

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: P563864

Luminaire Tested: **LD4C50D010 EX4C509030 4LBSQLWWLI**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P563864
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 EX4C509030 4LBSQLWWLI
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

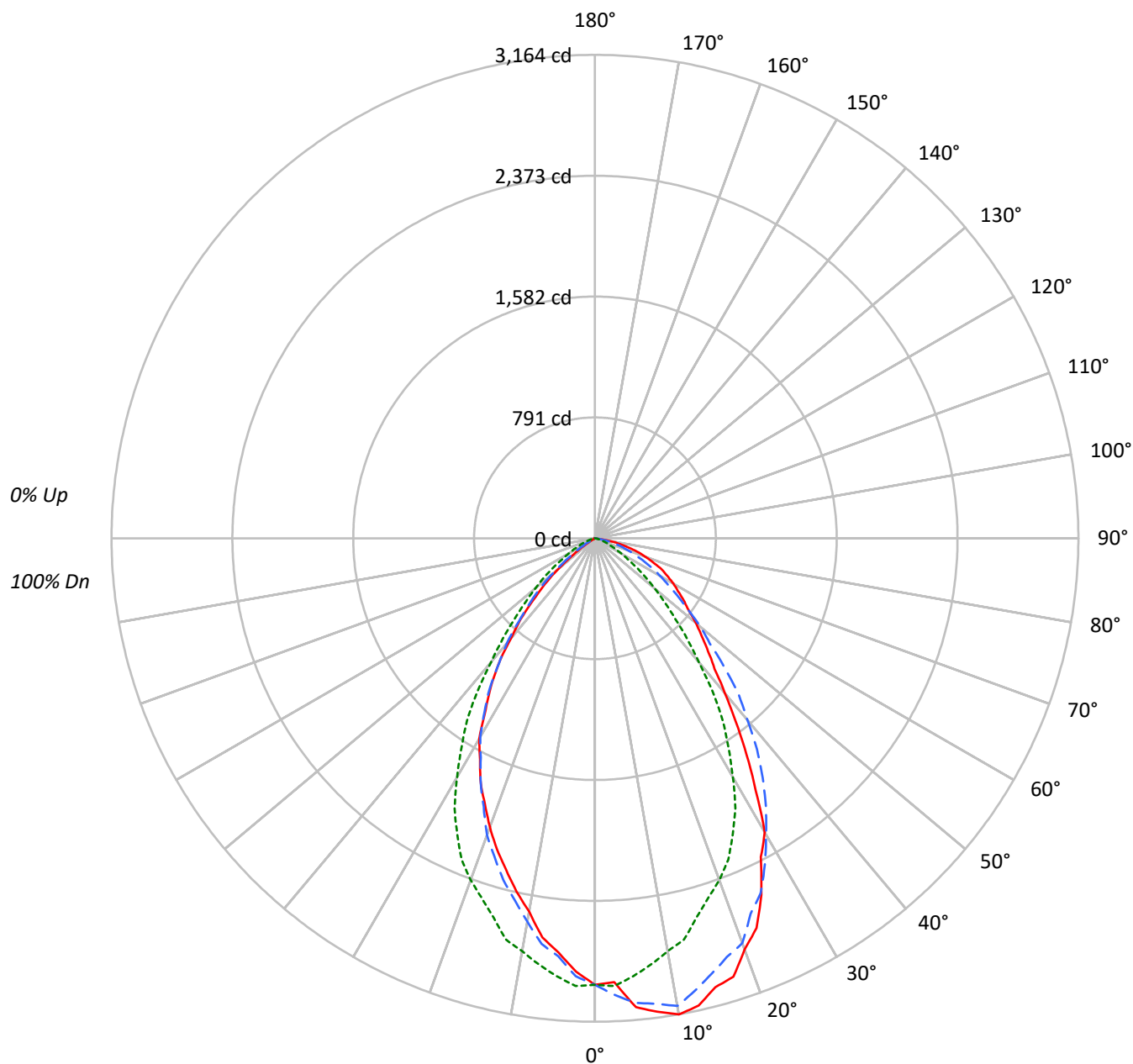
Lumens per Lamp: N/A
Luminaire Lumens: 4188.8 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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

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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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	112	108	105	102	109	106	103	101		102	100	98			98	96	95			95
2	104	98	93	89	102	96	92	88		93	89	86			90	87	84			87
3	97	89	83	78	95	88	82	77		85	80	76			82	78	75			80
4	91	81	74	69	89	80	74	69		78	72	68			76	71	67			74
5	85	75	67	62	83	74	67	62		72	66	61			70	65	60			68
6	80	69	61	56	78	68	61	56		66	60	55			65	59	55			63
7	75	63	56	51	73	63	56	51		61	55	50			60	54	50			59
8	70	59	52	47	69	58	51	46		57	51	46			56	50	46			55
9	66	55	48	43	65	54	47	43		53	47	43			52	46	42			51
10	62	51	44	40	61	51	44	40		50	44	39			49	43	39			48

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	281960	281960	281960
5°	298321	278630	263704
10°	310010	268811	243053
15°	303814	256554	224359
20°	293956	244289	206513
25°	274187	227183	188388
30°	247521	201050	168661
35°	203897	172116	139924
40°	166390	132847	107693
45°	142965	100895	77452
50°	129395	76811	48921
55°	119068	55413	17697
60°	114281	37862	2702
65°	110389	25617	822
70°	98825	17773	1016
75°	81010	9171	0
80°	50620	3890	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.8	6.5
10°-20°	737.7	17.6
20°-30°	985.0	23.5
30°-40°	935.1	22.3
40°-50°	646.3	15.4
50°-60°	357.1	8.5
60°-70°	177.4	4.2
70°-80°	69.9	1.7
80°-90°	6.7	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°	1996.4	47.7
0°-40°	2931.5	70.0
0°-60°	3935.0	93.9
0°-90°	4188.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4188.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2922	2922	2922	2922	2922	
5°	3080	3052	2877	2747	2723	295
15°	3041	2950	2568	2316	2246	860
25°	2575	2565	2134	1770	1770	1174
35°	1731	1913	1461	1202	1188	1084
45°	1048	1202	739	606	568	817
55°	708	666	329	168	105	637
65°	484	350	112	4	4	469
75°	217	133	25	0	0	232
85°	0	4	0	0	0	20
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°	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2
2.5°	2908.2	2988.8	2995.8	2988.8	2999.4	2995.8	3013.4	2995.8	3016.9	2985.4	2992.4
5°	3080.0	3048.3	3115.0	3080.0	3080.0	3076.5	3065.9	3062.4	3076.5	3031.0	3051.9
7.5°	3125.6	3171.1	3230.7	3157.1	3160.5	3160.5	3139.5	3132.6	3132.6	3048.3	3073.0
10°	3164.1	3135.9	3167.6	3139.5	3164.1	3160.5	3174.6	3129.0	3160.5	3111.5	3108.0
12.5°	3132.6	3122.0	3164.1	3118.5	3104.5	3108.0	3090.6	3080.0	3090.6	3034.4	3031.0
15°	3041.4	3051.9	3115.0	3065.9	3058.9	3051.9	3031.0	2995.8	3023.9	2946.8	2950.4
17.5°	3009.9	2992.4	3003.0	2960.8	2971.3	2964.3	2960.8	2929.3	2922.2	2873.2	2873.2
20°	2862.8	2901.3	2901.3	2873.2	2873.2	2869.8	2824.3	2852.2	2820.6	2806.7	2820.6
22.5°	2761.1	2764.6	2764.6	2740.0	2743.6	2729.7	2705.0	2687.4	2705.0	2687.4	2659.5
25°	2575.4	2582.5	2624.5	2578.9	2571.9	2585.9	2564.9	2554.3	2550.9	2508.9	2564.9
27.5°	2351.2	2421.1	2417.7	2400.2	2421.1	2393.2	2382.7	2386.1	2396.7	2393.2	2407.2
30°	2221.6	2232.0	2242.5	2228.6	2232.0	2221.6	2221.6	2225.0	2253.0	2242.5	2239.0
32.5°	1958.7	1993.7	2021.8	2021.8	2025.2	2035.8	2032.3	2105.8	2123.4	2088.4	2081.4
35°	1731.0	1755.5	1779.9	1783.5	1829.1	1832.5	1836.0	1857.1	1906.1	1916.7	1913.0
37.5°	1513.8	1538.2	1545.2	1576.8	1601.4	1625.8	1654.0	1681.9	1724.0	1758.9	1741.5
40°	1321.0	1331.4	1349.0	1363.0	1412.1	1412.1	1426.0	1482.2	1527.7	1555.8	1552.1
42.5°	1159.8	1163.3	1177.3	1201.8	1247.4	1236.9	1247.4	1286.0	1352.5	1356.0	1394.6
45°	1047.7	1044.2	1054.7	1058.1	1086.3	1100.3	1107.3	1135.3	1191.2	1198.3	1201.8
47.5°	946.1	942.5	960.1	967.2	977.5	991.6	991.6	995.1	1016.1	1033.7	1019.7
50°	862.0	862.0	862.0	869.0	886.5	882.9	886.5	900.5	911.0	904.0	900.5
52.5°	770.8	784.8	795.3	798.9	802.4	802.4	805.9	798.9	795.3	784.8	763.8
55°	707.8	721.8	721.8	721.8	721.8	735.8	718.3	721.8	721.8	693.8	665.8
57.5°	644.8	658.8	669.2	655.2	669.2	655.2	648.3	644.8	637.7	609.6	567.6
60°	592.2	599.2	595.7	592.2	599.2	588.7	581.6	567.6	560.7	522.0	494.1
62.5°	532.6	536.1	539.6	532.6	525.6	522.0	508.1	487.0	473.1	441.5	417.0
65°	483.5	473.1	469.4	466.1	459.1	448.5	438.0	413.5	402.9	374.9	350.3
67.5°	409.9	406.5	413.5	402.9	385.5	385.5	374.9	353.9	329.4	311.9	287.4
70°	350.3	346.9	339.9	329.4	325.9	311.9	311.9	287.4	280.3	248.7	227.8
72.5°	287.4	287.4	276.8	266.3	255.7	248.7	245.3	227.8	217.3	199.8	182.2
75°	217.3	217.3	213.7	203.1	196.2	189.2	185.7	171.7	161.1	143.7	133.2
77.5°	154.2	154.2	140.2	133.2	136.6	129.6	122.6	119.1	115.6	105.2	91.1
80°	91.1	87.6	77.1	80.6	77.1	77.1	73.5	70.0	63.0	56.0	49.0
82.5°	24.6	28.0	28.0	28.0	31.5	24.6	24.6	24.6	28.0	28.0	17.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6	3.6
87.5°	3.6	7.0	14.0	14.0	14.0	14.0	14.0	10.6	10.6	10.6	7.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2
2.5°	2957.4	2953.8	2957.4	2932.8	2988.8	2946.8	2939.8	2932.8	2957.4	2932.8	2897.8
5°	3020.4	2985.4	2974.8	2964.3	2995.8	2946.8	2936.4	2939.8	2922.2	2876.7	2880.2
7.5°	3041.4	3009.9	2978.4	2911.8	2939.8	2929.3	2901.3	2880.2	2852.2	2813.7	2806.7
10°	3048.3	3013.4	2967.8	2946.8	2904.8	2890.8	2880.2	2845.2	2810.2	2743.6	2726.1
12.5°	3027.4	2985.4	2929.3	2911.8	2880.2	2834.6	2810.2	2775.0	2743.6	2691.0	2652.5
15°	2936.4	2901.3	2883.8	2824.3	2810.2	2782.0	2733.0	2684.1	2638.5	2568.3	2547.3
17.5°	2831.2	2817.2	2799.6	2754.1	2750.6	2722.6	2677.1	2634.9	2575.4	2466.7	2431.7
20°	2722.6	2722.6	2666.5	2649.0	2684.1	2627.9	2592.9	2554.3	2431.7	2379.1	2316.2
22.5°	2642.1	2603.4	2571.9	2543.9	2547.3	2512.3	2463.4	2386.1	2340.6	2277.6	2204.0
25°	2484.3	2498.3	2428.3	2417.7	2428.3	2347.6	2323.2	2260.0	2193.4	2133.9	2077.8
27.5°	2386.1	2347.6	2302.1	2263.6	2263.6	2232.0	2162.0	2148.0	2046.3	1990.3	1920.1
30°	2239.0	2211.0	2172.4	2116.4	2109.4	2084.9	2028.8	1993.7	1888.6	1804.5	1766.0
32.5°	2053.2	2042.8	2011.2	1948.2	1927.2	1899.1	1829.1	1769.5	1720.5	1625.8	1580.3
35°	1920.1	1881.6	1815.1	1762.5	1744.9	1695.9	1639.8	1597.8	1545.2	1461.2	1401.6
37.5°	1720.5	1681.9	1618.8	1555.8	1555.8	1506.8	1429.6	1387.6	1314.0	1264.9	1215.9
40°	1545.2	1496.2	1433.1	1359.6	1349.0	1278.9	1247.4	1177.3	1131.7	1054.7	1047.7
42.5°	1349.0	1303.4	1247.4	1191.2	1149.3	1114.2	1033.7	981.1	932.2	893.5	882.9
45°	1170.3	1110.7	1061.8	991.6	949.6	907.5	855.0	820.0	781.4	739.4	714.8
47.5°	1016.1	967.2	897.0	834.0	792.0	770.8	711.2	672.8	641.2	613.2	595.7
50°	858.5	798.9	760.4	690.3	683.3	634.2	585.2	553.7	536.1	511.7	487.0
52.5°	739.4	683.3	630.7	578.2	550.1	532.6	487.0	455.5	431.1	413.5	399.5
55°	623.6	574.6	532.6	480.0	462.5	438.0	385.5	378.5	353.9	329.4	311.9
57.5°	536.1	490.5	441.5	406.5	374.9	357.4	315.3	287.4	273.3	252.3	234.8
60°	455.5	406.5	367.9	325.9	311.9	287.4	255.7	231.3	213.7	196.2	178.7
62.5°	381.9	339.9	297.9	262.7	241.8	227.8	203.1	182.2	164.7	150.7	136.6
65°	315.3	276.8	241.8	206.7	196.2	178.7	161.1	143.7	129.6	112.2	98.2
67.5°	259.3	224.3	189.2	164.7	154.2	147.2	126.1	108.6	98.2	87.6	73.5
70°	203.1	178.7	150.7	129.6	119.1	108.6	94.6	84.1	70.0	63.0	52.6
72.5°	157.8	136.6	112.2	94.6	87.6	80.6	66.6	56.0	49.0	42.0	35.0
75°	112.2	94.6	80.6	63.0	59.6	56.0	45.6	38.6	31.5	24.6	21.0
77.5°	77.1	63.0	49.0	42.0	38.6	31.5	28.0	21.0	17.6	14.0	10.6
80°	42.0	31.5	24.6	21.0	17.6	14.0	14.0	10.6	7.0	7.0	3.6
82.5°	14.0	10.6	7.0	3.6	3.6	3.6	3.6	3.6	3.6	0.0	3.6
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°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	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°	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2
2.5°	2918.8	2880.2	2890.8	2890.8	2883.8	2883.8	2876.7	2866.2	2869.8	2848.7	2803.2
5°	2887.2	2838.2	2831.2	2838.2	2810.2	2803.2	2789.2	2810.2	2747.1	2771.7	2743.6
7.5°	2796.2	2750.6	2740.0	2764.6	2729.7	2708.5	2705.0	2733.0	2677.1	2649.0	2617.5
10°	2694.5	2677.1	2645.4	2627.9	2617.5	2620.9	2592.9	2557.9	2547.3	2540.4	2512.3
12.5°	2603.4	2564.9	2536.9	2515.8	2508.9	2508.9	2463.4	2456.3	2424.7	2417.7	2375.8
15°	2494.8	2449.3	2431.7	2403.7	2379.1	2393.2	2340.6	2326.5	2316.2	2270.6	2277.6
17.5°	2400.2	2351.2	2309.1	2291.5	2270.6	2249.5	2200.4	2211.0	2186.4	2186.4	2123.4
20°	2277.6	2225.0	2193.4	2158.4	2158.4	2130.4	2095.4	2098.8	2067.3	2035.8	1979.7
22.5°	2148.0	2091.9	2053.2	2039.3	2004.3	1997.3	1955.3	1944.7	1902.7	1906.1	1857.1
25°	2011.2	1955.3	1902.7	1906.1	1874.7	1860.7	1836.0	1787.1	1769.5	1748.5	1734.5
27.5°	1850.1	1811.5	1766.0	1762.5	1702.9	1706.4	1674.9	1660.9	1618.8	1629.4	1597.8
30°	1702.9	1646.9	1604.7	1594.4	1569.7	1562.7	1513.8	1492.6	1499.8	1471.6	1454.2
32.5°	1552.1	1468.2	1450.6	1429.6	1415.6	1398.0	1363.0	1377.0	1345.5	1352.5	1324.5
35°	1352.5	1317.5	1271.9	1271.9	1257.9	1243.8	1219.4	1233.5	1201.8	1187.9	1159.8
37.5°	1184.3	1152.9	1107.3	1121.3	1096.7	1075.7	1054.7	1058.1	1030.1	1026.7	998.6
40°	1002.1	984.5	953.1	953.1	935.5	935.5	924.9	914.6	897.0	876.0	844.4
42.5°	830.3	816.4	802.4	805.9	781.4	802.4	774.4	792.0	735.8	732.4	711.2
45°	704.2	672.8	676.2	662.2	648.3	655.2	630.7	637.7	606.3	599.2	578.2
47.5°	571.3	560.7	539.6	532.6	532.6	522.0	511.7	508.1	494.1	476.5	448.5
50°	469.4	431.1	423.9	413.5	406.5	406.5	392.4	371.5	374.9	357.4	329.4
52.5°	367.9	336.3	322.4	318.9	304.9	297.9	280.3	266.3	255.7	248.7	231.3
55°	283.8	255.7	238.3	238.3	217.3	217.3	192.8	182.2	168.1	154.2	143.7
57.5°	213.7	199.8	182.2	168.1	161.1	143.7	129.6	112.2	101.6	80.6	66.6
60°	161.1	147.2	129.6	119.1	112.2	94.6	77.1	63.0	38.6	31.5	28.0
62.5°	119.1	105.2	87.6	80.6	73.5	59.6	42.0	21.0	10.6	10.6	10.6
65°	87.6	70.0	56.0	49.0	42.0	31.5	14.0	7.0	3.6	3.6	3.6
67.5°	59.6	45.6	31.5	28.0	21.0	10.6	3.6	3.6	3.6	3.6	3.6
70°	38.6	28.0	14.0	10.6	7.0	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	24.6	14.0	7.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	14.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	7.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.6	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	3.6	3.6	3.6
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: P563864

CATALOG NUMBER: LD4C50D010 EX4C509030 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2	2922.2
2.5°	2852.2	2827.6	2841.6	2810.2	2824.3	2848.7	2831.2	2838.2
5°	2754.1	2740.0	2722.6	2677.1	2712.1	2740.0	2726.1	2722.6
7.5°	2649.0	2599.9	2624.5	2610.4	2603.4	2631.5	2599.9	2634.9
10°	2540.4	2505.3	2501.9	2477.3	2477.3	2498.3	2501.9	2480.7
12.5°	2379.1	2361.7	2361.7	2358.2	2354.6	2375.8	2379.1	2368.8
15°	2263.6	2256.6	2239.0	2235.6	2214.5	2246.0	2249.5	2246.0
17.5°	2123.4	2126.9	2109.4	2109.4	2123.4	2133.9	2105.8	2133.9
20°	2028.8	2011.2	2004.3	1972.7	1990.3	2007.9	2007.9	2011.2
22.5°	1892.1	1864.1	1874.7	1857.1	1846.5	1871.1	1871.1	1881.6
25°	1737.9	1737.9	1744.9	1734.5	1741.5	1755.5	1744.9	1769.5
27.5°	1590.8	1604.7	1604.7	1590.8	1597.8	1639.8	1657.3	1629.4
30°	1454.2	1457.6	1468.2	1461.2	1482.2	1496.2	1492.6	1513.8
32.5°	1300.0	1317.5	1324.5	1314.0	1321.0	1352.5	1335.0	1331.4
35°	1180.9	1149.3	1145.9	1149.3	1163.3	1170.3	1163.3	1187.9
37.5°	1009.2	998.6	984.5	988.1	998.6	1012.7	1019.7	1037.1
40°	844.4	830.3	830.3	827.0	816.4	855.0	855.0	855.0
42.5°	700.9	697.2	679.8	679.8	693.8	704.2	697.2	721.8
45°	574.6	560.7	550.1	550.1	560.7	560.7	571.3	567.6
47.5°	452.0	438.0	441.5	431.1	441.5	455.5	438.0	441.5
50°	339.9	339.9	332.9	339.9	336.3	339.9	332.9	325.9
52.5°	231.3	262.7	266.3	252.3	220.7	192.8	175.2	189.2
55°	133.2	119.1	119.1	115.6	108.6	105.2	94.6	105.2
57.5°	66.6	59.6	59.6	59.6	56.0	52.6	45.6	45.6
60°	28.0	24.6	24.6	21.0	17.6	14.0	10.6	14.0
62.5°	10.6	7.0	7.0	7.0	7.0	7.0	7.0	7.0
65°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
67.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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)