

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: P212766

Luminaire Tested: **LD4B50D010TE EU4B30509040 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212766
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 EU4B30509040 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4094.7 lumens
Efficiency: N/A
Efficacy: 69.7 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

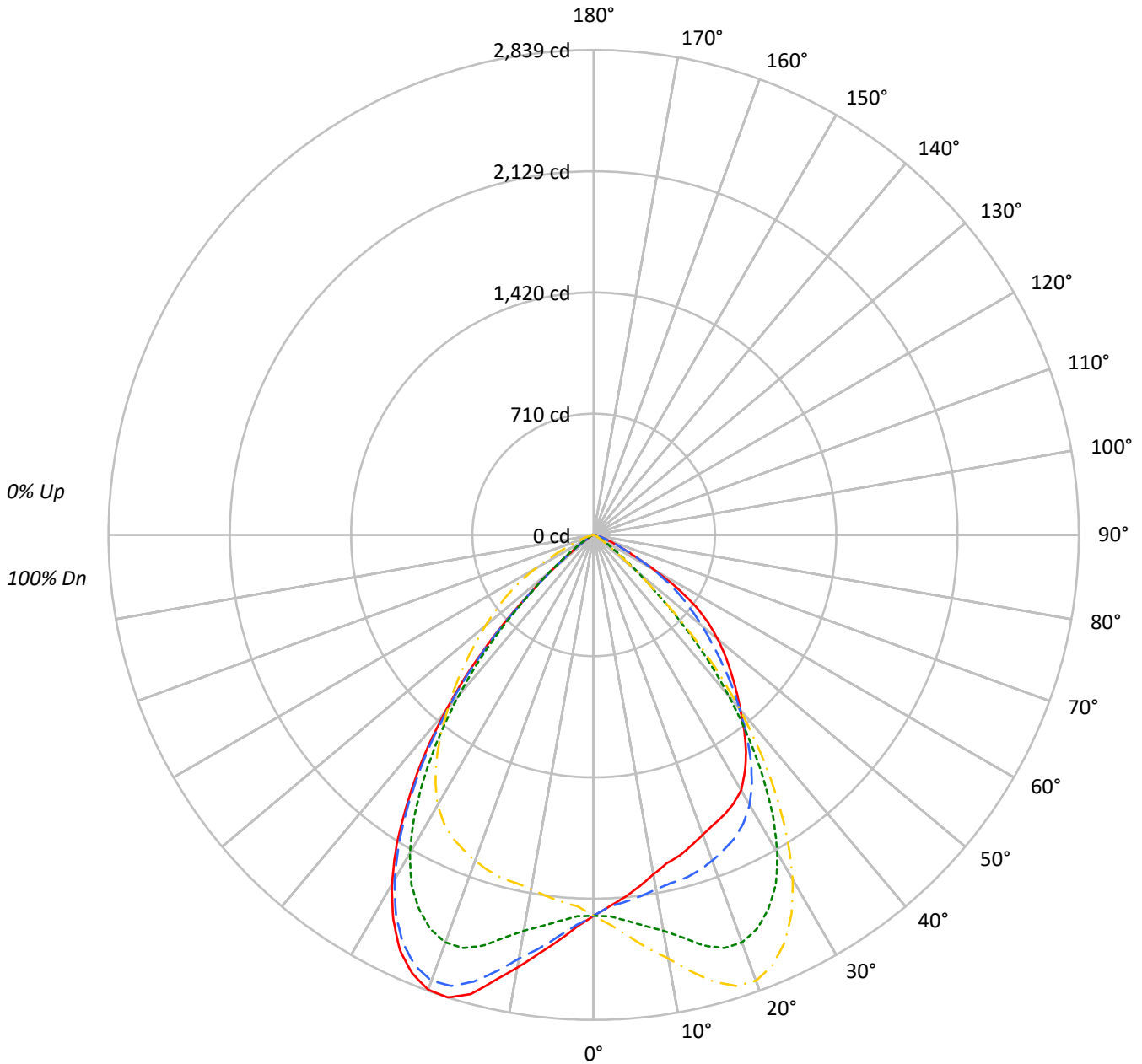
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	274962	274962	274962	274962
5°	263247	280742	295328	280742
10°	252639	294685	321989	294685
15°	248179	317748	355355	317748
20°	245066	333195	371838	333195
25°	246077	329028	365107	329028
30°	245772	306176	336370	306176
35°	234117	259836	284230	259836
40°	214796	197728	218113	197728
45°	198283	125856	135607	125856
50°	181395	61022	59333	61022
55°	157048	26601	18989	26601
60°	101711	13075	8708	13075
65°	53294	8581	6888	8581
70°	28671	6383	5301	6383
75°	15441	5624	4194	5624
80°	10442	4191	2060	4191
85°	8350	4104	0	4104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.3	5.3
10°-20°	679.8	16.6
20°-30°	1057.0	25.8
30°-40°	1067.6	26.1
40°-50°	676.0	16.5
50°-60°	283.7	6.9
60°-70°	89.9	2.2
70°-80°	20.6	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°	1954.1	47.7
0°-40°	3021.6	73.8
0°-60°	3981.3	97.2
0°-90°	4094.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4094.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2229	2229	2229	2229	2229	
5°	2126	2267	2385	2267	2126	200
15°	1944	2488	2783	2488	1944	548
25°	1808	2418	2683	2418	1808	833
35°	1555	1726	1888	1726	1555	966
45°	1137	722	777	722	1137	877
55°	730	124	88	124	730	630
65°	183	29	24	29	183	201
75°	32	12	9	12	32	39
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°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2176.2	2155.5	2173.2	2179.1	2179.1	2176.2	2182.0	2176.2	2167.3	2202.7	2176.2
5°	2126.1	2111.4	2126.1	2132.0	2134.9	2137.9	2143.8	2143.8	2140.8	2173.2	2155.5
7.5°	2073.1	2064.3	2076.0	2084.9	2096.7	2093.7	2102.5	2105.5	2111.4	2149.7	2132.0
10°	2017.1	2008.3	2023.0	2028.9	2043.6	2046.6	2052.5	2061.3	2073.1	2111.4	2105.5
12.5°	1970.0	1967.1	1975.9	1987.7	2002.4	2005.4	2011.3	2026.0	2043.6	2084.9	2087.8
15°	1943.5	1940.6	1949.4	1961.2	1973.0	1978.9	1984.8	2005.4	2023.0	2067.2	2079.0
17.5°	1905.2	1905.2	1914.1	1925.9	1940.6	1946.5	1955.3	1975.9	1999.5	2043.6	2058.4
20°	1867.0	1869.9	1875.8	1887.6	1902.3	1908.2	1917.0	1937.6	1964.1	2008.3	2028.9
22.5°	1834.6	1843.4	1846.3	1855.2	1869.9	1878.7	1881.7	1905.2	1928.8	1967.1	1993.6
25°	1808.1	1819.8	1819.8	1825.7	1843.4	1846.3	1849.3	1872.9	1893.5	1928.8	1955.3
27.5°	1772.7	1784.5	1784.5	1793.3	1805.1	1811.0	1811.0	1831.6	1852.2	1878.7	1899.4
30°	1725.6	1734.4	1734.4	1737.4	1749.2	1755.1	1752.1	1772.7	1787.5	1805.1	1825.7
32.5°	1646.1	1660.8	1654.9	1663.8	1669.7	1675.6	1669.7	1687.3	1699.1	1716.8	1722.7
35°	1554.8	1566.6	1557.8	1563.7	1575.4	1575.4	1572.5	1584.3	1590.2	1599.0	1601.9
37.5°	1448.8	1457.6	1451.8	1454.7	1460.6	1463.5	1457.6	1469.4	1469.4	1472.4	1466.5
40°	1334.0	1348.7	1339.9	1339.9	1345.7	1348.7	1339.9	1345.7	1351.6	1336.9	1325.1
42.5°	1233.8	1248.6	1239.7	1239.7	1239.7	1242.7	1230.9	1233.8	1233.8	1213.2	1195.6
45°	1136.7	1148.4	1139.6	1130.8	1133.7	1136.7	1124.9	1121.9	1113.1	1089.6	1063.0
47.5°	1042.4	1054.2	1042.4	1036.5	1036.5	1036.5	1021.8	1013.0	1001.2	968.8	936.4
50°	945.3	957.0	948.2	942.3	936.4	936.4	924.6	912.9	895.2	862.8	827.5
52.5°	845.1	854.0	845.1	839.2	833.4	833.4	818.6	809.8	789.2	756.8	718.5
55°	730.3	736.2	727.3	721.5	718.5	718.5	706.7	697.9	680.2	653.7	618.4
57.5°	577.2	588.9	574.2	580.1	580.1	577.2	568.3	565.4	559.5	535.9	509.4
60°	412.3	412.3	409.3	421.1	418.2	424.0	418.2	421.1	424.0	406.4	388.7
62.5°	270.9	279.7	273.9	279.7	285.6	285.6	282.7	288.6	294.5	285.6	276.8
65°	182.6	182.6	182.6	185.5	185.5	188.5	185.5	188.5	191.4	188.5	182.6
67.5°	120.7	123.7	120.7	123.7	120.7	123.7	123.7	123.7	126.6	123.7	120.7
70°	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	82.5	79.5	76.6
72.5°	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1
75°	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
77.5°	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
80°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	11.8	14.7	11.8	11.8
82.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
85°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	2.9	5.9	2.9	2.9
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2190.9	2182.0	2226.2	2187.9	2208.6	2205.6	2208.6	2226.2	2226.2	2235.1	2232.1
5°	2179.1	2170.3	2220.3	2190.9	2214.4	2214.4	2223.3	2249.8	2249.8	2267.4	2270.4
7.5°	2161.4	2164.4	2217.4	2199.7	2226.2	2229.2	2243.9	2276.3	2285.1	2308.7	2320.5
10°	2140.8	2152.6	2208.6	2202.7	2238.0	2240.9	2270.4	2308.7	2320.5	2352.8	2373.5
12.5°	2132.0	2152.6	2217.4	2223.3	2258.6	2273.3	2305.7	2355.8	2376.4	2414.7	2444.1
15°	2129.0	2158.5	2229.2	2249.8	2291.0	2311.6	2355.8	2414.7	2438.2	2488.3	2523.6
17.5°	2114.3	2152.6	2229.2	2261.6	2305.7	2326.3	2382.3	2450.0	2479.5	2535.4	2576.6
20°	2087.8	2129.0	2205.6	2246.8	2293.9	2323.4	2379.3	2450.0	2479.5	2538.4	2585.5
22.5°	2052.5	2093.7	2167.3	2214.4	2255.7	2288.1	2347.0	2414.7	2441.2	2497.1	2544.3
25°	2008.3	2049.5	2111.4	2158.5	2196.8	2226.2	2276.3	2347.0	2364.6	2417.6	2467.7
27.5°	1946.5	1984.8	2031.9	2076.0	2111.4	2134.9	2179.1	2240.9	2255.7	2308.7	2349.9
30°	1864.0	1887.6	1928.8	1958.2	1984.8	2008.3	2040.7	2096.7	2102.5	2149.7	2187.9
32.5°	1752.1	1763.9	1793.3	1808.1	1831.6	1840.5	1867.0	1914.1	1908.2	1952.4	1984.8
35°	1616.7	1622.5	1622.5	1640.2	1646.1	1649.1	1669.7	1696.2	1687.3	1725.6	1749.2
37.5°	1469.4	1466.5	1448.8	1448.8	1451.8	1442.9	1451.8	1463.5	1451.8	1481.2	1501.8
40°	1319.2	1301.6	1269.2	1251.5	1242.7	1239.7	1222.1	1236.8	1207.3	1228.0	1242.7
42.5°	1174.9	1145.5	1095.4	1060.1	1045.4	1030.7	1001.2	1001.2	962.9	977.7	980.6
45°	1027.7	977.7	909.9	877.5	839.2	815.7	777.4	739.1	712.6	721.5	712.6
47.5°	892.3	833.4	753.9	697.9	653.7	621.3	568.3	524.2	497.7	485.9	474.1
50°	774.5	715.6	624.3	553.6	509.4	471.2	418.2	368.1	335.7	318.0	309.2
52.5°	668.5	606.6	518.3	444.7	397.5	362.2	303.3	253.2	217.9	197.3	185.5
55°	568.3	512.4	429.9	362.2	318.0	282.7	223.8	176.7	144.3	123.7	109.0
57.5°	468.2	418.2	350.4	285.6	247.4	215.0	164.9	123.7	97.2	79.5	67.7
60°	359.3	321.0	265.0	215.0	182.6	156.1	117.8	85.4	67.7	53.0	47.1
62.5°	253.2	229.7	188.5	153.1	132.5	111.9	82.5	61.8	47.1	38.3	35.3
65°	170.8	153.1	129.6	103.1	88.3	76.6	58.9	44.2	35.3	29.4	26.5
67.5°	111.9	103.1	85.4	70.7	61.8	53.0	41.2	32.4	26.5	23.6	20.6
70°	73.6	67.7	55.9	47.1	44.2	38.3	29.4	23.6	20.6	17.7	17.7
72.5°	47.1	41.2	38.3	32.4	29.4	26.5	20.6	17.7	14.7	14.7	14.7
75°	29.4	26.5	23.6	20.6	20.6	17.7	14.7	14.7	11.8	11.8	11.8
77.5°	17.7	17.7	14.7	14.7	11.8	11.8	11.8	8.8	8.8	8.8	8.8
80°	11.8	11.8	8.8	8.8	8.8	8.8	5.9	5.9	5.9	5.9	5.9
82.5°	5.9	5.9	5.9	5.9	5.9	5.9	2.9	2.9	2.9	2.9	2.9
85°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2246.8	2252.7	2246.8	2264.5	2235.1	2267.4	2255.7	2261.6	2285.1	2276.3	2285.1
5°	2291.0	2302.8	2302.8	2323.4	2296.9	2335.2	2323.4	2335.2	2358.7	2358.7	2370.5
7.5°	2347.0	2361.7	2367.6	2388.2	2361.7	2408.8	2397.0	2411.7	2441.2	2441.2	2450.0
10°	2405.8	2423.5	2435.3	2458.9	2429.4	2482.4	2470.6	2491.2	2517.7	2520.7	2535.4
12.5°	2479.5	2503.0	2517.7	2538.4	2517.7	2570.8	2559.0	2579.6	2614.9	2617.9	2635.5
15°	2561.9	2591.4	2609.0	2632.6	2609.0	2667.9	2656.2	2679.7	2706.2	2718.0	2735.7
17.5°	2614.9	2650.3	2665.0	2691.5	2667.9	2726.8	2712.1	2744.5	2768.1	2773.9	2794.6
20°	2623.8	2656.2	2676.8	2697.4	2676.8	2735.7	2720.9	2747.4	2776.9	2782.8	2797.5
22.5°	2585.5	2612.0	2635.5	2653.2	2635.5	2694.4	2673.8	2703.3	2729.8	2735.7	2747.4
25°	2497.1	2529.5	2553.1	2567.8	2550.1	2606.1	2588.4	2614.9	2638.5	2650.3	2653.2
27.5°	2373.5	2402.9	2426.5	2435.3	2423.5	2476.5	2453.0	2485.4	2506.0	2511.9	2520.7
30°	2205.6	2232.1	2255.7	2261.6	2252.7	2291.0	2279.2	2308.7	2329.3	2335.2	2341.1
32.5°	1999.5	2026.0	2040.7	2046.6	2037.8	2076.0	2064.3	2087.8	2111.4	2111.4	2111.4
35°	1766.8	1790.4	1799.2	1816.9	1796.3	1834.6	1822.8	1843.4	1864.0	1864.0	1867.0
37.5°	1516.5	1534.2	1540.1	1557.8	1537.2	1572.5	1563.7	1581.3	1599.0	1596.0	1601.9
40°	1248.6	1266.2	1272.1	1286.8	1269.2	1298.6	1292.7	1310.4	1325.1	1325.1	1325.1
42.5°	989.4	1001.2	1001.2	1015.9	998.3	1024.8	1024.8	1036.5	1051.3	1048.3	1048.3
45°	718.5	715.6	721.5	718.5	718.5	742.1	742.1	748.0	759.7	753.9	756.8
47.5°	477.0	480.0	468.2	477.0	465.3	485.9	485.9	485.9	494.7	488.8	494.7
50°	303.3	294.5	288.6	288.6	285.6	300.4	294.5	297.4	303.3	297.4	303.3
52.5°	170.8	167.8	162.0	164.9	159.0	162.0	162.0	162.0	164.9	162.0	167.8
55°	100.1	91.3	88.3	88.3	85.4	88.3	85.4	85.4	85.4	82.5	85.4
57.5°	58.9	55.9	53.0	53.0	50.1	50.1	50.1	50.1	50.1	50.1	50.1
60°	41.2	38.3	38.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3
62.5°	32.4	29.4	29.4	29.4	26.5	26.5	26.5	26.5	26.5	29.4	26.5
65°	23.6	23.6	23.6	23.6	23.6	23.6	20.6	23.6	23.6	23.6	23.6
67.5°	20.6	20.6	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
70°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
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°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
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	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
85°	0.0	2.9	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: P212766

CATALOG NUMBER: LD4B50D010TE EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2293.9	2282.2	2255.7	2273.3	2276.3	2264.5	2279.2	2296.9	2279.2	2264.5	2276.3
5°	2379.3	2370.5	2347.0	2361.7	2364.6	2361.7	2370.5	2385.2	2370.5	2361.7	2364.6
7.5°	2464.7	2458.9	2432.4	2450.0	2455.9	2450.0	2458.9	2473.6	2458.9	2450.0	2455.9
10°	2547.2	2544.3	2517.7	2541.3	2544.3	2538.4	2547.2	2570.8	2547.2	2538.4	2544.3
12.5°	2641.4	2647.3	2617.9	2644.4	2647.3	2641.4	2653.2	2670.9	2653.2	2641.4	2647.3
15°	2750.4	2747.4	2723.9	2744.5	2750.4	2744.5	2759.2	2782.8	2759.2	2744.5	2750.4
17.5°	2803.4	2803.4	2785.7	2806.3	2809.3	2809.3	2821.1	2838.7	2821.1	2809.3	2809.3
20°	2806.3	2809.3	2788.7	2812.2	2812.2	2812.2	2824.0	2832.8	2824.0	2812.2	2812.2
22.5°	2759.2	2762.2	2741.5	2762.2	2762.2	2765.1	2771.0	2776.9	2771.0	2765.1	2762.2
25°	2667.9	2670.9	2653.2	2670.9	2667.9	2667.9	2673.8	2682.7	2673.8	2667.9	2667.9
27.5°	2532.5	2535.4	2511.9	2532.5	2529.5	2526.6	2535.4	2538.4	2535.4	2526.6	2529.5
30°	2352.8	2355.8	2335.2	2352.8	2349.9	2347.0	2358.7	2361.7	2358.7	2347.0	2349.9
32.5°	2137.9	2132.0	2117.3	2132.0	2129.0	2129.0	2134.9	2143.8	2134.9	2129.0	2129.0
35°	1878.7	1878.7	1869.9	1881.7	1872.9	1884.6	1884.6	1887.6	1884.6	1884.6	1872.9
37.5°	1613.7	1613.7	1607.8	1613.7	1610.8	1622.5	1622.5	1631.4	1622.5	1622.5	1610.8
40°	1336.9	1336.9	1331.0	1336.9	1345.7	1345.7	1342.8	1354.6	1342.8	1345.7	1345.7
42.5°	1057.2	1057.2	1054.2	1068.9	1068.9	1068.9	1060.1	1071.9	1060.1	1068.9	1068.9
45°	768.6	762.7	759.7	759.7	762.7	774.5	762.7	777.4	762.7	774.5	762.7
47.5°	488.8	491.8	494.7	503.5	497.7	494.7	494.7	503.5	494.7	494.7	497.7
50°	300.4	303.3	303.3	309.2	300.4	306.3	303.3	309.2	303.3	306.3	300.4
52.5°	164.9	164.9	164.9	170.8	164.9	167.8	164.9	170.8	164.9	167.8	164.9
55°	85.4	85.4	85.4	88.3	85.4	85.4	85.4	88.3	85.4	85.4	85.4
57.5°	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1
60°	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3
62.5°	29.4	26.5	26.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
65°	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
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°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
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°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
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°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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: P212766

CATALOG NUMBER: LD4B50D010TE EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2273.3	2255.7	2282.2	2293.9	2285.1	2276.3	2285.1	2261.6	2255.7	2267.4	2235.1
5°	2361.7	2347.0	2370.5	2379.3	2370.5	2358.7	2358.7	2335.2	2323.4	2335.2	2296.9
7.5°	2450.0	2432.4	2458.9	2464.7	2450.0	2441.2	2441.2	2411.7	2397.0	2408.8	2361.7
10°	2541.3	2517.7	2544.3	2547.2	2535.4	2520.7	2517.7	2491.2	2470.6	2482.4	2429.4
12.5°	2644.4	2617.9	2647.3	2641.4	2635.5	2617.9	2614.9	2579.6	2559.0	2570.8	2517.7
15°	2744.5	2723.9	2747.4	2750.4	2735.7	2718.0	2706.2	2679.7	2656.2	2667.9	2609.0
17.5°	2806.3	2785.7	2803.4	2803.4	2794.6	2773.9	2768.1	2744.5	2712.1	2726.8	2667.9
20°	2812.2	2788.7	2809.3	2806.3	2797.5	2782.8	2776.9	2747.4	2720.9	2735.7	2676.8
22.5°	2762.2	2741.5	2762.2	2759.2	2747.4	2735.7	2729.8	2703.3	2673.8	2694.4	2635.5
25°	2670.9	2653.2	2670.9	2667.9	2653.2	2650.3	2638.5	2614.9	2588.4	2606.1	2550.1
27.5°	2532.5	2511.9	2535.4	2532.5	2520.7	2511.9	2506.0	2485.4	2453.0	2476.5	2423.5
30°	2352.8	2335.2	2355.8	2352.8	2341.1	2335.2	2329.3	2308.7	2279.2	2291.0	2252.7
32.5°	2132.0	2117.3	2132.0	2137.9	2111.4	2111.4	2111.4	2087.8	2064.3	2076.0	2037.8
35°	1881.7	1869.9	1878.7	1878.7	1867.0	1864.0	1864.0	1843.4	1822.8	1834.6	1796.3
37.5°	1613.7	1607.8	1613.7	1613.7	1601.9	1596.0	1599.0	1581.3	1563.7	1572.5	1537.2
40°	1336.9	1331.0	1336.9	1336.9	1325.1	1325.1	1325.1	1310.4	1292.7	1298.6	1269.2
42.5°	1068.9	1054.2	1057.2	1057.2	1048.3	1048.3	1051.3	1036.5	1024.8	1024.8	998.3
45°	759.7	759.7	762.7	768.6	756.8	753.9	759.7	748.0	742.1	742.1	718.5
47.5°	503.5	494.7	491.8	488.8	494.7	488.8	494.7	485.9	485.9	485.9	465.3
50°	309.2	303.3	303.3	300.4	303.3	297.4	303.3	297.4	294.5	300.4	285.6
52.5°	170.8	164.9	164.9	164.9	167.8	162.0	164.9	162.0	162.0	162.0	159.0
55°	88.3	85.4	85.4	85.4	85.4	82.5	85.4	85.4	85.4	88.3	85.4
57.5°	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1
60°	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3
62.5°	29.4	26.5	26.5	29.4	26.5	29.4	26.5	26.5	26.5	26.5	26.5
65°	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	20.6	23.6	23.6
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°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
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°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
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°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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: P212766

CATALOG NUMBER: LD4B50D010TE EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2264.5	2246.8	2252.7	2246.8	2232.1	2235.1	2226.2	2226.2	2208.6	2205.6	2208.6
5°	2323.4	2302.8	2302.8	2291.0	2270.4	2267.4	2249.8	2249.8	2223.3	2214.4	2214.4
7.5°	2388.2	2367.6	2361.7	2347.0	2320.5	2308.7	2285.1	2276.3	2243.9	2229.2	2226.2
10°	2458.9	2435.3	2423.5	2405.8	2373.5	2352.8	2320.5	2308.7	2270.4	2240.9	2238.0
12.5°	2538.4	2517.7	2503.0	2479.5	2444.1	2414.7	2376.4	2355.8	2305.7	2273.3	2258.6
15°	2632.6	2609.0	2591.4	2561.9	2523.6	2488.3	2438.2	2414.7	2355.8	2311.6	2291.0
17.5°	2691.5	2665.0	2650.3	2614.9	2576.6	2535.4	2479.5	2450.0	2382.3	2326.3	2305.7
20°	2697.4	2676.8	2656.2	2623.8	2585.5	2538.4	2479.5	2450.0	2379.3	2323.4	2293.9
22.5°	2653.2	2635.5	2612.0	2585.5	2544.3	2497.1	2441.2	2414.7	2347.0	2288.1	2255.7
25°	2567.8	2553.1	2529.5	2497.1	2467.7	2417.6	2364.6	2347.0	2276.3	2226.2	2196.8
27.5°	2435.3	2426.5	2402.9	2373.5	2349.9	2308.7	2255.7	2240.9	2179.1	2134.9	2111.4
30°	2261.6	2255.7	2232.1	2205.6	2187.9	2149.7	2102.5	2096.7	2040.7	2008.3	1984.8
32.5°	2046.6	2040.7	2026.0	1999.5	1984.8	1952.4	1908.2	1914.1	1867.0	1840.5	1831.6
35°	1816.9	1799.2	1790.4	1766.8	1749.2	1725.6	1687.3	1696.2	1669.7	1649.1	1646.1
37.5°	1557.8	1540.1	1534.2	1516.5	1501.8	1481.2	1451.8	1463.5	1451.8	1442.9	1451.8
40°	1286.8	1272.1	1266.2	1248.6	1242.7	1228.0	1207.3	1236.8	1222.1	1239.7	1242.7
42.5°	1015.9	1001.2	1001.2	989.4	980.6	977.7	962.9	1001.2	1001.2	1030.7	1045.4
45°	718.5	721.5	715.6	718.5	712.6	721.5	712.6	739.1	777.4	815.7	839.2
47.5°	477.0	468.2	480.0	477.0	474.1	485.9	497.7	524.2	568.3	621.3	653.7
50°	288.6	288.6	294.5	303.3	309.2	318.0	335.7	368.1	418.2	471.2	509.4
52.5°	164.9	162.0	167.8	170.8	185.5	197.3	217.9	253.2	303.3	362.2	397.5
55°	88.3	88.3	91.3	100.1	109.0	123.7	144.3	176.7	223.8	282.7	318.0
57.5°	53.0	53.0	55.9	58.9	67.7	79.5	97.2	123.7	164.9	215.0	247.4
60°	35.3	38.3	38.3	41.2	47.1	53.0	67.7	85.4	117.8	156.1	182.6
62.5°	29.4	29.4	29.4	32.4	35.3	38.3	47.1	61.8	82.5	111.9	132.5
65°	23.6	23.6	23.6	23.6	26.5	29.4	35.3	44.2	58.9	76.6	88.3
67.5°	17.7	17.7	20.6	20.6	20.6	23.6	26.5	32.4	41.2	53.0	61.8
70°	14.7	14.7	14.7	14.7	17.7	17.7	20.6	23.6	29.4	38.3	44.2
72.5°	11.8	11.8	11.8	11.8	14.7	14.7	14.7	17.7	20.6	26.5	29.4
75°	8.8	8.8	8.8	8.8	11.8	11.8	11.8	14.7	14.7	17.7	20.6
77.5°	5.9	5.9	5.9	5.9	8.8	8.8	8.8	8.8	11.8	11.8	11.8
80°	2.9	2.9	2.9	5.9	5.9	5.9	5.9	5.9	5.9	8.8	8.8
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.9	5.9
85°	0.0	0.0	2.9	0.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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: P212766

CATALOG NUMBER: LD4B50D010TE EU4B30509040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2187.9	2226.2	2182.0	2190.9	2176.2	2202.7	2167.3	2176.2	2182.0	2176.2	2179.1
5°	2190.9	2220.3	2170.3	2179.1	2155.5	2173.2	2140.8	2143.8	2143.8	2137.9	2134.9
7.5°	2199.7	2217.4	2164.4	2161.4	2132.0	2149.7	2111.4	2105.5	2102.5	2093.7	2096.7
10°	2202.7	2208.6	2152.6	2140.8	2105.5	2111.4	2073.1	2061.3	2052.5	2046.6	2043.6
12.5°	2223.3	2217.4	2152.6	2132.0	2087.8	2084.9	2043.6	2026.0	2011.3	2005.4	2002.4
15°	2249.8	2229.2	2158.5	2129.0	2079.0	2067.2	2023.0	2005.4	1984.8	1978.9	1973.0
17.5°	2261.6	2229.2	2152.6	2114.3	2058.4	2043.6	1999.5	1975.9	1955.3	1946.5	1940.6
20°	2246.8	2205.6	2129.0	2087.8	2028.9	2008.3	1964.1	1937.6	1917.0	1908.2	1902.3
22.5°	2214.4	2167.3	2093.7	2052.5	1993.6	1967.1	1928.8	1905.2	1881.7	1878.7	1869.9
25°	2158.5	2111.4	2049.5	2008.3	1955.3	1928.8	1893.5	1872.9	1849.3	1846.3	1843.4
27.5°	2076.0	2031.9	1984.8	1946.5	1899.4	1878.7	1852.2	1831.6	1811.0	1811.0	1805.1
30°	1958.2	1928.8	1887.6	1864.0	1825.7	1805.1	1787.5	1772.7	1752.1	1755.1	1749.2
32.5°	1808.1	1793.3	1763.9	1752.1	1722.7	1716.8	1699.1	1687.3	1669.7	1675.6	1669.7
35°	1640.2	1622.5	1622.5	1616.7	1601.9	1599.0	1590.2	1584.3	1572.5	1575.4	1575.4
37.5°	1448.8	1448.8	1466.5	1469.4	1466.5	1472.4	1469.4	1469.4	1457.6	1463.5	1460.6
40°	1251.5	1269.2	1301.6	1319.2	1325.1	1336.9	1351.6	1345.7	1339.9	1348.7	1345.7
42.5°	1060.1	1095.4	1145.5	1174.9	1195.6	1213.2	1233.8	1233.8	1230.9	1242.7	1239.7
45°	877.5	909.9	977.7	1027.7	1063.0	1089.6	1113.1	1121.9	1124.9	1136.7	1133.7
47.5°	697.9	753.9	833.4	892.3	936.4	968.8	1001.2	1013.0	1021.8	1036.5	1036.5
50°	553.6	624.3	715.6	774.5	827.5	862.8	895.2	912.9	924.6	936.4	936.4
52.5°	444.7	518.3	606.6	668.5	718.5	756.8	789.2	809.8	818.6	833.4	833.4
55°	362.2	429.9	512.4	568.3	618.4	653.7	680.2	697.9	706.7	718.5	718.5
57.5°	285.6	350.4	418.2	468.2	509.4	535.9	559.5	565.4	568.3	577.2	580.1
60°	215.0	265.0	321.0	359.3	388.7	406.4	424.0	421.1	418.2	424.0	418.2
62.5°	153.1	188.5	229.7	253.2	276.8	285.6	294.5	288.6	282.7	285.6	285.6
65°	103.1	129.6	153.1	170.8	182.6	188.5	191.4	188.5	185.5	188.5	185.5
67.5°	70.7	85.4	103.1	111.9	120.7	123.7	126.6	123.7	123.7	123.7	120.7
70°	47.1	55.9	67.7	73.6	76.6	79.5	82.5	79.5	79.5	79.5	79.5
72.5°	32.4	38.3	41.2	47.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1
75°	20.6	23.6	26.5	29.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
77.5°	14.7	14.7	17.7	17.7	20.6	20.6	20.6	20.6	20.6	20.6	20.6
80°	8.8	8.8	11.8	11.8	11.8	11.8	14.7	11.8	14.7	14.7	14.7
82.5°	5.9	5.9	5.9	5.9	8.8	8.8	8.8	8.8	8.8	8.8	8.8
85°	2.9	2.9	2.9	2.9	2.9	2.9	5.9	2.9	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: P212766

CATALOG NUMBER: LD4B50D010TE EU4B30509040 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2229.2	2229.2	2229.2	2229.2
2.5°	2179.1	2173.2	2155.5	2176.2
5°	2132.0	2126.1	2111.4	2126.1
7.5°	2084.9	2076.0	2064.3	2073.1
10°	2028.9	2023.0	2008.3	2017.1
12.5°	1987.7	1975.9	1967.1	1970.0
15°	1961.2	1949.4	1940.6	1943.5
17.5°	1925.9	1914.1	1905.2	1905.2
20°	1887.6	1875.8	1869.9	1867.0
22.5°	1855.2	1846.3	1843.4	1834.6
25°	1825.7	1819.8	1819.8	1808.1
27.5°	1793.3	1784.5	1784.5	1772.7
30°	1737.4	1734.4	1734.4	1725.6
32.5°	1663.8	1654.9	1660.8	1646.1
35°	1563.7	1557.8	1566.6	1554.8
37.5°	1454.7	1451.8	1457.6	1448.8
40°	1339.9	1339.9	1348.7	1334.0
42.5°	1239.7	1239.7	1248.6	1233.8
45°	1130.8	1139.6	1148.4	1136.7
47.5°	1036.5	1042.4	1054.2	1042.4
50°	942.3	948.2	957.0	945.3
52.5°	839.2	845.1	854.0	845.1
55°	721.5	727.3	736.2	730.3
57.5°	580.1	574.2	588.9	577.2
60°	421.1	409.3	412.3	412.3
62.5°	279.7	273.9	279.7	270.9
65°	185.5	182.6	182.6	182.6
67.5°	123.7	120.7	123.7	120.7
70°	79.5	79.5	79.5	79.5
72.5°	50.1	50.1	50.1	50.1
75°	32.4	32.4	32.4	32.4
77.5°	20.6	20.6	20.6	20.6
80°	14.7	14.7	14.7	14.7
82.5°	8.8	8.8	8.8	8.8
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



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





















(END OF REPORT)