

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: P252438

Luminaire Tested: **LD6B70D010TE EU6B60709727 6LBLWW1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252438  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-5)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD6B70D010TE EU6B60709727 6LBLWW1LI  
Description: PORTFOLIO 6 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 97CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

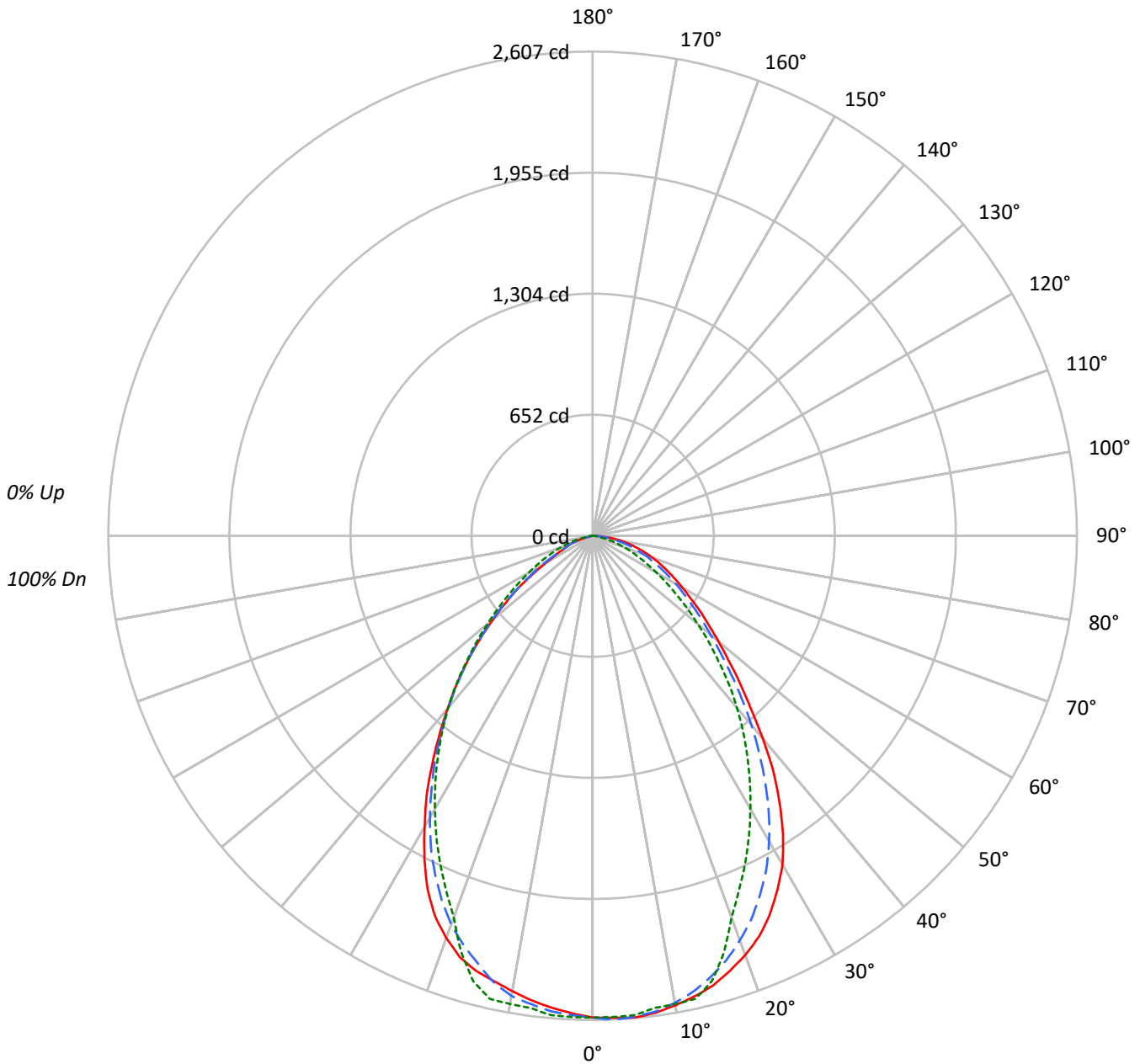
Lumens per Lamp: N/A  
Luminaire Lumens: 4578.0 lumens  
Efficiency: N/A  
Efficacy: 57.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.03 / 1.12  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 79.45  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P252438

CATALOG NUMBER: LD6B70D010TE EU6B60709727 6LBLWW1LI

### Luminous Intensity Polar Plot





TEST NUMBER: P252438

CATALOG NUMBER: LD6B70D010TE EU6B60709727 6LBLWW1LI

**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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	68																			
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60																			
5	82	71	63	57	80	70	63	57	68	62	57	66	60	56	64	59	55	54																			
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48																			
7	72	60	52	46	70	59	51	46	57	51	46	56	50	46	55	49	45	44																			
8	67	55	47	42	66	54	47	42	53	46	42	52	46	42	51	45	41	40																			
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36																			
10	59	47	40	35	58	47	40	35	46	40	35	45	39	35	44	39	35	33																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	169228	169228	169228
5°	170536	169658	167006
10°	170056	169606	164922
15°	169281	167693	163823
20°	166758	151790	159975
25°	162233	139925	151320
30°	154042	127901	136278
35°	139783	115635	119928
40°	121361	102999	103280
45°	103502	88583	87651
50°	89581	74884	70773
55°	80087	62457	54790
60°	72965	51866	36926
65°	68125	42638	27555
70°	64893	34698	23138
75°	61127	24627	7638
80°	58234	12661	2517
85°	47907	7560	0



TEST NUMBER: P252438

CATALOG NUMBER: LD6B70D010TE EU6B60709727 6LBLWW1LI

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.9	5.4
10°-20°	685.1	15.0
20°-30°	945.7	20.7
30°-40°	962.3	21.0
40°-50°	773.4	16.9
50°-60°	514.2	11.2
60°-70°	293.0	6.4
70°-80°	131.6	2.9
80°-90°	27.7	0.6
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°	1875.7	41.0
0°-40°	2838.0	62.0
0°-60°	4125.6	90.1
0°-90°	4578.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4578.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2594	2594	2594	2594	2594	
5°	2604	2601	2591	2570	2550	247
15°	2506	2459	2483	2385	2426	705
25°	2254	2132	1944	2008	2102	1033
35°	1755	1620	1452	1479	1506	1091
45°	1122	1054	960	950	950	870
55°	704	657	549	488	482	633
65°	441	394	276	178	178	440
75°	242	202	98	40	30	259
85°	64	44	10	3	0	76
90°	0	0	0	0	0	



TEST NUMBER: P252438

CATALOG NUMBER: LD6B70D010TE EU6B60709727 6LBLWW1LI

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9
2.5°	2597.3	2610.8	2607.4	2604.0	2607.4	2604.0	2597.3	2597.3	2590.6	2590.6	2607.4
5°	2604.0	2610.8	2607.4	2604.0	2604.0	2607.4	2593.9	2593.9	2587.2	2583.8	2600.7
7.5°	2590.6	2600.7	2593.9	2593.9	2590.6	2593.9	2580.5	2580.5	2570.4	2567.0	2583.8
10°	2567.0	2580.5	2573.7	2573.7	2573.7	2567.0	2560.2	2556.9	2546.8	2543.4	2553.5
12.5°	2540.0	2550.1	2546.8	2540.0	2540.0	2540.0	2526.6	2523.2	2509.7	2503.0	2513.1
15°	2506.3	2513.1	2509.7	2506.3	2499.6	2499.6	2486.1	2479.4	2465.9	2452.4	2459.2
17.5°	2455.8	2465.9	2459.2	2455.8	2445.7	2445.7	2432.2	2425.5	2405.3	2391.8	2395.2
20°	2401.9	2405.3	2401.9	2395.2	2385.1	2381.7	2368.2	2354.8	2337.9	2321.1	2317.7
22.5°	2337.9	2341.3	2331.2	2324.4	2314.3	2311.0	2294.1	2284.0	2257.1	2236.8	2233.5
25°	2253.7	2257.1	2257.1	2240.2	2233.5	2226.7	2209.9	2193.1	2169.5	2142.5	2132.4
27.5°	2152.6	2162.7	2156.0	2139.2	2125.7	2122.3	2105.5	2092.0	2061.7	2038.1	2024.6
30°	2044.8	2041.5	2038.1	2028.0	2007.8	2004.4	1987.6	1970.7	1947.1	1916.8	1900.0
32.5°	1906.7	1906.7	1903.3	1893.2	1873.0	1866.3	1852.8	1832.6	1805.6	1782.1	1765.2
35°	1755.1	1758.5	1755.1	1734.9	1721.4	1714.7	1708.0	1684.4	1660.8	1633.8	1620.4
37.5°	1596.8	1586.7	1590.0	1573.2	1556.4	1563.1	1542.9	1532.8	1505.8	1485.6	1472.1
40°	1425.0	1431.7	1418.2	1411.5	1401.4	1391.3	1391.3	1374.4	1361.0	1337.4	1330.7
42.5°	1256.5	1266.6	1263.3	1256.5	1243.1	1246.4	1229.6	1222.9	1206.0	1195.9	1185.8
45°	1121.8	1121.8	1121.8	1115.1	1111.7	1104.9	1094.8	1084.7	1074.6	1061.2	1054.4
47.5°	990.4	990.4	993.8	987.0	980.3	976.9	970.2	970.2	953.4	939.9	933.1
50°	882.6	882.6	882.6	875.9	869.1	869.1	862.4	855.7	845.6	835.4	828.7
52.5°	784.9	784.9	784.9	778.2	774.8	771.4	768.1	764.7	751.2	744.5	737.8
55°	704.1	700.7	700.7	697.3	690.6	690.6	687.2	680.5	670.4	660.3	656.9
57.5°	623.2	626.6	623.2	623.2	616.5	616.5	609.7	606.4	596.3	589.5	582.8
60°	559.2	559.2	559.2	555.8	549.1	552.5	545.7	542.4	532.3	522.2	515.4
62.5°	495.2	498.6	498.6	495.2	488.5	488.5	485.1	481.7	471.6	461.5	451.4
65°	441.3	441.3	441.3	437.9	434.6	434.6	431.2	427.8	417.7	404.2	394.1
67.5°	390.8	387.4	387.4	387.4	384.0	380.7	377.3	373.9	363.8	353.7	340.2
70°	340.2	340.2	340.2	336.9	330.1	333.5	330.1	326.8	316.7	306.6	296.4
72.5°	293.1	293.1	289.7	286.3	286.3	283.0	283.0	279.6	269.5	256.0	245.9
75°	242.5	242.5	242.5	242.5	235.8	239.2	232.4	229.1	222.3	212.2	202.1
77.5°	198.8	198.8	198.8	195.4	192.0	192.0	188.6	185.3	175.2	168.4	155.0
80°	155.0	155.0	155.0	155.0	151.6	148.2	144.9	141.5	134.7	124.6	114.5
82.5°	114.5	114.5	111.2	111.2	111.2	107.8	104.4	101.1	94.3	87.6	80.8
85°	64.0	67.4	67.4	60.6	64.0	60.6	60.6	53.9	53.9	47.2	43.8
87.5°	23.6	20.2	20.2	20.2	20.2	20.2	20.2	16.8	16.8	16.8	13.5
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: P252438

CATALOG NUMBER: LD6B70D010TE EU6B60709727 6LBLWW1LI

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9
2.5°	2593.9	2590.6	2604.0	2604.0	2583.8	2593.9	2597.3	2590.6	2590.6	2593.9	2583.8
5°	2587.2	2580.5	2593.9	2597.3	2577.1	2587.2	2590.6	2583.8	2587.2	2590.6	2577.1
7.5°	2563.6	2563.6	2573.7	2577.1	2556.9	2567.0	2567.0	2560.2	2563.6	2563.6	2553.5
10°	2540.0	2529.9	2540.0	2540.0	2523.2	2526.6	2533.3	2529.9	2543.4	2560.2	2560.2
12.5°	2496.2	2486.1	2503.0	2503.0	2492.9	2506.3	2523.2	2533.3	2546.8	2553.5	2533.3
15°	2442.3	2445.7	2476.0	2499.6	2489.5	2509.7	2526.6	2519.8	2503.0	2482.8	2452.4
17.5°	2371.6	2361.5	2388.4	2401.9	2388.4	2395.2	2408.7	2395.2	2368.2	2351.4	2311.0
20°	2290.7	2263.8	2263.8	2257.1	2233.5	2233.5	2230.1	2206.5	2196.4	2186.3	2169.5
22.5°	2199.8	2169.5	2159.4	2139.2	2118.9	2115.6	2105.5	2081.9	2068.4	2061.7	2041.5
25°	2095.4	2068.4	2051.6	2031.4	2001.0	1994.3	1984.2	1960.6	1953.9	1943.8	1926.9
27.5°	1987.6	1953.9	1930.3	1910.1	1883.1	1879.8	1859.5	1842.7	1829.2	1822.5	1809.0
30°	1862.9	1825.9	1809.0	1782.1	1761.9	1755.1	1738.3	1714.7	1704.6	1697.8	1687.7
32.5°	1724.8	1694.5	1677.6	1654.1	1627.1	1630.5	1610.3	1590.0	1583.3	1576.6	1566.5
35°	1590.0	1559.7	1539.5	1519.3	1502.5	1495.7	1482.2	1465.4	1455.3	1451.9	1445.2
37.5°	1441.8	1418.2	1401.4	1381.2	1367.7	1361.0	1354.2	1337.4	1330.7	1330.7	1317.2
40°	1297.0	1276.8	1263.3	1253.2	1236.3	1233.0	1226.2	1216.1	1212.7	1209.4	1199.3
42.5°	1165.6	1138.6	1128.5	1121.8	1111.7	1104.9	1101.6	1094.8	1091.5	1088.1	1078.0
45°	1040.9	1017.4	1007.3	1000.5	990.4	987.0	983.7	973.6	966.8	960.1	956.7
47.5°	919.7	902.8	899.5	882.6	875.9	869.1	862.4	855.7	852.3	848.9	835.4
50°	815.2	805.1	788.3	778.2	771.4	768.1	754.6	744.5	741.1	737.8	727.6
52.5°	720.9	707.4	697.3	680.5	677.1	670.4	663.6	650.2	643.4	640.1	630.0
55°	636.7	626.6	613.1	599.6	589.5	586.2	576.1	562.6	555.8	549.1	542.4
57.5°	565.9	549.1	535.6	522.2	515.4	505.3	495.2	488.5	478.4	468.3	458.1
60°	498.6	485.1	468.3	454.8	448.0	441.3	427.8	417.7	407.6	397.5	387.4
62.5°	434.6	421.1	404.2	390.8	384.0	377.3	363.8	353.7	343.6	333.5	320.0
65°	377.3	363.8	350.3	336.9	330.1	323.4	309.9	296.4	286.3	276.2	262.8
67.5°	330.1	313.3	299.8	286.3	279.6	272.9	259.4	249.3	235.8	225.7	212.2
70°	279.6	266.1	256.0	242.5	235.8	229.1	215.6	202.1	192.0	181.9	168.4
72.5°	235.8	219.0	208.9	195.4	188.6	185.3	171.8	161.7	151.6	138.1	128.0
75°	188.6	175.2	161.7	151.6	144.9	141.5	128.0	117.9	107.8	97.7	87.6
77.5°	144.9	134.7	121.3	111.2	104.4	101.1	87.6	77.5	67.4	60.6	50.5
80°	107.8	94.3	87.6	77.5	74.1	67.4	60.6	50.5	43.8	33.7	26.9
82.5°	74.1	64.0	57.3	50.5	47.2	43.8	37.1	30.3	23.6	20.2	16.8
85°	40.4	33.7	30.3	26.9	23.6	23.6	20.2	16.8	13.5	10.1	6.7
87.5°	13.5	10.1	10.1	10.1	10.1	6.7	6.7	6.7	3.4	3.4	3.4
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: P252438

CATALOG NUMBER: LD6B70D010TE EU6B60709727 6LBLWW1LI

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9
2.5°	2590.6	2590.6	2590.6	2587.2	2587.2	2587.2	2583.8	2597.3	2583.8	2580.5	2590.6
5°	2587.2	2580.5	2580.5	2580.5	2580.5	2577.1	2573.7	2580.5	2570.4	2567.0	2567.0
7.5°	2567.0	2563.6	2563.6	2560.2	2556.9	2553.5	2550.1	2553.5	2543.4	2540.0	2540.0
10°	2570.4	2563.6	2563.6	2553.5	2546.8	2536.7	2526.6	2529.9	2516.5	2506.3	2506.3
12.5°	2529.9	2513.1	2503.0	2492.9	2486.1	2482.8	2469.3	2476.0	2462.6	2459.2	2459.2
15°	2439.0	2418.8	2401.9	2395.2	2395.2	2388.4	2378.3	2391.8	2385.1	2388.4	2405.3
17.5°	2297.5	2287.4	2277.3	2273.9	2277.3	2284.0	2290.7	2311.0	2311.0	2321.1	2337.9
20°	2172.8	2166.1	2172.8	2172.8	2176.2	2189.7	2203.2	2220.0	2226.7	2236.8	2260.4
22.5°	2051.6	2051.6	2058.3	2068.4	2065.0	2088.6	2092.0	2122.3	2122.3	2142.5	2162.7
25°	1933.7	1933.7	1940.4	1943.8	1950.5	1964.0	1977.5	2001.0	2007.8	2028.0	2044.8
27.5°	1819.1	1815.8	1815.8	1819.1	1825.9	1842.7	1849.4	1876.4	1886.5	1900.0	1916.8
30°	1691.1	1687.7	1694.5	1701.2	1697.8	1714.7	1724.8	1745.0	1751.7	1765.2	1778.7
32.5°	1569.8	1569.8	1569.8	1576.6	1576.6	1590.0	1590.0	1613.6	1613.6	1623.7	1637.2
35°	1445.2	1445.2	1448.6	1451.9	1455.3	1458.7	1462.0	1475.5	1478.9	1482.2	1489.0
37.5°	1327.3	1323.9	1327.3	1327.3	1320.5	1334.0	1334.0	1347.5	1337.4	1347.5	1350.9
40°	1206.0	1206.0	1202.6	1202.6	1202.6	1209.4	1202.6	1212.7	1206.0	1212.7	1209.4
42.5°	1081.4	1081.4	1074.6	1081.4	1078.0	1078.0	1078.0	1084.7	1074.6	1081.4	1084.7
45°	956.7	953.4	953.4	950.0	950.0	950.0	953.4	953.4	950.0	956.7	956.7
47.5°	835.4	832.1	832.1	832.1	832.1	835.4	825.3	832.1	825.3	825.3	825.3
50°	731.0	727.6	724.3	720.9	717.5	717.5	714.2	714.2	707.4	704.1	700.7
52.5°	630.0	626.6	619.8	619.8	616.5	613.1	603.0	603.0	592.9	589.5	589.5
55°	539.0	528.9	525.5	518.8	518.8	512.0	505.3	498.6	488.5	481.7	481.7
57.5°	454.8	444.7	437.9	434.6	431.2	424.5	411.0	407.6	394.1	390.8	387.4
60°	380.7	370.6	360.5	353.7	350.3	340.2	326.8	320.0	313.3	303.2	293.1
62.5°	309.9	299.8	286.3	283.0	276.2	266.1	256.0	245.9	239.2	229.1	222.3
65°	249.3	239.2	229.1	222.3	215.6	205.5	195.4	185.3	178.5	175.2	171.8
67.5°	202.1	188.6	178.5	175.2	168.4	161.7	151.6	148.2	141.5	141.5	141.5
70°	158.3	148.2	138.1	134.7	131.4	124.6	117.9	117.9	117.9	117.9	117.9
72.5°	117.9	111.2	101.1	97.7	94.3	91.0	84.2	87.6	84.2	84.2	84.2
75°	74.1	67.4	60.6	57.3	53.9	50.5	47.2	43.8	40.4	37.1	37.1
77.5°	40.4	33.7	30.3	26.9	26.9	23.6	20.2	20.2	16.8	16.8	16.8
80°	23.6	20.2	16.8	13.5	13.5	10.1	10.1	10.1	10.1	6.7	6.7
82.5°	13.5	10.1	6.7	6.7	6.7	6.7	3.4	3.4	3.4	3.4	3.4
85°	6.7	6.7	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0.0
87.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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: P252438

CATALOG NUMBER: LD6B70D010TE EU6B60709727 6LBLWW1LI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9	2593.9
2.5°	2573.7	2583.8	2573.7	2583.8	2583.8	2583.8	2583.8	2573.7
5°	2556.9	2563.6	2553.5	2560.2	2563.6	2560.2	2560.2	2550.1
7.5°	2526.6	2533.3	2523.2	2533.3	2536.7	2533.3	2529.9	2523.2
10°	2496.2	2499.6	2489.5	2496.2	2503.0	2503.0	2499.6	2489.5
12.5°	2449.1	2459.2	2449.1	2455.8	2462.6	2465.9	2465.9	2455.8
15°	2395.2	2412.0	2405.3	2415.4	2425.5	2428.9	2428.9	2425.5
17.5°	2341.3	2358.1	2348.0	2364.9	2375.0	2381.7	2385.1	2378.3
20°	2263.8	2284.0	2277.3	2290.7	2304.2	2314.3	2314.3	2304.2
22.5°	2162.7	2189.7	2186.3	2196.4	2213.3	2216.6	2223.4	2216.6
25°	2051.6	2071.8	2068.4	2078.5	2098.7	2098.7	2102.1	2102.1
27.5°	1923.6	1943.8	1940.4	1947.1	1960.6	1964.0	1967.3	1960.6
30°	1785.4	1795.5	1795.5	1805.6	1815.8	1819.1	1819.1	1809.0
32.5°	1633.8	1647.3	1654.1	1650.7	1660.8	1667.5	1664.2	1664.2
35°	1495.7	1499.1	1502.5	1505.8	1509.2	1515.9	1509.2	1505.8
37.5°	1347.5	1357.6	1350.9	1357.6	1364.3	1361.0	1357.6	1357.6
40°	1212.7	1216.1	1209.4	1216.1	1219.5	1219.5	1219.5	1212.7
42.5°	1078.0	1084.7	1078.0	1084.7	1084.7	1084.7	1084.7	1081.4
45°	943.2	950.0	950.0	953.4	953.4	950.0	950.0	950.0
47.5°	818.6	825.3	818.6	825.3	828.7	822.0	822.0	822.0
50°	700.7	697.3	697.3	700.7	700.7	700.7	700.7	697.3
52.5°	579.4	582.8	582.8	582.8	586.2	582.8	586.2	586.2
55°	475.0	475.0	475.0	478.4	475.0	475.0	478.4	481.7
57.5°	380.7	377.3	373.9	373.9	377.3	373.9	373.9	373.9
60°	293.1	289.7	286.3	286.3	286.3	286.3	286.3	283.0
62.5°	219.0	219.0	219.0	222.3	222.3	222.3	222.3	225.7
65°	175.2	175.2	175.2	175.2	175.2	175.2	175.2	178.5
67.5°	141.5	141.5	141.5	144.9	144.9	144.9	144.9	144.9
70°	117.9	117.9	121.3	117.9	121.3	121.3	121.3	121.3
72.5°	80.8	80.8	80.8	80.8	80.8	77.5	80.8	77.5
75°	33.7	33.7	33.7	33.7	33.7	33.7	33.7	30.3
77.5°	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
80°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.4	3.4	3.4	3.4	3.4	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)