

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: P212751

Luminaire Tested: **LD4B40D010 EU4B30509030 4LBSWLI1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212751  
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 EU4B30509030 4LBSWLI1  
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3168.3 lumens  
Efficiency: N/A  
Efficacy: 73.6 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

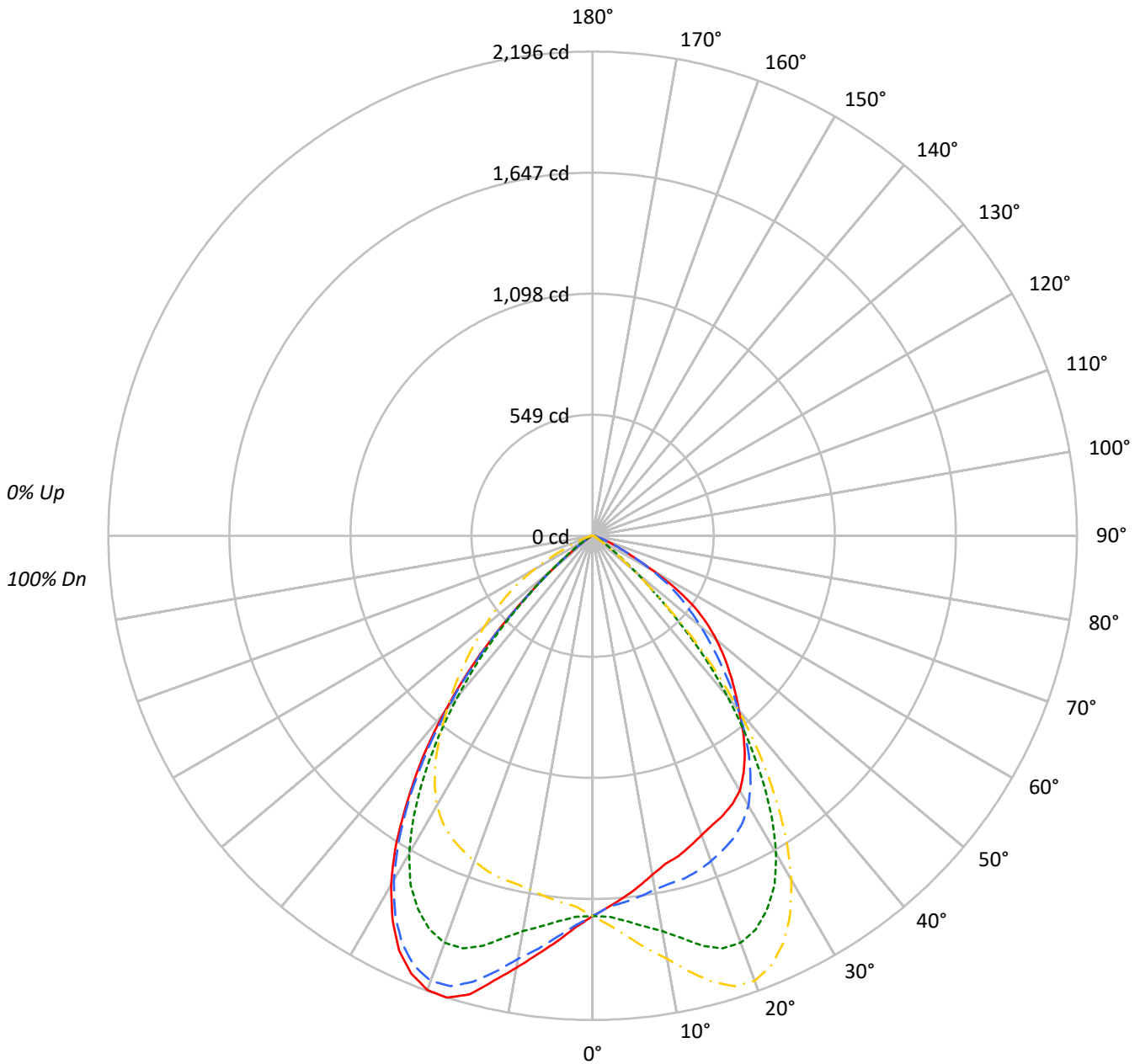
Input Watts (W): 43.02  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	212747	212747	212747	212747
5°	203691	217237	228516	217237
10°	195488	228015	249144	228015
15°	192030	245867	274957	245867
20°	189621	257811	287712	257811
25°	190399	254596	282496	254596
30°	190169	236899	260272	236899
35°	181159	201051	219918	201051
40°	166201	152982	168761	152982
45°	153417	97371	104924	97371
50°	140350	47225	45901	47225
55°	121523	20580	14709	20580
60°	78695	10114	6735	10114
65°	41240	6654	5312	6654
70°	22179	4941	4111	4941
75°	11962	4337	3241	4337
80°	8098	3267	1634	3267
85°	6510	3255	0	3255



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.1	5.3
10°-20°	526.0	16.6
20°-30°	817.8	25.8
30°-40°	826.0	26.1
40°-50°	523.0	16.5
50°-60°	219.5	6.9
60°-70°	69.6	2.2
70°-80°	15.9	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°	1512.0	47.7
0°-40°	2338.0	73.8
0°-60°	3080.6	97.2
0°-90°	3168.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3168.3	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1725	1725	1725	1725	1725	
5°	1645	1754	1846	1754	1645	155
15°	1504	1925	2153	1925	1504	424
25°	1399	1871	2076	1871	1399	644
35°	1203	1335	1460	1335	1203	747
45°	880	558	602	558	880	679
55°	565	96	68	96	565	488
65°	141	23	18	23	141	156
75°	25	9	7	9	25	31
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°	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8
2.5°	1683.8	1667.9	1681.6	1686.1	1686.1	1683.8	1688.4	1683.8	1677.0	1704.3	1683.8
5°	1645.1	1633.7	1645.1	1649.7	1651.9	1654.2	1658.8	1658.8	1656.5	1681.6	1667.9
7.5°	1604.1	1597.3	1606.4	1613.2	1622.3	1620.0	1626.9	1629.2	1633.7	1663.3	1649.7
10°	1560.8	1554.0	1565.4	1569.9	1581.3	1583.6	1588.1	1595.0	1604.1	1633.7	1629.2
12.5°	1524.3	1522.1	1528.9	1538.0	1549.4	1551.7	1556.2	1567.6	1581.3	1613.2	1615.5
15°	1503.8	1501.6	1508.4	1517.5	1526.6	1531.2	1535.7	1551.7	1565.4	1599.5	1608.6
17.5°	1474.2	1474.2	1481.0	1490.2	1501.6	1506.1	1512.9	1528.9	1547.1	1581.3	1592.7
20°	1444.6	1446.9	1451.4	1460.5	1471.9	1476.5	1483.3	1499.3	1519.8	1554.0	1569.9
22.5°	1419.5	1426.4	1428.6	1435.5	1446.9	1453.7	1456.0	1474.2	1492.4	1522.1	1542.6
25°	1399.0	1408.1	1408.1	1412.7	1426.4	1428.6	1430.9	1449.1	1465.1	1492.4	1512.9
27.5°	1371.7	1380.8	1380.8	1387.6	1396.7	1401.3	1401.3	1417.2	1433.2	1453.7	1469.7
30°	1335.2	1342.1	1342.1	1344.3	1353.4	1358.0	1355.7	1371.7	1383.1	1396.7	1412.7
32.5°	1273.7	1285.1	1280.5	1287.4	1291.9	1296.5	1291.9	1305.6	1314.7	1328.4	1332.9
35°	1203.1	1212.2	1205.3	1209.9	1219.0	1219.0	1216.7	1225.9	1230.4	1237.2	1239.5
37.5°	1121.0	1127.9	1123.3	1125.6	1130.2	1132.4	1127.9	1137.0	1137.0	1139.3	1134.7
40°	1032.2	1043.6	1036.7	1036.7	1041.3	1043.6	1036.7	1041.3	1045.8	1034.5	1025.3
42.5°	954.7	966.1	959.3	959.3	959.3	961.5	952.4	954.7	954.7	938.8	925.1
45°	879.5	888.6	881.8	875.0	877.2	879.5	870.4	868.1	861.3	843.1	822.6
47.5°	806.6	815.7	806.6	802.0	802.0	802.0	790.7	783.8	774.7	749.6	724.6
50°	731.4	740.5	733.7	729.1	724.6	724.6	715.5	706.3	692.7	667.6	640.3
52.5°	653.9	660.8	653.9	649.4	644.8	644.8	633.4	626.6	610.6	585.6	556.0
55°	565.1	569.6	562.8	558.2	556.0	556.0	546.8	540.0	526.3	505.8	478.5
57.5°	446.6	455.7	444.3	448.9	448.9	446.6	439.8	437.5	432.9	414.7	394.2
60°	319.0	319.0	316.7	325.8	323.6	328.1	323.6	325.8	328.1	314.4	300.8
62.5°	209.6	216.5	211.9	216.5	221.0	221.0	218.7	223.3	227.9	221.0	214.2
65°	141.3	141.3	141.3	143.5	143.5	145.8	143.5	145.8	148.1	145.8	141.3
67.5°	93.4	95.7	93.4	95.7	93.4	95.7	95.7	95.7	98.0	95.7	93.4
70°	61.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5	63.8	61.5	59.2
72.5°	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
75°	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
77.5°	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
80°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	9.1	11.4	9.1	9.1
82.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8
2.5°	1695.2	1688.4	1722.6	1692.9	1708.9	1706.6	1708.9	1722.6	1722.6	1729.4	1727.1
5°	1686.1	1679.3	1718.0	1695.2	1713.5	1713.5	1720.3	1740.8	1740.8	1754.5	1756.7
7.5°	1672.4	1674.7	1715.7	1702.1	1722.6	1724.8	1736.2	1761.3	1768.1	1786.4	1795.5
10°	1656.5	1665.6	1708.9	1704.3	1731.7	1734.0	1756.7	1786.4	1795.5	1820.5	1836.5
12.5°	1649.7	1665.6	1715.7	1720.3	1747.6	1759.0	1784.1	1822.8	1838.8	1868.4	1891.2
15°	1647.4	1670.2	1724.8	1740.8	1772.7	1788.6	1822.8	1868.4	1886.6	1925.4	1952.7
17.5°	1636.0	1665.6	1724.8	1749.9	1784.1	1800.0	1843.3	1895.7	1918.5	1961.8	1993.7
20°	1615.5	1647.4	1706.6	1738.5	1775.0	1797.8	1841.1	1895.7	1918.5	1964.1	2000.6
22.5°	1588.1	1620.0	1677.0	1713.5	1745.4	1770.4	1816.0	1868.4	1888.9	1932.2	1968.7
25°	1554.0	1585.9	1633.7	1670.2	1699.8	1722.6	1761.3	1816.0	1829.7	1870.7	1909.4
27.5°	1506.1	1535.7	1572.2	1606.4	1633.7	1651.9	1686.1	1734.0	1745.4	1786.4	1818.3
30°	1442.3	1460.5	1492.4	1515.2	1535.7	1554.0	1579.0	1622.3	1626.9	1663.3	1692.9
32.5°	1355.7	1364.8	1387.6	1399.0	1417.2	1424.1	1444.6	1481.0	1476.5	1510.7	1535.7
35°	1250.9	1255.5	1255.5	1269.1	1273.7	1276.0	1291.9	1312.4	1305.6	1335.2	1353.4
37.5°	1137.0	1134.7	1121.0	1121.0	1123.3	1116.5	1123.3	1132.4	1123.3	1146.1	1162.1
40°	1020.8	1007.1	982.0	968.4	961.5	959.3	945.6	957.0	934.2	950.1	961.5
42.5°	909.1	886.3	847.6	820.3	808.9	797.5	774.7	774.7	745.1	756.5	758.8
45°	795.2	756.5	704.1	679.0	649.4	631.2	601.5	571.9	551.4	558.2	551.4
47.5°	690.4	644.8	583.3	540.0	505.8	480.8	439.8	405.6	385.1	376.0	366.8
50°	599.3	553.7	483.0	428.4	394.2	364.6	323.6	284.8	259.8	246.1	239.2
52.5°	517.2	469.4	401.0	344.1	307.6	280.3	234.7	196.0	168.6	152.7	143.5
55°	439.8	396.5	332.7	280.3	246.1	218.7	173.2	136.7	111.6	95.7	84.3
57.5°	362.3	323.6	271.1	221.0	191.4	166.3	127.6	95.7	75.2	61.5	52.4
60°	278.0	248.4	205.1	166.3	141.3	120.8	91.1	66.1	52.4	41.0	36.5
62.5°	196.0	177.7	145.8	118.5	102.5	86.6	63.8	47.8	36.5	29.6	27.3
65°	132.2	118.5	100.3	79.7	68.4	59.2	45.6	34.2	27.3	22.8	20.5
67.5°	86.6	79.7	66.1	54.7	47.8	41.0	31.9	25.1	20.5	18.2	15.9
70°	57.0	52.4	43.3	36.5	34.2	29.6	22.8	18.2	15.9	13.7	13.7
72.5°	36.5	31.9	29.6	25.1	22.8	20.5	15.9	13.7	11.4	11.4	11.4
75°	22.8	20.5	18.2	15.9	15.9	13.7	11.4	11.4	9.1	9.1	9.1
77.5°	13.7	13.7	11.4	11.4	9.1	9.1	9.1	6.8	6.8	6.8	6.8
80°	9.1	9.1	6.8	6.8	6.8	6.8	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8
2.5°	1738.5	1743.1	1738.5	1752.2	1729.4	1754.5	1745.4	1749.9	1768.1	1761.3	1768.1
5°	1772.7	1781.8	1781.8	1797.8	1777.3	1806.9	1797.8	1806.9	1825.1	1825.1	1834.2
7.5°	1816.0	1827.4	1831.9	1847.9	1827.4	1863.8	1854.7	1866.1	1888.9	1888.9	1895.7
10°	1861.6	1875.2	1884.3	1902.6	1879.8	1920.8	1911.7	1927.6	1948.1	1950.4	1961.8
12.5°	1918.5	1936.8	1948.1	1964.1	1948.1	1989.2	1980.0	1996.0	2023.3	2025.6	2039.3
15°	1982.3	2005.1	2018.8	2037.0	2018.8	2064.4	2055.2	2073.5	2094.0	2103.1	2116.8
17.5°	2023.3	2050.7	2062.1	2082.6	2064.4	2109.9	2098.5	2123.6	2141.8	2146.4	2162.3
20°	2030.2	2055.2	2071.2	2087.1	2071.2	2116.8	2105.4	2125.9	2148.7	2153.2	2164.6
22.5°	2000.6	2021.1	2039.3	2053.0	2039.3	2084.9	2068.9	2091.7	2112.2	2116.8	2125.9
25°	1932.2	1957.3	1975.5	1986.9	1973.2	2016.5	2002.8	2023.3	2041.6	2050.7	2053.0
27.5°	1836.5	1859.3	1877.5	1884.3	1875.2	1916.2	1898.0	1923.1	1939.0	1943.6	1950.4
30°	1706.6	1727.1	1745.4	1749.9	1743.1	1772.7	1763.6	1786.4	1802.3	1806.9	1811.4
32.5°	1547.1	1567.6	1579.0	1583.6	1576.7	1606.4	1597.3	1615.5	1633.7	1633.7	1633.7
35°	1367.1	1385.3	1392.2	1405.9	1389.9	1419.5	1410.4	1426.4	1442.3	1442.3	1444.6
37.5°	1173.4	1187.1	1191.7	1205.3	1189.4	1216.7	1209.9	1223.6	1237.2	1235.0	1239.5
40°	966.1	979.8	984.3	995.7	982.0	1004.8	1000.3	1013.9	1025.3	1025.3	1025.3
42.5°	765.6	774.7	774.7	786.1	772.4	792.9	792.9	802.0	813.4	811.2	811.2
45°	556.0	553.7	558.2	556.0	556.0	574.2	574.2	578.7	587.9	583.3	585.6
47.5°	369.1	371.4	362.3	369.1	360.0	376.0	376.0	376.0	382.8	378.2	382.8
50°	234.7	227.9	223.3	223.3	221.0	232.4	227.9	230.1	234.7	230.1	234.7
52.5°	132.2	129.9	125.3	127.6	123.0	125.3	125.3	125.3	127.6	125.3	129.9
55°	77.5	70.6	68.4	68.4	66.1	68.4	66.1	66.1	66.1	63.8	66.1
57.5°	45.6	43.3	41.0	41.0	38.7	38.7	38.7	38.7	38.7	38.7	38.7
60°	31.9	29.6	29.6	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
62.5°	25.1	22.8	22.8	22.8	20.5	20.5	20.5	20.5	20.5	22.8	20.5
65°	18.2	18.2	18.2	18.2	18.2	18.2	15.9	18.2	18.2	18.2	18.2
67.5°	15.9	15.9	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
70°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
72.5°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
75°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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: P212751

CATALOG NUMBER: LD4B40D010 EU4B30509030 4LBSWLI1

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8
2.5°	1775.0	1765.9	1745.4	1759.0	1761.3	1752.2	1763.6	1777.3	1763.6	1752.2	1761.3
5°	1841.1	1834.2	1816.0	1827.4	1829.7	1827.4	1834.2	1845.6	1834.2	1827.4	1829.7
7.5°	1907.1	1902.6	1882.1	1895.7	1900.3	1895.7	1902.6	1914.0	1902.6	1895.7	1900.3
10°	1970.9	1968.7	1948.1	1966.4	1968.7	1964.1	1970.9	1989.2	1970.9	1964.1	1968.7
12.5°	2043.8	2048.4	2025.6	2046.1	2048.4	2043.8	2053.0	2066.6	2053.0	2043.8	2048.4
15°	2128.1	2125.9	2107.6	2123.6	2128.1	2123.6	2135.0	2153.2	2135.0	2123.6	2128.1
17.5°	2169.2	2169.2	2155.5	2171.4	2173.7	2173.7	2182.8	2196.5	2182.8	2173.7	2173.7
20°	2171.4	2173.7	2157.8	2176.0	2176.0	2176.0	2185.1	2191.9	2185.1	2176.0	2176.0
22.5°	2135.0	2137.3	2121.3	2137.3	2137.3	2139.5	2144.1	2148.7	2144.1	2139.5	2137.3
25°	2064.4	2066.6	2053.0	2066.6	2064.4	2064.4	2068.9	2075.7	2068.9	2064.4	2064.4
27.5°	1959.5	1961.8	1943.6	1959.5	1957.3	1955.0	1961.8	1964.1	1961.8	1955.0	1957.3
30°	1820.5	1822.8	1806.9	1820.5	1818.3	1816.0	1825.1	1827.4	1825.1	1816.0	1818.3
32.5°	1654.2	1649.7	1638.3	1649.7	1647.4	1647.4	1651.9	1658.8	1651.9	1647.4	1647.4
35°	1453.7	1453.7	1446.9	1456.0	1449.1	1458.3	1458.3	1460.5	1458.3	1458.3	1449.1
37.5°	1248.6	1248.6	1244.1	1248.6	1246.4	1255.5	1255.5	1262.3	1255.5	1255.5	1246.4
40°	1034.5	1034.5	1029.9	1034.5	1041.3	1041.3	1039.0	1048.1	1039.0	1041.3	1041.3
42.5°	818.0	818.0	815.7	827.1	827.1	827.1	820.3	829.4	820.3	827.1	827.1
45°	594.7	590.1	587.9	587.9	590.1	599.3	590.1	601.5	590.1	599.3	590.1
47.5°	378.2	380.5	382.8	389.6	385.1	382.8	382.8	389.6	382.8	382.8	385.1
50°	232.4	234.7	234.7	239.2	232.4	237.0	234.7	239.2	234.7	237.0	232.4
52.5°	127.6	127.6	127.6	132.2	127.6	129.9	127.6	132.2	127.6	129.9	127.6
55°	66.1	66.1	66.1	68.4	66.1	66.1	66.1	68.4	66.1	66.1	66.1
57.5°	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
60°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
62.5°	22.8	20.5	20.5	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
65°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
67.5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
70°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
72.5°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
75°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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: P212751

CATALOG NUMBER: LD4B40D010 EU4B30509030 4LBSWLI1

**CANDELA DISTRIBUTION (continued):**

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8
2.5°	1759.0	1745.4	1765.9	1775.0	1768.1	1761.3	1768.1	1749.9	1745.4	1754.5	1729.4
5°	1827.4	1816.0	1834.2	1841.1	1834.2	1825.1	1825.1	1806.9	1797.8	1806.9	1777.3
7.5°	1895.7	1882.1	1902.6	1907.1	1895.7	1888.9	1888.9	1866.1	1854.7	1863.8	1827.4
10°	1966.4	1948.1	1968.7	1970.9	1961.8	1950.4	1948.1	1927.6	1911.7	1920.8	1879.8
12.5°	2046.1	2025.6	2048.4	2043.8	2039.3	2025.6	2023.3	1996.0	1980.0	1989.2	1948.1
15°	2123.6	2107.6	2125.9	2128.1	2116.8	2103.1	2094.0	2073.5	2055.2	2064.4	2018.8
17.5°	2171.4	2155.5	2169.2	2169.2	2162.3	2146.4	2141.8	2123.6	2098.5	2109.9	2064.4
20°	2176.0	2157.8	2173.7	2171.4	2164.6	2153.2	2148.7	2125.9	2105.4	2116.8	2071.2
22.5°	2137.3	2121.3	2137.3	2135.0	2125.9	2116.8	2112.2	2091.7	2068.9	2084.9	2039.3
25°	2066.6	2053.0	2066.6	2064.4	2053.0	2050.7	2041.6	2023.3	2002.8	2016.5	1973.2
27.5°	1959.5	1943.6	1961.8	1959.5	1950.4	1943.6	1939.0	1923.1	1898.0	1916.2	1875.2
30°	1820.5	1806.9	1822.8	1820.5	1811.4	1806.9	1802.3	1786.4	1763.6	1772.7	1743.1
32.5°	1649.7	1638.3	1649.7	1654.2	1633.7	1633.7	1633.7	1615.5	1597.3	1606.4	1576.7
35°	1456.0	1446.9	1453.7	1453.7	1444.6	1442.3	1442.3	1426.4	1410.4	1419.5	1389.9
37.5°	1248.6	1244.1	1248.6	1248.6	1239.5	1235.0	1237.2	1223.6	1209.9	1216.7	1189.4
40°	1034.5	1029.9	1034.5	1034.5	1025.3	1025.3	1025.3	1013.9	1000.3	1004.8	982.0
42.5°	827.1	815.7	818.0	818.0	811.2	811.2	813.4	802.0	792.9	792.9	772.4
45°	587.9	587.9	590.1	594.7	585.6	583.3	587.9	578.7	574.2	574.2	556.0
47.5°	389.6	382.8	380.5	378.2	382.8	378.2	382.8	376.0	376.0	376.0	360.0
50°	239.2	234.7	234.7	232.4	234.7	230.1	234.7	230.1	227.9	232.4	221.0
52.5°	132.2	127.6	127.6	127.6	129.9	125.3	127.6	125.3	125.3	125.3	123.0
55°	68.4	66.1	66.1	66.1	66.1	63.8	66.1	66.1	66.1	68.4	66.1
57.5°	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
60°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
62.5°	22.8	20.5	20.5	22.8	20.5	22.8	20.5	20.5	20.5	20.5	20.5
65°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	15.9	18.2	18.2
67.5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
70°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
72.5°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
75°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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: P212751

CATALOG NUMBER: LD4B40D010 EU4B30509030 4LBSWLI1

**CANDELA DISTRIBUTION (continued):**

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8
2.5°	1752.2	1738.5	1743.1	1738.5	1727.1	1729.4	1722.6	1722.6	1708.9	1706.6	1708.9
5°	1797.8	1781.8	1781.8	1772.7	1756.7	1754.5	1740.8	1740.8	1720.3	1713.5	1713.5
7.5°	1847.9	1831.9	1827.4	1816.0	1795.5	1786.4	1768.1	1761.3	1736.2	1724.8	1722.6
10°	1902.6	1884.3	1875.2	1861.6	1836.5	1820.5	1795.5	1786.4	1756.7	1734.0	1731.7
12.5°	1964.1	1948.1	1936.8	1918.5	1891.2	1868.4	1838.8	1822.8	1784.1	1759.0	1747.6
15°	2037.0	2018.8	2005.1	1982.3	1952.7	1925.4	1886.6	1868.4	1822.8	1788.6	1772.7
17.5°	2082.6	2062.1	2050.7	2023.3	1993.7	1961.8	1918.5	1895.7	1843.3	1800.0	1784.1
20°	2087.1	2071.2	2055.2	2030.2	2000.6	1964.1	1918.5	1895.7	1841.1	1797.8	1775.0
22.5°	2053.0	2039.3	2021.1	2000.6	1968.7	1932.2	1888.9	1868.4	1816.0	1770.4	1745.4
25°	1986.9	1975.5	1957.3	1932.2	1909.4	1870.7	1829.7	1816.0	1761.3	1722.6	1699.8
27.5°	1884.3	1877.5	1859.3	1836.5	1818.3	1786.4	1745.4	1734.0	1686.1	1651.9	1633.7
30°	1749.9	1745.4	1727.1	1706.6	1692.9	1663.3	1626.9	1622.3	1579.0	1554.0	1535.7
32.5°	1583.6	1579.0	1567.6	1547.1	1535.7	1510.7	1476.5	1481.0	1444.6	1424.1	1417.2
35°	1405.9	1392.2	1385.3	1367.1	1353.4	1335.2	1305.6	1312.4	1291.9	1276.0	1273.7
37.5°	1205.3	1191.7	1187.1	1173.4	1162.1	1146.1	1123.3	1132.4	1123.3	1116.5	1123.3
40°	995.7	984.3	979.8	966.1	961.5	950.1	934.2	957.0	945.6	959.3	961.5
42.5°	786.1	774.7	774.7	765.6	758.8	756.5	745.1	774.7	774.7	797.5	808.9
45°	556.0	558.2	553.7	556.0	551.4	558.2	551.4	571.9	601.5	631.2	649.4
47.5°	369.1	362.3	371.4	369.1	366.8	376.0	385.1	405.6	439.8	480.8	505.8
50°	223.3	223.3	227.9	234.7	239.2	246.1	259.8	284.8	323.6	364.6	394.2
52.5°	127.6	125.3	129.9	132.2	143.5	152.7	168.6	196.0	234.7	280.3	307.6
55°	68.4	68.4	70.6	77.5	84.3	95.7	111.6	136.7	173.2	218.7	246.1
57.5°	41.0	41.0	43.3	45.6	52.4	61.5	75.2	95.7	127.6	166.3	191.4
60°	27.3	29.6	29.6	31.9	36.5	41.0	52.4	66.1	91.1	120.8	141.3
62.5°	22.8	22.8	22.8	25.1	27.3	29.6	36.5	47.8	63.8	86.6	102.5
65°	18.2	18.2	18.2	18.2	20.5	22.8	27.3	34.2	45.6	59.2	68.4
67.5°	13.7	13.7	15.9	15.9	15.9	18.2	20.5	25.1	31.9	41.0	47.8
70°	11.4	11.4	11.4	11.4	13.7	13.7	15.9	18.2	22.8	29.6	34.2
72.5°	9.1	9.1	9.1	9.1	11.4	11.4	11.4	13.7	15.9	20.5	22.8
75°	6.8	6.8	6.8	6.8	9.1	9.1	9.1	11.4	11.4	13.7	15.9
77.5°	4.6	4.6	4.6	4.6	6.8	6.8	6.8	6.8	9.1	9.1	9.1
80°	2.3	2.3	2.3	4.6	4.6	4.6	4.6	4.6	4.6	6.8	6.8
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: P212751

CATALOG NUMBER: LD4B40D010 EU4B30509030 4LBSWLI1

**CANDELA DISTRIBUTION (continued):**

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8	1724.8
2.5°	1692.9	1722.6	1688.4	1695.2	1683.8	1704.3	1677.0	1683.8	1688.4	1683.8	1686.1
5°	1695.2	1718.0	1679.3	1686.1	1667.9	1681.6	1656.5	1658.8	1658.8	1654.2	1651.9
7.5°	1702.1	1715.7	1674.7	1672.4	1649.7	1663.3	1633.7	1629.2	1626.9	1620.0	1622.3
10°	1704.3	1708.9	1665.6	1656.5	1629.2	1633.7	1604.1	1595.0	1588.1	1583.6	1581.3
12.5°	1720.3	1715.7	1665.6	1649.7	1615.5	1613.2	1581.3	1567.6	1556.2	1551.7	1549.4
15°	1740.8	1724.8	1670.2	1647.4	1608.6	1599.5	1565.4	1551.7	1535.7	1531.2	1526.6
17.5°	1749.9	1724.8	1665.6	1636.0	1592.7	1581.3	1547.1	1528.9	1512.9	1506.1	1501.6
20°	1738.5	1706.6	1647.4	1615.5	1569.9	1554.0	1519.8	1499.3	1483.3	1476.5	1471.9
22.5°	1713.5	1677.0	1620.0	1588.1	1542.6	1522.1	1492.4	1474.2	1456.0	1453.7	1446.9
25°	1670.2	1633.7	1585.9	1554.0	1512.9	1492.4	1465.1	1449.1	1430.9	1428.6	1426.4
27.5°	1606.4	1572.2	1535.7	1506.1	1469.7	1453.7	1433.2	1417.2	1401.3	1401.3	1396.7
30°	1515.2	1492.4	1460.5	1442.3	1412.7	1396.7	1383.1	1371.7	1355.7	1358.0	1353.4
32.5°	1399.0	1387.6	1364.8	1355.7	1332.9	1328.4	1314.7	1305.6	1291.9	1296.5	1291.9
35°	1269.1	1255.5	1255.5	1250.9	1239.5	1237.2	1230.4	1225.9	1216.7	1219.0	1219.0
37.5°	1121.0	1121.0	1134.7	1137.0	1134.7	1139.3	1137.0	1137.0	1127.9	1132.4	1130.2
40°	968.4	982.0	1007.1	1020.8	1025.3	1034.5	1045.8	1041.3	1036.7	1043.6	1041.3
42.5°	820.3	847.6	886.3	909.1	925.1	938.8	954.7	954.7	952.4	961.5	959.3
45°	679.0	704.1	756.5	795.2	822.6	843.1	861.3	868.1	870.4	879.5	877.2
47.5°	540.0	583.3	644.8	690.4	724.6	749.6	774.7	783.8	790.7	802.0	802.0
50°	428.4	483.0	553.7	599.3	640.3	667.6	692.7	706.3	715.5	724.6	724.6
52.5°	344.1	401.0	469.4	517.2	556.0	585.6	610.6	626.6	633.4	644.8	644.8
55°	280.3	332.7	396.5	439.8	478.5	505.8	526.3	540.0	546.8	556.0	556.0
57.5°	221.0	271.1	323.6	362.3	394.2	414.7	432.9	437.5	439.8	446.6	448.9
60°	166.3	205.1	248.4	278.0	300.8	314.4	328.1	325.8	323.6	328.1	323.6
62.5°	118.5	145.8	177.7	196.0	214.2	221.0	227.9	223.3	218.7	221.0	221.0
65°	79.7	100.3	118.5	132.2	141.3	145.8	148.1	145.8	143.5	145.8	143.5
67.5°	54.7	66.1	79.7	86.6	93.4	95.7	98.0	95.7	95.7	95.7	93.4
70°	36.5	43.3	52.4	57.0	59.2	61.5	63.8	61.5	61.5	61.5	61.5
72.5°	25.1	29.6	31.9	36.5	38.7	38.7	38.7	38.7	38.7	38.7	38.7
75°	15.9	18.2	20.5	22.8	25.1	25.1	25.1	25.1	25.1	25.1	25.1
77.5°	11.4	11.4	13.7	13.7	15.9	15.9	15.9	15.9	15.9	15.9	15.9
80°	6.8	6.8	9.1	9.1	9.1	9.1	11.4	9.1	11.4	11.4	11.4
82.5°	4.6	4.6	4.6	4.6	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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: P212751

CATALOG NUMBER: LD4B40D010 EU4B30509030 4LBSWLI1

**CANDELA DISTRIBUTION (continued):**

	345°	350°	355°	360°
0°	1724.8	1724.8	1724.8	1724.8
2.5°	1686.1	1681.6	1667.9	1683.8
5°	1649.7	1645.1	1633.7	1645.1
7.5°	1613.2	1606.4	1597.3	1604.1
10°	1569.9	1565.4	1554.0	1560.8
12.5°	1538.0	1528.9	1522.1	1524.3
15°	1517.5	1508.4	1501.6	1503.8
17.5°	1490.2	1481.0	1474.2	1474.2
20°	1460.5	1451.4	1446.9	1444.6
22.5°	1435.5	1428.6	1426.4	1419.5
25°	1412.7	1408.1	1408.1	1399.0
27.5°	1387.6	1380.8	1380.8	1371.7
30°	1344.3	1342.1	1342.1	1335.2
32.5°	1287.4	1280.5	1285.1	1273.7
35°	1209.9	1205.3	1212.2	1203.1
37.5°	1125.6	1123.3	1127.9	1121.0
40°	1036.7	1036.7	1043.6	1032.2
42.5°	959.3	959.3	966.1	954.7
45°	875.0	881.8	888.6	879.5
47.5°	802.0	806.6	815.7	806.6
50°	729.1	733.7	740.5	731.4
52.5°	649.4	653.9	660.8	653.9
55°	558.2	562.8	569.6	565.1
57.5°	448.9	444.3	455.7	446.6
60°	325.8	316.7	319.0	319.0
62.5°	216.5	211.9	216.5	209.6
65°	143.5	141.3	141.3	141.3
67.5°	95.7	93.4	95.7	93.4
70°	61.5	61.5	61.5	61.5
72.5°	38.7	38.7	38.7	38.7
75°	25.1	25.1	25.1	25.1
77.5°	15.9	15.9	15.9	15.9
80°	11.4	11.4	11.4	11.4
82.5°	6.8	6.8	6.8	6.8
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)