

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 EX4C509040 4LBSQLWWLI**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



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 EX4C509040 4LBSQLWWLI
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

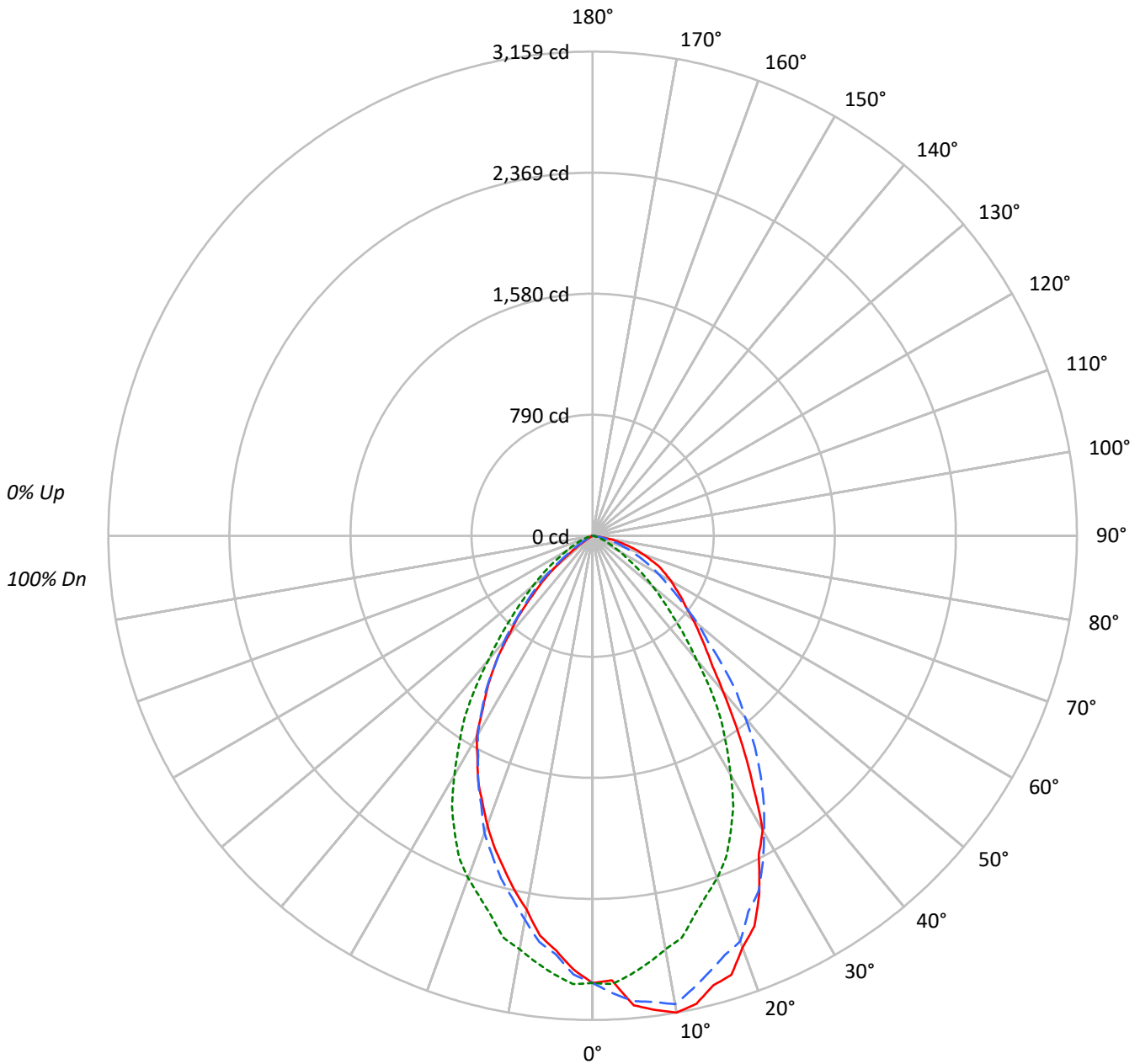
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4182.0 lumens
Efficiency: N/A
Efficacy: 71.6 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									
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	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°	281506	281506	281506
5°	297827	278184	263278
10°	309501	268380	242661
15°	303314	256135	223989
20°	293474	243899	206184
25°	273750	226810	188079
30°	247109	200727	168383
35°	203555	171834	139689
40°	166125	132633	107517
45°	142733	100732	77330
50°	129185	76676	48846
55°	118867	55312	17663
60°	114088	37785	2702
65°	110206	25571	822
70°	98684	17745	1016
75°	80899	9134	0
80°	50565	3890	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.3	6.5
10°-20°	736.4	17.6
20°-30°	983.4	23.5
30°-40°	933.5	22.3
40°-50°	645.3	15.4
50°-60°	356.5	8.5
60°-70°	177.1	4.2
70°-80°	69.8	1.7
80°-90°	6.6	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°	1993.2	47.7
0°-40°	2926.7	70.0
0°-60°	3928.6	93.9
0°-90°	4182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4182.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2918	2918	2918	2918	2918	
5°	3075	3047	2872	2743	2718	294
15°	3036	2946	2564	2312	2242	859
25°	2571	2561	2130	1767	1767	1172
35°	1728	1910	1459	1200	1186	1083
45°	1046	1200	738	605	567	816
55°	707	665	329	168	105	636
65°	483	350	112	4	4	469
75°	217	133	24	0	0	231
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°	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5
2.5°	2903.5	2983.9	2990.9	2983.9	2994.5	2990.9	3008.5	2990.9	3012.0	2980.5	2987.5
5°	3074.9	3043.4	3109.9	3074.9	3074.9	3071.5	3061.0	3057.4	3071.5	3026.0	3047.0
7.5°	3120.4	3165.9	3225.4	3152.0	3155.4	3155.4	3134.4	3127.4	3127.4	3043.4	3067.9
10°	3158.9	3130.9	3162.4	3134.4	3158.9	3155.4	3169.4	3123.9	3155.4	3106.5	3102.9
12.5°	3127.4	3116.9	3158.9	3113.4	3099.5	3102.9	3085.5	3074.9	3085.5	3029.4	3026.0
15°	3036.4	3047.0	3109.9	3061.0	3054.0	3047.0	3026.0	2990.9	3019.0	2942.0	2945.6
17.5°	3005.0	2987.5	2998.0	2956.0	2966.5	2959.5	2956.0	2924.6	2917.5	2868.5	2868.5
20°	2858.1	2896.5	2896.5	2868.5	2868.5	2865.1	2819.6	2847.6	2816.0	2802.1	2816.0
22.5°	2756.6	2760.1	2760.1	2735.6	2739.2	2725.2	2700.6	2683.1	2700.6	2683.1	2655.1
25°	2571.3	2578.3	2620.2	2574.7	2567.7	2581.7	2560.7	2550.2	2546.7	2504.8	2560.7
27.5°	2347.3	2417.2	2413.8	2396.2	2417.2	2389.3	2378.8	2382.3	2392.8	2389.3	2403.2
30°	2217.9	2228.4	2238.9	2224.9	2228.4	2217.9	2217.9	2221.4	2249.3	2238.9	2235.3
32.5°	1955.5	1990.4	2018.5	2018.5	2022.0	2032.5	2028.9	2102.4	2119.9	2085.0	2078.0
35°	1728.1	1752.6	1777.0	1780.6	1826.1	1829.5	1833.1	1854.1	1903.0	1913.5	1910.0
37.5°	1511.3	1535.7	1542.7	1574.2	1598.7	1623.1	1651.2	1679.2	1721.1	1756.1	1738.7
40°	1318.9	1329.3	1346.8	1360.8	1409.7	1409.7	1423.7	1479.8	1525.3	1553.2	1549.7
42.5°	1158.0	1161.4	1175.4	1199.9	1245.4	1234.9	1245.4	1283.9	1350.3	1353.8	1392.3
45°	1046.0	1042.4	1053.0	1056.4	1084.5	1098.5	1105.5	1133.4	1189.4	1196.3	1199.9
47.5°	944.6	941.0	958.6	965.5	976.0	989.9	989.9	993.5	1014.5	1032.0	1018.0
50°	860.6	860.6	860.6	867.5	885.1	881.5	885.1	899.1	909.5	902.5	899.1
52.5°	769.6	783.5	794.1	797.7	801.1	801.1	804.6	797.7	794.1	783.5	762.6
55°	706.6	720.6	720.6	720.6	720.6	734.6	717.2	720.6	720.6	692.7	664.7
57.5°	643.7	657.7	668.1	654.2	668.1	654.2	647.2	643.7	636.6	608.7	566.7
60°	591.2	598.2	594.7	591.2	598.2	587.7	580.7	566.7	559.7	521.2	493.3
62.5°	531.8	535.2	538.8	531.8	524.8	521.2	507.2	486.3	472.3	440.8	416.2
65°	482.7	472.3	468.7	465.3	458.3	447.8	437.3	412.8	402.3	374.3	349.8
67.5°	409.2	405.8	412.8	402.3	384.8	384.8	374.3	353.3	328.8	311.4	286.9
70°	349.8	346.3	339.3	328.8	325.4	311.4	311.4	286.9	279.9	248.3	227.4
72.5°	286.9	286.9	276.3	265.9	255.3	248.3	244.9	227.4	217.0	199.4	181.9
75°	217.0	217.0	213.4	202.8	195.8	188.9	185.4	171.5	160.9	143.5	132.9
77.5°	153.9	153.9	139.9	132.9	136.4	129.4	122.4	119.0	115.4	105.0	91.0
80°	91.0	87.4	77.0	80.5	77.0	77.0	73.5	69.9	62.9	55.9	48.9
82.5°	24.5	28.0	28.0	28.0	31.5	24.5	24.5	24.5	28.0	28.0	17.5
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°	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5
2.5°	2952.5	2949.0	2952.5	2928.0	2983.9	2942.0	2935.0	2928.0	2952.5	2928.0	2893.1
5°	3015.5	2980.5	2970.0	2959.5	2990.9	2942.0	2931.6	2935.0	2917.5	2872.1	2875.5
7.5°	3036.4	3005.0	2973.5	2907.0	2935.0	2924.6	2896.5	2875.5	2847.6	2809.0	2802.1
10°	3043.4	3008.5	2963.0	2942.0	2900.1	2886.1	2875.5	2840.6	2805.6	2739.2	2721.6
12.5°	3022.4	2980.5	2924.6	2907.0	2875.5	2830.0	2805.6	2770.5	2739.2	2686.7	2648.1
15°	2931.6	2896.5	2879.1	2819.6	2805.6	2777.5	2728.6	2679.7	2634.2	2564.1	2543.2
17.5°	2826.6	2812.6	2795.1	2749.6	2746.1	2718.2	2672.7	2630.6	2571.3	2462.7	2427.8
20°	2718.2	2718.2	2662.1	2644.7	2679.7	2623.6	2588.7	2550.2	2427.8	2375.3	2312.4
22.5°	2637.7	2599.2	2567.7	2539.7	2543.2	2508.2	2459.3	2382.3	2336.8	2273.9	2200.4
25°	2480.3	2494.2	2424.3	2413.8	2424.3	2343.8	2319.4	2256.3	2189.8	2130.4	2074.4
27.5°	2382.3	2343.8	2298.4	2259.9	2259.9	2228.4	2158.5	2144.5	2042.9	1987.0	1917.0
30°	2235.3	2207.4	2168.9	2113.0	2106.0	2081.4	2025.5	1990.4	1885.6	1801.6	1763.1
32.5°	2049.9	2039.5	2008.0	1945.1	1924.1	1896.0	1826.1	1766.6	1717.7	1623.1	1577.8
35°	1917.0	1878.6	1812.1	1759.6	1742.1	1693.2	1637.1	1595.2	1542.7	1458.8	1399.3
37.5°	1717.7	1679.2	1616.1	1553.2	1553.2	1504.3	1427.3	1385.3	1311.9	1262.8	1213.9
40°	1542.7	1493.7	1430.8	1357.4	1346.8	1276.8	1245.4	1175.4	1129.9	1053.0	1046.0
42.5°	1346.8	1301.3	1245.4	1189.4	1147.4	1112.5	1032.0	979.5	930.6	892.1	881.5
45°	1168.4	1108.9	1060.0	989.9	948.0	906.1	853.6	818.6	780.1	738.2	713.6
47.5°	1014.5	965.5	895.5	832.6	790.7	769.6	710.1	671.7	640.2	612.2	594.7
50°	857.1	797.7	759.1	689.1	682.1	633.2	584.3	552.7	535.2	510.8	486.3
52.5°	738.2	682.1	629.6	577.3	549.2	531.8	486.3	454.7	430.3	412.8	398.8
55°	622.6	573.7	531.8	479.3	461.7	437.3	384.8	377.9	353.3	328.8	311.4
57.5°	535.2	489.7	440.8	405.8	374.3	356.9	314.8	286.9	272.9	251.9	234.4
60°	454.7	405.8	367.3	325.4	311.4	286.9	255.3	230.9	213.4	195.8	178.4
62.5°	381.3	339.3	297.4	262.3	241.4	227.4	202.8	181.9	164.5	150.5	136.4
65°	314.8	276.3	241.4	206.4	195.8	178.4	160.9	143.5	129.4	112.0	98.0
67.5°	258.9	223.9	188.9	164.5	153.9	146.9	126.0	108.4	98.0	87.4	73.5
70°	202.8	178.4	150.5	129.4	119.0	108.4	94.4	84.0	69.9	62.9	52.5
72.5°	157.5	136.4	112.0	94.4	87.4	80.5	66.5	55.9	48.9	41.9	34.9
75°	112.0	94.4	80.5	62.9	59.5	55.9	45.5	38.5	31.5	24.5	21.0
77.5°	77.0	62.9	48.9	41.9	38.5	31.5	28.0	21.0	17.5	14.0	10.6
80°	41.9	31.5	24.5	21.0	17.5	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°	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5
2.5°	2914.0	2875.5	2886.1	2886.1	2879.1	2879.1	2872.1	2861.5	2865.1	2844.0	2798.6
5°	2882.5	2833.6	2826.6	2833.6	2805.6	2798.6	2784.7	2805.6	2742.6	2767.1	2739.2
7.5°	2791.6	2746.1	2735.6	2760.1	2725.2	2704.1	2700.6	2728.6	2672.7	2644.7	2613.2
10°	2690.1	2672.7	2641.2	2623.6	2613.2	2616.6	2588.7	2553.7	2543.2	2536.2	2508.2
12.5°	2599.2	2560.7	2532.7	2511.8	2504.8	2504.8	2459.3	2452.3	2420.8	2413.8	2371.8
15°	2490.7	2445.3	2427.8	2399.8	2375.3	2389.3	2336.8	2322.8	2312.4	2266.9	2273.9
17.5°	2396.2	2347.3	2305.4	2287.8	2266.9	2245.9	2196.8	2207.4	2182.9	2182.9	2119.9
20°	2273.9	2221.4	2189.8	2154.9	2154.9	2126.9	2092.0	2095.4	2063.9	2032.5	1976.4
22.5°	2144.5	2088.4	2049.9	2035.9	2001.0	1994.0	1952.1	1941.5	1899.6	1903.0	1854.1
25°	2008.0	1952.1	1899.6	1903.0	1871.6	1857.6	1833.1	1784.2	1766.6	1745.7	1731.7
27.5°	1847.1	1808.6	1763.1	1759.6	1700.1	1703.6	1672.2	1658.2	1616.1	1626.7	1595.2
30°	1700.1	1644.2	1602.2	1591.7	1567.2	1560.2	1511.3	1490.2	1497.3	1469.2	1451.8
32.5°	1549.7	1465.8	1448.2	1427.3	1413.3	1395.8	1360.8	1374.8	1343.3	1350.3	1322.3
35°	1350.3	1315.3	1269.8	1269.8	1255.8	1241.8	1217.4	1231.4	1199.9	1185.9	1158.0
37.5°	1182.4	1151.0	1105.5	1119.5	1094.9	1074.0	1053.0	1056.4	1028.4	1025.0	996.9
40°	1000.5	982.9	951.6	951.6	934.0	934.0	923.5	913.1	895.5	874.5	843.0
42.5°	829.0	815.1	801.1	804.6	780.1	801.1	773.1	790.7	734.6	731.2	710.1
45°	703.1	671.7	675.1	661.1	647.2	654.2	629.6	636.6	605.2	598.2	577.3
47.5°	570.3	559.7	538.8	531.8	531.8	521.2	510.8	507.2	493.3	475.7	447.8
50°	468.7	430.3	423.2	412.8	405.8	405.8	391.8	370.9	374.3	356.9	328.8
52.5°	367.3	335.8	321.8	318.4	304.4	297.4	279.9	265.9	255.3	248.3	230.9
55°	283.3	255.3	237.9	237.9	217.0	217.0	192.4	181.9	167.9	153.9	143.5
57.5°	213.4	199.4	181.9	167.9	160.9	143.5	129.4	112.0	101.4	80.5	66.5
60°	160.9	146.9	129.4	119.0	112.0	94.4	77.0	62.9	38.5	31.5	28.0
62.5°	119.0	105.0	87.4	80.5	73.5	59.5	41.9	21.0	10.6	10.6	10.6
65°	87.4	69.9	55.9	48.9	41.9	31.5	14.0	7.0	3.6	3.6	3.6
67.5°	59.5	45.5	31.5	28.0	21.0	10.6	3.6	3.6	3.6	3.6	3.6
70°	38.5	28.0	14.0	10.6	7.0	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	24.5	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: P#

CATALOG NUMBER: LD4C50D010 EX4C509040 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5	2917.5
2.5°	2847.6	2823.0	2837.0	2805.6	2819.6	2844.0	2826.6	2833.6
5°	2749.6	2735.6	2718.2	2672.7	2707.6	2735.6	2721.6	2718.2
7.5°	2644.7	2595.7	2620.2	2606.2	2599.2	2627.2	2595.7	2630.6
10°	2536.2	2501.2	2497.8	2473.3	2473.3	2494.2	2497.8	2476.7
12.5°	2375.3	2357.9	2357.9	2354.3	2350.7	2371.8	2375.3	2364.9
15°	2259.9	2252.9	2235.3	2231.9	2210.9	2242.3	2245.9	2242.3
17.5°	2119.9	2123.4	2106.0	2106.0	2119.9	2130.4	2102.4	2130.4
20°	2025.5	2008.0	2001.0	1969.5	1987.0	2004.5	2004.5	2008.0
22.5°	1889.0	1861.1	1871.6	1854.1	1843.5	1868.0	1868.0	1878.6
25°	1735.1	1735.1	1742.1	1731.7	1738.7	1752.6	1742.1	1766.6
27.5°	1588.2	1602.2	1602.2	1588.2	1595.2	1637.1	1654.6	1626.7
30°	1451.8	1455.2	1465.8	1458.8	1479.8	1493.7	1490.2	1511.3
32.5°	1297.9	1315.3	1322.3	1311.9	1318.9	1350.3	1332.8	1329.3
35°	1178.9	1147.4	1144.0	1147.4	1161.4	1168.4	1161.4	1185.9
37.5°	1007.5	996.9	982.9	986.5	996.9	1011.0	1018.0	1035.4
40°	843.0	829.0	829.0	825.6	815.1	853.6	853.6	853.6
42.5°	699.7	696.1	678.7	678.7	692.7	703.1	696.1	720.6
45°	573.7	559.7	549.2	549.2	559.7	559.7	570.3	566.7
47.5°	451.3	437.3	440.8	430.3	440.8	454.7	437.3	440.8
50°	339.3	339.3	332.4	339.3	335.8	339.3	332.4	325.4
52.5°	230.9	262.3	265.9	251.9	220.4	192.4	174.9	188.9
55°	132.9	119.0	119.0	115.4	108.4	105.0	94.4	105.0
57.5°	66.5	59.5	59.5	59.5	55.9	52.5	45.5	45.5
60°	28.0	24.5	24.5	21.0	17.5	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)