

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: P212758

Luminaire Tested: **LD4B50D010TE EU4B30508030 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212758
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 EU4B30508030 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4719.0 lumens
Efficiency: N/A
Efficacy: 80.3 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

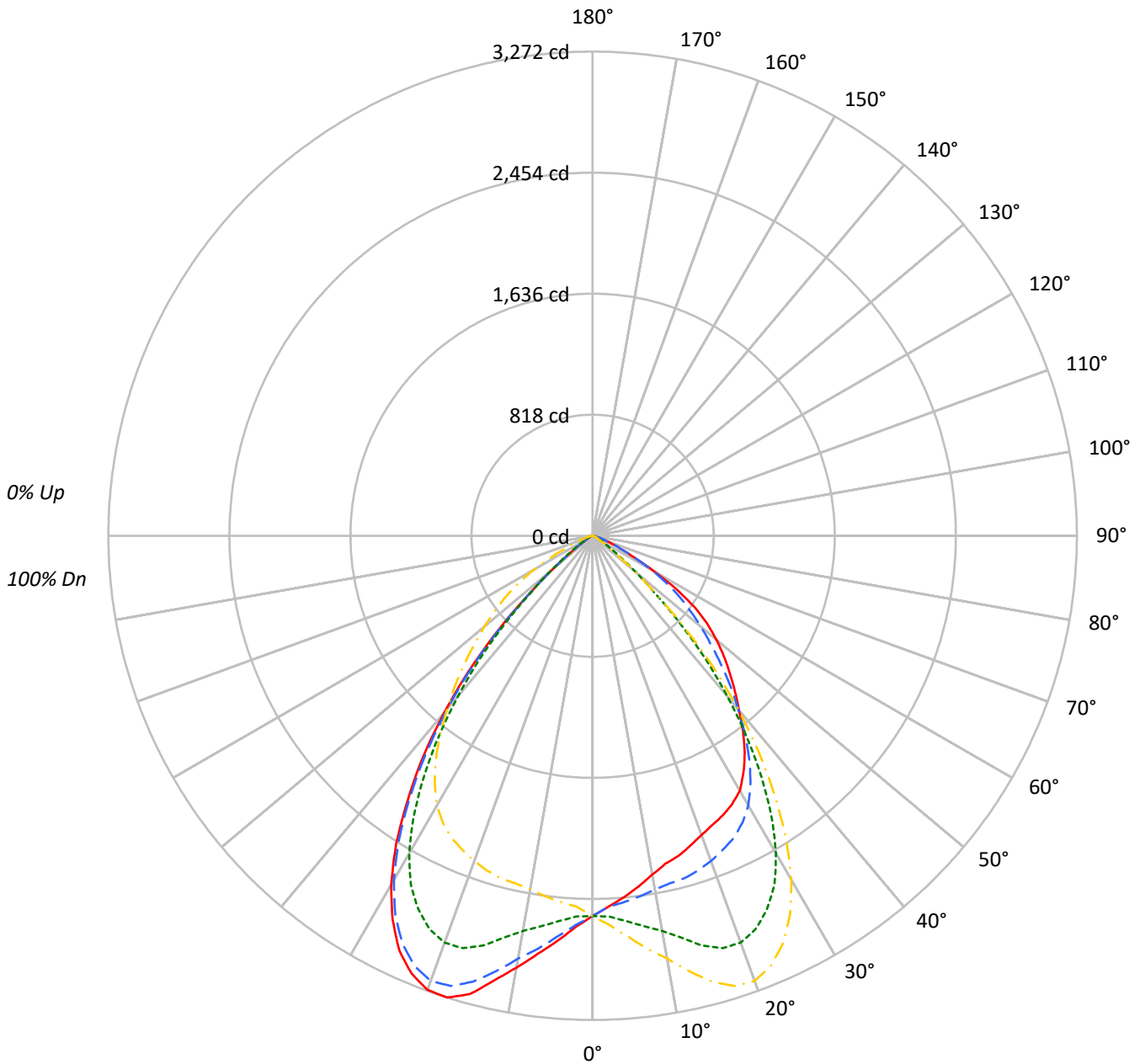
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	316875	316875	316875	316875
5°	303376	323546	340360	323546
10°	291165	339611	371074	339611
15°	286015	366183	409524	366183
20°	282423	383980	428530	383980
25°	283585	379193	420757	379193
30°	283245	352849	387644	352849
35°	269819	299453	327551	299453
40°	247530	227870	251363	227870
45°	228513	145027	156278	145027
50°	209047	70328	68371	70328
55°	180983	30644	21892	30644
60°	117203	15073	10040	15073
65°	61407	9894	7909	9894
70°	33034	7357	6131	7357
75°	17776	6481	4861	6481
80°	12075	4830	2415	4830
85°	9624	4812	0	4812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.4	5.3
10°-20°	783.5	16.6
20°-30°	1218.1	25.8
30°-40°	1230.3	26.1
40°-50°	779.0	16.5
50°-60°	326.9	6.9
60°-70°	103.6	2.2
70°-80°	23.7	0.5
80°-90°	3.4	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°	2252.0	47.7
0°-40°	3482.3	73.8
0°-60°	4588.3	97.2
0°-90°	4719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4719.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2569	2569	2569	2569	2569	
5°	2450	2613	2749	2613	2450	230
15°	2240	2868	3207	2868	2240	631
25°	2084	2786	3092	2786	2084	960
35°	1792	1989	2175	1989	1792	1113
45°	1310	831	896	831	1310	1011
55°	842	142	102	142	842	727
65°	210	34	27	34	210	232
75°	37	14	10	14	37	45
85°	7	3	0	3	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°	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0
2.5°	2507.9	2484.2	2504.5	2511.3	2511.3	2507.9	2514.7	2507.9	2497.7	2538.5	2507.9
5°	2450.2	2433.3	2450.2	2457.0	2460.4	2463.8	2470.6	2470.6	2467.2	2504.5	2484.2
7.5°	2389.1	2379.0	2392.5	2402.7	2416.3	2412.9	2423.1	2426.5	2433.3	2477.4	2457.0
10°	2324.7	2314.5	2331.4	2338.2	2355.2	2358.6	2365.4	2375.6	2389.1	2433.3	2426.5
12.5°	2270.4	2267.0	2277.1	2290.7	2307.7	2311.1	2317.9	2334.8	2355.2	2402.7	2406.1
15°	2239.8	2236.4	2246.6	2260.2	2273.8	2280.5	2287.3	2311.1	2331.4	2382.4	2395.9
17.5°	2195.7	2195.7	2205.9	2219.5	2236.4	2243.2	2253.4	2277.1	2304.3	2355.2	2372.2
20°	2151.6	2155.0	2161.8	2175.3	2192.3	2199.1	2209.3	2233.0	2263.6	2314.5	2338.2
22.5°	2114.3	2124.4	2127.8	2138.0	2155.0	2165.2	2168.6	2195.7	2222.9	2267.0	2297.5
25°	2083.7	2097.3	2097.3	2104.1	2124.4	2127.8	2131.2	2158.4	2182.1	2222.9	2253.4
27.5°	2043.0	2056.6	2056.6	2066.7	2080.3	2087.1	2087.1	2110.9	2134.6	2165.2	2188.9
30°	1988.7	1998.9	1998.9	2002.3	2015.8	2022.6	2019.2	2043.0	2060.0	2080.3	2104.1
32.5°	1897.1	1914.0	1907.2	1917.4	1924.2	1931.0	1924.2	1944.6	1958.1	1978.5	1985.3
35°	1791.9	1805.4	1795.2	1802.0	1815.6	1815.6	1812.2	1825.8	1832.6	1842.8	1846.2
37.5°	1669.7	1679.9	1673.1	1676.5	1683.3	1686.7	1679.9	1693.4	1693.4	1696.8	1690.0
40°	1537.3	1554.3	1544.1	1544.1	1550.9	1554.3	1544.1	1550.9	1557.7	1540.7	1527.1
42.5°	1421.9	1438.9	1428.7	1428.7	1428.7	1432.1	1418.6	1421.9	1421.9	1398.2	1377.8
45°	1310.0	1323.5	1313.3	1303.2	1306.6	1310.0	1296.4	1293.0	1282.8	1255.7	1225.1
47.5°	1201.4	1214.9	1201.4	1194.6	1194.6	1194.6	1177.6	1167.4	1153.8	1116.5	1079.2
50°	1089.4	1102.9	1092.8	1086.0	1079.2	1079.2	1065.6	1052.0	1031.7	994.3	953.6
52.5°	974.0	984.2	974.0	967.2	960.4	960.4	943.4	933.3	909.5	872.2	828.1
55°	841.6	848.4	838.2	831.4	828.1	828.1	814.5	804.3	783.9	753.4	712.7
57.5°	665.2	678.7	661.8	668.6	668.6	665.2	655.0	651.6	644.8	617.6	587.1
60°	475.1	475.1	471.7	485.3	481.9	488.7	481.9	485.3	488.7	468.3	448.0
62.5°	312.2	322.4	315.6	322.4	329.2	329.2	325.8	332.6	339.4	329.2	319.0
65°	210.4	210.4	210.4	213.8	213.8	217.2	213.8	217.2	220.6	217.2	210.4
67.5°	139.1	142.5	139.1	142.5	139.1	142.5	142.5	142.5	145.9	142.5	139.1
70°	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	95.0	91.6	88.2
72.5°	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7
75°	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3
77.5°	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
80°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	13.6	17.0	13.6	13.6
82.5°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
85°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	3.4	6.8	3.4	3.4
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°	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0
2.5°	2524.9	2514.7	2565.6	2521.5	2545.2	2541.9	2545.2	2565.6	2565.6	2575.8	2572.4
5°	2511.3	2501.1	2558.8	2524.9	2552.0	2552.0	2562.2	2592.8	2592.8	2613.1	2616.5
7.5°	2491.0	2494.3	2555.4	2535.1	2565.6	2569.0	2586.0	2623.3	2633.5	2660.6	2674.2
10°	2467.2	2480.8	2545.2	2538.5	2579.2	2582.6	2616.5	2660.6	2674.2	2711.5	2735.3
12.5°	2457.0	2480.8	2555.4	2562.2	2602.9	2619.9	2657.2	2714.9	2738.7	2782.8	2816.7
15°	2453.6	2487.6	2569.0	2592.8	2640.3	2664.0	2714.9	2782.8	2810.0	2867.6	2908.4
17.5°	2436.7	2480.8	2569.0	2606.3	2657.2	2681.0	2745.5	2823.5	2857.5	2921.9	2969.5
20°	2406.1	2453.6	2541.9	2589.4	2643.7	2677.6	2742.1	2823.5	2857.5	2925.3	2979.6
22.5°	2365.4	2412.9	2497.7	2552.0	2599.5	2636.9	2704.8	2782.8	2813.3	2877.8	2932.1
25°	2314.5	2362.0	2433.3	2487.6	2531.7	2565.6	2623.3	2704.8	2725.1	2786.2	2843.9
27.5°	2243.2	2287.3	2341.6	2392.5	2433.3	2460.4	2511.3	2582.6	2599.5	2660.6	2708.1
30°	2148.2	2175.3	2222.9	2256.8	2287.3	2314.5	2351.8	2416.3	2423.1	2477.4	2521.5
32.5°	2019.2	2032.8	2066.7	2083.7	2110.9	2121.0	2151.6	2205.9	2199.1	2250.0	2287.3
35°	1863.1	1869.9	1869.9	1890.3	1897.1	1900.5	1924.2	1954.8	1944.6	1988.7	2015.8
37.5°	1693.4	1690.0	1669.7	1669.7	1673.1	1662.9	1673.1	1686.7	1673.1	1707.0	1730.8
40°	1520.4	1500.0	1462.7	1442.3	1432.1	1428.7	1408.4	1425.3	1391.4	1415.2	1432.1
42.5°	1354.1	1320.1	1262.4	1221.7	1204.8	1187.8	1153.8	1153.8	1109.7	1126.7	1130.1
45°	1184.4	1126.7	1048.6	1011.3	967.2	940.0	895.9	851.8	821.3	831.4	821.3
47.5°	1028.3	960.4	868.8	804.3	753.4	716.1	655.0	604.1	573.5	560.0	546.4
50°	892.5	824.7	719.5	638.0	587.1	543.0	481.9	424.2	386.9	366.5	356.3
52.5°	770.4	699.1	597.3	512.4	458.1	417.4	349.5	291.9	251.1	227.4	213.8
55°	655.0	590.5	495.5	417.4	366.5	325.8	257.9	203.6	166.3	142.5	125.6
57.5°	539.6	481.9	403.8	329.2	285.1	247.7	190.0	142.5	112.0	91.6	78.1
60°	414.0	369.9	305.4	247.7	210.4	179.9	135.7	98.4	78.1	61.1	54.3
62.5°	291.9	264.7	217.2	176.5	152.7	129.0	95.0	71.3	54.3	44.1	40.7
65°	196.8	176.5	149.3	118.8	101.8	88.2	67.9	50.9	40.7	33.9	30.5
67.5°	129.0	118.8	98.4	81.4	71.3	61.1	47.5	37.3	30.5	27.1	23.8
70°	84.8	78.1	64.5	54.3	50.9	44.1	33.9	27.1	23.8	20.4	20.4
72.5°	54.3	47.5	44.1	37.3	33.9	30.5	23.8	20.4	17.0	17.0	17.0
75°	33.9	30.5	27.1	23.8	23.8	20.4	17.0	17.0	13.6	13.6	13.6
77.5°	20.4	20.4	17.0	17.0	13.6	13.6	13.6	10.2	10.2	10.2	10.2
80°	13.6	13.6	10.2	10.2	10.2	10.2	6.8	6.8	6.8	6.8	6.8
82.5°	6.8	6.8	6.8	6.8	6.8	6.8	3.4	3.4	3.4	3.4	3.4
85°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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°	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0
2.5°	2589.4	2596.2	2589.4	2609.7	2575.8	2613.1	2599.5	2606.3	2633.5	2623.3	2633.5
5°	2640.3	2653.8	2653.8	2677.6	2647.1	2691.2	2677.6	2691.2	2718.3	2718.3	2731.9
7.5°	2704.8	2721.7	2728.5	2752.3	2721.7	2776.0	2762.4	2779.4	2813.3	2813.3	2823.5
10°	2772.6	2793.0	2806.6	2833.7	2799.8	2860.9	2847.3	2871.0	2901.6	2905.0	2921.9
12.5°	2857.5	2884.6	2901.6	2925.3	2901.6	2962.7	2949.1	2972.9	3013.6	3017.0	3037.3
15°	2952.5	2986.4	3006.8	3033.9	3006.8	3074.7	3061.1	3088.2	3118.8	3132.4	3152.7
17.5°	3013.6	3054.3	3071.3	3101.8	3074.7	3142.5	3125.6	3162.9	3190.0	3196.8	3220.6
20°	3023.8	3061.1	3084.8	3108.6	3084.8	3152.7	3135.7	3166.3	3200.2	3207.0	3224.0
22.5°	2979.6	3010.2	3037.3	3057.7	3037.3	3105.2	3081.4	3115.4	3145.9	3152.7	3166.3
25°	2877.8	2915.2	2942.3	2959.3	2938.9	3003.4	2983.0	3013.6	3040.7	3054.3	3057.7
27.5°	2735.3	2769.2	2796.4	2806.6	2793.0	2854.1	2826.9	2864.3	2888.0	2894.8	2905.0
30°	2541.9	2572.4	2599.5	2606.3	2596.2	2640.3	2626.7	2660.6	2684.4	2691.2	2698.0
32.5°	2304.3	2334.8	2351.8	2358.6	2348.4	2392.5	2379.0	2406.1	2433.3	2433.3	2433.3
35°	2036.2	2063.3	2073.5	2093.9	2070.1	2114.3	2100.7	2124.4	2148.2	2148.2	2151.6
37.5°	1747.7	1768.1	1774.9	1795.2	1771.5	1812.2	1802.0	1822.4	1842.8	1839.4	1846.2
40°	1438.9	1459.3	1466.1	1483.0	1462.7	1496.6	1489.8	1510.2	1527.1	1527.1	1527.1
42.5°	1140.3	1153.8	1153.8	1170.8	1150.5	1181.0	1181.0	1194.6	1211.5	1208.1	1208.1
45°	828.1	824.7	831.4	828.1	828.1	855.2	855.2	862.0	875.6	868.8	872.2
47.5°	549.8	553.2	539.6	549.8	536.2	560.0	560.0	560.0	570.1	563.3	570.1
50°	349.5	339.4	332.6	332.6	329.2	346.2	339.4	342.8	349.5	342.8	349.5
52.5°	196.8	193.4	186.7	190.0	183.3	186.7	186.7	186.7	190.0	186.7	193.4
55°	115.4	105.2	101.8	101.8	98.4	101.8	98.4	98.4	98.4	95.0	98.4
57.5°	67.9	64.5	61.1	61.1	57.7	57.7	57.7	57.7	57.7	57.7	57.7
60°	47.5	44.1	44.1	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
62.5°	37.3	33.9	33.9	33.9	30.5	30.5	30.5	30.5	30.5	33.9	30.5
65°	27.1	27.1	27.1	27.1	27.1	27.1	23.8	27.1	27.1	27.1	27.1
67.5°	23.8	23.8	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
70°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
72.5°	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6
75°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
77.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
80°	6.8	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
85°	0.0	3.4	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: P212758

CATALOG NUMBER: LD4B50D010TE EU4B30508030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0
2.5°	2643.7	2630.1	2599.5	2619.9	2623.3	2609.7	2626.7	2647.1	2626.7	2609.7	2623.3
5°	2742.1	2731.9	2704.8	2721.7	2725.1	2721.7	2731.9	2748.9	2731.9	2721.7	2725.1
7.5°	2840.5	2833.7	2803.2	2823.5	2830.3	2823.5	2833.7	2850.7	2833.7	2823.5	2830.3
10°	2935.5	2932.1	2901.6	2928.7	2932.1	2925.3	2935.5	2962.7	2935.5	2925.3	2932.1
12.5°	3044.1	3050.9	3017.0	3047.5	3050.9	3044.1	3057.7	3078.1	3057.7	3044.1	3050.9
15°	3169.7	3166.3	3139.1	3162.9	3169.7	3162.9	3179.9	3207.0	3179.9	3162.9	3169.7
17.5°	3230.8	3230.8	3210.4	3234.2	3237.6	3237.6	3251.1	3271.5	3251.1	3237.6	3237.6
20°	3234.2	3237.6	3213.8	3241.0	3241.0	3241.0	3254.5	3264.7	3254.5	3241.0	3241.0
22.5°	3179.9	3183.3	3159.5	3183.3	3183.3	3186.7	3193.4	3200.2	3193.4	3186.7	3183.3
25°	3074.7	3078.1	3057.7	3078.1	3074.7	3074.7	3081.4	3091.6	3081.4	3074.7	3074.7
27.5°	2918.6	2921.9	2894.8	2918.6	2915.2	2911.8	2921.9	2925.3	2921.9	2911.8	2915.2
30°	2711.5	2714.9	2691.2	2711.5	2708.1	2704.8	2718.3	2721.7	2718.3	2704.8	2708.1
32.5°	2463.8	2457.0	2440.0	2457.0	2453.6	2453.6	2460.4	2470.6	2460.4	2453.6	2453.6
35°	2165.2	2165.2	2155.0	2168.6	2158.4	2171.9	2171.9	2175.3	2171.9	2171.9	2158.4
37.5°	1859.7	1859.7	1852.9	1859.7	1856.3	1869.9	1869.9	1880.1	1869.9	1869.9	1856.3
40°	1540.7	1540.7	1533.9	1540.7	1550.9	1550.9	1547.5	1561.1	1547.5	1550.9	1550.9
42.5°	1218.3	1218.3	1214.9	1231.9	1231.9	1231.9	1221.7	1235.3	1221.7	1231.9	1231.9
45°	885.7	879.0	875.6	875.6	879.0	892.5	879.0	895.9	879.0	892.5	879.0
47.5°	563.3	566.7	570.1	580.3	573.5	570.1	570.1	580.3	570.1	570.1	573.5
50°	346.2	349.5	349.5	356.3	346.2	352.9	349.5	356.3	349.5	352.9	346.2
52.5°	190.0	190.0	190.0	196.8	190.0	193.4	190.0	196.8	190.0	193.4	190.0
55°	98.4	98.4	98.4	101.8	98.4	98.4	98.4	101.8	98.4	98.4	98.4
57.5°	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7
60°	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
62.5°	33.9	30.5	30.5	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9
65°	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1
67.5°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
70°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
72.5°	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6
75°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
77.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
80°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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: P212758

CATALOG NUMBER: LD4B50D010TE EU4B30508030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0
2.5°	2619.9	2599.5	2630.1	2643.7	2633.5	2623.3	2633.5	2606.3	2599.5	2613.1	2575.8
5°	2721.7	2704.8	2731.9	2742.1	2731.9	2718.3	2718.3	2691.2	2677.6	2691.2	2647.1
7.5°	2823.5	2803.2	2833.7	2840.5	2823.5	2813.3	2813.3	2779.4	2762.4	2776.0	2721.7
10°	2928.7	2901.6	2932.1	2935.5	2921.9	2905.0	2901.6	2871.0	2847.3	2860.9	2799.8
12.5°	3047.5	3017.0	3050.9	3044.1	3037.3	3017.0	3013.6	2972.9	2949.1	2962.7	2901.6
15°	3162.9	3139.1	3166.3	3169.7	3152.7	3132.4	3118.8	3088.2	3061.1	3074.7	3006.8
17.5°	3234.2	3210.4	3230.8	3230.8	3220.6	3196.8	3190.0	3162.9	3125.6	3142.5	3074.7
20°	3241.0	3213.8	3237.6	3234.2	3224.0	3207.0	3200.2	3166.3	3135.7	3152.7	3084.8
22.5°	3183.3	3159.5	3183.3	3179.9	3166.3	3152.7	3145.9	3115.4	3081.4	3105.2	3037.3
25°	3078.1	3057.7	3078.1	3074.7	3057.7	3054.3	3040.7	3013.6	2983.0	3003.4	2938.9
27.5°	2918.6	2894.8	2921.9	2918.6	2905.0	2894.8	2888.0	2864.3	2826.9	2854.1	2793.0
30°	2711.5	2691.2	2714.9	2711.5	2698.0	2691.2	2684.4	2660.6	2626.7	2640.3	2596.2
32.5°	2457.0	2440.0	2457.0	2463.8	2433.3	2433.3	2433.3	2406.1	2379.0	2392.5	2348.4
35°	2168.6	2155.0	2165.2	2165.2	2151.6	2148.2	2148.2	2124.4	2100.7	2114.3	2070.1
37.5°	1859.7	1852.9	1859.7	1859.7	1846.2	1839.4	1842.8	1822.4	1802.0	1812.2	1771.5
40°	1540.7	1533.9	1540.7	1540.7	1527.1	1527.1	1527.1	1510.2	1489.8	1496.6	1462.7
42.5°	1231.9	1214.9	1218.3	1218.3	1208.1	1208.1	1211.5	1194.6	1181.0	1181.0	1150.5
45°	875.6	875.6	879.0	885.7	872.2	868.8	875.6	862.0	855.2	855.2	828.1
47.5°	580.3	570.1	566.7	563.3	570.1	563.3	570.1	560.0	560.0	560.0	536.2
50°	356.3	349.5	349.5	346.2	349.5	342.8	349.5	342.8	339.4	346.2	329.2
52.5°	196.8	190.0	190.0	190.0	193.4	186.7	190.0	186.7	186.7	186.7	183.3
55°	101.8	98.4	98.4	98.4	98.4	95.0	98.4	98.4	98.4	101.8	98.4
57.5°	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7	57.7
60°	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
62.5°	33.9	30.5	30.5	33.9	30.5	33.9	30.5	30.5	30.5	30.5	30.5
65°	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	23.8	27.1	27.1
67.5°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
70°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
72.5°	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6
75°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
77.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
80°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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: P212758

CATALOG NUMBER: LD4B50D010TE EU4B30508030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0
2.5°	2609.7	2589.4	2596.2	2589.4	2572.4	2575.8	2565.6	2565.6	2545.2	2541.9	2545.2
5°	2677.6	2653.8	2653.8	2640.3	2616.5	2613.1	2592.8	2592.8	2562.2	2552.0	2552.0
7.5°	2752.3	2728.5	2721.7	2704.8	2674.2	2660.6	2633.5	2623.3	2586.0	2569.0	2565.6
10°	2833.7	2806.6	2793.0	2772.6	2735.3	2711.5	2674.2	2660.6	2616.5	2582.6	2579.2
12.5°	2925.3	2901.6	2884.6	2857.5	2816.7	2782.8	2738.7	2714.9	2657.2	2619.9	2602.9
15°	3033.9	3006.8	2986.4	2952.5	2908.4	2867.6	2810.0	2782.8	2714.9	2664.0	2640.3
17.5°	3101.8	3071.3	3054.3	3013.6	2969.5	2921.9	2857.5	2823.5	2745.5	2681.0	2657.2
20°	3108.6	3084.8	3061.1	3023.8	2979.6	2925.3	2857.5	2823.5	2742.1	2677.6	2643.7
22.5°	3057.7	3037.3	3010.2	2979.6	2932.1	2877.8	2813.3	2782.8	2704.8	2636.9	2599.5
25°	2959.3	2942.3	2915.2	2877.8	2843.9	2786.2	2725.1	2704.8	2623.3	2565.6	2531.7
27.5°	2806.6	2796.4	2769.2	2735.3	2708.1	2660.6	2599.5	2582.6	2511.3	2460.4	2433.3
30°	2606.3	2599.5	2572.4	2541.9	2521.5	2477.4	2423.1	2416.3	2351.8	2314.5	2287.3
32.5°	2358.6	2351.8	2334.8	2304.3	2287.3	2250.0	2199.1	2205.9	2151.6	2121.0	2110.9
35°	2093.9	2073.5	2063.3	2036.2	2015.8	1988.7	1944.6	1954.8	1924.2	1900.5	1897.1
37.5°	1795.2	1774.9	1768.1	1747.7	1730.8	1707.0	1673.1	1686.7	1673.1	1662.9	1673.1
40°	1483.0	1466.1	1459.3	1438.9	1432.1	1415.2	1391.4	1425.3	1408.4	1428.7	1432.1
42.5°	1170.8	1153.8	1153.8	1140.3	1130.1	1126.7	1109.7	1153.8	1153.8	1187.8	1204.8
45°	828.1	831.4	824.7	828.1	821.3	831.4	821.3	851.8	895.9	940.0	967.2
47.5°	549.8	539.6	553.2	549.8	546.4	560.0	573.5	604.1	655.0	716.1	753.4
50°	332.6	332.6	339.4	349.5	356.3	366.5	386.9	424.2	481.9	543.0	587.1
52.5°	190.0	186.7	193.4	196.8	213.8	227.4	251.1	291.9	349.5	417.4	458.1
55°	101.8	101.8	105.2	115.4	125.6	142.5	166.3	203.6	257.9	325.8	366.5
57.5°	61.1	61.1	64.5	67.9	78.1	91.6	112.0	142.5	190.0	247.7	285.1
60°	40.7	44.1	44.1	47.5	54.3	61.1	78.1	98.4	135.7	179.9	210.4
62.5°	33.9	33.9	33.9	37.3	40.7	44.1	54.3	71.3	95.0	129.0	152.7
65°	27.1	27.1	27.1	27.1	30.5	33.9	40.7	50.9	67.9	88.2	101.8
67.5°	20.4	20.4	23.8	23.8	23.8	27.1	30.5	37.3	47.5	61.1	71.3
70°	17.0	17.0	17.0	17.0	20.4	20.4	23.8	27.1	33.9	44.1	50.9
72.5°	13.6	13.6	13.6	13.6	17.0	17.0	17.0	20.4	23.8	30.5	33.9
75°	10.2	10.2	10.2	10.2	13.6	13.6	13.6	17.0	17.0	20.4	23.8
77.5°	6.8	6.8	6.8	6.8	10.2	10.2	10.2	10.2	13.6	13.6	13.6
80°	3.4	3.4	3.4	6.8	6.8	6.8	6.8	6.8	6.8	10.2	10.2
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	6.8	6.8
85°	0.0	0.0	3.4	0.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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: P212758

CATALOG NUMBER: LD4B50D010TE EU4B30508030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0	2569.0
2.5°	2521.5	2565.6	2514.7	2524.9	2507.9	2538.5	2497.7	2507.9	2514.7	2507.9	2511.3
5°	2524.9	2558.8	2501.1	2511.3	2484.2	2504.5	2467.2	2470.6	2470.6	2463.8	2460.4
7.5°	2535.1	2555.4	2494.3	2491.0	2457.0	2477.4	2433.3	2426.5	2423.1	2412.9	2416.3
10°	2538.5	2545.2	2480.8	2467.2	2426.5	2433.3	2389.1	2375.6	2365.4	2358.6	2355.2
12.5°	2562.2	2555.4	2480.8	2457.0	2406.1	2402.7	2355.2	2334.8	2317.9	2311.1	2307.7
15°	2592.8	2569.0	2487.6	2453.6	2395.9	2382.4	2331.4	2311.1	2287.3	2280.5	2273.8
17.5°	2606.3	2569.0	2480.8	2436.7	2372.2	2355.2	2304.3	2277.1	2253.4	2243.2	2236.4
20°	2589.4	2541.9	2453.6	2406.1	2338.2	2314.5	2263.6	2233.0	2209.3	2199.1	2192.3
22.5°	2552.0	2497.7	2412.9	2365.4	2297.5	2267.0	2222.9	2195.7	2168.6	2165.2	2155.0
25°	2487.6	2433.3	2362.0	2314.5	2253.4	2222.9	2182.1	2158.4	2131.2	2127.8	2124.4
27.5°	2392.5	2341.6	2287.3	2243.2	2188.9	2165.2	2134.6	2110.9	2087.1	2087.1	2080.3
30°	2256.8	2222.9	2175.3	2148.2	2104.1	2080.3	2060.0	2043.0	2019.2	2022.6	2015.8
32.5°	2083.7	2066.7	2032.8	2019.2	1985.3	1978.5	1958.1	1944.6	1924.2	1931.0	1924.2
35°	1890.3	1869.9	1869.9	1863.1	1846.2	1842.8	1832.6	1825.8	1812.2	1815.6	1815.6
37.5°	1669.7	1669.7	1690.0	1693.4	1690.0	1696.8	1693.4	1693.4	1679.9	1686.7	1683.3
40°	1442.3	1462.7	1500.0	1520.4	1527.1	1540.7	1557.7	1550.9	1544.1	1554.3	1550.9
42.5°	1221.7	1262.4	1320.1	1354.1	1377.8	1398.2	1421.9	1421.9	1418.6	1432.1	1428.7
45°	1011.3	1048.6	1126.7	1184.4	1225.1	1255.7	1282.8	1293.0	1296.4	1310.0	1306.6
47.5°	804.3	868.8	960.4	1028.3	1079.2	1116.5	1153.8	1167.4	1177.6	1194.6	1194.6
50°	638.0	719.5	824.7	892.5	953.6	994.3	1031.7	1052.0	1065.6	1079.2	1079.2
52.5°	512.4	597.3	699.1	770.4	828.1	872.2	909.5	933.3	943.4	960.4	960.4
55°	417.4	495.5	590.5	655.0	712.7	753.4	783.9	804.3	814.5	828.1	828.1
57.5°	329.2	403.8	481.9	539.6	587.1	617.6	644.8	651.6	655.0	665.2	668.6
60°	247.7	305.4	369.9	414.0	448.0	468.3	488.7	485.3	481.9	488.7	481.9
62.5°	176.5	217.2	264.7	291.9	319.0	329.2	339.4	332.6	325.8	329.2	329.2
65°	118.8	149.3	176.5	196.8	210.4	217.2	220.6	217.2	213.8	217.2	213.8
67.5°	81.4	98.4	118.8	129.0	139.1	142.5	145.9	142.5	142.5	142.5	139.1
70°	54.3	64.5	78.1	84.8	88.2	91.6	95.0	91.6	91.6	91.6	91.6
72.5°	37.3	44.1	47.5	54.3	57.7	57.7	57.7	57.7	57.7	57.7	57.7
75°	23.8	27.1	30.5	33.9	37.3	37.3	37.3	37.3	37.3	37.3	37.3
77.5°	17.0	17.0	20.4	20.4	23.8	23.8	23.8	23.8	23.8	23.8	23.8
80°	10.2	10.2	13.6	13.6	13.6	13.6	17.0	13.6	17.0	17.0	17.0
82.5°	6.8	6.8	6.8	6.8	10.2	10.2	10.2	10.2	10.2	10.2	10.2
85°	3.4	3.4	3.4	3.4	3.4	3.4	6.8	3.4	6.8	6.8	6.8
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: P212758

CATALOG NUMBER: LD4B50D010TE EU4B30508030 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2569.0	2569.0	2569.0	2569.0
2.5°	2511.3	2504.5	2484.2	2507.9
5°	2457.0	2450.2	2433.3	2450.2
7.5°	2402.7	2392.5	2379.0	2389.1
10°	2338.2	2331.4	2314.5	2324.7
12.5°	2290.7	2277.1	2267.0	2270.4
15°	2260.2	2246.6	2236.4	2239.8
17.5°	2219.5	2205.9	2195.7	2195.7
20°	2175.3	2161.8	2155.0	2151.6
22.5°	2138.0	2127.8	2124.4	2114.3
25°	2104.1	2097.3	2097.3	2083.7
27.5°	2066.7	2056.6	2056.6	2043.0
30°	2002.3	1998.9	1998.9	1988.7
32.5°	1917.4	1907.2	1914.0	1897.1
35°	1802.0	1795.2	1805.4	1791.9
37.5°	1676.5	1673.1	1679.9	1669.7
40°	1544.1	1544.1	1554.3	1537.3
42.5°	1428.7	1428.7	1438.9	1421.9
45°	1303.2	1313.3	1323.5	1310.0
47.5°	1194.6	1201.4	1214.9	1201.4
50°	1086.0	1092.8	1102.9	1089.4
52.5°	967.2	974.0	984.2	974.0
55°	831.4	838.2	848.4	841.6
57.5°	668.6	661.8	678.7	665.2
60°	485.3	471.7	475.1	475.1
62.5°	322.4	315.6	322.4	312.2
65°	213.8	210.4	210.4	210.4
67.5°	142.5	139.1	142.5	139.1
70°	91.6	91.6	91.6	91.6
72.5°	57.7	57.7	57.7	57.7
75°	37.3	37.3	37.3	37.3
77.5°	23.8	23.8	23.8	23.8
80°	17.0	17.0	17.0	17.0
82.5°	10.2	10.2	10.2	10.2
85°	6.8	6.8	6.8	6.8
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)