

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: P212763

Luminaire Tested: **LD4B50D010TE EU4B30509027 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212763
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 EU4B30509027 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3876.1 lumens
Efficiency: N/A
Efficacy: 66.0 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

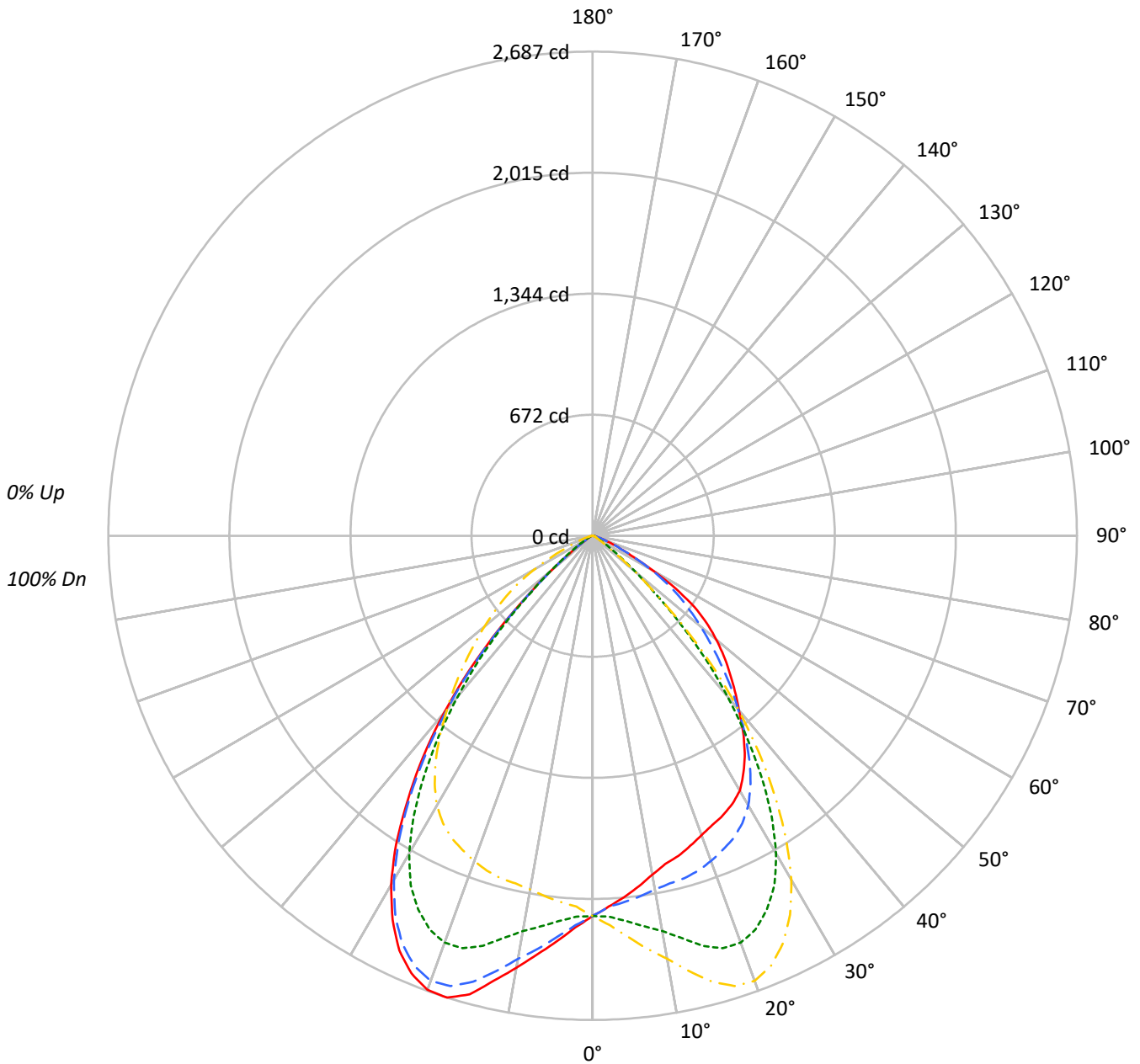
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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°	260272	260272	260272	260272
5°	249194	265760	279566	265760
10°	239149	278953	304792	278953
15°	234937	300777	336379	300777
20°	231979	315396	351991	315396
25°	232930	311458	345604	311458
30°	232655	289825	318410	289825
35°	221620	245968	269051	245968
40°	203315	187165	206471	187165
45°	187694	119123	128368	119123
50°	171705	57779	56167	57779
55°	148662	25182	17978	25182
60°	96284	12384	8264	12384
65°	50434	8143	6508	8143
70°	27156	6023	5013	6023
75°	14631	5338	4003	5338
80°	9873	3978	1989	3978
85°	7925	3963	0	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.7	5.3
10°-20°	643.5	16.6
20°-30°	1000.5	25.8
30°-40°	1010.6	26.1
40°-50°	639.9	16.5
50°-60°	268.6	6.9
60°-70°	85.1	2.2
70°-80°	19.5	0.5
80°-90°	2.8	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°	1849.8	47.7
0°-40°	2860.3	73.8
0°-60°	3768.7	97.2
0°-90°	3876.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3876.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2110	2110	2110	2110	2110	
5°	2013	2146	2258	2146	2013	189
15°	1840	2355	2634	2355	1840	519
25°	1712	2288	2539	2288	1712	788
35°	1472	1634	1787	1634	1472	914
45°	1076	683	736	683	1076	831
55°	691	117	84	117	691	597
65°	173	28	22	28	173	191
75°	31	11	8	11	31	37
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°	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1
2.5°	2060.0	2040.5	2057.2	2062.8	2062.8	2060.0	2065.5	2060.0	2051.6	2085.1	2060.0
5°	2012.6	1998.6	2012.6	2018.2	2020.9	2023.7	2029.3	2029.3	2026.5	2057.2	2040.5
7.5°	1962.4	1954.0	1965.2	1973.6	1984.7	1981.9	1990.3	1993.1	1998.6	2034.9	2018.2
10°	1909.4	1901.1	1915.0	1920.6	1934.5	1937.3	1942.9	1951.3	1962.4	1998.6	1993.1
12.5°	1864.8	1862.1	1870.4	1881.6	1895.5	1898.3	1903.9	1917.8	1934.5	1973.6	1976.3
15°	1839.8	1837.0	1845.3	1856.5	1867.6	1873.2	1878.8	1898.3	1915.0	1956.8	1968.0
17.5°	1803.5	1803.5	1811.9	1823.0	1837.0	1842.5	1850.9	1870.4	1892.7	1934.5	1948.5
20°	1767.3	1770.1	1775.6	1786.8	1800.7	1806.3	1814.7	1834.2	1859.3	1901.1	1920.6
22.5°	1736.6	1745.0	1747.8	1756.1	1770.1	1778.4	1781.2	1803.5	1825.8	1862.1	1887.1
25°	1711.5	1722.7	1722.7	1728.3	1745.0	1747.8	1750.6	1772.9	1792.4	1825.8	1850.9
27.5°	1678.1	1689.2	1689.2	1697.6	1708.7	1714.3	1714.3	1733.8	1753.3	1778.4	1797.9
30°	1633.5	1641.8	1641.8	1644.6	1655.8	1661.4	1658.6	1678.1	1692.0	1708.7	1728.3
32.5°	1558.2	1572.2	1566.6	1574.9	1580.5	1586.1	1580.5	1597.2	1608.4	1625.1	1630.7
35°	1471.8	1483.0	1474.6	1480.2	1491.3	1491.3	1488.5	1499.7	1505.3	1513.6	1516.4
37.5°	1371.5	1379.8	1374.2	1377.0	1382.6	1385.4	1379.8	1391.0	1391.0	1393.8	1388.2
40°	1262.7	1276.7	1268.3	1268.3	1273.9	1276.7	1268.3	1273.9	1279.5	1265.5	1254.4
42.5°	1168.0	1181.9	1173.5	1173.5	1173.5	1176.3	1165.2	1168.0	1168.0	1148.5	1131.7
45°	1076.0	1087.1	1078.8	1070.4	1073.2	1076.0	1064.8	1062.0	1053.7	1031.4	1006.3
47.5°	986.8	997.9	986.8	981.2	981.2	981.2	967.3	958.9	947.8	917.1	886.4
50°	894.8	905.9	897.6	892.0	886.4	886.4	875.3	864.1	847.4	816.7	783.3
52.5°	800.0	808.4	800.0	794.4	788.9	788.9	774.9	766.6	747.1	716.4	680.2
55°	691.3	696.9	688.5	682.9	680.2	680.2	669.0	660.6	643.9	618.8	585.4
57.5°	546.4	557.5	543.6	549.1	549.1	546.4	538.0	535.2	529.6	507.3	482.2
60°	390.3	390.3	387.5	398.6	395.8	401.4	395.8	398.6	401.4	384.7	368.0
62.5°	256.5	264.8	259.2	264.8	270.4	270.4	267.6	273.2	278.8	270.4	262.0
65°	172.8	172.8	172.8	175.6	175.6	178.4	175.6	178.4	181.2	178.4	172.8
67.5°	114.3	117.1	114.3	117.1	114.3	117.1	117.1	117.1	119.9	117.1	114.3
70°	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	78.1	75.3	72.5
72.5°	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4
75°	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7
77.5°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
80°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	11.2	13.9	11.2	11.2
82.5°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
85°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	2.8	5.6	2.8	2.8
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1
2.5°	2073.9	2065.5	2107.4	2071.1	2090.6	2087.8	2090.6	2107.4	2107.4	2115.7	2112.9
5°	2062.8	2054.4	2101.8	2073.9	2096.2	2096.2	2104.6	2129.7	2129.7	2146.4	2149.2
7.5°	2046.0	2048.8	2099.0	2082.3	2107.4	2110.1	2124.1	2154.7	2163.1	2185.4	2196.6
10°	2026.5	2037.7	2090.6	2085.1	2118.5	2121.3	2149.2	2185.4	2196.6	2227.2	2246.7
12.5°	2018.2	2037.7	2099.0	2104.6	2138.0	2152.0	2182.6	2230.0	2249.5	2285.8	2313.6
15°	2015.4	2043.2	2110.1	2129.7	2168.7	2188.2	2230.0	2285.8	2308.1	2355.4	2388.9
17.5°	2001.4	2037.7	2110.1	2140.8	2182.6	2202.1	2255.1	2319.2	2347.1	2400.0	2439.1
20°	1976.3	2015.4	2087.8	2126.9	2171.5	2199.3	2252.3	2319.2	2347.1	2402.8	2447.4
22.5°	1942.9	1981.9	2051.6	2096.2	2135.2	2165.9	2221.6	2285.8	2310.8	2363.8	2408.4
25°	1901.1	1940.1	1998.6	2043.2	2079.5	2107.4	2154.7	2221.6	2238.4	2288.5	2335.9
27.5°	1842.5	1878.8	1923.4	1965.2	1998.6	2020.9	2062.8	2121.3	2135.2	2185.4	2224.4
30°	1764.5	1786.8	1825.8	1853.7	1878.8	1901.1	1931.7	1984.7	1990.3	2034.9	2071.1
32.5°	1658.6	1669.7	1697.6	1711.5	1733.8	1742.2	1767.3	1811.9	1806.3	1848.1	1878.8
35°	1530.3	1535.9	1535.9	1552.6	1558.2	1561.0	1580.5	1605.6	1597.2	1633.5	1655.8
37.5°	1391.0	1388.2	1371.5	1371.5	1374.2	1365.9	1374.2	1385.4	1374.2	1402.1	1421.6
40°	1248.8	1232.1	1201.4	1184.7	1176.3	1173.5	1156.8	1170.8	1142.9	1162.4	1176.3
42.5°	1112.2	1084.3	1037.0	1003.5	989.6	975.6	947.8	947.8	911.5	925.5	928.2
45°	972.8	925.5	861.3	830.7	794.4	772.1	735.9	699.7	674.6	682.9	674.6
47.5°	844.6	788.9	713.6	660.6	618.8	588.2	538.0	496.2	471.1	459.9	448.8
50°	733.1	677.4	591.0	524.1	482.2	446.0	395.8	348.4	317.8	301.1	292.7
52.5°	632.8	574.2	490.6	420.9	376.3	342.9	287.1	239.7	206.3	186.8	175.6
55°	538.0	485.0	407.0	342.9	301.1	267.6	211.9	167.3	136.6	117.1	103.1
57.5°	443.2	395.8	331.7	270.4	234.2	203.5	156.1	117.1	92.0	75.3	64.1
60°	340.1	303.8	250.9	203.5	172.8	147.7	111.5	80.8	64.1	50.2	44.6
62.5°	239.7	217.4	178.4	145.0	125.4	105.9	78.1	58.5	44.6	36.2	33.5
65°	161.7	145.0	122.7	97.6	83.6	72.5	55.8	41.8	33.5	27.9	25.1
67.5°	105.9	97.6	80.8	66.9	58.5	50.2	39.0	30.7	25.1	22.3	19.5
70°	69.7	64.1	53.0	44.6	41.8	36.2	27.9	22.3	19.5	16.7	16.7
72.5°	44.6	39.0	36.2	30.7	27.9	25.1	19.5	16.7	13.9	13.9	13.9
75°	27.9	25.1	22.3	19.5	19.5	16.7	13.9	13.9	11.2	11.2	11.2
77.5°	16.7	16.7	13.9	13.9	11.2	11.2	11.2	8.4	8.4	8.4	8.4
80°	11.2	11.2	8.4	8.4	8.4	8.4	5.6	5.6	5.6	5.6	5.6
82.5°	5.6	5.6	5.6	5.6	5.6	5.6	2.8	2.8	2.8	2.8	2.8
85°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1
2.5°	2126.9	2132.4	2126.9	2143.6	2115.7	2146.4	2135.2	2140.8	2163.1	2154.7	2163.1
5°	2168.7	2179.8	2179.8	2199.3	2174.3	2210.5	2199.3	2210.5	2232.8	2232.8	2243.9
7.5°	2221.6	2235.6	2241.2	2260.7	2235.6	2280.2	2269.0	2283.0	2310.8	2310.8	2319.2
10°	2277.4	2294.1	2305.3	2327.6	2299.7	2349.9	2338.7	2358.2	2383.3	2386.1	2400.0
12.5°	2347.1	2369.4	2383.3	2402.8	2383.3	2433.5	2422.3	2441.9	2475.3	2478.1	2494.8
15°	2425.1	2453.0	2469.7	2492.0	2469.7	2525.5	2514.3	2536.6	2561.7	2572.9	2589.6
17.5°	2475.3	2508.8	2522.7	2547.8	2525.5	2581.2	2567.3	2598.0	2620.3	2625.8	2645.3
20°	2483.7	2514.3	2533.8	2553.4	2533.8	2589.6	2575.7	2600.7	2628.6	2634.2	2648.1
22.5°	2447.4	2472.5	2494.8	2511.5	2494.8	2550.6	2531.1	2558.9	2584.0	2589.6	2600.7
25°	2363.8	2394.5	2416.8	2430.7	2414.0	2466.9	2450.2	2475.3	2497.6	2508.8	2511.5
27.5°	2246.7	2274.6	2296.9	2305.3	2294.1	2344.3	2322.0	2352.7	2372.2	2377.7	2386.1
30°	2087.8	2112.9	2135.2	2140.8	2132.4	2168.7	2157.5	2185.4	2204.9	2210.5	2216.1
32.5°	1892.7	1917.8	1931.7	1937.3	1929.0	1965.2	1954.0	1976.3	1998.6	1998.6	1998.6
35°	1672.5	1694.8	1703.2	1719.9	1700.4	1736.6	1725.5	1745.0	1764.5	1764.5	1767.3
37.5°	1435.6	1452.3	1457.9	1474.6	1455.1	1488.5	1480.2	1496.9	1513.6	1510.8	1516.4
40°	1181.9	1198.6	1204.2	1218.1	1201.4	1229.3	1223.7	1240.4	1254.4	1254.4	1254.4
42.5°	936.6	947.8	947.8	961.7	945.0	970.1	970.1	981.2	995.1	992.4	992.4
45°	680.2	677.4	682.9	680.2	680.2	702.5	702.5	708.0	719.2	713.6	716.4
47.5°	451.6	454.4	443.2	451.6	440.4	459.9	459.9	459.9	468.3	462.7	468.3
50°	287.1	278.8	273.2	273.2	270.4	284.3	278.8	281.5	287.1	281.5	287.1
52.5°	161.7	158.9	153.3	156.1	150.5	153.3	153.3	153.3	156.1	153.3	158.9
55°	94.8	86.4	83.6	83.6	80.8	83.6	80.8	80.8	80.8	78.1	80.8
57.5°	55.8	53.0	50.2	50.2	47.4	47.4	47.4	47.4	47.4	47.4	47.4
60°	39.0	36.2	36.2	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
62.5°	30.7	27.9	27.9	27.9	25.1	25.1	25.1	25.1	25.1	27.9	25.1
65°	22.3	22.3	22.3	22.3	22.3	22.3	19.5	22.3	22.3	22.3	22.3
67.5°	19.5	19.5	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
70°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
72.5°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
75°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	5.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
85°	0.0	2.8	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: P212763

CATALOG NUMBER: LD4B50D010TE EU4B30509027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1
2.5°	2171.5	2160.3	2135.2	2152.0	2154.7	2143.6	2157.5	2174.3	2157.5	2143.6	2154.7
5°	2252.3	2243.9	2221.6	2235.6	2238.4	2235.6	2243.9	2257.9	2243.9	2235.6	2238.4
7.5°	2333.1	2327.6	2302.5	2319.2	2324.8	2319.2	2327.6	2341.5	2327.6	2319.2	2324.8
10°	2411.2	2408.4	2383.3	2405.6	2408.4	2402.8	2411.2	2433.5	2411.2	2402.8	2408.4
12.5°	2500.4	2506.0	2478.1	2503.2	2506.0	2500.4	2511.5	2528.3	2511.5	2500.4	2506.0
15°	2603.5	2600.7	2578.4	2598.0	2603.5	2598.0	2611.9	2634.2	2611.9	2598.0	2603.5
17.5°	2653.7	2653.7	2637.0	2656.5	2659.3	2659.3	2670.4	2687.2	2670.4	2659.3	2659.3
20°	2656.5	2659.3	2639.8	2662.1	2662.1	2662.1	2673.2	2681.6	2673.2	2662.1	2662.1
22.5°	2611.9	2614.7	2595.2	2614.7	2614.7	2617.5	2623.0	2628.6	2623.0	2617.5	2614.7
25°	2525.5	2528.3	2511.5	2528.3	2525.5	2525.5	2531.1	2539.4	2531.1	2525.5	2525.5
27.5°	2397.3	2400.0	2377.7	2397.3	2394.5	2391.7	2400.0	2402.8	2400.0	2391.7	2394.5
30°	2227.2	2230.0	2210.5	2227.2	2224.4	2221.6	2232.8	2235.6	2232.8	2221.6	2224.4
32.5°	2023.7	2018.2	2004.2	2018.2	2015.4	2015.4	2020.9	2029.3	2020.9	2015.4	2015.4
35°	1778.4	1778.4	1770.1	1781.2	1772.9	1784.0	1784.0	1786.8	1784.0	1784.0	1772.9
37.5°	1527.6	1527.6	1522.0	1527.6	1524.8	1535.9	1535.9	1544.3	1535.9	1535.9	1524.8
40°	1265.5	1265.5	1260.0	1265.5	1273.9	1273.9	1271.1	1282.3	1271.1	1273.9	1273.9
42.5°	1000.7	1000.7	997.9	1011.9	1011.9	1011.9	1003.5	1014.7	1003.5	1011.9	1011.9
45°	727.5	722.0	719.2	719.2	722.0	733.1	722.0	735.9	722.0	733.1	722.0
47.5°	462.7	465.5	468.3	476.7	471.1	468.3	468.3	476.7	468.3	468.3	471.1
50°	284.3	287.1	287.1	292.7	284.3	289.9	287.1	292.7	287.1	289.9	284.3
52.5°	156.1	156.1	156.1	161.7	156.1	158.9	156.1	161.7	156.1	158.9	156.1
55°	80.8	80.8	80.8	83.6	80.8	80.8	80.8	83.6	80.8	80.8	80.8
57.5°	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4
60°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
62.5°	27.9	25.1	25.1	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9
65°	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
67.5°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
70°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
72.5°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
75°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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: P212763

CATALOG NUMBER: LD4B50D010TE EU4B30509027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1
2.5°	2152.0	2135.2	2160.3	2171.5	2163.1	2154.7	2163.1	2140.8	2135.2	2146.4	2115.7
5°	2235.6	2221.6	2243.9	2252.3	2243.9	2232.8	2232.8	2210.5	2199.3	2210.5	2174.3
7.5°	2319.2	2302.5	2327.6	2333.1	2319.2	2310.8	2310.8	2283.0	2269.0	2280.2	2235.6
10°	2405.6	2383.3	2408.4	2411.2	2400.0	2386.1	2383.3	2358.2	2338.7	2349.9	2299.7
12.5°	2503.2	2478.1	2506.0	2500.4	2494.8	2478.1	2475.3	2441.9	2422.3	2433.5	2383.3
15°	2598.0	2578.4	2600.7	2603.5	2589.6	2572.9	2561.7	2536.6	2514.3	2525.5	2469.7
17.5°	2656.5	2637.0	2653.7	2653.7	2645.3	2625.8	2620.3	2598.0	2567.3	2581.2	2525.5
20°	2662.1	2639.8	2659.3	2656.5	2648.1	2634.2	2628.6	2600.7	2575.7	2589.6	2533.8
22.5°	2614.7	2595.2	2614.7	2611.9	2600.7	2589.6	2584.0	2558.9	2531.1	2550.6	2494.8
25°	2528.3	2511.5	2528.3	2525.5	2511.5	2508.8	2497.6	2475.3	2450.2	2466.9	2414.0
27.5°	2397.3	2377.7	2400.0	2397.3	2386.1	2377.7	2372.2	2352.7	2322.0	2344.3	2294.1
30°	2227.2	2210.5	2230.0	2227.2	2216.1	2210.5	2204.9	2185.4	2157.5	2168.7	2132.4
32.5°	2018.2	2004.2	2018.2	2023.7	1998.6	1998.6	1998.6	1976.3	1954.0	1965.2	1929.0
35°	1781.2	1770.1	1778.4	1778.4	1767.3	1764.5	1764.5	1745.0	1725.5	1736.6	1700.4
37.5°	1527.6	1522.0	1527.6	1527.6	1516.4	1510.8	1513.6	1496.9	1480.2	1488.5	1455.1
40°	1265.5	1260.0	1265.5	1265.5	1254.4	1254.4	1254.4	1240.4	1223.7	1229.3	1201.4
42.5°	1011.9	997.9	1000.7	1000.7	992.4	992.4	995.1	981.2	970.1	970.1	945.0
45°	719.2	719.2	722.0	727.5	716.4	713.6	719.2	708.0	702.5	702.5	680.2
47.5°	476.7	468.3	465.5	462.7	468.3	462.7	468.3	459.9	459.9	459.9	440.4
50°	292.7	287.1	287.1	284.3	287.1	281.5	287.1	281.5	278.8	284.3	270.4
52.5°	161.7	156.1	156.1	156.1	158.9	153.3	156.1	153.3	153.3	153.3	150.5
55°	83.6	80.8	80.8	80.8	80.8	78.1	80.8	80.8	80.8	83.6	80.8
57.5°	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4
60°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
62.5°	27.9	25.1	25.1	27.9	25.1	27.9	25.1	25.1	25.1	25.1	25.1
65°	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	19.5	22.3	22.3
67.5°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
70°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
72.5°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
75°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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: P212763

CATALOG NUMBER: LD4B50D010TE EU4B30509027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1
2.5°	2143.6	2126.9	2132.4	2126.9	2112.9	2115.7	2107.4	2107.4	2090.6	2087.8	2090.6
5°	2199.3	2179.8	2179.8	2168.7	2149.2	2146.4	2129.7	2129.7	2104.6	2096.2	2096.2
7.5°	2260.7	2241.2	2235.6	2221.6	2196.6	2185.4	2163.1	2154.7	2124.1	2110.1	2107.4
10°	2327.6	2305.3	2294.1	2277.4	2246.7	2227.2	2196.6	2185.4	2149.2	2121.3	2118.5
12.5°	2402.8	2383.3	2369.4	2347.1	2313.6	2285.8	2249.5	2230.0	2182.6	2152.0	2138.0
15°	2492.0	2469.7	2453.0	2425.1	2388.9	2355.4	2308.1	2285.8	2230.0	2188.2	2168.7
17.5°	2547.8	2522.7	2508.8	2475.3	2439.1	2400.0	2347.1	2319.2	2255.1	2202.1	2182.6
20°	2553.4	2533.8	2514.3	2483.7	2447.4	2402.8	2347.1	2319.2	2252.3	2199.3	2171.5
22.5°	2511.5	2494.8	2472.5	2447.4	2408.4	2363.8	2310.8	2285.8	2221.6	2165.9	2135.2
25°	2430.7	2416.8	2394.5	2363.8	2335.9	2288.5	2238.4	2221.6	2154.7	2107.4	2079.5
27.5°	2305.3	2296.9	2274.6	2246.7	2224.4	2185.4	2135.2	2121.3	2062.8	2020.9	1998.6
30°	2140.8	2135.2	2112.9	2087.8	2071.1	2034.9	1990.3	1984.7	1931.7	1901.1	1878.8
32.5°	1937.3	1931.7	1917.8	1892.7	1878.8	1848.1	1806.3	1811.9	1767.3	1742.2	1733.8
35°	1719.9	1703.2	1694.8	1672.5	1655.8	1633.5	1597.2	1605.6	1580.5	1561.0	1558.2
37.5°	1474.6	1457.9	1452.3	1435.6	1421.6	1402.1	1374.2	1385.4	1374.2	1365.9	1374.2
40°	1218.1	1204.2	1198.6	1181.9	1176.3	1162.4	1142.9	1170.8	1156.8	1173.5	1176.3
42.5°	961.7	947.8	947.8	936.6	928.2	925.5	911.5	947.8	947.8	975.6	989.6
45°	680.2	682.9	677.4	680.2	674.6	682.9	674.6	699.7	735.9	772.1	794.4
47.5°	451.6	443.2	454.4	451.6	448.8	459.9	471.1	496.2	538.0	588.2	618.8
50°	273.2	273.2	278.8	287.1	292.7	301.1	317.8	348.4	395.8	446.0	482.2
52.5°	156.1	153.3	158.9	161.7	175.6	186.8	206.3	239.7	287.1	342.9	376.3
55°	83.6	83.6	86.4	94.8	103.1	117.1	136.6	167.3	211.9	267.6	301.1
57.5°	50.2	50.2	53.0	55.8	64.1	75.3	92.0	117.1	156.1	203.5	234.2
60°	33.5	36.2	36.2	39.0	44.6	50.2	64.1	80.8	111.5	147.7	172.8
62.5°	27.9	27.9	27.9	30.7	33.5	36.2	44.6	58.5	78.1	105.9	125.4
65°	22.3	22.3	22.3	22.3	25.1	27.9	33.5	41.8	55.8	72.5	83.6
67.5°	16.7	16.7	19.5	19.5	19.5	22.3	25.1	30.7	39.0	50.2	58.5
70°	13.9	13.9	13.9	13.9	16.7	16.7	19.5	22.3	27.9	36.2	41.8
72.5°	11.2	11.2	11.2	11.2	13.9	13.9	13.9	16.7	19.5	25.1	27.9
75°	8.4	8.4	8.4	8.4	11.2	11.2	11.2	13.9	13.9	16.7	19.5
77.5°	5.6	5.6	5.6	5.6	8.4	8.4	8.4	8.4	11.2	11.2	11.2
80°	2.8	2.8	2.8	5.6	5.6	5.6	5.6	5.6	5.6	8.4	8.4
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	5.6	5.6
85°	0.0	0.0	2.8	0.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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: P212763

CATALOG NUMBER: LD4B50D010TE EU4B30509027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1	2110.1
2.5°	2071.1	2107.4	2065.5	2073.9	2060.0	2085.1	2051.6	2060.0	2065.5	2060.0	2062.8
5°	2073.9	2101.8	2054.4	2062.8	2040.5	2057.2	2026.5	2029.3	2029.3	2023.7	2020.9
7.5°	2082.3	2099.0	2048.8	2046.0	2018.2	2034.9	1998.6	1993.1	1990.3	1981.9	1984.7
10°	2085.1	2090.6	2037.7	2026.5	1993.1	1998.6	1962.4	1951.3	1942.9	1937.3	1934.5
12.5°	2104.6	2099.0	2037.7	2018.2	1976.3	1973.6	1934.5	1917.8	1903.9	1898.3	1895.5
15°	2129.7	2110.1	2043.2	2015.4	1968.0	1956.8	1915.0	1898.3	1878.8	1873.2	1867.6
17.5°	2140.8	2110.1	2037.7	2001.4	1948.5	1934.5	1892.7	1870.4	1850.9	1842.5	1837.0
20°	2126.9	2087.8	2015.4	1976.3	1920.6	1901.1	1859.3	1834.2	1814.7	1806.3	1800.7
22.5°	2096.2	2051.6	1981.9	1942.9	1887.1	1862.1	1825.8	1803.5	1781.2	1778.4	1770.1
25°	2043.2	1998.6	1940.1	1901.1	1850.9	1825.8	1792.4	1772.9	1750.6	1747.8	1745.0
27.5°	1965.2	1923.4	1878.8	1842.5	1797.9	1778.4	1753.3	1733.8	1714.3	1714.3	1708.7
30°	1853.7	1825.8	1786.8	1764.5	1728.3	1708.7	1692.0	1678.1	1658.6	1661.4	1655.8
32.5°	1711.5	1697.6	1669.7	1658.6	1630.7	1625.1	1608.4	1597.2	1580.5	1586.1	1580.5
35°	1552.6	1535.9	1535.9	1530.3	1516.4	1513.6	1505.3	1499.7	1488.5	1491.3	1491.3
37.5°	1371.5	1371.5	1388.2	1391.0	1388.2	1393.8	1391.0	1391.0	1379.8	1385.4	1382.6
40°	1184.7	1201.4	1232.1	1248.8	1254.4	1265.5	1279.5	1273.9	1268.3	1276.7	1273.9
42.5°	1003.5	1037.0	1084.3	1112.2	1131.7	1148.5	1168.0	1168.0	1165.2	1176.3	1173.5
45°	830.7	861.3	925.5	972.8	1006.3	1031.4	1053.7	1062.0	1064.8	1076.0	1073.2
47.5°	660.6	713.6	788.9	844.6	886.4	917.1	947.8	958.9	967.3	981.2	981.2
50°	524.1	591.0	677.4	733.1	783.3	816.7	847.4	864.1	875.3	886.4	886.4
52.5°	420.9	490.6	574.2	632.8	680.2	716.4	747.1	766.6	774.9	788.9	788.9
55°	342.9	407.0	485.0	538.0	585.4	618.8	643.9	660.6	669.0	680.2	680.2
57.5°	270.4	331.7	395.8	443.2	482.2	507.3	529.6	535.2	538.0	546.4	549.1
60°	203.5	250.9	303.8	340.1	368.0	384.7	401.4	398.6	395.8	401.4	395.8
62.5°	145.0	178.4	217.4	239.7	262.0	270.4	278.8	273.2	267.6	270.4	270.4
65°	97.6	122.7	145.0	161.7	172.8	178.4	181.2	178.4	175.6	178.4	175.6
67.5°	66.9	80.8	97.6	105.9	114.3	117.1	119.9	117.1	117.1	117.1	114.3
70°	44.6	53.0	64.1	69.7	72.5	75.3	78.1	75.3	75.3	75.3	75.3
72.5°	30.7	36.2	39.0	44.6	47.4	47.4	47.4	47.4	47.4	47.4	47.4
75°	19.5	22.3	25.1	27.9	30.7	30.7	30.7	30.7	30.7	30.7	30.7
77.5°	13.9	13.9	16.7	16.7	19.5	19.5	19.5	19.5	19.5	19.5	19.5
80°	8.4	8.4	11.2	11.2	11.2	11.2	13.9	11.2	13.9	13.9	13.9
82.5°	5.6	5.6	5.6	5.6	8.4	8.4	8.4	8.4	8.4	8.4	8.4
85°	2.8	2.8	2.8	2.8	2.8	2.8	5.6	2.8	5.6	5.6	5.6
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: P212763

CATALOG NUMBER: LD4B50D010TE EU4B30509027 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	2110.1	2110.1	2110.1	2110.1
2.5°	2062.8	2057.2	2040.5	2060.0
5°	2018.2	2012.6	1998.6	2012.6
7.5°	1973.6	1965.2	1954.0	1962.4
10°	1920.6	1915.0	1901.1	1909.4
12.5°	1881.6	1870.4	1862.1	1864.8
15°	1856.5	1845.3	1837.0	1839.8
17.5°	1823.0	1811.9	1803.5	1803.5
20°	1786.8	1775.6	1770.1	1767.3
22.5°	1756.1	1747.8	1745.0	1736.6
25°	1728.3	1722.7	1722.7	1711.5
27.5°	1697.6	1689.2	1689.2	1678.1
30°	1644.6	1641.8	1641.8	1633.5
32.5°	1574.9	1566.6	1572.2	1558.2
35°	1480.2	1474.6	1483.0	1471.8
37.5°	1377.0	1374.2	1379.8	1371.5
40°	1268.3	1268.3	1276.7	1262.7
42.5°	1173.5	1173.5	1181.9	1168.0
45°	1070.4	1078.8	1087.1	1076.0
47.5°	981.2	986.8	997.9	986.8
50°	892.0	897.6	905.9	894.8
52.5°	794.4	800.0	808.4	800.0
55°	682.9	688.5	696.9	691.3
57.5°	549.1	543.6	557.5	546.4
60°	398.6	387.5	390.3	390.3
62.5°	264.8	259.2	264.8	256.5
65°	175.6	172.8	172.8	172.8
67.5°	117.1	114.3	117.1	114.3
70°	75.3	75.3	75.3	75.3
72.5°	47.4	47.4	47.4	47.4
75°	30.7	30.7	30.7	30.7
77.5°	19.5	19.5	19.5	19.5
80°	13.9	13.9	13.9	13.9
82.5°	8.4	8.4	8.4	8.4
85°	5.6	5.6	5.6	5.6
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)