

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P859356

Luminaire Tested: **LX4C65D010 EX4C659030 4LBSWNH**

Issue Date: 2/18/2022

Test Information

Test Method: LM-79-08
Report Number: P859356
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C65D010 EX4C659030 4LBSWNH
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

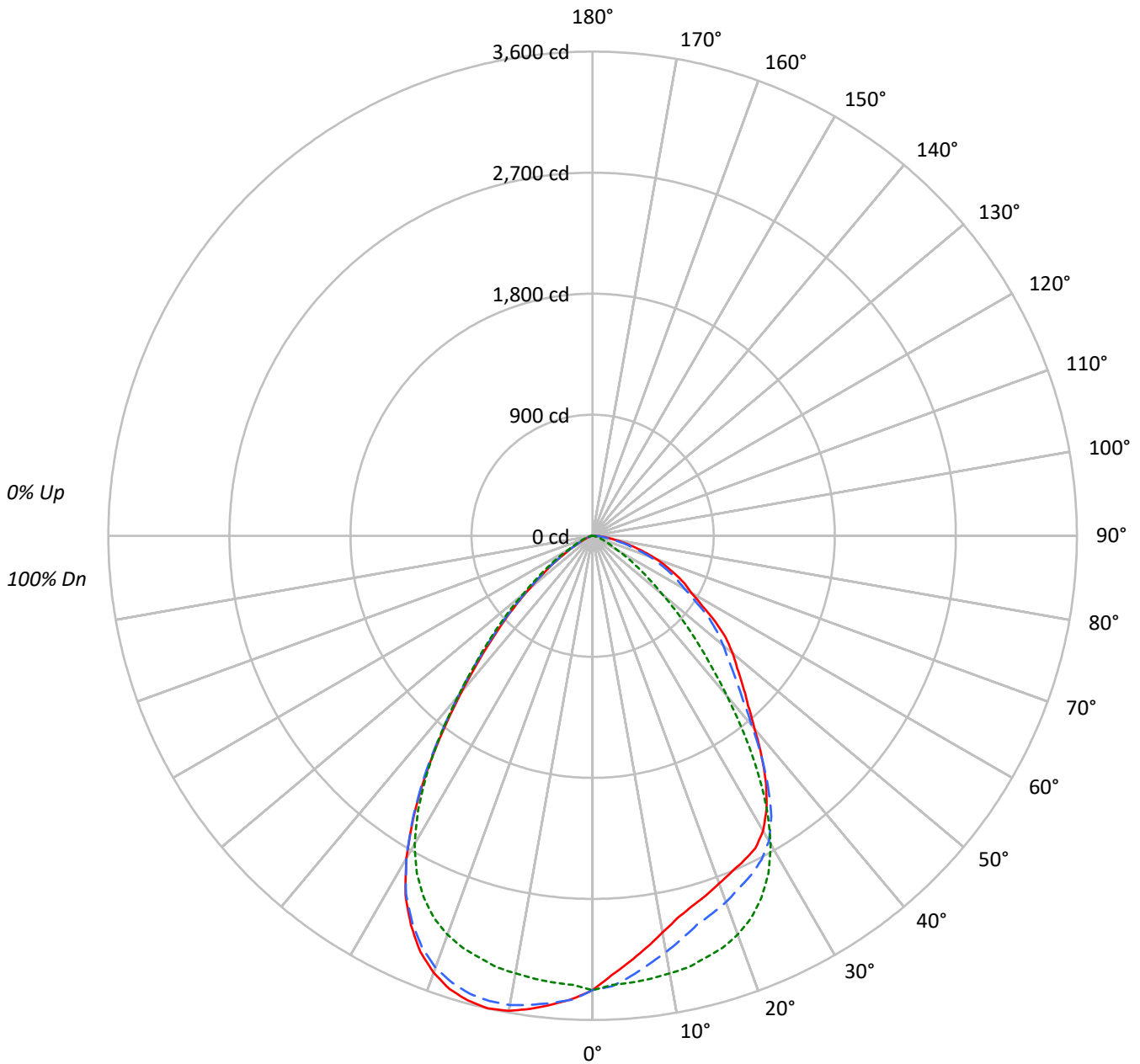
Lumens per Lamp: N/A
Luminaire Lumens: 5921.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 72.4
Input Voltage (V):
Input Current (A_{in}): 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

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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	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79																			
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70																			
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62																			
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56																			
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50																			
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46																			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42																			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38																			
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	414974	414974	414974
5°	391858	411195	431593
10°	373597	412145	447436
15°	362624	413015	455076
20°	359647	412596	451856
25°	361102	402419	433081
30°	359386	375430	392708
35°	336847	320545	323799
40°	300172	248531	242950
45°	274528	185295	173932
50°	259568	129794	117313
55°	238692	87646	73638
60°	208531	51328	40615
65°	197412	32878	22762
70°	179815	23492	14081
75°	148809	16518	10348
80°	116947	9268	6155
85°	104450	6202	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.1	5.4
10°-20°	915.6	15.5
20°-30°	1357.3	22.9
30°-40°	1359.1	23.0
40°-50°	949.9	16.0
50°-60°	565.2	9.5
60°-70°	295.0	5.0
70°-80°	131.2	2.2
80°-90°	28.6	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°	2592.0	43.8
0°-40°	3951.1	66.7
0°-60°	5466.2	92.3
0°-90°	5921.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5921.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3378	3378	3378	3378	3378	
5°	3178	3286	3334	3487	3500	298
15°	2851	2995	3247	3526	3578	807
25°	2664	2786	2969	3173	3195	1227
35°	2246	2272	2137	2176	2159	1392
45°	1580	1502	1066	1032	1001	1227
55°	1114	1045	409	357	344	989
65°	679	622	113	83	78	672
75°	314	274	35	22	22	339
85°	74	57	4	4	0	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8
2.5°	3269.0	3308.2	3269.0	3282.1	3334.3	3286.4	3312.5	3312.5	3299.5	3329.9	3351.7
5°	3177.5	3216.8	3177.5	3194.9	3251.6	3203.6	3234.2	3225.5	3229.9	3256.0	3286.4
7.5°	3086.2	3116.6	3081.8	3103.6	3155.9	3116.6	3142.7	3142.7	3147.1	3186.2	3212.5
10°	2994.8	3020.9	2994.8	3012.2	3068.8	3034.0	3051.4	3055.7	3068.8	3103.6	3142.7
12.5°	2912.0	2933.9	2907.8	2933.9	2981.6	2946.8	2968.7	2972.9	2986.1	3025.3	3068.8
15°	2851.1	2872.9	2846.8	2868.5	2912.0	2885.9	2903.3	2912.0	2920.7	2955.5	2994.8
17.5°	2803.3	2820.7	2798.9	2825.0	2859.8	2829.4	2855.5	2855.5	2868.5	2903.3	2946.8
20°	2750.9	2768.3	2750.9	2772.8	2812.0	2785.9	2807.6	2807.6	2820.7	2859.8	2899.0
22.5°	2703.2	2711.9	2703.2	2720.6	2759.6	2738.0	2750.9	2755.4	2768.3	2803.3	2838.1
25°	2663.9	2681.3	2672.6	2690.0	2716.1	2694.5	2707.4	2711.9	2724.8	2755.4	2785.9
27.5°	2620.4	2629.1	2620.4	2642.2	2663.9	2646.5	2659.7	2655.2	2663.9	2690.0	2716.1
30°	2533.4	2542.1	2542.1	2555.1	2572.6	2563.9	2576.9	2563.9	2572.6	2594.3	2620.4
32.5°	2407.1	2411.6	2415.8	2429.0	2441.9	2429.0	2437.7	2437.7	2437.7	2455.1	2472.5
35°	2246.0	2254.7	2250.5	2259.2	2272.1	2267.9	2267.9	2263.4	2254.7	2263.4	2272.1
37.5°	2063.3	2050.2	2050.2	2063.3	2072.0	2054.6	2063.3	2054.6	2054.6	2058.9	2058.9
40°	1871.7	1858.7	1871.7	1876.1	1880.4	1871.7	1867.4	1858.7	1845.6	1850.0	1841.3
42.5°	1710.8	1701.9	1706.3	1706.3	1710.8	1701.9	1706.3	1688.9	1675.8	1667.1	1654.1
45°	1580.1	1567.1	1580.1	1571.4	1571.4	1567.1	1562.7	1554.0	1536.5	1523.6	1501.7
47.5°	1458.2	1458.2	1462.5	1462.5	1462.5	1453.8	1453.8	1436.4	1419.0	1401.6	1371.2
50°	1358.1	1349.4	1366.8	1366.8	1353.8	1349.4	1353.8	1332.0	1319.0	1297.1	1266.6
52.5°	1249.2	1249.2	1253.6	1253.6	1249.2	1240.5	1244.9	1227.5	1214.4	1192.7	1162.2
55°	1114.4	1105.7	1118.7	1118.7	1114.4	1110.0	1114.4	1101.3	1088.3	1070.9	1044.6
57.5°	962.0	957.6	966.3	970.7	962.0	962.0	966.3	953.3	948.9	931.5	905.4
60°	848.7	844.5	853.2	857.6	848.7	848.7	848.7	831.3	822.6	805.2	787.8
62.5°	770.4	766.1	774.8	770.4	766.1	761.7	766.1	748.7	740.0	722.6	705.2
65°	679.1	683.4	687.8	687.8	683.4	679.1	679.1	670.4	661.7	644.3	622.5
67.5°	591.9	591.9	596.4	600.6	596.4	596.4	596.4	583.2	574.5	561.6	535.4
70°	500.6	496.2	509.3	509.3	500.6	504.9	500.6	496.2	487.5	470.1	448.4
72.5°	404.7	404.7	409.2	409.2	404.7	404.7	404.7	400.5	387.3	378.6	357.0
75°	313.5	313.5	317.7	322.2	313.5	313.5	317.7	309.0	300.3	287.3	274.2
77.5°	235.1	230.7	235.1	235.1	230.7	230.7	230.7	226.4	222.0	208.9	195.9
80°	165.3	161.1	165.3	165.3	165.3	161.1	161.1	156.6	156.6	147.9	135.0
82.5°	113.1	108.9	113.1	113.1	113.1	108.9	108.9	108.9	104.4	100.2	91.5
85°	74.1	69.6	69.6	74.1	69.6	69.6	69.6	69.6	65.4	60.9	56.7
87.5°	34.8	34.8	34.8	34.8	34.8	34.8	34.8	30.5	30.5	30.5	26.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8
2.5°	3334.3	3325.6	3351.7	3343.0	3347.3	3325.6	3360.4	3343.0	3364.7	3343.0	3386.5
5°	3277.7	3269.0	3308.2	3303.8	3308.2	3290.8	3329.9	3325.6	3351.7	3334.3	3382.1
7.5°	3216.8	3208.1	3251.6	3256.0	3264.7	3247.3	3299.5	3299.5	3325.6	3321.2	3373.4
10°	3147.1	3151.4	3194.9	3203.6	3221.2	3212.5	3260.3	3273.4	3308.2	3303.8	3369.1
12.5°	3081.8	3081.8	3138.4	3155.9	3168.8	3164.6	3221.2	3238.6	3277.7	3286.4	3347.3
15°	3016.6	3020.9	3073.1	3099.2	3116.6	3112.3	3173.3	3194.9	3242.9	3247.3	3321.2
17.5°	2964.2	2960.0	3016.6	3038.3	3064.4	3060.1	3125.3	3151.4	3199.4	3212.5	3282.1
20°	2920.7	2916.5	2968.7	2994.8	3012.2	3007.9	3073.1	3103.6	3147.1	3155.9	3225.5
22.5°	2868.5	2859.8	2912.0	2933.9	2951.3	2946.8	3003.5	3025.3	3068.8	3077.5	3142.7
25°	2807.6	2798.9	2846.8	2859.8	2872.9	2864.2	2912.0	2925.2	2960.0	2968.7	3034.0
27.5°	2738.0	2716.1	2755.4	2755.4	2764.1	2750.9	2785.9	2798.9	2829.4	2829.4	2890.3
30°	2629.1	2598.7	2620.4	2616.1	2620.4	2603.0	2624.8	2629.1	2650.9	2646.5	2690.0
32.5°	2476.7	2433.2	2446.4	2433.2	2420.3	2394.1	2420.3	2411.6	2429.0	2411.6	2450.6
35°	2267.9	2224.4	2219.9	2202.5	2189.6	2167.7	2167.7	2146.0	2150.3	2137.3	2163.5
37.5°	2041.4	1985.0	1976.3	1941.5	1919.6	1893.5	1893.5	1876.1	1854.3	1845.6	1867.4
40°	1819.5	1758.5	1736.9	1680.2	1658.4	1632.3	1614.9	1593.2	1584.5	1549.7	1567.1
42.5°	1628.0	1562.7	1514.9	1453.8	1432.1	1392.9	1366.8	1340.7	1327.7	1288.4	1305.9
45°	1466.9	1388.6	1336.4	1257.9	1227.5	1184.0	1144.8	1114.4	1083.9	1066.5	1057.8
47.5°	1332.0	1249.2	1179.6	1092.6	1044.6	1005.5	953.3	922.8	883.7	861.9	848.7
50°	1218.8	1127.4	1049.0	948.9	901.1	857.6	796.5	748.7	713.9	679.1	670.4
52.5°	1118.7	1022.9	935.9	822.6	766.1	713.9	648.6	596.4	565.8	526.7	522.3
55°	1001.1	918.5	822.6	705.2	648.6	596.4	526.7	474.5	435.3	409.2	400.5
57.5°	875.0	796.5	705.2	587.7	531.0	474.5	409.2	361.2	326.4	304.7	300.3
60°	757.4	683.4	596.4	478.8	422.1	374.4	304.7	256.8	226.4	208.9	200.2
62.5°	670.4	600.6	518.0	409.2	357.0	309.0	243.8	200.2	174.0	156.6	147.9
65°	587.7	518.0	444.0	343.8	300.3	256.8	195.9	156.6	130.5	113.1	104.4
67.5°	500.6	439.7	369.9	287.3	243.8	208.9	156.6	121.8	100.2	87.0	78.3
70°	413.4	357.0	300.3	230.7	200.2	165.3	121.8	95.7	74.1	65.4	56.7
72.5°	326.4	282.9	235.1	178.5	152.4	130.5	95.7	69.6	56.7	47.9	39.2
75°	243.8	213.3	174.0	135.0	113.1	95.7	69.6	52.2	43.5	34.8	30.5
77.5°	174.0	147.9	121.8	91.5	82.8	69.6	47.9	39.2	30.5	21.8	17.4
80°	117.6	104.4	82.8	65.4	52.2	47.9	34.8	26.1	17.4	13.1	13.1
82.5°	78.3	65.4	52.2	39.2	34.8	30.5	21.8	17.4	13.1	8.7	8.7
85°	47.9	39.2	30.5	21.8	21.8	17.4	13.1	8.7	4.4	4.4	4.4
87.5°	21.8	17.4	13.1	8.7	8.7	4.4	4.4	4.4	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8
2.5°	3421.4	3395.2	3377.8	3399.5	3408.2	3395.2	3408.2	3430.1	3451.9	3456.2	3395.2
5°	3425.8	3399.5	3390.8	3416.9	3421.4	3416.9	3430.1	3460.6	3486.7	3495.4	3434.5
7.5°	3425.8	3408.2	3403.9	3434.5	3438.8	3434.5	3456.2	3491.0	3517.1	3534.5	3473.6
10°	3416.9	3408.2	3412.7	3438.8	3447.5	3447.5	3478.0	3517.1	3543.2	3560.6	3499.7
12.5°	3403.9	3403.9	3403.9	3434.5	3443.2	3447.5	3473.6	3525.8	3543.2	3569.3	3508.4
15°	3382.1	3382.1	3382.1	3412.7	3425.8	3425.8	3456.2	3504.1	3525.8	3551.9	3491.0
17.5°	3343.0	3343.0	3347.3	3373.4	3386.5	3386.5	3416.9	3469.3	3482.3	3512.8	3451.9
20°	3286.4	3286.4	3290.8	3316.9	3329.9	3321.2	3360.4	3403.9	3416.9	3443.2	3382.1
22.5°	3203.6	3203.6	3203.6	3229.9	3238.6	3234.2	3273.4	3312.5	3312.5	3347.3	3282.1
25°	3081.8	3090.5	3081.8	3107.9	3116.6	3112.3	3147.1	3182.0	3173.3	3212.5	3147.1
27.5°	2933.9	2929.4	2929.4	2951.3	2951.3	2946.8	2972.9	3012.2	3003.5	3029.6	2968.7
30°	2729.3	2742.2	2720.6	2750.9	2738.0	2729.3	2746.7	2781.5	2768.3	2790.2	2742.2
32.5°	2494.1	2476.7	2476.7	2476.7	2485.4	2463.8	2481.2	2498.6	2485.4	2507.3	2455.1
35°	2185.1	2189.6	2176.4	2180.9	2185.1	2159.0	2176.4	2193.8	2176.4	2189.6	2141.6
37.5°	1876.1	1880.4	1850.0	1867.4	1850.0	1841.3	1858.7	1867.4	1850.0	1863.0	1810.8
40°	1567.1	1558.4	1554.0	1554.0	1558.4	1536.5	1549.7	1562.7	1549.7	1558.4	1510.4
42.5°	1297.1	1292.9	1284.2	1288.4	1275.3	1271.0	1275.3	1288.4	1275.3	1284.2	1249.2
45°	1062.0	1053.3	1040.3	1044.6	1044.6	1022.9	1035.9	1044.6	1031.6	1035.9	1005.5
47.5°	844.5	831.3	831.3	827.1	827.1	818.4	831.3	827.1	813.9	822.6	792.2
50°	657.3	648.6	648.6	648.6	648.6	635.4	639.9	648.6	635.4	635.4	618.0
52.5°	513.6	500.6	491.9	491.9	491.9	487.5	487.5	491.9	478.8	478.8	474.5
55°	387.3	383.1	369.9	369.9	369.9	357.0	361.2	361.2	357.0	357.0	343.8
57.5°	287.3	274.2	265.5	265.5	256.8	256.8	252.5	256.8	248.1	248.1	239.4
60°	191.4	182.7	178.5	174.0	174.0	169.8	174.0	169.8	169.8	165.3	161.1
62.5°	139.2	130.5	121.8	121.8	121.8	117.6	117.6	117.6	117.6	117.6	113.1
65°	100.2	91.5	91.5	87.0	87.0	82.8	82.8	82.8	82.8	82.8	78.3
67.5°	69.6	65.4	60.9	60.9	60.9	60.9	60.9	60.9	56.7	56.7	56.7
70°	52.2	47.9	43.5	43.5	43.5	43.5	43.5	39.2	43.5	43.5	39.2
72.5°	34.8	34.8	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
75°	26.1	26.1	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8
77.5°	17.4	17.4	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
80°	13.1	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
82.5°	8.7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
85°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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: P859356

CATALOG NUMBER: LX4C65D010 EX4C659030 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8	3377.8
2.5°	3460.6	3456.2	3447.5	3460.6	3425.8	3412.7	3408.2	3447.5
5°	3508.4	3499.7	3499.7	3512.8	3473.6	3464.9	3456.2	3499.7
7.5°	3551.9	3543.2	3543.2	3556.3	3521.5	3512.8	3504.1	3547.6
10°	3578.0	3578.0	3578.0	3586.7	3556.3	3547.6	3543.2	3586.7
12.5°	3591.1	3591.1	3586.7	3604.1	3565.0	3565.0	3556.3	3599.8
15°	3573.7	3573.7	3573.7	3586.7	3551.9	3543.2	3543.2	3578.0
17.5°	3530.2	3530.2	3525.8	3538.9	3499.7	3499.7	3495.4	3534.5
20°	3464.9	3464.9	3456.2	3473.6	3434.5	3421.4	3416.9	3456.2
22.5°	3360.4	3356.0	3351.7	3360.4	3325.6	3316.9	3312.5	3347.3
25°	3225.5	3221.2	3212.5	3221.2	3182.0	3168.8	3168.8	3194.9
27.5°	3034.0	3034.0	3020.9	3034.0	2990.3	2986.1	2981.6	3012.2
30°	2798.9	2781.5	2772.8	2790.2	2746.7	2746.7	2738.0	2768.3
32.5°	2507.3	2489.9	2485.4	2494.1	2455.1	2441.9	2459.3	2476.7
35°	2172.2	2176.4	2159.0	2159.0	2124.2	2128.5	2132.9	2159.0
37.5°	1850.0	1841.3	1836.9	1841.3	1815.2	1806.5	1797.8	1823.9
40°	1549.7	1527.8	1523.6	1523.6	1501.7	1497.5	1501.7	1514.9
42.5°	1266.6	1262.3	1244.9	1253.6	1231.8	1240.5	1236.2	1236.2
45°	1022.9	1027.2	1009.8	1022.9	1005.5	992.4	992.4	1001.1
47.5°	809.7	809.7	805.2	805.2	792.2	796.5	787.8	800.9
50°	626.7	626.7	618.0	622.5	613.8	613.8	609.3	613.8
52.5°	478.8	474.5	474.5	470.1	461.4	465.8	470.1	461.4
55°	348.3	352.5	343.8	348.3	339.6	343.8	339.6	343.8
57.5°	239.4	243.8	235.1	243.8	235.1	239.4	235.1	235.1
60°	165.3	165.3	161.1	165.3	161.1	161.1	156.6	165.3
62.5°	113.1	113.1	113.1	113.1	113.1	108.9	113.1	113.1
65°	82.8	78.3	78.3	78.3	78.3	78.3	78.3	78.3
67.5°	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
70°	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2
72.5°	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
75°	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8
77.5°	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
80°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
82.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
85°	4.4	4.4	4.4	0.0	4.4	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	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



Report Generated By 670246072 / DESKTOP-50001EG





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













(END OF REPORT)