

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 EX4C709040 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 EX4C709040 4LBSQLWWH  
Description: 4 INCH 7000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

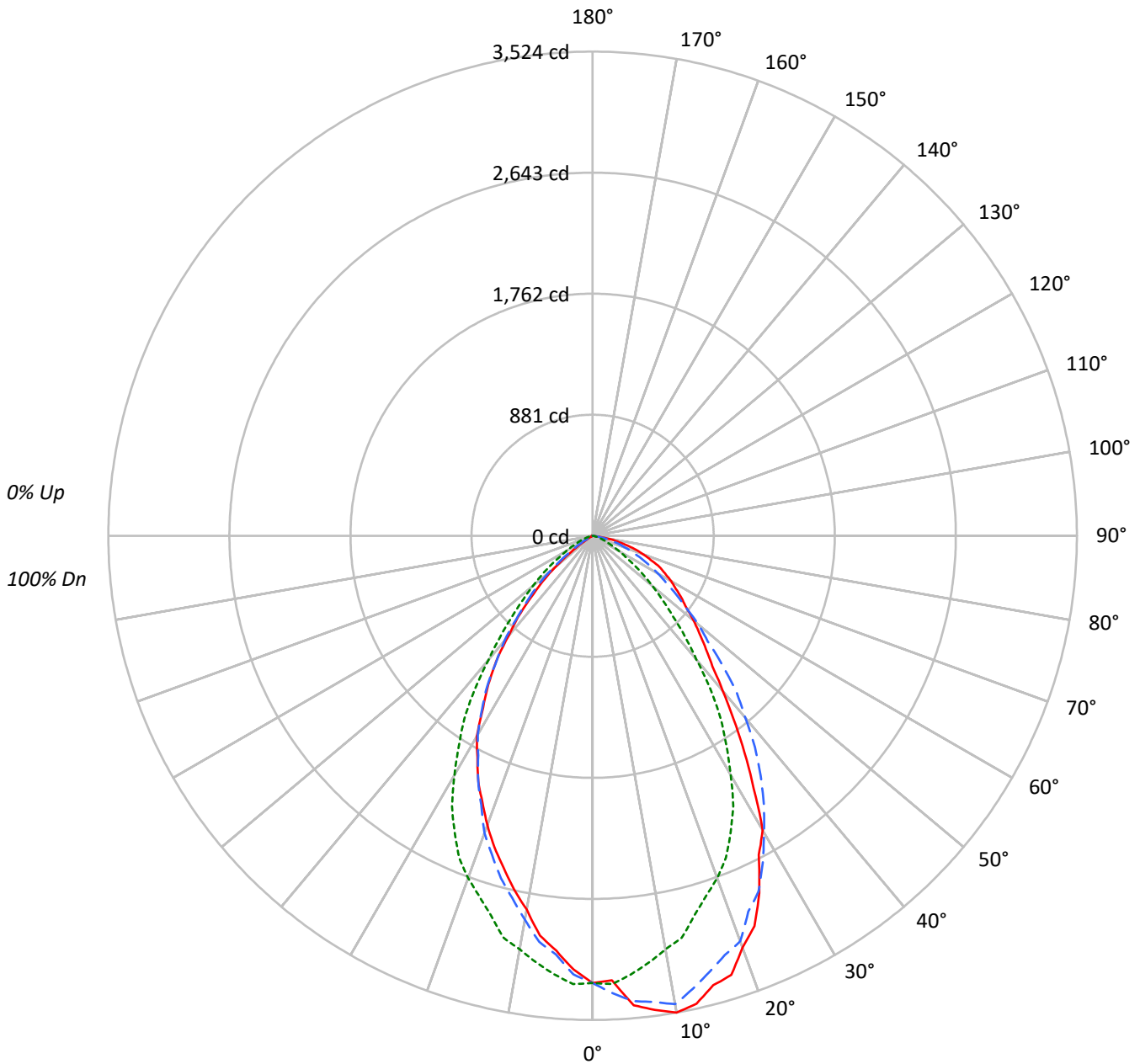
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4665.0 lumens  
Efficiency: N/A  
Efficacy: 59.8 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 EX4C709040 4LBSQLWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C70D010 EX4C709040 4LBSQLWWH

**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°	314013	314013	314013
5°	332231	310312	293682
10°	345253	299370	270682
15°	338346	285723	249861
20°	327369	272064	229996
25°	305359	253000	209808
30°	275654	223901	187825
35°	227066	191682	155826
40°	185308	147949	119937
45°	159217	112358	86267
50°	144091	85533	54475
55°	132610	61704	19699
60°	127269	42166	3010
65°	122946	28516	913
70°	110081	19804	1128
75°	90219	10215	0
80°	56399	4334	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C70D010 EX4C709040 4LBSQLWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	304.9	6.5
10°-20°	821.5	17.6
20°-30°	1097.0	23.5
30°-40°	1041.3	22.3
40°-50°	719.8	15.4
50°-60°	397.7	8.5
60°-70°	197.5	4.2
70°-80°	77.8	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°	2223.4	47.7
0°-40°	3264.7	70.0
0°-60°	4382.3	93.9
0°-90°	4665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4665.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3254	3254	3254	3254	3254	
5°	3430	3399	3204	3059	3032	328
15°	3387	3286	2860	2579	2501	958
25°	2868	2856	2376	1971	1971	1308
35°	1928	2131	1627	1338	1323	1208
45°	1167	1338	823	675	632	910
55°	788	742	367	187	117	709
65°	538	390	125	4	4	523
75°	242	148	27	0	0	258
85°	0	4	0	0	0	22
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C70D010 EX4C709040 4LBSQLWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4
2.5°	3238.8	3328.6	3336.4	3328.6	3340.3	3336.4	3355.9	3336.4	3359.9	3324.7	3332.5
5°	3430.1	3394.9	3469.1	3430.1	3430.1	3426.3	3414.5	3410.5	3426.3	3375.5	3398.9
7.5°	3480.8	3531.6	3597.9	3516.0	3519.8	3519.8	3496.4	3488.6	3488.6	3394.9	3422.3
10°	3523.8	3492.4	3527.6	3496.4	3523.8	3519.8	3535.4	3484.7	3519.8	3465.2	3461.3
12.5°	3488.6	3476.9	3523.8	3473.0	3457.4	3461.3	3441.8	3430.1	3441.8	3379.3	3375.5
15°	3387.1	3398.9	3469.1	3414.5	3406.7	3398.9	3375.5	3336.4	3367.7	3281.8	3285.8
17.5°	3352.1	3332.5	3344.3	3297.4	3309.1	3301.3	3297.4	3262.4	3254.4	3199.8	3199.8
20°	3188.2	3231.0	3231.0	3199.8	3199.8	3196.0	3145.3	3176.4	3141.3	3125.7	3141.3
22.5°	3074.9	3078.9	3078.9	3051.5	3055.5	3039.9	3012.6	2993.0	3012.6	2993.0	2961.8
25°	2868.2	2876.0	2922.8	2872.1	2864.3	2879.8	2856.5	2844.7	2840.9	2794.1	2856.5
27.5°	2618.4	2696.4	2692.6	2673.0	2696.4	2665.2	2653.6	2657.4	2669.2	2665.2	2680.8
30°	2474.1	2485.7	2497.5	2481.9	2485.7	2474.1	2474.1	2477.9	2509.1	2497.5	2493.5
32.5°	2181.3	2220.3	2251.7	2251.7	2255.5	2267.2	2263.3	2345.2	2364.8	2325.8	2318.0
35°	1927.7	1955.1	1982.3	1986.3	2037.0	2040.8	2044.8	2068.2	2122.8	2134.5	2130.6
37.5°	1685.8	1713.0	1720.8	1756.0	1783.4	1810.6	1841.9	1873.1	1919.9	1958.9	1939.5
40°	1471.2	1482.8	1502.4	1518.0	1572.5	1572.5	1588.1	1650.7	1701.4	1732.6	1728.6
42.5°	1291.7	1295.5	1311.1	1338.5	1389.2	1377.5	1389.2	1432.2	1506.2	1510.2	1553.1
45°	1166.8	1162.8	1174.6	1178.4	1209.8	1225.4	1233.2	1264.3	1326.7	1334.5	1338.5
47.5°	1053.7	1049.7	1069.3	1077.1	1088.7	1104.3	1104.3	1108.2	1131.6	1151.2	1135.6
50°	959.9	959.9	959.9	967.7	987.3	983.3	987.3	1002.9	1014.5	1006.7	1002.9
52.5°	858.4	874.0	885.8	889.8	893.6	893.6	897.6	889.8	885.8	874.0	850.6
55°	788.3	803.9	803.9	803.9	803.9	819.5	800.0	803.9	803.9	772.7	741.5
57.5°	718.1	733.7	745.3	729.7	745.3	729.7	721.9	718.1	710.1	679.0	632.2
60°	659.5	667.3	663.4	659.5	667.3	655.6	647.8	632.2	624.4	581.4	550.2
62.5°	593.2	597.0	601.0	593.2	585.4	581.4	565.8	542.4	526.8	491.7	464.3
65°	538.5	526.8	522.9	519.0	511.2	499.5	487.8	460.5	448.7	417.5	390.2
67.5°	456.5	452.7	460.5	448.7	429.3	429.3	417.5	394.1	366.8	347.3	320.0
70°	390.2	386.3	378.5	366.8	362.9	347.3	347.3	320.0	312.2	277.0	253.6
72.5°	320.0	320.0	308.2	296.6	284.8	277.0	273.2	253.6	242.0	222.4	202.9
75°	242.0	242.0	238.0	226.3	218.5	210.7	206.9	191.3	179.5	160.1	148.3
77.5°	171.7	171.7	156.1	148.3	152.1	144.3	136.5	132.7	128.7	117.1	101.5
80°	101.5	97.5	85.9	89.7	85.9	85.9	81.9	78.0	70.2	62.4	54.6
82.5°	27.4	31.2	31.2	31.2	35.2	27.4	27.4	27.4	31.2	31.2	19.6
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 EX4C709040 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4
2.5°	3293.5	3289.6	3293.5	3266.2	3328.6	3281.8	3274.0	3266.2	3293.5	3266.2	3227.2
5°	3363.7	3324.7	3313.0	3301.3	3336.4	3281.8	3270.2	3274.0	3254.4	3203.8	3207.6
7.5°	3387.1	3352.1	3316.9	3242.8	3274.0	3262.4	3231.0	3207.6	3176.4	3133.5	3125.7
10°	3394.9	3355.9	3305.2	3281.8	3235.0	3219.4	3207.6	3168.6	3129.7	3055.5	3035.9
12.5°	3371.5	3324.7	3262.4	3242.8	3207.6	3156.9	3129.7	3090.5	3055.5	2997.0	2954.0
15°	3270.2	3231.0	3211.6	3145.3	3129.7	3098.3	3043.7	2989.2	2938.4	2860.3	2836.9
17.5°	3153.0	3137.5	3117.9	3067.1	3063.3	3032.1	2981.4	2934.4	2868.2	2747.1	2708.2
20°	3032.1	3032.1	2969.6	2950.2	2989.2	2926.6	2887.6	2844.7	2708.2	2649.6	2579.4
22.5°	2942.4	2899.4	2864.3	2833.1	2836.9	2797.9	2743.3	2657.4	2606.6	2536.5	2454.5
25°	2766.7	2782.3	2704.3	2692.6	2704.3	2614.4	2587.2	2516.9	2442.8	2376.4	2314.0
27.5°	2657.4	2614.4	2563.8	2520.9	2520.9	2485.7	2407.7	2392.2	2278.9	2216.5	2138.4
30°	2493.5	2462.3	2419.4	2357.0	2349.2	2321.8	2259.5	2220.3	2103.4	2009.6	1966.7
32.5°	2286.7	2275.0	2239.9	2169.7	2146.3	2115.0	2037.0	1970.7	1916.1	1810.6	1760.0
35°	2138.4	2095.6	2021.4	1962.9	1943.3	1888.7	1826.2	1779.4	1720.8	1627.3	1560.9
37.5°	1916.1	1873.1	1802.8	1732.6	1732.6	1678.0	1592.1	1545.3	1463.4	1408.7	1354.1
40°	1720.8	1666.3	1596.1	1514.1	1502.4	1424.3	1389.2	1311.1	1260.4	1174.6	1166.8
42.5°	1502.4	1451.6	1389.2	1326.7	1279.9	1240.9	1151.2	1092.7	1038.1	995.1	983.3
45°	1303.3	1237.0	1182.4	1104.3	1057.5	1010.7	952.2	913.2	870.2	823.4	796.1
47.5°	1131.6	1077.1	998.9	928.8	882.0	858.4	792.1	749.3	714.1	682.9	663.4
50°	956.1	889.8	846.8	768.7	760.9	706.3	651.7	616.6	597.0	569.8	542.4
52.5°	823.4	760.9	702.3	643.9	612.6	593.2	542.4	507.3	480.1	460.5	444.9
55°	694.5	640.0	593.2	534.6	515.1	487.8	429.3	421.5	394.1	366.8	347.3
57.5°	597.0	546.2	491.7	452.7	417.5	398.1	351.2	320.0	304.4	281.0	261.4
60°	507.3	452.7	409.7	362.9	347.3	320.0	284.8	257.6	238.0	218.5	199.1
62.5°	425.3	378.5	331.8	292.6	269.2	253.6	226.3	202.9	183.5	167.9	152.1
65°	351.2	308.2	269.2	230.2	218.5	199.1	179.5	160.1	144.3	124.9	109.3
67.5°	288.8	249.8	210.7	183.5	171.7	163.9	140.5	120.9	109.3	97.5	81.9
70°	226.3	199.1	167.9	144.3	132.7	120.9	105.3	93.7	78.0	70.2	58.6
72.5°	175.7	152.1	124.9	105.3	97.5	89.7	74.1	62.4	54.6	46.8	39.0
75°	124.9	105.3	89.7	70.2	66.4	62.4	50.8	43.0	35.2	27.4	23.4
77.5°	85.9	70.2	54.6	46.8	43.0	35.2	31.2	23.4	19.6	15.6	11.8
80°	46.8	35.2	27.4	23.4	19.6	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 EX4C709040 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4
2.5°	3250.6	3207.6	3219.4	3219.4	3211.6	3211.6	3203.8	3192.0	3196.0	3172.5	3121.9
5°	3215.4	3160.8	3153.0	3160.8	3129.7	3121.9	3106.3	3129.7	3059.3	3086.7	3055.5
7.5°	3114.1	3063.3	3051.5	3078.9	3039.9	3016.4	3012.6	3043.7	2981.4	2950.2	2915.0
10°	3000.8	2981.4	2946.2	2926.6	2915.0	2918.8	2887.6	2848.7	2836.9	2829.1	2797.9
12.5°	2899.4	2856.5	2825.3	2801.9	2794.1	2794.1	2743.3	2735.5	2700.4	2692.6	2645.8
15°	2778.3	2727.7	2708.2	2677.0	2649.6	2665.2	2606.6	2591.1	2579.4	2528.7	2536.5
17.5°	2673.0	2618.4	2571.6	2552.1	2528.7	2505.3	2450.6	2462.3	2435.0	2435.0	2364.8
20°	2536.5	2477.9	2442.8	2403.8	2403.8	2372.6	2333.6	2337.4	2302.3	2267.2	2204.7
22.5°	2392.2	2329.6	2286.7	2271.1	2232.1	2224.3	2177.5	2165.7	2119.0	2122.8	2068.2
25°	2239.9	2177.5	2119.0	2122.8	2087.8	2072.2	2044.8	1990.2	1970.7	1947.3	1931.7
27.5°	2060.4	2017.4	1966.7	1962.9	1896.5	1900.3	1865.3	1849.7	1802.8	1814.6	1779.4
30°	1896.5	1834.1	1787.2	1775.6	1748.2	1740.4	1685.8	1662.3	1670.2	1638.9	1619.5
32.5°	1728.6	1635.1	1615.5	1592.1	1576.5	1557.0	1518.0	1533.6	1498.4	1506.2	1475.0
35°	1506.2	1467.2	1416.5	1416.5	1400.9	1385.3	1358.1	1373.6	1338.5	1322.9	1291.7
37.5°	1318.9	1283.9	1233.2	1248.7	1221.4	1198.0	1174.6	1178.4	1147.2	1143.4	1112.1
40°	1116.0	1096.5	1061.5	1061.5	1041.9	1041.9	1030.1	1018.5	998.9	975.5	940.4
42.5°	924.8	909.2	893.6	897.6	870.2	893.6	862.4	882.0	819.5	815.6	792.1
45°	784.3	749.3	753.1	737.5	721.9	729.7	702.3	710.1	675.1	667.3	643.9
47.5°	636.1	624.4	601.0	593.2	593.2	581.4	569.8	565.8	550.2	530.7	499.5
50°	522.9	480.1	472.1	460.5	452.7	452.7	437.1	413.7	417.5	398.1	366.8
52.5°	409.7	374.6	359.0	355.1	339.6	331.8	312.2	296.6	284.8	277.0	257.6
55°	316.0	284.8	265.4	265.4	242.0	242.0	214.6	202.9	187.3	171.7	160.1
57.5°	238.0	222.4	202.9	187.3	179.5	160.1	144.3	124.9	113.1	89.7	74.1
60°	179.5	163.9	144.3	132.7	124.9	105.3	85.9	70.2	43.0	35.2	31.2
62.5°	132.7	117.1	97.5	89.7	81.9	66.4	46.8	23.4	11.8	11.8	11.8
65°	97.5	78.0	62.4	54.6	46.8	35.2	15.6	7.8	4.0	4.0	4.0
67.5°	66.4	50.8	35.2	31.2	23.4	11.8	4.0	4.0	4.0	4.0	4.0
70°	43.0	31.2	15.6	11.8	7.8	4.0	4.0	4.0	4.0	4.0	4.0
72.5°	27.4	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 EX4C709040 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4	3254.4
2.5°	3176.4	3149.1	3164.7	3129.7	3145.3	3172.5	3153.0	3160.8
5°	3067.1	3051.5	3032.1	2981.4	3020.3	3051.5	3035.9	3032.1
7.5°	2950.2	2895.4	2922.8	2907.2	2899.4	2930.6	2895.4	2934.4
10°	2829.1	2790.1	2786.3	2758.9	2758.9	2782.3	2786.3	2762.7
12.5°	2649.6	2630.2	2630.2	2626.2	2622.2	2645.8	2649.6	2638.0
15°	2520.9	2513.1	2493.5	2489.7	2466.3	2501.3	2505.3	2501.3
17.5°	2364.8	2368.6	2349.2	2349.2	2364.8	2376.4	2345.2	2376.4
20°	2259.5	2239.9	2232.1	2196.9	2216.5	2236.1	2236.1	2239.9
22.5°	2107.2	2076.0	2087.8	2068.2	2056.4	2083.8	2083.8	2095.6
25°	1935.5	1935.5	1943.3	1931.7	1939.5	1955.1	1943.3	1970.7
27.5°	1771.6	1787.2	1787.2	1771.6	1779.4	1826.2	1845.8	1814.6
30°	1619.5	1623.3	1635.1	1627.3	1650.7	1666.3	1662.3	1685.8
32.5°	1447.8	1467.2	1475.0	1463.4	1471.2	1506.2	1486.8	1482.8
35°	1315.1	1279.9	1276.1	1279.9	1295.5	1303.3	1295.5	1322.9
37.5°	1123.8	1112.1	1096.5	1100.4	1112.1	1127.8	1135.6	1155.0
40°	940.4	924.8	924.8	921.0	909.2	952.2	952.2	952.2
42.5°	780.5	776.5	757.1	757.1	772.7	784.3	776.5	803.9
45°	640.0	624.4	612.6	612.6	624.4	624.4	636.1	632.2
47.5°	503.4	487.8	491.7	480.1	491.7	507.3	487.8	491.7
50°	378.5	378.5	370.7	378.5	374.6	378.5	370.7	362.9
52.5°	257.6	292.6	296.6	281.0	245.8	214.6	195.1	210.7
55°	148.3	132.7	132.7	128.7	120.9	117.1	105.3	117.1
57.5°	74.1	66.4	66.4	66.4	62.4	58.6	50.8	50.8
60°	31.2	27.4	27.4	23.4	19.6	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)