

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: P212768

Luminaire Tested: **LD4B50D010TE EU4B30509727 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212768
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 EU4B30509727 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 97CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3370.6 lumens
Efficiency: N/A
Efficacy: 57.4 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

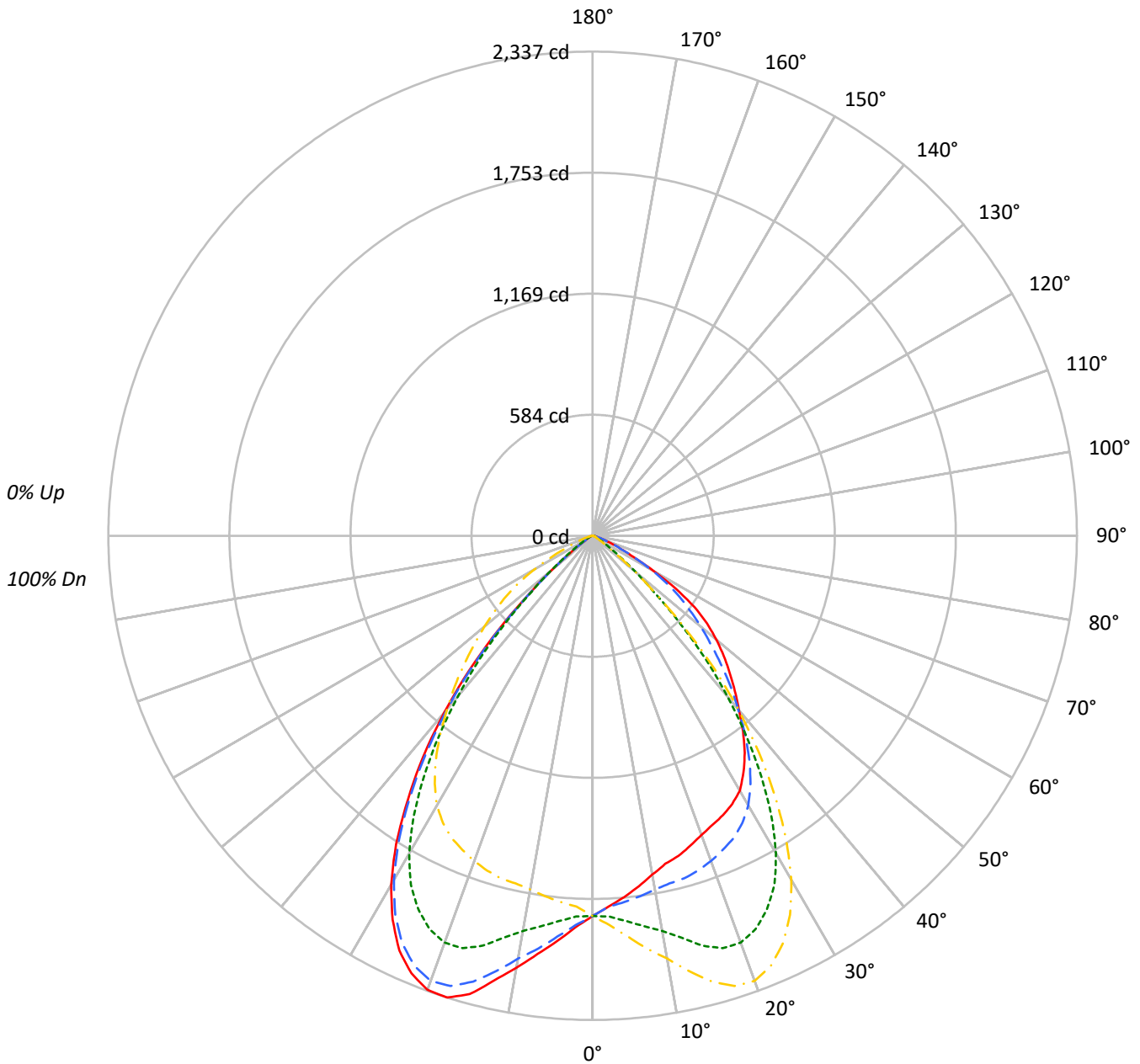
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	226339	226339	226339	226339
5°	216692	231104	243102	231104
10°	207962	242581	265051	242581
15°	204289	261561	292515	261561
20°	201723	274271	306089	274271
25°	202553	270846	300543	270846
30°	202318	252025	276893	252025
35°	192724	213895	233967	213895
40°	176812	162755	179533	162755
45°	163221	103598	111622	103598
50°	149311	50237	48836	50237
55°	129286	21892	15634	21892
60°	83727	10756	7179	10756
65°	43867	7063	5662	7063
70°	23586	5229	4364	5229
75°	12724	4623	3479	4623
80°	8595	3410	1705	3410
85°	6793	3397	0	3397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.9	5.3
10°-20°	559.6	16.6
20°-30°	870.0	25.8
30°-40°	878.8	26.1
40°-50°	556.4	16.5
50°-60°	233.5	6.9
60°-70°	74.0	2.2
70°-80°	16.9	0.5
80°-90°	2.4	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°	1608.5	47.7
0°-40°	2487.3	73.8
0°-60°	3277.3	97.2
0°-90°	3370.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3370.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1835	1835	1835	1835	1835	
5°	1750	1866	1963	1866	1750	164
15°	1600	2048	2291	2048	1600	451
25°	1488	1990	2208	1990	1488	685
35°	1280	1420	1554	1420	1280	795
45°	936	594	640	594	936	722
55°	601	102	73	102	601	519
65°	150	24	19	24	150	166
75°	27	10	7	10	27	33
85°	5	2	0	2	5	5
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°	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0
2.5°	1791.3	1774.4	1788.9	1793.8	1793.8	1791.3	1796.2	1791.3	1784.1	1813.2	1791.3
5°	1750.1	1738.0	1750.1	1755.0	1757.4	1759.8	1764.7	1764.7	1762.3	1788.9	1774.4
7.5°	1706.5	1699.2	1708.9	1716.2	1725.9	1723.5	1730.7	1733.2	1738.0	1769.5	1755.0
10°	1660.4	1653.2	1665.3	1670.1	1682.3	1684.7	1689.5	1696.8	1706.5	1738.0	1733.2
12.5°	1621.7	1619.2	1626.5	1636.2	1648.3	1650.7	1655.6	1667.7	1682.3	1716.2	1718.6
15°	1599.8	1597.4	1604.7	1614.4	1624.1	1628.9	1633.8	1650.7	1665.3	1701.7	1711.3
17.5°	1568.3	1568.3	1575.6	1585.3	1597.4	1602.3	1609.5	1626.5	1645.9	1682.3	1694.4
20°	1536.8	1539.2	1544.1	1553.8	1565.9	1570.8	1578.0	1595.0	1616.8	1653.2	1670.1
22.5°	1510.2	1517.4	1519.9	1527.1	1539.2	1546.5	1548.9	1568.3	1587.7	1619.2	1641.1
25°	1488.3	1498.0	1498.0	1502.9	1517.4	1519.9	1522.3	1541.7	1558.6	1587.7	1609.5
27.5°	1459.3	1468.9	1468.9	1476.2	1485.9	1490.8	1490.8	1507.7	1524.7	1546.5	1563.5
30°	1420.5	1427.7	1427.7	1430.2	1439.9	1444.7	1442.3	1459.3	1471.4	1485.9	1502.9
32.5°	1355.0	1367.1	1362.3	1369.6	1374.4	1379.3	1374.4	1389.0	1398.7	1413.2	1418.0
35°	1279.9	1289.6	1282.3	1287.1	1296.8	1296.8	1294.4	1304.1	1309.0	1316.2	1318.7
37.5°	1192.6	1199.9	1195.0	1197.5	1202.3	1204.7	1199.9	1209.6	1209.6	1212.0	1207.2
40°	1098.1	1110.2	1102.9	1102.9	1107.8	1110.2	1102.9	1107.8	1112.6	1100.5	1090.8
42.5°	1015.7	1027.8	1020.5	1020.5	1020.5	1022.9	1013.2	1015.7	1015.7	998.7	984.1
45°	935.7	945.4	938.1	930.8	933.2	935.7	926.0	923.5	916.3	896.9	875.1
47.5°	858.1	867.8	858.1	853.3	853.3	853.3	841.1	833.9	824.2	797.5	770.8
50°	778.1	787.8	780.5	775.7	770.8	770.8	761.1	751.4	736.9	710.2	681.1
52.5°	695.7	703.0	695.7	690.8	686.0	686.0	673.9	666.6	649.6	623.0	591.5
55°	601.2	606.0	598.7	593.9	591.5	591.5	581.8	574.5	559.9	538.1	509.0
57.5°	475.1	484.8	472.7	477.5	477.5	475.1	467.8	465.4	460.6	441.2	419.4
60°	339.4	339.4	336.9	346.6	344.2	349.1	344.2	346.6	349.1	334.5	320.0
62.5°	223.0	230.3	225.4	230.3	235.1	235.1	232.7	237.6	242.4	235.1	227.9
65°	150.3	150.3	150.3	152.7	152.7	155.1	152.7	155.1	157.6	155.1	150.3
67.5°	99.4	101.8	99.4	101.8	99.4	101.8	101.8	101.8	104.2	101.8	99.4
70°	65.4	65.4	65.4	65.4	65.4	65.4	65.4	65.4	67.9	65.4	63.0
72.5°	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2
75°	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7
77.5°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
80°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	9.7	12.1	9.7	9.7
82.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
85°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	2.4	4.8	2.4	2.4
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°	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0
2.5°	1803.5	1796.2	1832.6	1801.0	1818.0	1815.6	1818.0	1832.6	1832.6	1839.8	1837.4
5°	1793.8	1786.5	1827.7	1803.5	1822.9	1822.9	1830.1	1851.9	1851.9	1866.5	1868.9
7.5°	1779.2	1781.6	1825.3	1810.7	1832.6	1835.0	1847.1	1873.8	1881.0	1900.4	1910.1
10°	1762.3	1771.9	1818.0	1813.2	1842.2	1844.7	1868.9	1900.4	1910.1	1936.8	1953.8
12.5°	1755.0	1771.9	1825.3	1830.1	1859.2	1871.3	1898.0	1939.2	1956.2	1987.7	2011.9
15°	1752.6	1776.8	1835.0	1851.9	1885.9	1902.8	1939.2	1987.7	2007.1	2048.3	2077.4
17.5°	1740.4	1771.9	1835.0	1861.6	1898.0	1915.0	1961.0	2016.8	2041.0	2087.1	2121.0
20°	1718.6	1752.6	1815.6	1849.5	1888.3	1912.5	1958.6	2016.8	2041.0	2089.5	2128.3
22.5°	1689.5	1723.5	1784.1	1822.9	1856.8	1883.5	1931.9	1987.7	2009.5	2055.6	2094.3
25°	1653.2	1687.1	1738.0	1776.8	1808.3	1832.6	1873.8	1931.9	1946.5	1990.1	2031.3
27.5°	1602.3	1633.8	1672.6	1708.9	1738.0	1757.4	1793.8	1844.7	1856.8	1900.4	1934.4
30°	1534.4	1553.8	1587.7	1612.0	1633.8	1653.2	1679.8	1725.9	1730.7	1769.5	1801.0
32.5°	1442.3	1452.0	1476.2	1488.3	1507.7	1515.0	1536.8	1575.6	1570.8	1607.1	1633.8
35°	1330.8	1335.6	1335.6	1350.2	1355.0	1357.4	1374.4	1396.2	1389.0	1420.5	1439.9
37.5°	1209.6	1207.2	1192.6	1192.6	1195.0	1187.8	1195.0	1204.7	1195.0	1219.3	1236.2
40°	1086.0	1071.4	1044.7	1030.2	1022.9	1020.5	1006.0	1018.1	993.8	1010.8	1022.9
42.5°	967.2	942.9	901.7	872.6	860.5	848.4	824.2	824.2	792.7	804.8	807.2
45°	846.0	804.8	749.0	722.4	690.8	671.5	639.9	608.4	586.6	593.9	586.6
47.5°	734.5	686.0	620.5	574.5	538.1	511.5	467.8	431.5	409.7	400.0	390.3
50°	637.5	589.0	513.9	455.7	419.4	387.8	344.2	303.0	276.3	261.8	254.5
52.5°	550.2	499.3	426.6	366.0	327.2	298.2	249.7	208.5	179.4	162.4	152.7
55°	467.8	421.8	353.9	298.2	261.8	232.7	184.2	145.4	118.8	101.8	89.7
57.5°	385.4	344.2	288.5	235.1	203.6	177.0	135.7	101.8	80.0	65.4	55.8
60°	295.7	264.2	218.2	177.0	150.3	128.5	97.0	70.3	55.8	43.6	38.8
62.5°	208.5	189.1	155.1	126.0	109.1	92.1	67.9	50.9	38.8	31.5	29.1
65°	140.6	126.0	106.7	84.8	72.7	63.0	48.5	36.4	29.1	24.2	21.8
67.5°	92.1	84.8	70.3	58.2	50.9	43.6	33.9	26.7	21.8	19.4	17.0
70°	60.6	55.8	46.1	38.8	36.4	31.5	24.2	19.4	17.0	14.5	14.5
72.5°	38.8	33.9	31.5	26.7	24.2	21.8	17.0	14.5	12.1	12.1	12.1
75°	24.2	21.8	19.4	17.0	17.0	14.5	12.1	12.1	9.7	9.7	9.7
77.5°	14.5	14.5	12.1	12.1	9.7	9.7	9.7	7.3	7.3	7.3	7.3
80°	9.7	9.7	7.3	7.3	7.3	7.3	4.8	4.8	4.8	4.8	4.8
82.5°	4.8	4.8	4.8	4.8	4.8	4.8	2.4	2.4	2.4	2.4	2.4
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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°	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0
2.5°	1849.5	1854.4	1849.5	1864.1	1839.8	1866.5	1856.8	1861.6	1881.0	1873.8	1881.0
5°	1885.9	1895.6	1895.6	1912.5	1890.7	1922.2	1912.5	1922.2	1941.6	1941.6	1951.3
7.5°	1931.9	1944.1	1948.9	1965.9	1944.1	1982.8	1973.1	1985.3	2009.5	2009.5	2016.8
10°	1980.4	1995.0	2004.7	2024.0	1999.8	2043.4	2033.7	2050.7	2072.5	2075.0	2087.1
12.5°	2041.0	2060.4	2072.5	2089.5	2072.5	2116.2	2106.5	2123.4	2152.5	2154.9	2169.5
15°	2108.9	2133.1	2147.7	2167.1	2147.7	2196.2	2186.5	2205.8	2227.7	2237.4	2251.9
17.5°	2152.5	2181.6	2193.7	2215.5	2196.2	2244.6	2232.5	2259.2	2278.6	2283.4	2300.4
20°	2159.8	2186.5	2203.4	2220.4	2203.4	2251.9	2239.8	2261.6	2285.8	2290.7	2302.8
22.5°	2128.3	2150.1	2169.5	2184.0	2169.5	2218.0	2201.0	2225.2	2247.1	2251.9	2261.6
25°	2055.6	2082.2	2101.6	2113.7	2099.2	2145.2	2130.7	2152.5	2171.9	2181.6	2184.0
27.5°	1953.8	1978.0	1997.4	2004.7	1995.0	2038.6	2019.2	2045.9	2062.8	2067.7	2075.0
30°	1815.6	1837.4	1856.8	1861.6	1854.4	1885.9	1876.2	1900.4	1917.4	1922.2	1927.1
32.5°	1645.9	1667.7	1679.8	1684.7	1677.4	1708.9	1699.2	1718.6	1738.0	1738.0	1738.0
35°	1454.4	1473.8	1481.1	1495.6	1478.6	1510.2	1500.5	1517.4	1534.4	1534.4	1536.8
37.5°	1248.4	1262.9	1267.8	1282.3	1265.3	1294.4	1287.1	1301.7	1316.2	1313.8	1318.7
40°	1027.8	1042.3	1047.2	1059.3	1044.7	1069.0	1064.1	1078.7	1090.8	1090.8	1090.8
42.5°	814.5	824.2	824.2	836.3	821.7	843.6	843.6	853.3	865.4	862.9	862.9
45°	591.5	589.0	593.9	591.5	591.5	610.9	610.9	615.7	625.4	620.5	623.0
47.5°	392.7	395.1	385.4	392.7	383.0	400.0	400.0	400.0	407.2	402.4	407.2
50°	249.7	242.4	237.6	237.6	235.1	247.2	242.4	244.8	249.7	244.8	249.7
52.5°	140.6	138.2	133.3	135.7	130.9	133.3	133.3	133.3	135.7	133.3	138.2
55°	82.4	75.1	72.7	72.7	70.3	72.7	70.3	70.3	70.3	67.9	70.3
57.5°	48.5	46.1	43.6	43.6	41.2	41.2	41.2	41.2	41.2	41.2	41.2
60°	33.9	31.5	31.5	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
62.5°	26.7	24.2	24.2	24.2	21.8	21.8	21.8	21.8	21.8	24.2	21.8
65°	19.4	19.4	19.4	19.4	19.4	19.4	17.0	19.4	19.4	19.4	19.4
67.5°	17.0	17.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
70°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
72.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
75°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
77.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
80°	4.8	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
85°	0.0	2.4	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: P212768

CATALOG NUMBER: LD4B50D010TE EU4B30509727 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0
2.5°	1888.3	1878.6	1856.8	1871.3	1873.8	1864.1	1876.2	1890.7	1876.2	1864.1	1873.8
5°	1958.6	1951.3	1931.9	1944.1	1946.5	1944.1	1951.3	1963.4	1951.3	1944.1	1946.5
7.5°	2028.9	2024.0	2002.2	2016.8	2021.6	2016.8	2024.0	2036.2	2024.0	2016.8	2021.6
10°	2096.8	2094.3	2072.5	2091.9	2094.3	2089.5	2096.8	2116.2	2096.8	2089.5	2094.3
12.5°	2174.3	2179.2	2154.9	2176.8	2179.2	2174.3	2184.0	2198.6	2184.0	2174.3	2179.2
15°	2264.0	2261.6	2242.2	2259.2	2264.0	2259.2	2271.3	2290.7	2271.3	2259.2	2264.0
17.5°	2307.7	2307.7	2293.1	2310.1	2312.5	2312.5	2322.2	2336.7	2322.2	2312.5	2312.5
20°	2310.1	2312.5	2295.5	2314.9	2314.9	2314.9	2324.6	2331.9	2324.6	2314.9	2314.9
22.5°	2271.3	2273.7	2256.8	2273.7	2273.7	2276.1	2281.0	2285.8	2281.0	2276.1	2273.7
25°	2196.2	2198.6	2184.0	2198.6	2196.2	2196.2	2201.0	2208.3	2201.0	2196.2	2196.2
27.5°	2084.6	2087.1	2067.7	2084.6	2082.2	2079.8	2087.1	2089.5	2087.1	2079.8	2082.2
30°	1936.8	1939.2	1922.2	1936.8	1934.4	1931.9	1941.6	1944.1	1941.6	1931.9	1934.4
32.5°	1759.8	1755.0	1742.9	1755.0	1752.6	1752.6	1757.4	1764.7	1757.4	1752.6	1752.6
35°	1546.5	1546.5	1539.2	1548.9	1541.7	1551.4	1551.4	1553.8	1551.4	1551.4	1541.7
37.5°	1328.4	1328.4	1323.5	1328.4	1325.9	1335.6	1335.6	1342.9	1335.6	1335.6	1325.9
40°	1100.5	1100.5	1095.7	1100.5	1107.8	1107.8	1105.3	1115.0	1105.3	1107.8	1107.8
42.5°	870.2	870.2	867.8	879.9	879.9	879.9	872.6	882.3	872.6	879.9	879.9
45°	632.7	627.8	625.4	625.4	627.8	637.5	627.8	639.9	627.8	637.5	627.8
47.5°	402.4	404.8	407.2	414.5	409.7	407.2	407.2	414.5	407.2	407.2	409.7
50°	247.2	249.7	249.7	254.5	247.2	252.1	249.7	254.5	249.7	252.1	247.2
52.5°	135.7	135.7	135.7	140.6	135.7	138.2	135.7	140.6	135.7	138.2	135.7
55°	70.3	70.3	70.3	72.7	70.3	70.3	70.3	72.7	70.3	70.3	70.3
57.5°	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2
60°	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
62.5°	24.2	21.8	21.8	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2
65°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
67.5°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
70°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
72.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
75°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
77.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
80°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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: P212768

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0
2.5°	1871.3	1856.8	1878.6	1888.3	1881.0	1873.8	1881.0	1861.6	1856.8	1866.5	1839.8
5°	1944.1	1931.9	1951.3	1958.6	1951.3	1941.6	1941.6	1922.2	1912.5	1922.2	1890.7
7.5°	2016.8	2002.2	2024.0	2028.9	2016.8	2009.5	2009.5	1985.3	1973.1	1982.8	1944.1
10°	2091.9	2072.5	2094.3	2096.8	2087.1	2075.0	2072.5	2050.7	2033.7	2043.4	1999.8
12.5°	2176.8	2154.9	2179.2	2174.3	2169.5	2154.9	2152.5	2123.4	2106.5	2116.2	2072.5
15°	2259.2	2242.2	2261.6	2264.0	2251.9	2237.4	2227.7	2205.8	2186.5	2196.2	2147.7
17.5°	2310.1	2293.1	2307.7	2307.7	2300.4	2283.4	2278.6	2259.2	2232.5	2244.6	2196.2
20°	2314.9	2295.5	2312.5	2310.1	2302.8	2290.7	2285.8	2261.6	2239.8	2251.9	2203.4
22.5°	2273.7	2256.8	2273.7	2271.3	2261.6	2251.9	2247.1	2225.2	2201.0	2218.0	2169.5
25°	2198.6	2184.0	2198.6	2196.2	2184.0	2181.6	2171.9	2152.5	2130.7	2145.2	2099.2
27.5°	2084.6	2067.7	2087.1	2084.6	2075.0	2067.7	2062.8	2045.9	2019.2	2038.6	1995.0
30°	1936.8	1922.2	1939.2	1936.8	1927.1	1922.2	1917.4	1900.4	1876.2	1885.9	1854.4
32.5°	1755.0	1742.9	1755.0	1759.8	1738.0	1738.0	1738.0	1718.6	1699.2	1708.9	1677.4
35°	1548.9	1539.2	1546.5	1546.5	1536.8	1534.4	1534.4	1517.4	1500.5	1510.2	1478.6
37.5°	1328.4	1323.5	1328.4	1328.4	1318.7	1313.8	1316.2	1301.7	1287.1	1294.4	1265.3
40°	1100.5	1095.7	1100.5	1100.5	1090.8	1090.8	1090.8	1078.7	1064.1	1069.0	1044.7
42.5°	879.9	867.8	870.2	870.2	862.9	862.9	865.4	853.3	843.6	843.6	821.7
45°	625.4	625.4	627.8	632.7	623.0	620.5	625.4	615.7	610.9	610.9	591.5
47.5°	414.5	407.2	404.8	402.4	407.2	402.4	407.2	400.0	400.0	400.0	383.0
50°	254.5	249.7	249.7	247.2	249.7	244.8	249.7	244.8	242.4	247.2	235.1
52.5°	140.6	135.7	135.7	135.7	138.2	133.3	135.7	133.3	133.3	133.3	130.9
55°	72.7	70.3	70.3	70.3	70.3	67.9	70.3	70.3	70.3	72.7	70.3
57.5°	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2
60°	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
62.5°	24.2	21.8	21.8	24.2	21.8	24.2	21.8	21.8	21.8	21.8	21.8
65°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	17.0	19.4	19.4
67.5°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
70°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
72.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
75°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
77.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
80°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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



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CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0
2.5°	1864.1	1849.5	1854.4	1849.5	1837.4	1839.8	1832.6	1832.6	1818.0	1815.6	1818.0
5°	1912.5	1895.6	1895.6	1885.9	1868.9	1866.5	1851.9	1851.9	1830.1	1822.9	1822.9
7.5°	1965.9	1948.9	1944.1	1931.9	1910.1	1900.4	1881.0	1873.8	1847.1	1835.0	1832.6
10°	2024.0	2004.7	1995.0	1980.4	1953.8	1936.8	1910.1	1900.4	1868.9	1844.7	1842.2
12.5°	2089.5	2072.5	2060.4	2041.0	2011.9	1987.7	1956.2	1939.2	1898.0	1871.3	1859.2
15°	2167.1	2147.7	2133.1	2108.9	2077.4	2048.3	2007.1	1987.7	1939.2	1902.8	1885.9
17.5°	2215.5	2193.7	2181.6	2152.5	2121.0	2087.1	2041.0	2016.8	1961.0	1915.0	1898.0
20°	2220.4	2203.4	2186.5	2159.8	2128.3	2089.5	2041.0	2016.8	1958.6	1912.5	1888.3
22.5°	2184.0	2169.5	2150.1	2128.3	2094.3	2055.6	2009.5	1987.7	1931.9	1883.5	1856.8
25°	2113.7	2101.6	2082.2	2055.6	2031.3	1990.1	1946.5	1931.9	1873.8	1832.6	1808.3
27.5°	2004.7	1997.4	1978.0	1953.8	1934.4	1900.4	1856.8	1844.7	1793.8	1757.4	1738.0
30°	1861.6	1856.8	1837.4	1815.6	1801.0	1769.5	1730.7	1725.9	1679.8	1653.2	1633.8
32.5°	1684.7	1679.8	1667.7	1645.9	1633.8	1607.1	1570.8	1575.6	1536.8	1515.0	1507.7
35°	1495.6	1481.1	1473.8	1454.4	1439.9	1420.5	1389.0	1396.2	1374.4	1357.4	1355.0
37.5°	1282.3	1267.8	1262.9	1248.4	1236.2	1219.3	1195.0	1204.7	1195.0	1187.8	1195.0
40°	1059.3	1047.2	1042.3	1027.8	1022.9	1010.8	993.8	1018.1	1006.0	1020.5	1022.9
42.5°	836.3	824.2	824.2	814.5	807.2	804.8	792.7	824.2	824.2	848.4	860.5
45°	591.5	593.9	589.0	591.5	586.6	593.9	586.6	608.4	639.9	671.5	690.8
47.5°	392.7	385.4	395.1	392.7	390.3	400.0	409.7	431.5	467.8	511.5	538.1
50°	237.6	237.6	242.4	249.7	254.5	261.8	276.3	303.0	344.2	387.8	419.4
52.5°	135.7	133.3	138.2	140.6	152.7	162.4	179.4	208.5	249.7	298.2	327.2
55°	72.7	72.7	75.1	82.4	89.7	101.8	118.8	145.4	184.2	232.7	261.8
57.5°	43.6	43.6	46.1	48.5	55.8	65.4	80.0	101.8	135.7	177.0	203.6
60°	29.1	31.5	31.5	33.9	38.8	43.6	55.8	70.3	97.0	128.5	150.3
62.5°	24.2	24.2	24.2	26.7	29.1	31.5	38.8	50.9	67.9	92.1	109.1
65°	19.4	19.4	19.4	19.4	21.8	24.2	29.1	36.4	48.5	63.0	72.7
67.5°	14.5	14.5	17.0	17.0	17.0	19.4	21.8	26.7	33.9	43.6	50.9
70°	12.1	12.1	12.1	12.1	14.5	14.5	17.0	19.4	24.2	31.5	36.4
72.5°	9.7	9.7	9.7	9.7	12.1	12.1	12.1	14.5	17.0	21.8	24.2
75°	7.3	7.3	7.3	7.3	9.7	9.7	9.7	12.1	12.1	14.5	17.0
77.5°	4.8	4.8	4.8	4.8	7.3	7.3	7.3	7.3	9.7	9.7	9.7
80°	2.4	2.4	2.4	4.8	4.8	4.8	4.8	4.8	4.8	7.3	7.3
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	4.8	4.8
85°	0.0	0.0	2.4	0.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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: P212768

CATALOG NUMBER: LD4B50D010TE EU4B30509727 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0	1835.0
2.5°	1801.0	1832.6	1796.2	1803.5	1791.3	1813.2	1784.1	1791.3	1796.2	1791.3	1793.8
5°	1803.5	1827.7	1786.5	1793.8	1774.4	1788.9	1762.3	1764.7	1764.7	1759.8	1757.4
7.5°	1810.7	1825.3	1781.6	1779.2	1755.0	1769.5	1738.0	1733.2	1730.7	1723.5	1725.9
10°	1813.2	1818.0	1771.9	1762.3	1733.2	1738.0	1706.5	1696.8	1689.5	1684.7	1682.3
12.5°	1830.1	1825.3	1771.9	1755.0	1718.6	1716.2	1682.3	1667.7	1655.6	1650.7	1648.3
15°	1851.9	1835.0	1776.8	1752.6	1711.3	1701.7	1665.3	1650.7	1633.8	1628.9	1624.1
17.5°	1861.6	1835.0	1771.9	1740.4	1694.4	1682.3	1645.9	1626.5	1609.5	1602.3	1597.4
20°	1849.5	1815.6	1752.6	1718.6	1670.1	1653.2	1616.8	1595.0	1578.0	1570.8	1565.9
22.5°	1822.9	1784.1	1723.5	1689.5	1641.1	1619.2	1587.7	1568.3	1548.9	1546.5	1539.2
25°	1776.8	1738.0	1687.1	1653.2	1609.5	1587.7	1558.6	1541.7	1522.3	1519.9	1517.4
27.5°	1708.9	1672.6	1633.8	1602.3	1563.5	1546.5	1524.7	1507.7	1490.8	1490.8	1485.9
30°	1612.0	1587.7	1553.8	1534.4	1502.9	1485.9	1471.4	1459.3	1442.3	1444.7	1439.9
32.5°	1488.3	1476.2	1452.0	1442.3	1418.0	1413.2	1398.7	1389.0	1374.4	1379.3	1374.4
35°	1350.2	1335.6	1335.6	1330.8	1318.7	1316.2	1309.0	1304.1	1294.4	1296.8	1296.8
37.5°	1192.6	1192.6	1207.2	1209.6	1207.2	1212.0	1209.6	1209.6	1199.9	1204.7	1202.3
40°	1030.2	1044.7	1071.4	1086.0	1090.8	1100.5	1112.6	1107.8	1102.9	1110.2	1107.8
42.5°	872.6	901.7	942.9	967.2	984.1	998.7	1015.7	1015.7	1013.2	1022.9	1020.5
45°	722.4	749.0	804.8	846.0	875.1	896.9	916.3	923.5	926.0	935.7	933.2
47.5°	574.5	620.5	686.0	734.5	770.8	797.5	824.2	833.9	841.1	853.3	853.3
50°	455.7	513.9	589.0	637.5	681.1	710.2	736.9	751.4	761.1	770.8	770.8
52.5°	366.0	426.6	499.3	550.2	591.5	623.0	649.6	666.6	673.9	686.0	686.0
55°	298.2	353.9	421.8	467.8	509.0	538.1	559.9	574.5	581.8	591.5	591.5
57.5°	235.1	288.5	344.2	385.4	419.4	441.2	460.6	465.4	467.8	475.1	477.5
60°	177.0	218.2	264.2	295.7	320.0	334.5	349.1	346.6	344.2	349.1	344.2
62.5°	126.0	155.1	189.1	208.5	227.9	235.1	242.4	237.6	232.7	235.1	235.1
65°	84.8	106.7	126.0	140.6	150.3	155.1	157.6	155.1	152.7	155.1	152.7
67.5°	58.2	70.3	84.8	92.1	99.4	101.8	104.2	101.8	101.8	101.8	99.4
70°	38.8	46.1	55.8	60.6	63.0	65.4	67.9	65.4	65.4	65.4	65.4
72.5°	26.7	31.5	33.9	38.8	41.2	41.2	41.2	41.2	41.2	41.2	41.2
75°	17.0	19.4	21.8	24.2	26.7	26.7	26.7	26.7	26.7	26.7	26.7
77.5°	12.1	12.1	14.5	14.5	17.0	17.0	17.0	17.0	17.0	17.0	17.0
80°	7.3	7.3	9.7	9.7	9.7	9.7	12.1	9.7	12.1	12.1	12.1
82.5°	4.8	4.8	4.8	4.8	7.3	7.3	7.3	7.3	7.3	7.3	7.3
85°	2.4	2.4	2.4	2.4	2.4	2.4	4.8	2.4	4.8	4.8	4.8
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: P212768

CATALOG NUMBER: LD4B50D010TE EU4B30509727 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1835.0	1835.0	1835.0	1835.0
2.5°	1793.8	1788.9	1774.4	1791.3
5°	1755.0	1750.1	1738.0	1750.1
7.5°	1716.2	1708.9	1699.2	1706.5
10°	1670.1	1665.3	1653.2	1660.4
12.5°	1636.2	1626.5	1619.2	1621.7
15°	1614.4	1604.7	1597.4	1599.8
17.5°	1585.3	1575.6	1568.3	1568.3
20°	1553.8	1544.1	1539.2	1536.8
22.5°	1527.1	1519.9	1517.4	1510.2
25°	1502.9	1498.0	1498.0	1488.3
27.5°	1476.2	1468.9	1468.9	1459.3
30°	1430.2	1427.7	1427.7	1420.5
32.5°	1369.6	1362.3	1367.1	1355.0
35°	1287.1	1282.3	1289.6	1279.9
37.5°	1197.5	1195.0	1199.9	1192.6
40°	1102.9	1102.9	1110.2	1098.1
42.5°	1020.5	1020.5	1027.8	1015.7
45°	930.8	938.1	945.4	935.7
47.5°	853.3	858.1	867.8	858.1
50°	775.7	780.5	787.8	778.1
52.5°	690.8	695.7	703.0	695.7
55°	593.9	598.7	606.0	601.2
57.5°	477.5	472.7	484.8	475.1
60°	346.6	336.9	339.4	339.4
62.5°	230.3	225.4	230.3	223.0
65°	152.7	150.3	150.3	150.3
67.5°	101.8	99.4	101.8	99.4
70°	65.4	65.4	65.4	65.4
72.5°	41.2	41.2	41.2	41.2
75°	26.7	26.7	26.7	26.7
77.5°	17.0	17.0	17.0	17.0
80°	12.1	12.1	12.1	12.1
82.5°	7.3	7.3	7.3	7.3
85°	4.8	4.8	4.8	4.8
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)