

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 EX4C709030 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 EX4C709030 4LBSQLWWH  
Description: 4 INCH 7000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

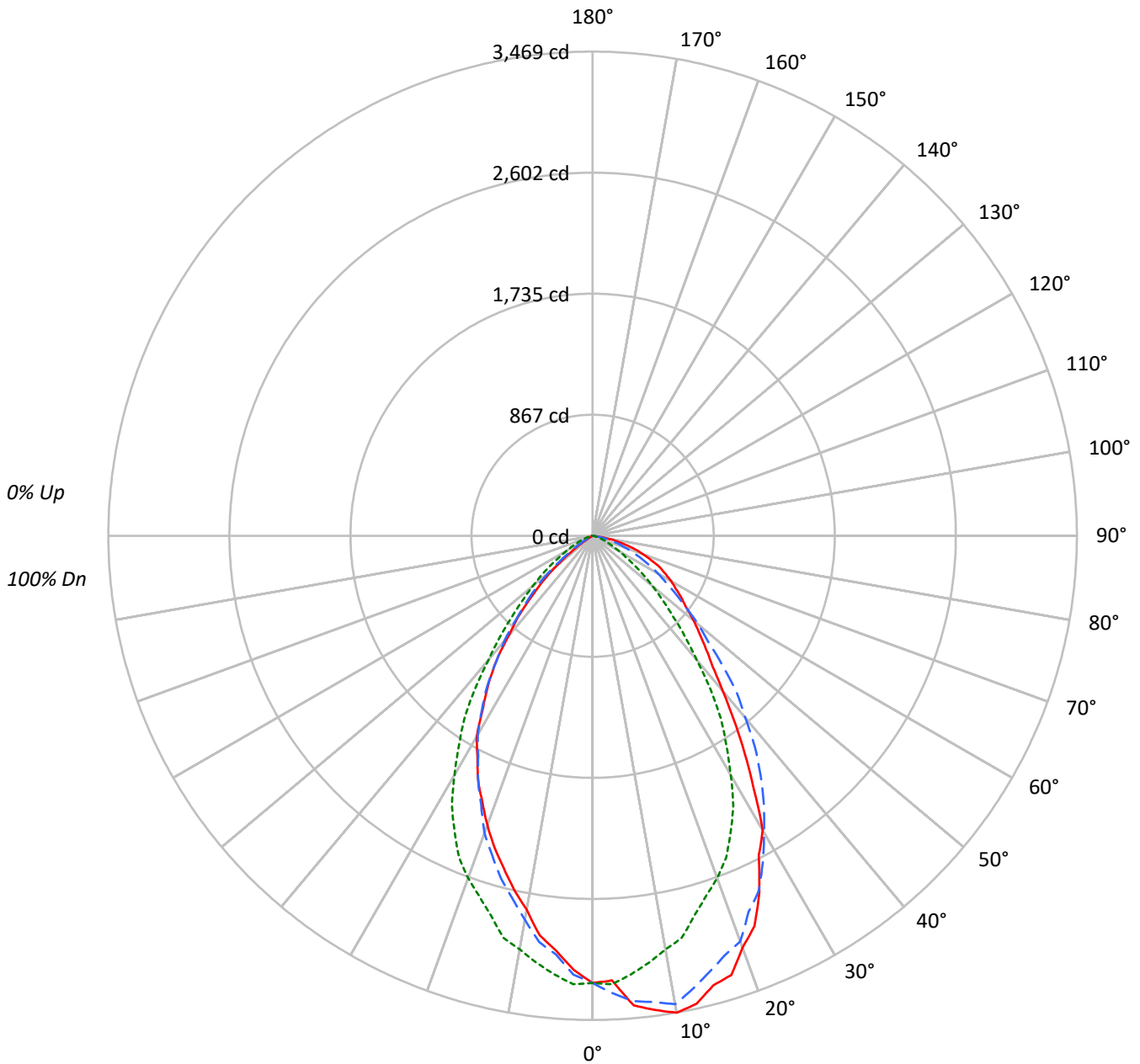
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4593.0 lumens  
Efficiency: N/A  
Efficacy: 58.9 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 (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: LD4C70D010 EX4C709030 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	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°	309170	309170	309170
5°	327097	305527	289149
10°	339923	294755	266508
15°	333122	281308	246006
20°	322317	267865	226443
25°	300654	249093	206561
30°	271398	220447	184928
35°	223556	188725	153423
40°	182449	145670	118085
45°	156761	110625	84930
50°	141869	84212	53634
55°	130558	60745	19396
60°	125320	41510	2972
65°	121028	28082	890
70°	108360	19494	1100
75°	88839	10028	0
80°	55510	4279	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	300.2	6.5
10°-20°	808.8	17.6
20°-30°	1080.0	23.5
30°-40°	1025.3	22.3
40°-50°	708.7	15.4
50°-60°	391.6	8.5
60°-70°	194.5	4.2
70°-80°	76.6	1.7
80°-90°	7.3	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°	2189.1	47.7
0°-40°	3214.4	70.0
0°-60°	4314.6	93.9
0°-90°	4593.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4593.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3204	3204	3204	3204	3204	
5°	3377	3346	3154	3012	2985	323
15°	3335	3235	2816	2540	2463	943
25°	2824	2812	2340	1940	1940	1287
35°	1898	2098	1602	1318	1302	1189
45°	1149	1318	811	665	622	896
55°	776	730	361	184	115	699
65°	530	384	123	4	4	515
75°	238	146	27	0	0	254
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°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3188.8	3277.2	3284.9	3277.2	3288.8	3284.9	3304.1	3284.9	3308.0	3273.4	3281.1
5°	3377.1	3342.5	3415.5	3377.1	3377.1	3373.4	3361.8	3357.9	3373.4	3323.4	3346.4
7.5°	3427.1	3477.1	3542.4	3461.7	3465.5	3465.5	3442.5	3434.8	3434.8	3342.5	3369.5
10°	3469.4	3438.5	3473.2	3442.5	3469.4	3465.5	3480.8	3430.9	3465.5	3411.8	3407.8
12.5°	3434.8	3423.2	3469.4	3419.4	3404.1	3407.8	3388.7	3377.1	3388.7	3327.2	3323.4
15°	3334.8	3346.4	3415.5	3361.8	3354.1	3346.4	3323.4	3284.9	3315.7	3231.1	3235.0
17.5°	3300.4	3281.1	3292.7	3246.5	3258.1	3250.4	3246.5	3212.0	3204.2	3150.4	3150.4
20°	3139.0	3181.2	3181.2	3150.4	3150.4	3146.7	3096.7	3127.4	3092.8	3077.4	3092.8
22.5°	3027.5	3031.4	3031.4	3004.4	3008.4	2993.0	2966.1	2946.8	2966.1	2946.8	2916.1
25°	2824.0	2831.6	2877.7	2827.7	2820.0	2835.4	2812.4	2800.8	2797.0	2751.0	2812.4
27.5°	2578.0	2654.8	2651.0	2631.7	2654.8	2624.1	2612.6	2616.4	2628.0	2624.1	2639.4
30°	2435.9	2447.4	2458.9	2443.6	2447.4	2435.9	2435.9	2439.7	2470.4	2458.9	2455.0
32.5°	2147.7	2186.0	2216.9	2216.9	2220.7	2232.3	2228.3	2309.0	2328.3	2289.9	2282.2
35°	1897.9	1924.9	1951.7	1955.6	2005.6	2009.3	2013.2	2036.3	2090.0	2101.6	2097.7
37.5°	1659.8	1686.6	1694.3	1728.9	1755.9	1782.6	1813.5	1844.2	1890.3	1928.7	1909.5
40°	1448.5	1459.9	1479.2	1494.5	1548.3	1548.3	1563.6	1625.2	1675.2	1705.9	1702.0
42.5°	1271.8	1275.5	1290.9	1317.8	1367.8	1356.2	1367.8	1410.1	1483.0	1486.9	1529.2
45°	1148.8	1144.9	1156.5	1160.2	1191.1	1206.4	1214.1	1244.8	1306.2	1313.9	1317.8
47.5°	1037.4	1033.5	1052.8	1060.4	1071.9	1087.2	1087.2	1091.1	1114.2	1133.4	1118.1
50°	945.1	945.1	945.1	952.8	972.1	968.2	972.1	987.4	998.9	991.2	987.4
52.5°	845.2	860.5	872.1	876.0	879.8	879.8	883.7	876.0	872.1	860.5	837.5
55°	776.1	791.4	791.4	791.4	791.4	806.8	787.7	791.4	791.4	760.7	730.0
57.5°	707.0	722.4	733.8	718.4	733.8	718.4	710.8	707.0	699.2	668.5	622.4
60°	649.4	657.0	653.1	649.4	657.0	645.4	637.8	622.4	614.7	572.4	541.7
62.5°	584.0	587.8	591.7	584.0	576.4	572.4	557.1	534.1	518.7	484.1	457.1
65°	530.1	518.7	514.8	511.0	503.3	491.8	480.3	453.4	441.8	411.1	384.1
67.5°	449.5	445.7	453.4	441.8	422.7	422.7	411.1	388.0	361.1	342.0	315.0
70°	384.1	380.4	372.7	361.1	357.3	342.0	342.0	315.0	307.4	272.7	249.7
72.5°	315.0	315.0	303.5	292.0	280.4	272.7	269.0	249.7	238.3	219.0	199.7
75°	238.3	238.3	234.4	222.8	215.1	207.4	203.7	188.3	176.7	157.6	146.0
77.5°	169.0	169.0	153.7	146.0	149.8	142.1	134.4	130.7	126.7	115.3	99.9
80°	99.9	96.0	84.6	88.4	84.6	84.6	80.7	76.8	69.1	61.4	53.7
82.5°	26.9	30.7	30.7	30.7	34.6	26.9	26.9	26.9	30.7	30.7	19.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9	3.9
87.5°	3.9	7.7	15.4	15.4	15.4	15.4	15.4	11.6	11.6	11.6	7.7
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°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3242.7	3238.8	3242.7	3215.8	3277.2	3231.1	3223.4	3215.8	3242.7	3215.8	3177.4
5°	3311.8	3273.4	3261.8	3250.4	3284.9	3231.1	3219.7	3223.4	3204.2	3154.4	3158.1
7.5°	3334.8	3300.4	3265.7	3192.7	3223.4	3212.0	3181.2	3158.1	3127.4	3085.1	3077.4
10°	3342.5	3304.1	3254.2	3231.1	3185.1	3169.7	3158.1	3119.7	3081.4	3008.4	2989.1
12.5°	3319.5	3273.4	3212.0	3192.7	3158.1	3108.1	3081.4	3042.8	3008.4	2950.7	2908.4
15°	3219.7	3181.2	3162.0	3096.7	3081.4	3050.5	2996.8	2943.0	2893.1	2816.1	2793.1
17.5°	3104.4	3089.0	3069.8	3019.8	3016.0	2985.3	2935.3	2889.1	2824.0	2704.7	2666.4
20°	2985.3	2985.3	2923.8	2904.6	2943.0	2881.5	2843.1	2800.8	2666.4	2608.7	2539.6
22.5°	2897.0	2854.7	2820.0	2789.3	2793.1	2754.7	2701.0	2616.4	2566.4	2497.3	2416.6
25°	2724.0	2739.4	2662.6	2651.0	2662.6	2574.1	2547.3	2478.1	2405.1	2339.7	2278.3
27.5°	2616.4	2574.1	2524.3	2482.0	2482.0	2447.4	2370.6	2355.2	2243.7	2182.3	2105.4
30°	2455.0	2424.3	2382.0	2320.6	2312.9	2286.0	2224.6	2186.0	2070.9	1978.6	1936.3
32.5°	2251.4	2239.9	2205.3	2136.2	2113.2	2082.3	2005.6	1940.2	1886.5	1782.6	1732.8
35°	2105.4	2063.2	1990.2	1932.6	1913.3	1859.6	1798.0	1751.9	1694.3	1602.2	1536.8
37.5°	1886.5	1844.2	1775.0	1705.9	1705.9	1652.1	1567.5	1521.5	1440.8	1386.9	1333.2
40°	1694.3	1640.5	1571.5	1490.8	1479.2	1402.3	1367.8	1290.9	1240.9	1156.5	1148.8
42.5°	1479.2	1429.2	1367.8	1306.2	1260.2	1221.8	1133.4	1075.8	1022.1	979.8	968.2
45°	1283.2	1217.9	1164.1	1087.2	1041.2	995.1	937.5	899.1	856.8	810.7	783.8
47.5°	1114.2	1060.4	983.5	914.4	868.4	845.2	779.9	737.7	703.1	672.4	653.1
50°	941.4	876.0	833.7	756.8	749.2	695.4	641.7	607.1	587.8	561.0	534.1
52.5°	810.7	749.2	691.5	634.0	603.1	584.0	534.1	499.4	472.6	453.4	438.0
55°	683.8	630.1	584.0	526.4	507.1	480.3	422.7	415.0	388.0	361.1	342.0
57.5°	587.8	537.8	484.1	445.7	411.1	392.0	345.8	315.0	299.7	276.7	257.4
60°	499.4	445.7	403.4	357.3	342.0	315.0	280.4	253.6	234.4	215.1	196.0
62.5°	418.8	372.7	326.6	288.1	265.1	249.7	222.8	199.7	180.6	165.3	149.8
65°	345.8	303.5	265.1	226.7	215.1	196.0	176.7	157.6	142.1	123.0	107.6
67.5°	284.3	246.0	207.4	180.6	169.0	161.4	138.3	119.1	107.6	96.0	80.7
70°	222.8	196.0	165.3	142.1	130.7	119.1	103.7	92.3	76.8	69.1	57.7
72.5°	173.0	149.8	123.0	103.7	96.0	88.4	73.0	61.4	53.7	46.1	38.4
75°	123.0	103.7	88.4	69.1	65.3	61.4	50.0	42.3	34.6	26.9	23.0
77.5°	84.6	69.1	53.7	46.1	42.3	34.6	30.7	23.0	19.3	15.4	11.6
80°	46.1	34.6	26.9	23.0	19.3	15.4	15.4	11.6	7.7	7.7	3.9
82.5°	15.4	11.6	7.7	3.9	3.9	3.9	3.9	3.9	3.9	0.0	3.9
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°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	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°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3200.4	3158.1	3169.7	3169.7	3162.0	3162.0	3154.4	3142.8	3146.7	3123.5	3073.7
5°	3165.8	3112.1	3104.4	3112.1	3081.4	3073.7	3058.3	3081.4	3012.1	3039.1	3008.4
7.5°	3066.0	3016.0	3004.4	3031.4	2993.0	2969.8	2966.1	2996.8	2935.3	2904.6	2870.0
10°	2954.5	2935.3	2900.7	2881.5	2870.0	2873.8	2843.1	2804.7	2793.1	2785.4	2754.7
12.5°	2854.7	2812.4	2781.7	2758.6	2751.0	2751.0	2701.0	2693.3	2658.7	2651.0	2605.0
15°	2735.5	2685.6	2666.4	2635.7	2608.7	2624.1	2566.4	2551.1	2539.6	2489.6	2497.3
17.5°	2631.7	2578.0	2531.9	2512.7	2489.6	2466.6	2412.7	2424.3	2397.4	2397.4	2328.3
20°	2497.3	2439.7	2405.1	2366.7	2366.7	2336.0	2297.6	2301.3	2266.7	2232.3	2170.7
22.5°	2355.2	2293.7	2251.4	2236.0	2197.6	2190.0	2143.9	2132.3	2086.2	2090.0	2036.3
25°	2205.3	2143.9	2086.2	2090.0	2055.5	2040.2	2013.2	1959.5	1940.2	1917.2	1901.9
27.5°	2028.6	1986.3	1936.3	1932.6	1867.2	1871.0	1836.5	1821.2	1775.0	1786.6	1751.9
30°	1867.2	1805.8	1759.6	1748.2	1721.2	1713.6	1659.8	1636.6	1644.5	1613.6	1594.5
32.5°	1702.0	1609.8	1590.6	1567.5	1552.2	1532.9	1494.5	1509.9	1475.3	1483.0	1452.2
35°	1483.0	1444.6	1394.6	1394.6	1379.2	1363.9	1337.1	1352.4	1317.8	1302.5	1271.8
37.5°	1298.6	1264.1	1214.1	1229.5	1202.5	1179.5	1156.5	1160.2	1129.5	1125.8	1094.9
40°	1098.8	1079.6	1045.1	1045.1	1025.8	1025.8	1014.2	1002.8	983.5	960.5	925.9
42.5°	910.5	895.2	879.8	883.7	856.8	879.8	849.1	868.4	806.8	803.0	779.9
45°	772.2	737.7	741.5	726.1	710.8	718.4	691.5	699.2	664.7	657.0	634.0
47.5°	626.3	614.7	591.7	584.0	584.0	572.4	561.0	557.1	541.7	522.5	491.8
50°	514.8	472.6	464.8	453.4	445.7	445.7	430.3	407.3	411.1	392.0	361.1
52.5°	403.4	368.8	353.4	349.7	334.3	326.6	307.4	292.0	280.4	272.7	253.6
55°	311.1	280.4	261.3	261.3	238.3	238.3	211.3	199.7	184.4	169.0	157.6
57.5°	234.4	219.0	199.7	184.4	176.7	157.6	142.1	123.0	111.4	88.4	73.0
60°	176.7	161.4	142.1	130.7	123.0	103.7	84.6	69.1	42.3	34.6	30.7
62.5°	130.7	115.3	96.0	88.4	80.7	65.3	46.1	23.0	11.6	11.6	11.6
65°	96.0	76.8	61.4	53.7	46.1	34.6	15.4	7.7	3.9	3.9	3.9
67.5°	65.3	50.0	34.6	30.7	23.0	11.6	3.9	3.9	3.9	3.9	3.9
70°	42.3	30.7	15.4	11.6	7.7	3.9	3.9	3.9	3.9	3.9	3.9
72.5°	26.9	15.4	7.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	15.4	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	7.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.9	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	3.9	3.9	3.9
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 EX4C709030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3127.4	3100.5	3115.8	3081.4	3096.7	3123.5	3104.4	3112.1
5°	3019.8	3004.4	2985.3	2935.3	2973.7	3004.4	2989.1	2985.3
7.5°	2904.6	2850.8	2877.7	2862.3	2854.7	2885.4	2850.8	2889.1
10°	2785.4	2747.0	2743.3	2716.3	2716.3	2739.4	2743.3	2720.1
12.5°	2608.7	2589.6	2589.6	2585.7	2581.8	2605.0	2608.7	2597.3
15°	2482.0	2474.3	2455.0	2451.3	2428.2	2462.7	2466.6	2462.7
17.5°	2328.3	2332.1	2312.9	2312.9	2328.3	2339.7	2309.0	2339.7
20°	2224.6	2205.3	2197.6	2163.0	2182.3	2201.5	2201.5	2205.3
22.5°	2074.7	2044.0	2055.5	2036.3	2024.7	2051.6	2051.6	2063.2
25°	1905.6	1905.6	1913.3	1901.9	1909.5	1924.9	1913.3	1940.2
27.5°	1744.3	1759.6	1759.6	1744.3	1751.9	1798.0	1817.3	1786.6
30°	1594.5	1598.3	1609.8	1602.2	1625.2	1640.5	1636.6	1659.8
32.5°	1425.5	1444.6	1452.2	1440.8	1448.5	1483.0	1463.8	1459.9
35°	1294.8	1260.2	1256.4	1260.2	1275.5	1283.2	1275.5	1302.5
37.5°	1106.5	1094.9	1079.6	1083.5	1094.9	1110.4	1118.1	1137.2
40°	925.9	910.5	910.5	906.8	895.2	937.5	937.5	937.5
42.5°	768.4	764.5	745.4	745.4	760.7	772.2	764.5	791.4
45°	630.1	614.7	603.1	603.1	614.7	614.7	626.3	622.4
47.5°	495.7	480.3	484.1	472.6	484.1	499.4	480.3	484.1
50°	372.7	372.7	365.0	372.7	368.8	372.7	365.0	357.3
52.5°	253.6	288.1	292.0	276.7	242.0	211.3	192.1	207.4
55°	146.0	130.7	130.7	126.7	119.1	115.3	103.7	115.3
57.5°	73.0	65.3	65.3	65.3	61.4	57.7	50.0	50.0
60°	30.7	26.9	26.9	23.0	19.3	15.4	11.6	15.4
62.5°	11.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7
65°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
67.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
70°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
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)