

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 EX4C659050 4LBSQLWWH**

Issue Date: 2/18/2022



**Test Information**

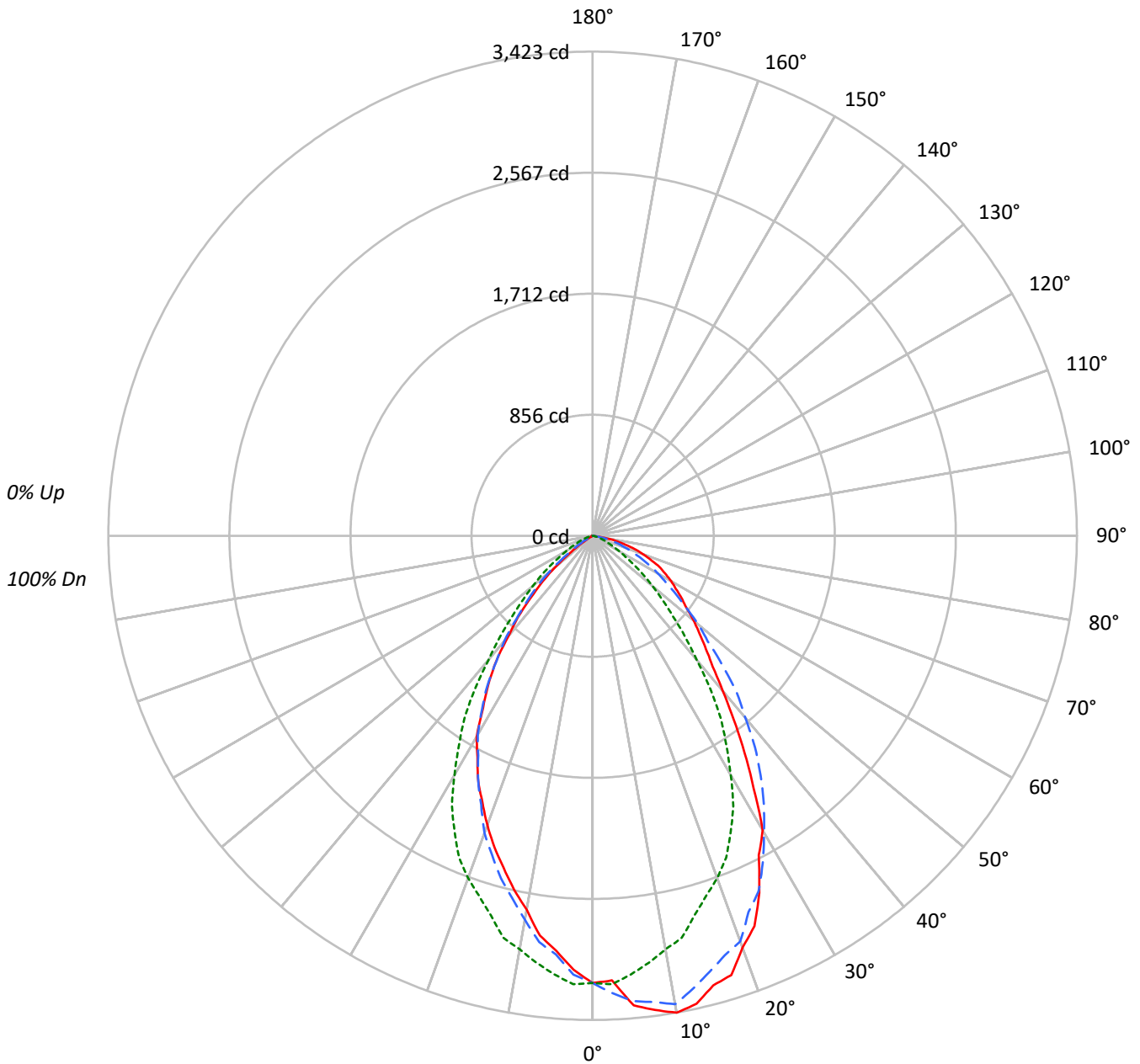
Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/18/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C65D010 EX4C659050 4LBSQLWWH  
Description: 4 INCH 6500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4532.0 lumens  
Efficiency: N/A  
Efficacy: 62.6 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): 72.4  
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: LD4C65D010 EX4C659050 4LBSQLWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C65D010 EX4C659050 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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90			90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80			80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72			72
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64			64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58			58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53			53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48			48
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44			44
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41			41
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38			38

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	305059	305059	305059
5°	322758	301469	285313
10°	335406	290836	262971
15°	328697	277572	242739
20°	318035	264312	223435
25°	296661	245793	203825
30°	267799	217517	182477
35°	220588	186216	151385
40°	180018	143730	116511
45°	154673	109151	83798
50°	139993	83086	52929
55°	128825	59938	19144
60°	123641	40950	2914
65°	119430	27694	890
70°	106921	19240	1100
75°	87646	9917	0
80°	54788	4223	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C65D010 EX4C659050 4LBSQLWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	296.2	6.5
10°-20°	798.1	17.6
20°-30°	1065.7	23.5
30°-40°	1011.7	22.3
40°-50°	699.3	15.4
50°-60°	386.4	8.5
60°-70°	191.9	4.2
70°-80°	75.6	1.7
80°-90°	7.2	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°	2160.0	47.7
0°-40°	3171.7	70.0
0°-60°	4257.3	93.9
0°-90°	4532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4532.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3162	3162	3162	3162	3162	
5°	3332	3302	3112	2972	2946	319
15°	3290	3192	2779	2506	2430	931
25°	2786	2775	2309	1914	1914	1270
35°	1873	2070	1581	1300	1285	1173
45°	1134	1300	800	656	614	884
55°	766	720	356	182	114	689
65°	523	379	121	4	4	508
75°	235	144	27	0	0	251
85°	0	4	0	0	0	22
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C65D010 EX4C659050 4LBSQLWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6
2.5°	3146.5	3233.7	3241.2	3233.7	3245.1	3241.2	3260.2	3241.2	3264.1	3229.9	3237.5
5°	3332.3	3298.1	3370.2	3332.3	3332.3	3328.6	3317.1	3313.3	3328.6	3279.3	3302.0
7.5°	3381.6	3430.9	3495.4	3415.8	3419.5	3419.5	3396.7	3389.2	3389.2	3298.1	3324.7
10°	3423.3	3392.9	3427.0	3396.7	3423.3	3419.5	3434.6	3385.3	3419.5	3366.4	3362.6
12.5°	3389.2	3377.7	3423.3	3374.0	3358.9	3362.6	3343.7	3332.3	3343.7	3283.0	3279.3
15°	3290.5	3302.0	3370.2	3317.1	3309.6	3302.0	3279.3	3241.2	3271.7	3188.2	3192.1
17.5°	3256.5	3237.5	3249.0	3203.4	3214.8	3207.2	3203.4	3169.4	3161.6	3108.6	3108.6
20°	3097.3	3138.9	3138.9	3108.6	3108.6	3104.9	3055.6	3085.9	3051.7	3036.6	3051.7
22.5°	2987.3	2991.1	2991.1	2964.5	2968.4	2953.2	2926.7	2907.7	2926.7	2907.7	2877.4
25°	2786.5	2794.0	2839.5	2790.2	2782.6	2797.7	2775.0	2763.6	2759.9	2714.4	2775.0
27.5°	2543.8	2619.5	2615.8	2596.8	2619.5	2589.2	2577.9	2581.6	2593.1	2589.2	2604.4
30°	2403.6	2414.8	2426.3	2411.1	2414.8	2403.6	2403.6	2407.3	2437.6	2426.3	2422.4
32.5°	2119.1	2157.0	2187.5	2187.5	2191.2	2202.6	2198.7	2278.4	2297.4	2259.5	2251.9
35°	1872.7	1899.3	1925.8	1929.6	1978.9	1982.6	1986.5	2009.2	2062.3	2073.7	2069.8
37.5°	1637.8	1664.2	1671.8	1705.9	1732.5	1759.0	1789.4	1819.7	1865.2	1903.0	1884.2
40°	1429.2	1440.5	1459.5	1474.7	1527.7	1527.7	1542.9	1603.6	1652.9	1683.2	1679.4
42.5°	1254.9	1258.6	1273.7	1300.3	1349.6	1338.2	1349.6	1391.4	1463.3	1467.1	1508.9
45°	1133.5	1129.7	1141.1	1144.8	1175.3	1190.4	1198.0	1228.3	1288.9	1296.5	1300.3
47.5°	1023.6	1019.8	1038.8	1046.4	1057.6	1072.8	1072.8	1076.6	1099.4	1118.4	1103.2
50°	932.6	932.6	932.6	940.2	959.2	955.3	959.2	974.3	985.6	978.0	974.3
52.5°	834.0	849.1	860.5	864.4	868.1	868.1	872.0	864.4	860.5	849.1	826.4
55°	765.8	780.9	780.9	780.9	780.9	796.1	777.2	780.9	780.9	750.6	720.3
57.5°	697.6	712.8	724.1	708.9	724.1	708.9	701.3	697.6	689.9	659.6	614.1
60°	640.7	648.3	644.4	640.7	648.3	636.9	629.3	614.1	606.6	564.8	534.5
62.5°	576.3	580.0	583.8	576.3	568.7	564.8	549.7	527.0	511.8	477.7	451.1
65°	523.1	511.8	508.0	504.2	496.7	485.2	473.9	447.4	435.9	405.6	379.0
67.5°	443.5	439.8	447.4	435.9	417.1	417.1	405.6	382.9	356.3	337.4	310.9
70°	379.0	375.3	367.7	356.3	352.6	337.4	337.4	310.9	303.3	269.1	246.4
72.5°	310.9	310.9	299.4	288.1	276.7	269.1	265.4	246.4	235.1	216.1	197.1
75°	235.1	235.1	231.3	219.8	212.2	204.7	201.0	185.8	174.4	155.5	144.1
77.5°	166.8	166.8	151.6	144.1	147.8	140.2	132.6	128.9	125.1	113.8	98.6
80°	98.6	94.8	83.5	87.2	83.5	83.5	79.6	75.7	68.2	60.6	53.0
82.5°	26.6	30.3	30.3	30.3	34.2	26.6	26.6	26.6	30.3	30.3	19.0
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	7.6	15.1	15.1	15.1	15.1	15.1	11.4	11.4	11.4	7.6
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 EX4C659050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6
2.5°	3199.6	3195.8	3199.6	3173.1	3233.7	3188.2	3180.6	3173.1	3199.6	3173.1	3135.2
5°	3267.8	3229.9	3218.5	3207.2	3241.2	3188.2	3176.9	3180.6	3161.6	3112.5	3116.2
7.5°	3290.5	3256.5	3222.4	3150.3	3180.6	3169.4	3138.9	3116.2	3085.9	3044.1	3036.6
10°	3298.1	3260.2	3210.9	3188.2	3142.8	3127.6	3116.2	3078.3	3040.4	2968.4	2949.4
12.5°	3275.4	3229.9	3169.4	3150.3	3116.2	3066.9	3040.4	3002.4	2968.4	2911.5	2869.8
15°	3176.9	3138.9	3120.0	3055.6	3040.4	3010.0	2957.0	2903.9	2854.6	2778.7	2756.0
17.5°	3063.2	3048.0	3029.0	2979.7	2976.0	2945.7	2896.4	2850.8	2786.5	2668.8	2631.0
20°	2945.7	2945.7	2884.9	2866.1	2903.9	2843.2	2805.3	2763.6	2631.0	2574.1	2505.9
22.5°	2858.5	2816.8	2782.6	2752.3	2756.0	2718.1	2665.1	2581.6	2532.3	2464.2	2384.6
25°	2687.8	2703.0	2627.2	2615.8	2627.2	2539.9	2513.5	2445.1	2373.1	2308.7	2248.1
27.5°	2581.6	2539.9	2490.7	2449.0	2449.0	2414.8	2339.1	2324.0	2213.9	2153.3	2077.4
30°	2422.4	2392.1	2350.4	2289.8	2282.2	2255.6	2195.0	2157.0	2043.4	1952.3	1910.6
32.5°	2221.5	2210.2	2176.0	2107.9	2085.1	2054.7	1978.9	1914.5	1861.4	1759.0	1709.8
35°	2077.4	2035.8	1963.8	1906.9	1887.9	1834.9	1774.1	1728.7	1671.8	1580.9	1516.4
37.5°	1861.4	1819.7	1751.4	1683.2	1683.2	1630.2	1546.7	1501.3	1421.7	1368.5	1315.5
40°	1671.8	1618.8	1550.6	1471.0	1459.5	1383.6	1349.6	1273.7	1224.4	1141.1	1133.5
42.5°	1459.5	1410.2	1349.6	1288.9	1243.4	1205.6	1118.4	1061.5	1008.5	966.7	955.3
45°	1266.2	1201.7	1148.7	1072.8	1027.3	981.9	925.0	887.1	845.4	799.9	773.4
47.5°	1099.4	1046.4	970.5	902.3	856.8	834.0	769.5	727.9	693.8	663.5	644.4
50°	928.9	864.4	822.7	746.8	739.2	686.2	633.2	599.0	580.0	553.5	527.0
52.5°	799.9	739.2	682.3	625.6	595.1	576.3	527.0	492.8	466.4	447.4	432.2
55°	674.7	621.7	576.3	519.4	500.4	473.9	417.1	409.5	382.9	356.3	337.4
57.5°	580.0	530.7	477.7	439.8	405.6	386.8	341.2	310.9	295.7	273.0	254.0
60°	492.8	439.8	398.0	352.6	337.4	310.9	276.7	250.3	231.3	212.2	193.4
62.5°	413.2	367.7	322.3	284.3	261.6	246.4	219.8	197.1	178.2	163.1	147.8
65°	341.2	299.4	261.6	223.7	212.2	193.4	174.4	155.5	140.2	121.3	106.2
67.5°	280.6	242.7	204.7	178.2	166.8	159.2	136.5	117.5	106.2	94.8	79.6
70°	219.8	193.4	163.1	140.2	128.9	117.5	102.3	91.0	75.7	68.2	56.9
72.5°	170.7	147.8	121.3	102.3	94.8	87.2	72.0	60.6	53.0	45.4	37.9
75°	121.3	102.3	87.2	68.2	64.5	60.6	49.3	41.7	34.2	26.6	22.7
77.5°	83.5	68.2	53.0	45.4	41.7	34.2	30.3	22.7	19.0	15.1	11.4
80°	45.4	34.2	26.6	22.7	19.0	15.1	15.1	11.4	7.6	7.6	3.9
82.5°	15.1	11.4	7.6	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C65D010 EX4C659050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6
2.5°	3157.9	3116.2	3127.6	3127.6	3120.0	3120.0	3112.5	3101.0	3104.9	3082.0	3032.9
5°	3123.8	3070.7	3063.2	3070.7	3040.4	3032.9	3017.7	3040.4	2972.1	2998.7	2968.4
7.5°	3025.3	2976.0	2964.5	2991.1	2953.2	2930.4	2926.7	2957.0	2896.4	2866.1	2831.9
10°	2915.2	2896.4	2862.2	2843.2	2831.9	2835.6	2805.3	2767.4	2756.0	2748.4	2718.1
12.5°	2816.8	2775.0	2744.7	2722.0	2714.4	2714.4	2665.1	2657.5	2623.4	2615.8	2570.4
15°	2699.1	2650.0	2631.0	2600.7	2574.1	2589.2	2532.3	2517.2	2505.9	2456.6	2464.2
17.5°	2596.8	2543.8	2498.3	2479.3	2456.6	2433.9	2380.7	2392.1	2365.5	2365.5	2297.4
20°	2464.2	2407.3	2373.1	2335.2	2335.2	2304.9	2267.1	2270.8	2236.6	2202.6	2141.9
22.5°	2324.0	2263.2	2221.5	2206.3	2168.4	2160.9	2115.4	2104.0	2058.5	2062.3	2009.2
25°	2176.0	2115.4	2058.5	2062.3	2028.2	2013.1	1986.5	1933.5	1914.5	1891.7	1876.6
27.5°	2001.7	1959.9	1910.6	1906.9	1842.4	1846.2	1812.1	1797.0	1751.4	1762.8	1728.7
30°	1842.4	1781.8	1736.2	1725.0	1698.4	1690.8	1637.8	1614.9	1622.6	1592.2	1573.3
32.5°	1679.4	1588.5	1569.5	1546.7	1531.6	1512.6	1474.7	1489.8	1455.7	1463.3	1433.0
35°	1463.3	1425.4	1376.1	1376.1	1360.9	1345.8	1319.3	1334.5	1300.3	1285.2	1254.9
37.5°	1281.3	1247.3	1198.0	1213.1	1186.6	1163.8	1141.1	1144.8	1114.5	1110.8	1080.4
40°	1084.2	1065.2	1031.2	1031.2	1012.2	1012.2	1000.8	989.5	970.5	947.7	913.6
42.5°	898.4	883.3	868.1	872.0	845.4	868.1	837.8	856.8	796.1	792.4	769.5
45°	761.9	727.9	731.6	716.5	701.3	708.9	682.3	689.9	655.9	648.3	625.6
47.5°	618.0	606.6	583.8	576.3	576.3	564.8	553.5	549.7	534.5	515.5	485.2
50°	508.0	466.4	458.6	447.4	439.8	439.8	424.6	401.9	405.6	386.8	356.3
52.5°	398.0	363.9	348.7	345.0	329.9	322.3	303.3	288.1	276.7	269.1	250.3
55°	307.0	276.7	257.8	257.8	235.1	235.1	208.5	197.1	181.9	166.8	155.5
57.5°	231.3	216.1	197.1	181.9	174.4	155.5	140.2	121.3	109.9	87.2	72.0
60°	174.4	159.2	140.2	128.9	121.3	102.3	83.5	68.2	41.7	34.2	30.3
62.5°	128.9	113.8	94.8	87.2	79.6	64.5	45.4	22.7	11.4	11.4	11.4
65°	94.8	75.7	60.6	53.0	45.4	34.2	15.1	7.6	3.9	3.9	3.9
67.5°	64.5	49.3	34.2	30.3	22.7	11.4	3.9	3.9	3.9	3.9	3.9
70°	41.7	30.3	15.1	11.4	7.6	3.9	3.9	3.9	3.9	3.9	3.9
72.5°	26.6	15.1	7.6	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	15.1	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	7.6	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: LD4C65D010 EX4C659050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6	3161.6
2.5°	3085.9	3059.3	3074.4	3040.4	3055.6	3082.0	3063.2	3070.7
5°	2979.7	2964.5	2945.7	2896.4	2934.2	2964.5	2949.4	2945.7
7.5°	2866.1	2812.9	2839.5	2824.3	2816.8	2847.1	2812.9	2850.8
10°	2748.4	2710.6	2706.8	2680.3	2680.3	2703.0	2706.8	2684.0
12.5°	2574.1	2555.2	2555.2	2551.3	2547.5	2570.4	2574.1	2562.8
15°	2449.0	2441.4	2422.4	2418.7	2396.0	2430.0	2433.9	2430.0
17.5°	2297.4	2301.1	2282.2	2282.2	2297.4	2308.7	2278.4	2308.7
20°	2195.0	2176.0	2168.4	2134.3	2153.3	2172.3	2172.3	2176.0
22.5°	2047.1	2016.8	2028.2	2009.2	1997.8	2024.4	2024.4	2035.8
25°	1880.3	1880.3	1887.9	1876.6	1884.2	1899.3	1887.9	1914.5
27.5°	1721.1	1736.2	1736.2	1721.1	1728.7	1774.1	1793.1	1762.8
30°	1573.3	1577.0	1588.5	1580.9	1603.6	1618.8	1614.9	1637.8
32.5°	1406.5	1425.4	1433.0	1421.7	1429.2	1463.3	1444.4	1440.5
35°	1277.6	1243.4	1239.7	1243.4	1258.6	1266.2	1258.6	1285.2
37.5°	1091.8	1080.4	1065.2	1069.1	1080.4	1095.7	1103.2	1122.1
40°	913.6	898.4	898.4	894.7	883.3	925.0	925.0	925.0
42.5°	758.2	754.4	735.5	735.5	750.6	761.9	754.4	780.9
45°	621.7	606.6	595.1	595.1	606.6	606.6	618.0	614.1
47.5°	489.1	473.9	477.7	466.4	477.7	492.8	473.9	477.7
50°	367.7	367.7	360.2	367.7	363.9	367.7	360.2	352.6
52.5°	250.3	284.3	288.1	273.0	238.8	208.5	189.5	204.7
55°	144.1	128.9	128.9	125.1	117.5	113.8	102.3	113.8
57.5°	72.0	64.5	64.5	64.5	60.6	56.9	49.3	49.3
60°	30.3	26.6	26.6	22.7	19.0	15.1	11.4	15.1
62.5°	11.4	7.6	7.6	7.6	7.6	7.6	7.6	7.6
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)