

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: P252715

Luminaire Tested: **LE_6B50D010R EC6B30508035 6LBDW1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P252715
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-9)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LE_6B50D010R EC6B30508035 6LBDW1H
Description: PORTFOLIO 6 INCH DOUBLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

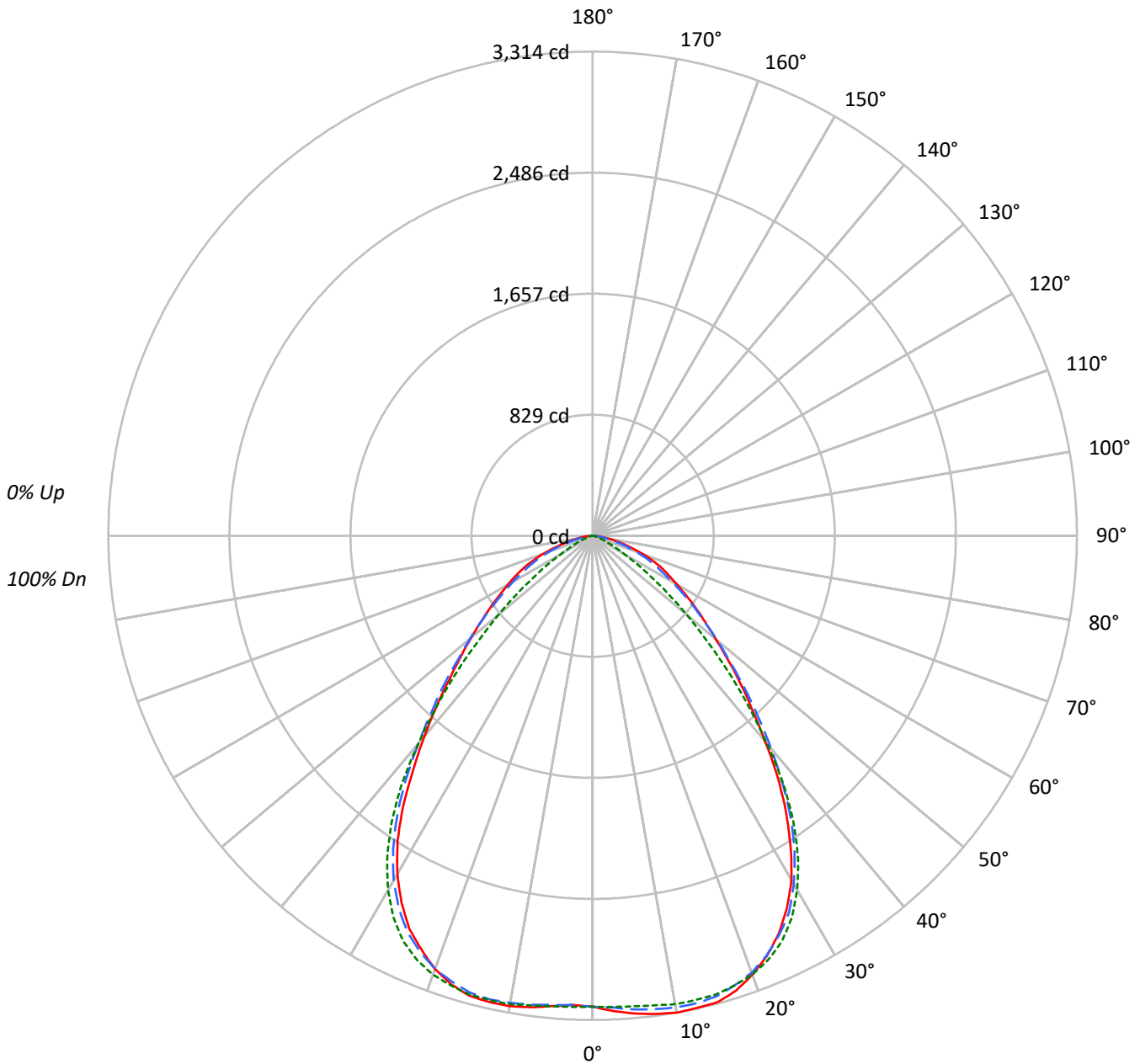
Lumens per Lamp: N/A
Luminaire Lumens: 6397.5 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.25 / 1.21
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

Input Watts (W): 58.8
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: P252715
CATALOG NUMBER: LE_6B50D010R EC6B30508035 6LBDW1H

Luminous Intensity Polar Plot





TEST NUMBER: P252715

CATALOG NUMBER: LE_6B50D010R EC6B30508035 6LBDW1H

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	109	105	102	99	101	98	96	97	95	93	94	92	91	89																			
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78																			
3	95	87	80	75	93	85	79	74	82	77	73	80	75	71	77	74	70	68																			
4	89	78	71	65	87	77	70	65	75	69	64	73	67	63	71	66	62	61																			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54																			
6	77	65	57	52	75	64	57	51	63	56	51	61	55	51	59	54	50	48																			
7	72	60	52	47	70	59	52	46	58	51	46	56	50	46	55	50	45	44																			
8	67	55	47	42	66	54	47	42	53	47	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	39	35	45	39	35	44	39	35	33																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	210284	210284	210284
5°	214970	211689	211689
10°	219569	215641	216548
15°	223240	219545	220160
20°	221884	221884	219037
25°	216596	220533	213644
30°	205042	210873	201253
35°	183731	190987	180091
40°	156091	158025	152199
45°	132076	120718	127454
50°	111524	85145	110124
55°	98001	54961	96966
60°	86848	32725	87435
65°	80243	19698	80243
70°	69586	11292	67831
75°	55178	6907	51700
80°	41102	5110	39412
85°	37502	3368	34134



TEST NUMBER: P252715

CATALOG NUMBER: LE_6B50D010R EC6B30508035 6LBDW1H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.3	4.9
10°-20°	918.4	14.4
20°-30°	1381.3	21.6
30°-40°	1452.2	22.7
40°-50°	1084.9	17.0
50°-60°	675.4	10.6
60°-70°	384.1	6.0
70°-80°	158.2	2.5
80°-90°	32.7	0.5
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°	2610.0	40.8
0°-40°	4062.2	63.5
0°-60°	5822.5	91.0
0°-90°	6397.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6397.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3223	3223	3223	3223	3223	
5°	3282	3255	3232	3223	3232	314
15°	3305	3264	3250	3237	3260	929
25°	3009	3018	3064	2995	2968	1377
35°	2307	2366	2398	2330	2261	1432
45°	1432	1463	1308	1436	1381	1109
55°	862	843	483	830	852	775
65°	520	465	128	465	520	512
75°	219	173	27	169	205	238
85°	50	32	4	27	46	56
90°	0	0	0	0	0	



TEST NUMBER: P252715

CATALOG NUMBER: LE_6B50D010R EC6B30508035 6LBDW1H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2
2.5°	3255.1	3250.5	3255.1	3246.0	3241.4	3241.4	3246.0	3236.9	3232.4	3236.9	3232.4
5°	3282.5	3273.4	3277.9	3273.4	3264.2	3264.2	3268.8	3255.1	3255.1	3259.6	3255.1
7.5°	3300.8	3300.8	3300.8	3291.6	3287.0	3282.5	3291.6	3277.9	3273.4	3273.4	3268.8
10°	3314.4	3309.9	3314.4	3305.2	3296.1	3291.6	3300.8	3291.6	3282.5	3291.6	3277.9
12.5°	3309.9	3309.9	3309.9	3305.2	3296.1	3291.6	3300.8	3287.0	3282.5	3287.0	3277.9
15°	3305.2	3291.6	3296.1	3291.6	3277.9	3277.9	3282.5	3268.8	3259.6	3273.4	3264.2
17.5°	3264.2	3255.1	3259.6	3250.5	3241.4	3236.9	3241.4	3236.9	3227.8	3236.9	3227.8
20°	3195.9	3195.9	3200.4	3191.2	3182.1	3177.6	3186.8	3177.6	3168.5	3182.1	3182.1
22.5°	3113.8	3113.8	3113.8	3109.2	3104.6	3104.6	3104.6	3100.1	3095.5	3104.6	3109.2
25°	3008.9	3004.4	3008.9	3013.5	3008.9	3004.4	3008.9	3008.9	2999.8	3018.0	3018.0
27.5°	2876.8	2876.8	2885.9	2881.2	2881.2	2876.8	2885.9	2885.9	2881.2	2895.0	2908.6
30°	2721.8	2712.6	2721.8	2721.8	2726.2	2726.2	2730.9	2730.9	2730.9	2744.5	2753.6
32.5°	2521.1	2525.6	2539.4	2534.8	2530.2	2543.9	2543.9	2553.0	2557.6	2566.8	2571.2
35°	2306.9	2311.4	2311.4	2316.0	2325.1	2316.0	2338.8	2334.2	2338.8	2357.0	2366.1
37.5°	2078.9	2065.2	2088.0	2078.9	2083.5	2083.5	2092.6	2097.1	2110.8	2133.6	2133.6
40°	1832.8	1837.2	1846.4	1851.0	1855.5	1855.5	1855.5	1869.1	1873.8	1901.1	1896.5
42.5°	1618.4	1618.4	1627.5	1632.1	1632.1	1632.1	1632.1	1645.8	1654.9	1664.0	1673.1
45°	1431.5	1417.9	1427.0	1427.0	1436.1	1431.5	1440.6	1449.8	1454.4	1468.0	1463.4
47.5°	1253.8	1249.1	1253.8	1258.2	1253.8	1258.2	1262.9	1267.4	1272.0	1272.0	1272.0
50°	1098.8	1098.8	1103.2	1107.9	1107.9	1107.9	1107.9	1112.4	1112.4	1121.5	1112.4
52.5°	971.0	975.6	975.6	971.0	975.6	975.6	980.1	980.1	975.6	975.6	962.0
55°	861.6	857.1	861.6	857.1	861.6	861.6	857.1	857.1	852.5	848.0	843.4
57.5°	756.8	756.8	756.8	756.8	752.2	756.8	752.2	747.6	747.6	738.5	724.9
60°	665.6	665.6	665.6	665.6	665.6	661.0	665.6	661.0	651.9	642.9	624.6
62.5°	588.1	583.5	588.1	583.5	583.5	579.0	579.0	574.4	565.4	556.2	538.0
65°	519.8	524.2	519.8	519.8	515.1	510.6	510.6	506.0	492.4	483.2	465.0
67.5°	446.8	442.2	442.2	442.2	437.6	437.6	437.6	428.5	419.4	405.8	387.5
70°	364.8	364.8	364.8	360.1	360.1	355.6	355.6	351.0	341.9	332.8	310.0
72.5°	287.2	287.2	287.2	278.1	282.6	278.1	278.1	269.0	264.4	250.8	237.1
75°	218.9	218.9	214.2	214.2	209.8	205.1	205.1	200.6	196.0	186.9	173.2
77.5°	159.6	159.6	159.6	155.0	150.5	145.9	145.9	141.4	136.8	132.2	123.1
80°	109.4	109.4	109.4	109.4	104.9	100.2	100.2	95.8	95.8	91.1	82.0
82.5°	73.0	73.0	73.0	73.0	68.4	68.4	68.4	63.9	59.2	59.2	50.1
85°	50.1	50.1	45.6	45.6	45.6	45.6	41.0	41.0	36.5	31.9	31.9
87.5°	27.4	27.4	27.4	27.4	22.8	22.8	22.8	22.8	18.2	18.2	13.6
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: P252715

CATALOG NUMBER: LE_6B50D010R EC6B30508035 6LBDW1H

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2
2.5°	3246.0	3246.0	3241.4	3227.8	3232.4	3227.8	3232.4	3227.8	3214.1	3227.8	3214.1
5°	3264.2	3268.8	3259.6	3241.4	3246.0	3241.4	3241.4	3236.9	3223.2	3232.4	3223.2
7.5°	3282.5	3277.9	3273.4	3255.1	3259.6	3255.1	3255.1	3246.0	3232.4	3241.4	3227.8
10°	3291.6	3291.6	3282.5	3264.2	3264.2	3259.6	3264.2	3259.6	3241.4	3255.1	3246.0
12.5°	3291.6	3287.0	3287.0	3264.2	3268.8	3264.2	3268.8	3259.6	3246.0	3255.1	3250.5
15°	3277.9	3277.9	3273.4	3250.5	3255.1	3255.1	3259.6	3250.5	3236.9	3250.5	3241.4
17.5°	3250.5	3250.5	3246.0	3227.8	3236.9	3236.9	3241.4	3232.4	3218.6	3227.8	3227.8
20°	3195.9	3200.4	3200.4	3186.8	3195.9	3195.9	3200.4	3195.9	3191.2	3195.9	3186.8
22.5°	3132.0	3141.1	3141.1	3127.5	3136.6	3136.6	3150.2	3145.8	3136.6	3141.1	3136.6
25°	3036.2	3045.4	3054.5	3045.4	3054.5	3054.5	3068.2	3063.6	3054.5	3063.6	3050.0
27.5°	2926.9	2931.4	2940.5	2931.4	2945.1	2940.5	2954.2	2949.6	2936.0	2949.6	2945.1
30°	2771.9	2790.1	2803.8	2790.1	2803.8	2803.8	2812.9	2808.4	2803.8	2799.2	2799.2
32.5°	2598.6	2616.9	2616.9	2612.2	2621.4	2621.4	2626.0	2616.9	2612.2	2616.9	2621.4
35°	2384.4	2393.5	2402.6	2398.0	2402.6	2407.1	2402.6	2407.1	2393.5	2398.0	2398.0
37.5°	2151.9	2161.0	2161.0	2147.2	2156.4	2156.4	2147.2	2147.2	2138.1	2147.2	2129.0
40°	1905.6	1896.5	1901.1	1892.0	1882.9	1882.9	1878.2	1860.1	1851.0	1855.5	1860.1
42.5°	1664.0	1664.0	1650.4	1627.5	1604.8	1604.8	1591.1	1582.0	1563.8	1572.9	1568.2
45°	1458.9	1436.1	1417.9	1381.4	1367.8	1358.6	1335.8	1313.0	1303.9	1308.4	1303.9
47.5°	1262.9	1244.6	1199.0	1148.9	1135.1	1121.5	1094.1	1066.8	1057.6	1048.6	1048.6
50°	1098.8	1066.8	1016.6	962.0	939.1	916.4	879.9	852.5	834.2	838.9	838.9
52.5°	948.2	911.8	852.5	784.1	756.8	729.4	697.5	665.6	651.9	647.4	647.4
55°	816.0	775.0	715.8	638.2	615.5	583.5	542.5	506.0	487.8	483.2	492.4
57.5°	697.5	661.0	592.6	515.1	487.8	455.9	414.9	383.0	360.1	355.6	360.1
60°	601.8	551.6	492.4	419.4	383.0	355.6	310.0	282.6	259.9	250.8	255.2
62.5°	506.0	460.5	401.2	328.2	300.9	273.5	232.5	200.6	182.4	177.8	182.4
65°	433.1	387.5	332.8	269.0	241.6	214.2	177.8	145.9	132.2	127.6	132.2
67.5°	360.1	319.1	273.5	214.2	191.5	168.6	132.2	109.4	91.1	86.6	91.1
70°	291.8	255.2	209.8	168.6	145.9	127.6	100.2	77.5	63.9	59.2	63.9
72.5°	218.9	191.5	159.6	123.1	109.4	95.8	73.0	54.8	45.6	41.0	45.6
75°	159.6	136.8	114.0	86.6	77.5	68.4	50.1	36.5	31.9	27.4	31.9
77.5°	109.4	95.8	77.5	59.2	50.1	45.6	31.9	27.4	22.8	18.2	18.2
80°	73.0	63.9	50.1	41.0	36.5	31.9	22.8	18.2	13.6	13.6	13.6
82.5°	45.6	36.5	31.9	22.8	18.2	18.2	13.6	9.1	9.1	9.1	9.1
85°	27.4	22.8	18.2	13.6	9.1	9.1	4.5	4.5	4.5	4.5	4.5
87.5°	13.6	9.1	9.1	4.5	4.5	4.5	4.5	4.5	0.0	0.0	4.5
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: P252715

CATALOG NUMBER: LE_6B50D010R EC6B30508035 6LBDW1H

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2
2.5°	3223.2	3214.1	3214.1	3218.6	3223.2	3227.8	3218.6	3214.1	3214.1	3227.8	3218.6
5°	3223.2	3218.6	3218.6	3218.6	3227.8	3232.4	3223.2	3218.6	3223.2	3236.9	3232.4
7.5°	3236.9	3227.8	3232.4	3232.4	3236.9	3246.0	3236.9	3232.4	3236.9	3250.5	3241.4
10°	3246.0	3236.9	3241.4	3236.9	3250.5	3255.1	3246.0	3241.4	3246.0	3264.2	3259.6
12.5°	3250.5	3246.0	3246.0	3241.4	3255.1	3259.6	3250.5	3246.0	3250.5	3264.2	3259.6
15°	3241.4	3236.9	3236.9	3236.9	3246.0	3255.1	3241.4	3236.9	3236.9	3250.5	3246.0
17.5°	3223.2	3214.1	3214.1	3214.1	3218.6	3223.2	3209.5	3205.0	3200.4	3214.1	3209.5
20°	3191.2	3182.1	3173.0	3173.0	3177.6	3177.6	3168.5	3154.9	3154.9	3159.4	3150.2
22.5°	3132.0	3127.5	3118.4	3113.8	3122.9	3118.4	3100.1	3086.4	3081.9	3086.4	3077.2
25°	3050.0	3040.9	3036.2	3031.8	3036.2	3031.8	3013.5	2995.2	2995.2	2995.2	2981.6
27.5°	2936.0	2926.9	2922.2	2922.2	2926.9	2917.8	2899.5	2881.2	2872.1	2872.1	2858.5
30°	2790.1	2790.1	2785.5	2781.0	2776.4	2776.4	2749.1	2730.9	2721.8	2726.2	2717.1
32.5°	2612.2	2607.8	2603.1	2589.5	2594.0	2589.5	2566.8	2553.0	2539.4	2530.2	2525.6
35°	2384.4	2384.4	2379.8	2379.8	2379.8	2375.2	2352.4	2338.8	2329.6	2325.1	2311.4
37.5°	2133.6	2129.0	2124.5	2124.5	2124.5	2124.5	2110.8	2097.1	2097.1	2092.6	2083.5
40°	1851.0	1855.5	1860.1	1855.5	1869.1	1882.9	1864.6	1855.5	1851.0	1864.6	1846.4
42.5°	1577.4	1572.9	1595.6	1600.2	1600.2	1623.0	1627.5	1632.1	1627.5	1636.6	1636.6
45°	1313.0	1308.4	1331.2	1340.4	1363.1	1390.5	1404.1	1427.0	1436.1	1445.2	1436.1
47.5°	1062.2	1080.5	1098.8	1121.5	1139.8	1185.4	1212.8	1235.5	1244.6	1258.2	1258.2
50°	852.5	870.8	902.6	920.9	943.8	998.4	1044.0	1075.9	1094.1	1107.9	1103.2
52.5°	656.5	688.4	729.4	747.6	779.6	843.4	893.5	930.0	952.9	966.5	971.0
55°	506.0	533.4	574.4	601.8	633.8	702.1	765.9	807.0	829.8	848.0	857.1
57.5°	373.9	405.8	451.4	474.1	510.6	588.1	642.9	693.0	720.4	743.1	747.6
60°	273.5	305.5	346.5	373.9	410.2	487.8	551.6	597.2	629.1	647.4	656.5
62.5°	196.0	228.0	269.0	296.4	328.2	396.6	460.5	506.0	538.0	560.8	574.4
65°	141.4	173.2	214.2	237.1	264.4	328.2	387.5	433.1	465.0	492.4	501.5
67.5°	104.9	127.6	164.1	186.9	214.2	264.4	314.6	355.6	387.5	410.2	419.4
70°	77.5	95.8	127.6	141.4	159.6	205.1	246.1	282.6	310.0	328.2	337.4
72.5°	54.8	68.4	91.1	104.9	118.5	155.0	186.9	214.2	232.5	250.8	259.9
75°	36.5	45.6	63.9	73.0	82.0	109.4	132.2	155.0	168.6	182.4	186.9
77.5°	22.8	31.9	45.6	50.1	59.2	73.0	91.1	104.9	114.0	123.1	132.2
80°	13.6	18.2	27.4	31.9	36.5	50.1	59.2	68.4	77.5	86.6	91.1
82.5°	9.1	13.6	18.2	18.2	22.8	27.4	36.5	45.6	50.1	54.8	59.2
85°	4.5	4.5	9.1	9.1	13.6	13.6	18.2	22.8	27.4	31.9	36.5
87.5°	4.5	4.5	4.5	4.5	9.1	9.1	13.6	13.6	13.6	18.2	18.2
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: P252715

CATALOG NUMBER: LE_6B50D010R EC6B30508035 6LBDW1H

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2	3223.2
2.5°	3209.5	3223.2	3209.5	3218.6	3214.1	3214.1	3209.5	3214.1
5°	3223.2	3241.4	3223.2	3236.9	3227.8	3227.8	3227.8	3232.4
7.5°	3236.9	3255.1	3241.4	3255.1	3250.5	3246.0	3246.0	3255.1
10°	3250.5	3264.2	3255.1	3268.8	3264.2	3259.6	3259.6	3268.8
12.5°	3250.5	3268.8	3259.6	3273.4	3268.8	3264.2	3264.2	3268.8
15°	3236.9	3259.6	3246.0	3259.6	3255.1	3250.5	3250.5	3259.6
17.5°	3195.9	3214.1	3205.0	3214.1	3214.1	3209.5	3214.1	3218.6
20°	3141.1	3154.9	3145.8	3154.9	3154.9	3145.8	3150.2	3154.9
22.5°	3063.6	3077.2	3068.2	3077.2	3072.8	3068.2	3068.2	3063.6
25°	2967.9	2986.1	2972.5	2981.6	2972.5	2963.4	2963.4	2967.9
27.5°	2849.4	2863.0	2844.8	2853.9	2844.8	2835.6	2835.6	2831.1
30°	2694.4	2698.9	2685.2	2694.4	2685.2	2680.6	2671.5	2671.5
32.5°	2507.5	2512.0	2498.4	2498.4	2489.2	2489.2	2471.0	2484.6
35°	2288.6	2293.1	2288.6	2284.0	2270.4	2265.8	2261.2	2261.2
37.5°	2060.6	2060.6	2047.0	2042.4	2033.2	2024.1	2028.8	2015.1
40°	1828.1	1823.6	1809.9	1814.5	1809.9	1796.2	1791.6	1787.1
42.5°	1609.4	1609.4	1595.6	1600.2	1591.1	1586.5	1572.9	1577.4
45°	1417.9	1417.9	1404.1	1404.1	1399.6	1385.9	1390.5	1381.4
47.5°	1244.6	1244.6	1240.0	1240.0	1226.4	1221.8	1221.8	1221.8
50°	1094.1	1094.1	1094.1	1094.1	1089.6	1085.0	1080.5	1085.0
52.5°	966.5	975.6	971.0	971.0	966.5	962.0	957.4	957.4
55°	852.5	857.1	857.1	861.6	857.1	852.5	857.1	852.5
57.5°	752.2	761.4	761.4	761.4	761.4	761.4	756.8	752.2
60°	665.6	670.1	670.1	674.8	674.8	674.8	670.1	670.1
62.5°	579.0	588.1	592.6	592.6	597.2	592.6	592.6	592.6
65°	510.6	519.8	524.2	519.8	524.2	524.2	519.8	519.8
67.5°	428.5	437.6	437.6	437.6	437.6	442.2	437.6	437.6
70°	346.5	355.6	351.0	355.6	355.6	355.6	355.6	355.6
72.5°	264.4	269.0	273.5	273.5	278.1	273.5	273.5	273.5
75°	191.5	200.6	200.6	200.6	200.6	205.1	205.1	205.1
77.5°	136.8	141.4	141.4	145.9	145.9	145.9	145.9	150.5
80°	95.8	95.8	100.2	100.2	104.9	104.9	104.9	104.9
82.5°	63.9	68.4	68.4	68.4	68.4	68.4	68.4	68.4
85°	36.5	41.0	41.0	41.0	41.0	45.6	45.6	45.6
87.5°	22.8	22.8	22.8	22.8	22.8	22.8	18.2	18.2
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)