

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: P212761

Luminaire Tested: **LD4B50D010TE EU4B30508050 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212761
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 EU4B30508050 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4885.3 lumens
Efficiency: N/A
Efficacy: 83.1 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

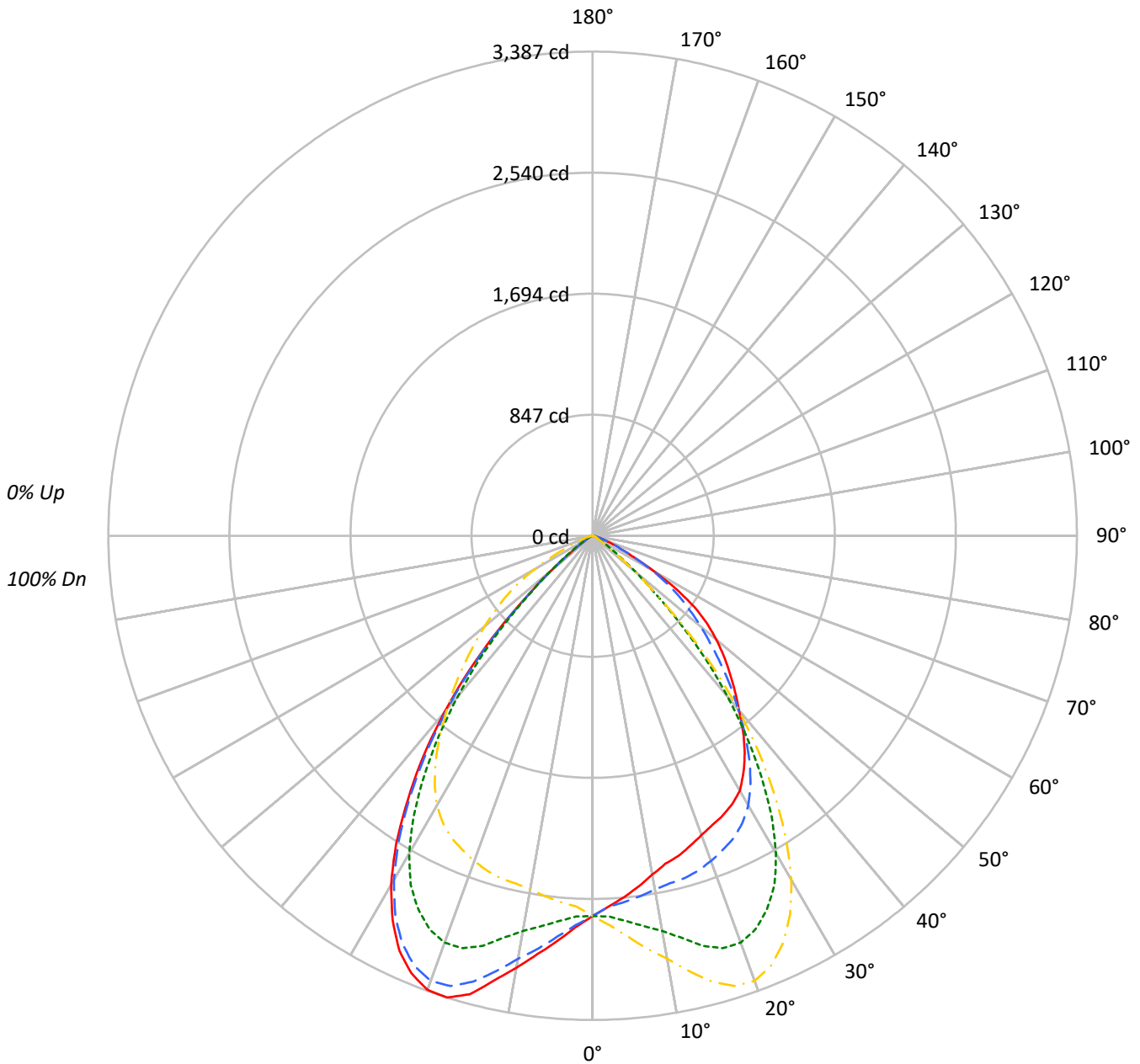
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 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°	328050	328050	328050	328050
5°	314074	334962	352358	334962
10°	301423	351585	384149	351585
15°	296103	379106	423966	379106
20°	292372	397526	443638	397526
25°	293588	392558	435592	392558
30°	293229	365283	401317	365283
35°	279321	310008	339100	310008
40°	256257	235905	260218	235905
45°	236554	150155	161790	150155
50°	216415	72804	70789	72804
55°	187370	31741	22666	31741
60°	121347	15591	10410	15591
65°	63567	10244	8201	10244
70°	34225	7609	6347	7609
75°	18396	6720	5004	6720
80°	12502	4972	2486	4972
85°	9907	4953	0	4953



TEST NUMBER: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWLI1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.3	5.3
10°-20°	811.1	16.6
20°-30°	1261.0	25.8
30°-40°	1273.7	26.1
40°-50°	806.5	16.5
50°-60°	338.5	6.9
60°-70°	107.3	2.2
70°-80°	24.5	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°	2331.4	47.7
0°-40°	3605.1	73.8
0°-60°	4750.0	97.2
0°-90°	4885.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4885.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2660	2660	2660	2660	2660	
5°	2537	2705	2846	2705	2537	238
15°	2319	2969	3320	2969	2319	654
25°	2157	2884	3201	2884	2157	993
35°	1855	2059	2252	2059	1855	1152
45°	1356	861	928	861	1356	1047
55°	871	148	105	148	871	752
65°	218	35	28	35	218	240
75°	39	14	10	14	39	47
85°	7	4	0	4	7	7
90°	0	0	0	0	0	



TEST NUMBER: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWLI1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6
2.5°	2596.3	2571.7	2592.8	2599.9	2599.9	2596.3	2603.4	2596.3	2585.8	2628.0	2596.3
5°	2536.6	2519.0	2536.6	2543.6	2547.2	2550.7	2557.7	2557.7	2554.2	2592.8	2571.7
7.5°	2473.4	2462.8	2476.9	2487.4	2501.5	2498.0	2508.5	2512.0	2519.0	2564.7	2543.6
10°	2406.6	2396.1	2413.6	2420.7	2438.2	2441.8	2448.8	2459.3	2473.4	2519.0	2512.0
12.5°	2350.4	2346.9	2357.4	2371.5	2389.1	2392.6	2399.6	2417.2	2438.2	2487.4	2490.9
15°	2318.8	2315.3	2325.8	2339.9	2353.9	2360.9	2368.0	2392.6	2413.6	2466.3	2480.4
17.5°	2273.1	2273.1	2283.7	2297.7	2315.3	2322.3	2332.8	2357.4	2385.5	2438.2	2455.8
20°	2227.4	2231.0	2238.0	2252.0	2269.6	2276.6	2287.2	2311.8	2343.4	2396.1	2420.7
22.5°	2188.8	2199.3	2202.8	2213.4	2231.0	2241.5	2245.0	2273.1	2301.2	2346.9	2378.5
25°	2157.2	2171.2	2171.2	2178.3	2199.3	2202.8	2206.4	2234.5	2259.1	2301.2	2332.8
27.5°	2115.0	2129.1	2129.1	2139.6	2153.7	2160.7	2160.7	2185.3	2209.9	2241.5	2266.1
30°	2058.8	2069.3	2069.3	2072.9	2086.9	2093.9	2090.4	2115.0	2132.6	2153.7	2178.3
32.5°	1963.9	1981.5	1974.5	1985.0	1992.0	1999.1	1992.0	2013.1	2027.2	2048.3	2055.3
35°	1855.0	1869.1	1858.5	1865.6	1879.6	1879.6	1876.1	1890.2	1897.2	1907.7	1911.2
37.5°	1728.6	1739.1	1732.1	1735.6	1742.6	1746.1	1739.1	1753.1	1753.1	1756.7	1749.6
40°	1591.5	1609.1	1598.6	1598.6	1605.6	1609.1	1598.6	1605.6	1612.6	1595.0	1581.0
42.5°	1472.1	1489.6	1479.1	1479.1	1479.1	1482.6	1468.6	1472.1	1472.1	1447.5	1426.4
45°	1356.1	1370.2	1359.7	1349.1	1352.6	1356.1	1342.1	1338.6	1328.0	1299.9	1268.3
47.5°	1243.7	1257.8	1243.7	1236.7	1236.7	1236.7	1219.1	1208.6	1194.5	1155.9	1117.2
50°	1127.8	1141.8	1131.3	1124.3	1117.2	1117.2	1103.2	1089.1	1068.0	1029.4	987.2
52.5°	1008.3	1018.9	1008.3	1001.3	994.3	994.3	976.7	966.2	941.6	902.9	857.2
55°	871.3	878.3	867.8	860.8	857.2	857.2	843.2	832.7	811.6	780.0	737.8
57.5°	688.6	702.7	685.1	692.1	692.1	688.6	678.1	674.6	667.5	639.4	607.8
60°	491.9	491.9	488.4	502.4	498.9	505.9	498.9	502.4	505.9	484.8	463.8
62.5°	323.2	333.8	326.7	333.8	340.8	340.8	337.3	344.3	351.3	340.8	330.3
65°	217.8	217.8	217.8	221.3	221.3	224.9	221.3	224.9	228.4	224.9	217.8
67.5°	144.0	147.6	144.0	147.6	144.0	147.6	147.6	147.6	151.1	147.6	144.0
70°	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9	98.4	94.9	91.3
72.5°	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
75°	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6
77.5°	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
80°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	14.1	17.6	14.1	14.1
82.5°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
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



TEST NUMBER: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6
2.5°	2613.9	2603.4	2656.1	2610.4	2635.0	2631.5	2635.0	2656.1	2656.1	2666.6	2663.1
5°	2599.9	2589.3	2649.0	2613.9	2642.0	2642.0	2652.6	2684.2	2684.2	2705.3	2708.8
7.5°	2578.8	2582.3	2645.5	2624.4	2656.1	2659.6	2677.1	2715.8	2726.3	2754.4	2768.5
10°	2554.2	2568.2	2635.0	2628.0	2670.1	2673.6	2708.8	2754.4	2768.5	2807.1	2831.7
12.5°	2543.6	2568.2	2645.5	2652.6	2694.7	2712.3	2750.9	2810.7	2835.2	2880.9	2916.1
15°	2540.1	2575.3	2659.6	2684.2	2733.4	2758.0	2810.7	2880.9	2909.0	2968.8	3010.9
17.5°	2522.6	2568.2	2659.6	2698.2	2750.9	2775.5	2842.3	2923.1	2958.2	3025.0	3074.1
20°	2490.9	2540.1	2631.5	2680.7	2736.9	2772.0	2838.8	2923.1	2958.2	3028.5	3084.7
22.5°	2448.8	2498.0	2585.8	2642.0	2691.2	2729.8	2800.1	2880.9	2912.5	2979.3	3035.5
25°	2396.1	2445.3	2519.0	2575.3	2620.9	2656.1	2715.8	2800.1	2821.2	2884.4	2944.2
27.5°	2322.3	2368.0	2424.2	2476.9	2519.0	2547.2	2599.9	2673.6	2691.2	2754.4	2803.6
30°	2223.9	2252.0	2301.2	2336.4	2368.0	2396.1	2434.7	2501.5	2508.5	2564.7	2610.4
32.5°	2090.4	2104.5	2139.6	2157.2	2185.3	2195.8	2227.4	2283.7	2276.6	2329.3	2368.0
35°	1928.8	1935.8	1935.8	1956.9	1963.9	1967.5	1992.0	2023.7	2013.1	2058.8	2086.9
37.5°	1753.1	1749.6	1728.6	1728.6	1732.1	1721.5	1732.1	1746.1	1732.1	1767.2	1791.8
40°	1574.0	1552.9	1514.2	1493.2	1482.6	1479.1	1458.0	1475.6	1440.5	1465.1	1482.6
42.5°	1401.8	1366.7	1307.0	1264.8	1247.2	1229.7	1194.5	1194.5	1148.9	1166.4	1169.9
45°	1226.1	1166.4	1085.6	1047.0	1001.3	973.2	927.5	881.8	850.2	860.8	850.2
47.5°	1064.5	994.3	899.4	832.7	780.0	741.3	678.1	625.4	593.8	579.7	565.6
50°	924.0	853.7	744.8	660.5	607.8	562.1	498.9	439.2	400.5	379.4	368.9
52.5°	797.5	723.7	618.3	530.5	474.3	432.1	361.9	302.1	260.0	235.4	221.3
55°	678.1	611.3	512.9	432.1	379.4	337.3	267.0	210.8	172.2	147.6	130.0
57.5°	558.6	498.9	418.1	340.8	295.1	256.5	196.7	147.6	115.9	94.9	80.8
60°	428.6	383.0	316.2	256.5	217.8	186.2	140.5	101.9	80.8	63.2	56.2
62.5°	302.1	274.0	224.9	182.7	158.1	133.5	98.4	73.8	56.2	45.7	42.2
65°	203.8	182.7	154.6	123.0	105.4	91.3	70.3	52.7	42.2	35.1	31.6
67.5°	133.5	123.0	101.9	84.3	73.8	63.2	49.2	38.6	31.6	28.1	24.6
70°	87.8	80.8	66.8	56.2	52.7	45.7	35.1	28.1	24.6	21.1	21.1
72.5°	56.2	49.2	45.7	38.6	35.1	31.6	24.6	21.1	17.6	17.6	17.6
75°	35.1	31.6	28.1	24.6	24.6	21.1	17.6	17.6	14.1	14.1	14.1
77.5°	21.1	21.1	17.6	17.6	14.1	14.1	14.1	10.5	10.5	10.5	10.5
80°	14.1	14.1	10.5	10.5	10.5	10.5	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



TEST NUMBER: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6
2.5°	2680.7	2687.7	2680.7	2701.7	2666.6	2705.3	2691.2	2698.2	2726.3	2715.8	2726.3
5°	2733.4	2747.4	2747.4	2772.0	2740.4	2786.1	2772.0	2786.1	2814.2	2814.2	2828.2
7.5°	2800.1	2817.7	2824.7	2849.3	2817.7	2873.9	2859.8	2877.4	2912.5	2912.5	2923.1
10°	2870.4	2891.5	2905.5	2933.6	2898.5	2961.7	2947.7	2972.3	3003.9	3007.4	3025.0
12.5°	2958.2	2986.3	3003.9	3028.5	3003.9	3067.1	3053.1	3077.7	3119.8	3123.3	3144.4
15°	3056.6	3091.7	3112.8	3140.9	3112.8	3183.1	3169.0	3197.1	3228.7	3242.8	3263.9
17.5°	3119.8	3162.0	3179.5	3211.2	3183.1	3253.3	3235.8	3274.4	3302.5	3309.5	3334.1
20°	3130.4	3169.0	3193.6	3218.2	3193.6	3263.9	3246.3	3277.9	3313.1	3320.1	3337.6
22.5°	3084.7	3116.3	3144.4	3165.5	3144.4	3214.7	3190.1	3225.2	3256.8	3263.9	3277.9
25°	2979.3	3017.9	3046.0	3063.6	3042.5	3109.3	3088.2	3119.8	3147.9	3162.0	3165.5
27.5°	2831.7	2866.9	2895.0	2905.5	2891.5	2954.7	2926.6	2965.2	2989.8	2996.9	3007.4
30°	2631.5	2663.1	2691.2	2698.2	2687.7	2733.4	2719.3	2754.4	2779.0	2786.1	2793.1
32.5°	2385.5	2417.2	2434.7	2441.8	2431.2	2476.9	2462.8	2490.9	2519.0	2519.0	2519.0
35°	2108.0	2136.1	2146.6	2167.7	2143.1	2188.8	2174.7	2199.3	2223.9	2223.9	2227.4
37.5°	1809.4	1830.4	1837.5	1858.5	1833.9	1876.1	1865.6	1886.6	1907.7	1904.2	1911.2
40°	1489.6	1510.7	1517.8	1535.3	1514.2	1549.4	1542.3	1563.4	1581.0	1581.0	1581.0
42.5°	1180.5	1194.5	1194.5	1212.1	1191.0	1222.6	1222.6	1236.7	1254.3	1250.7	1250.7
45°	857.2	853.7	860.8	857.2	857.2	885.4	885.4	892.4	906.4	899.4	902.9
47.5°	569.2	572.7	558.6	569.2	555.1	579.7	579.7	579.7	590.2	583.2	590.2
50°	361.9	351.3	344.3	344.3	340.8	358.4	351.3	354.8	361.9	354.8	361.9
52.5°	203.8	200.3	193.2	196.7	189.7	193.2	193.2	193.2	196.7	193.2	200.3
55°	119.5	108.9	105.4	105.4	101.9	105.4	101.9	101.9	101.9	98.4	101.9
57.5°	70.3	66.8	63.2	63.2	59.7	59.7	59.7	59.7	59.7	59.7	59.7
60°	49.2	45.7	45.7	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
62.5°	38.6	35.1	35.1	35.1	31.6	31.6	31.6	31.6	31.6	35.1	31.6
65°	28.1	28.1	28.1	28.1	28.1	28.1	24.6	28.1	28.1	28.1	28.1
67.5°	24.6	24.6	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1
70°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
72.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
75°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
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: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6
2.5°	2736.9	2722.8	2691.2	2712.3	2715.8	2701.7	2719.3	2740.4	2719.3	2701.7	2715.8
5°	2838.8	2828.2	2800.1	2817.7	2821.2	2817.7	2828.2	2845.8	2828.2	2817.7	2821.2
7.5°	2940.6	2933.6	2902.0	2923.1	2930.1	2923.1	2933.6	2951.2	2933.6	2923.1	2930.1
10°	3039.0	3035.5	3003.9	3032.0	3035.5	3028.5	3039.0	3067.1	3039.0	3028.5	3035.5
12.5°	3151.4	3158.5	3123.3	3155.0	3158.5	3151.4	3165.5	3186.6	3165.5	3151.4	3158.5
15°	3281.4	3277.9	3249.8	3274.4	3281.4	3274.4	3292.0	3320.1	3292.0	3274.4	3281.4
17.5°	3344.7	3344.7	3323.6	3348.2	3351.7	3351.7	3365.8	3386.8	3365.8	3351.7	3351.7
20°	3348.2	3351.7	3327.1	3355.2	3355.2	3355.2	3369.3	3379.8	3369.3	3355.2	3355.2
22.5°	3292.0	3295.5	3270.9	3295.5	3295.5	3299.0	3306.0	3313.1	3306.0	3299.0	3295.5
25°	3183.1	3186.6	3165.5	3186.6	3183.1	3183.1	3190.1	3200.6	3190.1	3183.1	3183.1
27.5°	3021.5	3025.0	2996.9	3021.5	3017.9	3014.4	3025.0	3028.5	3025.0	3014.4	3017.9
30°	2807.1	2810.7	2786.1	2807.1	2803.6	2800.1	2814.2	2817.7	2814.2	2800.1	2803.6
32.5°	2550.7	2543.6	2526.1	2543.6	2540.1	2540.1	2547.2	2557.7	2547.2	2540.1	2540.1
35°	2241.5	2241.5	2231.0	2245.0	2234.5	2248.5	2248.5	2252.0	2248.5	2248.5	2234.5
37.5°	1925.3	1925.3	1918.3	1925.3	1921.8	1935.8	1935.8	1946.4	1935.8	1935.8	1921.8
40°	1595.0	1595.0	1588.0	1595.0	1605.6	1605.6	1602.1	1616.1	1602.1	1605.6	1605.6
42.5°	1261.3	1261.3	1257.8	1275.3	1275.3	1275.3	1264.8	1278.8	1264.8	1275.3	1275.3
45°	917.0	909.9	906.4	906.4	909.9	924.0	909.9	927.5	909.9	924.0	909.9
47.5°	583.2	586.7	590.2	600.8	593.8	590.2	590.2	600.8	590.2	590.2	593.8
50°	358.4	361.9	361.9	368.9	358.4	365.4	361.9	368.9	361.9	365.4	358.4
52.5°	196.7	196.7	196.7	203.8	196.7	200.3	196.7	203.8	196.7	200.3	196.7
55°	101.9	101.9	101.9	105.4	101.9	101.9	101.9	105.4	101.9	101.9	101.9
57.5°	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
60°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
62.5°	35.1	31.6	31.6	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1
65°	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1
67.5°	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1
70°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
72.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
75°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
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: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6
2.5°	2712.3	2691.2	2722.8	2736.9	2726.3	2715.8	2726.3	2698.2	2691.2	2705.3	2666.6
5°	2817.7	2800.1	2828.2	2838.8	2828.2	2814.2	2814.2	2786.1	2772.0	2786.1	2740.4
7.5°	2923.1	2902.0	2933.6	2940.6	2923.1	2912.5	2912.5	2877.4	2859.8	2873.9	2817.7
10°	3032.0	3003.9	3035.5	3039.0	3025.0	3007.4	3003.9	2972.3	2947.7	2961.7	2898.5
12.5°	3155.0	3123.3	3158.5	3151.4	3144.4	3123.3	3119.8	3077.7	3053.1	3067.1	3003.9
15°	3274.4	3249.8	3277.9	3281.4	3263.9	3242.8	3228.7	3197.1	3169.0	3183.1	3112.8
17.5°	3348.2	3323.6	3344.7	3344.7	3334.1	3309.5	3302.5	3274.4	3235.8	3253.3	3183.1
20°	3355.2	3327.1	3351.7	3348.2	3337.6	3320.1	3313.1	3277.9	3246.3	3263.9	3193.6
22.5°	3295.5	3270.9	3295.5	3292.0	3277.9	3263.9	3256.8	3225.2	3190.1	3214.7	3144.4
25°	3186.6	3165.5	3186.6	3183.1	3165.5	3162.0	3147.9	3119.8	3088.2	3109.3	3042.5
27.5°	3021.5	2996.9	3025.0	3021.5	3007.4	2996.9	2989.8	2965.2	2926.6	2954.7	2891.5
30°	2807.1	2786.1	2810.7	2807.1	2793.1	2786.1	2779.0	2754.4	2719.3	2733.4	2687.7
32.5°	2543.6	2526.1	2543.6	2550.7	2519.0	2519.0	2519.0	2490.9	2462.8	2476.9	2431.2
35°	2245.0	2231.0	2241.5	2241.5	2227.4	2223.9	2223.9	2199.3	2174.7	2188.8	2143.1
37.5°	1925.3	1918.3	1925.3	1925.3	1911.2	1904.2	1907.7	1886.6	1865.6	1876.1	1833.9
40°	1595.0	1588.0	1595.0	1595.0	1581.0	1581.0	1581.0	1563.4	1542.3	1549.4	1514.2
42.5°	1275.3	1257.8	1261.3	1261.3	1250.7	1250.7	1254.3	1236.7	1222.6	1222.6	1191.0
45°	906.4	906.4	909.9	917.0	902.9	899.4	906.4	892.4	885.4	885.4	857.2
47.5°	600.8	590.2	586.7	583.2	590.2	583.2	590.2	579.7	579.7	579.7	555.1
50°	368.9	361.9	361.9	358.4	361.9	354.8	361.9	354.8	351.3	358.4	340.8
52.5°	203.8	196.7	196.7	196.7	200.3	193.2	196.7	193.2	193.2	193.2	189.7
55°	105.4	101.9	101.9	101.9	101.9	98.4	101.9	101.9	101.9	105.4	101.9
57.5°	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
60°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
62.5°	35.1	31.6	31.6	35.1	31.6	35.1	31.6	31.6	31.6	31.6	31.6
65°	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	24.6	28.1	28.1
67.5°	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1
70°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
72.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
75°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
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: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWL11

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6
2.5°	2701.7	2680.7	2687.7	2680.7	2663.1	2666.6	2656.1	2656.1	2635.0	2631.5	2635.0
5°	2772.0	2747.4	2747.4	2733.4	2708.8	2705.3	2684.2	2684.2	2652.6	2642.0	2642.0
7.5°	2849.3	2824.7	2817.7	2800.1	2768.5	2754.4	2726.3	2715.8	2677.1	2659.6	2656.1
10°	2933.6	2905.5	2891.5	2870.4	2831.7	2807.1	2768.5	2754.4	2708.8	2673.6	2670.1
12.5°	3028.5	3003.9	2986.3	2958.2	2916.1	2880.9	2835.2	2810.7	2750.9	2712.3	2694.7
15°	3140.9	3112.8	3091.7	3056.6	3010.9	2968.8	2909.0	2880.9	2810.7	2758.0	2733.4
17.5°	3211.2	3179.5	3162.0	3119.8	3074.1	3025.0	2958.2	2923.1	2842.3	2775.5	2750.9
20°	3218.2	3193.6	3169.0	3130.4	3084.7	3028.5	2958.2	2923.1	2838.8	2772.0	2736.9
22.5°	3165.5	3144.4	3116.3	3084.7	3035.5	2979.3	2912.5	2880.9	2800.1	2729.8	2691.2
25°	3063.6	3046.0	3017.9	2979.3	2944.2	2884.4	2821.2	2800.1	2715.8	2656.1	2620.9
27.5°	2905.5	2895.0	2866.9	2831.7	2803.6	2754.4	2691.2	2673.6	2599.9	2547.2	2519.0
30°	2698.2	2691.2	2663.1	2631.5	2610.4	2564.7	2508.5	2501.5	2434.7	2396.1	2368.0
32.5°	2441.8	2434.7	2417.2	2385.5	2368.0	2329.3	2276.6	2283.7	2227.4	2195.8	2185.3
35°	2167.7	2146.6	2136.1	2108.0	2086.9	2058.8	2013.1	2023.7	1992.0	1967.5	1963.9
37.5°	1858.5	1837.5	1830.4	1809.4	1791.8	1767.2	1732.1	1746.1	1732.1	1721.5	1732.1
40°	1535.3	1517.8	1510.7	1489.6	1482.6	1465.1	1440.5	1475.6	1458.0	1479.1	1482.6
42.5°	1212.1	1194.5	1194.5	1180.5	1169.9	1166.4	1148.9	1194.5	1194.5	1229.7	1247.2
45°	857.2	860.8	853.7	857.2	850.2	860.8	850.2	881.8	927.5	973.2	1001.3
47.5°	569.2	558.6	572.7	569.2	565.6	579.7	593.8	625.4	678.1	741.3	780.0
50°	344.3	344.3	351.3	361.9	368.9	379.4	400.5	439.2	498.9	562.1	607.8
52.5°	196.7	193.2	200.3	203.8	221.3	235.4	260.0	302.1	361.9	432.1	474.3
55°	105.4	105.4	108.9	119.5	130.0	147.6	172.2	210.8	267.0	337.3	379.4
57.5°	63.2	63.2	66.8	70.3	80.8	94.9	115.9	147.6	196.7	256.5	295.1
60°	42.2	45.7	45.7	49.2	56.2	63.2	80.8	101.9	140.5	186.2	217.8
62.5°	35.1	35.1	35.1	38.6	42.2	45.7	56.2	73.8	98.4	133.5	158.1
65°	28.1	28.1	28.1	28.1	31.6	35.1	42.2	52.7	70.3	91.3	105.4
67.5°	21.1	21.1	24.6	24.6	24.6	28.1	31.6	38.6	49.2	63.2	73.8
70°	17.6	17.6	17.6	17.6	21.1	21.1	24.6	28.1	35.1	45.7	52.7
72.5°	14.1	14.1	14.1	14.1	17.6	17.6	17.6	21.1	24.6	31.6	35.1
75°	10.5	10.5	10.5	10.5	14.1	14.1	14.1	17.6	17.6	21.1	24.6
77.5°	7.0	7.0	7.0	7.0	10.5	10.5	10.5	10.5	14.1	14.1	14.1
80°	3.5	3.5	3.5	7.0	7.0	7.0	7.0	7.0	7.0	10.5	10.5
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: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6	2659.6
2.5°	2610.4	2656.1	2603.4	2613.9	2596.3	2628.0	2585.8	2596.3	2603.4	2596.3	2599.9
5°	2613.9	2649.0	2589.3	2599.9	2571.7	2592.8	2554.2	2557.7	2557.7	2550.7	2547.2
7.5°	2624.4	2645.5	2582.3	2578.8	2543.6	2564.7	2519.0	2512.0	2508.5	2498.0	2501.5
10°	2628.0	2635.0	2568.2	2554.2	2512.0	2519.0	2473.4	2459.3	2448.8	2441.8	2438.2
12.5°	2652.6	2645.5	2568.2	2543.6	2490.9	2487.4	2438.2	2417.2	2399.6	2392.6	2389.1
15°	2684.2	2659.6	2575.3	2540.1	2480.4	2466.3	2413.6	2392.6	2368.0	2360.9	2353.9
17.5°	2698.2	2659.6	2568.2	2522.6	2455.8	2438.2	2385.5	2357.4	2332.8	2322.3	2315.3
20°	2680.7	2631.5	2540.1	2490.9	2420.7	2396.1	2343.4	2311.8	2287.2	2276.6	2269.6
22.5°	2642.0	2585.8	2498.0	2448.8	2378.5	2346.9	2301.2	2273.1	2245.0	2241.5	2231.0
25°	2575.3	2519.0	2445.3	2396.1	2332.8	2301.2	2259.1	2234.5	2206.4	2202.8	2199.3
27.5°	2476.9	2424.2	2368.0	2322.3	2266.1	2241.5	2209.9	2185.3	2160.7	2160.7	2153.7
30°	2336.4	2301.2	2252.0	2223.9	2178.3	2153.7	2132.6	2115.0	2090.4	2093.9	2086.9
32.5°	2157.2	2139.6	2104.5	2090.4	2055.3	2048.3	2027.2	2013.1	1992.0	1999.1	1992.0
35°	1956.9	1935.8	1935.8	1928.8	1911.2	1907.7	1897.2	1890.2	1876.1	1879.6	1879.6
37.5°	1728.6	1728.6	1749.6	1753.1	1749.6	1756.7	1753.1	1753.1	1739.1	1746.1	1742.6
40°	1493.2	1514.2	1552.9	1574.0	1581.0	1595.0	1612.6	1605.6	1598.6	1609.1	1605.6
42.5°	1264.8	1307.0	1366.7	1401.8	1426.4	1447.5	1472.1	1472.1	1468.6	1482.6	1479.1
45°	1047.0	1085.6	1166.4	1226.1	1268.3	1299.9	1328.0	1338.6	1342.1	1356.1	1352.6
47.5°	832.7	899.4	994.3	1064.5	1117.2	1155.9	1194.5	1208.6	1219.1	1236.7	1236.7
50°	660.5	744.8	853.7	924.0	987.2	1029.4	1068.0	1089.1	1103.2	1117.2	1117.2
52.5°	530.5	618.3	723.7	797.5	857.2	902.9	941.6	966.2	976.7	994.3	994.3
55°	432.1	512.9	611.3	678.1	737.8	780.0	811.6	832.7	843.2	857.2	857.2
57.5°	340.8	418.1	498.9	558.6	607.8	639.4	667.5	674.6	678.1	688.6	692.1
60°	256.5	316.2	383.0	428.6	463.8	484.8	505.9	502.4	498.9	505.9	498.9
62.5°	182.7	224.9	274.0	302.1	330.3	340.8	351.3	344.3	337.3	340.8	340.8
65°	123.0	154.6	182.7	203.8	217.8	224.9	228.4	224.9	221.3	224.9	221.3
67.5°	84.3	101.9	123.0	133.5	144.0	147.6	151.1	147.6	147.6	147.6	144.0
70°	56.2	66.8	80.8	87.8	91.3	94.9	98.4	94.9	94.9	94.9	94.9
72.5°	38.6	45.7	49.2	56.2	59.7	59.7	59.7	59.7	59.7	59.7	59.7
75°	24.6	28.1	31.6	35.1	38.6	38.6	38.6	38.6	38.6	38.6	38.6
77.5°	17.6	17.6	21.1	21.1	24.6	24.6	24.6	24.6	24.6	24.6	24.6
80°	10.5	10.5	14.1	14.1	14.1	14.1	17.6	14.1	17.6	17.6	17.6
82.5°	7.0	7.0	7.0	7.0	10.5	10.5	10.5	10.5	10.5	10.5	10.5
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: P212761

CATALOG NUMBER: LD4B50D010TE EU4B30508050 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2659.6	2659.6	2659.6	2659.6
2.5°	2599.9	2592.8	2571.7	2596.3
5°	2543.6	2536.6	2519.0	2536.6
7.5°	2487.4	2476.9	2462.8	2473.4
10°	2420.7	2413.6	2396.1	2406.6
12.5°	2371.5	2357.4	2346.9	2350.4
15°	2339.9	2325.8	2315.3	2318.8
17.5°	2297.7	2283.7	2273.1	2273.1
20°	2252.0	2238.0	2231.0	2227.4
22.5°	2213.4	2202.8	2199.3	2188.8
25°	2178.3	2171.2	2171.2	2157.2
27.5°	2139.6	2129.1	2129.1	2115.0
30°	2072.9	2069.3	2069.3	2058.8
32.5°	1985.0	1974.5	1981.5	1963.9
35°	1865.6	1858.5	1869.1	1855.0
37.5°	1735.6	1732.1	1739.1	1728.6
40°	1598.6	1598.6	1609.1	1591.5
42.5°	1479.1	1479.1	1489.6	1472.1
45°	1349.1	1359.7	1370.2	1356.1
47.5°	1236.7	1243.7	1257.8	1243.7
50°	1124.3	1131.3	1141.8	1127.8
52.5°	1001.3	1008.3	1018.9	1008.3
55°	860.8	867.8	878.3	871.3
57.5°	692.1	685.1	702.7	688.6
60°	502.4	488.4	491.9	491.9
62.5°	333.8	326.7	333.8	323.2
65°	221.3	217.8	217.8	217.8
67.5°	147.6	144.0	147.6	144.0
70°	94.9	94.9	94.9	94.9
72.5°	59.7	59.7	59.7	59.7
75°	38.6	38.6	38.6	38.6
77.5°	24.6	24.6	24.6	24.6
80°	17.6	17.6	17.6	17.6
82.5°	10.5	10.5	10.5	10.5
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



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





















(END OF REPORT)