

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



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: -

Summary

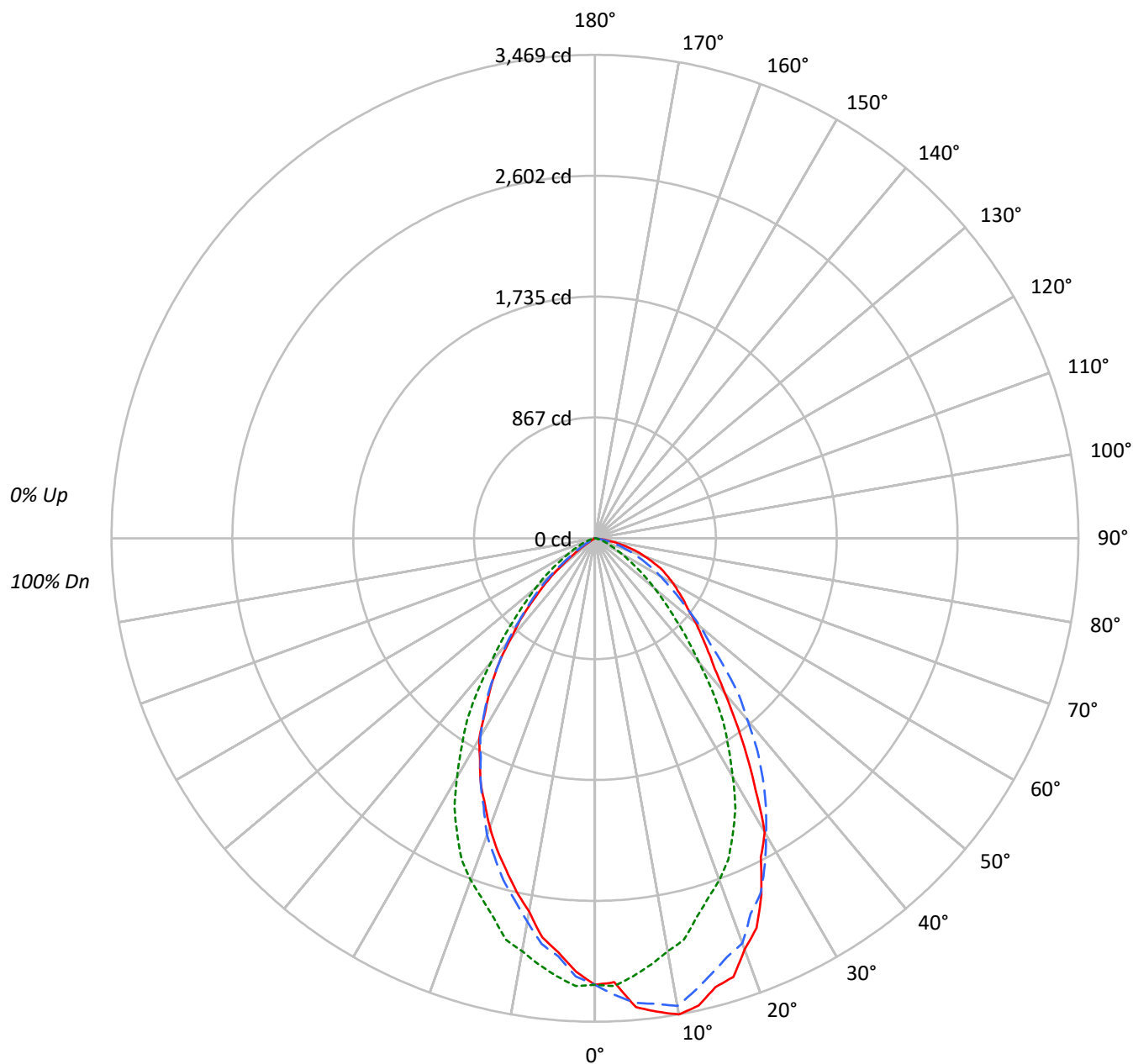
Lumens per Lamp: N/A
Luminaire Lumens: 4593.0 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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

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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	108	105	102	109	106	103	101	102	100	98		98	96	95		95
2	104	98	93	89	102	96	92	88	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	74	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	67	62	83	74	67	62	72	66	61		70	65	60		68
6	80	69	61	56	78	68	61	56	66	60	55		65	59	55		63
7	75	63	56	51	73	63	56	51	61	55	50		60	54	50		59
8	70	59	52	47	69	58	51	46	57	51	46		56	50	46		55
9	66	55	48	43	65	54	47	43	53	47	43		52	46	42		51
10	62	51	44	40	61	51	44	40	50	44	39		49	43	39		48

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	



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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)