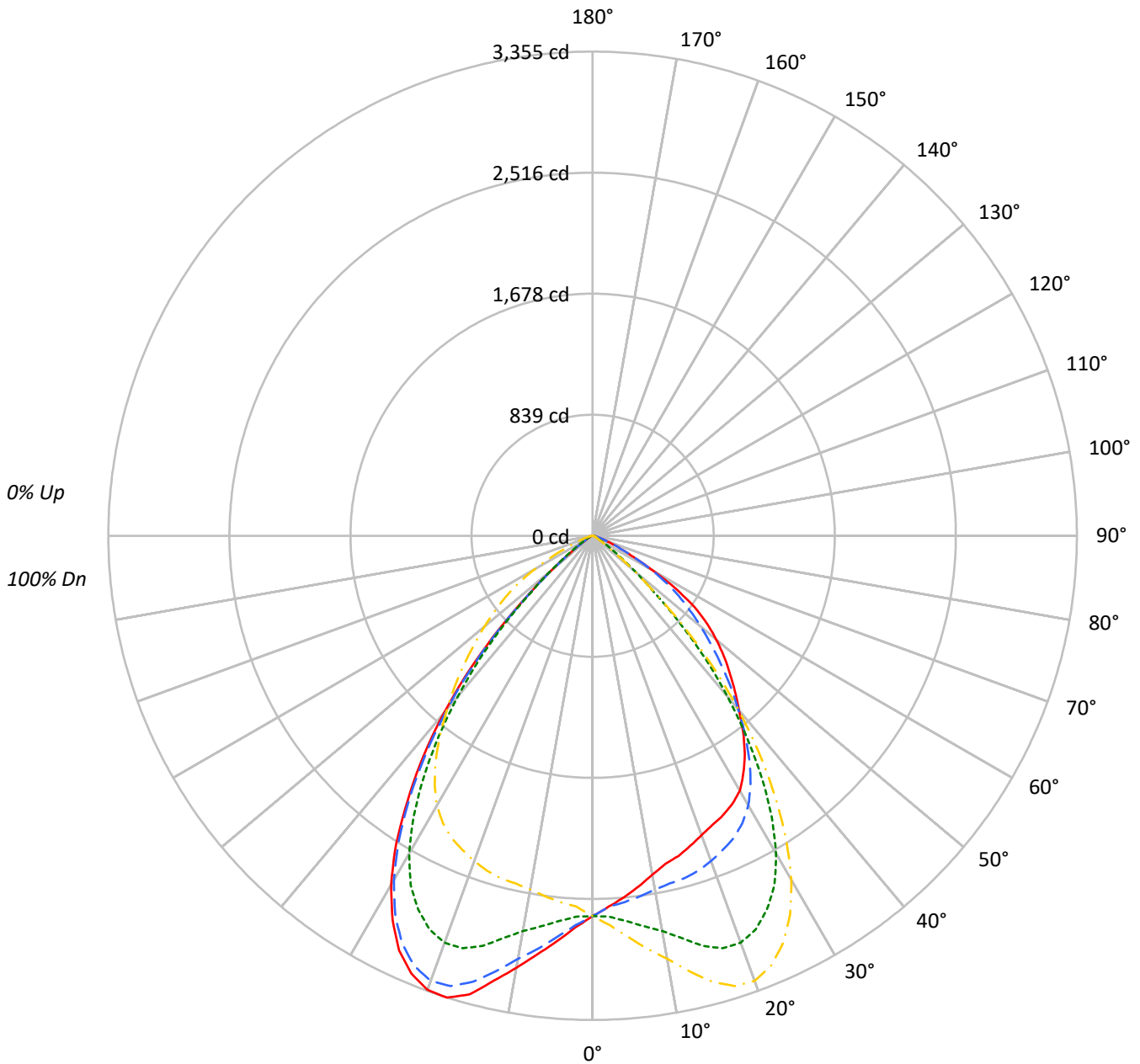
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	109	106	103	110	107	104	102	103	100	99	99	97	96	95	94	93	91																			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82																			
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73																			
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66																			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60																			
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54																			
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49																			
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45																			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	52	46	43	41																			
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	324991	324991	324991	324991
5°	311152	331841	349077	331841
10°	298617	348316	380580	348316
15°	293345	375569	420020	375569
20°	289655	393824	439517	393824
25°	290853	388910	431549	388910
30°	290509	361893	397586	361893
35°	276731	307132	335953	307132
40°	253874	233699	257803	233699
45°	234356	148760	160290	148760
50°	214401	72132	70136	72132
55°	185628	31440	22451	31440
60°	120213	15468	10312	15468
65°	62984	10157	8114	10157
70°	33900	7537	6275	7537
75°	18253	6624	4956	6624
80°	12360	4972	2486	4972
85°	9907	4953	0	4953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.9	5.3
10°-20°	803.5	16.6
20°-30°	1249.3	25.8
30°-40°	1261.8	26.1
40°-50°	799.0	16.5
50°-60°	335.3	6.9
60°-70°	106.3	2.2
70°-80°	24.3	0.5
80°-90°	3.5	0.1
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°	2309.7	47.7
0°-40°	3571.5	73.8
0°-60°	4705.8	97.2
0°-90°	4839.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4839.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2635	2635	2635	2635	2635	
5°	2513	2680	2819	2680	2513	236
15°	2297	2941	3289	2941	2297	648
25°	2137	2858	3171	2858	2137	984
35°	1838	2040	2231	2040	1838	1141
45°	1344	853	919	853	1344	1037
55°	863	146	104	146	863	745
65°	216	35	28	35	216	238
75°	38	14	10	14	38	47
85°	7	4	0	4	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8
2.5°	2572.2	2547.8	2568.7	2575.7	2575.7	2572.2	2579.2	2572.2	2561.8	2603.5	2572.2
5°	2513.0	2495.6	2513.0	2520.0	2523.5	2526.9	2533.9	2533.9	2530.4	2568.7	2547.8
7.5°	2450.4	2439.9	2453.9	2464.3	2478.2	2474.7	2485.2	2488.7	2495.6	2540.9	2520.0
10°	2384.2	2373.8	2391.2	2398.2	2415.6	2419.0	2426.0	2436.4	2450.4	2495.6	2488.7
12.5°	2328.5	2325.1	2335.5	2349.4	2366.8	2370.3	2377.3	2394.7	2415.6	2464.3	2467.8
15°	2297.2	2293.7	2304.2	2318.1	2332.0	2339.0	2346.0	2370.3	2391.2	2443.4	2457.3
17.5°	2252.0	2252.0	2262.4	2276.3	2293.7	2300.7	2311.1	2335.5	2363.4	2415.6	2433.0
20°	2206.7	2210.2	2217.2	2231.1	2248.5	2255.5	2265.9	2290.3	2321.6	2373.8	2398.2
22.5°	2168.4	2178.9	2182.4	2192.8	2210.2	2220.6	2224.1	2252.0	2279.8	2325.1	2356.4
25°	2137.1	2151.0	2151.0	2158.0	2178.9	2182.4	2185.8	2213.7	2238.1	2279.8	2311.1
27.5°	2095.3	2109.3	2109.3	2119.7	2133.6	2140.6	2140.6	2165.0	2189.3	2220.6	2245.0
30°	2039.7	2050.1	2050.1	2053.6	2067.5	2074.5	2071.0	2095.3	2112.7	2133.6	2158.0
32.5°	1945.7	1963.1	1956.1	1966.6	1973.5	1980.5	1973.5	1994.4	2008.3	2029.2	2036.2
35°	1837.8	1851.7	1841.3	1848.2	1862.1	1862.1	1858.7	1872.6	1879.5	1890.0	1893.5
37.5°	1712.5	1722.9	1716.0	1719.4	1726.4	1729.9	1722.9	1736.8	1736.8	1740.3	1733.4
40°	1576.7	1594.1	1583.7	1583.7	1590.7	1594.1	1583.7	1590.7	1597.6	1580.2	1566.3
42.5°	1458.4	1475.8	1465.3	1465.3	1465.3	1468.8	1454.9	1458.4	1458.4	1434.0	1413.1
45°	1343.5	1357.4	1347.0	1336.6	1340.0	1343.5	1329.6	1326.1	1315.7	1287.8	1256.5
47.5°	1232.1	1246.1	1232.1	1225.2	1225.2	1225.2	1207.8	1197.3	1183.4	1145.1	1106.8
50°	1117.3	1131.2	1120.8	1113.8	1106.8	1106.8	1092.9	1079.0	1058.1	1019.8	978.1
52.5°	998.9	1009.4	998.9	992.0	985.0	985.0	967.6	957.2	932.8	894.5	849.3
55°	863.2	870.2	859.7	852.8	849.3	849.3	835.4	824.9	804.0	772.7	730.9
57.5°	682.2	696.1	678.7	685.7	685.7	682.2	671.8	668.3	661.3	633.5	602.2
60°	487.3	487.3	483.8	497.7	494.3	501.2	494.3	497.7	501.2	480.3	459.4
62.5°	320.2	330.7	323.7	330.7	337.6	337.6	334.1	341.1	348.1	337.6	327.2
65°	215.8	215.8	215.8	219.3	219.3	222.8	219.3	222.8	226.2	222.8	215.8
67.5°	142.7	146.2	142.7	146.2	142.7	146.2	146.2	146.2	149.7	146.2	142.7
70°	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	97.5	94.0	90.5
72.5°	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2
75°	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3
77.5°	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
80°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	13.9	17.4	13.9	13.9
82.5°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
85°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	3.5	7.0	3.5	3.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8
2.5°	2589.6	2579.2	2631.4	2586.1	2610.5	2607.0	2610.5	2631.4	2631.4	2641.8	2638.3
5°	2575.7	2565.2	2624.4	2589.6	2617.4	2617.4	2627.9	2659.2	2659.2	2680.1	2683.6
7.5°	2554.8	2558.3	2620.9	2600.0	2631.4	2634.8	2652.2	2690.5	2701.0	2728.8	2742.7
10°	2530.4	2544.3	2610.5	2603.5	2645.3	2648.8	2683.6	2728.8	2742.7	2781.0	2805.4
12.5°	2520.0	2544.3	2620.9	2627.9	2669.7	2687.1	2725.3	2784.5	2808.9	2854.1	2888.9
15°	2516.5	2551.3	2634.8	2659.2	2707.9	2732.3	2784.5	2854.1	2882.0	2941.1	2982.9
17.5°	2499.1	2544.3	2634.8	2673.1	2725.3	2749.7	2815.8	2895.9	2930.7	2996.8	3045.6
20°	2467.8	2516.5	2607.0	2655.7	2711.4	2746.2	2812.4	2895.9	2930.7	3000.3	3056.0
22.5°	2426.0	2474.7	2561.8	2617.4	2666.2	2704.5	2774.1	2854.1	2885.5	2951.6	3007.3
25°	2373.8	2422.5	2495.6	2551.3	2596.6	2631.4	2690.5	2774.1	2795.0	2857.6	2916.8
27.5°	2300.7	2346.0	2401.6	2453.9	2495.6	2523.5	2575.7	2648.8	2666.2	2728.8	2777.6
30°	2203.2	2231.1	2279.8	2314.6	2346.0	2373.8	2412.1	2478.2	2485.2	2540.9	2586.1
32.5°	2071.0	2084.9	2119.7	2137.1	2165.0	2175.4	2206.7	2262.4	2255.5	2307.7	2346.0
35°	1910.9	1917.8	1917.8	1938.7	1945.7	1949.2	1973.5	2004.8	1994.4	2039.7	2067.5
37.5°	1736.8	1733.4	1712.5	1712.5	1716.0	1705.5	1716.0	1729.9	1716.0	1750.8	1775.1
40°	1559.3	1538.4	1500.2	1479.3	1468.8	1465.3	1444.5	1461.9	1427.1	1451.4	1468.8
42.5°	1388.8	1354.0	1294.8	1253.0	1235.6	1218.2	1183.4	1183.4	1138.2	1155.6	1159.1
45°	1214.7	1155.6	1075.5	1037.2	992.0	964.1	918.9	873.6	842.3	852.8	842.3
47.5°	1054.6	985.0	891.0	824.9	772.7	734.4	671.8	619.6	588.2	574.3	560.4
50°	915.4	845.8	737.9	654.4	602.2	556.9	494.3	435.1	396.8	375.9	365.5
52.5°	790.1	717.0	612.6	525.6	469.9	428.1	358.5	299.3	257.6	233.2	219.3
55°	671.8	605.6	508.2	428.1	375.9	334.1	264.5	208.8	170.6	146.2	128.8
57.5°	553.4	494.3	414.2	337.6	292.4	254.1	194.9	146.2	114.9	94.0	80.1
60°	424.6	379.4	313.3	254.1	215.8	184.5	139.2	100.9	80.1	62.7	55.7
62.5°	299.3	271.5	222.8	181.0	156.6	132.3	97.5	73.1	55.7	45.2	41.8
65°	201.9	181.0	153.1	121.8	104.4	90.5	69.6	52.2	41.8	34.8	31.3
67.5°	132.3	121.8	100.9	83.5	73.1	62.7	48.7	38.3	31.3	27.8	24.4
70°	87.0	80.1	66.1	55.7	52.2	45.2	34.8	27.8	24.4	20.9	20.9
72.5°	55.7	48.7	45.2	38.3	34.8	31.3	24.4	20.9	17.4	17.4	17.4
75°	34.8	31.3	27.8	24.4	24.4	20.9	17.4	17.4	13.9	13.9	13.9
77.5°	20.9	20.9	17.4	17.4	13.9	13.9	13.9	10.4	10.4	10.4	10.4
80°	13.9	13.9	10.4	10.4	10.4	10.4	7.0	7.0	7.0	7.0	7.0
82.5°	7.0	7.0	7.0	7.0	7.0	7.0	3.5	3.5	3.5	3.5	3.5
85°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8
2.5°	2655.7	2662.7	2655.7	2676.6	2641.8	2680.1	2666.2	2673.1	2701.0	2690.5	2701.0
5°	2707.9	2721.9	2721.9	2746.2	2714.9	2760.1	2746.2	2760.1	2788.0	2788.0	2801.9
7.5°	2774.1	2791.5	2798.4	2822.8	2791.5	2847.2	2833.2	2850.6	2885.5	2885.5	2895.9
10°	2843.7	2864.6	2878.5	2906.3	2871.5	2934.2	2920.3	2944.6	2975.9	2979.4	2996.8
12.5°	2930.7	2958.5	2975.9	3000.3	2975.9	3038.6	3024.7	3049.0	3090.8	3094.3	3115.2
15°	3028.2	3063.0	3083.8	3111.7	3083.8	3153.5	3139.5	3167.4	3198.7	3212.6	3233.5
17.5°	3090.8	3132.6	3150.0	3181.3	3153.5	3223.1	3205.7	3244.0	3271.8	3278.8	3303.1
20°	3101.2	3139.5	3163.9	3188.3	3163.9	3233.5	3216.1	3247.4	3282.2	3289.2	3306.6
22.5°	3056.0	3087.3	3115.2	3136.1	3115.2	3184.8	3160.4	3195.2	3226.6	3233.5	3247.4
25°	2951.6	2989.9	3017.7	3035.1	3014.2	3080.4	3059.5	3090.8	3118.7	3132.6	3136.1
27.5°	2805.4	2840.2	2868.0	2878.5	2864.6	2927.2	2899.4	2937.7	2962.0	2969.0	2979.4
30°	2607.0	2638.3	2666.2	2673.1	2662.7	2707.9	2694.0	2728.8	2753.2	2760.1	2767.1
32.5°	2363.4	2394.7	2412.1	2419.0	2408.6	2453.9	2439.9	2467.8	2495.6	2495.6	2495.6
35°	2088.4	2116.2	2126.7	2147.6	2123.2	2168.4	2154.5	2178.9	2203.2	2203.2	2206.7
37.5°	1792.5	1813.4	1820.4	1841.3	1816.9	1858.7	1848.2	1869.1	1890.0	1886.5	1893.5
40°	1475.8	1496.7	1503.6	1521.0	1500.2	1535.0	1528.0	1548.9	1566.3	1566.3	1566.3
42.5°	1169.5	1183.4	1183.4	1200.8	1179.9	1211.3	1211.3	1225.2	1242.6	1239.1	1239.1
45°	849.3	845.8	852.8	849.3	849.3	877.1	877.1	884.1	898.0	891.0	894.5
47.5°	563.9	567.3	553.4	563.9	549.9	574.3	574.3	574.3	584.7	577.8	584.7
50°	358.5	348.1	341.1	341.1	337.6	355.0	348.1	351.5	358.5	351.5	358.5
52.5°	201.9	198.4	191.4	194.9	188.0	191.4	191.4	191.4	194.9	191.4	198.4
55°	118.3	107.9	104.4	104.4	100.9	104.4	100.9	100.9	100.9	97.5	100.9
57.5°	69.6	66.1	62.7	62.7	59.2	59.2	59.2	59.2	59.2	59.2	59.2
60°	48.7	45.2	45.2	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8
62.5°	38.3	34.8	34.8	34.8	31.3	31.3	31.3	31.3	31.3	34.8	31.3
65°	27.8	27.8	27.8	27.8	27.8	27.8	24.4	27.8	27.8	27.8	27.8
67.5°	24.4	24.4	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
70°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
72.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
75°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
77.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
80°	7.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212759

CATALOG NUMBER: LD4B50D010TE EU4B30508035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8
2.5°	2711.4	2697.5	2666.2	2687.1	2690.5	2676.6	2694.0	2714.9	2694.0	2676.6	2690.5
5°	2812.4	2801.9	2774.1	2791.5	2795.0	2791.5	2801.9	2819.3	2801.9	2791.5	2795.0
7.5°	2913.3	2906.3	2875.0	2895.9	2902.9	2895.9	2906.3	2923.7	2906.3	2895.9	2902.9
10°	3010.8	3007.3	2975.9	3003.8	3007.3	3000.3	3010.8	3038.6	3010.8	3000.3	3007.3
12.5°	3122.1	3129.1	3094.3	3125.6	3129.1	3122.1	3136.1	3156.9	3136.1	3122.1	3129.1
15°	3250.9	3247.4	3219.6	3244.0	3250.9	3244.0	3261.4	3289.2	3261.4	3244.0	3250.9
17.5°	3313.6	3313.6	3292.7	3317.0	3320.5	3320.5	3334.5	3355.3	3334.5	3320.5	3320.5
20°	3317.0	3320.5	3296.2	3324.0	3324.0	3324.0	3337.9	3348.4	3337.9	3324.0	3324.0
22.5°	3261.4	3264.8	3240.5	3264.8	3264.8	3268.3	3275.3	3282.2	3275.3	3268.3	3264.8
25°	3153.5	3156.9	3136.1	3156.9	3153.5	3153.5	3160.4	3170.9	3160.4	3153.5	3153.5
27.5°	2993.3	2996.8	2969.0	2993.3	2989.9	2986.4	2996.8	3000.3	2996.8	2986.4	2989.9
30°	2781.0	2784.5	2760.1	2781.0	2777.6	2774.1	2788.0	2791.5	2788.0	2774.1	2777.6
32.5°	2526.9	2520.0	2502.6	2520.0	2516.5	2516.5	2523.5	2533.9	2523.5	2516.5	2516.5
35°	2220.6	2220.6	2210.2	2224.1	2213.7	2227.6	2227.6	2231.1	2227.6	2227.6	2213.7
37.5°	1907.4	1907.4	1900.4	1907.4	1903.9	1917.8	1917.8	1928.3	1917.8	1917.8	1903.9
40°	1580.2	1580.2	1573.2	1580.2	1590.7	1590.7	1587.2	1601.1	1587.2	1590.7	1590.7
42.5°	1249.5	1249.5	1246.1	1263.5	1263.5	1263.5	1253.0	1267.0	1253.0	1263.5	1263.5
45°	908.4	901.5	898.0	898.0	901.5	915.4	901.5	918.9	901.5	915.4	901.5
47.5°	577.8	581.3	584.7	595.2	588.2	584.7	584.7	595.2	584.7	584.7	588.2
50°	355.0	358.5	358.5	365.5	355.0	362.0	358.5	365.5	358.5	362.0	355.0
52.5°	194.9	194.9	194.9	201.9	194.9	198.4	194.9	201.9	194.9	198.4	194.9
55°	100.9	100.9	100.9	104.4	100.9	100.9	100.9	104.4	100.9	100.9	100.9
57.5°	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2
60°	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8
62.5°	34.8	31.3	31.3	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
65°	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
67.5°	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
70°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
72.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
75°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
77.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212759

CATALOG NUMBER: LD4B50D010TE EU4B30508035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8
2.5°	2687.1	2666.2	2697.5	2711.4	2701.0	2690.5	2701.0	2673.1	2666.2	2680.1	2641.8
5°	2791.5	2774.1	2801.9	2812.4	2801.9	2788.0	2788.0	2760.1	2746.2	2760.1	2714.9
7.5°	2895.9	2875.0	2906.3	2913.3	2895.9	2885.5	2885.5	2850.6	2833.2	2847.2	2791.5
10°	3003.8	2975.9	3007.3	3010.8	2996.8	2979.4	2975.9	2944.6	2920.3	2934.2	2871.5
12.5°	3125.6	3094.3	3129.1	3122.1	3115.2	3094.3	3090.8	3049.0	3024.7	3038.6	2975.9
15°	3244.0	3219.6	3247.4	3250.9	3233.5	3212.6	3198.7	3167.4	3139.5	3153.5	3083.8
17.5°	3317.0	3292.7	3313.6	3313.6	3303.1	3278.8	3271.8	3244.0	3205.7	3223.1	3153.5
20°	3324.0	3296.2	3320.5	3317.0	3306.6	3289.2	3282.2	3247.4	3216.1	3233.5	3163.9
22.5°	3264.8	3240.5	3264.8	3261.4	3247.4	3233.5	3226.6	3195.2	3160.4	3184.8	3115.2
25°	3156.9	3136.1	3156.9	3153.5	3136.1	3132.6	3118.7	3090.8	3059.5	3080.4	3014.2
27.5°	2993.3	2969.0	2996.8	2993.3	2979.4	2969.0	2962.0	2937.7	2899.4	2927.2	2864.6
30°	2781.0	2760.1	2784.5	2781.0	2767.1	2760.1	2753.2	2728.8	2694.0	2707.9	2662.7
32.5°	2520.0	2502.6	2520.0	2526.9	2495.6	2495.6	2495.6	2467.8	2439.9	2453.9	2408.6
35°	2224.1	2210.2	2220.6	2220.6	2206.7	2203.2	2203.2	2178.9	2154.5	2168.4	2123.2
37.5°	1907.4	1900.4	1907.4	1907.4	1893.5	1886.5	1890.0	1869.1	1848.2	1858.7	1816.9
40°	1580.2	1573.2	1580.2	1580.2	1566.3	1566.3	1566.3	1548.9	1528.0	1535.0	1500.2
42.5°	1263.5	1246.1	1249.5	1249.5	1239.1	1239.1	1242.6	1225.2	1211.3	1211.3	1179.9
45°	898.0	898.0	901.5	908.4	894.5	891.0	898.0	884.1	877.1	877.1	849.3
47.5°	595.2	584.7	581.3	577.8	584.7	577.8	584.7	574.3	574.3	574.3	549.9
50°	365.5	358.5	358.5	355.0	358.5	351.5	358.5	351.5	348.1	355.0	337.6
52.5°	201.9	194.9	194.9	194.9	198.4	191.4	194.9	191.4	191.4	191.4	188.0
55°	104.4	100.9	100.9	100.9	100.9	97.5	100.9	100.9	100.9	104.4	100.9
57.5°	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2
60°	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8
62.5°	34.8	31.3	31.3	34.8	31.3	34.8	31.3	31.3	31.3	31.3	31.3
65°	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	24.4	27.8	27.8
67.5°	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
70°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
72.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
75°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
77.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212759

CATALOG NUMBER: LD4B50D010TE EU4B30508035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8
2.5°	2676.6	2655.7	2662.7	2655.7	2638.3	2641.8	2631.4	2631.4	2610.5	2607.0	2610.5
5°	2746.2	2721.9	2721.9	2707.9	2683.6	2680.1	2659.2	2659.2	2627.9	2617.4	2617.4
7.5°	2822.8	2798.4	2791.5	2774.1	2742.7	2728.8	2701.0	2690.5	2652.2	2634.8	2631.4
10°	2906.3	2878.5	2864.6	2843.7	2805.4	2781.0	2742.7	2728.8	2683.6	2648.8	2645.3
12.5°	3000.3	2975.9	2958.5	2930.7	2888.9	2854.1	2808.9	2784.5	2725.3	2687.1	2669.7
15°	3111.7	3083.8	3063.0	3028.2	2982.9	2941.1	2882.0	2854.1	2784.5	2732.3	2707.9
17.5°	3181.3	3150.0	3132.6	3090.8	3045.6	2996.8	2930.7	2895.9	2815.8	2749.7	2725.3
20°	3188.3	3163.9	3139.5	3101.2	3056.0	3000.3	2930.7	2895.9	2812.4	2746.2	2711.4
22.5°	3136.1	3115.2	3087.3	3056.0	3007.3	2951.6	2885.5	2854.1	2774.1	2704.5	2666.2
25°	3035.1	3017.7	2989.9	2951.6	2916.8	2857.6	2795.0	2774.1	2690.5	2631.4	2596.6
27.5°	2878.5	2868.0	2840.2	2805.4	2777.6	2728.8	2666.2	2648.8	2575.7	2523.5	2495.6
30°	2673.1	2666.2	2638.3	2607.0	2586.1	2540.9	2485.2	2478.2	2412.1	2373.8	2346.0
32.5°	2419.0	2412.1	2394.7	2363.4	2346.0	2307.7	2255.5	2262.4	2206.7	2175.4	2165.0
35°	2147.6	2126.7	2116.2	2088.4	2067.5	2039.7	1994.4	2004.8	1973.5	1949.2	1945.7
37.5°	1841.3	1820.4	1813.4	1792.5	1775.1	1750.8	1716.0	1729.9	1716.0	1705.5	1716.0
40°	1521.0	1503.6	1496.7	1475.8	1468.8	1451.4	1427.1	1461.9	1444.5	1465.3	1468.8
42.5°	1200.8	1183.4	1183.4	1169.5	1159.1	1155.6	1138.2	1183.4	1183.4	1218.2	1235.6
45°	849.3	852.8	845.8	849.3	842.3	852.8	842.3	873.6	918.9	964.1	992.0
47.5°	563.9	553.4	567.3	563.9	560.4	574.3	588.2	619.6	671.8	734.4	772.7
50°	341.1	341.1	348.1	358.5	365.5	375.9	396.8	435.1	494.3	556.9	602.2
52.5°	194.9	191.4	198.4	201.9	219.3	233.2	257.6	299.3	358.5	428.1	469.9
55°	104.4	104.4	107.9	118.3	128.8	146.2	170.6	208.8	264.5	334.1	375.9
57.5°	62.7	62.7	66.1	69.6	80.1	94.0	114.9	146.2	194.9	254.1	292.4
60°	41.8	45.2	45.2	48.7	55.7	62.7	80.1	100.9	139.2	184.5	215.8
62.5°	34.8	34.8	34.8	38.3	41.8	45.2	55.7	73.1	97.5	132.3	156.6
65°	27.8	27.8	27.8	27.8	31.3	34.8	41.8	52.2	69.6	90.5	104.4
67.5°	20.9	20.9	24.4	24.4	24.4	27.8	31.3	38.3	48.7	62.7	73.1
70°	17.4	17.4	17.4	17.4	20.9	20.9	24.4	27.8	34.8	45.2	52.2
72.5°	13.9	13.9	13.9	13.9	17.4	17.4	17.4	20.9	24.4	31.3	34.8
75°	10.4	10.4	10.4	10.4	13.9	13.9	13.9	17.4	17.4	20.9	24.4
77.5°	7.0	7.0	7.0	7.0	10.4	10.4	10.4	10.4	13.9	13.9	13.9
80°	3.5	3.5	3.5	7.0	7.0	7.0	7.0	7.0	7.0	10.4	10.4
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	7.0	7.0
85°	0.0	0.0	3.5	0.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212759

CATALOG NUMBER: LD4B50D010TE EU4B30508035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8	2634.8
2.5°	2586.1	2631.4	2579.2	2589.6	2572.2	2603.5	2561.8	2572.2	2579.2	2572.2	2575.7
5°	2589.6	2624.4	2565.2	2575.7	2547.8	2568.7	2530.4	2533.9	2533.9	2526.9	2523.5
7.5°	2600.0	2620.9	2558.3	2554.8	2520.0	2540.9	2495.6	2488.7	2485.2	2474.7	2478.2
10°	2603.5	2610.5	2544.3	2530.4	2488.7	2495.6	2450.4	2436.4	2426.0	2419.0	2415.6
12.5°	2627.9	2620.9	2544.3	2520.0	2467.8	2464.3	2415.6	2394.7	2377.3	2370.3	2366.8
15°	2659.2	2634.8	2551.3	2516.5	2457.3	2443.4	2391.2	2370.3	2346.0	2339.0	2332.0
17.5°	2673.1	2634.8	2544.3	2499.1	2433.0	2415.6	2363.4	2335.5	2311.1	2300.7	2293.7
20°	2655.7	2607.0	2516.5	2467.8	2398.2	2373.8	2321.6	2290.3	2265.9	2255.5	2248.5
22.5°	2617.4	2561.8	2474.7	2426.0	2356.4	2325.1	2279.8	2252.0	2224.1	2220.6	2210.2
25°	2551.3	2495.6	2422.5	2373.8	2311.1	2279.8	2238.1	2213.7	2185.8	2182.4	2178.9
27.5°	2453.9	2401.6	2346.0	2300.7	2245.0	2220.6	2189.3	2165.0	2140.6	2140.6	2133.6
30°	2314.6	2279.8	2231.1	2203.2	2158.0	2133.6	2112.7	2095.3	2071.0	2074.5	2067.5
32.5°	2137.1	2119.7	2084.9	2071.0	2036.2	2029.2	2008.3	1994.4	1973.5	1980.5	1973.5
35°	1938.7	1917.8	1917.8	1910.9	1893.5	1890.0	1879.5	1872.6	1858.7	1862.1	1862.1
37.5°	1712.5	1712.5	1733.4	1736.8	1733.4	1740.3	1736.8	1736.8	1722.9	1729.9	1726.4
40°	1479.3	1500.2	1538.4	1559.3	1566.3	1580.2	1597.6	1590.7	1583.7	1594.1	1590.7
42.5°	1253.0	1294.8	1354.0	1388.8	1413.1	1434.0	1458.4	1458.4	1454.9	1468.8	1465.3
45°	1037.2	1075.5	1155.6	1214.7	1256.5	1287.8	1315.7	1326.1	1329.6	1343.5	1340.0
47.5°	824.9	891.0	985.0	1054.6	1106.8	1145.1	1183.4	1197.3	1207.8	1225.2	1225.2
50°	654.4	737.9	845.8	915.4	978.1	1019.8	1058.1	1079.0	1092.9	1106.8	1106.8
52.5°	525.6	612.6	717.0	790.1	849.3	894.5	932.8	957.2	967.6	985.0	985.0
55°	428.1	508.2	605.6	671.8	730.9	772.7	804.0	824.9	835.4	849.3	849.3
57.5°	337.6	414.2	494.3	553.4	602.2	633.5	661.3	668.3	671.8	682.2	685.7
60°	254.1	313.3	379.4	424.6	459.4	480.3	501.2	497.7	494.3	501.2	494.3
62.5°	181.0	222.8	271.5	299.3	327.2	337.6	348.1	341.1	334.1	337.6	337.6
65°	121.8	153.1	181.0	201.9	215.8	222.8	226.2	222.8	219.3	222.8	219.3
67.5°	83.5	100.9	121.8	132.3	142.7	146.2	149.7	146.2	146.2	146.2	142.7
70°	55.7	66.1	80.1	87.0	90.5	94.0	97.5	94.0	94.0	94.0	94.0
72.5°	38.3	45.2	48.7	55.7	59.2	59.2	59.2	59.2	59.2	59.2	59.2
75°	24.4	27.8	31.3	34.8	38.3	38.3	38.3	38.3	38.3	38.3	38.3
77.5°	17.4	17.4	20.9	20.9	24.4	24.4	24.4	24.4	24.4	24.4	24.4
80°	10.4	10.4	13.9	13.9	13.9	13.9	17.4	13.9	17.4	17.4	17.4
82.5°	7.0	7.0	7.0	7.0	10.4	10.4	10.4	10.4	10.4	10.4	10.4
85°	3.5	3.5	3.5	3.5	3.5	3.5	7.0	3.5	7.0	7.0	7.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212759

CATALOG NUMBER: LD4B50D010TE EU4B30508035 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2634.8	2634.8	2634.8	2634.8
2.5°	2575.7	2568.7	2547.8	2572.2
5°	2520.0	2513.0	2495.6	2513.0
7.5°	2464.3	2453.9	2439.9	2450.4
10°	2398.2	2391.2	2373.8	2384.2
12.5°	2349.4	2335.5	2325.1	2328.5
15°	2318.1	2304.2	2293.7	2297.2
17.5°	2276.3	2262.4	2252.0	2252.0
20°	2231.1	2217.2	2210.2	2206.7
22.5°	2192.8	2182.4	2178.9	2168.4
25°	2158.0	2151.0	2151.0	2137.1
27.5°	2119.7	2109.3	2109.3	2095.3
30°	2053.6	2050.1	2050.1	2039.7
32.5°	1966.6	1956.1	1963.1	1945.7
35°	1848.2	1841.3	1851.7	1837.8
37.5°	1719.4	1716.0	1722.9	1712.5
40°	1583.7	1583.7	1594.1	1576.7
42.5°	1465.3	1465.3	1475.8	1458.4
45°	1336.6	1347.0	1357.4	1343.5
47.5°	1225.2	1232.1	1246.1	1232.1
50°	1113.8	1120.8	1131.2	1117.3
52.5°	992.0	998.9	1009.4	998.9
55°	852.8	859.7	870.2	863.2
57.5°	685.7	678.7	696.1	682.2
60°	497.7	483.8	487.3	487.3
62.5°	330.7	323.7	330.7	320.2
65°	219.3	215.8	215.8	215.8
67.5°	146.2	142.7	146.2	142.7
70°	94.0	94.0	94.0	94.0
72.5°	59.2	59.2	59.2	59.2
75°	38.3	38.3	38.3	38.3
77.5°	24.4	24.4	24.4	24.4
80°	17.4	17.4	17.4	17.4
82.5°	10.4	10.4	10.4	10.4
85°	7.0	7.0	7.0	7.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°





















(END OF REPORT)