

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

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: 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: -

Luminaire Equipment: Sample No.   Condition   Description

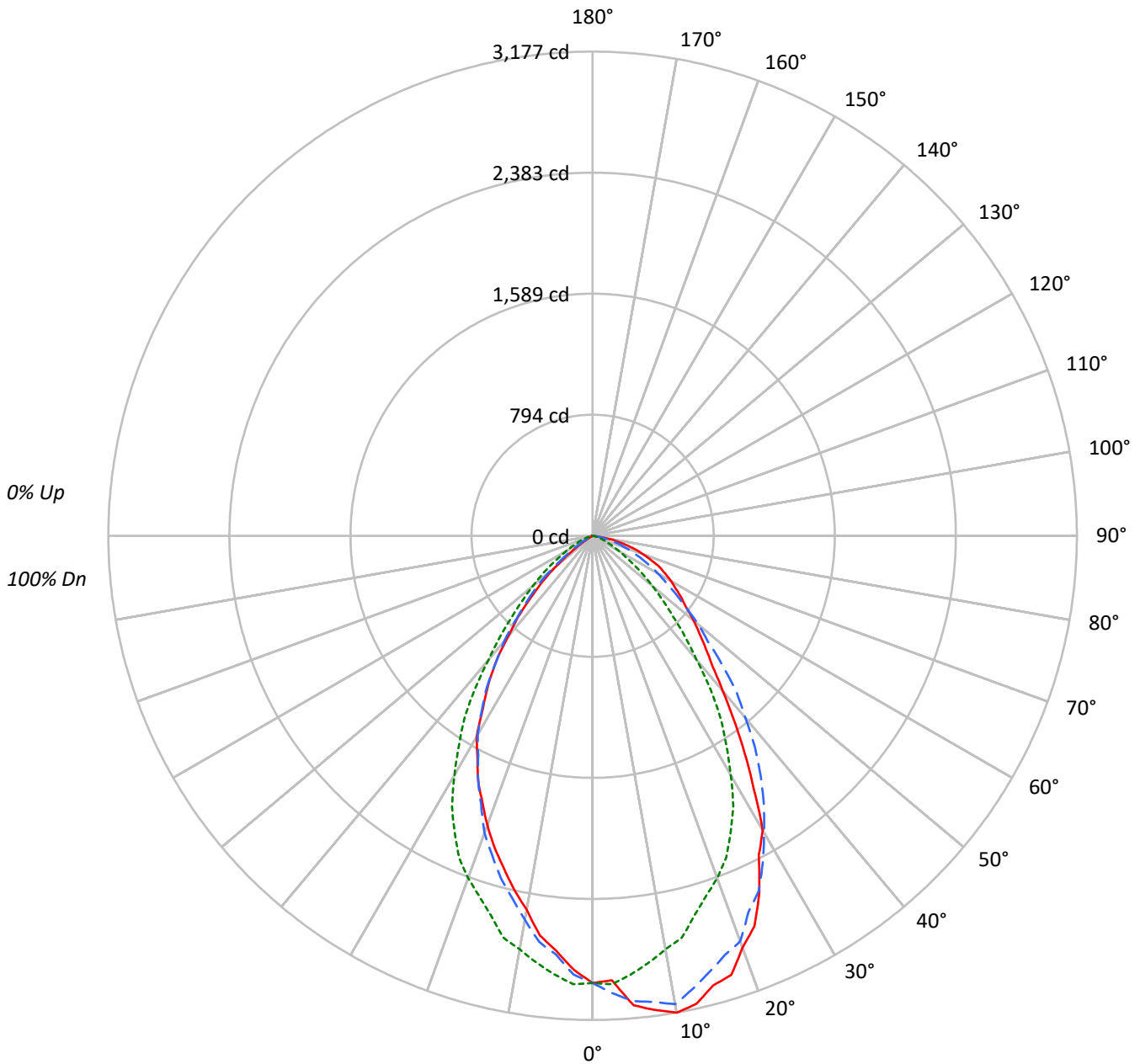
**Summary**

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	



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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)