

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: P880594

Luminaire Tested: **LD4C60D010 EU4609035 4LBDWNH**

Issue Date: 10/4/2024

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: P880594
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C60D010 EU4609035 4LBDWNH
Description: 4 INCH 6000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

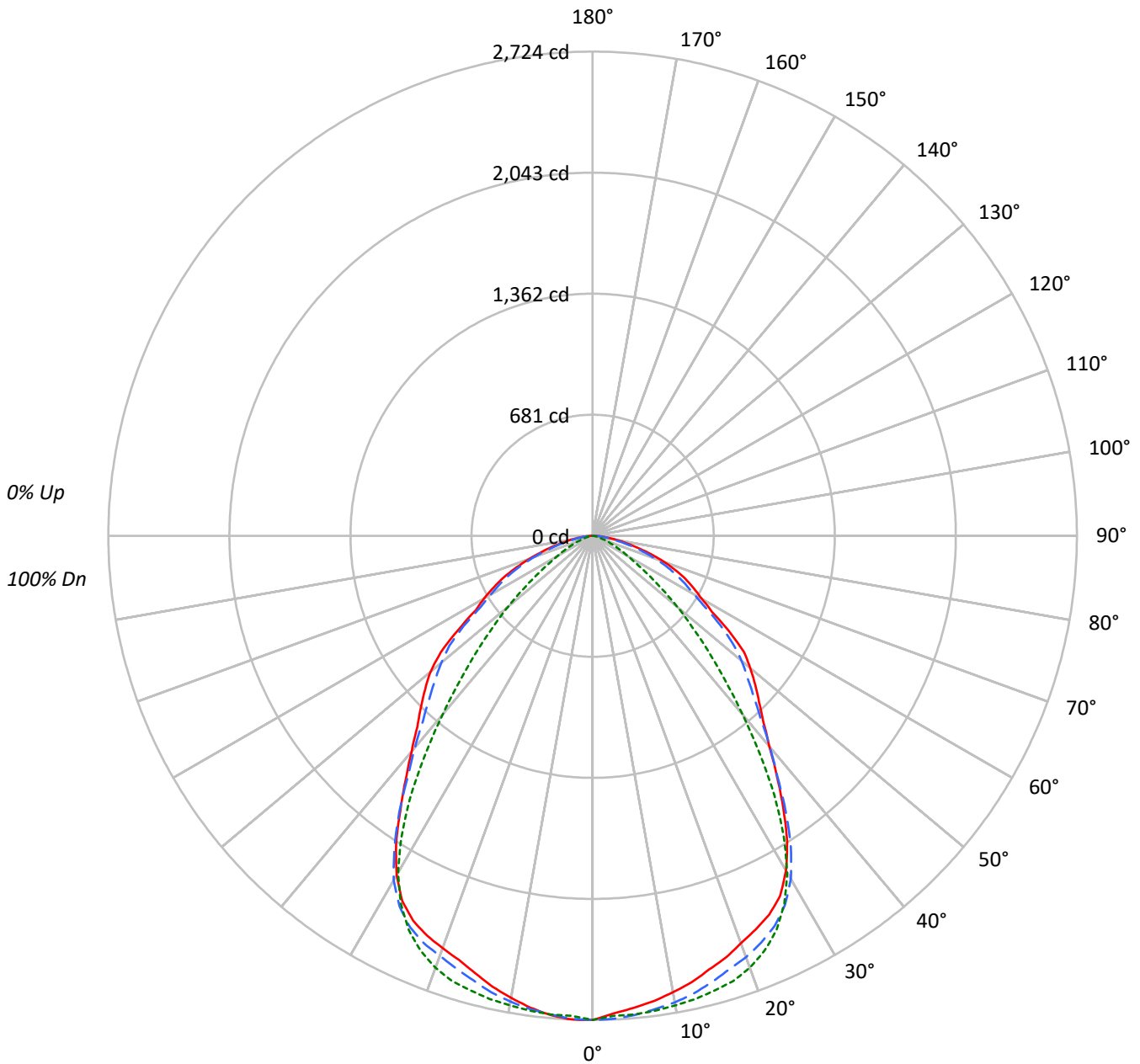
Lumens per Lamp: N/A
Luminaire Lumens: 5544.0 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 72
Input Voltage (V): NR
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
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88			88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			76
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66			66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58			58
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51			51
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46			46
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41			41
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37			37
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34			34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	334665	334665	334665
5°	328729	333366	333872
10°	325195	334613	329374
15°	321415	336856	324073
20°	318870	338075	322714
25°	318701	331768	323797
30°	308557	310345	312728
35°	280321	267138	282840
40°	248002	210346	254048
45°	230085	160172	237382
50°	221076	118575	227478
55°	200181	81713	197460
60°	174034	55603	173002
65°	168139	40232	159592
70°	152013	27120	135454
75°	125265	17848	107418
80°	100817	11886	80017
85°	82884	5779	53000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.2	4.6
10°-20°	735.2	13.3
20°-30°	1110.8	20.0
30°-40°	1162.5	21.0
40°-50°	941.5	17.0
50°-60°	684.8	12.4
60°-70°	422.4	7.6
70°-80°	190.8	3.4
80°-90°	38.8	0.7
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°	2103.2	37.9
0°-40°	3265.7	58.9
0°-60°	4892.0	88.2
0°-90°	5544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5544.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2724	2724	2724	2724	2724	
5°	2666	2707	2703	2703	2707	253
15°	2527	2598	2648	2590	2548	714
25°	2351	2422	2448	2431	2389	1077
35°	1869	1894	1781	1894	1886	1165
45°	1324	1282	922	1299	1366	1029
55°	935	876	382	884	922	834
65°	578	520	138	511	549	566
75°	264	226	38	197	226	286
85°	59	46	4	34	38	67
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°	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1
2.5°	2690.6	2690.6	2715.8	2744.9	2719.9	2694.7	2711.4	2703.2	2732.6	2732.6	2719.9
5°	2665.6	2673.8	2694.7	2719.9	2699.1	2673.8	2694.7	2686.4	2715.8	2715.8	2707.3
7.5°	2640.3	2644.4	2669.7	2699.1	2677.9	2652.9	2669.7	2665.6	2690.6	2694.7	2686.4
10°	2606.8	2610.9	2636.2	2665.6	2644.4	2623.5	2640.3	2636.2	2669.7	2669.7	2665.6
12.5°	2573.3	2577.4	2602.7	2627.7	2606.8	2585.9	2602.7	2602.7	2636.2	2640.3	2636.2
15°	2527.1	2535.4	2556.5	2581.5	2569.2	2543.9	2560.7	2560.7	2590.0	2598.3	2598.3
17.5°	2489.5	2493.6	2514.5	2539.8	2523.0	2501.9	2518.6	2518.6	2548.0	2556.5	2556.5
20°	2439.0	2447.5	2468.4	2493.6	2481.0	2464.3	2476.9	2476.9	2510.4	2518.6	2523.0
22.5°	2397.2	2405.5	2422.2	2456.0	2434.9	2422.2	2439.0	2434.9	2472.8	2476.9	2476.9
25°	2351.1	2359.6	2380.5	2401.4	2388.7	2376.4	2388.7	2388.7	2418.1	2422.2	2422.2
27.5°	2284.1	2288.2	2309.1	2330.2	2317.6	2300.8	2317.6	2313.5	2342.6	2347.0	2342.6
30°	2175.1	2183.6	2191.8	2221.2	2208.6	2195.9	2212.7	2204.5	2233.8	2233.8	2229.5
32.5°	2036.7	2036.7	2053.7	2074.6	2057.8	2049.3	2061.9	2066.0	2087.2	2087.2	2074.6
35°	1869.1	1877.6	1890.0	1902.6	1890.0	1881.8	1894.4	1890.0	1915.3	1906.8	1894.4
37.5°	1701.6	1705.7	1718.4	1735.1	1718.4	1705.7	1709.9	1705.7	1726.6	1726.6	1705.7
40°	1546.4	1554.9	1563.2	1579.9	1563.2	1554.9	1559.1	1546.4	1571.7	1563.2	1550.6
42.5°	1420.7	1424.8	1437.4	1445.9	1429.2	1424.8	1429.2	1420.7	1433.3	1424.8	1399.8
45°	1324.3	1324.3	1328.7	1341.0	1324.3	1320.1	1320.1	1311.6	1324.3	1307.5	1282.5
47.5°	1240.5	1244.6	1249.0	1257.3	1244.6	1232.3	1236.4	1219.6	1227.9	1215.2	1181.7
50°	1156.7	1165.0	1169.4	1177.6	1165.0	1156.7	1160.9	1144.1	1144.1	1123.2	1093.9
52.5°	1073.0	1077.1	1073.0	1081.2	1073.0	1060.3	1064.5	1047.7	1047.7	1022.7	993.3
55°	934.6	938.7	943.1	951.3	943.1	930.4	938.7	926.3	926.3	909.3	875.8
57.5°	796.2	800.5	804.7	808.8	808.8	800.5	804.7	796.2	792.0	779.4	754.4
60°	708.3	708.3	708.3	712.4	708.3	704.1	704.1	695.6	695.6	678.9	653.9
62.5°	641.3	645.4	645.4	649.5	645.4	641.3	637.1	628.6	624.5	607.8	586.6
65°	578.4	578.4	574.2	582.5	578.4	574.2	574.2	565.7	557.5	540.7	519.6
67.5°	502.9	507.0	502.9	507.0	507.0	502.9	498.7	490.2	486.1	473.5	448.5
70°	423.2	423.2	423.2	427.6	423.2	423.2	427.6	415.0	410.8	393.8	373.0
72.5°	343.6	347.9	347.9	343.6	347.9	339.4	339.4	339.4	335.3	318.6	297.4
75°	263.9	268.3	268.3	272.4	268.3	263.9	263.9	259.8	255.7	243.0	226.3
77.5°	196.9	196.9	201.0	201.0	201.0	196.9	196.9	188.7	188.7	180.2	163.4
80°	142.5	142.5	138.4	142.5	142.5	138.4	138.4	134.0	134.0	125.8	113.1
82.5°	92.3	96.4	96.4	96.4	96.4	92.3	92.3	92.3	87.9	83.8	75.5
85°	58.8	58.8	58.8	58.8	62.9	58.8	62.9	58.8	58.8	50.3	46.1
87.5°	25.3	25.3	25.3	29.4	29.4	25.3	25.3	25.3	25.3	25.3	20.9
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°	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1
2.5°	2719.9	2724.1	2711.4	2728.2	2715.8	2719.9	2724.1	2719.9	2703.2	2703.2	2749.3
5°	2703.2	2711.4	2699.1	2719.9	2711.4	2711.4	2719.9	2715.8	2699.1	2703.2	2744.9
7.5°	2686.4	2699.1	2690.6	2711.4	2699.1	2699.1	2707.3	2707.3	2690.6	2694.7	2732.6
10°	2661.2	2677.9	2673.8	2694.7	2682.3	2682.3	2694.7	2694.7	2677.9	2682.3	2719.9
12.5°	2640.3	2657.0	2652.9	2673.8	2665.6	2669.7	2673.8	2682.3	2661.2	2669.7	2703.2
15°	2606.8	2623.5	2623.5	2644.4	2636.2	2644.4	2652.9	2665.6	2648.5	2648.5	2682.3
17.5°	2569.2	2590.0	2590.0	2606.8	2606.8	2610.9	2627.7	2640.3	2623.5	2627.7	2657.0
20°	2527.1	2552.4	2552.4	2573.3	2569.2	2577.4	2590.0	2602.7	2585.9	2585.9	2619.4
22.5°	2485.1	2506.3	2510.4	2523.0	2523.0	2527.1	2539.8	2548.0	2527.1	2527.1	2560.7
25°	2426.6	2447.5	2451.6	2460.1	2451.6	2451.6	2460.1	2468.4	2447.5	2447.5	2476.9
27.5°	2347.0	2367.9	2367.9	2363.7	2355.2	2359.6	2355.2	2359.6	2338.5	2334.4	2363.7
30°	2229.5	2242.1	2242.1	2238.0	2225.3	2225.3	2212.7	2217.1	2187.7	2187.7	2212.7
32.5°	2070.4	2082.8	2074.6	2066.0	2049.3	2041.0	2032.5	2028.4	1999.0	1999.0	2028.4
35°	1881.8	1890.0	1877.6	1860.9	1839.8	1827.1	1814.8	1798.0	1776.9	1781.2	1798.0
37.5°	1689.0	1689.0	1672.2	1638.7	1622.0	1600.8	1579.9	1579.9	1546.4	1542.3	1554.9
40°	1525.6	1508.8	1479.4	1433.3	1403.9	1383.0	1353.7	1336.9	1311.6	1311.6	1332.8
42.5°	1378.9	1345.4	1307.5	1244.6	1215.2	1190.2	1152.6	1135.9	1106.5	1102.1	1114.7
45°	1249.0	1215.2	1160.9	1093.9	1056.2	1026.8	972.2	951.3	926.3	921.9	930.4
47.5°	1144.1	1106.5	1039.5	951.3	913.7	875.8	821.4	792.0	771.2	758.5	771.2
50°	1051.8	1001.6	930.4	838.2	787.9	754.4	687.4	658.0	628.6	620.4	624.5
52.5°	951.3	901.1	825.5	729.1	683.0	632.8	569.9	528.1	502.9	490.2	502.9
55°	842.3	792.0	716.8	620.4	569.9	524.0	456.7	423.2	393.8	381.5	393.8
57.5°	725.0	678.9	611.9	515.5	469.3	427.6	364.7	331.2	301.8	293.3	301.8
60°	624.5	586.6	519.6	427.6	389.7	343.6	289.2	255.7	230.4	226.3	230.4
62.5°	557.5	515.5	452.6	364.7	326.8	289.2	238.9	205.4	184.3	180.2	184.3
65°	490.2	444.3	385.6	310.1	272.4	243.0	192.8	163.4	142.5	138.4	142.5
67.5°	415.0	373.0	322.7	255.7	226.3	196.9	155.2	125.8	109.0	104.9	109.0
70°	343.6	305.9	255.7	205.4	176.0	155.2	117.3	96.4	79.6	75.5	79.6
72.5°	272.4	238.9	196.9	155.2	138.4	117.3	92.3	71.1	58.8	54.4	58.8
75°	209.5	184.3	150.8	113.1	100.5	87.9	62.9	50.3	42.0	37.6	42.0
77.5°	146.7	129.9	104.9	83.8	71.1	62.9	46.1	33.5	29.4	25.3	29.4
80°	100.5	87.9	71.1	54.4	46.1	37.6	29.4	20.9	16.8	16.8	16.8
82.5°	67.0	54.4	42.0	33.5	29.4	25.3	16.8	12.6	12.6	8.5	8.5
85°	37.6	33.5	25.3	20.9	16.8	12.6	8.5	8.5	4.1	4.1	4.1
87.5°	16.8	12.6	8.5	8.5	4.1	4.1	4.1	4.1	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°	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1
2.5°	2736.7	2724.1	2740.8	2724.1	2715.8	2724.1	2715.8	2740.8	2719.9	2703.2	2719.9
5°	2732.6	2715.8	2732.6	2719.9	2707.3	2711.4	2703.2	2728.2	2703.2	2690.6	2699.1
7.5°	2724.1	2711.4	2719.9	2707.3	2694.7	2699.1	2690.6	2711.4	2686.4	2673.8	2682.3
10°	2711.4	2699.1	2703.2	2694.7	2682.3	2682.3	2673.8	2690.6	2661.2	2644.4	2652.9
12.5°	2694.7	2677.9	2686.4	2673.8	2657.0	2657.0	2648.5	2661.2	2631.8	2615.0	2619.4
15°	2673.8	2657.0	2657.0	2644.4	2627.7	2627.7	2610.9	2623.5	2590.0	2573.3	2573.3
17.5°	2648.5	2627.7	2627.7	2615.0	2594.2	2590.0	2577.4	2590.0	2552.4	2535.4	2535.4
20°	2610.9	2594.2	2590.0	2581.5	2560.7	2556.5	2539.8	2543.9	2514.5	2501.9	2497.8
22.5°	2560.7	2543.9	2548.0	2535.4	2518.6	2514.5	2497.8	2510.4	2481.0	2468.4	2472.8
25°	2472.8	2464.3	2472.8	2468.4	2456.0	2456.0	2447.5	2456.0	2430.8	2422.2	2426.6
27.5°	2372.0	2367.9	2372.0	2372.0	2363.7	2363.7	2363.7	2376.4	2351.1	2347.0	2347.0
30°	2225.3	2225.3	2229.5	2233.8	2233.8	2242.1	2238.0	2254.7	2238.0	2229.5	2238.0
32.5°	2032.5	2049.3	2061.9	2061.9	2061.9	2070.4	2078.7	2091.3	2074.6	2078.7	2078.7
35°	1814.8	1827.1	1835.6	1856.5	1844.1	1873.3	1881.8	1898.5	1894.4	1902.6	1898.5
37.5°	1571.7	1588.5	1605.2	1634.6	1630.2	1663.7	1680.5	1714.0	1705.7	1722.5	1730.7
40°	1345.4	1370.4	1395.7	1416.5	1433.3	1466.8	1500.3	1542.3	1554.9	1567.3	1571.7
42.5°	1127.4	1152.6	1194.4	1223.8	1249.0	1303.4	1349.5	1399.8	1412.4	1437.4	1445.9
45°	951.3	972.2	1022.7	1060.3	1081.2	1160.9	1215.2	1278.1	1299.3	1328.7	1341.0
47.5°	787.9	825.5	875.8	921.9	951.3	1035.1	1106.5	1173.5	1202.9	1236.4	1253.1
50°	645.4	687.4	754.4	796.2	838.2	930.4	1010.1	1081.2	1110.6	1148.2	1165.0
52.5°	528.1	574.2	637.1	683.0	729.1	825.5	909.3	976.6	1014.2	1039.5	1064.5
55°	415.0	465.2	528.1	578.4	616.0	720.9	792.0	859.0	884.3	905.2	917.8
57.5°	322.7	360.3	423.2	465.2	511.4	603.4	674.8	725.0	745.9	771.2	779.4
60°	251.6	289.2	347.9	389.7	431.7	519.6	591.0	641.3	662.1	683.0	695.6
62.5°	201.0	238.9	293.3	331.2	368.8	448.5	511.4	561.6	586.6	607.8	620.4
65°	159.3	192.8	238.9	276.6	305.9	377.1	440.0	486.1	511.4	532.2	544.9
67.5°	125.8	155.2	196.9	222.2	251.6	310.1	364.7	406.5	427.6	452.6	465.2
70°	96.4	117.3	155.2	176.0	196.9	247.2	289.2	331.2	352.1	368.8	377.1
72.5°	71.1	87.9	117.3	134.0	146.7	188.7	222.2	251.6	268.3	285.1	293.3
75°	50.3	62.9	83.8	96.4	104.9	134.0	163.4	184.3	196.9	209.5	222.2
77.5°	33.5	42.0	54.4	62.9	71.1	92.3	109.0	125.8	138.4	150.8	155.2
80°	20.9	29.4	37.6	42.0	46.1	58.8	75.5	83.8	92.3	100.5	104.9
82.5°	12.6	16.8	20.9	25.3	29.4	37.6	46.1	54.4	58.8	67.0	71.1
85°	4.1	8.5	8.5	12.6	12.6	20.9	25.3	29.4	33.5	37.6	42.0
87.5°	0.0	0.0	4.1	4.1	4.1	4.1	8.5	8.5	8.5	8.5	8.5
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: P880594

CATALOG NUMBER: LD4C60D010 EU4609035 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1
2.5°	2736.7	2724.1	2715.8	2711.4	2740.8	2703.2	2719.9	2724.1
5°	2719.9	2707.3	2699.1	2694.7	2719.9	2686.4	2699.1	2707.3
7.5°	2694.7	2686.4	2673.8	2669.7	2694.7	2657.0	2673.8	2677.9
10°	2665.6	2652.9	2644.4	2640.3	2661.2	2623.5	2640.3	2640.3
12.5°	2627.7	2619.4	2602.7	2602.7	2619.4	2585.9	2598.3	2598.3
15°	2577.4	2569.2	2552.4	2552.4	2569.2	2535.4	2548.0	2548.0
17.5°	2535.4	2527.1	2514.5	2510.4	2527.1	2493.6	2506.3	2501.9
20°	2501.9	2493.6	2476.9	2476.9	2489.5	2456.0	2468.4	2468.4
22.5°	2472.8	2468.4	2451.6	2451.6	2468.4	2434.9	2443.4	2434.9
25°	2426.6	2422.2	2405.5	2409.9	2418.1	2384.6	2397.2	2388.7
27.5°	2351.1	2351.1	2334.4	2330.2	2342.6	2313.5	2321.7	2317.6
30°	2233.8	2238.0	2217.1	2217.1	2221.2	2195.9	2208.6	2204.5
32.5°	2074.6	2078.7	2061.9	2057.8	2070.4	2049.3	2057.8	2057.8
35°	1898.5	1902.6	1890.0	1890.0	1902.6	1890.0	1890.0	1885.9
37.5°	1722.5	1730.7	1722.5	1726.6	1735.1	1722.5	1730.7	1726.6
40°	1579.9	1588.5	1575.8	1584.1	1592.6	1579.9	1592.6	1584.1
42.5°	1450.0	1462.7	1454.2	1462.7	1470.9	1462.7	1470.9	1458.6
45°	1353.7	1362.2	1357.8	1362.2	1370.4	1366.3	1370.4	1366.3
47.5°	1261.4	1278.1	1269.9	1278.1	1290.8	1282.5	1290.8	1278.1
50°	1177.6	1190.2	1186.1	1194.4	1198.5	1194.4	1202.9	1190.2
52.5°	1068.6	1081.2	1077.1	1077.1	1085.3	1077.1	1085.3	1077.1
55°	926.3	930.4	930.4	934.6	930.4	926.3	930.4	921.9
57.5°	787.9	796.2	783.8	796.2	792.0	787.9	787.9	779.4
60°	699.8	712.4	704.1	712.4	708.3	708.3	708.3	704.1
62.5°	628.6	637.1	628.6	632.8	632.8	632.8	628.6	624.5
65°	549.0	561.6	553.1	557.5	553.1	549.0	553.1	549.0
67.5°	469.3	473.5	473.5	469.3	469.3	469.3	469.3	461.1
70°	381.5	385.6	381.5	389.7	385.6	381.5	385.6	377.1
72.5°	297.4	301.8	297.4	301.8	297.4	297.4	297.4	297.4
75°	222.2	226.3	226.3	226.3	226.3	226.3	218.0	226.3
77.5°	159.3	159.3	159.3	163.4	159.3	159.3	159.3	159.3
80°	109.0	109.0	109.0	113.1	109.0	113.1	109.0	113.1
82.5°	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1
85°	37.6	42.0	42.0	37.6	37.6	37.6	37.6	37.6
87.5°	8.5	4.1	4.1	4.1	4.1	4.1	4.1	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)