

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 EX4C509050 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 EX4C509050 4LBSQLWWLI
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Summary

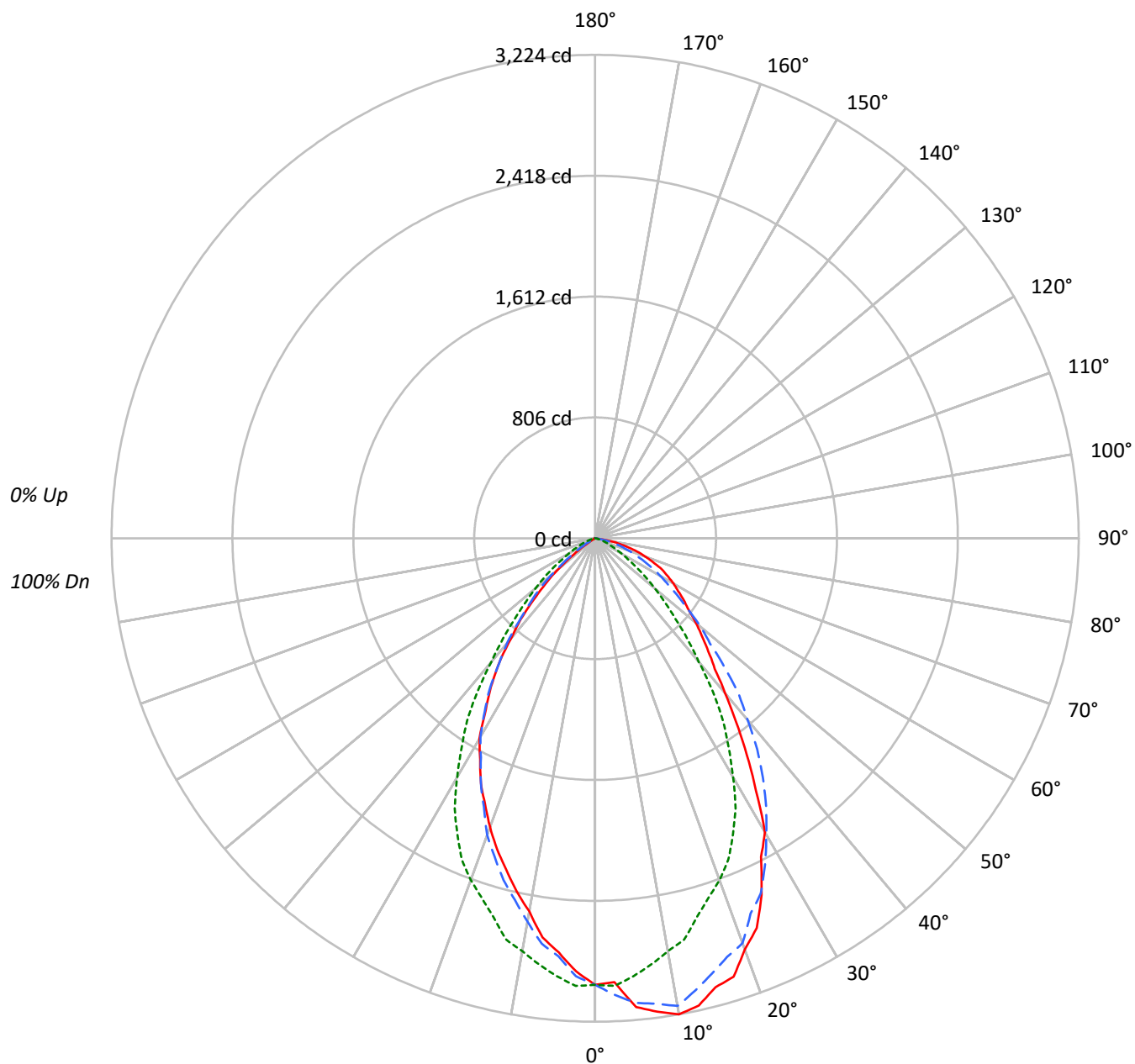
Lumens per Lamp: N/A
Luminaire Lumens: 4268.0 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	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°	287296	287296	287296
5°	303958	283909	268692
10°	315869	273896	247648
15°	309557	261409	228594
20°	299511	248910	210425
25°	279371	231473	191943
30°	252190	204849	171848
35°	207737	175368	142563
40°	169539	135354	109721
45°	145667	102806	78926
50°	131842	78252	49852
55°	121323	56456	18017
60°	116443	38576	2760
65°	112467	26096	822
70°	100715	18112	1016
75°	82539	9320	0
80°	51621	3945	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.0	6.5
10°-20°	751.6	17.6
20°-30°	1003.6	23.5
30°-40°	952.7	22.3
40°-50°	658.6	15.4
50°-60°	363.9	8.5
60°-70°	180.7	4.2
70°-80°	71.2	1.7
80°-90°	6.8	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°	2034.2	47.7
0°-40°	2986.9	70.0
0°-60°	4009.3	93.9
0°-90°	4268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4268.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2978	2978	2978	2978	2978	
5°	3138	3110	2931	2799	2774	300
15°	3099	3006	2617	2360	2288	877
25°	2624	2613	2174	1803	1803	1196
35°	1764	1949	1489	1225	1210	1105
45°	1068	1225	753	618	578	833
55°	721	678	336	171	107	649
65°	493	357	114	4	4	478
75°	221	136	25	0	0	236
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°	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5
2.5°	2963.2	3045.3	3052.4	3045.3	3056.1	3052.4	3070.3	3052.4	3074.0	3041.8	3048.9
5°	3138.2	3106.0	3173.8	3138.2	3138.2	3134.7	3123.9	3120.3	3134.7	3088.2	3109.6
7.5°	3184.6	3231.0	3291.7	3216.8	3220.3	3220.3	3198.9	3191.7	3191.7	3106.0	3131.0
10°	3223.9	3195.2	3227.4	3198.9	3223.9	3220.3	3234.5	3188.1	3220.3	3170.3	3166.7
12.5°	3191.7	3181.0	3223.9	3177.5	3163.2	3166.7	3148.9	3138.2	3148.9	3091.7	3088.2
15°	3098.9	3109.6	3173.8	3123.9	3116.8	3109.6	3088.2	3052.4	3081.1	3002.5	3006.1
17.5°	3066.8	3048.9	3059.7	3016.8	3027.5	3020.4	3016.8	2984.7	2977.5	2927.5	2927.5
20°	2916.9	2956.1	2956.1	2927.5	2927.5	2924.0	2877.6	2906.1	2873.9	2859.7	2873.9
22.5°	2813.2	2816.9	2816.9	2791.8	2795.5	2781.2	2756.2	2738.3	2756.2	2738.3	2709.7
25°	2624.1	2631.3	2674.1	2627.6	2620.5	2634.8	2613.4	2602.6	2599.1	2556.3	2613.4
27.5°	2395.6	2466.9	2463.4	2445.5	2466.9	2438.4	2427.8	2431.3	2442.0	2438.4	2452.7
30°	2263.5	2274.2	2284.9	2270.7	2274.2	2263.5	2263.5	2267.0	2295.6	2284.9	2281.3
32.5°	1995.7	2031.4	2060.0	2060.0	2063.5	2074.3	2070.7	2145.6	2163.5	2127.9	2120.7
35°	1763.6	1788.7	1813.6	1817.2	1863.7	1867.2	1870.8	1892.2	1942.1	1952.9	1949.3
37.5°	1542.4	1567.3	1574.4	1606.6	1631.6	1656.5	1685.2	1713.7	1756.5	1792.2	1774.4
40°	1346.0	1356.6	1374.5	1388.8	1438.7	1438.7	1453.0	1510.2	1556.6	1585.2	1581.5
42.5°	1181.8	1185.3	1199.5	1224.6	1271.0	1260.2	1271.0	1310.3	1378.0	1381.7	1421.0
45°	1067.5	1063.9	1074.6	1078.1	1106.8	1121.1	1128.2	1156.7	1213.8	1220.9	1224.6
47.5°	964.0	960.4	978.3	985.4	996.0	1010.3	1010.3	1013.9	1035.3	1053.2	1039.0
50°	878.3	878.3	878.3	885.4	903.3	899.7	903.3	917.6	928.2	921.1	917.6
52.5°	785.4	799.6	810.4	814.1	817.6	817.6	821.2	814.1	810.4	799.6	778.2
55°	721.2	735.4	735.4	735.4	735.4	749.7	731.9	735.4	735.4	706.9	678.4
57.5°	657.0	671.2	681.9	667.6	681.9	667.6	660.5	657.0	649.7	621.2	578.4
60°	603.4	610.5	606.9	603.4	610.5	599.8	592.6	578.4	571.2	531.9	503.4
62.5°	542.7	546.2	549.8	542.7	535.6	531.9	517.7	496.3	482.0	449.8	424.8
65°	492.6	482.0	478.4	474.9	467.7	457.0	446.3	421.3	410.5	382.0	357.0
67.5°	417.7	414.2	421.3	410.5	392.8	392.8	382.0	360.6	335.6	317.8	292.8
70°	357.0	353.5	346.3	335.6	332.1	317.8	317.8	292.8	285.6	253.4	232.0
72.5°	292.8	292.8	282.0	271.4	260.6	253.4	250.0	232.0	221.4	203.5	185.6
75°	221.4	221.4	217.8	207.0	199.9	192.7	189.2	175.0	164.2	146.4	135.7
77.5°	157.1	157.1	142.8	135.7	139.2	132.0	124.9	121.4	117.8	107.1	92.9
80°	92.9	89.2	78.6	82.1	78.6	78.6	75.0	71.3	64.2	57.1	49.9
82.5°	25.0	28.5	28.5	28.5	32.2	25.0	25.0	25.0	28.5	28.5	17.9
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	7.1	14.3	14.3	14.3	14.3	14.3	10.8	10.8	10.8	7.1
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°	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5
2.5°	3013.3	3009.6	3013.3	2988.2	3045.3	3002.5	2995.4	2988.2	3013.3	2988.2	2952.6
5°	3077.5	3041.8	3031.0	3020.4	3052.4	3002.5	2991.9	2995.4	2977.5	2931.2	2934.7
7.5°	3098.9	3066.8	3034.7	2966.8	2995.4	2984.7	2956.1	2934.7	2906.1	2866.8	2859.7
10°	3106.0	3070.3	3023.9	3002.5	2959.7	2945.4	2934.7	2899.0	2863.3	2795.5	2777.6
12.5°	3084.6	3041.8	2984.7	2966.8	2934.7	2888.2	2863.3	2827.5	2795.5	2741.9	2702.6
15°	2991.9	2956.1	2938.3	2877.6	2863.3	2834.6	2784.7	2734.8	2688.3	2616.9	2595.5
17.5°	2884.7	2870.5	2852.5	2806.1	2802.6	2774.1	2727.6	2684.7	2624.1	2513.4	2477.7
20°	2774.1	2774.1	2716.9	2699.1	2734.8	2677.6	2641.9	2602.6	2477.7	2424.1	2359.9
22.5°	2692.0	2652.7	2620.5	2592.0	2595.5	2559.8	2509.9	2431.3	2384.8	2320.6	2245.6
25°	2531.3	2545.5	2474.2	2463.4	2474.2	2392.0	2367.1	2302.7	2234.9	2174.2	2117.1
27.5°	2431.3	2392.0	2345.7	2306.3	2306.3	2274.2	2202.8	2188.6	2084.9	2027.9	1956.4
30°	2281.3	2252.8	2213.5	2156.4	2149.3	2124.2	2067.2	2031.4	1924.4	1838.6	1799.3
32.5°	2092.1	2081.4	2049.3	1985.1	1963.7	1935.0	1863.7	1802.9	1753.0	1656.5	1610.2
35°	1956.4	1917.2	1849.4	1795.8	1777.9	1728.0	1670.8	1628.0	1574.4	1488.8	1428.1
37.5°	1753.0	1713.7	1649.4	1585.2	1585.2	1535.2	1456.6	1413.8	1338.9	1288.8	1238.8
40°	1574.4	1524.5	1460.3	1385.3	1374.5	1303.0	1271.0	1199.5	1153.1	1074.6	1067.5
42.5°	1374.5	1328.1	1271.0	1213.8	1171.0	1135.3	1053.2	999.7	949.7	910.4	899.7
45°	1192.4	1131.7	1081.8	1010.3	967.5	924.7	871.1	835.5	796.2	753.4	728.3
47.5°	1035.3	985.4	913.9	849.7	806.9	785.4	724.7	685.5	653.3	624.8	606.9
50°	874.8	814.1	774.8	703.3	696.1	646.2	596.3	564.1	546.2	521.3	496.3
52.5°	753.4	696.1	642.6	589.1	560.5	542.7	496.3	464.1	439.2	421.3	407.0
55°	635.4	585.5	542.7	489.1	471.2	446.3	392.8	385.6	360.6	335.6	317.8
57.5°	546.2	499.8	449.8	414.2	382.0	364.2	321.3	292.8	278.5	257.1	239.2
60°	464.1	414.2	374.9	332.1	317.8	292.8	260.6	235.7	217.8	199.9	182.1
62.5°	389.1	346.3	303.5	267.7	246.3	232.0	207.0	185.6	167.8	153.6	139.2
65°	321.3	282.0	246.3	210.6	199.9	182.1	164.2	146.4	132.0	114.3	100.0
67.5°	264.2	228.6	192.7	167.8	157.1	149.9	128.5	110.6	100.0	89.2	75.0
70°	207.0	182.1	153.6	132.0	121.4	110.6	96.4	85.7	71.3	64.2	53.6
72.5°	160.7	139.2	114.3	96.4	89.2	82.1	67.8	57.1	49.9	42.8	35.7
75°	114.3	96.4	82.1	64.2	60.7	57.1	46.4	39.3	32.2	25.0	21.4
77.5°	78.6	64.2	49.9	42.8	39.3	32.2	28.5	21.4	17.9	14.3	10.8
80°	42.8	32.2	25.0	21.4	17.9	14.3	14.3	10.8	7.1	7.1	3.6
82.5°	14.3	10.8	7.1	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°	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5
2.5°	2974.0	2934.7	2945.4	2945.4	2938.3	2938.3	2931.2	2920.4	2924.0	2902.5	2856.2
5°	2941.8	2891.9	2884.7	2891.9	2863.3	2856.2	2841.9	2863.3	2799.0	2824.0	2795.5
7.5°	2849.1	2802.6	2791.8	2816.9	2781.2	2759.7	2756.2	2784.7	2727.6	2699.1	2666.9
10°	2745.4	2727.6	2695.5	2677.6	2666.9	2670.4	2641.9	2606.2	2595.5	2588.3	2559.8
12.5°	2652.7	2613.4	2584.8	2563.4	2556.3	2556.3	2509.9	2502.7	2470.6	2463.4	2420.6
15°	2541.9	2495.6	2477.7	2449.2	2424.1	2438.4	2384.8	2370.5	2359.9	2313.5	2320.6
17.5°	2445.5	2395.6	2352.8	2334.9	2313.5	2292.1	2242.0	2252.8	2227.7	2227.7	2163.5
20°	2320.6	2267.0	2234.9	2199.2	2199.2	2170.7	2135.0	2138.5	2106.3	2074.3	2017.1
22.5°	2188.6	2131.4	2092.1	2077.8	2042.1	2035.0	1992.2	1981.4	1938.6	1942.1	1892.2
25°	2049.3	1992.2	1938.6	1942.1	1910.1	1895.8	1870.8	1820.9	1802.9	1781.5	1767.3
27.5°	1885.1	1845.8	1799.3	1795.8	1735.1	1738.6	1706.6	1692.3	1649.4	1660.1	1628.0
30°	1735.1	1678.0	1635.1	1624.5	1599.4	1592.3	1542.4	1520.8	1528.1	1499.4	1481.7
32.5°	1581.5	1495.9	1478.0	1456.6	1442.4	1424.5	1388.8	1403.1	1370.9	1378.0	1349.5
35°	1378.0	1342.4	1295.9	1295.9	1281.6	1267.4	1242.5	1256.7	1224.6	1210.3	1181.8
37.5°	1206.7	1174.6	1128.2	1142.5	1117.4	1096.0	1074.6	1078.1	1049.6	1046.1	1017.4
40°	1021.1	1003.2	971.1	971.1	953.2	953.2	942.5	931.8	913.9	892.5	860.4
42.5°	846.1	831.8	817.6	821.2	796.2	817.6	789.0	806.9	749.7	746.2	724.7
45°	717.5	685.5	689.0	674.7	660.5	667.6	642.6	649.7	617.7	610.5	589.1
47.5°	582.0	571.2	549.8	542.7	542.7	531.9	521.3	517.7	503.4	485.5	457.0
50°	478.4	439.2	431.9	421.3	414.2	414.2	399.9	378.5	382.0	364.2	335.6
52.5°	374.9	342.7	328.4	324.9	310.7	303.5	285.6	271.4	260.6	253.4	235.7
55°	289.1	260.6	242.8	242.8	221.4	221.4	196.4	185.6	171.3	157.1	146.4
57.5°	217.8	203.5	185.6	171.3	164.2	146.4	132.0	114.3	103.5	82.1	67.8
60°	164.2	149.9	132.0	121.4	114.3	96.4	78.6	64.2	39.3	32.2	28.5
62.5°	121.4	107.1	89.2	82.1	75.0	60.7	42.8	21.4	10.8	10.8	10.8
65°	89.2	71.3	57.1	49.9	42.8	32.2	14.3	7.1	3.6	3.6	3.6
67.5°	60.7	46.4	32.2	28.5	21.4	10.8	3.6	3.6	3.6	3.6	3.6
70°	39.3	28.5	14.3	10.8	7.1	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	25.0	14.3	7.1	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	14.3	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	7.1	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 EX4C509050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5	2977.5
2.5°	2906.1	2881.1	2895.3	2863.3	2877.6	2902.5	2884.7	2891.9
5°	2806.1	2791.8	2774.1	2727.6	2763.3	2791.8	2777.6	2774.1
7.5°	2699.1	2649.0	2674.1	2659.8	2652.7	2681.2	2649.0	2684.7
10°	2588.3	2552.7	2549.2	2524.1	2524.1	2545.5	2549.2	2527.6
12.5°	2424.1	2406.4	2406.4	2402.7	2399.1	2420.6	2424.1	2413.5
15°	2306.3	2299.2	2281.3	2277.8	2256.4	2288.4	2292.1	2288.4
17.5°	2163.5	2167.0	2149.3	2149.3	2163.5	2174.2	2145.6	2174.2
20°	2067.2	2049.3	2042.1	2010.0	2027.9	2045.8	2045.8	2049.3
22.5°	1927.9	1899.3	1910.1	1892.2	1881.4	1906.5	1906.5	1917.2
25°	1770.8	1770.8	1777.9	1767.3	1774.4	1788.7	1777.9	1802.9
27.5°	1620.8	1635.1	1635.1	1620.8	1628.0	1670.8	1688.7	1660.1
30°	1481.7	1485.2	1495.9	1488.8	1510.2	1524.5	1520.8	1542.4
32.5°	1324.6	1342.4	1349.5	1338.9	1346.0	1378.0	1360.3	1356.6
35°	1203.2	1171.0	1167.5	1171.0	1185.3	1192.4	1185.3	1210.3
37.5°	1028.2	1017.4	1003.2	1006.8	1017.4	1031.8	1039.0	1056.7
40°	860.4	846.1	846.1	842.6	831.8	871.1	871.1	871.1
42.5°	714.0	710.4	692.6	692.6	706.9	717.5	710.4	735.4
45°	585.5	571.2	560.5	560.5	571.2	571.2	582.0	578.4
47.5°	460.6	446.3	449.8	439.2	449.8	464.1	446.3	449.8
50°	346.3	346.3	339.2	346.3	342.7	346.3	339.2	332.1
52.5°	235.7	267.7	271.4	257.1	224.9	196.4	178.5	192.7
55°	135.7	121.4	121.4	117.8	110.6	107.1	96.4	107.1
57.5°	67.8	60.7	60.7	60.7	57.1	53.6	46.4	46.4
60°	28.5	25.0	25.0	21.4	17.9	14.3	10.8	14.3
62.5°	10.8	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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)