

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: **LD4C70D010 EX4C709035 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: LD4C70D010 EX4C709035 4LBSQLWWH  
Description: 4 INCH 7000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

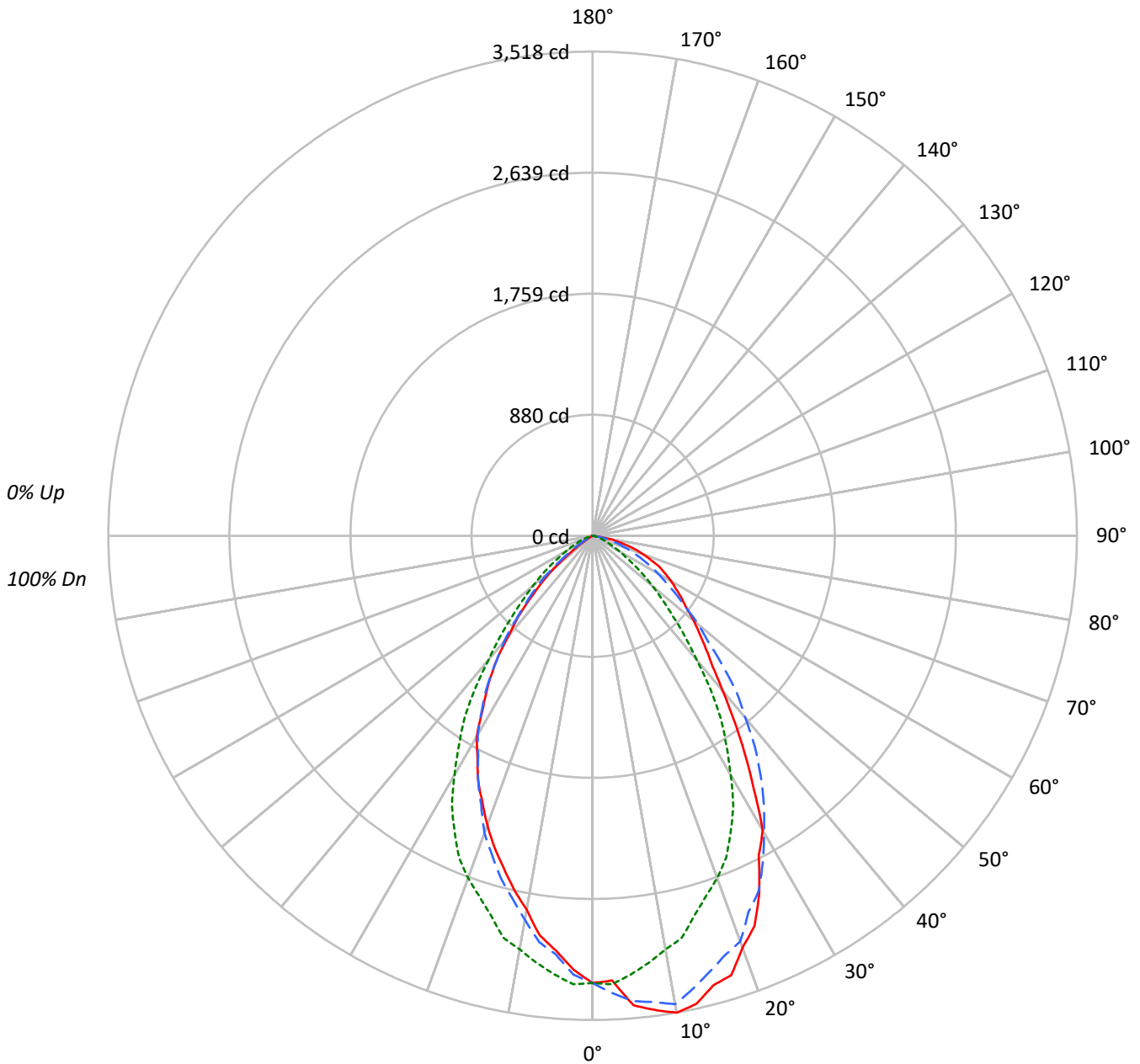
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4658.0 lumens  
Efficiency: N/A  
Efficacy: 59.7 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): 78  
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: LD4C70D010 EX4C709035 4LBSQLWWH

### 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	0
RW	70	50	30	10	70	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°	313541	313541	313541
5°	331727	309847	293246
10°	344733	298919	270280
15°	337837	285293	249492
20°	326876	271654	229647
25°	304901	252617	209489
30°	275242	223567	187546
35°	226724	191387	155590
40°	185031	147723	119748
45°	158971	112194	86131
50°	143881	85398	54400
55°	132409	61603	19665
60°	127076	42088	3010
65°	122741	28471	913
70°	109912	19776	1128
75°	90070	10178	0
80°	56344	4334	0
85°	0	0	0



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CATALOG NUMBER: LD4C70D010 EX4C709035 4LBSQLWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	304.5	6.5
10°-20°	820.3	17.6
20°-30°	1095.3	23.5
30°-40°	1039.8	22.3
40°-50°	718.7	15.4
50°-60°	397.1	8.5
60°-70°	197.2	4.2
70°-80°	77.7	1.7
80°-90°	7.4	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°	2220.1	47.7
0°-40°	3259.8	70.0
0°-60°	4375.7	93.9
0°-90°	4658.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4658.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3250	3250	3250	3250	3250	
5°	3425	3394	3199	3055	3028	328
15°	3382	3281	2856	2576	2498	957
25°	2864	2852	2373	1968	1968	1306
35°	1925	2127	1625	1336	1321	1206
45°	1165	1336	822	674	631	909
55°	787	740	366	187	117	708
65°	538	390	125	4	4	522
75°	242	148	27	0	0	258
85°	0	4	0	0	0	22
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°	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5
2.5°	3234.0	3323.6	3331.3	3323.6	3335.3	3331.3	3350.9	3331.3	3354.9	3319.7	3327.5
5°	3424.9	3389.8	3463.9	3424.9	3424.9	3421.1	3409.4	3405.4	3421.1	3370.4	3393.8
7.5°	3475.6	3526.3	3592.5	3510.7	3514.5	3514.5	3491.2	3483.4	3483.4	3389.8	3417.1
10°	3518.5	3487.2	3522.3	3491.2	3518.5	3514.5	3530.1	3479.4	3514.5	3460.0	3456.1
12.5°	3483.4	3471.6	3518.5	3467.8	3452.3	3456.1	3436.7	3424.9	3436.7	3374.2	3370.4
15°	3382.0	3393.8	3463.9	3409.4	3401.6	3393.8	3370.4	3331.3	3362.6	3276.9	3280.8
17.5°	3347.1	3327.5	3339.3	3292.4	3304.2	3296.4	3292.4	3257.5	3249.5	3195.0	3195.0
20°	3183.4	3226.2	3226.2	3195.0	3195.0	3191.2	3140.5	3171.7	3136.6	3121.0	3136.6
22.5°	3070.3	3074.3	3074.3	3047.0	3050.9	3035.4	3008.0	2988.5	3008.0	2988.5	2957.3
25°	2863.9	2871.7	2918.4	2867.7	2860.0	2875.5	2852.2	2840.4	2836.6	2789.9	2852.2
27.5°	2614.5	2692.3	2688.5	2669.0	2692.3	2661.2	2649.6	2653.4	2665.2	2661.2	2676.8
30°	2470.4	2482.0	2493.7	2478.2	2482.0	2470.4	2470.4	2474.2	2505.3	2493.7	2489.8
32.5°	2178.1	2217.0	2248.3	2248.3	2252.1	2263.8	2259.9	2341.7	2361.2	2322.3	2314.5
35°	1924.8	1952.1	1979.3	1983.3	2034.0	2037.8	2041.7	2065.1	2119.6	2131.3	2127.4
37.5°	1683.3	1710.5	1718.3	1753.4	1780.7	1807.9	1839.2	1870.3	1917.0	1955.9	1936.6
40°	1469.0	1480.6	1500.1	1515.7	1570.2	1570.2	1585.8	1648.2	1698.9	1730.0	1726.0
42.5°	1289.8	1293.6	1309.2	1336.5	1387.2	1375.4	1387.2	1430.1	1503.9	1507.9	1550.8
45°	1165.0	1161.1	1172.8	1176.7	1207.9	1223.5	1231.3	1262.4	1324.7	1332.5	1336.5
47.5°	1052.1	1048.1	1067.7	1075.4	1087.0	1102.6	1102.6	1106.6	1129.9	1149.5	1133.9
50°	958.5	958.5	958.5	966.3	985.8	981.9	985.8	1001.4	1013.0	1005.2	1001.4
52.5°	857.1	872.7	884.5	888.4	892.3	892.3	896.2	888.4	884.5	872.7	849.4
55°	787.1	802.7	802.7	802.7	802.7	818.2	798.8	802.7	802.7	771.5	740.4
57.5°	717.0	732.6	744.2	728.6	744.2	728.6	720.8	717.0	709.1	677.9	631.2
60°	658.5	666.3	662.4	658.5	666.3	654.6	646.8	631.2	623.4	580.5	549.4
62.5°	592.3	596.1	600.1	592.3	584.5	580.5	565.0	541.6	526.0	490.9	463.6
65°	537.6	526.0	522.1	518.3	510.5	498.7	487.1	459.8	448.0	416.9	389.6
67.5°	455.8	452.0	459.8	448.0	428.7	428.7	416.9	393.5	366.2	346.8	319.5
70°	389.6	385.8	378.0	366.2	362.4	346.8	346.8	319.5	311.7	276.6	253.3
72.5°	319.5	319.5	307.7	296.1	284.4	276.6	272.8	253.3	241.6	222.1	202.6
75°	241.6	241.6	237.7	225.9	218.1	210.4	206.5	191.0	179.2	159.8	148.1
77.5°	171.4	171.4	155.9	148.1	151.9	144.1	136.3	132.5	128.5	116.9	101.4
80°	101.4	97.4	85.8	89.6	85.8	85.8	81.8	77.9	70.1	62.3	54.5
82.5°	27.3	31.1	31.1	31.1	35.1	27.3	27.3	27.3	31.1	31.1	19.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	4.0
87.5°	4.0	7.8	15.6	15.6	15.6	15.6	15.6	11.8	11.8	11.8	7.8
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: LD4C70D010 EX4C709035 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5
2.5°	3288.6	3284.6	3288.6	3261.3	3323.6	3276.9	3269.1	3261.3	3288.6	3261.3	3222.4
5°	3358.7	3319.7	3308.0	3296.4	3331.3	3276.9	3265.3	3269.1	3249.5	3199.0	3202.8
7.5°	3382.0	3347.1	3312.0	3237.9	3269.1	3257.5	3226.2	3202.8	3171.7	3128.8	3121.0
10°	3389.8	3350.9	3300.2	3276.9	3230.1	3214.6	3202.8	3163.9	3125.0	3050.9	3031.4
12.5°	3366.5	3319.7	3257.5	3237.9	3202.8	3152.1	3125.0	3085.9	3050.9	2992.5	2949.6
15°	3265.3	3226.2	3206.8	3140.5	3125.0	3093.7	3039.2	2984.7	2934.0	2856.0	2832.6
17.5°	3148.3	3132.7	3113.2	3062.5	3058.7	3027.6	2976.9	2930.0	2863.9	2743.0	2704.1
20°	3027.6	3027.6	2965.1	2945.7	2984.7	2922.2	2883.3	2840.4	2704.1	2645.6	2575.6
22.5°	2938.0	2895.1	2860.0	2828.8	2832.6	2793.7	2739.2	2653.4	2602.7	2532.7	2450.8
25°	2762.6	2778.1	2700.3	2688.5	2700.3	2610.5	2583.3	2513.1	2439.1	2372.8	2310.6
27.5°	2653.4	2610.5	2560.0	2517.1	2517.1	2482.0	2404.1	2388.6	2275.4	2213.2	2135.2
30°	2489.8	2458.6	2415.7	2353.5	2345.7	2318.3	2256.1	2217.0	2100.2	2006.6	1963.7
32.5°	2283.2	2271.6	2236.5	2166.5	2143.1	2111.8	2034.0	1967.7	1913.2	1807.9	1757.3
35°	2135.2	2092.4	2018.4	1959.9	1940.4	1885.9	1823.4	1776.7	1718.3	1624.8	1558.6
37.5°	1913.2	1870.3	1800.1	1730.0	1730.0	1675.5	1589.7	1543.0	1461.2	1406.5	1352.0
40°	1718.3	1663.8	1593.7	1511.9	1500.1	1422.1	1387.2	1309.2	1258.5	1172.8	1165.0
42.5°	1500.1	1449.4	1387.2	1324.7	1278.0	1239.1	1149.5	1091.0	1036.5	993.6	981.9
45°	1301.4	1235.1	1180.6	1102.6	1055.9	1009.2	950.7	911.8	868.9	822.2	794.9
47.5°	1129.9	1075.4	997.4	927.4	880.7	857.1	790.9	748.2	713.0	681.9	662.4
50°	954.7	888.4	845.5	767.5	759.8	705.3	650.8	615.7	596.1	568.9	541.6
52.5°	822.2	759.8	701.3	643.0	611.7	592.3	541.6	506.5	479.3	459.8	444.2
55°	693.5	639.0	592.3	533.8	514.3	487.1	428.7	420.9	393.5	366.2	346.8
57.5°	596.1	545.4	490.9	452.0	416.9	397.5	350.6	319.5	303.9	280.6	261.0
60°	506.5	452.0	409.1	362.4	346.8	319.5	284.4	257.2	237.7	218.1	198.8
62.5°	424.7	378.0	331.3	292.2	268.8	253.3	225.9	202.6	183.2	167.6	151.9
65°	350.6	307.7	268.8	229.9	218.1	198.8	179.2	159.8	144.1	124.7	109.1
67.5°	288.4	249.4	210.4	183.2	171.4	163.6	140.3	120.7	109.1	97.4	81.8
70°	225.9	198.8	167.6	144.1	132.5	120.7	105.2	93.6	77.9	70.1	58.5
72.5°	175.4	151.9	124.7	105.2	97.4	89.6	74.0	62.3	54.5	46.7	38.9
75°	124.7	105.2	89.6	70.1	66.3	62.3	50.7	42.9	35.1	27.3	23.4
77.5°	85.8	70.1	54.5	46.7	42.9	35.1	31.1	23.4	19.5	15.6	11.8
80°	46.7	35.1	27.3	23.4	19.5	15.6	15.6	11.8	7.8	7.8	4.0
82.5°	15.6	11.8	7.8	4.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0
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°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	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: LD4C70D010 EX4C709035 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5
2.5°	3245.7	3202.8	3214.6	3214.6	3206.8	3206.8	3199.0	3187.2	3191.2	3167.7	3117.2
5°	3210.6	3156.1	3148.3	3156.1	3125.0	3117.2	3101.6	3125.0	3054.7	3082.1	3050.9
7.5°	3109.4	3058.7	3047.0	3074.3	3035.4	3011.8	3008.0	3039.2	2976.9	2945.7	2910.6
10°	2996.3	2976.9	2941.8	2922.2	2910.6	2914.5	2883.3	2844.4	2832.6	2824.8	2793.7
12.5°	2895.1	2852.2	2821.0	2797.7	2789.9	2789.9	2739.2	2731.4	2696.3	2688.5	2641.8
15°	2774.2	2723.6	2704.1	2673.0	2645.6	2661.2	2602.7	2587.2	2575.6	2524.9	2532.7
17.5°	2669.0	2614.5	2567.8	2548.2	2524.9	2501.5	2446.9	2458.6	2431.3	2431.3	2361.2
20°	2532.7	2474.2	2439.1	2400.2	2400.2	2369.0	2330.1	2333.9	2298.8	2263.8	2201.4
22.5°	2388.6	2326.1	2283.2	2267.7	2228.7	2221.0	2174.2	2162.5	2115.8	2119.6	2065.1
25°	2236.5	2174.2	2115.8	2119.6	2084.6	2069.1	2041.7	1987.2	1967.7	1944.3	1928.8
27.5°	2057.3	2014.4	1963.7	1959.9	1893.7	1897.5	1862.5	1847.0	1800.1	1811.8	1776.7
30°	1893.7	1831.4	1784.5	1772.9	1745.6	1737.8	1683.3	1659.8	1667.7	1636.4	1617.1
32.5°	1726.0	1632.6	1613.1	1589.7	1574.2	1554.6	1515.7	1531.3	1496.2	1503.9	1472.8
35°	1503.9	1465.0	1414.3	1414.3	1398.8	1383.2	1356.0	1371.6	1336.5	1320.9	1289.8
37.5°	1316.9	1282.0	1231.3	1246.9	1219.5	1196.2	1172.8	1176.7	1145.5	1141.7	1110.4
40°	1114.4	1094.8	1059.9	1059.9	1040.3	1040.3	1028.6	1017.0	997.4	974.1	939.0
42.5°	923.4	907.8	892.3	896.2	868.9	892.3	861.1	880.7	818.2	814.4	790.9
45°	783.1	748.2	752.0	736.4	720.8	728.6	701.3	709.1	674.1	666.3	643.0
47.5°	635.2	623.4	600.1	592.3	592.3	580.5	568.9	565.0	549.4	529.9	498.7
50°	522.1	479.3	471.4	459.8	452.0	452.0	436.4	413.1	416.9	397.5	366.2
52.5°	409.1	374.0	358.4	354.6	339.0	331.3	311.7	296.1	284.4	276.6	257.2
55°	315.5	284.4	265.0	265.0	241.6	241.6	214.3	202.6	187.0	171.4	159.8
57.5°	237.7	222.1	202.6	187.0	179.2	159.8	144.1	124.7	113.0	89.6	74.0
60°	179.2	163.6	144.1	132.5	124.7	105.2	85.8	70.1	42.9	35.1	31.1
62.5°	132.5	116.9	97.4	89.6	81.8	66.3	46.7	23.4	11.8	11.8	11.8
65°	97.4	77.9	62.3	54.5	46.7	35.1	15.6	7.8	4.0	4.0	4.0
67.5°	66.3	50.7	35.1	31.1	23.4	11.8	4.0	4.0	4.0	4.0	4.0
70°	42.9	31.1	15.6	11.8	7.8	4.0	4.0	4.0	4.0	4.0	4.0
72.5°	27.3	15.6	7.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	15.6	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	7.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	4.0	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	4.0	4.0	4.0
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: LD4C70D010 EX4C709035 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5	3249.5
2.5°	3171.7	3144.3	3159.9	3125.0	3140.5	3167.7	3148.3	3156.1
5°	3062.5	3047.0	3027.6	2976.9	3015.8	3047.0	3031.4	3027.6
7.5°	2945.7	2891.1	2918.4	2902.9	2895.1	2926.2	2891.1	2930.0
10°	2824.8	2785.9	2782.1	2754.8	2754.8	2778.1	2782.1	2758.6
12.5°	2645.6	2626.2	2626.2	2622.3	2618.3	2641.8	2645.6	2634.0
15°	2517.1	2509.3	2489.8	2486.0	2462.6	2497.6	2501.5	2497.6
17.5°	2361.2	2365.1	2345.7	2345.7	2361.2	2372.8	2341.7	2372.8
20°	2256.1	2236.5	2228.7	2193.6	2213.2	2232.7	2232.7	2236.5
22.5°	2104.0	2072.9	2084.6	2065.1	2053.3	2080.7	2080.7	2092.4
25°	1932.6	1932.6	1940.4	1928.8	1936.6	1952.1	1940.4	1967.7
27.5°	1768.9	1784.5	1784.5	1768.9	1776.7	1823.4	1843.0	1811.8
30°	1617.1	1620.9	1632.6	1624.8	1648.2	1663.8	1659.8	1683.3
32.5°	1445.6	1465.0	1472.8	1461.2	1469.0	1503.9	1484.6	1480.6
35°	1313.1	1278.0	1274.2	1278.0	1293.6	1301.4	1293.6	1320.9
37.5°	1122.2	1110.4	1094.8	1098.8	1110.4	1126.1	1133.9	1153.3
40°	939.0	923.4	923.4	919.6	907.8	950.7	950.7	950.7
42.5°	779.3	775.3	755.9	755.9	771.5	783.1	775.3	802.7
45°	639.0	623.4	611.7	611.7	623.4	623.4	635.2	631.2
47.5°	502.7	487.1	490.9	479.3	490.9	506.5	487.1	490.9
50°	378.0	378.0	370.2	378.0	374.0	378.0	370.2	362.4
52.5°	257.2	292.2	296.1	280.6	245.5	214.3	194.8	210.4
55°	148.1	132.5	132.5	128.5	120.7	116.9	105.2	116.9
57.5°	74.0	66.3	66.3	66.3	62.3	58.5	50.7	50.7
60°	31.1	27.3	27.3	23.4	19.5	15.6	11.8	15.6
62.5°	11.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
65°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
67.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)