

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 EX4C709027 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 EX4C709027 4LBSQLWWH
Description: 4 INCH 7000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

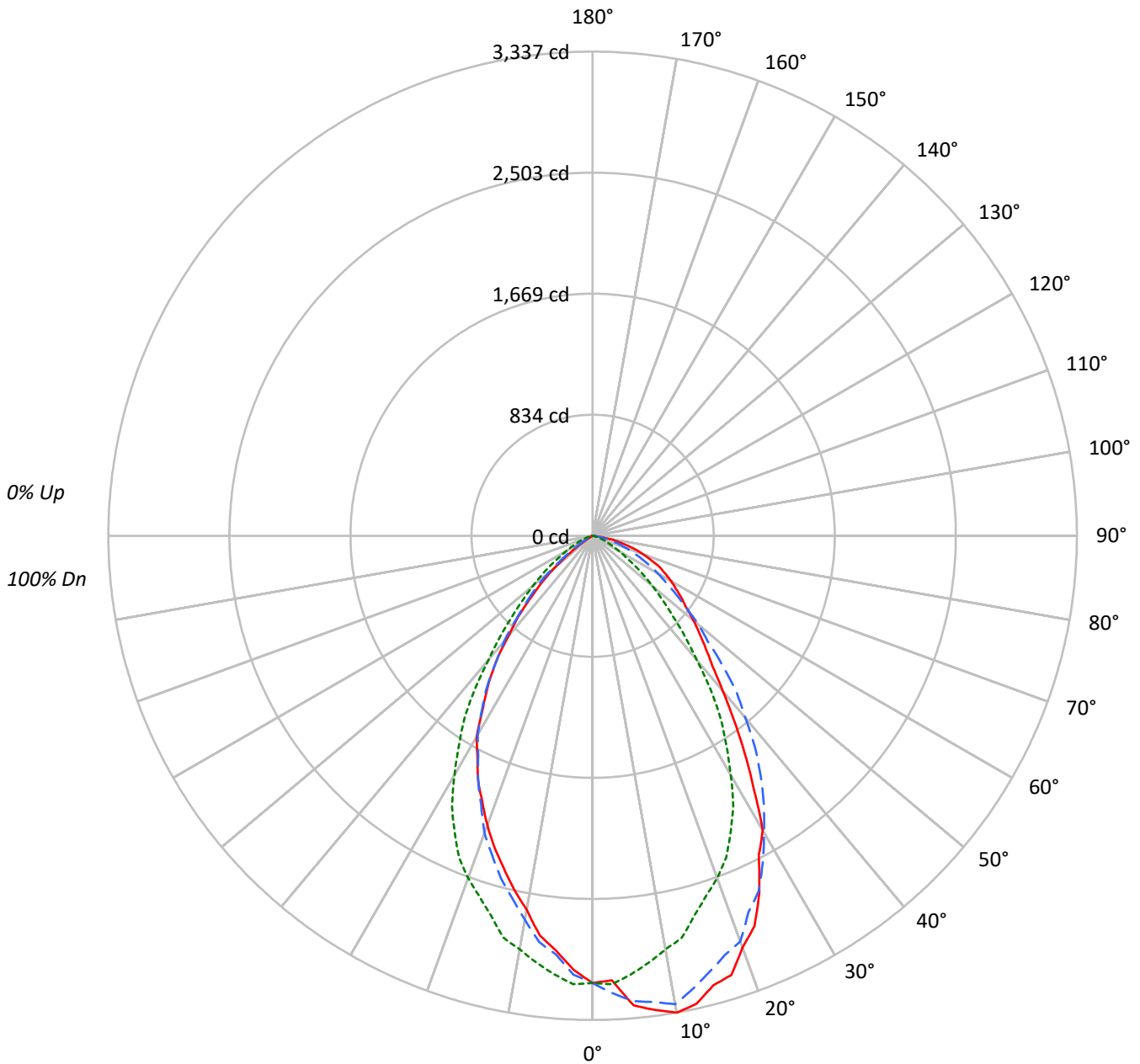
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4418.0 lumens
Efficiency: N/A
Efficacy: 56.6 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_{in}): 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 EX4C709027 4LBSQLWWH

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C70D010 EX4C709027 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°	297388	297388	297388
5°	314641	293885	278136
10°	326970	283517	256358
15°	320436	270589	236636
20°	310036	257658	217818
25°	289198	239607	198693
30°	261058	212047	177886
35°	215040	181528	147569
40°	175496	140115	113576
45°	150784	106408	81696
50°	136465	80999	51593
55°	125579	58424	18656
60°	120534	39927	2856
65°	116416	27009	868
70°	104241	18761	1072
75°	85447	9656	0
80°	53399	4112	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C70D010 EX4C709027 4LBSQLWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.8	6.5
10°-20°	778.0	17.6
20°-30°	1038.9	23.5
30°-40°	986.2	22.3
40°-50°	681.7	15.4
50°-60°	376.7	8.5
60°-70°	187.1	4.2
70°-80°	73.7	1.7
80°-90°	7.0	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°	2105.7	47.7
0°-40°	3091.9	70.0
0°-60°	4150.2	93.9
0°-90°	4418.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4418.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3082	3082	3082	3082	3082	
5°	3248	3219	3034	2897	2872	311
15°	3208	3112	2709	2443	2369	907
25°	2716	2705	2251	1866	1866	1238
35°	1826	2018	1541	1268	1253	1144
45°	1105	1268	780	639	599	862
55°	746	702	347	177	111	672
65°	510	370	118	4	4	495
75°	229	140	26	0	0	244
85°	0	4	0	0	0	21
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C70D010 EX4C709027 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1
2.5°	3067.3	3152.3	3159.7	3152.3	3163.5	3159.7	3178.2	3159.7	3182.0	3148.7	3156.1
5°	3248.5	3215.2	3285.4	3248.5	3248.5	3244.8	3233.7	3229.9	3244.8	3196.8	3218.9
7.5°	3296.5	3344.6	3407.4	3329.8	3333.4	3333.4	3311.3	3303.9	3303.9	3215.2	3241.1
10°	3337.2	3307.5	3340.8	3311.3	3337.2	3333.4	3348.2	3300.1	3333.4	3281.8	3278.0
12.5°	3303.9	3292.8	3337.2	3289.1	3274.4	3278.0	3259.6	3248.5	3259.6	3200.4	3196.8
15°	3207.8	3218.9	3285.4	3233.7	3226.3	3218.9	3196.8	3159.7	3189.4	3108.0	3111.8
17.5°	3174.6	3156.1	3167.2	3122.8	3133.9	3126.5	3122.8	3089.6	3082.1	3030.4	3030.4
20°	3019.4	3059.9	3059.9	3030.4	3030.4	3026.8	2978.7	3008.3	2975.0	2960.2	2975.0
22.5°	2912.1	2915.9	2915.9	2890.0	2893.7	2879.0	2853.0	2834.5	2853.0	2834.5	2805.0
25°	2716.4	2723.7	2768.1	2720.0	2712.6	2727.4	2705.2	2694.1	2690.4	2646.1	2705.2
27.5°	2479.8	2553.6	2550.0	2531.5	2553.6	2524.1	2513.1	2516.7	2527.9	2524.1	2538.9
30°	2343.1	2354.1	2365.3	2350.5	2354.1	2343.1	2343.1	2346.7	2376.3	2365.3	2361.5
32.5°	2065.8	2102.8	2132.4	2132.4	2136.1	2147.2	2143.4	2221.0	2239.6	2202.7	2195.3
35°	1825.6	1851.5	1877.3	1881.1	1929.2	1932.8	1936.5	1958.7	2010.4	2021.5	2017.8
37.5°	1596.6	1622.3	1629.7	1663.0	1688.9	1714.7	1744.4	1773.9	1818.2	1855.2	1836.8
40°	1393.3	1404.3	1422.8	1437.6	1489.3	1489.3	1504.1	1563.3	1611.3	1640.9	1637.1
42.5°	1223.3	1226.9	1241.7	1267.6	1315.7	1304.5	1315.7	1356.4	1426.4	1430.2	1470.9
45°	1105.0	1101.3	1112.4	1116.0	1145.7	1160.5	1167.9	1197.4	1256.5	1263.9	1267.6
47.5°	997.9	994.1	1012.6	1020.0	1031.0	1045.8	1045.8	1049.6	1071.7	1090.3	1075.5
50°	909.1	909.1	909.1	916.5	935.0	931.3	935.0	949.8	960.8	953.4	949.8
52.5°	813.0	827.8	838.9	842.7	846.3	846.3	850.0	842.7	838.9	827.8	805.6
55°	746.5	761.3	761.3	761.3	761.3	776.1	757.7	761.3	761.3	731.8	702.2
57.5°	680.1	694.8	705.8	691.1	705.8	691.1	683.7	680.1	672.5	643.0	598.7
60°	624.6	632.0	628.2	624.6	632.0	620.9	613.5	598.7	591.3	550.6	521.1
62.5°	561.8	565.4	569.2	561.8	554.4	550.6	535.9	513.7	498.9	465.6	439.7
65°	509.9	498.9	495.2	491.6	484.2	473.0	462.0	436.1	425.0	395.4	369.5
67.5°	432.3	428.7	436.1	425.0	406.6	406.6	395.4	373.3	347.3	329.0	303.0
70°	369.5	365.9	358.5	347.3	343.7	329.0	329.0	303.0	295.7	262.4	240.2
72.5°	303.0	303.0	291.9	280.9	269.7	262.4	258.7	240.2	229.2	210.7	192.1
75°	229.2	229.2	225.4	214.3	206.9	199.5	195.9	181.1	170.0	151.6	140.4
77.5°	162.6	162.6	147.8	140.4	144.1	136.7	129.3	125.7	121.9	110.9	96.1
80°	96.1	92.4	81.4	85.0	81.4	81.4	77.6	73.8	66.5	59.1	51.7
82.5°	25.9	29.5	29.5	29.5	33.3	25.9	25.9	25.9	29.5	29.5	18.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
87.5°	3.8	7.4	14.8	14.8	14.8	14.8	14.8	11.1	11.1	11.1	7.4
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 EX4C709027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1
2.5°	3119.2	3115.4	3119.2	3093.2	3152.3	3108.0	3100.6	3093.2	3119.2	3093.2	3056.3
5°	3185.6	3148.7	3137.6	3126.5	3159.7	3108.0	3097.0	3100.6	3082.1	3034.2	3037.8
7.5°	3207.8	3174.6	3141.3	3071.1	3100.6	3089.6	3059.9	3037.8	3008.3	2967.6	2960.2
10°	3215.2	3178.2	3130.2	3108.0	3063.7	3048.9	3037.8	3000.9	2964.0	2893.7	2875.2
12.5°	3193.0	3148.7	3089.6	3071.1	3037.8	2989.7	2964.0	2926.9	2893.7	2838.3	2797.6
15°	3097.0	3059.9	3041.6	2978.7	2964.0	2934.3	2882.6	2830.9	2782.8	2708.8	2686.7
17.5°	2986.1	2971.3	2952.8	2904.7	2901.1	2871.6	2823.5	2779.1	2716.4	2601.7	2564.8
20°	2871.6	2871.6	2812.4	2794.0	2830.9	2771.7	2734.8	2694.1	2564.8	2509.3	2442.9
22.5°	2786.6	2745.9	2712.6	2683.1	2686.7	2649.8	2598.1	2516.7	2468.6	2402.2	2324.6
25°	2620.2	2635.0	2561.2	2550.0	2561.2	2476.0	2450.2	2383.6	2313.4	2250.6	2191.5
27.5°	2516.7	2476.0	2428.1	2387.4	2387.4	2354.1	2280.3	2265.5	2158.2	2099.1	2025.1
30°	2361.5	2332.0	2291.3	2232.2	2224.8	2198.9	2139.8	2102.8	1992.0	1903.2	1862.6
32.5°	2165.6	2154.6	2121.3	2054.8	2032.7	2003.0	1929.2	1866.3	1814.6	1714.7	1666.8
35°	2025.1	1984.6	1914.4	1858.9	1840.4	1788.7	1729.5	1685.2	1629.7	1541.1	1478.3
37.5°	1814.6	1773.9	1707.3	1640.9	1640.9	1589.2	1507.8	1463.5	1385.9	1334.1	1282.4
40°	1629.7	1578.0	1511.6	1434.0	1422.8	1348.8	1315.7	1241.7	1193.6	1112.4	1105.0
42.5°	1422.8	1374.8	1315.7	1256.5	1212.2	1175.2	1090.3	1034.8	983.1	942.4	931.3
45°	1234.3	1171.5	1119.8	1045.8	1001.5	957.2	901.7	864.8	824.1	779.8	753.9
47.5°	1071.7	1020.0	946.0	879.6	835.3	813.0	750.1	709.6	676.3	646.8	628.2
50°	905.5	842.7	802.0	728.0	720.6	668.9	617.2	583.9	565.4	539.6	513.7
52.5°	779.8	720.6	665.2	609.8	580.2	561.8	513.7	480.4	454.6	436.1	421.3
55°	657.8	606.1	561.8	506.3	487.8	462.0	406.6	399.2	373.3	347.3	329.0
57.5°	565.4	517.3	465.6	428.7	395.4	377.0	332.6	303.0	288.3	266.1	247.6
60°	480.4	428.7	388.0	343.7	329.0	303.0	269.7	244.0	225.4	206.9	188.5
62.5°	402.8	358.5	314.2	277.1	255.0	240.2	214.3	192.1	173.7	159.0	144.1
65°	332.6	291.9	255.0	218.1	206.9	188.5	170.0	151.6	136.7	118.3	103.5
67.5°	273.5	236.6	199.5	173.7	162.6	155.2	133.1	114.5	103.5	92.4	77.6
70°	214.3	188.5	159.0	136.7	125.7	114.5	99.8	88.8	73.8	66.5	55.5
72.5°	166.4	144.1	118.3	99.8	92.4	85.0	70.2	59.1	51.7	44.3	36.9
75°	118.3	99.8	85.0	66.5	62.8	59.1	48.1	40.7	33.3	25.9	22.2
77.5°	81.4	66.5	51.7	44.3	40.7	33.3	29.5	22.2	18.5	14.8	11.1
80°	44.3	33.3	25.9	22.2	18.5	14.8	14.8	11.1	7.4	7.4	3.8
82.5°	14.8	11.1	7.4	3.8	3.8	3.8	3.8	3.8	3.8	0.0	3.8
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°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	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 EX4C709027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1
2.5°	3078.5	3037.8	3048.9	3048.9	3041.6	3041.6	3034.2	3023.0	3026.8	3004.5	2956.6
5°	3045.2	2993.5	2986.1	2993.5	2964.0	2956.6	2941.8	2964.0	2897.3	2923.3	2893.7
7.5°	2949.2	2901.1	2890.0	2915.9	2879.0	2856.7	2853.0	2882.6	2823.5	2794.0	2760.7
10°	2841.9	2823.5	2790.2	2771.7	2760.7	2764.3	2734.8	2697.8	2686.7	2679.3	2649.8
12.5°	2745.9	2705.2	2675.7	2653.5	2646.1	2646.1	2598.1	2590.7	2557.4	2550.0	2505.7
15°	2631.2	2583.3	2564.8	2535.2	2509.3	2524.1	2468.6	2453.9	2442.9	2394.8	2402.2
17.5°	2531.5	2479.8	2435.5	2416.9	2394.8	2372.6	2320.8	2332.0	2306.0	2306.0	2239.6
20°	2402.2	2346.7	2313.4	2276.5	2276.5	2247.0	2210.0	2213.7	2180.4	2147.2	2088.0
22.5°	2265.5	2206.3	2165.6	2150.8	2113.9	2106.5	2062.2	2051.1	2006.8	2010.4	1958.7
25°	2121.3	2062.2	2006.8	2010.4	1977.2	1962.5	1936.5	1884.8	1866.3	1844.2	1829.4
27.5°	1951.3	1910.6	1862.6	1858.9	1796.1	1799.7	1766.6	1751.8	1707.3	1718.5	1685.2
30°	1796.1	1737.0	1692.6	1681.6	1655.6	1648.3	1596.6	1574.3	1581.8	1552.1	1533.7
32.5°	1637.1	1548.5	1530.0	1507.8	1493.1	1474.5	1437.6	1452.4	1419.1	1426.4	1396.9
35°	1426.4	1389.5	1341.5	1341.5	1326.7	1311.9	1286.2	1300.9	1267.6	1252.8	1223.3
37.5°	1249.1	1215.9	1167.9	1182.6	1156.7	1134.6	1112.4	1116.0	1086.5	1082.9	1053.2
40°	1057.0	1038.4	1005.3	1005.3	986.7	986.7	975.6	964.6	946.0	923.9	890.6
42.5°	875.8	861.1	846.3	850.0	824.1	846.3	816.7	835.3	776.1	772.4	750.1
45°	742.8	709.6	713.2	698.5	683.7	691.1	665.2	672.5	639.4	632.0	609.8
47.5°	602.5	591.3	569.2	561.8	561.8	550.6	539.6	535.9	521.1	502.6	473.0
50°	495.2	454.6	447.1	436.1	428.7	428.7	413.9	391.8	395.4	377.0	347.3
52.5°	388.0	354.7	340.0	336.3	321.6	314.2	295.7	280.9	269.7	262.4	244.0
55°	299.3	269.7	251.4	251.4	229.2	229.2	203.3	192.1	177.4	162.6	151.6
57.5°	225.4	210.7	192.1	177.4	170.0	151.6	136.7	118.3	107.1	85.0	70.2
60°	170.0	155.2	136.7	125.7	118.3	99.8	81.4	66.5	40.7	33.3	29.5
62.5°	125.7	110.9	92.4	85.0	77.6	62.8	44.3	22.2	11.1	11.1	11.1
65°	92.4	73.8	59.1	51.7	44.3	33.3	14.8	7.4	3.8	3.8	3.8
67.5°	62.8	48.1	33.3	29.5	22.2	11.1	3.8	3.8	3.8	3.8	3.8
70°	40.7	29.5	14.8	11.1	7.4	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	25.9	14.8	7.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	14.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	7.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.8	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	3.8	3.8	3.8
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 EX4C709027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1	3082.1
2.5°	3008.3	2982.3	2997.1	2964.0	2978.7	3004.5	2986.1	2993.5
5°	2904.7	2890.0	2871.6	2823.5	2860.4	2890.0	2875.2	2871.6
7.5°	2794.0	2742.1	2768.1	2753.3	2745.9	2775.4	2742.1	2779.1
10°	2679.3	2642.4	2638.8	2612.8	2612.8	2635.0	2638.8	2616.5
12.5°	2509.3	2490.9	2490.9	2487.2	2483.4	2505.7	2509.3	2498.3
15°	2387.4	2380.0	2361.5	2357.9	2335.7	2368.9	2372.6	2368.9
17.5°	2239.6	2243.2	2224.8	2224.8	2239.6	2250.6	2221.0	2250.6
20°	2139.8	2121.3	2113.9	2080.6	2099.1	2117.7	2117.7	2121.3
22.5°	1995.6	1966.1	1977.2	1958.7	1947.5	1973.5	1973.5	1984.6
25°	1833.0	1833.0	1840.4	1829.4	1836.8	1851.5	1840.4	1866.3
27.5°	1677.8	1692.6	1692.6	1677.8	1685.2	1729.5	1748.0	1718.5
30°	1533.7	1537.4	1548.5	1541.1	1563.3	1578.0	1574.3	1596.6
32.5°	1371.1	1389.5	1396.9	1385.9	1393.3	1426.4	1408.1	1404.3
35°	1245.5	1212.2	1208.5	1212.2	1226.9	1234.3	1226.9	1252.8
37.5°	1064.3	1053.2	1038.4	1042.2	1053.2	1068.1	1075.5	1093.9
40°	890.6	875.8	875.8	872.2	861.1	901.7	901.7	901.7
42.5°	739.1	735.4	717.0	717.0	731.8	742.8	735.4	761.3
45°	606.1	591.3	580.2	580.2	591.3	591.3	602.5	598.7
47.5°	476.8	462.0	465.6	454.6	465.6	480.4	462.0	465.6
50°	358.5	358.5	351.1	358.5	354.7	358.5	351.1	343.7
52.5°	244.0	277.1	280.9	266.1	232.8	203.3	184.7	199.5
55°	140.4	125.7	125.7	121.9	114.5	110.9	99.8	110.9
57.5°	70.2	62.8	62.8	62.8	59.1	55.5	48.1	48.1
60°	29.5	25.9	25.9	22.2	18.5	14.8	11.1	14.8
62.5°	11.1	7.4	7.4	7.4	7.4	7.4	7.4	7.4
65°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
67.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
70°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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)