

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

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 EX4C659030 4LBSQLWWH
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

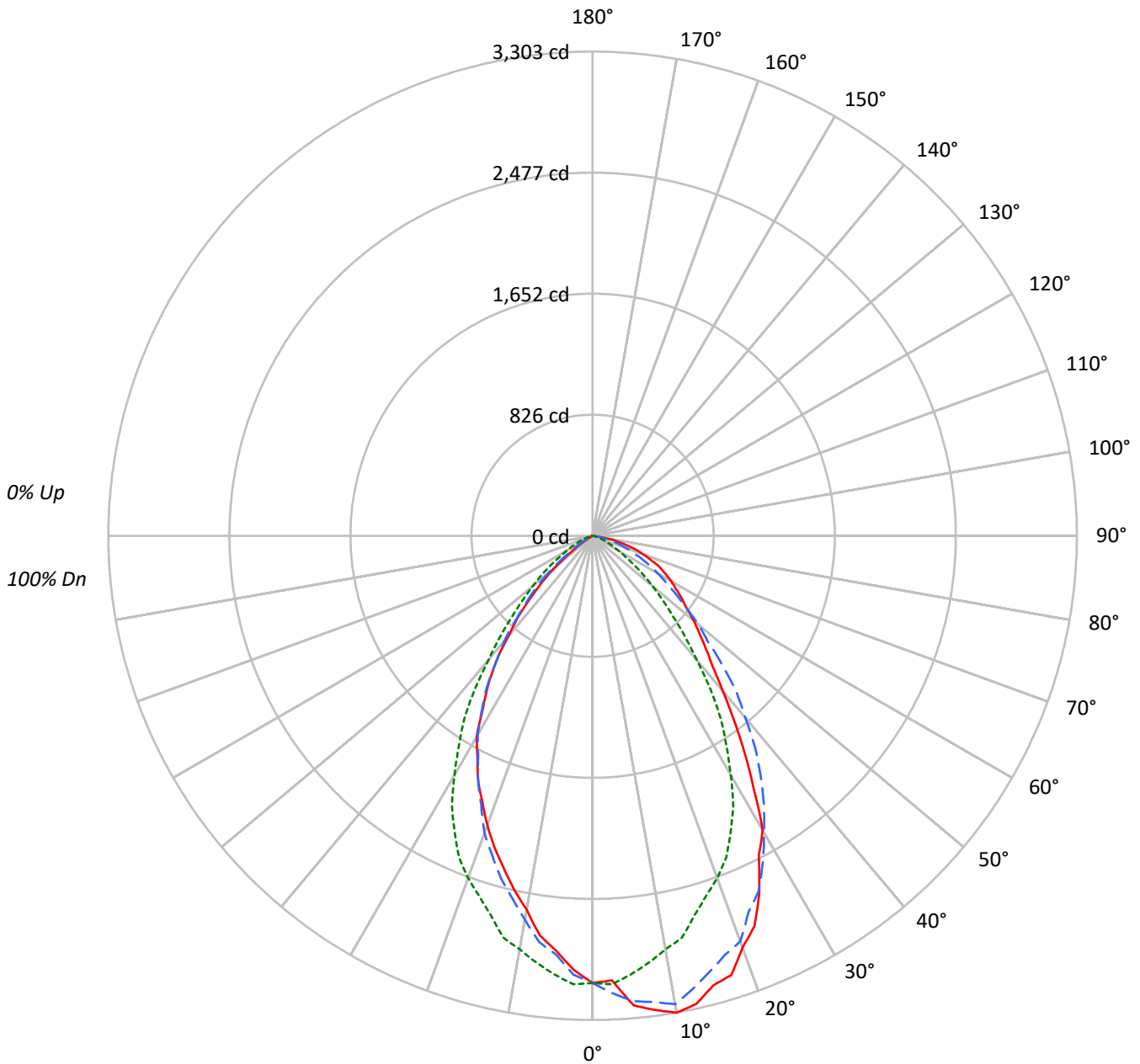
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 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 (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

TEST NUMBER: P#
CATALOG NUMBER: LD4C65D010 EX4C659030 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°	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)