

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: PORTFOLIO

Report Number: P252294

Luminaire Tested: **LE\_6B40D010 EC6B30509050 6LBSW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252294  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-7)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LE\_6B40D010 EC6B30509050 6LBSW1H  
Description: PORTFOLIO 6 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4206.2 lumens  
Efficiency: N/A  
Efficacy: 97.8 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.18 / 1.16  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

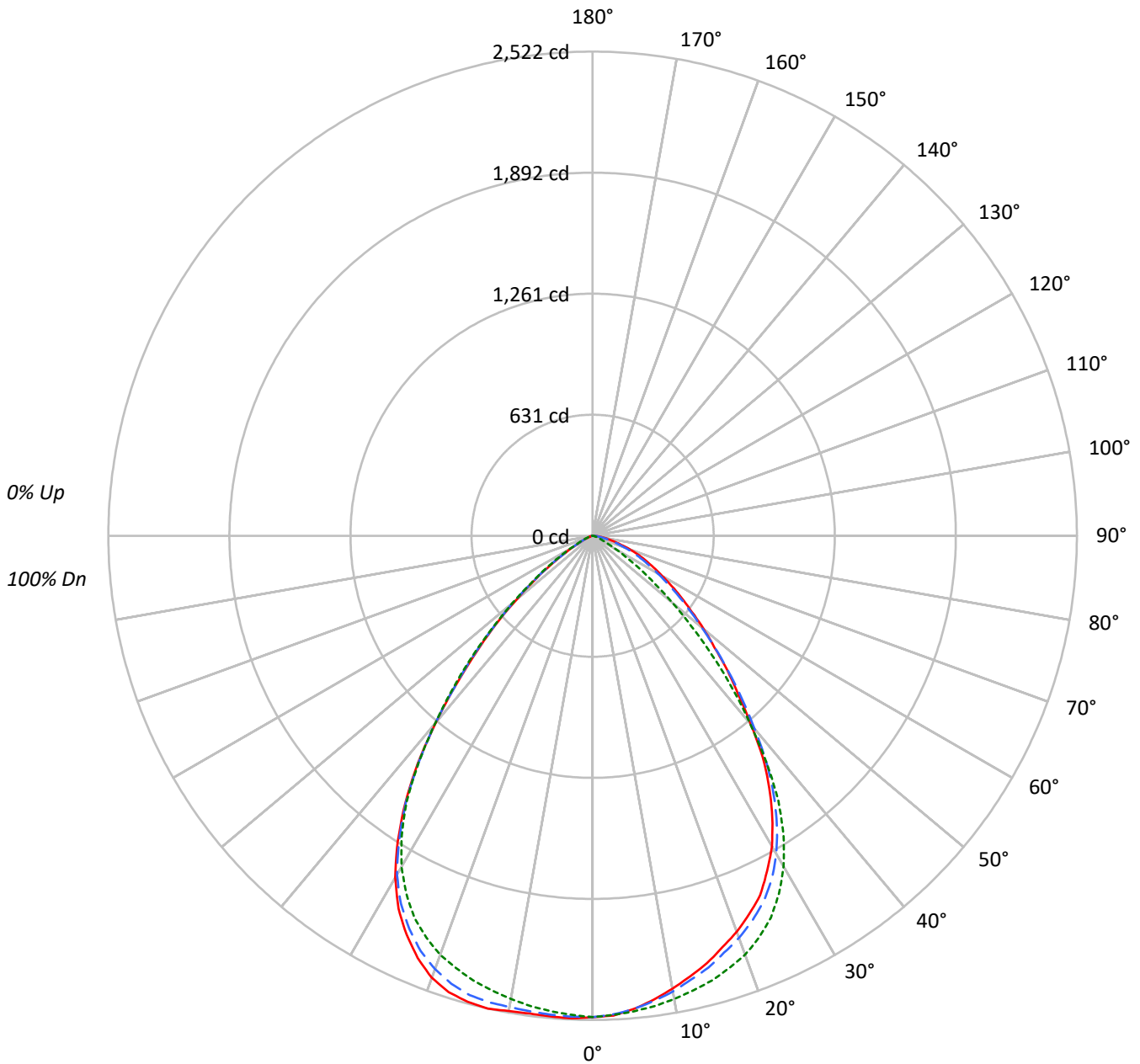
Input Watts (W): 43  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P252294

CATALOG NUMBER: LE\_6B40D010 EC6B30509050 6LBSW1H

### 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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	69	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52																			
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47																			
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43																			
9	65	54	47	42	64	53	46	42	52	46	42	51	46	41	50	45	41	40																			
10	62	50	43	39	61	50	43	38	49	43	38	48	42	38	47	42	38	37																			

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

	0°	90°	180°
0°	163565	163565	163565
5°	162015	162808	164589
10°	158668	162279	166492
15°	155630	161973	169747
20°	152408	161246	170070
25°	148656	158022	165004
30°	140738	149868	154885
35°	127821	134328	135538
40°	109089	108569	108058
45°	91628	81294	78784
50°	76528	55011	52250
55°	64402	33759	30654
60°	54528	17772	15410
65°	47223	9340	7487
70°	39276	5761	4044
75°	29013	3806	2294
80°	22730	2254	1127
85°	18115	2246	0



TEST NUMBER: P252294

CATALOG NUMBER: LE\_6B40D010 EC6B30509050 6LBSW1H

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	236.3	5.6
10°-20°	676.6	16.1
20°-30°	999.0	23.8
30°-40°	1029.6	24.5
40°-50°	711.1	16.9
50°-60°	350.5	8.3
60°-70°	142.0	3.4
70°-80°	50.6	1.2
80°-90°	10.4	0.2
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°	1911.9	45.5
0°-40°	2941.5	69.9
0°-60°	4003.2	95.2
0°-90°	4206.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4206.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2507	2507	2507	2507	2507	
5°	2474	2474	2486	2504	2513	234
15°	2304	2328	2398	2477	2513	649
25°	2065	2104	2195	2259	2292	944
35°	1605	1644	1687	1696	1702	994
45°	993	999	881	869	854	768
55°	566	545	297	279	270	512
65°	306	276	60	48	48	304
75°	115	97	15	9	9	129
85°	24	18	3	0	0	30
90°	0	0	0	0	0	



TEST NUMBER: P252294

CATALOG NUMBER: LE\_6B40D010 EC6B30509050 6LBSW1H

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1
2.5°	2501.1	2492.0	2498.1	2486.0	2501.1	2486.0	2489.0	2492.0	2489.0	2492.0	2495.1
5°	2473.9	2464.8	2473.9	2458.8	2473.9	2464.8	2464.8	2467.9	2467.9	2470.9	2473.9
7.5°	2437.5	2428.5	2437.5	2422.4	2440.6	2431.5	2431.5	2437.5	2434.5	2437.5	2443.6
10°	2395.1	2383.0	2392.1	2383.0	2401.2	2389.1	2395.1	2395.1	2395.1	2404.2	2410.2
12.5°	2349.8	2337.6	2349.8	2334.6	2352.8	2343.6	2346.8	2355.8	2358.8	2364.9	2367.9
15°	2304.2	2289.1	2295.2	2286.1	2304.2	2295.2	2298.2	2310.4	2310.4	2319.5	2328.5
17.5°	2246.8	2234.6	2246.8	2234.6	2249.8	2243.8	2249.8	2258.9	2258.9	2268.0	2277.0
20°	2195.2	2183.2	2192.2	2183.2	2201.4	2192.2	2195.2	2207.4	2210.5	2219.5	2228.6
22.5°	2131.8	2122.6	2128.6	2119.6	2137.8	2131.8	2134.8	2146.9	2149.9	2155.9	2171.1
25°	2065.1	2046.9	2056.0	2050.0	2068.1	2059.0	2065.1	2077.2	2083.2	2092.4	2104.5
27.5°	1968.2	1959.1	1965.1	1965.1	1980.2	1971.2	1974.2	1986.4	1995.5	2004.5	2019.6
30°	1868.2	1853.1	1859.2	1862.2	1874.4	1868.2	1874.4	1886.5	1889.5	1901.6	1913.8
32.5°	1741.1	1735.0	1747.1	1741.1	1747.1	1747.1	1750.1	1759.2	1765.4	1771.4	1786.5
35°	1604.9	1592.8	1604.9	1598.8	1613.9	1604.9	1613.9	1623.0	1623.0	1635.1	1644.2
37.5°	1456.5	1441.4	1447.4	1447.4	1453.5	1450.4	1450.4	1465.5	1468.6	1477.6	1486.8
40°	1280.9	1274.8	1286.9	1283.9	1286.9	1286.9	1289.9	1299.0	1305.1	1308.1	1311.1
42.5°	1123.4	1126.4	1129.5	1129.5	1129.5	1129.5	1129.5	1141.5	1138.5	1147.6	1150.6
45°	993.1	981.1	987.1	984.1	993.1	984.1	993.1	1002.2	996.2	1005.2	999.2
47.5°	860.0	860.0	860.0	856.9	863.0	860.0	866.0	869.0	869.0	869.0	866.0
50°	754.0	744.9	747.9	747.9	751.0	747.9	754.0	757.0	757.0	751.0	738.9
52.5°	651.0	648.0	648.0	654.0	654.0	651.0	651.0	651.0	651.0	641.9	635.9
55°	566.2	560.1	563.2	563.2	563.2	563.2	566.2	563.2	563.2	554.1	545.0
57.5°	490.5	484.5	484.5	484.5	487.5	484.5	484.5	484.5	481.5	472.4	460.2
60°	417.9	414.9	417.9	417.9	420.9	417.9	417.9	417.9	411.8	402.8	390.6
62.5°	357.2	357.2	357.2	360.4	360.4	357.2	357.2	354.2	351.2	339.1	327.0
65°	305.9	302.8	305.9	305.9	308.9	308.9	305.9	302.8	299.8	287.6	275.5
67.5°	254.4	251.4	254.4	254.4	257.4	254.4	254.4	254.4	245.2	239.2	227.1
70°	205.9	202.9	202.9	202.9	205.9	199.9	202.9	202.9	196.9	187.8	175.6
72.5°	157.5	157.5	157.5	157.5	157.5	157.5	154.4	154.4	148.4	139.2	133.2
75°	115.1	115.1	118.1	118.1	115.1	115.1	115.1	112.0	109.0	103.0	96.9
77.5°	84.8	84.8	84.8	84.8	81.8	81.8	81.8	78.8	75.8	72.6	66.6
80°	60.5	60.5	60.5	57.5	60.5	57.5	57.5	57.5	51.5	48.5	45.4
82.5°	42.4	39.4	39.4	39.4	39.4	39.4	39.4	36.4	36.4	33.2	30.2
85°	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	21.2	18.1	18.1
87.5°	12.1	15.1	15.1	15.1	15.1	15.1	15.1	12.1	12.1	12.1	9.1
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: P252294

CATALOG NUMBER: LE\_6B40D010 EC6B30509050 6LBSW1H

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1
2.5°	2495.1	2495.1	2501.1	2492.0	2507.1	2498.1	2495.1	2510.2	2501.1	2498.1	2504.1
5°	2473.9	2476.9	2479.9	2473.9	2489.0	2479.9	2479.9	2495.1	2489.0	2486.0	2495.1
7.5°	2446.6	2449.6	2455.8	2452.6	2464.8	2458.8	2461.8	2476.9	2470.9	2470.9	2479.9
10°	2413.4	2419.4	2425.4	2425.4	2440.6	2434.5	2434.5	2452.6	2446.6	2449.6	2461.8
12.5°	2374.0	2383.0	2392.1	2395.1	2410.2	2401.2	2404.2	2425.4	2422.4	2425.4	2437.5
15°	2331.5	2343.6	2352.8	2352.8	2370.9	2361.9	2370.9	2392.1	2386.1	2398.1	2413.4
17.5°	2283.1	2295.2	2307.4	2310.4	2328.5	2322.5	2334.6	2355.8	2355.8	2361.9	2380.0
20°	2237.8	2252.9	2258.9	2268.0	2286.1	2283.1	2289.1	2313.4	2313.4	2322.5	2340.6
22.5°	2177.1	2192.2	2204.4	2213.5	2228.6	2228.6	2237.8	2258.9	2258.9	2265.0	2283.1
25°	2110.5	2128.6	2137.8	2146.9	2162.0	2159.0	2168.0	2186.2	2189.2	2195.2	2213.5
27.5°	2025.8	2040.9	2053.0	2059.0	2080.2	2068.1	2077.2	2098.4	2095.4	2101.4	2116.6
30°	1919.8	1934.9	1947.0	1947.0	1965.1	1965.1	1974.2	1983.4	1983.4	1989.4	2001.5
32.5°	1795.6	1813.8	1813.8	1822.9	1835.0	1822.9	1835.0	1847.1	1841.0	1850.1	1859.2
35°	1653.2	1662.4	1665.4	1665.4	1674.5	1671.5	1668.4	1677.5	1671.5	1686.6	1695.6
37.5°	1480.8	1492.8	1486.8	1492.8	1489.8	1480.8	1480.8	1495.9	1483.8	1486.8	1495.9
40°	1314.1	1314.1	1311.1	1296.0	1299.0	1289.9	1286.9	1289.9	1277.9	1274.8	1286.9
42.5°	1141.5	1138.5	1129.5	1108.2	1111.2	1096.1	1084.0	1084.0	1078.0	1075.0	1078.0
45°	987.1	978.0	962.9	938.6	932.6	920.5	896.2	890.2	881.1	881.1	884.1
47.5°	844.8	832.8	808.5	781.2	766.1	751.0	726.8	717.6	702.5	696.5	702.5
50°	726.8	705.5	675.2	635.9	620.8	602.6	578.4	563.2	548.1	542.0	539.0
52.5°	617.8	587.4	557.1	508.8	496.6	478.4	445.1	430.0	414.9	402.8	402.8
55°	523.9	496.6	454.2	408.8	390.6	372.5	339.1	318.0	302.8	296.8	290.8
57.5°	439.0	408.8	369.4	321.0	302.8	284.6	251.4	230.1	215.0	205.9	199.9
60°	369.4	336.1	296.8	254.4	233.1	215.0	181.6	160.5	145.4	136.2	130.2
62.5°	302.8	275.5	236.1	196.9	178.6	160.5	133.2	112.0	96.9	90.9	81.8
65°	254.4	227.1	190.8	157.5	142.4	124.1	99.9	81.8	69.6	60.5	54.5
67.5°	205.9	184.8	154.4	124.1	109.0	96.9	75.8	60.5	48.5	42.4	39.4
70°	163.5	142.4	118.1	93.9	84.8	72.6	57.5	42.4	36.4	30.2	27.2
72.5°	121.1	106.0	87.8	69.6	60.5	54.5	39.4	33.2	24.2	21.2	18.1
75°	87.8	75.8	63.6	48.5	42.4	39.4	30.2	21.2	18.1	15.1	12.1
77.5°	60.5	54.5	42.4	33.2	30.2	27.2	21.2	15.1	12.1	9.1	9.1
80°	39.4	33.2	27.2	21.2	21.2	18.1	12.1	9.1	9.1	6.0	6.0
82.5°	24.2	21.2	18.1	15.1	12.1	12.1	9.1	6.0	6.0	3.0	3.0
85°	15.1	12.1	9.1	9.1	6.0	6.0	6.0	3.0	3.0	3.0	3.0
87.5°	6.0	6.0	6.0	3.0	3.0	3.0	3.0	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: P252294

CATALOG NUMBER: LE\_6B40D010 EC6B30509050 6LBSW1H

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1
2.5°	2504.1	2504.1	2510.2	2501.1	2507.1	2507.1	2513.2	2501.1	2507.1	2510.2	2516.2
5°	2492.0	2495.1	2501.1	2498.1	2501.1	2501.1	2507.1	2492.0	2504.1	2504.1	2513.2
7.5°	2479.9	2479.9	2486.0	2483.0	2489.0	2492.0	2498.1	2486.0	2498.1	2498.1	2507.1
10°	2464.8	2464.8	2473.9	2470.9	2479.9	2483.0	2492.0	2479.9	2492.0	2495.1	2504.1
12.5°	2443.6	2446.6	2455.8	2455.8	2464.8	2470.9	2479.9	2473.9	2489.0	2492.0	2504.1
15°	2419.4	2425.4	2437.5	2434.5	2443.6	2452.6	2464.8	2455.8	2476.9	2483.0	2495.1
17.5°	2389.1	2395.1	2404.2	2404.2	2413.4	2419.4	2434.5	2428.5	2446.6	2449.6	2464.8
20°	2343.6	2352.8	2364.9	2361.9	2370.9	2377.0	2389.1	2383.0	2401.2	2407.2	2422.4
22.5°	2289.1	2295.2	2304.2	2304.2	2313.4	2319.5	2331.5	2322.5	2340.6	2343.6	2355.8
25°	2216.5	2222.5	2228.6	2231.6	2240.8	2243.8	2249.8	2243.8	2258.9	2261.9	2277.0
27.5°	2122.6	2125.6	2134.8	2134.8	2140.8	2143.9	2152.9	2140.8	2162.0	2162.0	2171.1
30°	2010.6	2007.6	2019.6	2013.6	2019.6	2019.6	2028.8	2022.8	2037.9	2031.8	2040.9
32.5°	1862.2	1868.2	1868.2	1862.2	1874.4	1871.2	1871.2	1865.2	1874.4	1877.4	1883.4
35°	1689.6	1698.8	1698.8	1701.8	1704.8	1695.6	1698.8	1680.5	1695.6	1698.8	1701.8
37.5°	1501.9	1492.8	1498.9	1489.8	1504.9	1486.8	1486.8	1474.6	1486.8	1486.8	1489.8
40°	1286.9	1283.9	1289.9	1283.9	1280.9	1277.9	1271.8	1262.6	1274.8	1268.8	1277.9
42.5°	1084.0	1081.0	1081.0	1075.0	1071.9	1071.9	1065.9	1059.8	1056.8	1056.8	1071.9
45°	875.1	881.1	875.1	872.1	878.1	872.1	875.1	863.0	869.0	863.0	869.0
47.5°	699.5	702.5	696.5	690.4	699.5	690.4	690.4	681.2	693.4	693.4	687.4
50°	542.0	539.0	532.9	539.0	536.0	536.0	536.0	526.9	532.9	523.9	529.9
52.5°	399.8	396.6	396.6	393.6	396.6	393.6	393.6	390.6	390.6	387.6	390.6
55°	290.8	287.6	281.6	281.6	281.6	284.6	281.6	278.6	278.6	275.5	278.6
57.5°	196.9	190.8	190.8	190.8	190.8	187.8	187.8	184.8	187.8	184.8	187.8
60°	127.1	127.1	121.1	121.1	121.1	121.1	121.1	118.1	121.1	121.1	121.1
62.5°	78.8	78.8	75.8	72.6	75.8	72.6	72.6	72.6	75.8	72.6	75.8
65°	51.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
67.5°	36.4	33.2	33.2	33.2	33.2	33.2	33.2	30.2	33.2	33.2	33.2
70°	24.2	24.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
72.5°	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
75°	12.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
77.5°	9.1	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
80°	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	3.0	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	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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: P252294

CATALOG NUMBER: LE\_6B40D010 EC6B30509050 6LBSW1H

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1	2507.1
2.5°	2507.1	2510.2	2504.1	2507.1	2501.1	2507.1	2510.2	2516.2
5°	2501.1	2504.1	2498.1	2504.1	2498.1	2504.1	2507.1	2513.2
7.5°	2495.1	2501.1	2495.1	2501.1	2495.1	2501.1	2504.1	2510.2
10°	2495.1	2504.1	2498.1	2507.1	2498.1	2504.1	2510.2	2513.2
12.5°	2495.1	2504.1	2501.1	2507.1	2504.1	2510.2	2516.2	2522.4
15°	2489.0	2498.1	2492.0	2501.1	2498.1	2501.1	2513.2	2513.2
17.5°	2455.8	2464.8	2464.8	2470.9	2470.9	2479.9	2486.0	2492.0
20°	2413.4	2422.4	2419.4	2428.5	2428.5	2437.5	2443.6	2449.6
22.5°	2349.8	2361.9	2358.8	2367.9	2364.9	2370.9	2383.0	2380.0
25°	2268.0	2283.1	2280.1	2286.1	2283.1	2283.1	2289.1	2292.2
27.5°	2168.0	2177.1	2174.1	2180.1	2174.1	2180.1	2186.2	2189.2
30°	2037.9	2043.9	2040.9	2043.9	2040.9	2046.9	2050.0	2056.0
32.5°	1880.4	1889.5	1880.4	1886.5	1883.4	1883.4	1895.5	1889.5
35°	1692.6	1695.6	1698.8	1698.8	1692.6	1695.6	1701.8	1701.8
37.5°	1483.8	1498.9	1480.8	1489.8	1486.8	1486.8	1486.8	1495.9
40°	1265.8	1268.8	1262.6	1262.6	1262.6	1259.6	1271.8	1268.8
42.5°	1059.8	1062.9	1059.8	1050.8	1053.8	1053.8	1062.9	1050.8
45°	860.0	866.0	863.0	863.0	856.9	856.9	860.0	853.9
47.5°	681.2	687.4	678.2	681.2	675.2	681.2	678.2	684.4
50°	517.8	523.9	520.9	523.9	523.9	517.8	526.9	514.8
52.5°	387.6	390.6	387.6	384.5	381.5	381.5	387.6	384.5
55°	275.5	272.5	272.5	272.5	275.5	275.5	272.5	269.5
57.5°	184.8	184.8	181.6	181.6	184.8	178.6	181.6	178.6
60°	118.1	118.1	118.1	118.1	115.1	118.1	118.1	118.1
62.5°	72.6	72.6	72.6	72.6	72.6	72.6	72.6	72.6
65°	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
67.5°	30.2	33.2	33.2	33.2	30.2	30.2	30.2	30.2
70°	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
72.5°	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
75°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
77.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
80°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.0	3.0	3.0	3.0	3.0	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)