

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: P212767

Luminaire Tested: **LD4B50D010TE EU4B30509050 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212767
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 EU4B30509050 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4112.6 lumens
Efficiency: N/A
Efficacy: 70.0 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

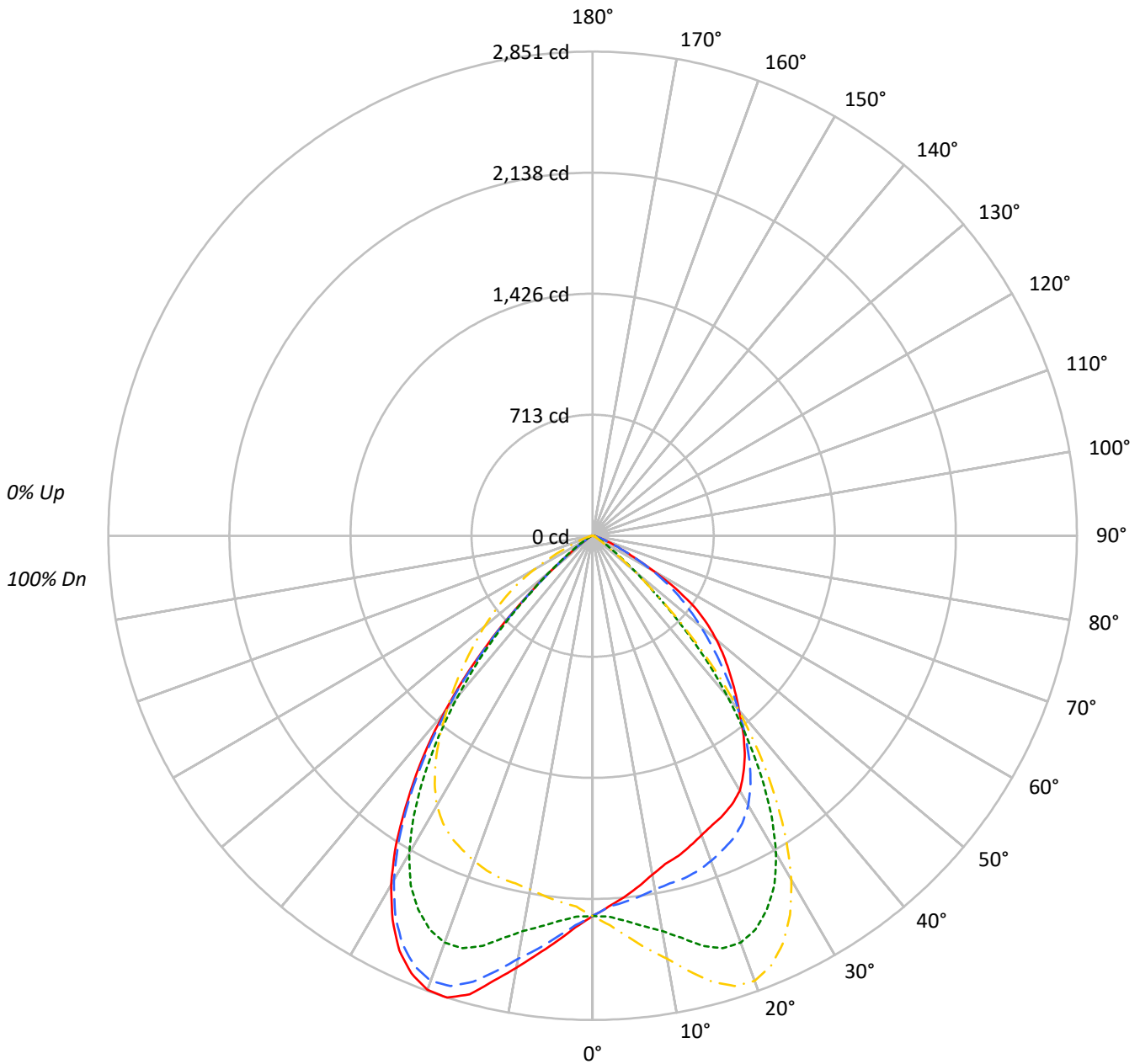
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	276159	276159	276159	276159
5°	264398	281968	296615	281968
10°	253753	295975	323391	295975
15°	249264	319140	356900	319140
20°	246129	334639	373466	334639
25°	247152	330470	366699	330470
30°	246841	307500	337837	307500
35°	235141	260965	285464	260965
40°	215730	198581	219063	198581
45°	199137	126397	136200	126397
50°	182182	61290	59582	61290
55°	157737	26709	19075	26709
60°	102155	13124	8758	13124
65°	53527	8639	6917	8639
70°	28815	6383	5337	6383
75°	15489	5624	4241	5624
80°	10513	4191	2131	4191
85°	8350	4246	0	4246



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.3	5.3
10°-20°	682.8	16.6
20°-30°	1061.6	25.8
30°-40°	1072.2	26.1
40°-50°	678.9	16.5
50°-60°	284.9	6.9
60°-70°	90.3	2.2
70°-80°	20.7	0.5
80°-90°	2.9	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°	1962.6	47.7
0°-40°	3034.8	73.8
0°-60°	3998.7	97.2
0°-90°	4112.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4112.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2239	2239	2239	2239	2239	
5°	2135	2277	2396	2277	2135	201
15°	1952	2499	2795	2499	1952	550
25°	1816	2428	2694	2428	1816	836
35°	1562	1733	1896	1733	1562	970
45°	1142	725	781	725	1142	881
55°	734	124	89	124	734	633
65°	183	30	24	30	183	202
75°	32	12	9	12	32	40
85°	6	3	0	3	6	6
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°	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2185.7	2165.0	2182.7	2188.6	2188.6	2185.7	2191.6	2185.7	2176.8	2212.3	2185.7
5°	2135.4	2120.6	2135.4	2141.3	2144.3	2147.2	2153.1	2153.1	2150.2	2182.7	2165.0
7.5°	2082.1	2073.3	2085.1	2094.0	2105.8	2102.8	2111.7	2114.7	2120.6	2159.0	2141.3
10°	2026.0	2017.1	2031.9	2037.8	2052.6	2055.5	2061.4	2070.3	2082.1	2120.6	2114.7
12.5°	1978.6	1975.7	1984.5	1996.4	2011.2	2014.1	2020.0	2034.8	2052.6	2094.0	2096.9
15°	1952.0	1949.1	1957.9	1969.8	1981.6	1987.5	1993.4	2014.1	2031.9	2076.2	2088.1
17.5°	1913.6	1913.6	1922.4	1934.3	1949.1	1955.0	1963.8	1984.5	2008.2	2052.6	2067.4
20°	1875.1	1878.1	1884.0	1895.8	1910.6	1916.5	1925.4	1946.1	1972.7	2017.1	2037.8
22.5°	1842.6	1851.5	1854.4	1863.3	1878.1	1886.9	1889.9	1913.6	1937.2	1975.7	2002.3
25°	1816.0	1827.8	1827.8	1833.7	1851.5	1854.4	1857.4	1881.0	1901.7	1937.2	1963.8
27.5°	1780.5	1792.3	1792.3	1801.2	1813.0	1818.9	1818.9	1839.6	1860.3	1886.9	1907.6
30°	1733.1	1742.0	1742.0	1745.0	1756.8	1762.7	1759.8	1780.5	1795.3	1813.0	1833.7
32.5°	1653.3	1668.1	1662.2	1671.0	1677.0	1682.9	1677.0	1694.7	1706.5	1724.3	1730.2
35°	1561.6	1573.4	1564.6	1570.5	1582.3	1582.3	1579.4	1591.2	1597.1	1606.0	1608.9
37.5°	1455.1	1464.0	1458.1	1461.1	1467.0	1469.9	1464.0	1475.8	1475.8	1478.8	1472.9
40°	1339.8	1354.6	1345.7	1345.7	1351.6	1354.6	1345.7	1351.6	1357.5	1342.7	1330.9
42.5°	1239.2	1254.0	1245.1	1245.1	1245.1	1248.1	1236.3	1239.2	1239.2	1218.5	1200.8
45°	1141.6	1153.5	1144.6	1135.7	1138.7	1141.6	1129.8	1126.8	1118.0	1094.3	1067.7
47.5°	1047.0	1058.8	1047.0	1041.1	1041.1	1041.1	1026.3	1017.4	1005.6	973.0	940.5
50°	949.4	961.2	952.3	946.4	940.5	940.5	928.7	916.9	899.1	866.6	831.1
52.5°	848.8	857.7	848.8	842.9	837.0	837.0	822.2	813.3	792.6	760.1	721.7
55°	733.5	739.4	730.5	724.6	721.7	721.7	709.8	700.9	683.2	656.6	621.1
57.5°	579.7	591.5	576.7	582.6	582.6	579.7	570.8	567.9	561.9	538.3	511.7
60°	414.1	414.1	411.1	422.9	420.0	425.9	420.0	422.9	425.9	408.1	390.4
62.5°	272.1	281.0	275.1	281.0	286.9	286.9	283.9	289.8	295.8	286.9	278.0
65°	183.4	183.4	183.4	186.3	186.3	189.3	186.3	189.3	192.2	189.3	183.4
67.5°	121.3	124.2	121.3	124.2	121.3	124.2	124.2	124.2	127.2	124.2	121.3
70°	79.9	79.9	79.9	79.9	79.9	79.9	79.9	79.9	82.8	79.9	76.9
72.5°	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
75°	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
77.5°	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
80°	14.8	14.8	14.8	14.8	14.8	14.8	14.8	11.8	14.8	11.8	11.8
82.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
85°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	3.0	5.9	3.0	3.0
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2200.4	2191.6	2235.9	2197.5	2218.2	2215.2	2218.2	2235.9	2235.9	2244.8	2241.9
5°	2188.6	2179.7	2230.0	2200.4	2224.1	2224.1	2233.0	2259.6	2259.6	2277.3	2280.3
7.5°	2170.9	2173.8	2227.1	2209.3	2235.9	2238.9	2253.7	2286.2	2295.1	2318.8	2330.6
10°	2150.2	2162.0	2218.2	2212.3	2247.8	2250.7	2280.3	2318.8	2330.6	2363.1	2383.8
12.5°	2141.3	2162.0	2227.1	2233.0	2268.5	2283.3	2315.8	2366.1	2386.8	2425.2	2454.8
15°	2138.3	2167.9	2238.9	2259.6	2301.0	2321.7	2366.1	2425.2	2448.9	2499.2	2534.7
17.5°	2123.6	2162.0	2238.9	2271.4	2315.8	2336.5	2392.7	2460.7	2490.3	2546.5	2587.9
20°	2096.9	2138.3	2215.2	2256.6	2304.0	2333.5	2389.7	2460.7	2490.3	2549.4	2596.8
22.5°	2061.4	2102.8	2176.8	2224.1	2265.5	2298.0	2357.2	2425.2	2451.8	2508.0	2555.4
25°	2017.1	2058.5	2120.6	2167.9	2206.4	2235.9	2286.2	2357.2	2374.9	2428.2	2478.5
27.5°	1955.0	1993.4	2040.7	2085.1	2120.6	2144.3	2188.6	2250.7	2265.5	2318.8	2360.2
30°	1872.2	1895.8	1937.2	1966.8	1993.4	2017.1	2049.6	2105.8	2111.7	2159.0	2197.5
32.5°	1759.8	1771.6	1801.2	1816.0	1839.6	1848.5	1875.1	1922.4	1916.5	1960.9	1993.4
35°	1623.7	1629.6	1629.6	1647.4	1653.3	1656.3	1677.0	1703.6	1694.7	1733.1	1756.8
37.5°	1475.8	1472.9	1455.1	1455.1	1458.1	1449.2	1458.1	1469.9	1458.1	1487.7	1508.4
40°	1325.0	1307.3	1274.7	1257.0	1248.1	1245.1	1227.4	1242.2	1212.6	1233.3	1248.1
42.5°	1180.1	1150.5	1100.2	1064.7	1049.9	1035.2	1005.6	1005.6	967.1	981.9	984.9
45°	1032.2	981.9	913.9	881.4	842.9	819.3	780.8	742.4	715.7	724.6	715.7
47.5°	896.2	837.0	757.1	700.9	656.6	624.1	570.8	526.5	499.8	488.0	476.2
50°	777.8	718.7	627.0	556.0	511.7	473.2	420.0	369.7	337.2	319.4	310.5
52.5°	671.4	609.3	520.5	446.6	399.3	363.8	304.6	254.4	218.9	198.2	186.3
55°	570.8	514.6	431.8	363.8	319.4	283.9	224.8	177.5	144.9	124.2	109.4
57.5°	470.3	420.0	352.0	286.9	248.4	215.9	165.6	124.2	97.6	79.9	68.0
60°	360.8	322.4	266.2	215.9	183.4	156.8	118.3	85.8	68.0	53.2	47.3
62.5°	254.4	230.7	189.3	153.8	133.1	112.4	82.8	62.1	47.3	38.4	35.5
65°	171.5	153.8	130.1	103.5	88.7	76.9	59.2	44.4	35.5	29.6	26.6
67.5°	112.4	103.5	85.8	71.0	62.1	53.2	41.4	32.5	26.6	23.7	20.7
70°	73.9	68.0	56.2	47.3	44.4	38.4	29.6	23.7	20.7	17.7	17.7
72.5°	47.3	41.4	38.4	32.5	29.6	26.6	20.7	17.7	14.8	14.8	14.8
75°	29.6	26.6	23.7	20.7	20.7	17.7	14.8	14.8	11.8	11.8	11.8
77.5°	17.7	17.7	14.8	14.8	11.8	11.8	11.8	8.9	8.9	8.9	8.9
80°	11.8	11.8	8.9	8.9	8.9	8.9	5.9	5.9	5.9	5.9	5.9
82.5°	5.9	5.9	5.9	5.9	5.9	5.9	3.0	3.0	3.0	3.0	3.0
85°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2256.6	2262.6	2256.6	2274.4	2244.8	2277.3	2265.5	2271.4	2295.1	2286.2	2295.1
5°	2301.0	2312.8	2312.8	2333.5	2306.9	2345.4	2333.5	2345.4	2369.0	2369.0	2380.9
7.5°	2357.2	2372.0	2377.9	2398.6	2372.0	2419.3	2407.5	2422.3	2451.8	2451.8	2460.7
10°	2416.4	2434.1	2445.9	2469.6	2440.0	2493.2	2481.4	2502.1	2528.7	2531.7	2546.5
12.5°	2490.3	2514.0	2528.7	2549.4	2528.7	2582.0	2570.1	2590.9	2626.3	2629.3	2647.0
15°	2573.1	2602.7	2620.4	2644.1	2620.4	2679.6	2667.7	2691.4	2718.0	2729.9	2747.6
17.5°	2626.3	2661.8	2676.6	2703.2	2679.6	2738.7	2723.9	2756.5	2780.1	2786.1	2806.8
20°	2635.2	2667.7	2688.5	2709.2	2688.5	2747.6	2732.8	2759.4	2789.0	2794.9	2809.7
22.5°	2596.8	2623.4	2647.0	2664.8	2647.0	2706.2	2685.5	2715.1	2741.7	2747.6	2759.4
25°	2508.0	2540.6	2564.2	2579.0	2561.3	2617.5	2599.7	2626.3	2650.0	2661.8	2664.8
27.5°	2383.8	2413.4	2437.1	2445.9	2434.1	2487.3	2463.7	2496.2	2516.9	2522.8	2531.7
30°	2215.2	2241.9	2265.5	2271.4	2262.6	2301.0	2289.2	2318.8	2339.5	2345.4	2351.3
32.5°	2008.2	2034.8	2049.6	2055.5	2046.7	2085.1	2073.3	2096.9	2120.6	2120.6	2120.6
35°	1774.6	1798.2	1807.1	1824.8	1804.1	1842.6	1830.7	1851.5	1872.2	1872.2	1875.1
37.5°	1523.2	1540.9	1546.8	1564.6	1543.9	1579.4	1570.5	1588.2	1606.0	1603.0	1608.9
40°	1254.0	1271.8	1277.7	1292.5	1274.7	1304.3	1298.4	1316.1	1330.9	1330.9	1330.9
42.5°	993.8	1005.6	1005.6	1020.4	1002.6	1029.2	1029.2	1041.1	1055.9	1052.9	1052.9
45°	721.7	718.7	724.6	721.7	721.7	745.3	745.3	751.2	763.1	757.1	760.1
47.5°	479.1	482.1	470.3	479.1	467.3	488.0	488.0	488.0	496.9	491.0	496.9
50°	304.6	295.8	289.8	289.8	286.9	301.7	295.8	298.7	304.6	298.7	304.6
52.5°	171.5	168.6	162.7	165.6	159.7	162.7	162.7	162.7	165.6	162.7	168.6
55°	100.6	91.7	88.7	88.7	85.8	88.7	85.8	85.8	85.8	82.8	85.8
57.5°	59.2	56.2	53.2	53.2	50.3	50.3	50.3	50.3	50.3	50.3	50.3
60°	41.4	38.4	38.4	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
62.5°	32.5	29.6	29.6	29.6	26.6	26.6	26.6	26.6	26.6	29.6	26.6
65°	23.7	23.7	23.7	23.7	23.7	23.7	20.7	23.7	23.7	23.7	23.7
67.5°	20.7	20.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
70°	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
72.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
75°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
77.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
80°	5.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	0.0	3.0	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: P212767

CATALOG NUMBER: LD4B50D010TE EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2304.0	2292.1	2265.5	2283.3	2286.2	2274.4	2289.2	2306.9	2289.2	2274.4	2286.2
5°	2389.7	2380.9	2357.2	2372.0	2374.9	2372.0	2380.9	2395.6	2380.9	2372.0	2374.9
7.5°	2475.5	2469.6	2443.0	2460.7	2466.6	2460.7	2469.6	2484.4	2469.6	2460.7	2466.6
10°	2558.3	2555.4	2528.7	2552.4	2555.4	2549.4	2558.3	2582.0	2558.3	2549.4	2555.4
12.5°	2653.0	2658.9	2629.3	2655.9	2658.9	2653.0	2664.8	2682.5	2664.8	2653.0	2658.9
15°	2762.4	2759.4	2735.8	2756.5	2762.4	2756.5	2771.3	2794.9	2771.3	2756.5	2762.4
17.5°	2815.6	2815.6	2797.9	2818.6	2821.5	2821.5	2833.4	2851.1	2833.4	2821.5	2821.5
20°	2818.6	2821.5	2800.8	2824.5	2824.5	2824.5	2836.3	2845.2	2836.3	2824.5	2824.5
22.5°	2771.3	2774.2	2753.5	2774.2	2774.2	2777.2	2783.1	2789.0	2783.1	2777.2	2774.2
25°	2679.6	2682.5	2664.8	2682.5	2679.6	2679.6	2685.5	2694.4	2685.5	2679.6	2679.6
27.5°	2543.5	2546.5	2522.8	2543.5	2540.6	2537.6	2546.5	2549.4	2546.5	2537.6	2540.6
30°	2363.1	2366.1	2345.4	2363.1	2360.2	2357.2	2369.0	2372.0	2369.0	2357.2	2360.2
32.5°	2147.2	2141.3	2126.5	2141.3	2138.3	2138.3	2144.3	2153.1	2144.3	2138.3	2138.3
35°	1886.9	1886.9	1878.1	1889.9	1881.0	1892.9	1892.9	1895.8	1892.9	1892.9	1881.0
37.5°	1620.8	1620.8	1614.8	1620.8	1617.8	1629.6	1629.6	1638.5	1629.6	1629.6	1617.8
40°	1342.7	1342.7	1336.8	1342.7	1351.6	1351.6	1348.7	1360.5	1348.7	1351.6	1351.6
42.5°	1061.8	1061.8	1058.8	1073.6	1073.6	1073.6	1064.7	1076.6	1064.7	1073.6	1073.6
45°	771.9	766.0	763.1	763.1	766.0	777.8	766.0	780.8	766.0	777.8	766.0
47.5°	491.0	493.9	496.9	505.7	499.8	496.9	496.9	505.7	496.9	496.9	499.8
50°	301.7	304.6	304.6	310.5	301.7	307.6	304.6	310.5	304.6	307.6	301.7
52.5°	165.6	165.6	165.6	171.5	165.6	168.6	165.6	171.5	165.6	168.6	165.6
55°	85.8	85.8	85.8	88.7	85.8	85.8	85.8	88.7	85.8	85.8	85.8
57.5°	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
60°	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
62.5°	29.6	26.6	26.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
65°	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7
67.5°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
70°	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
72.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
75°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
77.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
80°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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: P212767

CATALOG NUMBER: LD4B50D010TE EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2283.3	2265.5	2292.1	2304.0	2295.1	2286.2	2295.1	2271.4	2265.5	2277.3	2244.8
5°	2372.0	2357.2	2380.9	2389.7	2380.9	2369.0	2369.0	2345.4	2333.5	2345.4	2306.9
7.5°	2460.7	2443.0	2469.6	2475.5	2460.7	2451.8	2451.8	2422.3	2407.5	2419.3	2372.0
10°	2552.4	2528.7	2555.4	2558.3	2546.5	2531.7	2528.7	2502.1	2481.4	2493.2	2440.0
12.5°	2655.9	2629.3	2658.9	2653.0	2647.0	2629.3	2626.3	2590.9	2570.1	2582.0	2528.7
15°	2756.5	2735.8	2759.4	2762.4	2747.6	2729.9	2718.0	2691.4	2667.7	2679.6	2620.4
17.5°	2818.6	2797.9	2815.6	2815.6	2806.8	2786.1	2780.1	2756.5	2723.9	2738.7	2679.6
20°	2824.5	2800.8	2821.5	2818.6	2809.7	2794.9	2789.0	2759.4	2732.8	2747.6	2688.5
22.5°	2774.2	2753.5	2774.2	2771.3	2759.4	2747.6	2741.7	2715.1	2685.5	2706.2	2647.0
25°	2682.5	2664.8	2682.5	2679.6	2664.8	2661.8	2650.0	2626.3	2599.7	2617.5	2561.3
27.5°	2543.5	2522.8	2546.5	2543.5	2531.7	2522.8	2516.9	2496.2	2463.7	2487.3	2434.1
30°	2363.1	2345.4	2366.1	2363.1	2351.3	2345.4	2339.5	2318.8	2289.2	2301.0	2262.6
32.5°	2141.3	2126.5	2141.3	2147.2	2120.6	2120.6	2120.6	2096.9	2073.3	2085.1	2046.7
35°	1889.9	1878.1	1886.9	1886.9	1875.1	1872.2	1872.2	1851.5	1830.7	1842.6	1804.1
37.5°	1620.8	1614.8	1620.8	1620.8	1608.9	1603.0	1606.0	1588.2	1570.5	1579.4	1543.9
40°	1342.7	1336.8	1342.7	1342.7	1330.9	1330.9	1330.9	1316.1	1298.4	1304.3	1274.7
42.5°	1073.6	1058.8	1061.8	1061.8	1052.9	1052.9	1055.9	1041.1	1029.2	1029.2	1002.6
45°	763.1	763.1	766.0	771.9	760.1	757.1	763.1	751.2	745.3	745.3	721.7
47.5°	505.7	496.9	493.9	491.0	496.9	491.0	496.9	488.0	488.0	488.0	467.3
50°	310.5	304.6	304.6	301.7	304.6	298.7	304.6	298.7	295.8	301.7	286.9
52.5°	171.5	165.6	165.6	165.6	168.6	162.7	165.6	162.7	162.7	162.7	159.7
55°	88.7	85.8	85.8	85.8	85.8	82.8	85.8	85.8	85.8	88.7	85.8
57.5°	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
60°	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
62.5°	29.6	26.6	26.6	29.6	26.6	29.6	26.6	26.6	26.6	26.6	26.6
65°	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	20.7	23.7	23.7
67.5°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
70°	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
72.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
75°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
77.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
80°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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: P212767

CATALOG NUMBER: LD4B50D010TE EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2274.4	2256.6	2262.6	2256.6	2241.9	2244.8	2235.9	2235.9	2218.2	2215.2	2218.2
5°	2333.5	2312.8	2312.8	2301.0	2280.3	2277.3	2259.6	2259.6	2233.0	2224.1	2224.1
7.5°	2398.6	2377.9	2372.0	2357.2	2330.6	2318.8	2295.1	2286.2	2253.7	2238.9	2235.9
10°	2469.6	2445.9	2434.1	2416.4	2383.8	2363.1	2330.6	2318.8	2280.3	2250.7	2247.8
12.5°	2549.4	2528.7	2514.0	2490.3	2454.8	2425.2	2386.8	2366.1	2315.8	2283.3	2268.5
15°	2644.1	2620.4	2602.7	2573.1	2534.7	2499.2	2448.9	2425.2	2366.1	2321.7	2301.0
17.5°	2703.2	2676.6	2661.8	2626.3	2587.9	2546.5	2490.3	2460.7	2392.7	2336.5	2315.8
20°	2709.2	2688.5	2667.7	2635.2	2596.8	2549.4	2490.3	2460.7	2389.7	2333.5	2304.0
22.5°	2664.8	2647.0	2623.4	2596.8	2555.4	2508.0	2451.8	2425.2	2357.2	2298.0	2265.5
25°	2579.0	2564.2	2540.6	2508.0	2478.5	2428.2	2374.9	2357.2	2286.2	2235.9	2206.4
27.5°	2445.9	2437.1	2413.4	2383.8	2360.2	2318.8	2265.5	2250.7	2188.6	2144.3	2120.6
30°	2271.4	2265.5	2241.9	2215.2	2197.5	2159.0	2111.7	2105.8	2049.6	2017.1	1993.4
32.5°	2055.5	2049.6	2034.8	2008.2	1993.4	1960.9	1916.5	1922.4	1875.1	1848.5	1839.6
35°	1824.8	1807.1	1798.2	1774.6	1756.8	1733.1	1694.7	1703.6	1677.0	1656.3	1653.3
37.5°	1564.6	1546.8	1540.9	1523.2	1508.4	1487.7	1458.1	1469.9	1458.1	1449.2	1458.1
40°	1292.5	1277.7	1271.8	1254.0	1248.1	1233.3	1212.6	1242.2	1227.4	1245.1	1248.1
42.5°	1020.4	1005.6	1005.6	993.8	984.9	981.9	967.1	1005.6	1005.6	1035.2	1049.9
45°	721.7	724.6	718.7	721.7	715.7	724.6	715.7	742.4	780.8	819.3	842.9
47.5°	479.1	470.3	482.1	479.1	476.2	488.0	499.8	526.5	570.8	624.1	656.6
50°	289.8	289.8	295.8	304.6	310.5	319.4	337.2	369.7	420.0	473.2	511.7
52.5°	165.6	162.7	168.6	171.5	186.3	198.2	218.9	254.4	304.6	363.8	399.3
55°	88.7	88.7	91.7	100.6	109.4	124.2	144.9	177.5	224.8	283.9	319.4
57.5°	53.2	53.2	56.2	59.2	68.0	79.9	97.6	124.2	165.6	215.9	248.4
60°	35.5	38.4	38.4	41.4	47.3	53.2	68.0	85.8	118.3	156.8	183.4
62.5°	29.6	29.6	29.6	32.5	35.5	38.4	47.3	62.1	82.8	112.4	133.1
65°	23.7	23.7	23.7	23.7	26.6	29.6	35.5	44.4	59.2	76.9	88.7
67.5°	17.7	17.7	20.7	20.7	20.7	23.7	26.6	32.5	41.4	53.2	62.1
70°	14.8	14.8	14.8	14.8	17.7	17.7	20.7	23.7	29.6	38.4	44.4
72.5°	11.8	11.8	11.8	11.8	14.8	14.8	14.8	17.7	20.7	26.6	29.6
75°	8.9	8.9	8.9	8.9	11.8	11.8	11.8	14.8	14.8	17.7	20.7
77.5°	5.9	5.9	5.9	5.9	8.9	8.9	8.9	8.9	11.8	11.8	11.8
80°	3.0	3.0	3.0	5.9	5.9	5.9	5.9	5.9	5.9	8.9	8.9
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.9	5.9
85°	0.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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: P212767

CATALOG NUMBER: LD4B50D010TE EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9	2238.9
2.5°	2197.5	2235.9	2191.6	2200.4	2185.7	2212.3	2176.8	2185.7	2191.6	2185.7	2188.6
5°	2200.4	2230.0	2179.7	2188.6	2165.0	2182.7	2150.2	2153.1	2153.1	2147.2	2144.3
7.5°	2209.3	2227.1	2173.8	2170.9	2141.3	2159.0	2120.6	2114.7	2111.7	2102.8	2105.8
10°	2212.3	2218.2	2162.0	2150.2	2114.7	2120.6	2082.1	2070.3	2061.4	2055.5	2052.6
12.5°	2233.0	2227.1	2162.0	2141.3	2096.9	2094.0	2052.6	2034.8	2020.0	2014.1	2011.2
15°	2259.6	2238.9	2167.9	2138.3	2088.1	2076.2	2031.9	2014.1	1993.4	1987.5	1981.6
17.5°	2271.4	2238.9	2162.0	2123.6	2067.4	2052.6	2008.2	1984.5	1963.8	1955.0	1949.1
20°	2256.6	2215.2	2138.3	2096.9	2037.8	2017.1	1972.7	1946.1	1925.4	1916.5	1910.6
22.5°	2224.1	2176.8	2102.8	2061.4	2002.3	1975.7	1937.2	1913.6	1889.9	1886.9	1878.1
25°	2167.9	2120.6	2058.5	2017.1	1963.8	1937.2	1901.7	1881.0	1857.4	1854.4	1851.5
27.5°	2085.1	2040.7	1993.4	1955.0	1907.6	1886.9	1860.3	1839.6	1818.9	1818.9	1813.0
30°	1966.8	1937.2	1895.8	1872.2	1833.7	1813.0	1795.3	1780.5	1759.8	1762.7	1756.8
32.5°	1816.0	1801.2	1771.6	1759.8	1730.2	1724.3	1706.5	1694.7	1677.0	1682.9	1677.0
35°	1647.4	1629.6	1629.6	1623.7	1608.9	1606.0	1597.1	1591.2	1579.4	1582.3	1582.3
37.5°	1455.1	1455.1	1472.9	1475.8	1472.9	1478.8	1475.8	1475.8	1464.0	1469.9	1467.0
40°	1257.0	1274.7	1307.3	1325.0	1330.9	1342.7	1357.5	1351.6	1345.7	1354.6	1351.6
42.5°	1064.7	1100.2	1150.5	1180.1	1200.8	1218.5	1239.2	1239.2	1236.3	1248.1	1245.1
45°	881.4	913.9	981.9	1032.2	1067.7	1094.3	1118.0	1126.8	1129.8	1141.6	1138.7
47.5°	700.9	757.1	837.0	896.2	940.5	973.0	1005.6	1017.4	1026.3	1041.1	1041.1
50°	556.0	627.0	718.7	777.8	831.1	866.6	899.1	916.9	928.7	940.5	940.5
52.5°	446.6	520.5	609.3	671.4	721.7	760.1	792.6	813.3	822.2	837.0	837.0
55°	363.8	431.8	514.6	570.8	621.1	656.6	683.2	700.9	709.8	721.7	721.7
57.5°	286.9	352.0	420.0	470.3	511.7	538.3	561.9	567.9	570.8	579.7	582.6
60°	215.9	266.2	322.4	360.8	390.4	408.1	425.9	422.9	420.0	425.9	420.0
62.5°	153.8	189.3	230.7	254.4	278.0	286.9	295.8	289.8	283.9	286.9	286.9
65°	103.5	130.1	153.8	171.5	183.4	189.3	192.2	189.3	186.3	189.3	186.3
67.5°	71.0	85.8	103.5	112.4	121.3	124.2	127.2	124.2	124.2	124.2	121.3
70°	47.3	56.2	68.0	73.9	76.9	79.9	82.8	79.9	79.9	79.9	79.9
72.5°	32.5	38.4	41.4	47.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
75°	20.7	23.7	26.6	29.6	32.5	32.5	32.5	32.5	32.5	32.5	32.5
77.5°	14.8	14.8	17.7	17.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
80°	8.9	8.9	11.8	11.8	11.8	11.8	14.8	11.8	14.8	14.8	14.8
82.5°	5.9	5.9	5.9	5.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
85°	3.0	3.0	3.0	3.0	3.0	3.0	5.9	3.0	5.9	5.9	5.9
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: P212767

CATALOG NUMBER: LD4B50D010TE EU4B30509050 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2238.9	2238.9	2238.9	2238.9
2.5°	2188.6	2182.7	2165.0	2185.7
5°	2141.3	2135.4	2120.6	2135.4
7.5°	2094.0	2085.1	2073.3	2082.1
10°	2037.8	2031.9	2017.1	2026.0
12.5°	1996.4	1984.5	1975.7	1978.6
15°	1969.8	1957.9	1949.1	1952.0
17.5°	1934.3	1922.4	1913.6	1913.6
20°	1895.8	1884.0	1878.1	1875.1
22.5°	1863.3	1854.4	1851.5	1842.6
25°	1833.7	1827.8	1827.8	1816.0
27.5°	1801.2	1792.3	1792.3	1780.5
30°	1745.0	1742.0	1742.0	1733.1
32.5°	1671.0	1662.2	1668.1	1653.3
35°	1570.5	1564.6	1573.4	1561.6
37.5°	1461.1	1458.1	1464.0	1455.1
40°	1345.7	1345.7	1354.6	1339.8
42.5°	1245.1	1245.1	1254.0	1239.2
45°	1135.7	1144.6	1153.5	1141.6
47.5°	1041.1	1047.0	1058.8	1047.0
50°	946.4	952.3	961.2	949.4
52.5°	842.9	848.8	857.7	848.8
55°	724.6	730.5	739.4	733.5
57.5°	582.6	576.7	591.5	579.7
60°	422.9	411.1	414.1	414.1
62.5°	281.0	275.1	281.0	272.1
65°	186.3	183.4	183.4	183.4
67.5°	124.2	121.3	124.2	121.3
70°	79.9	79.9	79.9	79.9
72.5°	50.3	50.3	50.3	50.3
75°	32.5	32.5	32.5	32.5
77.5°	20.7	20.7	20.7	20.7
80°	14.8	14.8	14.8	14.8
82.5°	8.9	8.9	8.9	8.9
85°	5.9	5.9	5.9	5.9
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)