

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: P252315

Luminaire Tested: **LE\_6B60D010R EC6B60709024 6LBSW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252315  
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\_6B60D010R EC6B60709024 6LBSW1H  
Description: PORTFOLIO 6 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2400K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4986.3 lumens  
Efficiency: N/A  
Efficacy: 79.8 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

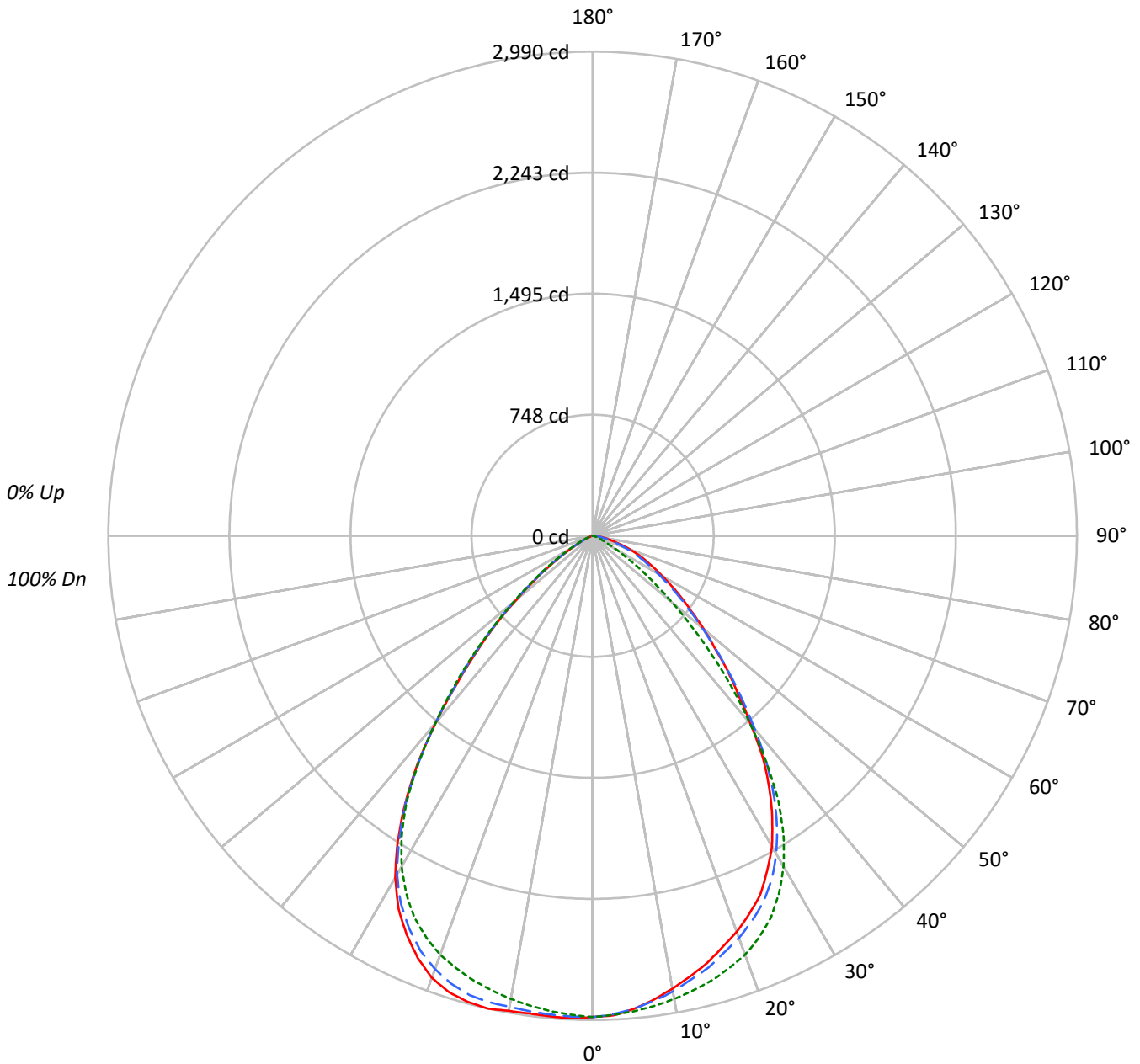
Input Watts (W): 62.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P252315

CATALOG NUMBER: LE\_6B60D010R EC6B60709024 6LBSW1H

### Luminous Intensity Polar Plot





TEST NUMBER: P252315

CATALOG NUMBER: LE\_6B60D010R EC6B60709024 6LBSW1H

**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°	193902	193902	193902
5°	192055	192999	195107
10°	188089	192375	197363
15°	184498	192015	201221
20°	180678	191141	201611
25°	176219	187334	195598
30°	166848	177651	183603
35°	151523	159240	160658
40°	129315	128694	128089
45°	108632	96370	93390
50°	90717	65211	61933
55°	76345	40015	36341
60°	64640	21073	18267
65°	55960	11084	8861
70°	46562	6848	4788
75°	34382	4537	2722
80°	26976	2668	1353
85°	21558	2695	0



TEST NUMBER: P252315

CATALOG NUMBER: LE\_6B60D010R EC6B60709024 6LBSW1H

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	280.1	5.6
10°-20°	802.0	16.1
20°-30°	1184.3	23.8
30°-40°	1220.5	24.5
40°-50°	843.0	16.9
50°-60°	415.5	8.3
60°-70°	168.4	3.4
70°-80°	60.0	1.2
80°-90°	12.4	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°	2266.4	45.5
0°-40°	3487.0	69.9
0°-60°	4745.5	95.2
0°-90°	4986.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4986.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2972	2972	2972	2972	2972	
5°	2933	2933	2947	2968	2979	277
15°	2732	2760	2843	2936	2979	769
25°	2448	2495	2602	2678	2717	1119
35°	1902	1949	1999	2010	2017	1179
45°	1177	1184	1044	1030	1012	910
55°	671	646	352	330	320	607
65°	362	327	72	57	57	360
75°	136	115	18	11	11	153
85°	29	22	4	0	0	35
90°	0	0	0	0	0	



TEST NUMBER: P252315

CATALOG NUMBER: LE\_6B60D010R EC6B60709024 6LBSW1H

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1
2.5°	2964.9	2954.1	2961.4	2947.0	2964.9	2947.0	2950.6	2954.1	2950.6	2954.1	2957.8
5°	2932.6	2921.9	2932.6	2914.6	2932.6	2921.9	2921.9	2925.5	2925.5	2929.0	2932.6
7.5°	2889.5	2878.8	2889.5	2871.6	2893.1	2882.4	2882.4	2889.5	2886.0	2889.5	2896.8
10°	2839.2	2825.0	2835.8	2825.0	2846.5	2832.1	2839.2	2839.2	2839.2	2850.1	2857.2
12.5°	2785.5	2771.1	2785.5	2767.5	2789.0	2778.2	2781.9	2792.6	2796.2	2803.4	2807.0
15°	2731.6	2713.6	2720.9	2710.1	2731.6	2720.9	2724.4	2738.8	2738.8	2749.5	2760.4
17.5°	2663.4	2649.0	2663.4	2649.0	2667.0	2659.9	2667.0	2677.8	2677.8	2688.5	2699.2
20°	2602.4	2588.0	2598.8	2588.0	2609.6	2598.8	2602.4	2616.8	2620.4	2631.1	2641.9
22.5°	2527.0	2516.2	2523.4	2512.6	2534.2	2527.0	2530.6	2545.0	2548.5	2555.8	2573.6
25°	2448.0	2426.5	2437.2	2430.1	2451.6	2440.9	2448.0	2462.4	2469.6	2480.4	2494.8
27.5°	2333.1	2322.4	2329.6	2329.6	2347.5	2336.8	2340.4	2354.8	2365.5	2376.2	2394.2
30°	2214.8	2196.8	2204.0	2207.5	2221.9	2214.8	2221.9	2236.2	2239.9	2254.2	2268.6
32.5°	2064.0	2056.8	2071.1	2064.0	2071.1	2071.1	2074.8	2085.5	2092.6	2099.9	2117.8
35°	1902.5	1888.1	1902.5	1895.2	1913.2	1902.5	1913.2	1924.0	1924.0	1938.4	1949.1
37.5°	1726.5	1708.6	1715.8	1715.8	1723.0	1719.4	1719.4	1737.4	1740.9	1751.6	1762.5
40°	1518.4	1511.1	1525.5	1522.0	1525.5	1525.5	1529.1	1539.9	1547.1	1550.6	1554.2
42.5°	1331.8	1335.2	1338.9	1338.9	1338.9	1338.9	1338.9	1353.2	1349.6	1360.4	1364.0
45°	1177.4	1163.0	1170.1	1166.6	1177.4	1166.6	1177.4	1188.1	1181.0	1191.8	1184.5
47.5°	1019.4	1019.4	1019.4	1015.9	1023.0	1019.4	1026.6	1030.2	1030.2	1030.2	1026.6
50°	893.8	883.0	886.6	886.6	890.2	886.6	893.8	897.4	897.4	890.2	875.9
52.5°	771.8	768.1	768.1	775.4	775.4	771.8	771.8	771.8	771.8	761.0	753.8
55°	671.2	664.0	667.6	667.6	667.6	667.6	671.2	667.6	667.6	656.9	646.1
57.5°	581.5	574.4	574.4	574.4	577.9	574.4	574.4	574.4	570.8	560.0	545.6
60°	495.4	491.8	495.4	495.4	499.0	495.4	495.4	495.4	488.1	477.4	463.0
62.5°	423.5	423.5	423.5	427.1	427.1	423.5	423.5	420.0	416.4	402.0	387.6
65°	362.5	359.0	362.5	362.5	366.1	366.1	362.5	359.0	355.4	341.0	326.6
67.5°	301.5	297.9	301.5	301.5	305.1	301.5	301.5	301.5	290.8	283.6	269.2
70°	244.1	240.5	240.5	240.5	244.1	236.9	240.5	240.5	233.4	222.5	208.2
72.5°	186.6	186.6	186.6	186.6	186.6	186.6	183.1	183.1	175.9	165.1	158.0
75°	136.4	136.4	140.0	140.0	136.4	136.4	136.4	132.8	129.2	122.0	114.9
77.5°	100.5	100.5	100.5	100.5	96.9	96.9	96.9	93.4	89.8	86.1	79.0
80°	71.8	71.8	71.8	68.2	71.8	68.2	68.2	68.2	61.0	57.4	53.9
82.5°	50.2	46.6	46.6	46.6	46.6	46.6	46.6	43.1	43.1	39.5	35.9
85°	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	25.1	21.5	21.5
87.5°	14.4	18.0	18.0	18.0	18.0	18.0	18.0	14.4	14.4	14.4	10.8
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: P252315

CATALOG NUMBER: LE\_6B60D010R EC6B60709024 6LBSW1H

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1
2.5°	2957.8	2957.8	2964.9	2954.1	2972.1	2961.4	2957.8	2975.8	2964.9	2961.4	2968.5
5°	2932.6	2936.2	2939.8	2932.6	2950.6	2939.8	2939.8	2957.8	2950.6	2947.0	2957.8
7.5°	2900.4	2903.9	2911.1	2907.5	2921.9	2914.6	2918.2	2936.2	2929.0	2929.0	2939.8
10°	2860.9	2868.0	2875.2	2875.2	2893.1	2886.0	2886.0	2907.5	2900.4	2903.9	2918.2
12.5°	2814.1	2825.0	2835.8	2839.2	2857.2	2846.5	2850.1	2875.2	2871.6	2875.2	2889.5
15°	2763.9	2778.2	2789.0	2789.0	2810.6	2799.9	2810.6	2835.8	2828.5	2842.9	2860.9
17.5°	2706.5	2720.9	2735.2	2738.8	2760.4	2753.1	2767.5	2792.6	2792.6	2799.9	2821.4
20°	2652.6	2670.6	2677.8	2688.5	2710.1	2706.5	2713.6	2742.4	2742.4	2753.1	2774.8
22.5°	2580.9	2598.8	2613.1	2623.9	2641.9	2641.9	2652.6	2677.8	2677.8	2685.0	2706.5
25°	2501.9	2523.4	2534.2	2545.0	2562.9	2559.4	2570.1	2591.6	2595.2	2602.4	2623.9
27.5°	2401.4	2419.4	2433.6	2440.9	2466.0	2451.6	2462.4	2487.5	2484.0	2491.1	2509.1
30°	2275.8	2293.8	2308.0	2308.0	2329.6	2329.6	2340.4	2351.1	2351.1	2358.2	2372.6
32.5°	2128.6	2150.1	2150.1	2160.9	2175.2	2160.9	2175.2	2189.6	2182.4	2193.2	2204.0
35°	1959.9	1970.6	1974.2	1974.2	1985.0	1981.4	1977.9	1988.6	1981.4	1999.4	2010.1
37.5°	1755.2	1769.6	1762.5	1769.6	1766.0	1755.2	1755.2	1773.2	1758.9	1762.5	1773.2
40°	1557.9	1557.9	1554.2	1536.2	1539.9	1529.1	1525.5	1529.1	1514.8	1511.1	1525.5
42.5°	1353.2	1349.6	1338.9	1313.8	1317.4	1299.4	1285.0	1285.0	1277.9	1274.2	1277.9
45°	1170.1	1159.4	1141.5	1112.8	1105.6	1091.2	1062.5	1055.4	1044.5	1044.5	1048.1
47.5°	1001.5	987.1	958.4	926.1	908.1	890.2	861.5	850.8	832.8	825.6	832.8
50°	861.5	836.4	800.5	753.8	735.9	714.2	685.6	667.6	649.8	642.5	638.9
52.5°	732.2	696.4	660.5	603.0	588.6	567.1	527.6	509.8	491.8	477.4	477.4
55°	621.0	588.6	538.4	484.6	463.0	441.5	402.0	376.9	359.0	351.8	344.6
57.5°	520.5	484.6	437.9	380.5	359.0	337.4	297.9	272.8	254.9	244.1	236.9
60°	437.9	398.4	351.8	301.5	276.4	254.9	215.4	190.2	172.2	161.5	154.4
62.5°	359.0	326.6	280.0	233.4	211.8	190.2	158.0	132.8	114.9	107.6	96.9
65°	301.5	269.2	226.1	186.6	168.8	147.1	118.5	96.9	82.5	71.8	64.6
67.5°	244.1	219.0	183.1	147.1	129.2	114.9	89.8	71.8	57.4	50.2	46.6
70°	193.9	168.8	140.0	111.2	100.5	86.1	68.2	50.2	43.1	35.9	32.2
72.5°	143.6	125.6	104.1	82.5	71.8	64.6	46.6	39.5	28.8	25.1	21.5
75°	104.1	89.8	75.4	57.4	50.2	46.6	35.9	25.1	21.5	18.0	14.4
77.5°	71.8	64.6	50.2	39.5	35.9	32.2	25.1	18.0	14.4	10.8	10.8
80°	46.6	39.5	32.2	25.1	25.1	21.5	14.4	10.8	10.8	7.1	7.1
82.5°	28.8	25.1	21.5	18.0	14.4	14.4	10.8	7.1	7.1	3.6	3.6
85°	18.0	14.4	10.8	10.8	7.1	7.1	7.1	3.6	3.6	3.6	3.6
87.5°	7.1	7.1	7.1	3.6	3.6	3.6	3.6	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: P252315

CATALOG NUMBER: LE\_6B60D010R EC6B60709024 6LBSW1H

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1
2.5°	2968.5	2968.5	2975.8	2964.9	2972.1	2972.1	2979.2	2964.9	2972.1	2975.8	2982.9
5°	2954.1	2957.8	2964.9	2961.4	2964.9	2964.9	2972.1	2954.1	2968.5	2968.5	2979.2
7.5°	2939.8	2939.8	2947.0	2943.4	2950.6	2954.1	2961.4	2947.0	2961.4	2961.4	2972.1
10°	2921.9	2921.9	2932.6	2929.0	2939.8	2943.4	2954.1	2939.8	2954.1	2957.8	2968.5
12.5°	2896.8	2900.4	2911.1	2911.1	2921.9	2929.0	2939.8	2932.6	2950.6	2954.1	2968.5
15°	2868.0	2875.2	2889.5	2886.0	2896.8	2907.5	2921.9	2911.1	2936.2	2943.4	2957.8
17.5°	2832.1	2839.2	2850.1	2850.1	2860.9	2868.0	2886.0	2878.8	2900.4	2903.9	2921.9
20°	2778.2	2789.0	2803.4	2799.9	2810.6	2817.8	2832.1	2825.0	2846.5	2853.6	2871.6
22.5°	2713.6	2720.9	2731.6	2731.6	2742.4	2749.5	2763.9	2753.1	2774.8	2778.2	2792.6
25°	2627.5	2634.8	2641.9	2645.5	2656.2	2659.9	2667.0	2659.9	2677.8	2681.4	2699.2
27.5°	2516.2	2519.9	2530.6	2530.6	2537.8	2541.4	2552.1	2537.8	2562.9	2562.9	2573.6
30°	2383.4	2379.9	2394.2	2387.0	2394.2	2394.2	2405.0	2397.8	2415.8	2408.5	2419.4
32.5°	2207.5	2214.8	2214.8	2207.5	2221.9	2218.4	2218.4	2211.1	2221.9	2225.5	2232.6
35°	2003.0	2013.8	2013.8	2017.2	2020.9	2010.1	2013.8	1992.1	2010.1	2013.8	2017.2
37.5°	1780.4	1769.6	1776.8	1766.0	1784.0	1762.5	1762.5	1748.1	1762.5	1762.5	1766.0
40°	1525.5	1522.0	1529.1	1522.0	1518.4	1514.8	1507.6	1496.9	1511.1	1504.0	1514.8
42.5°	1285.0	1281.5	1281.5	1274.2	1270.6	1270.6	1263.5	1256.4	1252.8	1252.8	1270.6
45°	1037.4	1044.5	1037.4	1033.8	1041.0	1033.8	1037.4	1023.0	1030.2	1023.0	1030.2
47.5°	829.1	832.8	825.6	818.4	829.1	818.4	818.4	807.6	822.0	822.0	814.9
50°	642.5	638.9	631.8	638.9	635.4	635.4	635.4	624.6	631.8	621.0	628.1
52.5°	473.9	470.2	470.2	466.6	470.2	466.6	466.6	463.0	463.0	459.5	463.0
55°	344.6	341.0	333.9	333.9	333.9	337.4	333.9	330.2	330.2	326.6	330.2
57.5°	233.4	226.1	226.1	226.1	226.1	222.5	222.5	219.0	222.5	219.0	222.5
60°	150.8	150.8	143.6	143.6	143.6	143.6	143.6	140.0	143.6	143.6	143.6
62.5°	93.4	93.4	89.8	86.1	89.8	86.1	86.1	86.1	89.8	86.1	89.8
65°	61.0	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
67.5°	43.1	39.5	39.5	39.5	39.5	39.5	39.5	35.9	39.5	39.5	39.5
70°	28.8	28.8	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
72.5°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
75°	14.4	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
77.5°	10.8	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
80°	7.1	7.1	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
82.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
85°	3.6	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	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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: P252315

CATALOG NUMBER: LE\_6B60D010R EC6B60709024 6LBSW1H

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1	2972.1
2.5°	2972.1	2975.8	2968.5	2972.1	2964.9	2972.1	2975.8	2982.9
5°	2964.9	2968.5	2961.4	2968.5	2961.4	2968.5	2972.1	2979.2
7.5°	2957.8	2964.9	2957.8	2964.9	2957.8	2964.9	2968.5	2975.8
10°	2957.8	2968.5	2961.4	2972.1	2961.4	2968.5	2975.8	2979.2
12.5°	2957.8	2968.5	2964.9	2972.1	2968.5	2975.8	2982.9	2990.0
15°	2950.6	2961.4	2954.1	2964.9	2961.4	2964.9	2979.2	2979.2
17.5°	2911.1	2921.9	2921.9	2929.0	2929.0	2939.8	2947.0	2954.1
20°	2860.9	2871.6	2868.0	2878.8	2878.8	2889.5	2896.8	2903.9
22.5°	2785.5	2799.9	2796.2	2807.0	2803.4	2810.6	2825.0	2821.4
25°	2688.5	2706.5	2702.9	2710.1	2706.5	2706.5	2713.6	2717.2
27.5°	2570.1	2580.9	2577.2	2584.5	2577.2	2584.5	2591.6	2595.2
30°	2415.8	2422.9	2419.4	2422.9	2419.4	2426.5	2430.1	2437.2
32.5°	2229.1	2239.9	2229.1	2236.2	2232.6	2232.6	2247.0	2239.9
35°	2006.5	2010.1	2013.8	2013.8	2006.5	2010.1	2017.2	2017.2
37.5°	1758.9	1776.8	1755.2	1766.0	1762.5	1762.5	1762.5	1773.2
40°	1500.4	1504.0	1496.9	1496.9	1496.9	1493.2	1507.6	1504.0
42.5°	1256.4	1259.9	1256.4	1245.5	1249.1	1249.1	1259.9	1245.5
45°	1019.4	1026.6	1023.0	1023.0	1015.9	1015.9	1019.4	1012.2
47.5°	807.6	814.9	804.0	807.6	800.5	807.6	804.0	811.2
50°	613.8	621.0	617.4	621.0	621.0	613.8	624.6	610.2
52.5°	459.5	463.0	459.5	455.9	452.2	452.2	459.5	455.9
55°	326.6	323.0	323.0	323.0	326.6	326.6	323.0	319.5
57.5°	219.0	219.0	215.4	215.4	219.0	211.8	215.4	211.8
60°	140.0	140.0	140.0	140.0	136.4	140.0	140.0	140.0
62.5°	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1
65°	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
67.5°	35.9	39.5	39.5	39.5	35.9	35.9	35.9	35.9
70°	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
72.5°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
75°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
77.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
80°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
82.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.6	3.6	3.6	3.6	3.6	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)