

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: **LD4C65D010 EX4C659030 4LBSQLWWH**

Issue Date: 2/18/2022



**Test Information**

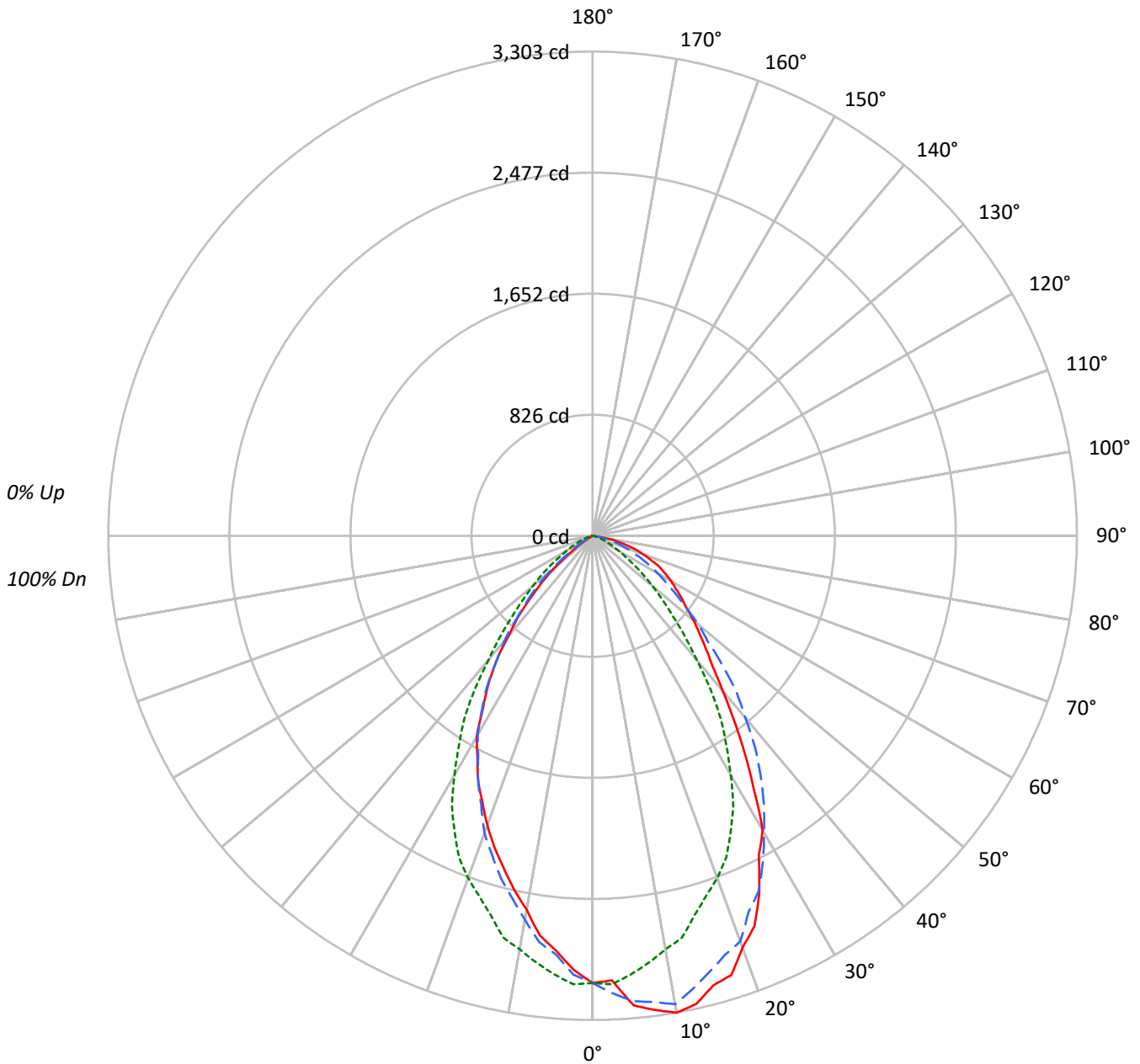
Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/18/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C65D010 EX4C659030 4LBSQLWWH  
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4373.0 lumens  
Efficiency: N/A  
Efficacy: 60.4 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): 72.4  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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: LD4C65D010 EX4C659030 4LBSQLWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C65D010 EX4C659030 4LBSQLWWH

**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°	294359	294359	294359
5°	311435	290892	275298
10°	323639	280637	253742
15°	317169	267832	234218
20°	306884	255040	215600
25°	286249	237169	196670
30°	258395	209896	176070
35°	212849	179679	146073
40°	173708	138692	112429
45°	149255	105330	80864
50°	135084	80174	51067
55°	124300	57835	18471
60°	119318	39522	2817
65°	115229	26735	845
70°	103169	18563	1044
75°	84589	9581	0
80°	52899	4056	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C65D010 EX4C659030 4LBSQLWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.8	6.5
10°-20°	770.1	17.6
20°-30°	1028.3	23.5
30°-40°	976.2	22.3
40°-50°	674.8	15.4
50°-60°	372.8	8.5
60°-70°	185.1	4.2
70°-80°	72.9	1.7
80°-90°	6.9	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°	2084.2	47.7
0°-40°	3060.4	70.0
0°-60°	4108.0	93.9
0°-90°	4373.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4373.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3051	3051	3051	3051	3051	
5°	3215	3186	3003	2868	2842	308
15°	3175	3080	2681	2418	2345	898
25°	2689	2678	2228	1847	1847	1226
35°	1807	1997	1525	1255	1240	1132
45°	1094	1255	772	633	593	853
55°	739	695	344	176	110	665
65°	505	366	117	4	4	490
75°	227	139	26	0	0	242
85°	0	4	0	0	0	21
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C65D010 EX4C659030 4LBSQLWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7
2.5°	3036.1	3120.2	3127.5	3120.2	3131.2	3127.5	3145.9	3127.5	3149.6	3116.6	3123.9
5°	3215.4	3182.4	3251.9	3215.4	3215.4	3211.8	3200.8	3197.0	3211.8	3164.2	3186.1
7.5°	3263.0	3310.5	3372.7	3295.9	3299.5	3299.5	3277.6	3270.3	3270.3	3182.4	3208.1
10°	3303.2	3273.8	3306.8	3277.6	3303.2	3299.5	3314.1	3266.5	3299.5	3248.3	3244.6
12.5°	3270.3	3259.2	3303.2	3255.6	3241.0	3244.6	3226.4	3215.4	3226.4	3167.8	3164.2
15°	3175.1	3186.1	3251.9	3200.8	3193.4	3186.1	3164.2	3127.5	3156.9	3076.4	3080.1
17.5°	3142.3	3123.9	3135.0	3091.0	3102.0	3094.7	3091.0	3058.2	3050.7	2999.5	2999.5
20°	2988.7	3028.8	3028.8	2999.5	2999.5	2996.0	2948.4	2977.6	2944.7	2930.0	2944.7
22.5°	2882.5	2886.2	2886.2	2860.5	2864.3	2849.6	2824.0	2805.6	2824.0	2805.6	2776.4
25°	2688.7	2696.0	2739.9	2692.3	2685.0	2699.6	2677.7	2666.6	2663.0	2619.2	2677.7
27.5°	2454.5	2527.6	2524.0	2505.7	2527.6	2498.4	2487.5	2491.1	2502.1	2498.4	2513.0
30°	2319.2	2330.1	2341.2	2326.5	2330.1	2319.2	2319.2	2322.8	2352.1	2341.2	2337.4
32.5°	2044.8	2081.3	2110.7	2110.7	2114.3	2125.3	2121.6	2198.4	2216.8	2180.2	2172.9
35°	1807.0	1832.7	1858.2	1861.9	1909.5	1913.1	1916.8	1938.7	1989.9	2000.9	1997.2
37.5°	1580.3	1605.8	1613.1	1646.1	1671.7	1697.3	1726.6	1755.9	1799.7	1836.3	1818.1
40°	1379.1	1390.0	1408.3	1423.0	1474.1	1474.1	1488.7	1547.4	1594.9	1624.2	1620.4
42.5°	1210.9	1214.4	1229.1	1254.7	1302.3	1291.3	1302.3	1342.6	1411.9	1415.6	1455.9
45°	1093.8	1090.0	1101.1	1104.7	1134.0	1148.7	1156.0	1185.2	1243.7	1251.0	1254.7
47.5°	987.7	984.0	1002.3	1009.6	1020.5	1035.2	1035.2	1038.9	1060.8	1079.1	1064.5
50°	899.9	899.9	899.9	907.2	925.5	921.8	925.5	940.1	951.0	943.7	940.1
52.5°	804.7	819.3	830.4	834.1	837.7	837.7	841.4	834.1	830.4	819.3	797.4
55°	738.9	753.5	753.5	753.5	753.5	768.2	750.0	753.5	753.5	724.3	695.1
57.5°	673.1	687.8	698.7	684.0	698.7	684.0	676.7	673.1	665.7	636.5	592.6
60°	618.3	625.6	621.8	618.3	625.6	614.5	607.2	592.6	585.3	545.0	515.8
62.5°	556.1	559.6	563.4	556.1	548.7	545.0	530.4	508.5	493.9	460.9	435.2
65°	504.7	493.9	490.1	486.5	479.2	468.2	457.3	431.7	420.6	391.4	365.7
67.5°	427.9	424.3	431.7	420.6	402.4	402.4	391.4	369.5	343.8	325.6	300.0
70°	365.7	362.2	354.8	343.8	340.2	325.6	325.6	300.0	292.6	259.7	237.8
72.5°	300.0	300.0	288.9	278.0	267.0	259.7	256.1	237.8	226.9	208.5	190.2
75°	226.9	226.9	223.1	212.1	204.8	197.5	193.9	179.3	168.2	150.0	139.0
77.5°	160.9	160.9	146.3	139.0	142.6	135.3	128.0	124.4	120.7	109.8	95.2
80°	95.2	91.4	80.5	84.1	80.5	80.5	76.8	73.1	65.8	58.5	51.2
82.5°	25.7	29.2	29.2	29.2	33.0	25.7	25.7	25.7	29.2	29.2	18.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.7	3.7
87.5°	3.7	7.3	14.6	14.6	14.6	14.6	14.6	11.0	11.0	11.0	7.3
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: LD4C65D010 EX4C659030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7
2.5°	3087.4	3083.7	3087.4	3061.7	3120.2	3076.4	3069.0	3061.7	3087.4	3061.7	3025.2
5°	3153.2	3116.6	3105.6	3094.7	3127.5	3076.4	3065.5	3069.0	3050.7	3003.3	3006.9
7.5°	3175.1	3142.3	3109.3	3039.8	3069.0	3058.2	3028.8	3006.9	2977.6	2937.3	2930.0
10°	3182.4	3145.9	3098.3	3076.4	3032.5	3017.9	3006.9	2970.3	2933.8	2864.3	2845.9
12.5°	3160.5	3116.6	3058.2	3039.8	3006.9	2959.3	2933.8	2897.1	2864.3	2809.4	2769.1
15°	3065.5	3028.8	3010.6	2948.4	2933.8	2904.4	2853.2	2802.1	2754.5	2681.2	2659.3
17.5°	2955.7	2941.1	2922.7	2875.1	2871.6	2842.3	2794.7	2750.8	2688.7	2575.2	2538.6
20°	2842.3	2842.3	2783.7	2765.5	2802.1	2743.4	2706.9	2666.6	2538.6	2483.8	2418.0
22.5°	2758.2	2717.9	2685.0	2655.7	2659.3	2622.8	2571.6	2491.1	2443.5	2377.7	2300.9
25°	2593.5	2608.2	2535.1	2524.0	2535.1	2450.8	2425.3	2359.4	2289.9	2227.7	2169.2
27.5°	2491.1	2450.8	2403.4	2363.1	2363.1	2330.1	2257.0	2242.4	2136.2	2077.8	2004.5
30°	2337.4	2308.2	2267.9	2209.5	2202.1	2176.5	2118.0	2081.3	1971.7	1883.9	1843.6
32.5°	2143.5	2132.6	2099.7	2033.9	2012.0	1982.6	1909.5	1847.3	1796.1	1697.3	1649.8
35°	2004.5	1964.4	1894.9	1840.0	1821.7	1770.5	1711.9	1668.0	1613.1	1525.4	1463.2
37.5°	1796.1	1755.9	1689.9	1624.2	1624.2	1573.0	1492.5	1448.6	1371.8	1320.5	1269.3
40°	1613.1	1562.0	1496.2	1419.4	1408.3	1335.1	1302.3	1229.1	1181.5	1101.1	1093.8
42.5°	1408.3	1360.8	1302.3	1243.7	1199.8	1163.3	1079.1	1024.3	973.1	932.8	921.8
45°	1221.7	1159.5	1108.4	1035.2	991.3	947.4	892.6	856.0	815.7	771.9	746.2
47.5°	1060.8	1009.6	936.4	870.6	826.8	804.7	742.5	702.4	669.4	640.2	621.8
50°	896.3	834.1	793.8	720.6	713.3	662.1	610.9	578.0	559.6	534.1	508.5
52.5°	771.9	713.3	658.4	603.6	574.3	556.1	508.5	475.5	450.0	431.7	417.0
55°	651.1	599.9	556.1	501.2	482.8	457.3	402.4	395.1	369.5	343.8	325.6
57.5°	559.6	512.1	460.9	424.3	391.4	373.2	329.2	300.0	285.3	263.4	245.1
60°	475.5	424.3	384.1	340.2	325.6	300.0	267.0	241.5	223.1	204.8	186.6
62.5°	398.7	354.8	311.0	274.3	252.4	237.8	212.1	190.2	172.0	157.4	142.6
65°	329.2	288.9	252.4	215.8	204.8	186.6	168.2	150.0	135.3	117.1	102.5
67.5°	270.7	234.2	197.5	172.0	160.9	153.6	131.7	113.4	102.5	91.4	76.8
70°	212.1	186.6	157.4	135.3	124.4	113.4	98.7	87.9	73.1	65.8	54.9
72.5°	164.7	142.6	117.1	98.7	91.4	84.1	69.5	58.5	51.2	43.9	36.5
75°	117.1	98.7	84.1	65.8	62.2	58.5	47.6	40.3	33.0	25.7	21.9
77.5°	80.5	65.8	51.2	43.9	40.3	33.0	29.2	21.9	18.3	14.6	11.0
80°	43.9	33.0	25.7	21.9	18.3	14.6	14.6	11.0	7.3	7.3	3.7
82.5°	14.6	11.0	7.3	3.7	3.7	3.7	3.7	3.7	3.7	0.0	3.7
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°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	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: P#

CATALOG NUMBER: LD4C65D010 EX4C659030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7
2.5°	3047.1	3006.9	3017.9	3017.9	3010.6	3010.6	3003.3	2992.2	2996.0	2973.9	2926.5
5°	3014.2	2963.0	2955.7	2963.0	2933.8	2926.5	2911.8	2933.8	2867.8	2893.5	2864.3
7.5°	2919.1	2871.6	2860.5	2886.2	2849.6	2827.6	2824.0	2853.2	2794.7	2765.5	2732.5
10°	2812.9	2794.7	2761.8	2743.4	2732.5	2736.1	2706.9	2670.4	2659.3	2652.0	2622.8
12.5°	2717.9	2677.7	2648.4	2626.5	2619.2	2619.2	2571.6	2564.3	2531.3	2524.0	2480.2
15°	2604.4	2557.0	2538.6	2509.4	2483.8	2498.4	2443.5	2428.9	2418.0	2370.4	2377.7
17.5°	2505.7	2454.5	2410.7	2392.3	2370.4	2348.5	2297.2	2308.2	2282.5	2282.5	2216.8
20°	2377.7	2322.8	2289.9	2253.3	2253.3	2224.1	2187.5	2191.1	2158.2	2125.3	2066.7
22.5°	2242.4	2183.8	2143.5	2128.9	2092.4	2085.1	2041.2	2030.2	1986.3	1989.9	1938.7
25°	2099.7	2041.2	1986.3	1989.9	1957.1	1942.5	1916.8	1865.6	1847.3	1825.4	1810.8
27.5°	1931.4	1891.2	1843.6	1840.0	1777.8	1781.4	1748.6	1733.9	1689.9	1701.0	1668.0
30°	1777.8	1719.3	1675.3	1664.4	1638.8	1631.5	1580.3	1558.2	1565.7	1536.3	1518.1
32.5°	1620.4	1532.7	1514.4	1492.5	1477.8	1459.5	1423.0	1437.6	1404.6	1411.9	1382.7
35°	1411.9	1375.4	1327.8	1327.8	1313.2	1298.6	1273.0	1287.7	1254.7	1240.1	1210.9
37.5°	1236.4	1203.5	1156.0	1170.6	1144.9	1123.0	1101.1	1104.7	1075.4	1071.8	1042.5
40°	1046.2	1027.8	995.0	995.0	976.7	976.7	965.6	954.8	936.4	914.5	881.5
42.5°	866.9	852.3	837.7	841.4	815.7	837.7	808.4	826.8	768.2	764.6	742.5
45°	735.2	702.4	706.0	691.3	676.7	684.0	658.4	665.7	632.9	625.6	603.6
47.5°	596.3	585.3	563.4	556.1	556.1	545.0	534.1	530.4	515.8	497.4	468.2
50°	490.1	450.0	442.6	431.7	424.3	424.3	409.7	387.8	391.4	373.2	343.8
52.5°	384.1	351.1	336.5	332.9	318.3	311.0	292.6	278.0	267.0	259.7	241.5
55°	296.2	267.0	248.8	248.8	226.9	226.9	201.2	190.2	175.6	160.9	150.0
57.5°	223.1	208.5	190.2	175.6	168.2	150.0	135.3	117.1	106.1	84.1	69.5
60°	168.2	153.6	135.3	124.4	117.1	98.7	80.5	65.8	40.3	33.0	29.2
62.5°	124.4	109.8	91.4	84.1	76.8	62.2	43.9	21.9	11.0	11.0	11.0
65°	91.4	73.1	58.5	51.2	43.9	33.0	14.6	7.3	3.7	3.7	3.7
67.5°	62.2	47.6	33.0	29.2	21.9	11.0	3.7	3.7	3.7	3.7	3.7
70°	40.3	29.2	14.6	11.0	7.3	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	25.7	14.6	7.3	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	14.6	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	7.3	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.7	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	3.7	3.7	3.7
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: LD4C65D010 EX4C659030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7	3050.7
2.5°	2977.6	2952.0	2966.6	2933.8	2948.4	2973.9	2955.7	2963.0
5°	2875.1	2860.5	2842.3	2794.7	2831.3	2860.5	2845.9	2842.3
7.5°	2765.5	2714.2	2739.9	2725.2	2717.9	2747.2	2714.2	2750.8
10°	2652.0	2615.5	2611.9	2586.2	2586.2	2608.2	2611.9	2589.8
12.5°	2483.8	2465.6	2465.6	2461.8	2458.1	2480.2	2483.8	2472.9
15°	2363.1	2355.8	2337.4	2333.9	2311.9	2344.7	2348.5	2344.7
17.5°	2216.8	2220.3	2202.1	2202.1	2216.8	2227.7	2198.4	2227.7
20°	2118.0	2099.7	2092.4	2059.4	2077.8	2096.1	2096.1	2099.7
22.5°	1975.3	1946.0	1957.1	1938.7	1927.7	1953.4	1953.4	1964.4
25°	1814.3	1814.3	1821.7	1810.8	1818.1	1832.7	1821.7	1847.3
27.5°	1660.7	1675.3	1675.3	1660.7	1668.0	1711.9	1730.2	1701.0
30°	1518.1	1521.7	1532.7	1525.4	1547.4	1562.0	1558.2	1580.3
32.5°	1357.2	1375.4	1382.7	1371.8	1379.1	1411.9	1393.7	1390.0
35°	1232.8	1199.8	1196.2	1199.8	1214.4	1221.7	1214.4	1240.1
37.5°	1053.5	1042.5	1027.8	1031.6	1042.5	1057.2	1064.5	1082.7
40°	881.5	866.9	866.9	863.3	852.3	892.6	892.6	892.6
42.5°	731.6	727.9	709.7	709.7	724.3	735.2	727.9	753.5
45°	599.9	585.3	574.3	574.3	585.3	585.3	596.3	592.6
47.5°	471.9	457.3	460.9	450.0	460.9	475.5	457.3	460.9
50°	354.8	354.8	347.5	354.8	351.1	354.8	347.5	340.2
52.5°	241.5	274.3	278.0	263.4	230.4	201.2	182.9	197.5
55°	139.0	124.4	124.4	120.7	113.4	109.8	98.7	109.8
57.5°	69.5	62.2	62.2	62.2	58.5	54.9	47.6	47.6
60°	29.2	25.7	25.7	21.9	18.3	14.6	11.0	14.6
62.5°	11.0	7.3	7.3	7.3	7.3	7.3	7.3	7.3
65°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
67.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
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)