

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: P252297

Luminaire Tested: **LE_6B50D010R EC6B30508027 6LBSW1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P252297
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_6B50D010R EC6B30508027 6LBSW1H
Description: PORTFOLIO 6 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5907.5 lumens
Efficiency: N/A
Efficacy: 100.5 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

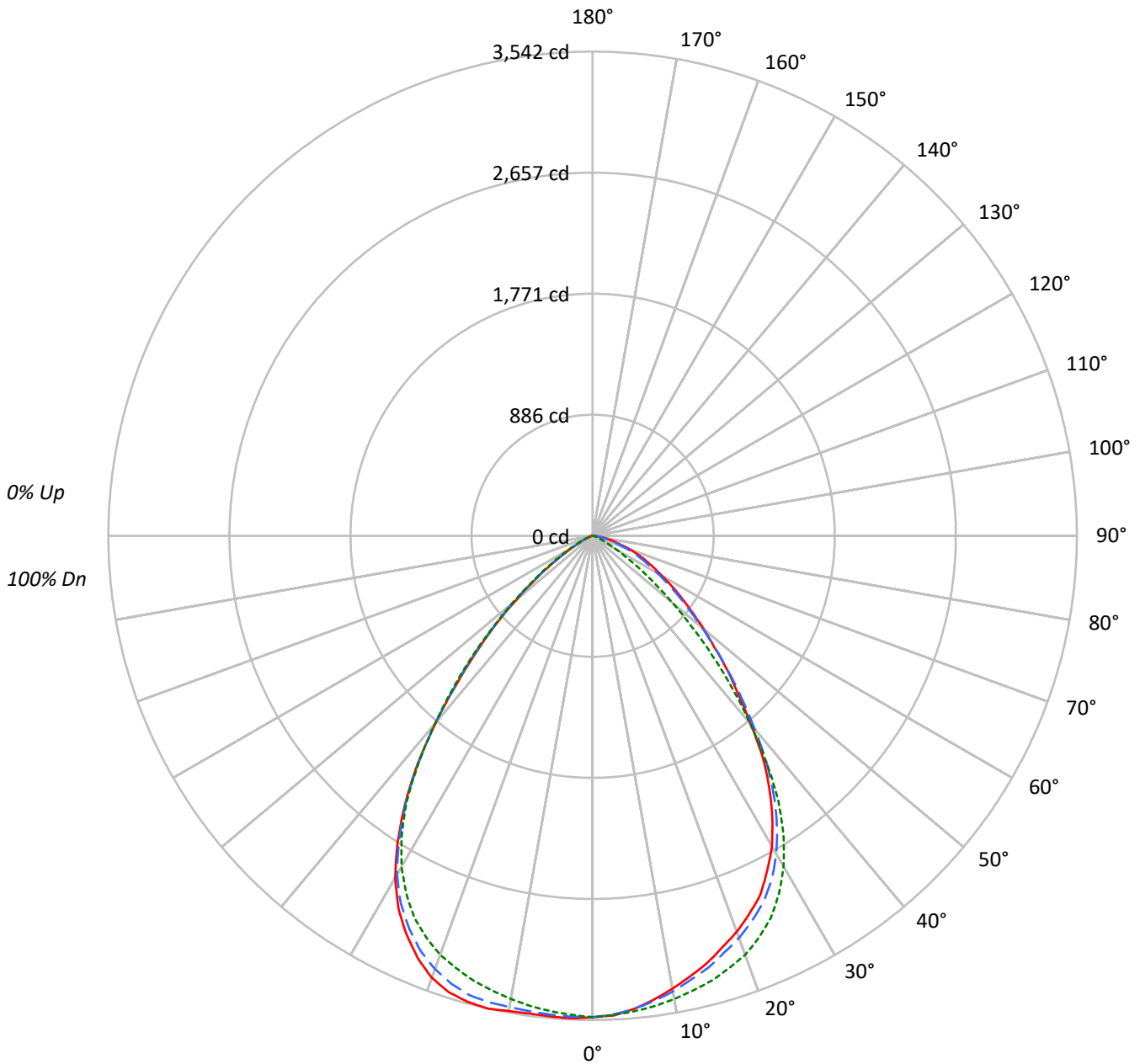
Input Watts (W): 58.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P252297

CATALOG NUMBER: LE_6B50D010R EC6B30508027 6LBSW1H

Luminous Intensity Polar Plot





TEST NUMBER: P252297

CATALOG NUMBER: LE_6B50D010R EC6B30508027 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°	229725	229725	229725
5°	227544	228658	231166
10°	222849	227916	233839
15°	218580	227488	238410
20°	214059	226466	238859
25°	208785	221944	231734
30°	197667	210481	217533
35°	179510	188661	190349
40°	153204	152480	151757
45°	128699	114177	110643
50°	107475	77259	73382
55°	90449	47408	43052
60°	76579	24974	21647
65°	66303	13122	10497
70°	55146	8107	5684
75°	40735	5344	3227
80°	31935	3193	1578
85°	25451	3144	0



TEST NUMBER: P252297

CATALOG NUMBER: LE_6B50D010R EC6B30508027 6LBSW1H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	331.9	5.6
10°-20°	950.2	16.1
20°-30°	1403.1	23.8
30°-40°	1446.0	24.5
40°-50°	998.8	16.9
50°-60°	492.3	8.3
60°-70°	199.5	3.4
70°-80°	71.1	1.2
80°-90°	14.7	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°	2685.2	45.5
0°-40°	4131.2	69.9
0°-60°	5622.2	95.2
0°-90°	5907.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5907.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3521	3521	3521	3521	3521	
5°	3474	3474	3492	3517	3530	328
15°	3236	3270	3368	3479	3530	911
25°	2900	2956	3083	3172	3219	1326
35°	2254	2309	2369	2382	2390	1397
45°	1395	1403	1238	1220	1199	1078
55°	795	766	417	391	378	719
65°	430	387	85	68	68	427
75°	162	136	21	13	13	181
85°	34	26	4	0	0	42
90°	0	0	0	0	0	



TEST NUMBER: P252297

CATALOG NUMBER: LE_6B50D010R EC6B30508027 6LBSW1H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2
2.5°	3512.8	3500.0	3508.5	3491.5	3512.8	3491.5	3495.8	3500.0	3495.8	3500.0	3504.2
5°	3474.5	3461.8	3474.5	3453.2	3474.5	3461.8	3461.8	3466.0	3466.0	3470.2	3474.5
7.5°	3423.4	3410.6	3423.4	3402.1	3427.6	3414.9	3414.9	3423.4	3419.1	3423.4	3431.9
10°	3363.9	3346.9	3359.6	3346.9	3372.4	3355.4	3363.9	3363.9	3363.9	3376.6	3385.1
12.5°	3300.1	3283.1	3300.1	3278.9	3304.4	3291.6	3295.9	3308.6	3312.9	3321.4	3325.6
15°	3236.2	3215.0	3223.5	3210.8	3236.2	3223.5	3227.8	3244.8	3244.8	3257.6	3270.4
17.5°	3155.5	3138.5	3155.5	3138.5	3159.8	3151.2	3159.8	3172.5	3172.5	3185.2	3198.0
20°	3083.2	3066.2	3079.0	3066.2	3091.8	3079.0	3083.2	3100.2	3104.5	3117.2	3130.0
22.5°	2993.9	2981.1	2989.6	2976.9	3002.4	2993.9	2998.1	3015.1	3019.4	3027.9	3049.1
25°	2900.4	2874.9	2887.6	2879.1	2904.6	2891.9	2900.4	2917.4	2925.9	2938.6	2955.6
27.5°	2764.2	2751.5	2760.0	2760.0	2781.2	2768.5	2772.8	2789.8	2802.5	2815.2	2836.5
30°	2623.9	2602.6	2611.1	2615.4	2632.4	2623.9	2632.4	2649.4	2653.6	2670.8	2687.8
32.5°	2445.2	2436.8	2453.8	2445.2	2453.8	2453.8	2458.0	2470.9	2479.4	2487.9	2509.1
35°	2253.9	2236.9	2253.9	2245.4	2266.8	2253.9	2266.8	2279.5	2279.5	2296.5	2309.2
37.5°	2045.5	2024.2	2032.8	2032.8	2041.2	2037.0	2037.0	2058.2	2062.5	2075.4	2088.1
40°	1798.9	1790.4	1807.4	1803.1	1807.4	1807.4	1811.6	1824.4	1832.9	1837.1	1841.4
42.5°	1577.8	1582.0	1586.2	1586.2	1586.2	1586.2	1586.2	1603.2	1599.0	1611.8	1616.0
45°	1394.9	1377.9	1386.4	1382.1	1394.9	1382.1	1394.9	1407.6	1399.1	1411.9	1403.4
47.5°	1207.8	1207.8	1207.8	1203.5	1212.0	1207.8	1216.2	1220.5	1220.5	1220.5	1216.2
50°	1058.9	1046.1	1050.4	1050.4	1054.6	1050.4	1058.9	1063.1	1063.1	1054.6	1037.6
52.5°	914.4	910.1	910.1	918.6	918.6	914.4	914.4	914.4	914.4	901.6	893.1
55°	795.2	786.8	791.0	791.0	791.0	791.0	795.2	791.0	791.0	778.2	765.5
57.5°	688.9	680.4	680.4	680.4	684.6	680.4	680.4	680.4	676.1	663.4	646.4
60°	586.9	582.6	586.9	586.9	591.1	586.9	586.9	586.9	578.4	565.6	548.6
62.5°	501.9	501.9	501.9	506.1	506.1	501.9	501.9	497.6	493.4	476.2	459.2
65°	429.5	425.2	429.5	429.5	433.8	433.8	429.5	425.2	421.0	404.0	387.0
67.5°	357.2	353.0	357.2	357.2	361.5	357.2	357.2	357.2	344.5	336.0	319.0
70°	289.1	284.9	284.9	284.9	289.1	280.6	284.9	284.9	276.4	263.6	246.6
72.5°	221.1	221.1	221.1	221.1	221.1	221.1	216.9	216.9	208.4	195.6	187.1
75°	161.6	161.6	165.9	165.9	161.6	161.6	161.6	157.4	153.1	144.6	136.1
77.5°	119.1	119.1	119.1	119.1	114.9	114.9	114.9	110.6	106.4	102.1	93.5
80°	85.0	85.0	85.0	80.8	85.0	80.8	80.8	80.8	72.2	68.0	63.8
82.5°	59.5	55.2	55.2	55.2	55.2	55.2	55.2	51.0	51.0	46.8	42.5
85°	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	29.8	25.5	25.5
87.5°	17.0	21.2	21.2	21.2	21.2	21.2	21.2	17.0	17.0	17.0	12.8
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: P252297

CATALOG NUMBER: LE_6B50D010R EC6B30508027 6LBSW1H

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2
2.5°	3504.2	3504.2	3512.8	3500.0	3521.2	3508.5	3504.2	3525.5	3512.8	3508.5	3517.0
5°	3474.5	3478.8	3483.0	3474.5	3495.8	3483.0	3483.0	3504.2	3495.8	3491.5	3504.2
7.5°	3436.1	3440.4	3449.0	3444.6	3461.8	3453.2	3457.5	3478.8	3470.2	3470.2	3483.0
10°	3389.4	3397.9	3406.4	3406.4	3427.6	3419.1	3419.1	3444.6	3436.1	3440.4	3457.5
12.5°	3334.1	3346.9	3359.6	3363.9	3385.1	3372.4	3376.6	3406.4	3402.1	3406.4	3423.4
15°	3274.6	3291.6	3304.4	3304.4	3329.9	3317.1	3329.9	3359.6	3351.1	3368.1	3389.4
17.5°	3206.5	3223.5	3240.5	3244.8	3270.4	3261.9	3278.9	3308.6	3308.6	3317.1	3342.6
20°	3142.8	3164.0	3172.5	3185.2	3210.8	3206.5	3215.0	3249.0	3249.0	3261.9	3287.4
22.5°	3057.8	3079.0	3096.0	3108.8	3130.0	3130.0	3142.8	3172.5	3172.5	3181.0	3206.5
25°	2964.1	2989.6	3002.4	3015.1	3036.4	3032.1	3044.9	3070.5	3074.8	3083.2	3108.8
27.5°	2845.0	2866.4	2883.4	2891.9	2921.6	2904.6	2917.4	2947.1	2942.9	2951.4	2972.6
30°	2696.2	2717.5	2734.5	2734.5	2760.0	2760.0	2772.8	2785.5	2785.5	2794.0	2811.0
32.5°	2521.9	2547.4	2547.4	2560.1	2577.1	2560.1	2577.1	2594.1	2585.6	2598.4	2611.1
35°	2322.0	2334.8	2339.0	2339.0	2351.8	2347.5	2343.2	2356.0	2347.5	2368.8	2381.5
37.5°	2079.6	2096.6	2088.1	2096.6	2092.4	2079.6	2079.6	2100.9	2083.9	2088.1	2100.9
40°	1845.6	1845.6	1841.4	1820.1	1824.4	1811.6	1807.4	1811.6	1794.6	1790.4	1807.4
42.5°	1603.2	1599.0	1586.2	1556.5	1560.8	1539.5	1522.5	1522.5	1514.0	1509.8	1514.0
45°	1386.4	1373.6	1352.4	1318.4	1309.9	1292.9	1258.8	1250.2	1237.5	1237.5	1241.8
47.5°	1186.5	1169.5	1135.5	1097.2	1075.9	1054.6	1020.6	1007.9	986.6	978.1	986.6
50°	1020.6	990.9	948.4	893.1	871.8	846.2	812.2	791.0	769.8	761.2	757.0
52.5°	867.5	825.0	782.5	714.5	697.5	671.9	625.1	603.9	582.6	565.6	565.6
55°	735.8	697.5	637.9	574.1	548.6	523.1	476.2	446.5	425.2	416.8	408.2
57.5°	616.6	574.1	518.9	450.8	425.2	399.8	353.0	323.2	302.0	289.1	280.6
60°	518.9	472.0	416.8	357.2	327.5	302.0	255.1	225.4	204.1	191.4	182.9
62.5°	425.2	387.0	331.8	276.4	250.9	225.4	187.1	157.4	136.1	127.6	114.9
65°	357.2	319.0	267.9	221.1	199.9	174.4	140.4	114.9	97.8	85.0	76.5
67.5°	289.1	259.4	216.9	174.4	153.1	136.1	106.4	85.0	68.0	59.5	55.2
70°	229.6	199.9	165.9	131.9	119.1	102.1	80.8	59.5	51.0	42.5	38.2
72.5°	170.1	148.9	123.4	97.8	85.0	76.5	55.2	46.8	34.0	29.8	25.5
75°	123.4	106.4	89.2	68.0	59.5	55.2	42.5	29.8	25.5	21.2	17.0
77.5°	85.0	76.5	59.5	46.8	42.5	38.2	29.8	21.2	17.0	12.8	12.8
80°	55.2	46.8	38.2	29.8	29.8	25.5	17.0	12.8	12.8	8.5	8.5
82.5°	34.0	29.8	25.5	21.2	17.0	17.0	12.8	8.5	8.5	4.2	4.2
85°	21.2	17.0	12.8	12.8	8.5	8.5	8.5	4.2	4.2	4.2	4.2
87.5°	8.5	8.5	8.5	4.2	4.2	4.2	4.2	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: P252297

CATALOG NUMBER: LE_6B50D010R EC6B30508027 6LBSW1H

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2
2.5°	3517.0	3517.0	3525.5	3512.8	3521.2	3521.2	3529.8	3512.8	3521.2	3525.5	3534.0
5°	3500.0	3504.2	3512.8	3508.5	3512.8	3512.8	3521.2	3500.0	3517.0	3517.0	3529.8
7.5°	3483.0	3483.0	3491.5	3487.2	3495.8	3500.0	3508.5	3491.5	3508.5	3508.5	3521.2
10°	3461.8	3461.8	3474.5	3470.2	3483.0	3487.2	3500.0	3483.0	3500.0	3504.2	3517.0
12.5°	3431.9	3436.1	3449.0	3449.0	3461.8	3470.2	3483.0	3474.5	3495.8	3500.0	3517.0
15°	3397.9	3406.4	3423.4	3419.1	3431.9	3444.6	3461.8	3449.0	3478.8	3487.2	3504.2
17.5°	3355.4	3363.9	3376.6	3376.6	3389.4	3397.9	3419.1	3410.6	3436.1	3440.4	3461.8
20°	3291.6	3304.4	3321.4	3317.1	3329.9	3338.4	3355.4	3346.9	3372.4	3380.9	3402.1
22.5°	3215.0	3223.5	3236.2	3236.2	3249.0	3257.6	3274.6	3261.9	3287.4	3291.6	3308.6
25°	3113.0	3121.5	3130.0	3134.2	3147.0	3151.2	3159.8	3151.2	3172.5	3176.8	3198.0
27.5°	2981.1	2985.4	2998.1	2998.1	3006.6	3010.9	3023.6	3006.6	3036.4	3036.4	3049.1
30°	2823.8	2819.5	2836.5	2828.0	2836.5	2836.5	2849.2	2840.8	2862.1	2853.5	2866.4
32.5°	2615.4	2623.9	2623.9	2615.4	2632.4	2628.1	2628.1	2619.6	2632.4	2636.6	2645.1
35°	2373.0	2385.8	2385.8	2390.0	2394.2	2381.5	2385.8	2360.2	2381.5	2385.8	2390.0
37.5°	2109.4	2096.6	2105.1	2092.4	2113.6	2088.1	2088.1	2071.1	2088.1	2088.1	2092.4
40°	1807.4	1803.1	1811.6	1803.1	1798.9	1794.6	1786.1	1773.4	1790.4	1781.9	1794.6
42.5°	1522.5	1518.2	1518.2	1509.8	1505.5	1505.5	1497.0	1488.5	1484.2	1484.2	1505.5
45°	1229.0	1237.5	1229.0	1224.8	1233.2	1224.8	1229.0	1212.0	1220.5	1212.0	1220.5
47.5°	982.4	986.6	978.1	969.6	982.4	969.6	969.6	956.9	973.9	973.9	965.4
50°	761.2	757.0	748.5	757.0	752.8	752.8	752.8	740.0	748.5	735.8	744.2
52.5°	561.4	557.1	557.1	552.9	557.1	552.9	552.9	548.6	548.6	544.4	548.6
55°	408.2	404.0	395.5	395.5	395.5	399.8	395.5	391.2	391.2	387.0	391.2
57.5°	276.4	267.9	267.9	267.9	267.9	263.6	263.6	259.4	263.6	259.4	263.6
60°	178.6	178.6	170.1	170.1	170.1	170.1	170.1	165.9	170.1	170.1	170.1
62.5°	110.6	110.6	106.4	102.1	106.4	102.1	102.1	102.1	106.4	102.1	106.4
65°	72.2	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
67.5°	51.0	46.8	46.8	46.8	46.8	46.8	46.8	42.5	46.8	46.8	46.8
70°	34.0	34.0	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
72.5°	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
75°	17.0	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
77.5°	12.8	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
80°	8.5	8.5	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
82.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
85°	4.2	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	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
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: P252297

CATALOG NUMBER: LE_6B50D010R EC6B30508027 6LBSW1H

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2	3521.2
2.5°	3521.2	3525.5	3517.0	3521.2	3512.8	3521.2	3525.5	3534.0
5°	3512.8	3517.0	3508.5	3517.0	3508.5	3517.0	3521.2	3529.8
7.5°	3504.2	3512.8	3504.2	3512.8	3504.2	3512.8	3517.0	3525.5
10°	3504.2	3517.0	3508.5	3521.2	3508.5	3517.0	3525.5	3529.8
12.5°	3504.2	3517.0	3512.8	3521.2	3517.0	3525.5	3534.0	3542.5
15°	3495.8	3508.5	3500.0	3512.8	3508.5	3512.8	3529.8	3529.8
17.5°	3449.0	3461.8	3461.8	3470.2	3470.2	3483.0	3491.5	3500.0
20°	3389.4	3402.1	3397.9	3410.6	3410.6	3423.4	3431.9	3440.4
22.5°	3300.1	3317.1	3312.9	3325.6	3321.4	3329.9	3346.9	3342.6
25°	3185.2	3206.5	3202.2	3210.8	3206.5	3206.5	3215.0	3219.2
27.5°	3044.9	3057.8	3053.4	3062.0	3053.4	3062.0	3070.5	3074.8
30°	2862.1	2870.6	2866.4	2870.6	2866.4	2874.9	2879.1	2887.6
32.5°	2640.9	2653.6	2640.9	2649.4	2645.1	2645.1	2662.2	2653.6
35°	2377.2	2381.5	2385.8	2385.8	2377.2	2381.5	2390.0	2390.0
37.5°	2083.9	2105.1	2079.6	2092.4	2088.1	2088.1	2088.1	2100.9
40°	1777.6	1781.9	1773.4	1773.4	1773.4	1769.1	1786.1	1781.9
42.5°	1488.5	1492.8	1488.5	1475.6	1480.0	1480.0	1492.8	1475.6
45°	1207.8	1216.2	1212.0	1212.0	1203.5	1203.5	1207.8	1199.2
47.5°	956.9	965.4	952.6	956.9	948.4	956.9	952.6	961.1
50°	727.2	735.8	731.5	735.8	735.8	727.2	740.0	723.0
52.5°	544.4	548.6	544.4	540.1	535.9	535.9	544.4	540.1
55°	387.0	382.8	382.8	382.8	387.0	387.0	382.8	378.5
57.5°	259.4	259.4	255.1	255.1	259.4	250.9	255.1	250.9
60°	165.9	165.9	165.9	165.9	161.6	165.9	165.9	165.9
62.5°	102.1	102.1	102.1	102.1	102.1	102.1	102.1	102.1
65°	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
67.5°	42.5	46.8	46.8	46.8	42.5	42.5	42.5	42.5
70°	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
72.5°	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
75°	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
77.5°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
80°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
82.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.2	4.2	4.2	4.2	4.2	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)