

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: P212762

Luminaire Tested: **LD4B50D010TE EU4B30509024 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212762
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 EU4B30509024 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2400K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3410.0 lumens
Efficiency: N/A
Efficacy: 58.0 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

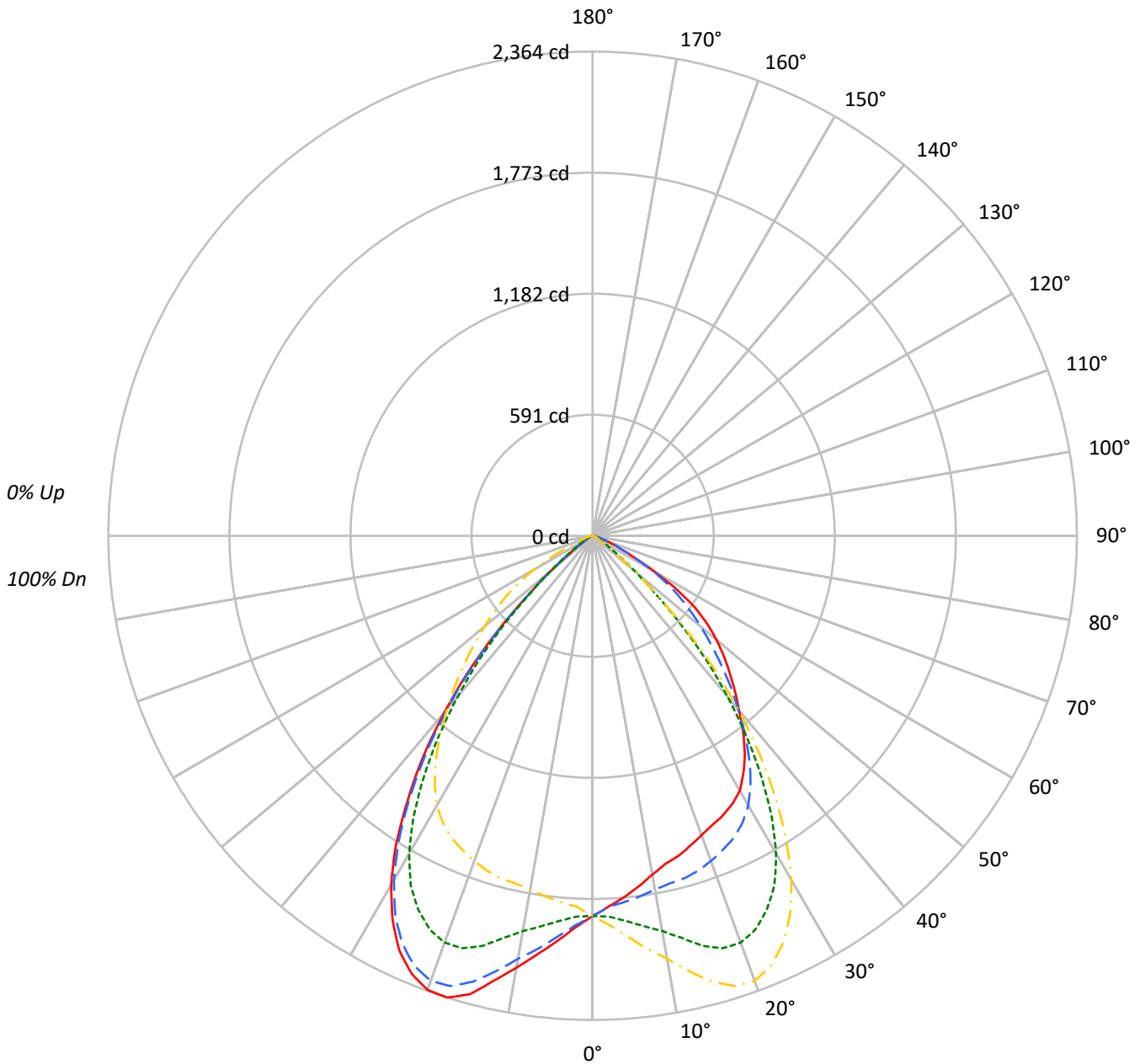
Input Watts (W): 58.77
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	228979	228979	228979	228979
5°	219230	233803	245950	233803
10°	210392	245412	268144	245412
15°	206677	264613	295925	264613
20°	204086	277474	309659	277474
25°	204921	274004	304040	274004
30°	204668	254973	280112	254973
35°	194967	216379	236692	216379
40°	178873	164655	181642	164655
45°	165122	104802	112931	104802
50°	151057	50813	49412	50813
55°	130791	22150	15827	22150
60°	84689	10879	7253	10879
65°	44363	7151	5720	7151
70°	23874	5301	4436	5301
75°	12867	4670	3527	4670
80°	8737	3481	1776	3481
85°	6935	3538	0	3538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.0	5.3
10°-20°	566.1	16.6
20°-30°	880.2	25.8
30°-40°	889.0	26.1
40°-50°	562.9	16.5
50°-60°	236.3	6.9
60°-70°	74.9	2.2
70°-80°	17.2	0.5
80°-90°	2.5	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°	1627.3	47.7
0°-40°	2516.3	73.8
0°-60°	3315.5	97.2
0°-90°	3410.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3410.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1856	1856	1856	1856	1856	
5°	1771	1888	1986	1888	1771	166
15°	1618	2072	2317	2072	1618	456
25°	1506	2013	2234	2013	1506	693
35°	1295	1437	1572	1437	1295	804
45°	947	601	647	601	947	731
55°	608	103	74	103	608	525
65°	152	24	20	24	152	168
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°	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4
2.5°	1812.2	1795.1	1809.8	1814.7	1814.7	1812.2	1817.2	1812.2	1804.9	1834.3	1812.2
5°	1770.6	1758.3	1770.6	1775.5	1777.9	1780.4	1785.3	1785.3	1782.8	1809.8	1795.1
7.5°	1726.4	1719.1	1728.9	1736.2	1746.0	1743.6	1750.9	1753.4	1758.3	1790.2	1775.5
10°	1679.8	1672.5	1684.7	1689.6	1701.9	1704.3	1709.3	1716.6	1726.4	1758.3	1753.4
12.5°	1640.6	1638.1	1645.5	1655.3	1667.6	1670.0	1674.9	1687.2	1701.9	1736.2	1738.7
15°	1618.5	1616.1	1623.4	1633.2	1643.0	1647.9	1652.8	1670.0	1684.7	1721.5	1731.3
17.5°	1586.6	1586.6	1594.0	1603.8	1616.1	1621.0	1628.3	1645.5	1665.1	1701.9	1714.2
20°	1554.8	1557.2	1562.1	1571.9	1584.2	1589.1	1596.4	1613.6	1635.7	1672.5	1689.6
22.5°	1527.8	1535.1	1537.6	1544.9	1557.2	1564.6	1567.0	1586.6	1606.3	1638.1	1660.2
25°	1505.7	1515.5	1515.5	1520.4	1535.1	1537.6	1540.0	1559.7	1576.8	1606.3	1628.3
27.5°	1476.3	1486.1	1486.1	1493.5	1503.3	1508.2	1508.2	1525.3	1542.5	1564.6	1581.7
30°	1437.0	1444.4	1444.4	1446.9	1456.7	1461.6	1459.1	1476.3	1488.5	1503.3	1520.4
32.5°	1370.8	1383.1	1378.2	1385.5	1390.5	1395.4	1390.5	1405.2	1415.0	1429.7	1434.6
35°	1294.8	1304.6	1297.3	1302.2	1312.0	1312.0	1309.5	1319.3	1324.2	1331.6	1334.1
37.5°	1206.5	1213.9	1209.0	1211.4	1216.3	1218.8	1213.9	1223.7	1223.7	1226.1	1221.2
40°	1110.9	1123.2	1115.8	1115.8	1120.7	1123.2	1115.8	1120.7	1125.6	1113.3	1103.5
42.5°	1027.5	1039.8	1032.4	1032.4	1032.4	1034.9	1025.1	1027.5	1027.5	1010.3	995.6
45°	946.6	956.4	949.0	941.7	944.1	946.6	936.8	934.3	927.0	907.4	885.3
47.5°	868.1	877.9	868.1	863.2	863.2	863.2	850.9	843.6	833.8	806.8	779.8
50°	787.2	797.0	789.6	784.7	779.8	779.8	770.0	760.2	745.5	718.5	689.1
52.5°	703.8	711.2	703.8	698.9	694.0	694.0	681.7	674.4	657.2	630.2	598.4
55°	608.2	613.1	605.7	600.8	598.4	598.4	588.6	581.2	566.5	544.4	515.0
57.5°	480.7	490.5	478.2	483.1	483.1	480.7	473.3	470.8	465.9	446.3	424.2
60°	343.3	343.3	340.9	350.7	348.2	353.1	348.2	350.7	353.1	338.4	323.7
62.5°	225.6	233.0	228.1	233.0	237.9	237.9	235.4	240.3	245.2	237.9	230.5
65°	152.0	152.0	152.0	154.5	154.5	156.9	154.5	156.9	159.4	156.9	152.0
67.5°	100.5	103.0	100.5	103.0	100.5	103.0	103.0	103.0	105.4	103.0	100.5
70°	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2	68.7	66.2	63.8
72.5°	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
75°	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
77.5°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
80°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	9.8	12.3	9.8	9.8
82.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
85°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	2.5	4.9	2.5	2.5
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°	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4
2.5°	1824.5	1817.2	1853.9	1822.1	1839.2	1836.8	1839.2	1853.9	1853.9	1861.3	1858.8
5°	1814.7	1807.3	1849.0	1824.5	1844.1	1844.1	1851.5	1873.6	1873.6	1888.3	1890.7
7.5°	1800.0	1802.4	1846.6	1831.9	1853.9	1856.4	1868.7	1895.6	1903.0	1922.6	1932.4
10°	1782.8	1792.6	1839.2	1834.3	1863.7	1866.2	1890.7	1922.6	1932.4	1959.4	1976.6
12.5°	1775.5	1792.6	1846.6	1851.5	1880.9	1893.2	1920.2	1961.8	1979.0	2010.9	2035.4
15°	1773.0	1797.5	1856.4	1873.6	1907.9	1925.1	1961.8	2010.9	2030.5	2072.2	2101.6
17.5°	1760.8	1792.6	1856.4	1883.4	1920.2	1937.3	1983.9	2040.3	2064.8	2111.4	2145.8
20°	1738.7	1773.0	1836.8	1871.1	1910.3	1934.9	1981.5	2040.3	2064.8	2113.9	2153.1
22.5°	1709.3	1743.6	1804.9	1844.1	1878.5	1905.4	1954.5	2010.9	2033.0	2079.5	2118.8
25°	1672.5	1706.8	1758.3	1797.5	1829.4	1853.9	1895.6	1954.5	1969.2	2013.3	2055.0
27.5°	1621.0	1652.8	1692.1	1728.9	1758.3	1777.9	1814.7	1866.2	1878.5	1922.6	1956.9
30°	1552.3	1571.9	1606.3	1630.8	1652.8	1672.5	1699.4	1746.0	1750.9	1790.2	1822.1
32.5°	1459.1	1468.9	1493.5	1505.7	1525.3	1532.7	1554.8	1594.0	1589.1	1625.9	1652.8
35°	1346.3	1351.2	1351.2	1365.9	1370.8	1373.3	1390.5	1412.5	1405.2	1437.0	1456.7
37.5°	1223.7	1221.2	1206.5	1206.5	1209.0	1201.6	1209.0	1218.8	1209.0	1233.5	1250.7
40°	1098.6	1083.9	1056.9	1042.2	1034.9	1032.4	1017.7	1030.0	1005.4	1022.6	1034.9
42.5°	978.5	953.9	912.3	882.8	870.6	858.3	833.8	833.8	801.9	814.2	816.6
45°	855.9	814.2	757.8	730.8	698.9	679.3	647.4	615.5	593.5	600.8	593.5
47.5°	743.0	694.0	627.8	581.2	544.4	517.4	473.3	436.5	414.4	404.6	394.8
50°	645.0	595.9	519.9	461.0	424.2	392.4	348.2	306.5	279.6	264.8	257.5
52.5°	556.7	505.2	431.6	370.3	331.1	301.6	252.6	210.9	181.5	164.3	154.5
55°	473.3	426.7	358.0	301.6	264.8	235.4	186.4	147.1	120.2	103.0	90.7
57.5°	389.9	348.2	291.8	237.9	206.0	179.0	137.3	103.0	80.9	66.2	56.4
60°	299.2	267.3	220.7	179.0	152.0	130.0	98.1	71.1	56.4	44.1	39.2
62.5°	210.9	191.3	156.9	127.5	110.4	93.2	68.7	51.5	39.2	31.9	29.4
65°	142.2	127.5	107.9	85.8	73.6	63.8	49.0	36.8	29.4	24.5	22.1
67.5°	93.2	85.8	71.1	58.9	51.5	44.1	34.3	27.0	22.1	19.6	17.2
70°	61.3	56.4	46.6	39.2	36.8	31.9	24.5	19.6	17.2	14.7	14.7
72.5°	39.2	34.3	31.9	27.0	24.5	22.1	17.2	14.7	12.3	12.3	12.3
75°	24.5	22.1	19.6	17.2	17.2	14.7	12.3	12.3	9.8	9.8	9.8
77.5°	14.7	14.7	12.3	12.3	9.8	9.8	9.8	7.4	7.4	7.4	7.4
80°	9.8	9.8	7.4	7.4	7.4	7.4	4.9	4.9	4.9	4.9	4.9
82.5°	4.9	4.9	4.9	4.9	4.9	4.9	2.5	2.5	2.5	2.5	2.5
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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°	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4
2.5°	1871.1	1876.0	1871.1	1885.8	1861.3	1888.3	1878.5	1883.4	1903.0	1895.6	1903.0
5°	1907.9	1917.7	1917.7	1934.9	1912.8	1944.7	1934.9	1944.7	1964.3	1964.3	1974.1
7.5°	1954.5	1966.7	1971.6	1988.8	1966.7	2006.0	1996.2	2008.4	2033.0	2033.0	2040.3
10°	2003.5	2018.2	2028.1	2047.7	2023.1	2067.3	2057.5	2074.6	2096.7	2099.2	2111.4
12.5°	2064.8	2084.5	2096.7	2113.9	2096.7	2140.9	2131.0	2148.2	2177.6	2180.1	2194.8
15°	2133.5	2158.0	2172.7	2192.4	2172.7	2221.8	2212.0	2231.6	2253.7	2263.5	2278.2
17.5°	2177.6	2207.1	2219.3	2241.4	2221.8	2270.8	2258.6	2285.5	2305.2	2310.1	2327.2
20°	2185.0	2212.0	2229.1	2246.3	2229.1	2278.2	2265.9	2288.0	2312.5	2317.4	2329.7
22.5°	2153.1	2175.2	2194.8	2209.5	2194.8	2243.9	2226.7	2251.2	2273.3	2278.2	2288.0
25°	2079.5	2106.5	2126.1	2138.4	2123.7	2170.3	2155.6	2177.6	2197.3	2207.1	2209.5
27.5°	1976.6	2001.1	2020.7	2028.1	2018.2	2062.4	2042.8	2069.7	2086.9	2091.8	2099.2
30°	1836.8	1858.8	1878.5	1883.4	1876.0	1907.9	1898.1	1922.6	1939.8	1944.7	1949.6
32.5°	1665.1	1687.2	1699.4	1704.3	1697.0	1728.9	1719.1	1738.7	1758.3	1758.3	1758.3
35°	1471.4	1491.0	1498.4	1513.1	1495.9	1527.8	1518.0	1535.1	1552.3	1552.3	1554.8
37.5°	1262.9	1277.6	1282.6	1297.3	1280.1	1309.5	1302.2	1316.9	1331.6	1329.1	1334.1
40°	1039.8	1054.5	1059.4	1071.7	1056.9	1081.5	1076.6	1091.3	1103.5	1103.5	1103.5
42.5°	824.0	833.8	833.8	846.0	831.3	853.4	853.4	863.2	875.5	873.0	873.0
45°	598.4	595.9	600.8	598.4	598.4	618.0	618.0	622.9	632.7	627.8	630.2
47.5°	397.3	399.7	389.9	397.3	387.5	404.6	404.6	404.6	412.0	407.1	412.0
50°	252.6	245.2	240.3	240.3	237.9	250.1	245.2	247.7	252.6	247.7	252.6
52.5°	142.2	139.8	134.9	137.3	132.4	134.9	134.9	134.9	137.3	134.9	139.8
55°	83.4	76.0	73.6	73.6	71.1	73.6	71.1	71.1	71.1	68.7	71.1
57.5°	49.0	46.6	44.1	44.1	41.7	41.7	41.7	41.7	41.7	41.7	41.7
60°	34.3	31.9	31.9	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
62.5°	27.0	24.5	24.5	24.5	22.1	22.1	22.1	22.1	22.1	24.5	22.1
65°	19.6	19.6	19.6	19.6	19.6	19.6	17.2	19.6	19.6	19.6	19.6
67.5°	17.2	17.2	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
70°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
72.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
75°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	4.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
85°	0.0	2.5	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: P212762

CATALOG NUMBER: LD4B50D010TE EU4B30509024 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4
2.5°	1910.3	1900.5	1878.5	1893.2	1895.6	1885.8	1898.1	1912.8	1898.1	1885.8	1895.6
5°	1981.5	1974.1	1954.5	1966.7	1969.2	1966.7	1974.1	1986.4	1974.1	1966.7	1969.2
7.5°	2052.6	2047.7	2025.6	2040.3	2045.2	2040.3	2047.7	2059.9	2047.7	2040.3	2045.2
10°	2121.2	2118.8	2096.7	2116.3	2118.8	2113.9	2121.2	2140.9	2121.2	2113.9	2118.8
12.5°	2199.7	2204.6	2180.1	2202.2	2204.6	2199.7	2209.5	2224.2	2209.5	2199.7	2204.6
15°	2290.4	2288.0	2268.4	2285.5	2290.4	2285.5	2297.8	2317.4	2297.8	2285.5	2290.4
17.5°	2334.6	2334.6	2319.9	2337.0	2339.5	2339.5	2349.3	2364.0	2349.3	2339.5	2339.5
20°	2337.0	2339.5	2322.3	2341.9	2341.9	2341.9	2351.8	2359.1	2351.8	2341.9	2341.9
22.5°	2297.8	2300.3	2283.1	2300.3	2300.3	2302.7	2307.6	2312.5	2307.6	2302.7	2300.3
25°	2221.8	2224.2	2209.5	2224.2	2221.8	2221.8	2226.7	2234.0	2226.7	2221.8	2221.8
27.5°	2109.0	2111.4	2091.8	2109.0	2106.5	2104.1	2111.4	2113.9	2111.4	2104.1	2106.5
30°	1959.4	1961.8	1944.7	1959.4	1956.9	1954.5	1964.3	1966.7	1964.3	1954.5	1956.9
32.5°	1780.4	1775.5	1763.2	1775.5	1773.0	1773.0	1777.9	1785.3	1777.9	1773.0	1773.0
35°	1564.6	1564.6	1557.2	1567.0	1559.7	1569.5	1569.5	1571.9	1569.5	1569.5	1559.7
37.5°	1343.9	1343.9	1339.0	1343.9	1341.4	1351.2	1351.2	1358.6	1351.2	1351.2	1341.4
40°	1113.3	1113.3	1108.4	1113.3	1120.7	1120.7	1118.2	1128.1	1118.2	1120.7	1120.7
42.5°	880.4	880.4	877.9	890.2	890.2	890.2	882.8	892.6	882.8	890.2	890.2
45°	640.1	635.1	632.7	632.7	635.1	645.0	635.1	647.4	635.1	645.0	635.1
47.5°	407.1	409.5	412.0	419.3	414.4	412.0	412.0	419.3	412.0	412.0	414.4
50°	250.1	252.6	252.6	257.5	250.1	255.0	252.6	257.5	252.6	255.0	250.1
52.5°	137.3	137.3	137.3	142.2	137.3	139.8	137.3	142.2	137.3	139.8	137.3
55°	71.1	71.1	71.1	73.6	71.1	71.1	71.1	73.6	71.1	71.1	71.1
57.5°	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
60°	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
62.5°	24.5	22.1	22.1	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
65°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
67.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
70°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
72.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
75°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P212762

CATALOG NUMBER: LD4B50D010TE EU4B30509024 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4
2.5°	1893.2	1878.5	1900.5	1910.3	1903.0	1895.6	1903.0	1883.4	1878.5	1888.3	1861.3
5°	1966.7	1954.5	1974.1	1981.5	1974.1	1964.3	1964.3	1944.7	1934.9	1944.7	1912.8
7.5°	2040.3	2025.6	2047.7	2052.6	2040.3	2033.0	2033.0	2008.4	1996.2	2006.0	1966.7
10°	2116.3	2096.7	2118.8	2121.2	2111.4	2099.2	2096.7	2074.6	2057.5	2067.3	2023.1
12.5°	2202.2	2180.1	2204.6	2199.7	2194.8	2180.1	2177.6	2148.2	2131.0	2140.9	2096.7
15°	2285.5	2268.4	2288.0	2290.4	2278.2	2263.5	2253.7	2231.6	2212.0	2221.8	2172.7
17.5°	2337.0	2319.9	2334.6	2334.6	2327.2	2310.1	2305.2	2285.5	2258.6	2270.8	2221.8
20°	2341.9	2322.3	2339.5	2337.0	2329.7	2317.4	2312.5	2288.0	2265.9	2278.2	2229.1
22.5°	2300.3	2283.1	2300.3	2297.8	2288.0	2278.2	2273.3	2251.2	2226.7	2243.9	2194.8
25°	2224.2	2209.5	2224.2	2221.8	2209.5	2207.1	2197.3	2177.6	2155.6	2170.3	2123.7
27.5°	2109.0	2091.8	2111.4	2109.0	2099.2	2091.8	2086.9	2069.7	2042.8	2062.4	2018.2
30°	1959.4	1944.7	1961.8	1959.4	1949.6	1944.7	1939.8	1922.6	1898.1	1907.9	1876.0
32.5°	1775.5	1763.2	1775.5	1780.4	1758.3	1758.3	1758.3	1738.7	1719.1	1728.9	1697.0
35°	1567.0	1557.2	1564.6	1564.6	1554.8	1552.3	1552.3	1535.1	1518.0	1527.8	1495.9
37.5°	1343.9	1339.0	1343.9	1343.9	1334.1	1329.1	1331.6	1316.9	1302.2	1309.5	1280.1
40°	1113.3	1108.4	1113.3	1113.3	1103.5	1103.5	1103.5	1091.3	1076.6	1081.5	1056.9
42.5°	890.2	877.9	880.4	880.4	873.0	873.0	875.5	863.2	853.4	853.4	831.3
45°	632.7	632.7	635.1	640.1	630.2	627.8	632.7	622.9	618.0	618.0	598.4
47.5°	419.3	412.0	409.5	407.1	412.0	407.1	412.0	404.6	404.6	404.6	387.5
50°	257.5	252.6	252.6	250.1	252.6	247.7	252.6	247.7	245.2	250.1	237.9
52.5°	142.2	137.3	137.3	137.3	139.8	134.9	137.3	134.9	134.9	134.9	132.4
55°	73.6	71.1	71.1	71.1	71.1	68.7	71.1	71.1	71.1	73.6	71.1
57.5°	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
60°	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
62.5°	24.5	22.1	22.1	24.5	22.1	24.5	22.1	22.1	22.1	22.1	22.1
65°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	17.2	19.6	19.6
67.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
70°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
72.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
75°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P212762

CATALOG NUMBER: LD4B50D010TE EU4B30509024 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4
2.5°	1885.8	1871.1	1876.0	1871.1	1858.8	1861.3	1853.9	1853.9	1839.2	1836.8	1839.2
5°	1934.9	1917.7	1917.7	1907.9	1890.7	1888.3	1873.6	1873.6	1851.5	1844.1	1844.1
7.5°	1988.8	1971.6	1966.7	1954.5	1932.4	1922.6	1903.0	1895.6	1868.7	1856.4	1853.9
10°	2047.7	2028.1	2018.2	2003.5	1976.6	1959.4	1932.4	1922.6	1890.7	1866.2	1863.7
12.5°	2113.9	2096.7	2084.5	2064.8	2035.4	2010.9	1979.0	1961.8	1920.2	1893.2	1880.9
15°	2192.4	2172.7	2158.0	2133.5	2101.6	2072.2	2030.5	2010.9	1961.8	1925.1	1907.9
17.5°	2241.4	2219.3	2207.1	2177.6	2145.8	2111.4	2064.8	2040.3	1983.9	1937.3	1920.2
20°	2246.3	2229.1	2212.0	2185.0	2153.1	2113.9	2064.8	2040.3	1981.5	1934.9	1910.3
22.5°	2209.5	2194.8	2175.2	2153.1	2118.8	2079.5	2033.0	2010.9	1954.5	1905.4	1878.5
25°	2138.4	2126.1	2106.5	2079.5	2055.0	2013.3	1969.2	1954.5	1895.6	1853.9	1829.4
27.5°	2028.1	2020.7	2001.1	1976.6	1956.9	1922.6	1878.5	1866.2	1814.7	1777.9	1758.3
30°	1883.4	1878.5	1858.8	1836.8	1822.1	1790.2	1750.9	1746.0	1699.4	1672.5	1652.8
32.5°	1704.3	1699.4	1687.2	1665.1	1652.8	1625.9	1589.1	1594.0	1554.8	1532.7	1525.3
35°	1513.1	1498.4	1491.0	1471.4	1456.7	1437.0	1405.2	1412.5	1390.5	1373.3	1370.8
37.5°	1297.3	1282.6	1277.6	1262.9	1250.7	1233.5	1209.0	1218.8	1209.0	1201.6	1209.0
40°	1071.7	1059.4	1054.5	1039.8	1034.9	1022.6	1005.4	1030.0	1017.7	1032.4	1034.9
42.5°	846.0	833.8	833.8	824.0	816.6	814.2	801.9	833.8	833.8	858.3	870.6
45°	598.4	600.8	595.9	598.4	593.5	600.8	593.5	615.5	647.4	679.3	698.9
47.5°	397.3	389.9	399.7	397.3	394.8	404.6	414.4	436.5	473.3	517.4	544.4
50°	240.3	240.3	245.2	252.6	257.5	264.8	279.6	306.5	348.2	392.4	424.2
52.5°	137.3	134.9	139.8	142.2	154.5	164.3	181.5	210.9	252.6	301.6	331.1
55°	73.6	73.6	76.0	83.4	90.7	103.0	120.2	147.1	186.4	235.4	264.8
57.5°	44.1	44.1	46.6	49.0	56.4	66.2	80.9	103.0	137.3	179.0	206.0
60°	29.4	31.9	31.9	34.3	39.2	44.1	56.4	71.1	98.1	130.0	152.0
62.5°	24.5	24.5	24.5	27.0	29.4	31.9	39.2	51.5	68.7	93.2	110.4
65°	19.6	19.6	19.6	19.6	22.1	24.5	29.4	36.8	49.0	63.8	73.6
67.5°	14.7	14.7	17.2	17.2	17.2	19.6	22.1	27.0	34.3	44.1	51.5
70°	12.3	12.3	12.3	12.3	14.7	14.7	17.2	19.6	24.5	31.9	36.8
72.5°	9.8	9.8	9.8	9.8	12.3	12.3	12.3	14.7	17.2	22.1	24.5
75°	7.4	7.4	7.4	7.4	9.8	9.8	9.8	12.3	12.3	14.7	17.2
77.5°	4.9	4.9	4.9	4.9	7.4	7.4	7.4	7.4	9.8	9.8	9.8
80°	2.5	2.5	2.5	4.9	4.9	4.9	4.9	4.9	4.9	7.4	7.4
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.9	4.9
85°	0.0	0.0	2.5	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P212762

CATALOG NUMBER: LD4B50D010TE EU4B30509024 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4	1856.4
2.5°	1822.1	1853.9	1817.2	1824.5	1812.2	1834.3	1804.9	1812.2	1817.2	1812.2	1814.7
5°	1824.5	1849.0	1807.3	1814.7	1795.1	1809.8	1782.8	1785.3	1785.3	1780.4	1777.9
7.5°	1831.9	1846.6	1802.4	1800.0	1775.5	1790.2	1758.3	1753.4	1750.9	1743.6	1746.0
10°	1834.3	1839.2	1792.6	1782.8	1753.4	1758.3	1726.4	1716.6	1709.3	1704.3	1701.9
12.5°	1851.5	1846.6	1792.6	1775.5	1738.7	1736.2	1701.9	1687.2	1674.9	1670.0	1667.6
15°	1873.6	1856.4	1797.5	1773.0	1731.3	1721.5	1684.7	1670.0	1652.8	1647.9	1643.0
17.5°	1883.4	1856.4	1792.6	1760.8	1714.2	1701.9	1665.1	1645.5	1628.3	1621.0	1616.1
20°	1871.1	1836.8	1773.0	1738.7	1689.6	1672.5	1635.7	1613.6	1596.4	1589.1	1584.2
22.5°	1844.1	1804.9	1743.6	1709.3	1660.2	1638.1	1606.3	1586.6	1567.0	1564.6	1557.2
25°	1797.5	1758.3	1706.8	1672.5	1628.3	1606.3	1576.8	1559.7	1540.0	1537.6	1535.1
27.5°	1728.9	1692.1	1652.8	1621.0	1581.7	1564.6	1542.5	1525.3	1508.2	1508.2	1503.3
30°	1630.8	1606.3	1571.9	1552.3	1520.4	1503.3	1488.5	1476.3	1459.1	1461.6	1456.7
32.5°	1505.7	1493.5	1468.9	1459.1	1434.6	1429.7	1415.0	1405.2	1390.5	1395.4	1390.5
35°	1365.9	1351.2	1351.2	1346.3	1334.1	1331.6	1324.2	1319.3	1309.5	1312.0	1312.0
37.5°	1206.5	1206.5	1221.2	1223.7	1221.2	1226.1	1223.7	1223.7	1213.9	1218.8	1216.3
40°	1042.2	1056.9	1083.9	1098.6	1103.5	1113.3	1125.6	1120.7	1115.8	1123.2	1120.7
42.5°	882.8	912.3	953.9	978.5	995.6	1010.3	1027.5	1027.5	1025.1	1034.9	1032.4
45°	730.8	757.8	814.2	855.9	885.3	907.4	927.0	934.3	936.8	946.6	944.1
47.5°	581.2	627.8	694.0	743.0	779.8	806.8	833.8	843.6	850.9	863.2	863.2
50°	461.0	519.9	595.9	645.0	689.1	718.5	745.5	760.2	770.0	779.8	779.8
52.5°	370.3	431.6	505.2	556.7	598.4	630.2	657.2	674.4	681.7	694.0	694.0
55°	301.6	358.0	426.7	473.3	515.0	544.4	566.5	581.2	588.6	598.4	598.4
57.5°	237.9	291.8	348.2	389.9	424.2	446.3	465.9	470.8	473.3	480.7	483.1
60°	179.0	220.7	267.3	299.2	323.7	338.4	353.1	350.7	348.2	353.1	348.2
62.5°	127.5	156.9	191.3	210.9	230.5	237.9	245.2	240.3	235.4	237.9	237.9
65°	85.8	107.9	127.5	142.2	152.0	156.9	159.4	156.9	154.5	156.9	154.5
67.5°	58.9	71.1	85.8	93.2	100.5	103.0	105.4	103.0	103.0	103.0	100.5
70°	39.2	46.6	56.4	61.3	63.8	66.2	68.7	66.2	66.2	66.2	66.2
72.5°	27.0	31.9	34.3	39.2	41.7	41.7	41.7	41.7	41.7	41.7	41.7
75°	17.2	19.6	22.1	24.5	27.0	27.0	27.0	27.0	27.0	27.0	27.0
77.5°	12.3	12.3	14.7	14.7	17.2	17.2	17.2	17.2	17.2	17.2	17.2
80°	7.4	7.4	9.8	9.8	9.8	9.8	12.3	9.8	12.3	12.3	12.3
82.5°	4.9	4.9	4.9	4.9	7.4	7.4	7.4	7.4	7.4	7.4	7.4
85°	2.5	2.5	2.5	2.5	2.5	2.5	4.9	2.5	4.9	4.9	4.9
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: P212762

CATALOG NUMBER: LD4B50D010TE EU4B30509024 4LBSWL11

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1856.4	1856.4	1856.4	1856.4
2.5°	1814.7	1809.8	1795.1	1812.2
5°	1775.5	1770.6	1758.3	1770.6
7.5°	1736.2	1728.9	1719.1	1726.4
10°	1689.6	1684.7	1672.5	1679.8
12.5°	1655.3	1645.5	1638.1	1640.6
15°	1633.2	1623.4	1616.1	1618.5
17.5°	1603.8	1594.0	1586.6	1586.6
20°	1571.9	1562.1	1557.2	1554.8
22.5°	1544.9	1537.6	1535.1	1527.8
25°	1520.4	1515.5	1515.5	1505.7
27.5°	1493.5	1486.1	1486.1	1476.3
30°	1446.9	1444.4	1444.4	1437.0
32.5°	1385.5	1378.2	1383.1	1370.8
35°	1302.2	1297.3	1304.6	1294.8
37.5°	1211.4	1209.0	1213.9	1206.5
40°	1115.8	1115.8	1123.2	1110.9
42.5°	1032.4	1032.4	1039.8	1027.5
45°	941.7	949.0	956.4	946.6
47.5°	863.2	868.1	877.9	868.1
50°	784.7	789.6	797.0	787.2
52.5°	698.9	703.8	711.2	703.8
55°	600.8	605.7	613.1	608.2
57.5°	483.1	478.2	490.5	480.7
60°	350.7	340.9	343.3	343.3
62.5°	233.0	228.1	233.0	225.6
65°	154.5	152.0	152.0	152.0
67.5°	103.0	100.5	103.0	100.5
70°	66.2	66.2	66.2	66.2
72.5°	41.7	41.7	41.7	41.7
75°	27.0	27.0	27.0	27.0
77.5°	17.2	17.2	17.2	17.2
80°	12.3	12.3	12.3	12.3
82.5°	7.4	7.4	7.4	7.4
85°	4.9	4.9	4.9	4.9
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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





















(END OF REPORT)