

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: P212765

Luminaire Tested: **LD4B50D010TE EU4B30509035 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212765
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 EU4B30509035 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4087.8 lumens
Efficiency: N/A
Efficacy: 69.6 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

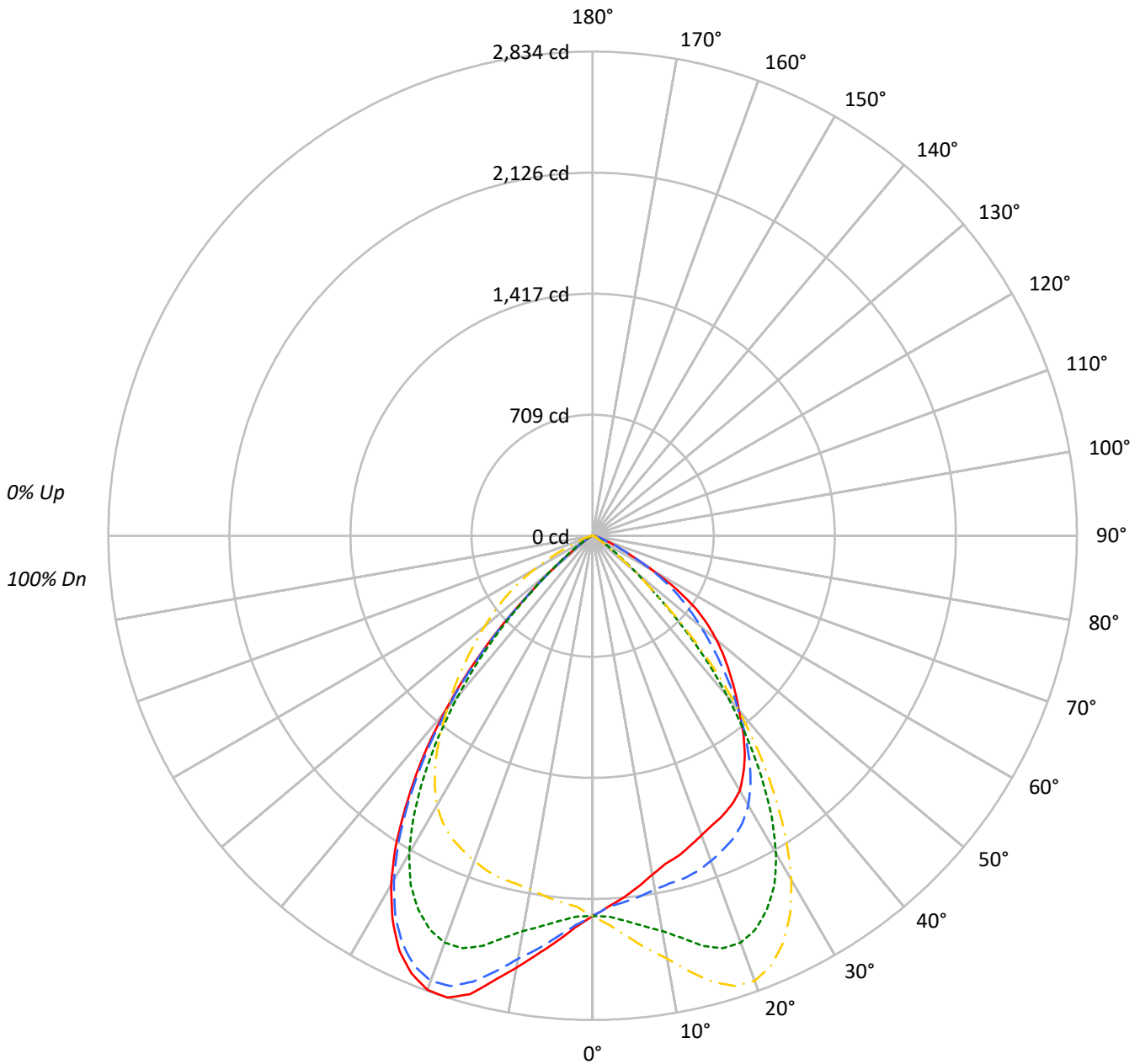
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	274493	274493	274493	274493
5°	262801	280272	294833	280272
10°	252225	294196	321438	294196
15°	247770	317212	354754	317212
20°	244646	332630	371221	332630
25°	245655	328483	364495	328483
30°	245359	305649	335801	305649
35°	233726	259399	283748	259399
40°	214425	197390	217742	197390
45°	197951	125630	135381	125630
50°	181088	60926	59237	60926
55°	156790	26558	18967	26558
60°	101538	13050	8708	13050
65°	53206	8581	6859	8581
70°	28635	6347	5301	6347
75°	15393	5624	4194	5624
80°	10442	4191	2060	4191
85°	8350	4104	0	4104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.9	5.3
10°-20°	678.7	16.6
20°-30°	1055.2	25.8
30°-40°	1065.8	26.1
40°-50°	674.8	16.5
50°-60°	283.2	6.9
60°-70°	89.8	2.2
70°-80°	20.5	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°	1950.8	47.7
0°-40°	3016.6	73.8
0°-60°	3974.6	97.2
0°-90°	4087.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4087.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2225	2225	2225	2225	2225	
5°	2122	2264	2381	2264	2122	199
15°	1940	2484	2778	2484	1940	547
25°	1805	2414	2678	2414	1805	831
35°	1552	1723	1884	1723	1552	964
45°	1135	720	776	720	1135	876
55°	729	124	88	124	729	629
65°	182	29	24	29	182	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°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2172.5	2151.9	2169.6	2175.4	2175.4	2172.5	2178.4	2172.5	2163.7	2199.0	2172.5
5°	2122.5	2107.8	2122.5	2128.4	2131.3	2134.3	2140.2	2140.2	2137.2	2169.6	2151.9
7.5°	2069.6	2060.8	2072.6	2081.4	2093.1	2090.2	2099.0	2102.0	2107.8	2146.0	2128.4
10°	2013.8	2004.9	2019.6	2025.5	2040.2	2043.2	2049.0	2057.9	2069.6	2107.8	2102.0
12.5°	1966.7	1963.8	1972.6	1984.4	1999.1	2002.0	2007.9	2022.6	2040.2	2081.4	2084.3
15°	1940.3	1937.3	1946.1	1957.9	1969.7	1975.5	1981.4	2002.0	2019.6	2063.7	2075.5
17.5°	1902.0	1902.0	1910.9	1922.6	1937.3	1943.2	1952.0	1972.6	1996.1	2040.2	2054.9
20°	1863.8	1866.8	1872.6	1884.4	1899.1	1905.0	1913.8	1934.4	1960.8	2004.9	2025.5
22.5°	1831.5	1840.3	1843.2	1852.1	1866.8	1875.6	1878.5	1902.0	1925.6	1963.8	1990.2
25°	1805.0	1816.8	1816.8	1822.7	1840.3	1843.2	1846.2	1869.7	1890.3	1925.6	1952.0
27.5°	1769.8	1781.5	1781.5	1790.3	1802.1	1808.0	1808.0	1828.6	1849.1	1875.6	1896.2
30°	1722.7	1731.5	1731.5	1734.5	1746.2	1752.1	1749.2	1769.8	1784.5	1802.1	1822.7
32.5°	1643.3	1658.0	1652.2	1661.0	1666.9	1672.7	1666.9	1684.5	1696.3	1713.9	1719.8
35°	1552.2	1564.0	1555.2	1561.0	1572.8	1572.8	1569.8	1581.6	1587.5	1596.3	1599.2
37.5°	1446.4	1455.2	1449.3	1452.3	1458.1	1461.1	1455.2	1467.0	1467.0	1469.9	1464.0
40°	1331.7	1346.4	1337.6	1337.6	1343.5	1346.4	1337.6	1343.5	1349.4	1334.7	1322.9
42.5°	1231.8	1246.5	1237.7	1237.7	1237.7	1240.6	1228.8	1231.8	1231.8	1211.2	1193.6
45°	1134.8	1146.5	1137.7	1128.9	1131.8	1134.8	1123.0	1120.1	1111.2	1087.7	1061.3
47.5°	1040.7	1052.4	1040.7	1034.8	1034.8	1034.8	1020.1	1011.3	999.5	967.2	934.9
50°	943.7	955.4	946.6	940.7	934.9	934.9	923.1	911.3	893.7	861.4	826.1
52.5°	843.7	852.5	843.7	837.8	832.0	832.0	817.3	808.4	787.9	755.5	717.3
55°	729.1	734.9	726.1	720.2	717.3	717.3	705.6	696.7	679.1	652.6	617.4
57.5°	576.2	588.0	573.3	579.1	579.1	576.2	567.4	564.4	558.6	535.0	508.6
60°	411.6	411.6	408.6	420.4	417.5	423.3	417.5	420.4	423.3	405.7	388.1
62.5°	270.5	279.3	273.4	279.3	285.2	285.2	282.2	288.1	294.0	285.2	276.3
65°	182.3	182.3	182.3	185.2	185.2	188.1	185.2	188.1	191.1	188.1	182.3
67.5°	120.5	123.5	120.5	123.5	120.5	123.5	123.5	123.5	126.4	123.5	120.5
70°	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	82.3	79.4	76.4
72.5°	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
75°	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
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°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2187.2	2178.4	2222.5	2184.3	2204.8	2201.9	2204.8	2222.5	2222.5	2231.3	2228.4
5°	2175.4	2166.6	2216.6	2187.2	2210.7	2210.7	2219.5	2246.0	2246.0	2263.6	2266.6
7.5°	2157.8	2160.7	2213.7	2196.0	2222.5	2225.4	2240.1	2272.5	2281.3	2304.8	2316.6
10°	2137.2	2149.0	2204.8	2199.0	2234.2	2237.2	2266.6	2304.8	2316.6	2348.9	2369.5
12.5°	2128.4	2149.0	2213.7	2219.5	2254.8	2269.5	2301.9	2351.8	2372.4	2410.6	2440.0
15°	2125.5	2154.9	2225.4	2246.0	2287.2	2307.7	2351.8	2410.6	2434.1	2484.1	2519.4
17.5°	2110.8	2149.0	2225.4	2257.8	2301.9	2322.4	2378.3	2445.9	2475.3	2531.2	2572.3
20°	2084.3	2125.5	2201.9	2243.1	2290.1	2319.5	2375.4	2445.9	2475.3	2534.1	2581.1
22.5°	2049.0	2090.2	2163.7	2210.7	2251.9	2284.2	2343.0	2410.6	2437.1	2492.9	2540.0
25°	2004.9	2046.1	2107.8	2154.9	2193.1	2222.5	2272.5	2343.0	2360.7	2413.6	2463.5
27.5°	1943.2	1981.4	2028.5	2072.6	2107.8	2131.3	2175.4	2237.2	2251.9	2304.8	2346.0
30°	1860.9	1884.4	1925.6	1955.0	1981.4	2004.9	2037.3	2093.1	2099.0	2146.0	2184.3
32.5°	1749.2	1760.9	1790.3	1805.0	1828.6	1837.4	1863.8	1910.9	1905.0	1949.1	1981.4
35°	1613.9	1619.8	1619.8	1637.5	1643.3	1646.3	1666.9	1693.3	1684.5	1722.7	1746.2
37.5°	1467.0	1464.0	1446.4	1446.4	1449.3	1440.5	1449.3	1461.1	1449.3	1478.7	1499.3
40°	1317.0	1299.4	1267.1	1249.4	1240.6	1237.7	1220.0	1234.7	1205.3	1225.9	1240.6
42.5°	1173.0	1143.6	1093.6	1058.3	1043.6	1028.9	999.5	999.5	961.3	976.0	979.0
45°	1026.0	976.0	908.4	876.1	837.8	814.3	776.1	737.9	711.4	720.2	711.4
47.5°	890.8	832.0	752.6	696.7	652.6	620.3	567.4	523.3	496.8	485.1	473.3
50°	773.2	714.4	623.2	552.7	508.6	470.4	417.5	367.5	335.1	317.5	308.7
52.5°	667.3	605.6	517.4	443.9	396.9	361.6	302.8	252.8	217.5	197.0	185.2
55°	567.4	511.5	429.2	361.6	317.5	282.2	223.4	176.4	144.0	123.5	108.8
57.5°	467.4	417.5	349.8	285.2	246.9	214.6	164.6	123.5	97.0	79.4	67.6
60°	358.7	320.4	264.6	214.6	182.3	155.8	117.6	85.3	67.6	52.9	47.0
62.5°	252.8	229.3	188.1	152.9	132.3	111.7	82.3	61.7	47.0	38.2	35.3
65°	170.5	152.9	129.4	102.9	88.2	76.4	58.8	44.1	35.3	29.4	26.5
67.5°	111.7	102.9	85.3	70.6	61.7	52.9	41.2	32.3	26.5	23.5	20.6
70°	73.5	67.6	55.9	47.0	44.1	38.2	29.4	23.5	20.6	17.6	17.6
72.5°	47.0	41.2	38.2	32.3	29.4	26.5	20.6	17.6	14.7	14.7	14.7
75°	29.4	26.5	23.5	20.6	20.6	17.6	14.7	14.7	11.8	11.8	11.8
77.5°	17.6	17.6	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°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2243.1	2248.9	2243.1	2260.7	2231.3	2263.6	2251.9	2257.8	2281.3	2272.5	2281.3
5°	2287.2	2298.9	2298.9	2319.5	2293.0	2331.3	2319.5	2331.3	2354.8	2354.8	2366.5
7.5°	2343.0	2357.7	2363.6	2384.2	2357.7	2404.8	2393.0	2407.7	2437.1	2437.1	2445.9
10°	2401.8	2419.4	2431.2	2454.7	2425.3	2478.2	2466.5	2487.1	2513.5	2516.5	2531.2
12.5°	2475.3	2498.8	2513.5	2534.1	2513.5	2566.4	2554.7	2575.3	2610.5	2613.5	2631.1
15°	2557.6	2587.0	2604.7	2628.2	2604.7	2663.5	2651.7	2675.2	2701.7	2713.4	2731.1
17.5°	2610.5	2645.8	2660.5	2687.0	2663.5	2722.2	2707.5	2739.9	2763.4	2769.3	2789.9
20°	2619.4	2651.7	2672.3	2692.8	2672.3	2731.1	2716.4	2742.8	2772.2	2778.1	2792.8
22.5°	2581.1	2607.6	2631.1	2648.8	2631.1	2689.9	2669.3	2698.7	2725.2	2731.1	2742.8
25°	2492.9	2525.3	2548.8	2563.5	2545.9	2601.7	2584.1	2610.5	2634.1	2645.8	2648.8
27.5°	2369.5	2398.9	2422.4	2431.2	2419.4	2472.4	2448.8	2481.2	2501.8	2507.6	2516.5
30°	2201.9	2228.4	2251.9	2257.8	2248.9	2287.2	2275.4	2304.8	2325.4	2331.3	2337.1
32.5°	1996.1	2022.6	2037.3	2043.2	2034.3	2072.6	2060.8	2084.3	2107.8	2107.8	2107.8
35°	1763.9	1787.4	1796.2	1813.9	1793.3	1831.5	1819.7	1840.3	1860.9	1860.9	1863.8
37.5°	1514.0	1531.6	1537.5	1555.2	1534.6	1569.8	1561.0	1578.7	1596.3	1593.4	1599.2
40°	1246.5	1264.1	1270.0	1284.7	1267.1	1296.4	1290.6	1308.2	1322.9	1322.9	1322.9
42.5°	987.8	999.5	999.5	1014.2	996.6	1023.0	1023.0	1034.8	1049.5	1046.6	1046.6
45°	717.3	714.4	720.2	717.3	717.3	740.8	740.8	746.7	758.5	752.6	755.5
47.5°	476.2	479.2	467.4	476.2	464.5	485.1	485.1	485.1	493.9	488.0	493.9
50°	302.8	294.0	288.1	288.1	285.2	299.9	294.0	296.9	302.8	296.9	302.8
52.5°	170.5	167.6	161.7	164.6	158.7	161.7	161.7	161.7	164.6	161.7	167.6
55°	100.0	91.1	88.2	88.2	85.3	88.2	85.3	85.3	85.3	82.3	85.3
57.5°	58.8	55.9	52.9	52.9	50.0	50.0	50.0	50.0	50.0	50.0	50.0
60°	41.2	38.2	38.2	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3
62.5°	32.3	29.4	29.4	29.4	26.5	26.5	26.5	26.5	26.5	29.4	26.5
65°	23.5	23.5	23.5	23.5	23.5	23.5	20.6	23.5	23.5	23.5	23.5
67.5°	20.6	20.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
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: P212765

CATALOG NUMBER: LD4B50D010TE EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2290.1	2278.3	2251.9	2269.5	2272.5	2260.7	2275.4	2293.0	2275.4	2260.7	2272.5
5°	2375.4	2366.5	2343.0	2357.7	2360.7	2357.7	2366.5	2381.2	2366.5	2357.7	2360.7
7.5°	2460.6	2454.7	2428.3	2445.9	2451.8	2445.9	2454.7	2469.4	2454.7	2445.9	2451.8
10°	2542.9	2540.0	2513.5	2537.0	2540.0	2534.1	2542.9	2566.4	2542.9	2534.1	2540.0
12.5°	2637.0	2642.9	2613.5	2639.9	2642.9	2637.0	2648.8	2666.4	2648.8	2637.0	2642.9
15°	2745.8	2742.8	2719.3	2739.9	2745.8	2739.9	2754.6	2778.1	2754.6	2739.9	2745.8
17.5°	2798.7	2798.7	2781.0	2801.6	2804.6	2804.6	2816.3	2834.0	2816.3	2804.6	2804.6
20°	2801.6	2804.6	2784.0	2807.5	2807.5	2807.5	2819.3	2828.1	2819.3	2807.5	2807.5
22.5°	2754.6	2757.5	2736.9	2757.5	2757.5	2760.5	2766.3	2772.2	2766.3	2760.5	2757.5
25°	2663.5	2666.4	2648.8	2666.4	2663.5	2663.5	2669.3	2678.2	2669.3	2663.5	2663.5
27.5°	2528.2	2531.2	2507.6	2528.2	2525.3	2522.3	2531.2	2534.1	2531.2	2522.3	2525.3
30°	2348.9	2351.8	2331.3	2348.9	2346.0	2343.0	2354.8	2357.7	2354.8	2343.0	2346.0
32.5°	2134.3	2128.4	2113.7	2128.4	2125.5	2125.5	2131.3	2140.2	2131.3	2125.5	2125.5
35°	1875.6	1875.6	1866.8	1878.5	1869.7	1881.5	1881.5	1884.4	1881.5	1881.5	1869.7
37.5°	1611.0	1611.0	1605.1	1611.0	1608.1	1619.8	1619.8	1628.6	1619.8	1619.8	1608.1
40°	1334.7	1334.7	1328.8	1334.7	1343.5	1343.5	1340.5	1352.3	1340.5	1343.5	1343.5
42.5°	1055.4	1055.4	1052.4	1067.1	1067.1	1067.1	1058.3	1070.1	1058.3	1067.1	1067.1
45°	767.3	761.4	758.5	758.5	761.4	773.2	761.4	776.1	761.4	773.2	761.4
47.5°	488.0	490.9	493.9	502.7	496.8	493.9	493.9	502.7	493.9	493.9	496.8
50°	299.9	302.8	302.8	308.7	299.9	305.7	302.8	308.7	302.8	305.7	299.9
52.5°	164.6	164.6	164.6	170.5	164.6	167.6	164.6	170.5	164.6	167.6	164.6
55°	85.3	85.3	85.3	88.2	85.3	85.3	85.3	88.2	85.3	85.3	85.3
57.5°	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
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°	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
67.5°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
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: P212765

CATALOG NUMBER: LD4B50D010TE EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2269.5	2251.9	2278.3	2290.1	2281.3	2272.5	2281.3	2257.8	2251.9	2263.6	2231.3
5°	2357.7	2343.0	2366.5	2375.4	2366.5	2354.8	2354.8	2331.3	2319.5	2331.3	2293.0
7.5°	2445.9	2428.3	2454.7	2460.6	2445.9	2437.1	2437.1	2407.7	2393.0	2404.8	2357.7
10°	2537.0	2513.5	2540.0	2542.9	2531.2	2516.5	2513.5	2487.1	2466.5	2478.2	2425.3
12.5°	2639.9	2613.5	2642.9	2637.0	2631.1	2613.5	2610.5	2575.3	2554.7	2566.4	2513.5
15°	2739.9	2719.3	2742.8	2745.8	2731.1	2713.4	2701.7	2675.2	2651.7	2663.5	2604.7
17.5°	2801.6	2781.0	2798.7	2798.7	2789.9	2769.3	2763.4	2739.9	2707.5	2722.2	2663.5
20°	2807.5	2784.0	2804.6	2801.6	2792.8	2778.1	2772.2	2742.8	2716.4	2731.1	2672.3
22.5°	2757.5	2736.9	2757.5	2754.6	2742.8	2731.1	2725.2	2698.7	2669.3	2689.9	2631.1
25°	2666.4	2648.8	2666.4	2663.5	2648.8	2645.8	2634.1	2610.5	2584.1	2601.7	2545.9
27.5°	2528.2	2507.6	2531.2	2528.2	2516.5	2507.6	2501.8	2481.2	2448.8	2472.4	2419.4
30°	2348.9	2331.3	2351.8	2348.9	2337.1	2331.3	2325.4	2304.8	2275.4	2287.2	2248.9
32.5°	2128.4	2113.7	2128.4	2134.3	2107.8	2107.8	2107.8	2084.3	2060.8	2072.6	2034.3
35°	1878.5	1866.8	1875.6	1875.6	1863.8	1860.9	1860.9	1840.3	1819.7	1831.5	1793.3
37.5°	1611.0	1605.1	1611.0	1611.0	1599.2	1593.4	1596.3	1578.7	1561.0	1569.8	1534.6
40°	1334.7	1328.8	1334.7	1334.7	1322.9	1322.9	1322.9	1308.2	1290.6	1296.4	1267.1
42.5°	1067.1	1052.4	1055.4	1055.4	1046.6	1046.6	1049.5	1034.8	1023.0	1023.0	996.6
45°	758.5	758.5	761.4	767.3	755.5	752.6	758.5	746.7	740.8	740.8	717.3
47.5°	502.7	493.9	490.9	488.0	493.9	488.0	493.9	485.1	485.1	485.1	464.5
50°	308.7	302.8	302.8	299.9	302.8	296.9	302.8	296.9	294.0	299.9	285.2
52.5°	170.5	164.6	164.6	164.6	167.6	161.7	164.6	161.7	161.7	161.7	158.7
55°	88.2	85.3	85.3	85.3	85.3	82.3	85.3	85.3	85.3	88.2	85.3
57.5°	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
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°	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	20.6	23.5	23.5
67.5°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
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: P212765

CATALOG NUMBER: LD4B50D010TE EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2260.7	2243.1	2248.9	2243.1	2228.4	2231.3	2222.5	2222.5	2204.8	2201.9	2204.8
5°	2319.5	2298.9	2298.9	2287.2	2266.6	2263.6	2246.0	2246.0	2219.5	2210.7	2210.7
7.5°	2384.2	2363.6	2357.7	2343.0	2316.6	2304.8	2281.3	2272.5	2240.1	2225.4	2222.5
10°	2454.7	2431.2	2419.4	2401.8	2369.5	2348.9	2316.6	2304.8	2266.6	2237.2	2234.2
12.5°	2534.1	2513.5	2498.8	2475.3	2440.0	2410.6	2372.4	2351.8	2301.9	2269.5	2254.8
15°	2628.2	2604.7	2587.0	2557.6	2519.4	2484.1	2434.1	2410.6	2351.8	2307.7	2287.2
17.5°	2687.0	2660.5	2645.8	2610.5	2572.3	2531.2	2475.3	2445.9	2378.3	2322.4	2301.9
20°	2692.8	2672.3	2651.7	2619.4	2581.1	2534.1	2475.3	2445.9	2375.4	2319.5	2290.1
22.5°	2648.8	2631.1	2607.6	2581.1	2540.0	2492.9	2437.1	2410.6	2343.0	2284.2	2251.9
25°	2563.5	2548.8	2525.3	2492.9	2463.5	2413.6	2360.7	2343.0	2272.5	2222.5	2193.1
27.5°	2431.2	2422.4	2398.9	2369.5	2346.0	2304.8	2251.9	2237.2	2175.4	2131.3	2107.8
30°	2257.8	2251.9	2228.4	2201.9	2184.3	2146.0	2099.0	2093.1	2037.3	2004.9	1981.4
32.5°	2043.2	2037.3	2022.6	1996.1	1981.4	1949.1	1905.0	1910.9	1863.8	1837.4	1828.6
35°	1813.9	1796.2	1787.4	1763.9	1746.2	1722.7	1684.5	1693.3	1666.9	1646.3	1643.3
37.5°	1555.2	1537.5	1531.6	1514.0	1499.3	1478.7	1449.3	1461.1	1449.3	1440.5	1449.3
40°	1284.7	1270.0	1264.1	1246.5	1240.6	1225.9	1205.3	1234.7	1220.0	1237.7	1240.6
42.5°	1014.2	999.5	999.5	987.8	979.0	976.0	961.3	999.5	999.5	1028.9	1043.6
45°	717.3	720.2	714.4	717.3	711.4	720.2	711.4	737.9	776.1	814.3	837.8
47.5°	476.2	467.4	479.2	476.2	473.3	485.1	496.8	523.3	567.4	620.3	652.6
50°	288.1	288.1	294.0	302.8	308.7	317.5	335.1	367.5	417.5	470.4	508.6
52.5°	164.6	161.7	167.6	170.5	185.2	197.0	217.5	252.8	302.8	361.6	396.9
55°	88.2	88.2	91.1	100.0	108.8	123.5	144.0	176.4	223.4	282.2	317.5
57.5°	52.9	52.9	55.9	58.8	67.6	79.4	97.0	123.5	164.6	214.6	246.9
60°	35.3	38.2	38.2	41.2	47.0	52.9	67.6	85.3	117.6	155.8	182.3
62.5°	29.4	29.4	29.4	32.3	35.3	38.2	47.0	61.7	82.3	111.7	132.3
65°	23.5	23.5	23.5	23.5	26.5	29.4	35.3	44.1	58.8	76.4	88.2
67.5°	17.6	17.6	20.6	20.6	20.6	23.5	26.5	32.3	41.2	52.9	61.7
70°	14.7	14.7	14.7	14.7	17.6	17.6	20.6	23.5	29.4	38.2	44.1
72.5°	11.8	11.8	11.8	11.8	14.7	14.7	14.7	17.6	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	17.6	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: P212765

CATALOG NUMBER: LD4B50D010TE EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4	2225.4
2.5°	2184.3	2222.5	2178.4	2187.2	2172.5	2199.0	2163.7	2172.5	2178.4	2172.5	2175.4
5°	2187.2	2216.6	2166.6	2175.4	2151.9	2169.6	2137.2	2140.2	2140.2	2134.3	2131.3
7.5°	2196.0	2213.7	2160.7	2157.8	2128.4	2146.0	2107.8	2102.0	2099.0	2090.2	2093.1
10°	2199.0	2204.8	2149.0	2137.2	2102.0	2107.8	2069.6	2057.9	2049.0	2043.2	2040.2
12.5°	2219.5	2213.7	2149.0	2128.4	2084.3	2081.4	2040.2	2022.6	2007.9	2002.0	1999.1
15°	2246.0	2225.4	2154.9	2125.5	2075.5	2063.7	2019.6	2002.0	1981.4	1975.5	1969.7
17.5°	2257.8	2225.4	2149.0	2110.8	2054.9	2040.2	1996.1	1972.6	1952.0	1943.2	1937.3
20°	2243.1	2201.9	2125.5	2084.3	2025.5	2004.9	1960.8	1934.4	1913.8	1905.0	1899.1
22.5°	2210.7	2163.7	2090.2	2049.0	1990.2	1963.8	1925.6	1902.0	1878.5	1875.6	1866.8
25°	2154.9	2107.8	2046.1	2004.9	1952.0	1925.6	1890.3	1869.7	1846.2	1843.2	1840.3
27.5°	2072.6	2028.5	1981.4	1943.2	1896.2	1875.6	1849.1	1828.6	1808.0	1808.0	1802.1
30°	1955.0	1925.6	1884.4	1860.9	1822.7	1802.1	1784.5	1769.8	1749.2	1752.1	1746.2
32.5°	1805.0	1790.3	1760.9	1749.2	1719.8	1713.9	1696.3	1684.5	1666.9	1672.7	1666.9
35°	1637.5	1619.8	1619.8	1613.9	1599.2	1596.3	1587.5	1581.6	1569.8	1572.8	1572.8
37.5°	1446.4	1446.4	1464.0	1467.0	1464.0	1469.9	1467.0	1467.0	1455.2	1461.1	1458.1
40°	1249.4	1267.1	1299.4	1317.0	1322.9	1334.7	1349.4	1343.5	1337.6	1346.4	1343.5
42.5°	1058.3	1093.6	1143.6	1173.0	1193.6	1211.2	1231.8	1231.8	1228.8	1240.6	1237.7
45°	876.1	908.4	976.0	1026.0	1061.3	1087.7	1111.2	1120.1	1123.0	1134.8	1131.8
47.5°	696.7	752.6	832.0	890.8	934.9	967.2	999.5	1011.3	1020.1	1034.8	1034.8
50°	552.7	623.2	714.4	773.2	826.1	861.4	893.7	911.3	923.1	934.9	934.9
52.5°	443.9	517.4	605.6	667.3	717.3	755.5	787.9	808.4	817.3	832.0	832.0
55°	361.6	429.2	511.5	567.4	617.4	652.6	679.1	696.7	705.6	717.3	717.3
57.5°	285.2	349.8	417.5	467.4	508.6	535.0	558.6	564.4	567.4	576.2	579.1
60°	214.6	264.6	320.4	358.7	388.1	405.7	423.3	420.4	417.5	423.3	417.5
62.5°	152.9	188.1	229.3	252.8	276.3	285.2	294.0	288.1	282.2	285.2	285.2
65°	102.9	129.4	152.9	170.5	182.3	188.1	191.1	188.1	185.2	188.1	185.2
67.5°	70.6	85.3	102.9	111.7	120.5	123.5	126.4	123.5	123.5	123.5	120.5
70°	47.0	55.9	67.6	73.5	76.4	79.4	82.3	79.4	79.4	79.4	79.4
72.5°	32.3	38.2	41.2	47.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
75°	20.6	23.5	26.5	29.4	32.3	32.3	32.3	32.3	32.3	32.3	32.3
77.5°	14.7	14.7	17.6	17.6	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: P212765

CATALOG NUMBER: LD4B50D010TE EU4B30509035 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2225.4	2225.4	2225.4	2225.4
2.5°	2175.4	2169.6	2151.9	2172.5
5°	2128.4	2122.5	2107.8	2122.5
7.5°	2081.4	2072.6	2060.8	2069.6
10°	2025.5	2019.6	2004.9	2013.8
12.5°	1984.4	1972.6	1963.8	1966.7
15°	1957.9	1946.1	1937.3	1940.3
17.5°	1922.6	1910.9	1902.0	1902.0
20°	1884.4	1872.6	1866.8	1863.8
22.5°	1852.1	1843.2	1840.3	1831.5
25°	1822.7	1816.8	1816.8	1805.0
27.5°	1790.3	1781.5	1781.5	1769.8
30°	1734.5	1731.5	1731.5	1722.7
32.5°	1661.0	1652.2	1658.0	1643.3
35°	1561.0	1555.2	1564.0	1552.2
37.5°	1452.3	1449.3	1455.2	1446.4
40°	1337.6	1337.6	1346.4	1331.7
42.5°	1237.7	1237.7	1246.5	1231.8
45°	1128.9	1137.7	1146.5	1134.8
47.5°	1034.8	1040.7	1052.4	1040.7
50°	940.7	946.6	955.4	943.7
52.5°	837.8	843.7	852.5	843.7
55°	720.2	726.1	734.9	729.1
57.5°	579.1	573.3	588.0	576.2
60°	420.4	408.6	411.6	411.6
62.5°	279.3	273.4	279.3	270.5
65°	185.2	182.3	182.3	182.3
67.5°	123.5	120.5	123.5	120.5
70°	79.4	79.4	79.4	79.4
72.5°	50.0	50.0	50.0	50.0
75°	32.3	32.3	32.3	32.3
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)