

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: P#

Luminaire Tested: **LD4C50D010 EX4C509027 4LBSQLWWLI**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C50D010 EX4C509027 4LBSQLWWLI
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Summary

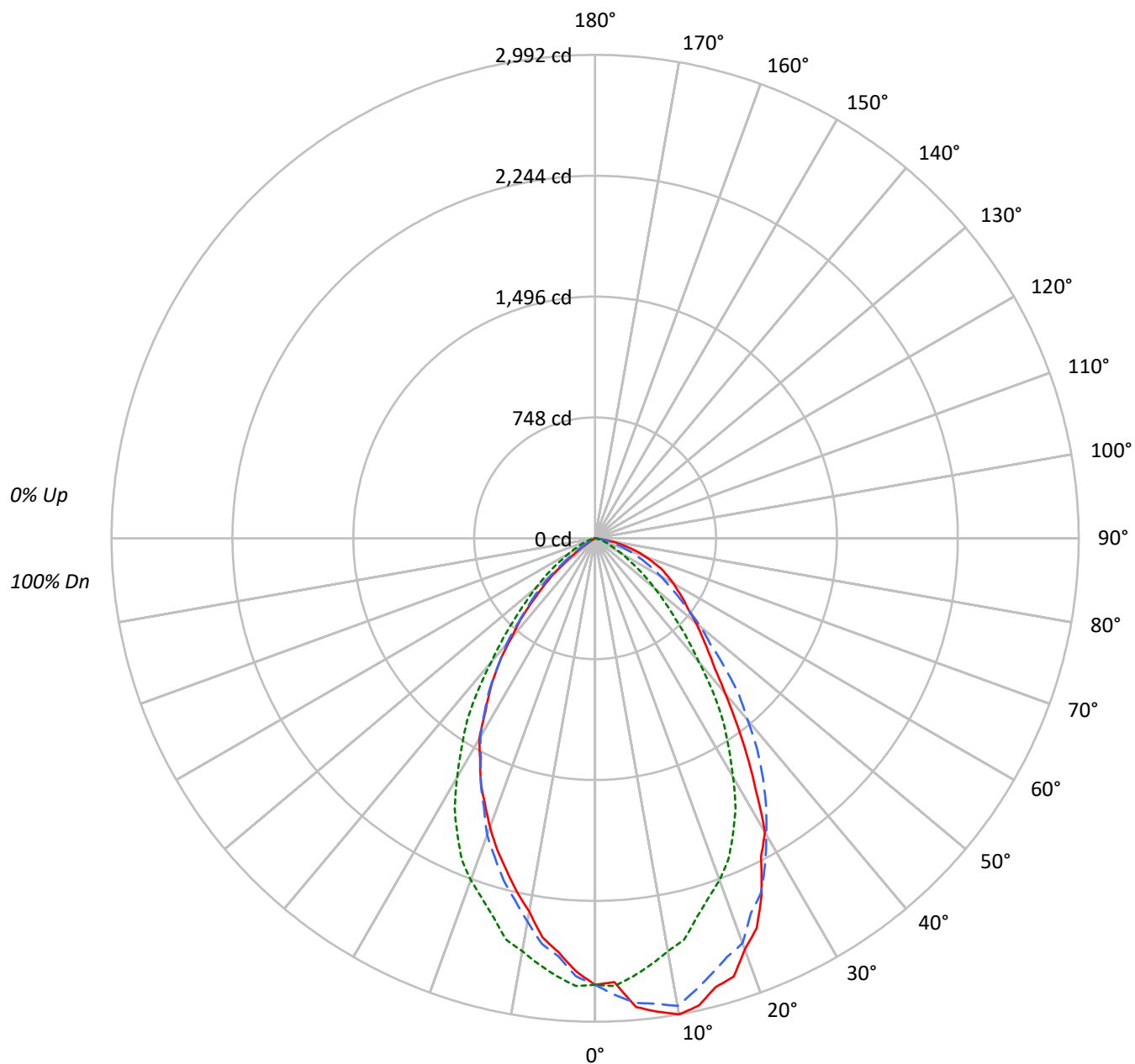
Lumens per Lamp: N/A
Luminaire Lumens: 3961.0 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 58.4
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

TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509027 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509027 4LBSQLWWLI

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	50	30	10
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	84	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	70	66	64		
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58		
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53		
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48		
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44		
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41		
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	266628	266628	266628
5°	282088	263481	249360
10°	293148	254193	229835
15°	287291	242599	212152
20°	277969	231012	195290
25°	259282	214822	178146
30°	234051	190120	159481
35°	192801	162752	132315
40°	157346	125617	101836
45°	135187	95410	73250
50°	122355	72623	46264
55°	112592	52385	16721
60°	108068	35797	2547
65°	104384	24224	776
70°	93465	16814	959
75°	76611	8649	0
80°	47898	3667	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509027 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.9	6.5
10°-20°	697.5	17.6
20°-30°	931.4	23.5
30°-40°	884.2	22.3
40°-50°	611.2	15.4
50°-60°	337.7	8.5
60°-70°	167.7	4.2
70°-80°	66.1	1.7
80°-90°	6.3	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°	1887.9	47.7
0°-40°	2772.1	70.0
0°-60°	3720.9	93.9
0°-90°	3961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3961.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2763	2763	2763	2763	2763	
5°	2912	2886	2720	2598	2574	279
15°	2876	2790	2429	2190	2124	814
25°	2435	2425	2018	1673	1673	1110
35°	1637	1809	1382	1136	1123	1025
45°	991	1136	699	573	537	773
55°	669	630	311	159	99	602
65°	457	331	106	3	3	444
75°	206	126	23	0	0	219
85°	0	3	0	0	0	19
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509027 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3
2.5°	2750.0	2826.2	2832.9	2826.2	2836.2	2832.9	2849.5	2832.9	2852.9	2823.0	2829.6
5°	2912.4	2882.6	2945.5	2912.4	2912.4	2909.2	2899.2	2895.8	2909.2	2866.1	2886.0
7.5°	2955.5	2998.6	3055.0	2985.4	2988.6	2988.6	2968.8	2962.2	2962.2	2882.6	2905.8
10°	2992.0	2965.4	2995.3	2968.8	2992.0	2988.6	3001.9	2958.8	2988.6	2942.3	2938.9
12.5°	2962.2	2952.2	2992.0	2948.9	2935.7	2938.9	2922.4	2912.4	2922.4	2869.3	2866.1
15°	2876.0	2886.0	2945.5	2899.2	2892.6	2886.0	2866.1	2832.9	2859.5	2786.5	2789.9
17.5°	2846.2	2829.6	2839.6	2799.8	2809.8	2803.1	2799.8	2770.0	2763.3	2716.9	2716.9
20°	2707.1	2743.4	2743.4	2716.9	2716.9	2713.7	2670.6	2697.1	2667.2	2654.0	2667.2
22.5°	2610.9	2614.3	2614.3	2591.0	2594.4	2581.2	2557.9	2541.3	2557.9	2541.3	2514.8
25°	2435.4	2442.0	2481.7	2438.6	2432.0	2445.2	2425.4	2415.4	2412.1	2372.4	2425.4
27.5°	2223.3	2289.5	2286.2	2269.6	2289.5	2263.0	2253.1	2256.4	2266.4	2263.0	2276.2
30°	2100.7	2110.6	2120.6	2107.3	2110.6	2100.7	2100.7	2104.0	2130.5	2120.6	2117.2
32.5°	1852.1	1885.2	1911.9	1911.9	1915.1	1925.1	1921.7	1991.3	2007.9	1974.8	1968.2
35°	1636.8	1660.0	1683.1	1686.5	1729.6	1732.8	1736.2	1756.1	1802.4	1812.4	1809.0
37.5°	1431.4	1454.5	1461.2	1491.0	1514.2	1537.4	1564.0	1590.4	1630.2	1663.3	1646.8
40°	1249.2	1259.0	1275.7	1288.9	1335.2	1335.2	1348.5	1401.6	1444.7	1471.1	1467.8
42.5°	1096.8	1100.0	1113.3	1136.5	1179.6	1169.6	1179.6	1216.1	1278.9	1282.3	1318.7
45°	990.7	987.3	997.3	1000.6	1027.2	1040.4	1047.1	1073.5	1126.5	1133.1	1136.5
47.5°	894.7	891.3	907.9	914.5	924.4	937.6	937.6	941.0	960.9	977.5	964.2
50°	815.1	815.1	815.1	821.7	838.3	834.9	838.3	851.6	861.4	854.8	851.6
52.5°	728.9	742.1	752.1	755.5	758.7	758.7	762.1	755.5	752.1	742.1	722.3
55°	669.3	682.5	682.5	682.5	682.5	695.8	679.3	682.5	682.5	656.1	629.6
57.5°	609.7	623.0	632.8	619.6	632.8	619.6	613.0	609.7	603.0	576.5	536.8
60°	560.0	566.6	563.2	560.0	566.6	556.6	550.0	536.8	530.1	493.7	467.2
62.5°	503.7	506.9	510.3	503.7	497.0	493.7	480.4	460.6	447.3	417.5	394.2
65°	457.2	447.3	444.0	440.7	434.1	424.1	414.2	391.0	381.0	354.5	331.3
67.5°	387.6	384.4	391.0	381.0	364.5	364.5	354.5	334.7	311.4	294.9	271.7
70°	331.3	328.0	321.4	311.4	308.2	294.9	294.9	271.7	265.1	235.2	215.4
72.5°	271.7	271.7	261.7	251.8	241.8	235.2	232.0	215.4	205.5	188.9	172.3
75°	205.5	205.5	202.1	192.1	185.5	178.9	175.6	162.4	152.4	135.9	125.9
77.5°	145.8	145.8	132.5	125.9	129.2	122.5	115.9	112.7	109.3	99.4	86.2
80°	86.2	82.8	73.0	76.2	73.0	73.0	69.6	66.2	59.6	53.0	46.3
82.5°	23.2	26.5	26.5	26.5	29.9	23.2	23.2	23.2	26.5	26.5	16.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4
87.5°	3.4	6.6	13.2	13.2	13.2	13.2	13.2	10.0	10.0	10.0	6.6
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: P#

CATALOG NUMBER: LD4C50D010 EX4C509027 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3
2.5°	2796.5	2793.1	2796.5	2773.3	2826.2	2786.5	2779.9	2773.3	2796.5	2773.3	2740.2
5°	2856.1	2823.0	2813.0	2803.1	2832.9	2786.5	2776.7	2779.9	2763.3	2720.3	2723.6
7.5°	2876.0	2846.2	2816.4	2753.4	2779.9	2770.0	2743.4	2723.6	2697.1	2660.6	2654.0
10°	2882.6	2849.5	2806.4	2786.5	2746.8	2733.6	2723.6	2690.5	2657.4	2594.4	2577.8
12.5°	2862.7	2823.0	2770.0	2753.4	2723.6	2680.5	2657.4	2624.1	2594.4	2544.7	2508.2
15°	2776.7	2743.4	2726.9	2670.6	2657.4	2630.7	2584.4	2538.1	2495.0	2428.6	2408.8
17.5°	2677.2	2664.0	2647.4	2604.3	2601.0	2574.5	2531.4	2491.6	2435.4	2332.6	2299.5
20°	2574.5	2574.5	2521.4	2505.0	2538.1	2485.0	2451.9	2415.4	2299.5	2249.8	2190.2
22.5°	2498.3	2461.9	2432.0	2405.5	2408.8	2375.7	2329.3	2256.4	2213.3	2153.7	2084.1
25°	2349.2	2362.4	2296.2	2286.2	2296.2	2219.9	2196.8	2137.1	2074.1	2017.8	1964.8
27.5°	2256.4	2219.9	2176.9	2140.5	2140.5	2110.6	2044.4	2031.2	1935.0	1882.0	1815.7
30°	2117.2	2090.7	2054.3	2001.3	1994.7	1971.4	1918.5	1885.2	1785.9	1706.4	1669.9
32.5°	1941.6	1931.7	1901.9	1842.3	1822.4	1795.8	1729.6	1673.3	1626.9	1537.4	1494.4
35°	1815.7	1779.3	1716.4	1666.6	1650.0	1603.7	1550.6	1510.9	1461.2	1381.7	1325.4
37.5°	1626.9	1590.4	1530.7	1471.1	1471.1	1424.8	1351.9	1312.1	1242.5	1196.1	1149.7
40°	1461.2	1414.8	1355.2	1285.6	1275.7	1209.3	1179.6	1113.3	1070.2	997.3	990.7
42.5°	1275.7	1232.6	1179.6	1126.5	1086.8	1053.7	977.5	927.8	881.4	844.9	834.9
45°	1106.6	1050.3	1004.0	937.6	897.9	858.2	808.5	775.4	738.9	699.2	675.9
47.5°	960.9	914.5	848.2	788.6	748.9	728.9	672.6	636.2	606.3	579.9	563.2
50°	811.8	755.5	719.0	652.7	646.1	599.7	553.4	523.5	506.9	483.8	460.6
52.5°	699.2	646.1	596.4	546.8	520.2	503.7	460.6	430.7	407.6	391.0	377.7
55°	589.7	543.4	503.7	453.9	437.3	414.2	364.5	357.9	334.7	311.4	294.9
57.5°	506.9	463.8	417.5	384.4	354.5	338.0	298.2	271.7	258.5	238.6	222.0
60°	430.7	384.4	347.9	308.2	294.9	271.7	241.8	218.7	202.1	185.5	169.0
62.5°	361.1	321.4	281.7	248.5	228.6	215.4	192.1	172.3	155.8	142.5	129.2
65°	298.2	261.7	228.6	195.5	185.5	169.0	152.4	135.9	122.5	106.1	92.8
67.5°	245.2	212.1	178.9	155.8	145.8	139.2	119.3	102.7	92.8	82.8	69.6
70°	192.1	169.0	142.5	122.5	112.7	102.7	89.4	79.6	66.2	59.6	49.7
72.5°	149.2	129.2	106.1	89.4	82.8	76.2	63.0	53.0	46.3	39.7	33.1
75°	106.1	89.4	76.2	59.6	56.3	53.0	43.1	36.5	29.9	23.2	19.9
77.5°	73.0	59.6	46.3	39.7	36.5	29.9	26.5	19.9	16.6	13.2	10.0
80°	39.7	29.9	23.2	19.9	16.6	13.2	13.2	10.0	6.6	6.6	3.4
82.5°	13.2	10.0	6.6	3.4	3.4	3.4	3.4	3.4	3.4	0.0	3.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C50D010 EX4C509027 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3
2.5°	2760.0	2723.6	2733.6	2733.6	2726.9	2726.9	2720.3	2710.3	2713.7	2693.7	2650.7
5°	2730.2	2683.8	2677.2	2683.8	2657.4	2650.7	2637.5	2657.4	2597.6	2620.9	2594.4
7.5°	2644.1	2601.0	2591.0	2614.3	2581.2	2561.2	2557.9	2584.4	2531.4	2505.0	2475.1
10°	2547.9	2531.4	2501.6	2485.0	2475.1	2478.3	2451.9	2418.8	2408.8	2402.2	2375.7
12.5°	2461.9	2425.4	2398.9	2379.0	2372.4	2372.4	2329.3	2322.7	2292.8	2286.2	2246.5
15°	2359.1	2316.1	2299.5	2273.0	2249.8	2263.0	2213.3	2200.0	2190.2	2147.1	2153.7
17.5°	2269.6	2223.3	2183.5	2166.9	2147.1	2127.2	2080.7	2090.7	2067.5	2067.5	2007.9
20°	2153.7	2104.0	2074.1	2041.0	2041.0	2014.5	1981.4	1984.7	1954.8	1925.1	1872.0
22.5°	2031.2	1978.1	1941.6	1928.3	1895.2	1888.6	1848.9	1838.9	1799.2	1802.4	1756.1
25°	1901.9	1848.9	1799.2	1802.4	1772.7	1759.5	1736.2	1689.9	1673.3	1653.4	1640.2
27.5°	1749.5	1713.0	1669.9	1666.6	1610.3	1613.5	1583.8	1570.6	1530.7	1540.7	1510.9
30°	1610.3	1557.3	1517.5	1507.6	1484.4	1477.8	1431.4	1411.4	1418.2	1391.6	1375.1
32.5°	1467.8	1388.3	1371.7	1351.9	1338.6	1322.0	1288.9	1302.1	1272.3	1278.9	1252.4
35°	1278.9	1245.8	1202.7	1202.7	1189.5	1176.2	1153.1	1166.4	1136.5	1123.3	1096.8
37.5°	1119.9	1090.2	1047.1	1060.3	1037.1	1017.2	997.3	1000.6	974.1	970.9	944.2
40°	947.6	931.0	901.3	901.3	884.7	884.7	874.7	864.8	848.2	828.3	798.5
42.5°	785.2	772.0	758.7	762.1	738.9	758.7	732.3	748.9	695.8	692.5	672.6
45°	665.9	636.2	639.4	626.2	613.0	619.6	596.4	603.0	573.2	566.6	546.8
47.5°	540.1	530.1	510.3	503.7	503.7	493.7	483.8	480.4	467.2	450.6	424.1
50°	444.0	407.6	400.9	391.0	384.4	384.4	371.1	351.3	354.5	338.0	311.4
52.5°	347.9	318.0	304.8	301.6	288.3	281.7	265.1	251.8	241.8	235.2	218.7
55°	268.3	241.8	225.4	225.4	205.5	205.5	182.3	172.3	159.0	145.8	135.9
57.5°	202.1	188.9	172.3	159.0	152.4	135.9	122.5	106.1	96.1	76.2	63.0
60°	152.4	139.2	122.5	112.7	106.1	89.4	73.0	59.6	36.5	29.9	26.5
62.5°	112.7	99.4	82.8	76.2	69.6	56.3	39.7	19.9	10.0	10.0	10.0
65°	82.8	66.2	53.0	46.3	39.7	29.9	13.2	6.6	3.4	3.4	3.4
67.5°	56.3	43.1	29.9	26.5	19.9	10.0	3.4	3.4	3.4	3.4	3.4
70°	36.5	26.5	13.2	10.0	6.6	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	23.2	13.2	6.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	13.2	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	6.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4
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: P#

CATALOG NUMBER: LD4C50D010 EX4C509027 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3	2763.3
2.5°	2697.1	2673.8	2687.1	2657.4	2670.6	2693.7	2677.2	2683.8
5°	2604.3	2591.0	2574.5	2531.4	2564.5	2591.0	2577.8	2574.5
7.5°	2505.0	2458.5	2481.7	2468.5	2461.9	2488.3	2458.5	2491.6
10°	2402.2	2369.0	2365.8	2342.6	2342.6	2362.4	2365.8	2345.8
12.5°	2249.8	2233.3	2233.3	2229.9	2226.5	2246.5	2249.8	2239.9
15°	2140.5	2133.8	2117.2	2114.0	2094.1	2123.8	2127.2	2123.8
17.5°	2007.9	2011.2	1994.7	1994.7	2007.9	2017.8	1991.3	2017.8
20°	1918.5	1901.9	1895.2	1865.4	1882.0	1898.6	1898.6	1901.9
22.5°	1789.2	1762.7	1772.7	1756.1	1746.1	1769.3	1769.3	1779.3
25°	1643.4	1643.4	1650.0	1640.2	1646.8	1660.0	1650.0	1673.3
27.5°	1504.2	1517.5	1517.5	1504.2	1510.9	1550.6	1567.2	1540.7
30°	1375.1	1378.3	1388.3	1381.7	1401.6	1414.8	1411.4	1431.4
32.5°	1229.3	1245.8	1252.4	1242.5	1249.2	1278.9	1262.4	1259.0
35°	1116.6	1086.8	1083.5	1086.8	1100.0	1106.6	1100.0	1123.3
37.5°	954.2	944.2	931.0	934.4	944.2	957.6	964.2	980.7
40°	798.5	785.2	785.2	782.0	772.0	808.5	808.5	808.5
42.5°	662.7	659.3	642.8	642.8	656.1	665.9	659.3	682.5
45°	543.4	530.1	520.2	520.2	530.1	530.1	540.1	536.8
47.5°	427.5	414.2	417.5	407.6	417.5	430.7	414.2	417.5
50°	321.4	321.4	314.8	321.4	318.0	321.4	314.8	308.2
52.5°	218.7	248.5	251.8	238.6	208.7	182.3	165.6	178.9
55°	125.9	112.7	112.7	109.3	102.7	99.4	89.4	99.4
57.5°	63.0	56.3	56.3	56.3	53.0	49.7	43.1	43.1
60°	26.5	23.2	23.2	19.9	16.6	13.2	10.0	13.2
62.5°	10.0	6.6	6.6	6.6	6.6	6.6	6.6	6.6
65°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
67.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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)