

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: P212752

Luminaire Tested: **LD4B40D010 EU4B30509035 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212752
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: LD4B40D010 EU4B30509035 4LBSWLI1
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: 3213.7 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

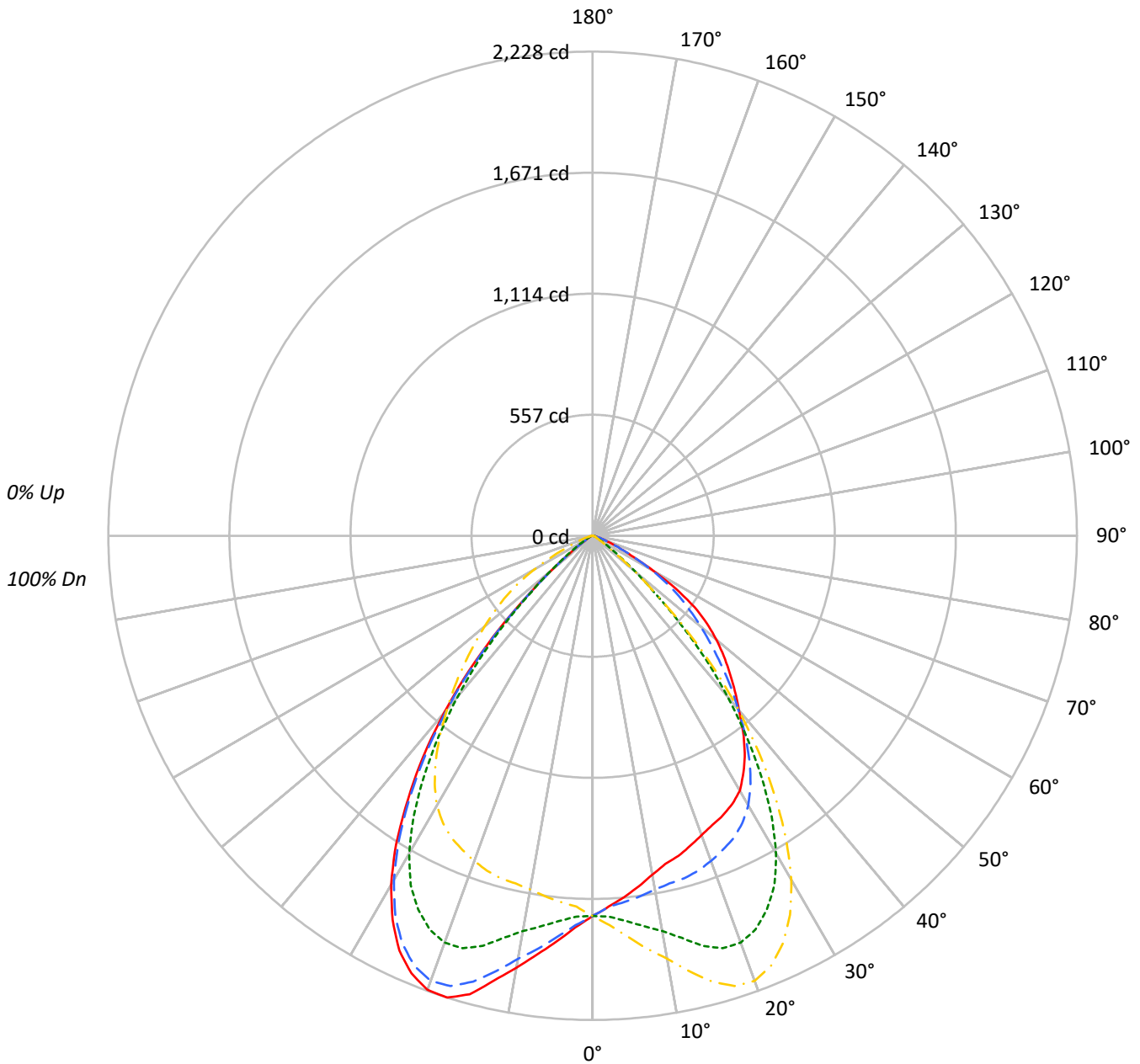
Input Watts (W): 43.02
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWL11

Luminous Intensity Polar Plot





TEST NUMBER: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

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°	215806	215806	215806	215806
5°	206613	220344	231797	220344
10°	198293	231284	252714	231284
15°	194789	249379	278903	249379
20°	192338	261500	291847	261500
25°	193135	258244	286552	258244
30°	192903	240303	264003	240303
35°	183749	203942	223080	203942
40°	168584	155187	171176	155187
45°	155615	98766	106441	98766
50°	142364	47896	46572	47896
55°	123265	20881	14903	20881
60°	79829	10262	6833	10262
65°	41824	6742	5399	6742
70°	22504	5013	4183	5013
75°	12105	4384	3288	4384
80°	8240	3267	1634	3267
85°	6510	3255	0	3255



TEST NUMBER: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.6	5.3
10°-20°	533.6	16.6
20°-30°	829.6	25.8
30°-40°	837.9	26.1
40°-50°	530.5	16.5
50°-60°	222.7	6.9
60°-70°	70.6	2.2
70°-80°	16.1	0.5
80°-90°	2.3	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°	1533.7	47.7
0°-40°	2371.5	73.8
0°-60°	3124.7	97.2
0°-90°	3213.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3213.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1750	1750	1750	1750	1750	
5°	1669	1780	1872	1780	1669	157
15°	1525	1953	2184	1953	1525	430
25°	1419	1898	2106	1898	1419	654
35°	1220	1354	1482	1354	1220	758
45°	892	566	610	566	892	689
55°	573	97	69	97	573	495
65°	143	23	18	23	143	158
75°	25	9	7	9	25	31
85°	5	2	0	2	5	5
90°	0	0	0	0	0	



TEST NUMBER: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6
2.5°	1708.0	1691.8	1705.7	1710.3	1710.3	1708.0	1712.6	1708.0	1701.0	1728.8	1708.0
5°	1668.7	1657.1	1668.7	1673.3	1675.6	1677.9	1682.5	1682.5	1680.2	1705.7	1691.8
7.5°	1627.1	1620.1	1629.4	1636.3	1645.6	1643.3	1650.2	1652.5	1657.1	1687.2	1673.3
10°	1583.2	1576.2	1587.8	1592.4	1604.0	1606.3	1610.9	1617.8	1627.1	1657.1	1652.5
12.5°	1546.2	1543.9	1550.8	1560.0	1571.6	1573.9	1578.5	1590.1	1604.0	1636.3	1638.6
15°	1525.4	1523.1	1530.0	1539.2	1548.5	1553.1	1557.7	1573.9	1587.8	1622.5	1631.7
17.5°	1495.3	1495.3	1502.3	1511.5	1523.1	1527.7	1534.6	1550.8	1569.3	1604.0	1615.5
20°	1465.3	1467.6	1472.2	1481.5	1493.0	1497.6	1504.6	1520.8	1541.6	1576.2	1592.4
22.5°	1439.9	1446.8	1449.1	1456.0	1467.6	1474.5	1476.8	1495.3	1513.8	1543.9	1564.7
25°	1419.1	1428.3	1428.3	1432.9	1446.8	1449.1	1451.4	1469.9	1486.1	1513.8	1534.6
27.5°	1391.3	1400.6	1400.6	1407.5	1416.8	1421.4	1421.4	1437.6	1453.7	1474.5	1490.7
30°	1354.4	1361.3	1361.3	1363.6	1372.8	1377.5	1375.2	1391.3	1402.9	1416.8	1432.9
32.5°	1292.0	1303.5	1298.9	1305.8	1310.4	1315.1	1310.4	1324.3	1333.6	1347.4	1352.0
35°	1220.3	1229.5	1222.6	1227.2	1236.5	1236.5	1234.2	1243.4	1248.0	1255.0	1257.3
37.5°	1137.1	1144.0	1139.4	1141.7	1146.3	1148.7	1144.0	1153.3	1153.3	1155.6	1151.0
40°	1047.0	1058.5	1051.6	1051.6	1056.2	1058.5	1051.6	1056.2	1060.8	1049.3	1040.0
42.5°	968.4	979.9	973.0	973.0	973.0	975.3	966.1	968.4	968.4	952.2	938.3
45°	892.1	901.4	894.4	887.5	889.8	892.1	882.9	880.6	873.6	855.1	834.3
47.5°	818.2	827.4	818.2	813.5	813.5	813.5	802.0	795.0	785.8	760.4	735.0
50°	741.9	751.1	744.2	739.6	735.0	735.0	725.7	716.5	702.6	677.2	649.4
52.5°	663.3	670.2	663.3	658.7	654.1	654.1	642.5	635.6	619.4	594.0	563.9
55°	573.2	577.8	570.9	566.2	563.9	563.9	554.7	547.8	533.9	513.1	485.3
57.5°	453.0	462.2	450.7	455.3	455.3	453.0	446.1	443.7	439.1	420.6	399.8
60°	323.6	323.6	321.3	330.5	328.2	332.8	328.2	330.5	332.8	318.9	305.1
62.5°	212.6	219.6	214.9	219.6	224.2	224.2	221.9	226.5	231.1	224.2	217.3
65°	143.3	143.3	143.3	145.6	145.6	147.9	145.6	147.9	150.2	147.9	143.3
67.5°	94.8	97.1	94.8	97.1	94.8	97.1	97.1	97.1	99.4	97.1	94.8
70°	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	64.7	62.4	60.1
72.5°	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3
75°	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
77.5°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
80°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	9.2	11.6	9.2	9.2
82.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
85°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	2.3	4.6	2.3	2.3
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: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6
2.5°	1719.5	1712.6	1747.3	1717.2	1733.4	1731.1	1733.4	1747.3	1747.3	1754.2	1751.9
5°	1710.3	1703.3	1742.6	1719.5	1738.0	1738.0	1744.9	1765.7	1765.7	1779.6	1781.9
7.5°	1696.4	1698.7	1740.3	1726.5	1747.3	1749.6	1761.1	1786.5	1793.5	1812.0	1821.2
10°	1680.2	1689.5	1733.4	1728.8	1756.5	1758.8	1781.9	1812.0	1821.2	1846.6	1862.8
12.5°	1673.3	1689.5	1740.3	1744.9	1772.7	1784.2	1809.7	1848.9	1865.1	1895.2	1918.3
15°	1671.0	1694.1	1749.6	1765.7	1798.1	1814.3	1848.9	1895.2	1913.7	1952.9	1980.7
17.5°	1659.4	1689.5	1749.6	1775.0	1809.7	1825.8	1869.7	1922.9	1946.0	1989.9	2022.3
20°	1638.6	1671.0	1731.1	1763.4	1800.4	1823.5	1867.4	1922.9	1946.0	1992.2	2029.2
22.5°	1610.9	1643.3	1701.0	1738.0	1770.4	1795.8	1842.0	1895.2	1916.0	1959.9	1996.9
25°	1576.2	1608.6	1657.1	1694.1	1724.1	1747.3	1786.5	1842.0	1855.9	1897.5	1936.8
27.5°	1527.7	1557.7	1594.7	1629.4	1657.1	1675.6	1710.3	1758.8	1770.4	1812.0	1844.3
30°	1463.0	1481.5	1513.8	1536.9	1557.7	1576.2	1601.6	1645.6	1650.2	1687.2	1717.2
32.5°	1375.2	1384.4	1407.5	1419.1	1437.6	1444.5	1465.3	1502.3	1497.6	1532.3	1557.7
35°	1268.8	1273.5	1273.5	1287.3	1292.0	1294.3	1310.4	1331.2	1324.3	1354.4	1372.8
37.5°	1153.3	1151.0	1137.1	1137.1	1139.4	1132.5	1139.4	1148.7	1139.4	1162.5	1178.7
40°	1035.4	1021.5	996.1	982.3	975.3	973.0	959.1	970.7	947.6	963.8	975.3
42.5°	922.2	899.1	859.8	832.0	820.5	808.9	785.8	785.8	755.8	767.3	769.6
45°	806.6	767.3	714.2	688.7	658.7	640.2	610.2	580.1	559.3	566.2	559.3
47.5°	700.3	654.1	591.7	547.8	513.1	487.7	446.1	411.4	390.6	381.3	372.1
50°	607.8	561.6	490.0	434.5	399.8	369.8	328.2	288.9	263.5	249.6	242.7
52.5°	524.6	476.1	406.8	349.0	312.0	284.3	238.1	198.8	171.0	154.8	145.6
55°	446.1	402.1	337.4	284.3	249.6	221.9	175.6	138.7	113.2	97.1	85.5
57.5°	367.5	328.2	275.0	224.2	194.1	168.7	129.4	97.1	76.3	62.4	53.2
60°	282.0	251.9	208.0	168.7	143.3	122.5	92.4	67.0	53.2	41.6	37.0
62.5°	198.8	180.3	147.9	120.2	104.0	87.8	64.7	48.5	37.0	30.0	27.7
65°	134.0	120.2	101.7	80.9	69.3	60.1	46.2	34.7	27.7	23.1	20.8
67.5°	87.8	80.9	67.0	55.5	48.5	41.6	32.4	25.4	20.8	18.5	16.2
70°	57.8	53.2	43.9	37.0	34.7	30.0	23.1	18.5	16.2	13.9	13.9
72.5°	37.0	32.4	30.0	25.4	23.1	20.8	16.2	13.9	11.6	11.6	11.6
75°	23.1	20.8	18.5	16.2	16.2	13.9	11.6	11.6	9.2	9.2	9.2
77.5°	13.9	13.9	11.6	11.6	9.2	9.2	9.2	6.9	6.9	6.9	6.9
80°	9.2	9.2	6.9	6.9	6.9	6.9	4.6	4.6	4.6	4.6	4.6
82.5°	4.6	4.6	4.6	4.6	4.6	4.6	2.3	2.3	2.3	2.3	2.3
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6
2.5°	1763.4	1768.1	1763.4	1777.3	1754.2	1779.6	1770.4	1775.0	1793.5	1786.5	1793.5
5°	1798.1	1807.3	1807.3	1823.5	1802.7	1832.8	1823.5	1832.8	1851.3	1851.3	1860.5
7.5°	1842.0	1853.6	1858.2	1874.4	1853.6	1890.5	1881.3	1892.9	1916.0	1916.0	1922.9
10°	1888.2	1902.1	1911.3	1929.8	1906.7	1948.3	1939.1	1955.3	1976.1	1978.4	1989.9
12.5°	1946.0	1964.5	1976.1	1992.2	1976.1	2017.7	2008.4	2024.6	2052.3	2054.6	2068.5
15°	2010.7	2033.8	2047.7	2066.2	2047.7	2093.9	2084.7	2103.2	2124.0	2133.2	2147.1
17.5°	2052.3	2080.1	2091.6	2112.4	2093.9	2140.2	2128.6	2154.0	2172.5	2177.1	2193.3
20°	2059.3	2084.7	2100.9	2117.0	2100.9	2147.1	2135.5	2156.3	2179.4	2184.1	2195.6
22.5°	2029.2	2050.0	2068.5	2082.4	2068.5	2114.7	2098.6	2121.7	2142.5	2147.1	2156.3
25°	1959.9	1985.3	2003.8	2015.4	2001.5	2045.4	2031.5	2052.3	2070.8	2080.1	2082.4
27.5°	1862.8	1885.9	1904.4	1911.3	1902.1	1943.7	1925.2	1950.6	1966.8	1971.4	1978.4
30°	1731.1	1751.9	1770.4	1775.0	1768.1	1798.1	1788.9	1812.0	1828.1	1832.8	1837.4
32.5°	1569.3	1590.1	1601.6	1606.3	1599.3	1629.4	1620.1	1638.6	1657.1	1657.1	1657.1
35°	1386.7	1405.2	1412.1	1426.0	1409.8	1439.9	1430.6	1446.8	1463.0	1463.0	1465.3
37.5°	1190.3	1204.1	1208.7	1222.6	1206.4	1234.2	1227.2	1241.1	1255.0	1252.7	1257.3
40°	979.9	993.8	998.4	1010.0	996.1	1019.2	1014.6	1028.5	1040.0	1040.0	1040.0
42.5°	776.6	785.8	785.8	797.4	783.5	804.3	804.3	813.5	825.1	822.8	822.8
45°	563.9	561.6	566.2	563.9	563.9	582.4	582.4	587.0	596.3	591.7	594.0
47.5°	374.4	376.7	367.5	374.4	365.2	381.3	381.3	381.3	388.3	383.7	388.3
50°	238.1	231.1	226.5	226.5	224.2	235.7	231.1	233.4	238.1	233.4	238.1
52.5°	134.0	131.7	127.1	129.4	124.8	127.1	127.1	127.1	129.4	127.1	131.7
55°	78.6	71.6	69.3	69.3	67.0	69.3	67.0	67.0	67.0	64.7	67.0
57.5°	46.2	43.9	41.6	41.6	39.3	39.3	39.3	39.3	39.3	39.3	39.3
60°	32.4	30.0	30.0	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7
62.5°	25.4	23.1	23.1	23.1	20.8	20.8	20.8	20.8	20.8	23.1	20.8
65°	18.5	18.5	18.5	18.5	18.5	18.5	16.2	18.5	18.5	18.5	18.5
67.5°	16.2	16.2	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
70°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
72.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
75°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
77.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
80°	4.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
85°	0.0	2.3	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: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6
2.5°	1800.4	1791.2	1770.4	1784.2	1786.5	1777.3	1788.9	1802.7	1788.9	1777.3	1786.5
5°	1867.4	1860.5	1842.0	1853.6	1855.9	1853.6	1860.5	1872.1	1860.5	1853.6	1855.9
7.5°	1934.5	1929.8	1909.0	1922.9	1927.5	1922.9	1929.8	1941.4	1929.8	1922.9	1927.5
10°	1999.2	1996.9	1976.1	1994.6	1996.9	1992.2	1999.2	2017.7	1999.2	1992.2	1996.9
12.5°	2073.1	2077.8	2054.6	2075.4	2077.8	2073.1	2082.4	2096.2	2082.4	2073.1	2077.8
15°	2158.6	2156.3	2137.8	2154.0	2158.6	2154.0	2165.6	2184.1	2165.6	2154.0	2158.6
17.5°	2200.2	2200.2	2186.4	2202.6	2204.9	2204.9	2214.1	2228.0	2214.1	2204.9	2204.9
20°	2202.6	2204.9	2188.7	2207.2	2207.2	2207.2	2216.4	2223.4	2216.4	2207.2	2207.2
22.5°	2165.6	2167.9	2151.7	2167.9	2167.9	2170.2	2174.8	2179.4	2174.8	2170.2	2167.9
25°	2093.9	2096.2	2082.4	2096.2	2093.9	2093.9	2098.6	2105.5	2098.6	2093.9	2093.9
27.5°	1987.6	1989.9	1971.4	1987.6	1985.3	1983.0	1989.9	1992.2	1989.9	1983.0	1985.3
30°	1846.6	1848.9	1832.8	1846.6	1844.3	1842.0	1851.3	1853.6	1851.3	1842.0	1844.3
32.5°	1677.9	1673.3	1661.7	1673.3	1671.0	1671.0	1675.6	1682.5	1675.6	1671.0	1671.0
35°	1474.5	1474.5	1467.6	1476.8	1469.9	1479.2	1479.2	1481.5	1479.2	1479.2	1469.9
37.5°	1266.5	1266.5	1261.9	1266.5	1264.2	1273.5	1273.5	1280.4	1273.5	1273.5	1264.2
40°	1049.3	1049.3	1044.7	1049.3	1056.2	1056.2	1053.9	1063.1	1053.9	1056.2	1056.2
42.5°	829.7	829.7	827.4	839.0	839.0	839.0	832.0	841.3	832.0	839.0	839.0
45°	603.2	598.6	596.3	596.3	598.6	607.8	598.6	610.2	598.6	607.8	598.6
47.5°	383.7	386.0	388.3	395.2	390.6	388.3	388.3	395.2	388.3	388.3	390.6
50°	235.7	238.1	238.1	242.7	235.7	240.4	238.1	242.7	238.1	240.4	235.7
52.5°	129.4	129.4	129.4	134.0	129.4	131.7	129.4	134.0	129.4	131.7	129.4
55°	67.0	67.0	67.0	69.3	67.0	67.0	67.0	69.3	67.0	67.0	67.0
57.5°	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3
60°	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7
62.5°	23.1	20.8	20.8	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1
65°	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
67.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
70°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
72.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
75°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
77.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6
2.5°	1784.2	1770.4	1791.2	1800.4	1793.5	1786.5	1793.5	1775.0	1770.4	1779.6	1754.2
5°	1853.6	1842.0	1860.5	1867.4	1860.5	1851.3	1851.3	1832.8	1823.5	1832.8	1802.7
7.5°	1922.9	1909.0	1929.8	1934.5	1922.9	1916.0	1916.0	1892.9	1881.3	1890.5	1853.6
10°	1994.6	1976.1	1996.9	1999.2	1989.9	1978.4	1976.1	1955.3	1939.1	1948.3	1906.7
12.5°	2075.4	2054.6	2077.8	2073.1	2068.5	2054.6	2052.3	2024.6	2008.4	2017.7	1976.1
15°	2154.0	2137.8	2156.3	2158.6	2147.1	2133.2	2124.0	2103.2	2084.7	2093.9	2047.7
17.5°	2202.6	2186.4	2200.2	2200.2	2193.3	2177.1	2172.5	2154.0	2128.6	2140.2	2093.9
20°	2207.2	2188.7	2204.9	2202.6	2195.6	2184.1	2179.4	2156.3	2135.5	2147.1	2100.9
22.5°	2167.9	2151.7	2167.9	2165.6	2156.3	2147.1	2142.5	2121.7	2098.6	2114.7	2068.5
25°	2096.2	2082.4	2096.2	2093.9	2082.4	2080.1	2070.8	2052.3	2031.5	2045.4	2001.5
27.5°	1987.6	1971.4	1989.9	1987.6	1978.4	1971.4	1966.8	1950.6	1925.2	1943.7	1902.1
30°	1846.6	1832.8	1848.9	1846.6	1837.4	1832.8	1828.1	1812.0	1788.9	1798.1	1768.1
32.5°	1673.3	1661.7	1673.3	1677.9	1657.1	1657.1	1657.1	1638.6	1620.1	1629.4	1599.3
35°	1476.8	1467.6	1474.5	1474.5	1465.3	1463.0	1463.0	1446.8	1430.6	1439.9	1409.8
37.5°	1266.5	1261.9	1266.5	1266.5	1257.3	1252.7	1255.0	1241.1	1227.2	1234.2	1206.4
40°	1049.3	1044.7	1049.3	1049.3	1040.0	1040.0	1040.0	1028.5	1014.6	1019.2	996.1
42.5°	839.0	827.4	829.7	829.7	822.8	822.8	825.1	813.5	804.3	804.3	783.5
45°	596.3	596.3	598.6	603.2	594.0	591.7	596.3	587.0	582.4	582.4	563.9
47.5°	395.2	388.3	386.0	383.7	388.3	383.7	388.3	381.3	381.3	381.3	365.2
50°	242.7	238.1	238.1	235.7	238.1	233.4	238.1	233.4	231.1	235.7	224.2
52.5°	134.0	129.4	129.4	129.4	131.7	127.1	129.4	127.1	127.1	127.1	124.8
55°	69.3	67.0	67.0	67.0	67.0	64.7	67.0	67.0	67.0	69.3	67.0
57.5°	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3
60°	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7
62.5°	23.1	20.8	20.8	23.1	20.8	23.1	20.8	20.8	20.8	20.8	20.8
65°	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	16.2	18.5	18.5
67.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
70°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
72.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
75°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
77.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6
2.5°	1777.3	1763.4	1768.1	1763.4	1751.9	1754.2	1747.3	1747.3	1733.4	1731.1	1733.4
5°	1823.5	1807.3	1807.3	1798.1	1781.9	1779.6	1765.7	1765.7	1744.9	1738.0	1738.0
7.5°	1874.4	1858.2	1853.6	1842.0	1821.2	1812.0	1793.5	1786.5	1761.1	1749.6	1747.3
10°	1929.8	1911.3	1902.1	1888.2	1862.8	1846.6	1821.2	1812.0	1781.9	1758.8	1756.5
12.5°	1992.2	1976.1	1964.5	1946.0	1918.3	1895.2	1865.1	1848.9	1809.7	1784.2	1772.7
15°	2066.2	2047.7	2033.8	2010.7	1980.7	1952.9	1913.7	1895.2	1848.9	1814.3	1798.1
17.5°	2112.4	2091.6	2080.1	2052.3	2022.3	1989.9	1946.0	1922.9	1869.7	1825.8	1809.7
20°	2117.0	2100.9	2084.7	2059.3	2029.2	1992.2	1946.0	1922.9	1867.4	1823.5	1800.4
22.5°	2082.4	2068.5	2050.0	2029.2	1996.9	1959.9	1916.0	1895.2	1842.0	1795.8	1770.4
25°	2015.4	2003.8	1985.3	1959.9	1936.8	1897.5	1855.9	1842.0	1786.5	1747.3	1724.1
27.5°	1911.3	1904.4	1885.9	1862.8	1844.3	1812.0	1770.4	1758.8	1710.3	1675.6	1657.1
30°	1775.0	1770.4	1751.9	1731.1	1717.2	1687.2	1650.2	1645.6	1601.6	1576.2	1557.7
32.5°	1606.3	1601.6	1590.1	1569.3	1557.7	1532.3	1497.6	1502.3	1465.3	1444.5	1437.6
35°	1426.0	1412.1	1405.2	1386.7	1372.8	1354.4	1324.3	1331.2	1310.4	1294.3	1292.0
37.5°	1222.6	1208.7	1204.1	1190.3	1178.7	1162.5	1139.4	1148.7	1139.4	1132.5	1139.4
40°	1010.0	998.4	993.8	979.9	975.3	963.8	947.6	970.7	959.1	973.0	975.3
42.5°	797.4	785.8	785.8	776.6	769.6	767.3	755.8	785.8	785.8	808.9	820.5
45°	563.9	566.2	561.6	563.9	559.3	566.2	559.3	580.1	610.2	640.2	658.7
47.5°	374.4	367.5	376.7	374.4	372.1	381.3	390.6	411.4	446.1	487.7	513.1
50°	226.5	226.5	231.1	238.1	242.7	249.6	263.5	288.9	328.2	369.8	399.8
52.5°	129.4	127.1	131.7	134.0	145.6	154.8	171.0	198.8	238.1	284.3	312.0
55°	69.3	69.3	71.6	78.6	85.5	97.1	113.2	138.7	175.6	221.9	249.6
57.5°	41.6	41.6	43.9	46.2	53.2	62.4	76.3	97.1	129.4	168.7	194.1
60°	27.7	30.0	30.0	32.4	37.0	41.6	53.2	67.0	92.4	122.5	143.3
62.5°	23.1	23.1	23.1	25.4	27.7	30.0	37.0	48.5	64.7	87.8	104.0
65°	18.5	18.5	18.5	18.5	20.8	23.1	27.7	34.7	46.2	60.1	69.3
67.5°	13.9	13.9	16.2	16.2	16.2	18.5	20.8	25.4	32.4	41.6	48.5
70°	11.6	11.6	11.6	11.6	13.9	13.9	16.2	18.5	23.1	30.0	34.7
72.5°	9.2	9.2	9.2	9.2	11.6	11.6	11.6	13.9	16.2	20.8	23.1
75°	6.9	6.9	6.9	6.9	9.2	9.2	9.2	11.6	11.6	13.9	16.2
77.5°	4.6	4.6	4.6	4.6	6.9	6.9	6.9	6.9	9.2	9.2	9.2
80°	2.3	2.3	2.3	4.6	4.6	4.6	4.6	4.6	4.6	6.9	6.9
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	4.6	4.6
85°	0.0	0.0	2.3	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6	1749.6
2.5°	1717.2	1747.3	1712.6	1719.5	1708.0	1728.8	1701.0	1708.0	1712.6	1708.0	1710.3
5°	1719.5	1742.6	1703.3	1710.3	1691.8	1705.7	1680.2	1682.5	1682.5	1677.9	1675.6
7.5°	1726.5	1740.3	1698.7	1696.4	1673.3	1687.2	1657.1	1652.5	1650.2	1643.3	1645.6
10°	1728.8	1733.4	1689.5	1680.2	1652.5	1657.1	1627.1	1617.8	1610.9	1606.3	1604.0
12.5°	1744.9	1740.3	1689.5	1673.3	1638.6	1636.3	1604.0	1590.1	1578.5	1573.9	1571.6
15°	1765.7	1749.6	1694.1	1671.0	1631.7	1622.5	1587.8	1573.9	1557.7	1553.1	1548.5
17.5°	1775.0	1749.6	1689.5	1659.4	1615.5	1604.0	1569.3	1550.8	1534.6	1527.7	1523.1
20°	1763.4	1731.1	1671.0	1638.6	1592.4	1576.2	1541.6	1520.8	1504.6	1497.6	1493.0
22.5°	1738.0	1701.0	1643.3	1610.9	1564.7	1543.9	1513.8	1495.3	1476.8	1474.5	1467.6
25°	1694.1	1657.1	1608.6	1576.2	1534.6	1513.8	1486.1	1469.9	1451.4	1449.1	1446.8
27.5°	1629.4	1594.7	1557.7	1527.7	1490.7	1474.5	1453.7	1437.6	1421.4	1421.4	1416.8
30°	1536.9	1513.8	1481.5	1463.0	1432.9	1416.8	1402.9	1391.3	1375.2	1377.5	1372.8
32.5°	1419.1	1407.5	1384.4	1375.2	1352.0	1347.4	1333.6	1324.3	1310.4	1315.1	1310.4
35°	1287.3	1273.5	1273.5	1268.8	1257.3	1255.0	1248.0	1243.4	1234.2	1236.5	1236.5
37.5°	1137.1	1137.1	1151.0	1153.3	1151.0	1155.6	1153.3	1153.3	1144.0	1148.7	1146.3
40°	982.3	996.1	1021.5	1035.4	1040.0	1049.3	1060.8	1056.2	1051.6	1058.5	1056.2
42.5°	832.0	859.8	899.1	922.2	938.3	952.2	968.4	968.4	966.1	975.3	973.0
45°	688.7	714.2	767.3	806.6	834.3	855.1	873.6	880.6	882.9	892.1	889.8
47.5°	547.8	591.7	654.1	700.3	735.0	760.4	785.8	795.0	802.0	813.5	813.5
50°	434.5	490.0	561.6	607.8	649.4	677.2	702.6	716.5	725.7	735.0	735.0
52.5°	349.0	406.8	476.1	524.6	563.9	594.0	619.4	635.6	642.5	654.1	654.1
55°	284.3	337.4	402.1	446.1	485.3	513.1	533.9	547.8	554.7	563.9	563.9
57.5°	224.2	275.0	328.2	367.5	399.8	420.6	439.1	443.7	446.1	453.0	455.3
60°	168.7	208.0	251.9	282.0	305.1	318.9	332.8	330.5	328.2	332.8	328.2
62.5°	120.2	147.9	180.3	198.8	217.3	224.2	231.1	226.5	221.9	224.2	224.2
65°	80.9	101.7	120.2	134.0	143.3	147.9	150.2	147.9	145.6	147.9	145.6
67.5°	55.5	67.0	80.9	87.8	94.8	97.1	99.4	97.1	97.1	97.1	94.8
70°	37.0	43.9	53.2	57.8	60.1	62.4	64.7	62.4	62.4	62.4	62.4
72.5°	25.4	30.0	32.4	37.0	39.3	39.3	39.3	39.3	39.3	39.3	39.3
75°	16.2	18.5	20.8	23.1	25.4	25.4	25.4	25.4	25.4	25.4	25.4
77.5°	11.6	11.6	13.9	13.9	16.2	16.2	16.2	16.2	16.2	16.2	16.2
80°	6.9	6.9	9.2	9.2	9.2	9.2	11.6	9.2	11.6	11.6	11.6
82.5°	4.6	4.6	4.6	4.6	6.9	6.9	6.9	6.9	6.9	6.9	6.9
85°	2.3	2.3	2.3	2.3	2.3	2.3	4.6	2.3	4.6	4.6	4.6
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: P212752

CATALOG NUMBER: LD4B40D010 EU4B30509035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1749.6	1749.6	1749.6	1749.6
2.5°	1710.3	1705.7	1691.8	1708.0
5°	1673.3	1668.7	1657.1	1668.7
7.5°	1636.3	1629.4	1620.1	1627.1
10°	1592.4	1587.8	1576.2	1583.2
12.5°	1560.0	1550.8	1543.9	1546.2
15°	1539.2	1530.0	1523.1	1525.4
17.5°	1511.5	1502.3	1495.3	1495.3
20°	1481.5	1472.2	1467.6	1465.3
22.5°	1456.0	1449.1	1446.8	1439.9
25°	1432.9	1428.3	1428.3	1419.1
27.5°	1407.5	1400.6	1400.6	1391.3
30°	1363.6	1361.3	1361.3	1354.4
32.5°	1305.8	1298.9	1303.5	1292.0
35°	1227.2	1222.6	1229.5	1220.3
37.5°	1141.7	1139.4	1144.0	1137.1
40°	1051.6	1051.6	1058.5	1047.0
42.5°	973.0	973.0	979.9	968.4
45°	887.5	894.4	901.4	892.1
47.5°	813.5	818.2	827.4	818.2
50°	739.6	744.2	751.1	741.9
52.5°	658.7	663.3	670.2	663.3
55°	566.2	570.9	577.8	573.2
57.5°	455.3	450.7	462.2	453.0
60°	330.5	321.3	323.6	323.6
62.5°	219.6	214.9	219.6	212.6
65°	145.6	143.3	143.3	143.3
67.5°	97.1	94.8	97.1	94.8
70°	62.4	62.4	62.4	62.4
72.5°	39.3	39.3	39.3	39.3
75°	25.4	25.4	25.4	25.4
77.5°	16.2	16.2	16.2	16.2
80°	11.6	11.6	11.6	11.6
82.5°	6.9	6.9	6.9	6.9
85°	4.6	4.6	4.6	4.6
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)