

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: P859488

Luminaire Tested: **LX4C70D010 EX4C709035 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P859488
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 EX4C709035 4LBSWNH
Description: 4 INCH 7000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

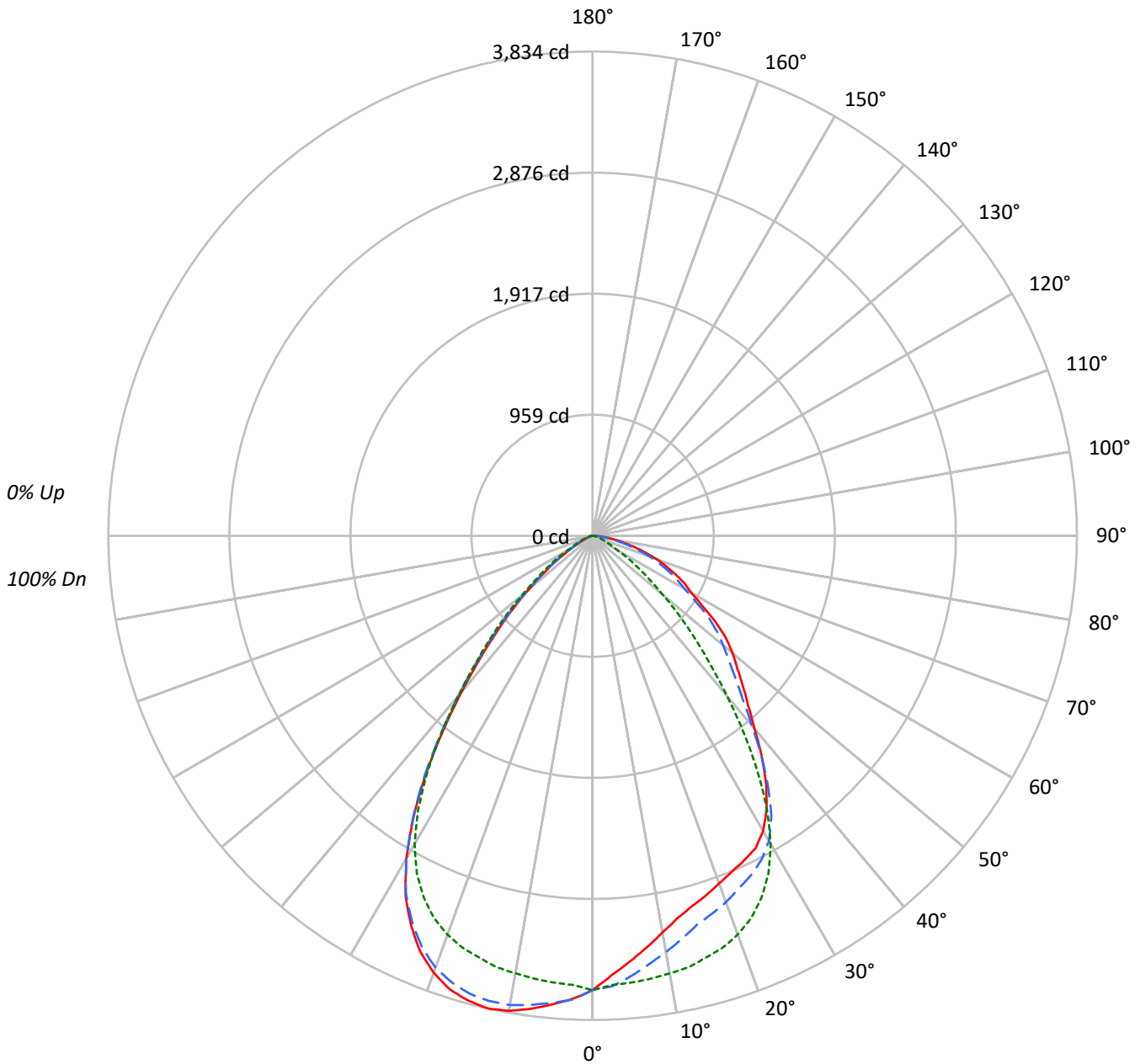
Lumens per Lamp: N/A
Luminaire Lumens: 6306.0 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 78
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

TEST NUMBER: P859488

CATALOG NUMBER: LX4C70D010 EX4C709035 4LBSWNH

Luminous Intensity Polar Plot





TEST NUMBER: P859488

CATALOG NUMBER: LX4C70D010 EX4C709035 4LBSWNH

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°	441965	441965	441965
5°	417337	437931	459649
10°	397886	438941	476528
15°	386204	439877	484660
20°	383036	439423	481233
25°	384580	428580	461249
30°	382750	399844	418243
35°	358759	341391	344856
40°	319689	264697	258747
45°	292371	197335	185243
50°	276445	138241	124939
55°	254220	93343	78436
60°	222095	54645	43269
65°	210260	35029	24244
70°	191525	25000	15015
75°	158445	17610	11060
80°	124588	9905	6580
85°	111216	6625	0



TEST NUMBER: P859488

CATALOG NUMBER: LX4C70D010 EX4C709035 4LBSWNH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	339.9	5.4
10°-20°	975.1	15.5
20°-30°	1445.5	22.9
30°-40°	1447.5	23.0
40°-50°	1011.6	16.0
50°-60°	602.0	9.5
60°-70°	314.2	5.0
70°-80°	139.7	2.2
80°-90°	30.5	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°	2760.5	43.8
0°-40°	4208.0	66.7
0°-60°	5821.7	92.3
0°-90°	6306.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6306.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3598	3598	3598	3598	3598	
5°	3384	3500	3551	3713	3727	317
15°	3036	3190	3458	3755	3811	860
25°	2837	2967	3162	3380	3403	1307
35°	2392	2420	2276	2318	2299	1483
45°	1683	1599	1136	1099	1066	1306
55°	1187	1112	436	380	366	1053
65°	723	663	120	88	83	715
75°	334	292	37	23	23	361
85°	79	60	5	5	0	88
90°	0	0	0	0	0	



TEST NUMBER: P859488

CATALOG NUMBER: LX4C70D010 EX4C709035 4LBSWNH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5
2.5°	3481.5	3523.3	3481.5	3495.5	3551.1	3500.1	3527.9	3527.9	3514.1	3546.4	3569.7
5°	3384.1	3425.9	3384.1	3402.7	3463.0	3411.9	3444.5	3435.2	3439.9	3467.7	3500.1
7.5°	3286.9	3319.3	3282.2	3305.4	3361.1	3319.3	3347.1	3347.1	3351.8	3393.4	3421.4
10°	3189.5	3217.3	3189.5	3208.0	3268.4	3231.3	3249.8	3254.4	3268.4	3305.4	3347.1
12.5°	3101.4	3124.6	3096.8	3124.6	3175.5	3138.4	3161.7	3166.2	3180.2	3222.0	3268.4
15°	3036.5	3059.7	3031.9	3055.0	3101.4	3073.6	3092.1	3101.4	3110.6	3147.7	3189.5
17.5°	2985.6	3004.1	2980.9	3008.7	3045.8	3013.4	3041.2	3041.2	3055.0	3092.1	3138.4
20°	2929.8	2948.3	2929.8	2953.1	2994.9	2967.1	2990.1	2990.1	3004.1	3045.8	3087.6
22.5°	2878.9	2888.2	2878.9	2897.5	2939.1	2916.0	2929.8	2934.5	2948.3	2985.6	3022.7
25°	2837.1	2855.7	2846.4	2864.9	2892.7	2869.7	2883.5	2888.2	2902.0	2934.5	2967.1
27.5°	2790.8	2800.1	2790.8	2814.1	2837.1	2818.6	2832.6	2827.9	2837.1	2864.9	2892.7
30°	2698.1	2707.4	2707.4	2721.2	2739.9	2730.6	2744.5	2730.6	2739.9	2763.0	2790.8
32.5°	2563.6	2568.4	2572.9	2586.9	2600.7	2586.9	2596.2	2596.2	2596.2	2614.7	2633.2
35°	2392.1	2401.3	2396.8	2406.1	2419.9	2415.3	2415.3	2410.6	2401.3	2410.6	2419.9
37.5°	2197.5	2183.5	2183.5	2197.5	2206.7	2188.2	2197.5	2188.2	2188.2	2192.7	2192.7
40°	1993.4	1979.6	1993.4	1998.1	2002.6	1993.4	1988.8	1979.6	1965.6	1970.3	1961.0
42.5°	1822.0	1812.6	1817.3	1817.3	1822.0	1812.6	1817.3	1798.7	1784.7	1775.5	1761.7
45°	1682.8	1669.0	1682.8	1673.5	1673.5	1669.0	1664.3	1655.0	1636.5	1622.6	1599.4
47.5°	1553.0	1553.0	1557.6	1557.6	1557.6	1548.3	1548.3	1529.8	1511.2	1492.7	1460.4
50°	1446.4	1437.1	1455.6	1455.6	1441.8	1437.1	1441.8	1418.6	1404.8	1381.5	1349.0
52.5°	1330.4	1330.4	1335.2	1335.2	1330.4	1321.2	1325.9	1307.3	1293.4	1270.3	1237.7
55°	1186.9	1177.6	1191.4	1191.4	1186.9	1182.1	1186.9	1172.9	1159.1	1140.5	1112.5
57.5°	1024.6	1019.9	1029.1	1033.8	1024.6	1024.6	1029.1	1015.3	1010.6	992.1	964.2
60°	903.9	899.4	908.6	913.4	903.9	903.9	903.9	885.4	876.1	857.6	839.0
62.5°	820.5	816.0	825.2	820.5	816.0	811.2	816.0	797.4	788.2	769.6	751.1
65°	723.3	727.8	732.5	732.5	727.8	723.3	723.3	714.0	704.7	686.2	662.9
67.5°	630.4	630.4	635.1	639.7	635.1	635.1	635.1	621.1	611.9	598.1	570.3
70°	533.2	528.5	542.5	542.5	533.2	537.7	533.2	528.5	519.2	500.7	477.6
72.5°	431.1	431.1	435.8	435.8	431.1	431.1	431.1	426.5	412.5	403.3	380.2
75°	333.8	333.8	338.4	343.1	333.8	333.8	338.4	329.1	319.8	306.0	292.0
77.5°	250.4	245.7	250.4	250.4	245.7	245.7	245.7	241.2	236.4	222.4	208.6
80°	176.1	171.6	176.1	176.1	176.1	171.6	171.6	166.8	166.8	157.6	143.7
82.5°	120.5	115.9	120.5	120.5	120.5	115.9	115.9	115.9	111.2	106.7	97.4
85°	78.9	74.1	74.1	78.9	74.1	74.1	74.1	74.1	69.6	64.9	60.3
87.5°	37.1	37.1	37.1	37.1	37.1	37.1	37.1	32.5	32.5	32.5	27.8
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: P859488

CATALOG NUMBER: LX4C70D010 EX4C709035 4LBSWNH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5
2.5°	3551.1	3541.9	3569.7	3560.4	3565.0	3541.9	3578.9	3560.4	3583.5	3560.4	3606.7
5°	3490.8	3481.5	3523.3	3518.6	3523.3	3504.8	3546.4	3541.9	3569.7	3551.1	3602.0
7.5°	3425.9	3416.7	3463.0	3467.7	3477.0	3458.5	3514.1	3514.1	3541.9	3537.1	3592.8
10°	3351.8	3356.3	3402.7	3411.9	3430.7	3421.4	3472.3	3486.3	3523.3	3518.6	3588.2
12.5°	3282.2	3282.2	3342.5	3361.1	3374.9	3370.3	3430.7	3449.2	3490.8	3500.1	3565.0
15°	3212.8	3217.3	3272.9	3300.7	3319.3	3314.7	3379.6	3402.7	3453.7	3458.5	3537.1
17.5°	3157.0	3152.4	3212.8	3235.8	3263.6	3259.1	3328.5	3356.3	3407.4	3421.4	3495.5
20°	3110.6	3106.1	3161.7	3189.5	3208.0	3203.5	3272.9	3305.4	3351.8	3361.1	3435.2
22.5°	3055.0	3045.8	3101.4	3124.6	3143.2	3138.4	3198.8	3222.0	3268.4	3277.6	3347.1
25°	2990.1	2980.9	3031.9	3045.8	3059.7	3050.5	3101.4	3115.4	3152.4	3161.7	3231.3
27.5°	2916.0	2892.7	2934.5	2934.5	2943.8	2929.8	2967.1	2980.9	3013.4	3013.4	3078.3
30°	2800.1	2767.7	2790.8	2786.2	2790.8	2772.3	2795.5	2800.1	2823.3	2818.6	2864.9
32.5°	2637.8	2591.4	2605.4	2591.4	2577.6	2549.8	2577.6	2568.4	2586.9	2568.4	2610.0
35°	2415.3	2369.0	2364.3	2345.7	2331.9	2308.7	2308.7	2285.6	2290.1	2276.3	2304.1
37.5°	2174.2	2114.0	2104.8	2067.7	2044.4	2016.6	2016.6	1998.1	1974.8	1965.6	1988.8
40°	1937.8	1872.9	1849.8	1789.5	1766.2	1738.4	1719.9	1696.8	1687.5	1650.5	1669.0
42.5°	1733.9	1664.3	1613.4	1548.3	1525.2	1483.4	1455.6	1427.8	1414.0	1372.2	1390.8
45°	1562.3	1478.9	1423.3	1339.7	1307.3	1261.0	1219.2	1186.9	1154.3	1135.8	1126.5
47.5°	1418.6	1330.4	1256.3	1163.6	1112.5	1070.9	1015.3	982.8	941.2	917.9	903.9
50°	1298.1	1200.7	1117.3	1010.6	959.7	913.4	848.3	797.4	760.3	723.3	714.0
52.5°	1191.4	1089.5	996.8	876.1	816.0	760.3	690.7	635.1	602.6	561.0	556.3
55°	1066.2	978.2	876.1	751.1	690.7	635.1	561.0	505.4	463.6	435.8	426.5
57.5°	931.9	848.3	751.1	625.9	565.5	505.4	435.8	384.7	347.6	324.6	319.8
60°	806.7	727.8	635.1	509.9	449.6	398.7	324.6	273.5	241.2	222.4	213.2
62.5°	714.0	639.7	551.7	435.8	380.2	329.1	259.7	213.2	185.4	166.8	157.6
65°	625.9	551.7	472.9	366.2	319.8	273.5	208.6	166.8	139.0	120.5	111.2
67.5°	533.2	468.3	394.0	306.0	259.7	222.4	166.8	129.8	106.7	92.7	83.4
70°	440.3	380.2	319.8	245.7	213.2	176.1	129.8	101.9	78.9	69.6	60.3
72.5°	347.6	301.3	250.4	190.1	162.3	139.0	101.9	74.1	60.3	51.1	41.8
75°	259.7	227.2	185.4	143.7	120.5	101.9	74.1	55.6	46.3	37.1	32.5
77.5°	185.4	157.6	129.8	97.4	88.1	74.1	51.1	41.8	32.5	23.3	18.5
80°	125.2	111.2	88.1	69.6	55.6	51.1	37.1	27.8	18.5	14.0	14.0
82.5°	83.4	69.6	55.6	41.8	37.1	32.5	23.3	18.5	14.0	9.3	9.3
85°	51.1	41.8	32.5	23.3	23.3	18.5	14.0	9.3	4.7	4.7	4.7
87.5°	23.3	18.5	14.0	9.3	9.3	4.7	4.7	4.7	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: P859488

CATALOG NUMBER: LX4C70D010 EX4C709035 4LBSWNH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5
2.5°	3643.8	3616.0	3597.5	3620.6	3629.8	3616.0	3629.8	3653.1	3676.3	3680.9	3616.0
5°	3648.5	3620.6	3611.3	3639.1	3643.8	3639.1	3653.1	3685.6	3713.4	3722.7	3657.8
7.5°	3648.5	3629.8	3625.3	3657.8	3662.4	3657.8	3680.9	3718.0	3745.8	3764.3	3699.4
10°	3639.1	3629.8	3634.6	3662.4	3671.6	3671.6	3704.2	3745.8	3773.6	3792.1	3727.2
12.5°	3625.3	3625.3	3625.3	3657.8	3667.1	3671.6	3699.4	3755.0	3773.6	3801.4	3736.5
15°	3602.0	3602.0	3602.0	3634.6	3648.5	3648.5	3680.9	3732.0	3755.0	3782.8	3718.0
17.5°	3560.4	3560.4	3565.0	3592.8	3606.7	3606.7	3639.1	3694.9	3708.7	3741.2	3676.3
20°	3500.1	3500.1	3504.8	3532.6	3546.4	3537.1	3578.9	3625.3	3639.1	3667.1	3602.0
22.5°	3411.9	3411.9	3411.9	3439.9	3449.2	3444.5	3486.3	3527.9	3527.9	3565.0	3495.5
25°	3282.2	3291.5	3282.2	3310.0	3319.3	3314.7	3351.8	3388.9	3379.6	3421.4	3351.8
27.5°	3124.6	3119.9	3119.9	3143.2	3143.2	3138.4	3166.2	3208.0	3198.8	3226.6	3161.7
30°	2906.7	2920.5	2897.5	2929.8	2916.0	2906.7	2925.3	2962.3	2948.3	2971.6	2920.5
32.5°	2656.3	2637.8	2637.8	2637.8	2647.0	2624.0	2642.5	2661.0	2647.0	2670.3	2614.7
35°	2327.2	2331.9	2317.9	2322.7	2327.2	2299.4	2317.9	2336.5	2317.9	2331.9	2280.9
37.5°	1998.1	2002.6	1970.3	1988.8	1970.3	1961.0	1979.6	1988.8	1970.3	1984.1	1928.5
40°	1669.0	1659.7	1655.0	1655.0	1659.7	1636.5	1650.5	1664.3	1650.5	1659.7	1608.7
42.5°	1381.5	1377.0	1367.7	1372.2	1358.2	1353.7	1358.2	1372.2	1358.2	1367.7	1330.4
45°	1131.1	1121.8	1108.0	1112.5	1112.5	1089.5	1103.3	1112.5	1098.7	1103.3	1070.9
47.5°	899.4	885.4	885.4	880.8	880.8	871.6	885.4	880.8	866.8	876.1	843.8
50°	700.0	690.7	690.7	690.7	690.7	676.8	681.5	690.7	676.8	676.8	658.2
52.5°	547.0	533.2	523.9	523.9	523.9	519.2	519.2	523.9	509.9	509.9	505.4
55°	412.5	408.0	394.0	394.0	394.0	380.2	384.7	384.7	380.2	380.2	366.2
57.5°	306.0	292.0	282.8	282.8	273.5	273.5	269.0	273.5	264.2	264.2	255.0
60°	203.9	194.6	190.1	185.4	185.4	180.8	185.4	180.8	180.8	176.1	171.6
62.5°	148.3	139.0	129.8	129.8	129.8	125.2	125.2	125.2	125.2	125.2	120.5
65°	106.7	97.4	97.4	92.7	92.7	88.1	88.1	88.1	88.1	88.1	83.4
67.5°	74.1	69.6	64.9	64.9	64.9	64.9	64.9	64.9	60.3	60.3	60.3
70°	55.6	51.1	46.3	46.3	46.3	46.3	46.3	41.8	46.3	46.3	41.8
72.5°	37.1	37.1	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
75°	27.8	27.8	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
77.5°	18.5	18.5	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
80°	14.0	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
82.5°	9.3	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
85°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	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: P859488

CATALOG NUMBER: LX4C70D010 EX4C709035 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5	3597.5
2.5°	3685.6	3680.9	3671.6	3685.6	3648.5	3634.6	3629.8	3671.6
5°	3736.5	3727.2	3727.2	3741.2	3699.4	3690.2	3680.9	3727.2
7.5°	3782.8	3773.6	3773.6	3787.6	3750.5	3741.2	3732.0	3778.3
10°	3810.6	3810.6	3810.6	3819.9	3787.6	3778.3	3773.6	3819.9
12.5°	3824.6	3824.6	3819.9	3838.5	3796.8	3796.8	3787.6	3833.9
15°	3806.1	3806.1	3806.1	3819.9	3782.8	3773.6	3773.6	3810.6
17.5°	3759.8	3759.8	3755.0	3769.0	3727.2	3727.2	3722.7	3764.3
20°	3690.2	3690.2	3680.9	3699.4	3657.8	3643.8	3639.1	3680.9
22.5°	3578.9	3574.2	3569.7	3578.9	3541.9	3532.6	3527.9	3565.0
25°	3435.2	3430.7	3421.4	3430.7	3388.9	3374.9	3374.9	3402.7
27.5°	3231.3	3231.3	3217.3	3231.3	3184.8	3180.2	3175.5	3208.0
30°	2980.9	2962.3	2953.1	2971.6	2925.3	2925.3	2916.0	2948.3
32.5°	2670.3	2651.8	2647.0	2656.3	2614.7	2600.7	2619.2	2637.8
35°	2313.4	2317.9	2299.4	2299.4	2262.3	2266.9	2271.6	2299.4
37.5°	1970.3	1961.0	1956.3	1961.0	1933.2	1924.0	1914.7	1942.5
40°	1650.5	1627.2	1622.6	1622.6	1599.4	1594.8	1599.4	1613.4
42.5°	1349.0	1344.4	1325.9	1335.2	1311.9	1321.2	1316.6	1316.6
45°	1089.5	1094.0	1075.5	1089.5	1070.9	1056.9	1056.9	1066.2
47.5°	862.3	862.3	857.6	857.6	843.8	848.3	839.0	853.0
50°	667.5	667.5	658.2	662.9	653.7	653.7	648.9	653.7
52.5°	509.9	505.4	505.4	500.7	491.4	496.1	500.7	491.4
55°	370.9	375.4	366.2	370.9	361.6	366.2	361.6	366.2
57.5°	255.0	259.7	250.4	259.7	250.4	255.0	250.4	250.4
60°	176.1	176.1	171.6	176.1	171.6	171.6	166.8	176.1
62.5°	120.5	120.5	120.5	120.5	120.5	115.9	120.5	120.5
65°	88.1	83.4	83.4	83.4	83.4	83.4	83.4	83.4
67.5°	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
70°	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8
72.5°	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
75°	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
77.5°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
80°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
82.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
85°	4.7	4.7	4.7	0.0	4.7	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)