

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 EX4C659027 4LBSQLWWH**

Issue Date: 2/18/2022



**Test Information**

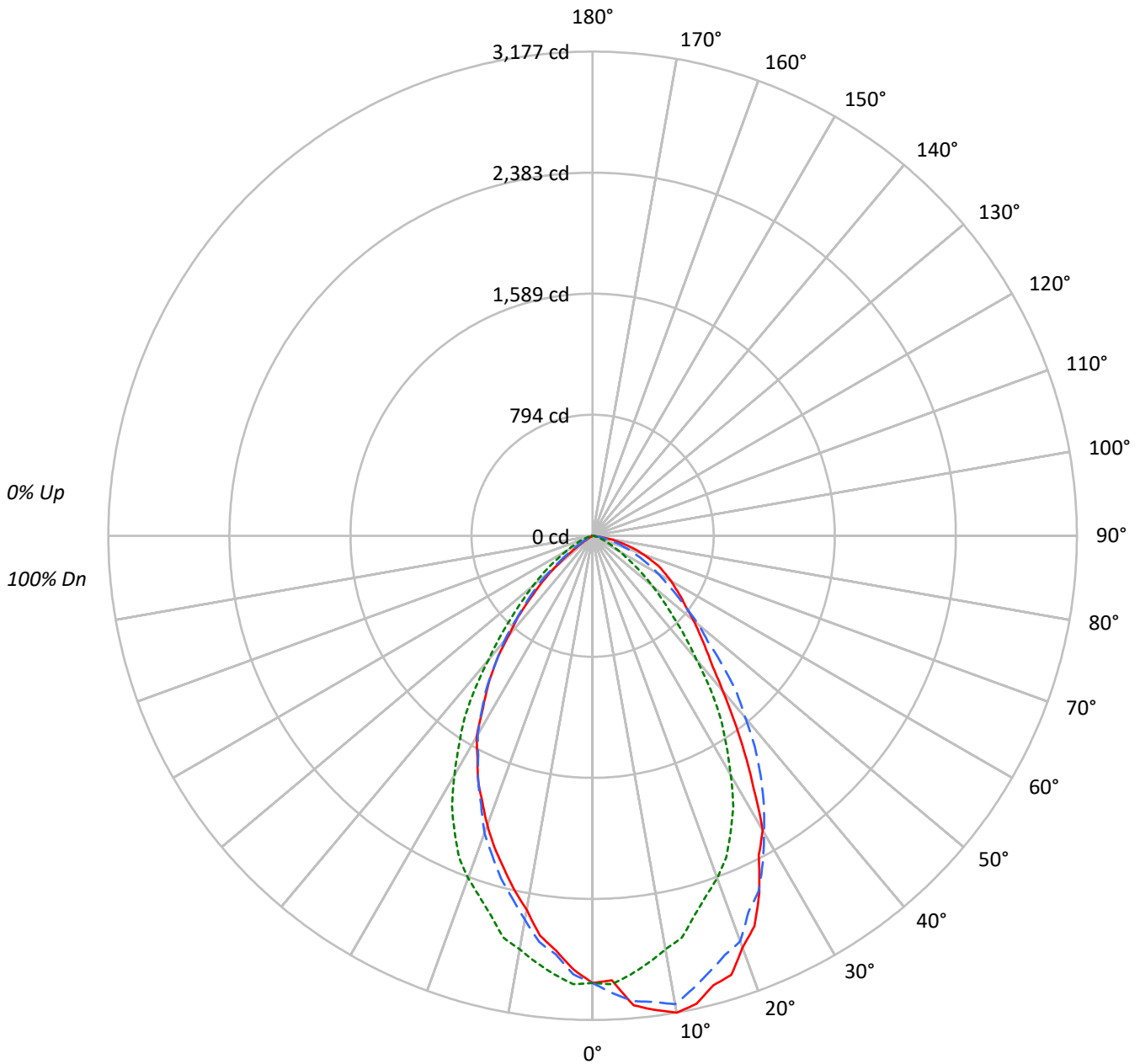
Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/18/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C65D010 EX4C659027 4LBSQLWWH  
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4206.0 lumens  
Efficiency: N/A  
Efficacy: 58.1 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): 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

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CATALOG NUMBER: LD4C65D010 EX4C659027 4LBSQLWWH

### 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°	283118	283118	283118
5°	299541	279782	264789
10°	311284	269918	244052
15°	305052	257613	225278
20°	295158	245295	207365
25°	275315	228109	189165
30°	248535	201874	169352
35°	204721	172823	140490
40°	167070	133389	108134
45°	143552	101305	77780
50°	129920	77112	49116
55°	119556	55631	17764
60°	114745	38017	2721
65°	110846	25708	822
70°	99248	17858	1016
75°	81346	9208	0
80°	50843	3890	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.9	6.5
10°-20°	740.7	17.6
20°-30°	989.0	23.5
30°-40°	938.9	22.3
40°-50°	649.0	15.4
50°-60°	358.6	8.5
60°-70°	178.1	4.2
70°-80°	70.2	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°	2004.6	47.7
0°-40°	2943.5	70.0
0°-60°	3951.1	93.9
0°-90°	4206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4206.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2934	2934	2934	2934	2934	
5°	3093	3064	2889	2758	2734	296
15°	3054	2962	2579	2326	2255	864
25°	2586	2575	2143	1777	1777	1179
35°	1738	1921	1467	1207	1193	1089
45°	1052	1207	742	609	570	821
55°	711	668	331	169	106	640
65°	486	352	113	4	4	471
75°	218	134	25	0	0	233
85°	0	4	0	0	0	20
90°	0	0	0	0	0	



TEST NUMBER: P#

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2
2.5°	2920.1	3001.1	3008.1	3001.1	3011.7	3008.1	3025.7	3008.1	3029.3	2997.6	3004.6
5°	3092.6	3060.9	3127.7	3092.6	3092.6	3089.1	3078.5	3074.9	3089.1	3043.4	3064.5
7.5°	3138.3	3184.1	3243.9	3170.0	3173.5	3173.5	3152.4	3145.4	3145.4	3060.9	3085.6
10°	3177.1	3148.8	3180.5	3152.4	3177.1	3173.5	3187.6	3141.8	3173.5	3124.3	3120.7
12.5°	3145.4	3134.8	3177.1	3131.3	3117.3	3120.7	3103.2	3092.6	3103.2	3046.8	3043.4
15°	3053.8	3064.5	3127.7	3078.5	3071.5	3064.5	3043.4	3008.1	3036.3	2958.9	2962.5
17.5°	3022.3	3004.6	3015.3	2972.9	2983.5	2976.5	2972.9	2941.4	2934.2	2885.0	2885.0
20°	2874.5	2913.1	2913.1	2885.0	2885.0	2881.5	2835.8	2863.9	2832.2	2818.1	2832.2
22.5°	2772.4	2776.0	2776.0	2751.3	2754.9	2740.8	2716.1	2698.5	2716.1	2698.5	2670.4
25°	2586.0	2593.0	2635.2	2589.5	2582.4	2596.5	2575.4	2564.8	2561.3	2519.2	2575.4
27.5°	2360.8	2431.1	2427.6	2410.0	2431.1	2403.0	2392.5	2395.9	2406.5	2403.0	2417.0
30°	2230.7	2241.1	2251.8	2237.7	2241.1	2230.7	2230.7	2234.1	2262.2	2251.8	2248.2
32.5°	1966.7	2001.9	2030.1	2030.1	2033.6	2044.2	2040.6	2114.5	2132.1	2097.0	2089.9
35°	1738.0	1762.7	1787.2	1790.8	1836.6	1840.0	1843.6	1864.7	1913.9	1924.5	1920.9
37.5°	1520.0	1544.5	1551.5	1583.2	1607.9	1632.4	1660.7	1688.8	1731.0	1766.1	1748.6
40°	1326.4	1336.9	1354.6	1368.6	1417.8	1417.8	1431.9	1488.3	1534.0	1562.1	1558.6
42.5°	1164.6	1168.1	1182.1	1206.8	1252.6	1241.9	1252.6	1291.3	1358.0	1361.6	1400.3
45°	1052.0	1048.4	1059.0	1062.5	1090.7	1104.8	1111.8	1139.9	1196.2	1203.2	1206.8
47.5°	950.0	946.4	964.1	971.1	981.6	995.6	995.6	999.2	1020.3	1037.9	1023.9
50°	865.5	865.5	865.5	872.5	890.2	886.6	890.2	904.2	914.7	907.7	904.2
52.5°	774.0	788.0	798.6	802.2	805.7	805.7	809.3	802.2	798.6	788.0	766.9
55°	710.7	724.8	724.8	724.8	724.8	738.8	721.3	724.8	724.8	696.6	668.5
57.5°	647.4	661.5	672.0	657.9	672.0	657.9	650.9	647.4	640.3	612.1	570.0
60°	594.6	601.7	598.1	594.6	601.7	591.1	584.0	570.0	562.9	524.2	496.1
62.5°	534.8	538.3	541.8	534.8	527.8	524.2	510.1	489.1	475.0	443.3	418.6
65°	485.5	475.0	471.4	468.0	460.9	450.3	439.8	415.2	404.6	376.4	351.8
67.5°	411.6	408.1	415.2	404.6	387.1	387.1	376.4	355.4	330.7	313.2	288.5
70°	351.8	348.3	341.3	330.7	327.2	313.2	313.2	288.5	281.5	249.8	228.7
72.5°	288.5	288.5	277.9	267.4	256.8	249.8	246.3	228.7	218.2	200.6	182.9
75°	218.2	218.2	214.6	204.0	197.0	189.9	186.5	172.4	161.8	144.3	133.7
77.5°	154.8	154.8	140.7	133.7	137.2	130.1	123.1	119.6	116.1	105.6	91.5
80°	91.5	87.9	77.5	80.9	77.5	77.5	73.9	70.3	63.3	56.2	49.2
82.5°	24.7	28.1	28.1	28.1	31.7	24.7	24.7	24.7	28.1	28.1	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	14.1	14.1	14.1	14.1	14.1	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°	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2
2.5°	2969.5	2965.9	2969.5	2944.8	3001.1	2958.9	2951.8	2944.8	2969.5	2944.8	2909.7
5°	3032.8	2997.6	2987.0	2976.5	3008.1	2958.9	2948.4	2951.8	2934.2	2888.6	2892.0
7.5°	3053.8	3022.3	2990.6	2923.7	2951.8	2941.4	2913.1	2892.0	2863.9	2825.2	2818.1
10°	3060.9	3025.7	2980.0	2958.9	2916.7	2902.6	2892.0	2856.9	2821.7	2754.9	2737.2
12.5°	3039.8	2997.6	2941.4	2923.7	2892.0	2846.3	2821.7	2786.4	2754.9	2702.1	2663.3
15°	2948.4	2913.1	2895.6	2835.8	2821.7	2793.5	2744.3	2695.0	2649.3	2578.9	2557.8
17.5°	2842.8	2828.8	2811.1	2765.3	2761.9	2733.8	2688.0	2645.7	2586.0	2476.8	2441.7
20°	2733.8	2733.8	2677.4	2659.9	2695.0	2638.7	2603.5	2564.8	2441.7	2388.9	2325.6
22.5°	2652.9	2614.1	2582.4	2554.3	2557.8	2522.6	2473.4	2395.9	2350.2	2286.9	2213.0
25°	2494.5	2508.6	2438.3	2427.6	2438.3	2357.2	2332.7	2269.3	2202.4	2142.6	2086.3
27.5°	2395.9	2357.2	2311.6	2272.8	2272.8	2241.1	2170.8	2156.8	2054.6	1998.4	1928.0
30°	2248.2	2220.1	2181.3	2125.1	2118.1	2093.4	2037.1	2001.9	1896.4	1811.9	1773.2
32.5°	2061.7	2051.2	2019.5	1956.2	1935.1	1906.9	1836.6	1776.8	1727.5	1632.4	1586.8
35°	1928.0	1889.4	1822.5	1769.7	1752.1	1702.9	1646.5	1604.3	1551.5	1467.2	1407.3
37.5°	1727.5	1688.8	1625.4	1562.1	1562.1	1512.9	1435.5	1393.3	1319.4	1270.1	1220.8
40°	1551.5	1502.3	1439.1	1365.2	1354.6	1284.1	1252.6	1182.1	1136.4	1059.0	1052.0
42.5°	1354.6	1308.8	1252.6	1196.2	1154.0	1118.8	1037.9	985.1	935.9	897.2	886.6
45°	1175.1	1115.3	1066.1	995.6	953.4	911.3	858.5	823.3	784.6	742.4	717.7
47.5°	1020.3	971.1	900.6	837.4	795.2	774.0	714.1	675.6	643.9	615.7	598.1
50°	862.1	802.2	763.5	693.1	686.0	636.8	587.6	555.9	538.3	513.7	489.1
52.5°	742.4	686.0	633.2	580.6	552.3	534.8	489.1	457.4	432.8	415.2	401.1
55°	626.2	577.0	534.8	482.0	464.4	439.8	387.1	380.0	355.4	330.7	313.2
57.5°	538.3	492.5	443.3	408.1	376.4	358.9	316.6	288.5	274.4	253.4	235.7
60°	457.4	408.1	369.4	327.2	313.2	288.5	256.8	232.3	214.6	197.0	179.5
62.5°	383.5	341.3	299.1	263.8	242.7	228.7	204.0	182.9	165.4	151.3	137.2
65°	316.6	277.9	242.7	207.6	197.0	179.5	161.8	144.3	130.1	112.6	98.6
67.5°	260.4	225.2	189.9	165.4	154.8	147.8	126.7	109.0	98.6	87.9	73.9
70°	204.0	179.5	151.3	130.1	119.6	109.0	95.0	84.5	70.3	63.3	52.8
72.5°	158.4	137.2	112.6	95.0	87.9	80.9	66.9	56.2	49.2	42.2	35.1
75°	112.6	95.0	80.9	63.3	59.8	56.2	45.8	38.7	31.7	24.7	21.1
77.5°	77.5	63.3	49.2	42.2	38.7	31.7	28.1	21.1	17.6	14.1	10.6
80°	42.2	31.7	24.7	21.1	17.6	14.1	14.1	10.6	7.0	7.0	3.6
82.5°	14.1	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°	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2
2.5°	2930.8	2892.0	2902.6	2902.6	2895.6	2895.6	2888.6	2878.0	2881.5	2860.3	2814.7
5°	2899.1	2849.8	2842.8	2849.8	2821.7	2814.7	2800.6	2821.7	2758.3	2783.0	2754.9
7.5°	2807.7	2761.9	2751.3	2776.0	2740.8	2719.6	2716.1	2744.3	2688.0	2659.9	2628.2
10°	2705.5	2688.0	2656.3	2638.7	2628.2	2631.6	2603.5	2568.4	2557.8	2550.7	2522.6
12.5°	2614.1	2575.4	2547.3	2526.2	2519.2	2519.2	2473.4	2466.4	2434.7	2427.6	2385.5
15°	2505.0	2459.3	2441.7	2413.6	2388.9	2403.0	2350.2	2336.1	2325.6	2279.9	2286.9
17.5°	2410.0	2360.8	2318.6	2301.0	2279.9	2258.8	2209.4	2220.1	2195.4	2195.4	2132.1
20°	2286.9	2234.1	2202.4	2167.3	2167.3	2139.1	2104.0	2107.4	2075.7	2044.2	1987.8
22.5°	2156.8	2100.4	2061.7	2047.6	2012.5	2005.4	1963.3	1952.6	1910.5	1913.9	1864.7
25°	2019.5	1963.3	1910.5	1913.9	1882.3	1868.3	1843.6	1794.4	1776.8	1755.7	1741.6
27.5°	1857.7	1818.9	1773.2	1769.7	1709.9	1713.4	1681.8	1667.7	1625.4	1636.0	1604.3
30°	1709.9	1653.7	1611.4	1600.9	1576.2	1569.2	1520.0	1498.7	1505.9	1477.6	1460.1
32.5°	1558.6	1474.2	1456.6	1435.5	1421.4	1403.8	1368.6	1382.7	1351.0	1358.0	1329.9
35°	1358.0	1322.9	1277.1	1277.1	1263.0	1249.0	1224.4	1238.5	1206.8	1192.7	1164.6
37.5°	1189.1	1157.6	1111.8	1125.9	1101.2	1080.1	1059.0	1062.5	1034.4	1030.9	1002.6
40°	1006.2	988.6	957.0	957.0	939.4	939.4	928.8	918.3	900.6	879.6	847.9
42.5°	833.8	819.7	805.7	809.3	784.6	805.7	777.6	795.2	738.8	735.4	714.1
45°	707.1	675.6	679.0	664.9	650.9	657.9	633.2	640.3	608.7	601.7	580.6
47.5°	573.6	562.9	541.8	534.8	534.8	524.2	513.7	510.1	496.1	478.4	450.3
50°	471.4	432.8	425.7	415.2	408.1	408.1	394.1	373.0	376.4	358.9	330.7
52.5°	369.4	337.7	323.6	320.2	306.1	299.1	281.5	267.4	256.8	249.8	232.3
55°	284.9	256.8	239.3	239.3	218.2	218.2	193.5	182.9	168.9	154.8	144.3
57.5°	214.6	200.6	182.9	168.9	161.8	144.3	130.1	112.6	102.0	80.9	66.9
60°	161.8	147.8	130.1	119.6	112.6	95.0	77.5	63.3	38.7	31.7	28.1
62.5°	119.6	105.6	87.9	80.9	73.9	59.8	42.2	21.1	10.6	10.6	10.6
65°	87.9	70.3	56.2	49.2	42.2	31.7	14.1	7.0	3.6	3.6	3.6
67.5°	59.8	45.8	31.7	28.1	21.1	10.6	3.6	3.6	3.6	3.6	3.6
70°	38.7	28.1	14.1	10.6	7.0	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	24.7	14.1	7.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	14.1	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: LD4C65D010 EX4C659027 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2	2934.2
2.5°	2863.9	2839.2	2853.3	2821.7	2835.8	2860.3	2842.8	2849.8
5°	2765.3	2751.3	2733.8	2688.0	2723.2	2751.3	2737.2	2733.8
7.5°	2659.9	2610.6	2635.2	2621.2	2614.1	2642.3	2610.6	2645.7
10°	2550.7	2515.6	2512.1	2487.5	2487.5	2508.6	2512.1	2490.9
12.5°	2388.9	2371.4	2371.4	2367.8	2364.2	2385.5	2388.9	2378.4
15°	2272.8	2265.8	2248.2	2244.7	2223.6	2255.2	2258.8	2255.2
17.5°	2132.1	2135.6	2118.1	2118.1	2132.1	2142.6	2114.5	2142.6
20°	2037.1	2019.5	2012.5	1980.8	1998.4	2016.0	2016.0	2019.5
22.5°	1899.8	1871.7	1882.3	1864.7	1854.1	1878.8	1878.8	1889.4
25°	1745.1	1745.1	1752.1	1741.6	1748.6	1762.7	1752.1	1776.8
27.5°	1597.3	1611.4	1611.4	1597.3	1604.3	1646.5	1664.1	1636.0
30°	1460.1	1463.6	1474.2	1467.2	1488.3	1502.3	1498.7	1520.0
32.5°	1305.3	1322.9	1329.9	1319.4	1326.4	1358.0	1340.5	1336.9
35°	1185.7	1154.0	1150.6	1154.0	1168.1	1175.1	1168.1	1192.7
37.5°	1013.3	1002.6	988.6	992.2	1002.6	1016.8	1023.9	1041.4
40°	847.9	833.8	833.8	830.3	819.7	858.5	858.5	858.5
42.5°	703.7	700.1	682.6	682.6	696.6	707.1	700.1	724.8
45°	577.0	562.9	552.3	552.3	562.9	562.9	573.6	570.0
47.5°	453.9	439.8	443.3	432.8	443.3	457.4	439.8	443.3
50°	341.3	341.3	334.3	341.3	337.7	341.3	334.3	327.2
52.5°	232.3	263.8	267.4	253.4	221.6	193.5	175.9	189.9
55°	133.7	119.6	119.6	116.1	109.0	105.6	95.0	105.6
57.5°	66.9	59.8	59.8	59.8	56.2	52.8	45.8	45.8
60°	28.1	24.7	24.7	21.1	17.6	14.1	10.6	14.1
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)