

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: P212757

Luminaire Tested: **LD4B50D010TE EU4B30508027 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212757
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 EU4B30508027 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4514.0 lumens
Efficiency: N/A
Efficacy: 76.8 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

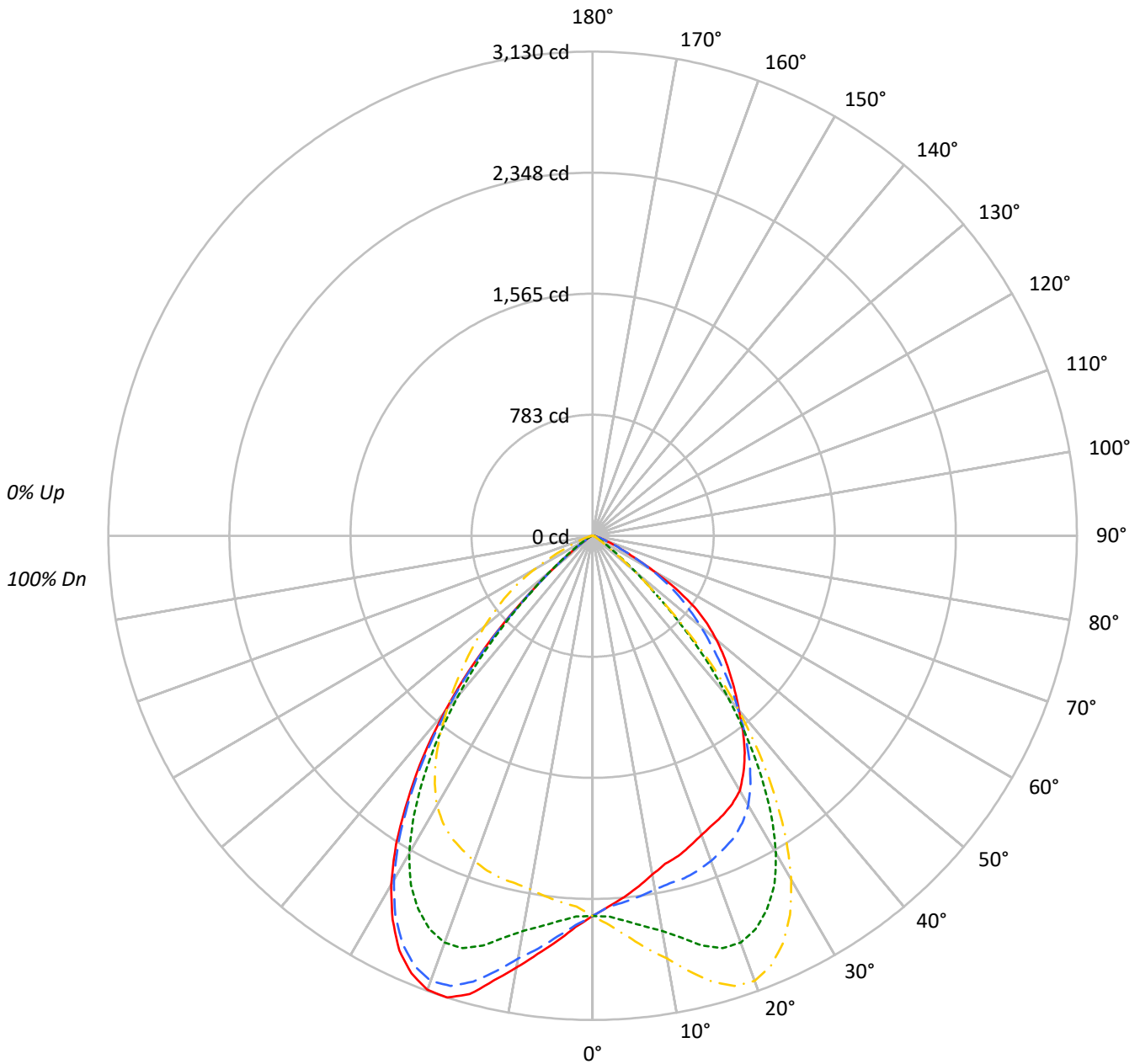
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWL11

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°	303122	303122	303122	303122
5°	290214	309505	325576	309505
10°	278515	324869	354954	324869
15°	273603	350285	391748	350285
20°	270163	367310	409930	367310
25°	271268	362725	402493	362725
30°	270939	337524	370824	337524
35°	258104	286443	313336	286443
40°	236791	217968	240446	217968
45°	218587	138747	149493	138747
50°	199970	67277	65416	67277
55°	173134	29311	20946	29311
60°	112121	14407	9621	14407
65°	58752	9485	7588	9485
70°	31628	7032	5842	7032
75°	17014	6195	4623	6195
80°	11507	4617	2273	4617
85°	9199	4529	0	4529



TEST NUMBER: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWLI1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.6	5.3
10°-20°	749.5	16.6
20°-30°	1165.2	25.8
30°-40°	1176.9	26.1
40°-50°	745.2	16.5
50°-60°	312.8	6.9
60°-70°	99.1	2.2
70°-80°	22.7	0.5
80°-90°	3.2	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°	2154.2	47.7
0°-40°	3331.1	73.8
0°-60°	4389.0	97.2
0°-90°	4514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4514.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2458	2458	2458	2458	2458	
5°	2344	2500	2630	2500	2344	220
15°	2143	2743	3068	2743	2143	604
25°	1993	2665	2957	2665	1993	918
35°	1714	1902	2081	1902	1714	1065
45°	1253	795	857	795	1253	967
55°	805	136	97	136	805	695
65°	201	32	26	32	201	222
75°	36	13	10	13	36	44
85°	6	3	0	3	6	7
90°	0	0	0	0	0	



TEST NUMBER: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWLI1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5
2.5°	2399.0	2376.3	2395.8	2402.3	2402.3	2399.0	2405.5	2399.0	2389.3	2428.3	2399.0
5°	2343.9	2327.6	2343.9	2350.3	2353.6	2356.8	2363.3	2363.3	2360.1	2395.8	2376.3
7.5°	2285.4	2275.7	2288.7	2298.4	2311.4	2308.1	2317.9	2321.1	2327.6	2369.8	2350.3
10°	2223.7	2214.0	2230.2	2236.7	2253.0	2256.2	2262.7	2272.4	2285.4	2327.6	2321.1
12.5°	2171.8	2168.5	2178.3	2191.3	2207.5	2210.8	2217.2	2233.5	2253.0	2298.4	2301.6
15°	2142.6	2139.3	2149.1	2162.1	2175.0	2181.5	2188.0	2210.8	2230.2	2278.9	2291.9
17.5°	2100.4	2100.4	2110.1	2123.1	2139.3	2145.8	2155.6	2178.3	2204.3	2253.0	2269.2
20°	2058.2	2061.4	2067.9	2080.9	2097.1	2103.6	2113.4	2136.1	2165.3	2214.0	2236.7
22.5°	2022.5	2032.2	2035.4	2045.2	2061.4	2071.2	2074.4	2100.4	2126.3	2168.5	2197.8
25°	1993.2	2006.2	2006.2	2012.7	2032.2	2035.4	2038.7	2064.7	2087.4	2126.3	2155.6
27.5°	1954.3	1967.3	1967.3	1977.0	1990.0	1996.5	1996.5	2019.2	2041.9	2071.2	2093.9
30°	1902.3	1912.1	1912.1	1915.3	1928.3	1934.8	1931.6	1954.3	1970.5	1990.0	2012.7
32.5°	1814.7	1830.9	1824.4	1834.2	1840.7	1847.2	1840.7	1860.1	1873.1	1892.6	1899.1
35°	1714.1	1727.0	1717.3	1723.8	1736.8	1736.8	1733.5	1746.5	1753.0	1762.8	1766.0
37.5°	1597.2	1606.9	1600.4	1603.7	1610.2	1613.4	1606.9	1619.9	1619.9	1623.2	1616.7
40°	1470.6	1486.8	1477.1	1477.1	1483.6	1486.8	1477.1	1483.6	1490.1	1473.8	1460.8
42.5°	1360.2	1376.4	1366.7	1366.7	1366.7	1370.0	1357.0	1360.2	1360.2	1337.5	1318.0
45°	1253.1	1266.1	1256.3	1246.6	1249.8	1253.1	1240.1	1236.9	1227.1	1201.1	1171.9
47.5°	1149.2	1162.2	1149.2	1142.7	1142.7	1142.7	1126.5	1116.7	1103.8	1068.0	1032.3
50°	1042.1	1055.1	1045.3	1038.8	1032.3	1032.3	1019.3	1006.4	986.9	951.2	912.2
52.5°	931.7	941.4	931.7	925.2	918.7	918.7	902.5	892.7	870.0	834.3	792.1
55°	805.1	811.6	801.8	795.4	792.1	792.1	779.1	769.4	749.9	720.7	681.7
57.5°	636.3	649.3	633.0	639.5	639.5	636.3	626.5	623.3	616.8	590.8	561.6
60°	454.5	454.5	451.2	464.2	461.0	467.5	461.0	464.2	467.5	448.0	428.5
62.5°	298.7	308.4	301.9	308.4	314.9	314.9	311.6	318.1	324.6	314.9	305.2
65°	201.3	201.3	201.3	204.5	204.5	207.8	204.5	207.8	211.0	207.8	201.3
67.5°	133.1	136.3	133.1	136.3	133.1	136.3	136.3	136.3	139.6	136.3	133.1
70°	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	90.9	87.7	84.4
72.5°	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2
75°	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7
77.5°	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
80°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	13.0	16.2	13.0	13.0
82.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
85°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	3.2	6.5	3.2	3.2
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: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5
2.5°	2415.3	2405.5	2454.2	2412.0	2434.7	2431.5	2434.7	2454.2	2454.2	2464.0	2460.7
5°	2402.3	2392.5	2447.7	2415.3	2441.2	2441.2	2451.0	2480.2	2480.2	2499.7	2502.9
7.5°	2382.8	2386.1	2444.5	2425.0	2454.2	2457.5	2473.7	2509.4	2519.2	2545.1	2558.1
10°	2360.1	2373.1	2434.7	2428.3	2467.2	2470.5	2502.9	2545.1	2558.1	2593.8	2616.5
12.5°	2350.3	2373.1	2444.5	2451.0	2489.9	2506.2	2541.9	2597.1	2619.8	2662.0	2694.5
15°	2347.1	2379.6	2457.5	2480.2	2525.6	2548.4	2597.1	2662.0	2688.0	2743.1	2782.1
17.5°	2330.9	2373.1	2457.5	2493.2	2541.9	2564.6	2626.3	2700.9	2733.4	2795.1	2840.5
20°	2301.6	2347.1	2431.5	2476.9	2528.9	2561.4	2623.0	2700.9	2733.4	2798.3	2850.3
22.5°	2262.7	2308.1	2389.3	2441.2	2486.7	2522.4	2587.3	2662.0	2691.2	2752.9	2804.8
25°	2214.0	2259.4	2327.6	2379.6	2421.8	2454.2	2509.4	2587.3	2606.8	2665.2	2720.4
27.5°	2145.8	2188.0	2240.0	2288.7	2327.6	2353.6	2402.3	2470.5	2486.7	2545.1	2590.6
30°	2054.9	2080.9	2126.3	2158.8	2188.0	2214.0	2249.7	2311.4	2317.9	2369.8	2412.0
32.5°	1931.6	1944.6	1977.0	1993.2	2019.2	2029.0	2058.2	2110.1	2103.6	2152.3	2188.0
35°	1782.2	1788.7	1788.7	1808.2	1814.7	1817.9	1840.7	1869.9	1860.1	1902.3	1928.3
37.5°	1619.9	1616.7	1597.2	1597.2	1600.4	1590.7	1600.4	1613.4	1600.4	1632.9	1655.6
40°	1454.4	1434.9	1399.2	1379.7	1370.0	1366.7	1347.2	1363.5	1331.0	1353.7	1370.0
42.5°	1295.3	1262.8	1207.6	1168.7	1152.4	1136.2	1103.8	1103.8	1061.5	1077.8	1081.0
45°	1133.0	1077.8	1003.1	967.4	925.2	899.2	857.0	814.8	785.6	795.4	785.6
47.5°	983.6	918.7	831.1	769.4	720.7	685.0	626.5	577.8	548.6	535.6	522.7
50°	853.8	788.9	688.2	610.3	561.6	519.4	461.0	405.8	370.1	350.6	340.9
52.5°	736.9	668.7	571.4	490.2	438.3	399.3	334.4	279.2	240.2	217.5	204.5
55°	626.5	564.9	474.0	399.3	350.6	311.6	246.7	194.8	159.1	136.3	120.1
57.5°	516.2	461.0	386.3	314.9	272.7	237.0	181.8	136.3	107.1	87.7	74.7
60°	396.1	353.8	292.2	237.0	201.3	172.1	129.9	94.1	74.7	58.4	51.9
62.5°	279.2	253.2	207.8	168.8	146.1	123.4	90.9	68.2	51.9	42.2	39.0
65°	188.3	168.8	142.8	113.6	97.4	84.4	64.9	48.7	39.0	32.5	29.2
67.5°	123.4	113.6	94.1	77.9	68.2	58.4	45.4	35.7	29.2	26.0	22.7
70°	81.2	74.7	61.7	51.9	48.7	42.2	32.5	26.0	22.7	19.5	19.5
72.5°	51.9	45.4	42.2	35.7	32.5	29.2	22.7	19.5	16.2	16.2	16.2
75°	32.5	29.2	26.0	22.7	22.7	19.5	16.2	16.2	13.0	13.0	13.0
77.5°	19.5	19.5	16.2	16.2	13.0	13.0	13.0	9.7	9.7	9.7	9.7
80°	13.0	13.0	9.7	9.7	9.7	9.7	6.5	6.5	6.5	6.5	6.5
82.5°	6.5	6.5	6.5	6.5	6.5	6.5	3.2	3.2	3.2	3.2	3.2
85°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5
2.5°	2476.9	2483.4	2476.9	2496.4	2464.0	2499.7	2486.7	2493.2	2519.2	2509.4	2519.2
5°	2525.6	2538.6	2538.6	2561.4	2532.1	2574.3	2561.4	2574.3	2600.3	2600.3	2613.3
7.5°	2587.3	2603.6	2610.0	2632.8	2603.6	2655.5	2642.5	2658.7	2691.2	2691.2	2700.9
10°	2652.3	2671.7	2684.7	2710.7	2678.2	2736.7	2723.7	2746.4	2775.6	2778.9	2795.1
12.5°	2733.4	2759.4	2775.6	2798.3	2775.6	2834.0	2821.1	2843.8	2882.7	2886.0	2905.5
15°	2824.3	2856.8	2876.2	2902.2	2876.2	2941.2	2928.2	2954.2	2983.4	2996.4	3015.8
17.5°	2882.7	2921.7	2937.9	2967.1	2941.2	3006.1	2989.9	3025.6	3051.6	3058.0	3080.8
20°	2892.5	2928.2	2950.9	2973.6	2950.9	3015.8	2999.6	3028.8	3061.3	3067.8	3084.0
22.5°	2850.3	2879.5	2905.5	2924.9	2905.5	2970.4	2947.7	2980.1	3009.3	3015.8	3028.8
25°	2752.9	2788.6	2814.6	2830.8	2811.3	2873.0	2853.5	2882.7	2908.7	2921.7	2924.9
27.5°	2616.5	2649.0	2675.0	2684.7	2671.7	2730.2	2704.2	2739.9	2762.6	2769.1	2778.9
30°	2431.5	2460.7	2486.7	2493.2	2483.4	2525.6	2512.7	2545.1	2567.8	2574.3	2580.8
32.5°	2204.3	2233.5	2249.7	2256.2	2246.5	2288.7	2275.7	2301.6	2327.6	2327.6	2327.6
35°	1947.8	1973.8	1983.5	2003.0	1980.3	2022.5	2009.5	2032.2	2054.9	2054.9	2058.2
37.5°	1671.9	1691.3	1697.8	1717.3	1694.6	1733.5	1723.8	1743.3	1762.8	1759.5	1766.0
40°	1376.4	1395.9	1402.4	1418.6	1399.2	1431.6	1425.1	1444.6	1460.8	1460.8	1460.8
42.5°	1090.8	1103.8	1103.8	1120.0	1100.5	1129.7	1129.7	1142.7	1158.9	1155.7	1155.7
45°	792.1	788.9	795.4	792.1	792.1	818.1	818.1	824.6	837.6	831.1	834.3
47.5°	525.9	529.2	516.2	525.9	512.9	535.6	535.6	535.6	545.4	538.9	545.4
50°	334.4	324.6	318.1	318.1	314.9	331.1	324.6	327.9	334.4	327.9	334.4
52.5°	188.3	185.0	178.5	181.8	175.3	178.5	178.5	178.5	181.8	178.5	185.0
55°	110.4	100.6	97.4	97.4	94.1	97.4	94.1	94.1	94.1	90.9	94.1
57.5°	64.9	61.7	58.4	58.4	55.2	55.2	55.2	55.2	55.2	55.2	55.2
60°	45.4	42.2	42.2	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
62.5°	35.7	32.5	32.5	32.5	29.2	29.2	29.2	29.2	29.2	32.5	29.2
65°	26.0	26.0	26.0	26.0	26.0	26.0	22.7	26.0	26.0	26.0	26.0
67.5°	22.7	22.7	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
70°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
72.5°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
75°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	6.5	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
85°	0.0	3.2	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: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWL11

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5
2.5°	2528.9	2515.9	2486.7	2506.2	2509.4	2496.4	2512.7	2532.1	2512.7	2496.4	2509.4
5°	2623.0	2613.3	2587.3	2603.6	2606.8	2603.6	2613.3	2629.5	2613.3	2603.6	2606.8
7.5°	2717.2	2710.7	2681.5	2700.9	2707.4	2700.9	2710.7	2726.9	2710.7	2700.9	2707.4
10°	2808.1	2804.8	2775.6	2801.6	2804.8	2798.3	2808.1	2834.0	2808.1	2798.3	2804.8
12.5°	2912.0	2918.5	2886.0	2915.2	2918.5	2912.0	2924.9	2944.4	2924.9	2912.0	2918.5
15°	3032.1	3028.8	3002.9	3025.6	3032.1	3025.6	3041.8	3067.8	3041.8	3025.6	3032.1
17.5°	3090.5	3090.5	3071.0	3093.8	3097.0	3097.0	3110.0	3129.5	3110.0	3097.0	3097.0
20°	3093.8	3097.0	3074.3	3100.2	3100.2	3100.2	3113.2	3123.0	3113.2	3100.2	3100.2
22.5°	3041.8	3045.1	3022.3	3045.1	3045.1	3048.3	3054.8	3061.3	3054.8	3048.3	3045.1
25°	2941.2	2944.4	2924.9	2944.4	2941.2	2941.2	2947.7	2957.4	2947.7	2941.2	2941.2
27.5°	2791.8	2795.1	2769.1	2791.8	2788.6	2785.4	2795.1	2798.3	2795.1	2785.4	2788.6
30°	2593.8	2597.1	2574.3	2593.8	2590.6	2587.3	2600.3	2603.6	2600.3	2587.3	2590.6
32.5°	2356.8	2350.3	2334.1	2350.3	2347.1	2347.1	2353.6	2363.3	2353.6	2347.1	2347.1
35°	2071.2	2071.2	2061.4	2074.4	2064.7	2077.7	2077.7	2080.9	2077.7	2077.7	2064.7
37.5°	1779.0	1779.0	1772.5	1779.0	1775.7	1788.7	1788.7	1798.5	1788.7	1788.7	1775.7
40°	1473.8	1473.8	1467.3	1473.8	1483.6	1483.6	1480.3	1493.3	1480.3	1483.6	1483.6
42.5°	1165.4	1165.4	1162.2	1178.4	1178.4	1178.4	1168.7	1181.7	1168.7	1178.4	1178.4
45°	847.3	840.8	837.6	837.6	840.8	853.8	840.8	857.0	840.8	853.8	840.8
47.5°	538.9	542.1	545.4	555.1	548.6	545.4	545.4	555.1	545.4	545.4	548.6
50°	331.1	334.4	334.4	340.9	331.1	337.6	334.4	340.9	334.4	337.6	331.1
52.5°	181.8	181.8	181.8	188.3	181.8	185.0	181.8	188.3	181.8	185.0	181.8
55°	94.1	94.1	94.1	97.4	94.1	94.1	94.1	97.4	94.1	94.1	94.1
57.5°	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2
60°	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
62.5°	32.5	29.2	29.2	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
65°	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
67.5°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
70°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
72.5°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
75°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5
2.5°	2506.2	2486.7	2515.9	2528.9	2519.2	2509.4	2519.2	2493.2	2486.7	2499.7	2464.0
5°	2603.6	2587.3	2613.3	2623.0	2613.3	2600.3	2600.3	2574.3	2561.4	2574.3	2532.1
7.5°	2700.9	2681.5	2710.7	2717.2	2700.9	2691.2	2691.2	2658.7	2642.5	2655.5	2603.6
10°	2801.6	2775.6	2804.8	2808.1	2795.1	2778.9	2775.6	2746.4	2723.7	2736.7	2678.2
12.5°	2915.2	2886.0	2918.5	2912.0	2905.5	2886.0	2882.7	2843.8	2821.1	2834.0	2775.6
15°	3025.6	3002.9	3028.8	3032.1	3015.8	2996.4	2983.4	2954.2	2928.2	2941.2	2876.2
17.5°	3093.8	3071.0	3090.5	3090.5	3080.8	3058.0	3051.6	3025.6	2989.9	3006.1	2941.2
20°	3100.2	3074.3	3097.0	3093.8	3084.0	3067.8	3061.3	3028.8	2999.6	3015.8	2950.9
22.5°	3045.1	3022.3	3045.1	3041.8	3028.8	3015.8	3009.3	2980.1	2947.7	2970.4	2905.5
25°	2944.4	2924.9	2944.4	2941.2	2924.9	2921.7	2908.7	2882.7	2853.5	2873.0	2811.3
27.5°	2791.8	2769.1	2795.1	2791.8	2778.9	2769.1	2762.6	2739.9	2704.2	2730.2	2671.7
30°	2593.8	2574.3	2597.1	2593.8	2580.8	2574.3	2567.8	2545.1	2512.7	2525.6	2483.4
32.5°	2350.3	2334.1	2350.3	2356.8	2327.6	2327.6	2327.6	2301.6	2275.7	2288.7	2246.5
35°	2074.4	2061.4	2071.2	2071.2	2058.2	2054.9	2054.9	2032.2	2009.5	2022.5	1980.3
37.5°	1779.0	1772.5	1779.0	1779.0	1766.0	1759.5	1762.8	1743.3	1723.8	1733.5	1694.6
40°	1473.8	1467.3	1473.8	1473.8	1460.8	1460.8	1460.8	1444.6	1425.1	1431.6	1399.2
42.5°	1178.4	1162.2	1165.4	1165.4	1155.7	1155.7	1158.9	1142.7	1129.7	1129.7	1100.5
45°	837.6	837.6	840.8	847.3	834.3	831.1	837.6	824.6	818.1	818.1	792.1
47.5°	555.1	545.4	542.1	538.9	545.4	538.9	545.4	535.6	535.6	535.6	512.9
50°	340.9	334.4	334.4	331.1	334.4	327.9	334.4	327.9	324.6	331.1	314.9
52.5°	188.3	181.8	181.8	181.8	185.0	178.5	181.8	178.5	178.5	178.5	175.3
55°	97.4	94.1	94.1	94.1	94.1	90.9	94.1	94.1	94.1	97.4	94.1
57.5°	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2
60°	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
62.5°	32.5	29.2	29.2	32.5	29.2	32.5	29.2	29.2	29.2	29.2	29.2
65°	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.7	26.0	26.0
67.5°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
70°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
72.5°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
75°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5
2.5°	2496.4	2476.9	2483.4	2476.9	2460.7	2464.0	2454.2	2454.2	2434.7	2431.5	2434.7
5°	2561.4	2538.6	2538.6	2525.6	2502.9	2499.7	2480.2	2480.2	2451.0	2441.2	2441.2
7.5°	2632.8	2610.0	2603.6	2587.3	2558.1	2545.1	2519.2	2509.4	2473.7	2457.5	2454.2
10°	2710.7	2684.7	2671.7	2652.3	2616.5	2593.8	2558.1	2545.1	2502.9	2470.5	2467.2
12.5°	2798.3	2775.6	2759.4	2733.4	2694.5	2662.0	2619.8	2597.1	2541.9	2506.2	2489.9
15°	2902.2	2876.2	2856.8	2824.3	2782.1	2743.1	2688.0	2662.0	2597.1	2548.4	2525.6
17.5°	2967.1	2937.9	2921.7	2882.7	2840.5	2795.1	2733.4	2700.9	2626.3	2564.6	2541.9
20°	2973.6	2950.9	2928.2	2892.5	2850.3	2798.3	2733.4	2700.9	2623.0	2561.4	2528.9
22.5°	2924.9	2905.5	2879.5	2850.3	2804.8	2752.9	2691.2	2662.0	2587.3	2522.4	2486.7
25°	2830.8	2814.6	2788.6	2752.9	2720.4	2665.2	2606.8	2587.3	2509.4	2454.2	2421.8
27.5°	2684.7	2675.0	2649.0	2616.5	2590.6	2545.1	2486.7	2470.5	2402.3	2353.6	2327.6
30°	2493.2	2486.7	2460.7	2431.5	2412.0	2369.8	2317.9	2311.4	2249.7	2214.0	2188.0
32.5°	2256.2	2249.7	2233.5	2204.3	2188.0	2152.3	2103.6	2110.1	2058.2	2029.0	2019.2
35°	2003.0	1983.5	1973.8	1947.8	1928.3	1902.3	1860.1	1869.9	1840.7	1817.9	1814.7
37.5°	1717.3	1697.8	1691.3	1671.9	1655.6	1632.9	1600.4	1613.4	1600.4	1590.7	1600.4
40°	1418.6	1402.4	1395.9	1376.4	1370.0	1353.7	1331.0	1363.5	1347.2	1366.7	1370.0
42.5°	1120.0	1103.8	1103.8	1090.8	1081.0	1077.8	1061.5	1103.8	1103.8	1136.2	1152.4
45°	792.1	795.4	788.9	792.1	785.6	795.4	785.6	814.8	857.0	899.2	925.2
47.5°	525.9	516.2	529.2	525.9	522.7	535.6	548.6	577.8	626.5	685.0	720.7
50°	318.1	318.1	324.6	334.4	340.9	350.6	370.1	405.8	461.0	519.4	561.6
52.5°	181.8	178.5	185.0	188.3	204.5	217.5	240.2	279.2	334.4	399.3	438.3
55°	97.4	97.4	100.6	110.4	120.1	136.3	159.1	194.8	246.7	311.6	350.6
57.5°	58.4	58.4	61.7	64.9	74.7	87.7	107.1	136.3	181.8	237.0	272.7
60°	39.0	42.2	42.2	45.4	51.9	58.4	74.7	94.1	129.9	172.1	201.3
62.5°	32.5	32.5	32.5	35.7	39.0	42.2	51.9	68.2	90.9	123.4	146.1
65°	26.0	26.0	26.0	26.0	29.2	32.5	39.0	48.7	64.9	84.4	97.4
67.5°	19.5	19.5	22.7	22.7	22.7	26.0	29.2	35.7	45.4	58.4	68.2
70°	16.2	16.2	16.2	16.2	19.5	19.5	22.7	26.0	32.5	42.2	48.7
72.5°	13.0	13.0	13.0	13.0	16.2	16.2	16.2	19.5	22.7	29.2	32.5
75°	9.7	9.7	9.7	9.7	13.0	13.0	13.0	16.2	16.2	19.5	22.7
77.5°	6.5	6.5	6.5	6.5	9.7	9.7	9.7	9.7	13.0	13.0	13.0
80°	3.2	3.2	3.2	6.5	6.5	6.5	6.5	6.5	6.5	9.7	9.7
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.5	6.5
85°	0.0	0.0	3.2	0.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5	2457.5
2.5°	2412.0	2454.2	2405.5	2415.3	2399.0	2428.3	2389.3	2399.0	2405.5	2399.0	2402.3
5°	2415.3	2447.7	2392.5	2402.3	2376.3	2395.8	2360.1	2363.3	2363.3	2356.8	2353.6
7.5°	2425.0	2444.5	2386.1	2382.8	2350.3	2369.8	2327.6	2321.1	2317.9	2308.1	2311.4
10°	2428.3	2434.7	2373.1	2360.1	2321.1	2327.6	2285.4	2272.4	2262.7	2256.2	2253.0
12.5°	2451.0	2444.5	2373.1	2350.3	2301.6	2298.4	2253.0	2233.5	2217.2	2210.8	2207.5
15°	2480.2	2457.5	2379.6	2347.1	2291.9	2278.9	2230.2	2210.8	2188.0	2181.5	2175.0
17.5°	2493.2	2457.5	2373.1	2330.9	2269.2	2253.0	2204.3	2178.3	2155.6	2145.8	2139.3
20°	2476.9	2431.5	2347.1	2301.6	2236.7	2214.0	2165.3	2136.1	2113.4	2103.6	2097.1
22.5°	2441.2	2389.3	2308.1	2262.7	2197.8	2168.5	2126.3	2100.4	2074.4	2071.2	2061.4
25°	2379.6	2327.6	2259.4	2214.0	2155.6	2126.3	2087.4	2064.7	2038.7	2035.4	2032.2
27.5°	2288.7	2240.0	2188.0	2145.8	2093.9	2071.2	2041.9	2019.2	1996.5	1996.5	1990.0
30°	2158.8	2126.3	2080.9	2054.9	2012.7	1990.0	1970.5	1954.3	1931.6	1934.8	1928.3
32.5°	1993.2	1977.0	1944.6	1931.6	1899.1	1892.6	1873.1	1860.1	1840.7	1847.2	1840.7
35°	1808.2	1788.7	1788.7	1782.2	1766.0	1762.8	1753.0	1746.5	1733.5	1736.8	1736.8
37.5°	1597.2	1597.2	1616.7	1619.9	1616.7	1623.2	1619.9	1619.9	1606.9	1613.4	1610.2
40°	1379.7	1399.2	1434.9	1454.4	1460.8	1473.8	1490.1	1483.6	1477.1	1486.8	1483.6
42.5°	1168.7	1207.6	1262.8	1295.3	1318.0	1337.5	1360.2	1360.2	1357.0	1370.0	1366.7
45°	967.4	1003.1	1077.8	1133.0	1171.9	1201.1	1227.1	1236.9	1240.1	1253.1	1249.8
47.5°	769.4	831.1	918.7	983.6	1032.3	1068.0	1103.8	1116.7	1126.5	1142.7	1142.7
50°	610.3	688.2	788.9	853.8	912.2	951.2	986.9	1006.4	1019.3	1032.3	1032.3
52.5°	490.2	571.4	668.7	736.9	792.1	834.3	870.0	892.7	902.5	918.7	918.7
55°	399.3	474.0	564.9	626.5	681.7	720.7	749.9	769.4	779.1	792.1	792.1
57.5°	314.9	386.3	461.0	516.2	561.6	590.8	616.8	623.3	626.5	636.3	639.5
60°	237.0	292.2	353.8	396.1	428.5	448.0	467.5	464.2	461.0	467.5	461.0
62.5°	168.8	207.8	253.2	279.2	305.2	314.9	324.6	318.1	311.6	314.9	314.9
65°	113.6	142.8	168.8	188.3	201.3	207.8	211.0	207.8	204.5	207.8	204.5
67.5°	77.9	94.1	113.6	123.4	133.1	136.3	139.6	136.3	136.3	136.3	133.1
70°	51.9	61.7	74.7	81.2	84.4	87.7	90.9	87.7	87.7	87.7	87.7
72.5°	35.7	42.2	45.4	51.9	55.2	55.2	55.2	55.2	55.2	55.2	55.2
75°	22.7	26.0	29.2	32.5	35.7	35.7	35.7	35.7	35.7	35.7	35.7
77.5°	16.2	16.2	19.5	19.5	22.7	22.7	22.7	22.7	22.7	22.7	22.7
80°	9.7	9.7	13.0	13.0	13.0	13.0	16.2	13.0	16.2	16.2	16.2
82.5°	6.5	6.5	6.5	6.5	9.7	9.7	9.7	9.7	9.7	9.7	9.7
85°	3.2	3.2	3.2	3.2	3.2	3.2	6.5	3.2	6.5	6.5	6.5
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: P212757

CATALOG NUMBER: LD4B50D010TE EU4B30508027 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2457.5	2457.5	2457.5	2457.5
2.5°	2402.3	2395.8	2376.3	2399.0
5°	2350.3	2343.9	2327.6	2343.9
7.5°	2298.4	2288.7	2275.7	2285.4
10°	2236.7	2230.2	2214.0	2223.7
12.5°	2191.3	2178.3	2168.5	2171.8
15°	2162.1	2149.1	2139.3	2142.6
17.5°	2123.1	2110.1	2100.4	2100.4
20°	2080.9	2067.9	2061.4	2058.2
22.5°	2045.2	2035.4	2032.2	2022.5
25°	2012.7	2006.2	2006.2	1993.2
27.5°	1977.0	1967.3	1967.3	1954.3
30°	1915.3	1912.1	1912.1	1902.3
32.5°	1834.2	1824.4	1830.9	1814.7
35°	1723.8	1717.3	1727.0	1714.1
37.5°	1603.7	1600.4	1606.9	1597.2
40°	1477.1	1477.1	1486.8	1470.6
42.5°	1366.7	1366.7	1376.4	1360.2
45°	1246.6	1256.3	1266.1	1253.1
47.5°	1142.7	1149.2	1162.2	1149.2
50°	1038.8	1045.3	1055.1	1042.1
52.5°	925.2	931.7	941.4	931.7
55°	795.4	801.8	811.6	805.1
57.5°	639.5	633.0	649.3	636.3
60°	464.2	451.2	454.5	454.5
62.5°	308.4	301.9	308.4	298.7
65°	204.5	201.3	201.3	201.3
67.5°	136.3	133.1	136.3	133.1
70°	87.7	87.7	87.7	87.7
72.5°	55.2	55.2	55.2	55.2
75°	35.7	35.7	35.7	35.7
77.5°	22.7	22.7	22.7	22.7
80°	16.2	16.2	16.2	16.2
82.5°	9.7	9.7	9.7	9.7
85°	6.5	6.5	6.5	6.5
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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





















(END OF REPORT)