

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

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: 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: -

Luminaire Equipment: Sample No. Condition Description

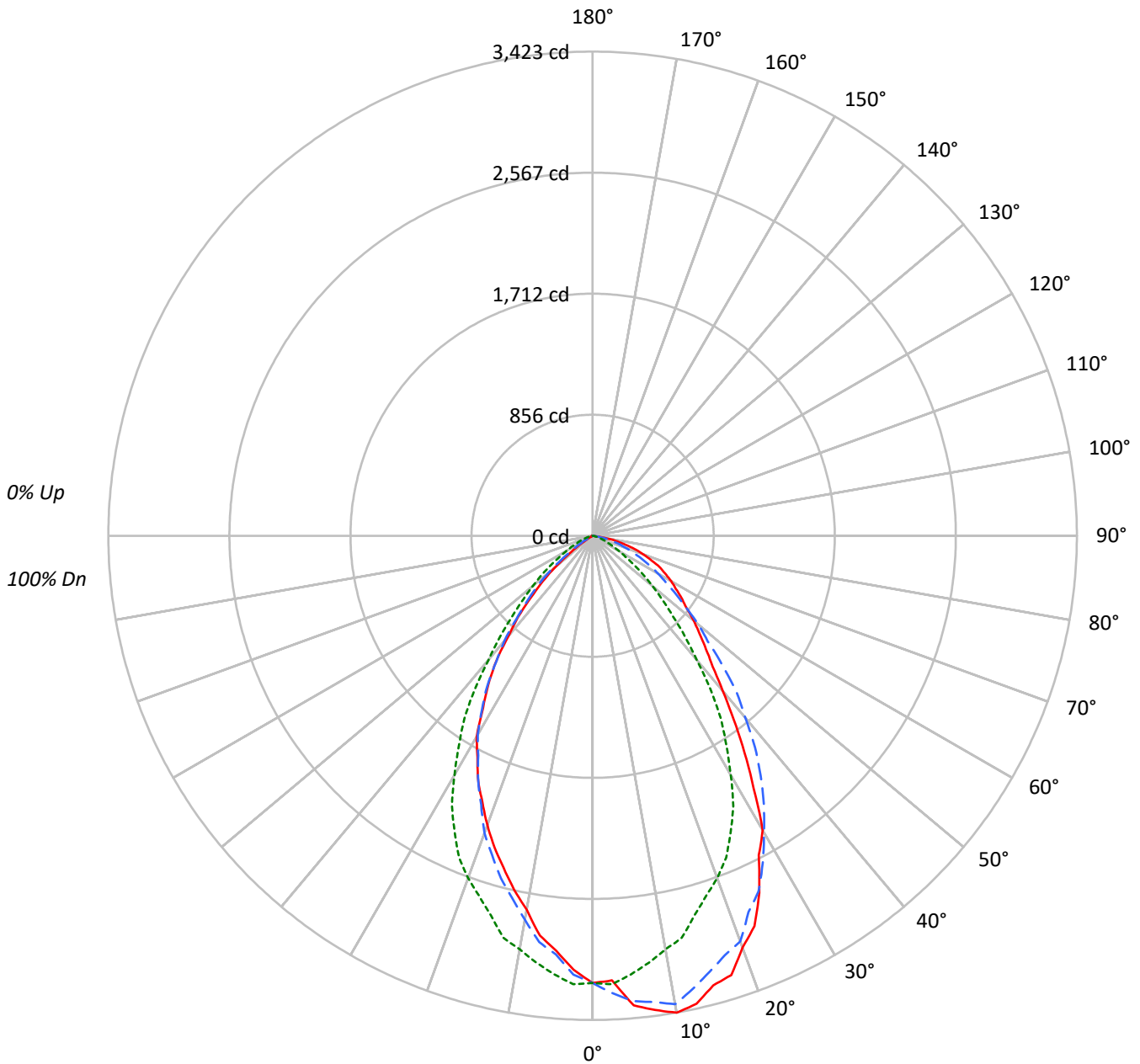
Summary

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



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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	



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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



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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#

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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)