

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: P859446

Luminaire Tested: **LX4C70D010 EX4C709027 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P859446
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: LX4C70D010 EX4C709027 4LBSWNH
Description: 4 INCH 7000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

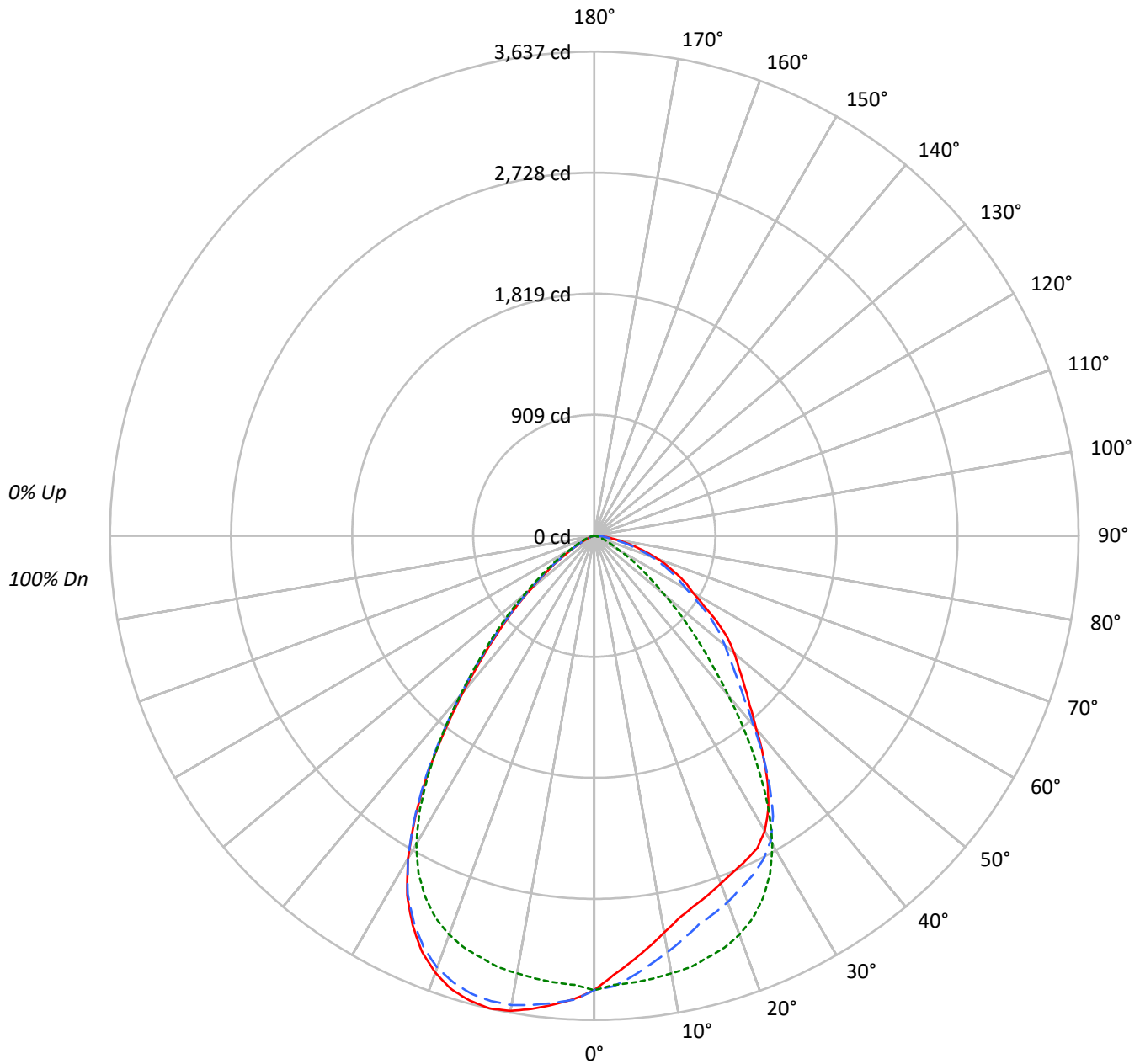
Lumens per Lamp: N/A
Luminaire Lumens: 5982.0 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 78
Input Voltage (V):
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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	111	108	104	101	109	106	103	100		101	99	97		98	96	94		94	93	91
2	104	97	92	87	101	95	90	86		92	88	84		89	85	82		86	83	81
3	96	88	81	76	94	86	80	75		83	78	74		81	76	73		78	75	72
4	90	80	72	67	88	78	72	66		76	70	66		74	69	65		72	68	64
5	83	73	65	60	82	72	65	59		70	63	59		68	62	58		66	61	58
6	78	67	59	53	76	66	59	53		64	58	53		62	57	52		61	56	52
7	73	61	54	48	71	61	53	48		59	53	48		58	52	48		56	51	47
8	68	57	49	44	67	56	49	44		55	48	44		54	48	43		52	47	43
9	64	52	45	40	63	52	45	40		51	44	40		50	44	40		49	44	40
10	61	49	42	37	59	48	42	37		47	41	37		47	41	37		46	40	37

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	419250	419250	419250
5°	395903	415437	436032
10°	377440	416386	452039
15°	366363	417276	459769
20°	363360	416845	456511
25°	364830	406567	437541
30°	363088	379303	396765
35°	340326	323859	327144
40°	303267	251097	245452
45°	277343	187189	175722
50°	262244	131132	118517
55°	241155	88546	74409
60°	210694	51844	41033
65°	199447	33227	22994
70°	181683	23707	14224
75°	150328	16708	10490
80°	118150	9410	6226
85°	105437	6343	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.4	5.4
10°-20°	925.0	15.5
20°-30°	1371.3	22.9
30°-40°	1373.1	23.0
40°-50°	959.7	16.0
50°-60°	571.0	9.5
60°-70°	298.0	5.0
70°-80°	132.5	2.2
80°-90°	28.9	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°	2618.7	43.8
0°-40°	3991.8	66.7
0°-60°	5522.5	92.3
0°-90°	5982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5982.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3413	3413	3413	3413	3413	
5°	3210	3320	3369	3523	3536	301
15°	2880	3026	3281	3562	3615	816
25°	2691	2815	2999	3206	3228	1240
35°	2269	2296	2159	2199	2181	1407
45°	1596	1517	1077	1042	1011	1239
55°	1126	1055	413	361	347	999
65°	686	629	114	84	79	679
75°	317	277	35	22	22	342
85°	75	57	4	4	0	84
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°	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6
2.5°	3302.7	3342.3	3302.7	3315.9	3368.7	3320.2	3346.6	3346.6	3333.5	3364.2	3386.3
5°	3210.3	3249.9	3210.3	3227.8	3285.1	3236.6	3267.5	3258.7	3263.2	3289.6	3320.2
7.5°	3118.0	3148.7	3113.5	3135.6	3188.4	3148.7	3175.1	3175.1	3179.6	3219.0	3245.6
10°	3025.6	3052.0	3025.6	3043.2	3100.4	3065.3	3082.9	3087.2	3100.4	3135.6	3175.1
12.5°	2942.0	2964.1	2937.7	2964.1	3012.4	2977.2	2999.3	3003.6	3016.8	3056.5	3100.4
15°	2880.5	2902.5	2876.2	2898.1	2942.0	2915.6	2933.2	2942.0	2950.8	2986.0	3025.6
17.5°	2832.2	2849.8	2827.7	2854.1	2889.3	2858.6	2885.0	2885.0	2898.1	2933.2	2977.2
20°	2779.3	2796.9	2779.3	2801.3	2841.0	2814.6	2836.5	2836.5	2849.8	2889.3	2928.9
22.5°	2731.0	2739.8	2731.0	2748.6	2788.1	2766.2	2779.3	2783.8	2796.9	2832.2	2867.4
25°	2691.4	2708.9	2700.2	2717.7	2744.1	2722.2	2735.3	2739.8	2752.9	2783.8	2814.6
27.5°	2647.4	2656.2	2647.4	2669.5	2691.4	2673.8	2687.1	2682.6	2691.4	2717.7	2744.1
30°	2559.5	2568.3	2568.3	2581.4	2599.1	2590.3	2603.4	2590.3	2599.1	2621.0	2647.4
32.5°	2431.9	2436.4	2440.7	2454.0	2467.1	2454.0	2462.8	2462.8	2462.8	2480.4	2497.9
35°	2269.2	2278.0	2273.7	2282.5	2295.6	2291.2	2291.2	2286.8	2278.0	2286.8	2295.6
37.5°	2084.5	2071.3	2071.3	2084.5	2093.3	2075.8	2084.5	2075.8	2075.8	2080.1	2080.1
40°	1891.0	1877.8	1891.0	1895.4	1899.7	1891.0	1886.6	1877.8	1864.6	1869.1	1860.3
42.5°	1728.4	1719.4	1723.9	1723.9	1728.4	1719.4	1723.9	1706.3	1693.0	1684.3	1671.2
45°	1596.3	1583.2	1596.3	1587.5	1587.5	1583.2	1578.8	1570.0	1552.4	1539.3	1517.2
47.5°	1473.2	1473.2	1477.6	1477.6	1477.6	1468.8	1468.8	1451.2	1433.6	1416.0	1385.3
50°	1372.1	1363.3	1380.8	1380.8	1367.7	1363.3	1367.7	1345.7	1332.6	1310.5	1279.7
52.5°	1262.1	1262.1	1266.6	1266.6	1262.1	1253.3	1257.8	1240.2	1226.9	1205.0	1174.2
55°	1125.9	1117.1	1130.2	1130.2	1125.9	1121.4	1125.9	1112.6	1099.5	1081.9	1055.4
57.5°	971.9	967.5	976.2	980.7	971.9	971.9	976.2	963.1	958.7	941.1	914.7
60°	857.5	853.2	862.0	866.4	857.5	857.5	857.5	839.9	831.1	813.5	795.9
62.5°	778.3	774.0	782.8	778.3	774.0	769.6	774.0	756.4	747.7	730.1	712.5
65°	686.1	690.4	694.9	694.9	690.4	686.1	686.1	677.3	668.5	650.9	628.9
67.5°	598.0	598.0	602.5	606.8	602.5	602.5	602.5	589.2	580.4	567.3	541.0
70°	505.8	501.3	514.6	514.6	505.8	510.1	505.8	501.3	492.5	474.9	453.0
72.5°	408.9	408.9	413.4	413.4	408.9	408.9	408.9	404.6	391.3	382.5	360.6
75°	316.7	316.7	321.0	325.5	316.7	316.7	321.0	312.2	303.4	290.3	277.0
77.5°	237.6	233.1	237.6	237.6	233.1	233.1	233.1	228.8	224.3	211.0	197.9
80°	167.0	162.7	167.0	167.0	167.0	162.7	162.7	158.3	158.3	149.5	136.4
82.5°	114.3	110.0	114.3	114.3	114.3	110.0	110.0	110.0	105.5	101.2	92.4
85°	74.8	70.3	70.3	74.8	70.3	70.3	70.3	70.3	66.0	61.5	57.2
87.5°	35.2	35.2	35.2	35.2	35.2	35.2	35.2	30.9	30.9	30.9	26.4
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°	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6
2.5°	3368.7	3359.9	3386.3	3377.5	3381.8	3359.9	3395.1	3377.5	3399.4	3377.5	3421.4
5°	3311.4	3302.7	3342.3	3337.8	3342.3	3324.7	3364.2	3359.9	3386.3	3368.7	3417.0
7.5°	3249.9	3241.1	3285.1	3289.6	3298.3	3280.8	3333.5	3333.5	3359.9	3355.4	3408.2
10°	3179.6	3183.9	3227.8	3236.6	3254.4	3245.6	3293.9	3307.1	3342.3	3337.8	3403.9
12.5°	3113.5	3113.5	3170.8	3188.4	3201.5	3197.2	3254.4	3272.0	3311.4	3320.2	3381.8
15°	3047.7	3052.0	3104.8	3131.1	3148.7	3144.4	3205.9	3227.8	3276.3	3280.8	3355.4
17.5°	2994.8	2990.5	3047.7	3069.6	3096.0	3091.7	3157.5	3183.9	3232.3	3245.6	3315.9
20°	2950.8	2946.5	2999.3	3025.6	3043.2	3038.9	3104.8	3135.6	3179.6	3188.4	3258.7
22.5°	2898.1	2889.3	2942.0	2964.1	2981.7	2977.2	3034.4	3056.5	3100.4	3109.2	3175.1
25°	2836.5	2827.7	2876.2	2889.3	2902.5	2893.7	2942.0	2955.3	2990.5	2999.3	3065.3
27.5°	2766.2	2744.1	2783.8	2783.8	2792.6	2779.3	2814.6	2827.7	2858.6	2858.6	2920.1
30°	2656.2	2625.5	2647.4	2643.1	2647.4	2629.8	2651.9	2656.2	2678.3	2673.8	2717.7
32.5°	2502.2	2458.3	2471.6	2458.3	2445.2	2418.8	2445.2	2436.4	2454.0	2436.4	2475.9
35°	2291.2	2247.3	2242.8	2225.2	2212.1	2190.0	2190.0	2168.2	2172.5	2159.4	2185.7
37.5°	2062.5	2005.4	1996.6	1961.5	1939.4	1913.0	1913.0	1895.4	1873.4	1864.6	1886.6
40°	1838.2	1776.7	1754.8	1697.5	1675.5	1649.1	1631.5	1609.6	1600.8	1565.7	1583.2
42.5°	1644.8	1578.8	1530.5	1468.8	1446.9	1407.2	1380.8	1354.5	1341.4	1301.7	1319.3
45°	1482.0	1402.9	1350.2	1270.9	1240.2	1196.2	1156.6	1125.9	1095.0	1077.4	1068.6
47.5°	1345.7	1262.1	1191.7	1103.8	1055.4	1015.9	963.1	932.3	892.8	870.7	857.5
50°	1231.4	1139.0	1059.9	958.7	910.4	866.4	804.7	756.4	721.3	686.1	677.3
52.5°	1130.2	1033.5	945.6	831.1	774.0	721.3	655.3	602.5	571.6	532.2	527.7
55°	1011.4	928.0	831.1	712.5	655.3	602.5	532.2	479.4	439.8	413.4	404.6
57.5°	884.0	804.7	712.5	593.7	536.5	479.4	413.4	365.0	329.8	307.9	303.4
60°	765.2	690.4	602.5	483.7	426.5	378.2	307.9	259.4	228.8	211.0	202.2
62.5°	677.3	606.8	523.4	413.4	360.6	312.2	246.3	202.2	175.8	158.3	149.5
65°	593.7	523.4	448.6	347.4	303.4	259.4	197.9	158.3	131.9	114.3	105.5
67.5°	505.8	444.3	373.7	290.3	246.3	211.0	158.3	123.1	101.2	87.9	79.1
70°	417.7	360.6	303.4	233.1	202.2	167.0	123.1	96.7	74.8	66.0	57.2
72.5°	329.8	285.8	237.6	180.3	153.9	131.9	96.7	70.3	57.2	48.4	39.6
75°	246.3	215.5	175.8	136.4	114.3	96.7	70.3	52.8	44.0	35.2	30.9
77.5°	175.8	149.5	123.1	92.4	83.6	70.3	48.4	39.6	30.9	22.1	17.6
80°	118.8	105.5	83.6	66.0	52.8	48.4	35.2	26.4	17.6	13.3	13.3
82.5°	79.1	66.0	52.8	39.6	35.2	30.9	22.1	17.6	13.3	8.8	8.8
85°	48.4	39.6	30.9	22.1	22.1	17.6	13.3	8.8	4.5	4.5	4.5
87.5°	22.1	17.6	13.3	8.8	8.8	4.5	4.5	4.5	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°	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6
2.5°	3456.6	3430.2	3412.6	3434.5	3443.3	3430.2	3443.3	3465.4	3487.5	3491.8	3430.2
5°	3461.1	3434.5	3425.7	3452.1	3456.6	3452.1	3465.4	3496.3	3522.6	3531.4	3469.9
7.5°	3461.1	3443.3	3439.0	3469.9	3474.2	3469.9	3491.8	3526.9	3553.3	3570.9	3509.4
10°	3452.1	3443.3	3447.8	3474.2	3483.0	3483.0	3513.8	3553.3	3579.7	3597.3	3535.7
12.5°	3439.0	3439.0	3439.0	3469.9	3478.7	3483.0	3509.4	3562.1	3579.7	3606.1	3544.5
15°	3417.0	3417.0	3417.0	3447.8	3461.1	3461.1	3491.8	3540.2	3562.1	3588.5	3526.9
17.5°	3377.5	3377.5	3381.8	3408.2	3421.4	3421.4	3452.1	3505.0	3518.1	3549.0	3487.5
20°	3320.2	3320.2	3324.7	3351.1	3364.2	3355.4	3395.1	3439.0	3452.1	3478.7	3417.0
22.5°	3236.6	3236.6	3236.6	3263.2	3272.0	3267.5	3307.1	3346.6	3346.6	3381.8	3315.9
25°	3113.5	3122.3	3113.5	3139.9	3148.7	3144.4	3179.6	3214.7	3205.9	3245.6	3179.6
27.5°	2964.1	2959.6	2959.6	2981.7	2981.7	2977.2	3003.6	3043.2	3034.4	3060.8	2999.3
30°	2757.4	2770.5	2748.6	2779.3	2766.2	2757.4	2775.0	2810.1	2796.9	2818.9	2770.5
32.5°	2519.8	2502.2	2502.2	2502.2	2511.0	2489.1	2506.7	2524.3	2511.0	2533.1	2480.4
35°	2207.6	2212.1	2198.8	2203.3	2207.6	2181.3	2198.8	2216.4	2198.8	2212.1	2163.7
37.5°	1895.4	1899.7	1869.1	1886.6	1869.1	1860.3	1877.8	1886.6	1869.1	1882.2	1829.4
40°	1583.2	1574.4	1570.0	1570.0	1574.4	1552.4	1565.7	1578.8	1565.7	1574.4	1526.0
42.5°	1310.5	1306.2	1297.4	1301.7	1288.4	1284.1	1288.4	1301.7	1288.4	1297.4	1262.1
45°	1073.0	1064.2	1051.1	1055.4	1055.4	1033.5	1046.6	1055.4	1042.3	1046.6	1015.9
47.5°	853.2	839.9	839.9	835.6	835.6	826.8	839.9	835.6	822.3	831.1	800.4
50°	664.0	655.3	655.3	655.3	655.3	642.0	646.5	655.3	642.0	642.0	624.4
52.5°	518.9	505.8	497.0	497.0	497.0	492.5	492.5	497.0	483.7	483.7	479.4
55°	391.3	387.0	373.7	373.7	373.7	360.6	365.0	365.0	360.6	360.6	347.4
57.5°	290.3	277.0	268.2	268.2	259.4	259.4	255.1	259.4	250.7	250.7	241.9
60°	193.4	184.6	180.3	175.8	175.8	171.5	175.8	171.5	171.5	167.0	162.7
62.5°	140.7	131.9	123.1	123.1	123.1	118.8	118.8	118.8	118.8	118.8	114.3
65°	101.2	92.4	92.4	87.9	87.9	83.6	83.6	83.6	83.6	83.6	79.1
67.5°	70.3	66.0	61.5	61.5	61.5	61.5	61.5	61.5	57.2	57.2	57.2
70°	52.8	48.4	44.0	44.0	44.0	44.0	44.0	39.6	44.0	44.0	39.6
72.5°	35.2	35.2	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9
75°	26.4	26.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
77.5°	17.6	17.6	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
80°	13.3	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
82.5°	8.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
85°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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: P859446

CATALOG NUMBER: LX4C70D010 EX4C709027 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6	3412.6
2.5°	3496.3	3491.8	3483.0	3496.3	3461.1	3447.8	3443.3	3483.0
5°	3544.5	3535.7	3535.7	3549.0	3509.4	3500.6	3491.8	3535.7
7.5°	3588.5	3579.7	3579.7	3593.0	3557.8	3549.0	3540.2	3584.2
10°	3614.9	3614.9	3614.9	3623.6	3593.0	3584.2	3579.7	3623.6
12.5°	3628.1	3628.1	3623.6	3641.2	3601.8	3601.8	3593.0	3636.9
15°	3610.5	3610.5	3610.5	3623.6	3588.5	3579.7	3579.7	3614.9
17.5°	3566.6	3566.6	3562.1	3575.4	3535.7	3535.7	3531.4	3570.9
20°	3500.6	3500.6	3491.8	3509.4	3469.9	3456.6	3452.1	3491.8
22.5°	3395.1	3390.6	3386.3	3395.1	3359.9	3351.1	3346.6	3381.8
25°	3258.7	3254.4	3245.6	3254.4	3214.7	3201.5	3201.5	3227.8
27.5°	3065.3	3065.3	3052.0	3065.3	3021.1	3016.8	3012.4	3043.2
30°	2827.7	2810.1	2801.3	2818.9	2775.0	2775.0	2766.2	2796.9
32.5°	2533.1	2515.5	2511.0	2519.8	2480.4	2467.1	2484.7	2502.2
35°	2194.5	2198.8	2181.3	2181.3	2146.1	2150.4	2154.9	2181.3
37.5°	1869.1	1860.3	1855.8	1860.3	1833.9	1825.1	1816.3	1842.7
40°	1565.7	1543.6	1539.3	1539.3	1517.2	1512.9	1517.2	1530.5
42.5°	1279.7	1275.3	1257.8	1266.6	1244.5	1253.3	1249.0	1249.0
45°	1033.5	1037.8	1020.2	1033.5	1015.9	1002.6	1002.6	1011.4
47.5°	818.0	818.0	813.5	813.5	800.4	804.7	795.9	809.2
50°	633.2	633.2	624.4	628.9	620.1	620.1	615.6	620.1
52.5°	483.7	479.4	479.4	474.9	466.1	470.6	474.9	466.1
55°	351.8	356.2	347.4	351.8	343.1	347.4	343.1	347.4
57.5°	241.9	246.3	237.6	246.3	237.6	241.9	237.6	237.6
60°	167.0	167.0	162.7	167.0	162.7	162.7	158.3	167.0
62.5°	114.3	114.3	114.3	114.3	114.3	110.0	114.3	114.3
65°	83.6	79.1	79.1	79.1	79.1	79.1	79.1	79.1
67.5°	57.2	57.2	57.2	57.2	57.2	57.2	57.2	57.2
70°	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6
72.5°	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9
75°	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
77.5°	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
80°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
82.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
85°	4.5	4.5	4.5	0.0	4.5	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)