

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: P879446

Luminaire Tested: **LD4C50D010 EU4509050 4LBDWWH**

Issue Date: 10/1/2024

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: P879446
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C50D010 EU4509050 4LBLDWWH
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBLDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

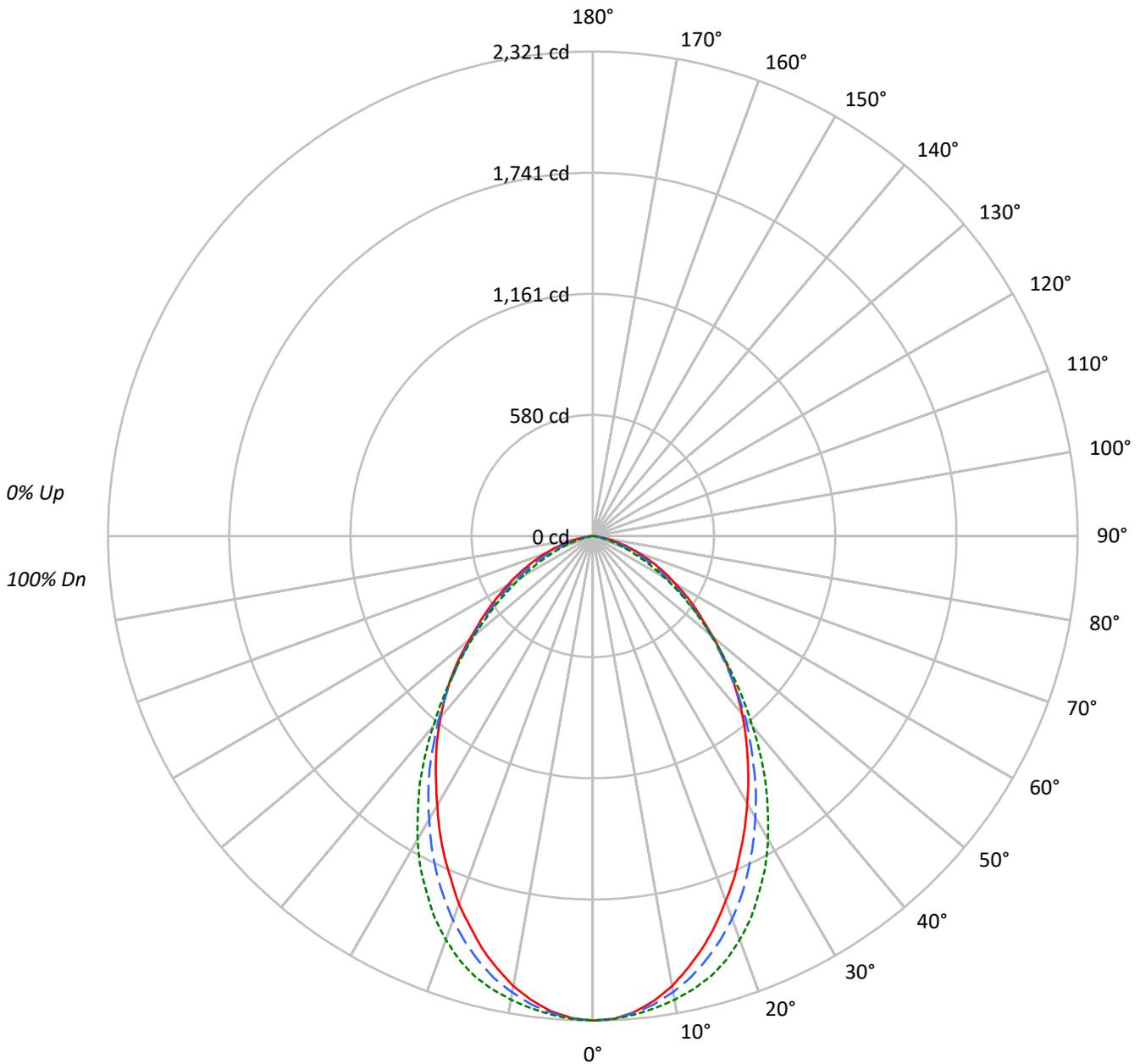
Lumens per Lamp: N/A
Luminaire Lumens: 4151.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 58.4
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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77			77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67			67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59			59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47			47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	285118	285118	285118
5°	282212	283778	281891
10°	273025	281321	273137
15°	259398	277713	260263
20°	243133	268980	245134
25°	226443	255207	228517
30°	209767	238054	211341
35°	193515	216401	196454
40°	178512	190668	181784
45°	161701	165245	166583
50°	143345	141548	146938
55°	127785	119196	130698
60°	111821	96759	116023
65°	97848	74825	101337
70°	82364	54814	86639
75°	64318	35600	67973
80°	42237	18678	46411
85°	14378	8458	19170



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.6	5.2
10°-20°	591.9	14.3
20°-30°	814.1	19.6
30°-40°	849.3	20.5
40°-50°	726.6	17.5
50°-60°	519.7	12.5
60°-70°	301.6	7.3
70°-80°	116.3	2.8
80°-90°	14.8	0.4
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°	1622.7	39.1
0°-40°	2472.0	59.6
0°-60°	3718.4	89.6
0°-90°	4151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4151.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2321	2321	2321	2321	2321	
5°	2288	2293	2301	2293	2286	215
15°	2040	2101	2184	2108	2046	572
25°	1670	1762	1883	1774	1686	768
35°	1290	1342	1443	1363	1310	808
45°	931	923	951	946	959	717
55°	597	567	556	582	610	534
65°	337	297	257	308	349	336
75°	136	101	75	107	143	146
85°	10	8	6	8	14	20
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°	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8
2.5°	2314.8	2313.1	2313.9	2313.9	2313.9	2313.1	2314.8	2314.8	2313.9	2313.9	2313.9
5°	2288.4	2286.7	2287.5	2288.4	2288.4	2288.4	2289.2	2290.1	2290.9	2291.8	2292.6
7.5°	2245.8	2243.2	2245.8	2249.2	2249.2	2250.0	2250.9	2251.7	2254.3	2258.5	2261.1
10°	2188.6	2188.6	2189.5	2192.1	2196.3	2195.5	2198.0	2202.3	2207.4	2213.4	2217.6
12.5°	2116.2	2117.9	2120.5	2123.0	2127.3	2129.8	2134.1	2139.2	2147.7	2156.3	2165.6
15°	2039.5	2040.4	2041.2	2047.2	2051.4	2057.4	2060.8	2071.0	2078.7	2090.6	2100.9
17.5°	1953.4	1952.6	1955.1	1960.2	1970.5	1973.0	1977.3	1988.4	1999.4	2015.6	2029.3
20°	1859.7	1864.8	1868.2	1875.0	1881.0	1887.8	1891.2	1904.8	1917.6	1933.0	1950.9
22.5°	1771.0	1766.8	1772.7	1780.4	1785.5	1790.6	1796.6	1811.1	1824.7	1843.5	1861.4
25°	1670.5	1673.0	1677.3	1683.2	1690.1	1696.9	1703.7	1719.0	1726.7	1746.3	1762.5
27.5°	1575.0	1579.3	1581.0	1588.6	1594.6	1599.7	1603.1	1621.0	1627.8	1644.9	1661.1
30°	1478.7	1483.0	1483.0	1491.5	1495.7	1500.9	1509.4	1521.3	1531.5	1543.5	1555.4
32.5°	1385.8	1385.8	1389.2	1396.9	1401.1	1407.1	1409.7	1418.2	1428.4	1440.3	1453.1
35°	1290.3	1292.9	1296.3	1296.3	1304.0	1307.4	1310.8	1319.3	1326.1	1331.3	1341.5
37.5°	1202.6	1202.6	1200.0	1204.3	1209.4	1208.5	1213.6	1217.9	1222.2	1228.1	1236.7
40°	1113.1	1113.1	1109.7	1112.2	1115.6	1114.8	1113.1	1117.3	1120.7	1125.0	1133.5
42.5°	1021.9	1020.2	1019.3	1019.3	1021.0	1019.3	1021.0	1021.9	1021.9	1021.9	1027.0
45°	930.7	934.9	929.8	928.1	925.6	923.0	922.2	923.0	926.4	922.2	923.0
47.5°	841.2	842.9	839.5	836.9	834.4	832.7	834.4	829.3	831.0	831.8	828.4
50°	750.0	746.6	746.6	744.0	744.9	744.0	742.3	740.6	740.6	736.4	733.8
52.5°	665.6	667.3	669.0	663.1	663.9	659.7	660.5	656.3	656.3	651.1	652.8
55°	596.6	594.0	594.0	591.5	590.6	586.4	585.5	583.0	577.0	573.6	566.8
57.5°	525.0	524.2	520.7	521.6	516.5	515.6	513.9	509.7	505.4	501.1	493.5
60°	455.1	456.0	456.0	454.3	451.7	447.4	448.3	442.3	436.4	428.7	421.9
62.5°	397.2	394.6	393.8	392.0	386.9	386.9	382.7	378.4	372.4	364.8	358.8
65°	336.6	337.5	334.9	332.4	327.3	326.4	323.0	319.6	313.6	306.0	297.4
67.5°	282.1	280.4	279.5	277.0	271.9	271.0	268.5	260.8	255.7	248.0	241.2
70°	229.3	227.6	228.4	224.1	219.0	216.5	215.6	209.7	202.0	196.0	189.2
72.5°	179.8	179.8	179.0	174.7	172.2	170.5	167.0	160.2	156.0	149.1	144.0
75°	135.5	134.7	133.0	130.4	127.0	125.3	123.6	119.3	113.4	105.7	101.4
77.5°	93.8	94.6	92.9	92.0	87.8	85.2	84.4	81.8	76.7	71.6	67.3
80°	59.7	58.8	58.0	56.3	55.4	54.5	52.0	50.3	45.2	42.6	40.1
82.5°	32.4	30.7	30.7	29.8	28.1	27.3	26.4	24.7	23.9	22.2	20.5
85°	10.2	11.1	10.2	10.2	10.2	9.4	9.4	9.4	8.5	8.5	7.7
87.5°	0.9	1.7	0.9	0.9	1.7	0.9	0.9	1.7	0.9	0.9	1.7
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°	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8
2.5°	2313.9	2314.8	2314.8	2315.6	2315.6	2315.6	2315.6	2315.6	2315.6	2315.6	2315.6
5°	2295.2	2295.2	2296.9	2298.6	2298.6	2298.6	2299.4	2301.1	2301.1	2301.1	2300.3
7.5°	2264.5	2267.9	2271.3	2274.7	2275.6	2276.4	2278.1	2281.5	2281.5	2281.5	2281.5
10°	2224.4	2232.1	2236.4	2241.5	2244.0	2245.8	2250.9	2251.7	2254.3	2255.1	2254.3
12.5°	2173.3	2183.5	2192.9	2201.4	2204.8	2208.3	2213.4	2218.5	2221.0	2223.6	2222.7
15°	2116.2	2127.3	2141.8	2151.1	2158.0	2163.1	2170.7	2177.6	2181.8	2183.5	2183.5
17.5°	2047.2	2060.8	2076.1	2091.5	2095.7	2104.3	2112.8	2122.2	2127.3	2128.1	2127.3
20°	1970.5	1985.8	1998.6	2013.9	2023.3	2027.6	2039.5	2051.4	2056.5	2057.4	2056.5
22.5°	1879.3	1893.8	1910.8	1927.0	1934.7	1942.3	1955.1	1967.1	1973.9	1979.0	1973.9
25°	1777.9	1798.3	1814.5	1828.1	1839.2	1846.9	1863.1	1872.5	1883.5	1882.7	1883.5
27.5°	1678.1	1695.2	1713.1	1729.3	1736.1	1744.6	1757.4	1772.7	1782.1	1788.1	1787.2
30°	1575.9	1589.5	1604.8	1619.3	1630.4	1637.2	1656.0	1662.8	1674.7	1678.1	1675.6
32.5°	1467.6	1477.0	1492.3	1511.9	1516.2	1523.0	1535.0	1552.0	1556.3	1558.0	1558.8
35°	1352.6	1370.5	1383.2	1395.2	1398.6	1404.6	1418.2	1431.0	1435.2	1442.9	1439.5
37.5°	1246.0	1256.3	1262.2	1274.2	1284.4	1289.5	1296.3	1304.8	1313.4	1316.8	1315.9
40°	1139.5	1144.6	1149.7	1162.5	1163.4	1163.4	1173.6	1185.5	1185.5	1188.9	1188.9
42.5°	1030.4	1031.3	1038.1	1044.9	1046.6	1048.3	1058.5	1060.2	1065.3	1067.9	1071.3
45°	924.7	929.8	934.1	934.9	939.2	940.1	942.6	945.2	952.8	951.1	952.8
47.5°	828.4	831.0	833.5	833.5	836.1	835.2	839.5	836.9	842.0	843.8	846.3
50°	733.8	738.1	735.5	737.2	736.4	738.9	737.2	737.2	737.2	740.6	743.2
52.5°	646.9	647.7	645.2	646.0	646.0	644.3	646.0	645.2	644.3	644.3	645.2
55°	566.8	563.4	561.7	558.2	554.0	559.1	556.5	554.8	558.2	556.5	558.2
57.5°	489.2	484.9	481.5	479.8	473.9	477.3	473.9	472.2	472.2	472.2	476.4
60°	415.9	411.6	407.4	402.3	401.4	399.7	398.0	393.8	394.6	393.8	395.5
62.5°	352.0	343.5	337.5	333.2	332.4	329.8	327.3	323.0	323.9	323.9	324.7
65°	293.2	283.8	275.3	269.3	269.3	265.1	260.8	260.8	255.7	257.4	258.2
67.5°	234.4	226.7	218.2	213.9	211.4	208.0	205.4	203.7	201.1	201.1	202.8
70°	181.5	173.9	169.6	162.8	161.9	159.4	156.0	153.4	152.6	152.6	151.7
72.5°	137.2	130.4	125.3	121.0	118.5	115.9	112.5	111.6	109.9	109.9	111.6
75°	95.5	91.2	86.9	82.7	81.0	80.1	77.6	75.9	75.9	75.0	75.9
77.5°	63.9	59.7	55.4	53.7	52.0	50.3	49.4	48.6	46.0	46.0	46.0
80°	36.6	34.9	33.2	30.7	30.7	29.8	28.1	27.3	26.4	26.4	26.4
82.5°	18.8	17.9	16.2	15.3	15.3	15.3	14.5	14.5	13.6	13.6	13.6
85°	7.7	6.8	6.0	6.0	6.0	6.0	6.0	6.0	6.8	6.0	6.8
87.5°	0.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8
2.5°	2315.6	2314.8	2314.8	2314.8	2314.8	2314.8	2313.9	2313.9	2313.1	2313.1	2313.1
5°	2301.1	2300.3	2299.4	2298.6	2297.7	2296.9	2296.0	2295.2	2292.6	2291.8	2290.1
7.5°	2280.7	2279.0	2276.4	2275.6	2273.9	2271.3	2267.9	2266.2	2262.8	2258.5	2256.8
10°	2253.4	2250.0	2247.5	2243.2	2242.3	2238.9	2230.4	2226.1	2220.2	2215.1	2209.1
12.5°	2220.2	2216.8	2210.8	2204.8	2201.4	2193.8	2186.1	2179.3	2171.6	2160.5	2152.0
15°	2179.3	2174.2	2162.2	2160.5	2155.4	2143.5	2133.2	2120.5	2108.5	2096.6	2086.4
17.5°	2124.7	2113.6	2107.7	2100.0	2094.0	2078.7	2067.6	2053.1	2036.9	2023.3	2008.8
20°	2053.1	2041.2	2031.0	2026.7	2019.0	2005.4	1991.8	1973.9	1957.7	1940.6	1927.9
22.5°	1967.9	1960.2	1944.9	1939.8	1930.4	1916.8	1900.6	1883.5	1868.2	1849.4	1832.4
25°	1876.7	1865.6	1853.7	1843.5	1836.7	1823.9	1803.4	1790.6	1773.6	1753.1	1740.3
27.5°	1779.6	1766.8	1749.7	1742.9	1736.9	1719.9	1702.8	1686.7	1673.0	1655.1	1644.0
30°	1667.1	1657.7	1646.6	1638.1	1629.6	1615.9	1600.6	1581.8	1567.3	1558.8	1543.5
32.5°	1552.8	1545.2	1530.7	1526.4	1517.1	1506.0	1494.9	1481.3	1465.9	1453.1	1441.2
35°	1431.0	1423.3	1413.1	1405.4	1402.0	1394.3	1382.4	1370.5	1362.8	1348.3	1342.3
37.5°	1309.1	1306.5	1296.3	1288.6	1286.1	1276.7	1270.7	1262.2	1251.1	1247.7	1240.9
40°	1183.8	1182.1	1176.1	1175.3	1170.2	1167.6	1159.1	1152.3	1147.2	1144.6	1140.3
42.5°	1068.8	1067.1	1061.9	1062.8	1057.7	1056.0	1055.1	1049.2	1044.9	1039.8	1040.6
45°	955.4	953.7	950.3	948.6	951.1	950.3	948.6	946.0	946.0	946.9	944.3
47.5°	846.3	848.0	844.6	846.3	846.3	843.8	843.8	847.2	848.0	849.7	851.4
50°	743.2	748.3	746.6	749.2	750.0	750.9	748.3	752.6	751.7	759.4	757.7
52.5°	649.4	650.3	653.7	654.5	655.4	656.3	660.5	663.9	664.8	668.2	674.2
55°	559.1	559.9	566.8	566.8	571.0	571.9	577.8	579.5	582.1	591.5	593.2
57.5°	473.9	479.0	482.4	484.1	486.7	490.9	494.3	502.0	506.3	512.2	518.2
60°	397.2	403.1	407.4	409.1	412.5	417.6	421.9	430.4	438.1	444.9	449.2
62.5°	326.4	331.5	334.9	340.9	340.9	345.2	355.4	360.5	369.0	375.0	382.7
65°	263.4	266.8	272.7	272.7	276.1	283.0	291.5	299.1	307.7	316.2	323.9
67.5°	206.3	208.8	212.2	215.6	217.3	225.9	232.7	243.8	251.4	257.4	266.8
70°	156.0	157.7	161.9	165.3	167.9	173.9	181.5	189.2	196.9	203.7	213.1
72.5°	111.6	115.1	119.3	121.9	123.6	127.8	135.5	143.2	150.0	156.8	161.9
75°	76.7	79.3	81.0	83.5	86.1	89.5	94.6	99.7	107.4	114.2	120.2
77.5°	47.7	50.3	52.8	53.7	54.5	58.0	61.4	66.5	71.6	76.7	81.0
80°	28.1	29.0	29.8	30.7	32.4	34.9	36.6	40.1	43.5	46.9	51.1
82.5°	14.5	15.3	16.2	16.2	16.2	17.0	19.6	21.3	22.2	23.9	26.4
85°	6.0	6.0	6.0	6.8	6.8	7.7	7.7	8.5	8.5	9.4	10.2
87.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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: P879446

CATALOG NUMBER: LD4C50D010 EU4509050 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8	2320.8
2.5°	2312.2	2312.2	2312.2	2311.4	2312.2	2312.2	2312.2	2311.4
5°	2290.1	2288.4	2288.4	2287.5	2286.7	2286.7	2287.5	2285.8
7.5°	2253.4	2250.9	2249.2	2249.2	2248.3	2247.5	2247.5	2243.2
10°	2205.7	2200.6	2200.6	2198.9	2192.1	2191.2	2189.5	2189.5
12.5°	2146.0	2140.1	2136.7	2132.4	2128.1	2124.7	2123.9	2120.5
15°	2075.3	2067.6	2061.7	2060.0	2053.1	2048.0	2048.0	2046.3
17.5°	1998.6	1986.7	1982.4	1978.1	1968.8	1967.9	1966.2	1958.5
20°	1911.7	1900.6	1894.6	1890.4	1884.4	1875.9	1874.2	1875.0
22.5°	1820.5	1805.1	1800.0	1795.7	1789.8	1782.1	1782.1	1776.1
25°	1725.9	1712.2	1707.1	1702.0	1692.6	1689.2	1685.0	1685.8
27.5°	1629.6	1616.8	1612.5	1603.1	1597.2	1592.9	1588.6	1588.6
30°	1529.0	1522.2	1515.3	1514.5	1502.6	1497.5	1493.2	1489.8
32.5°	1431.8	1423.3	1419.9	1416.5	1410.5	1403.7	1402.8	1396.9
35°	1336.4	1327.8	1323.6	1320.2	1313.4	1310.8	1308.2	1309.9
37.5°	1235.8	1234.1	1231.5	1227.3	1223.0	1222.2	1218.8	1223.0
40°	1136.9	1136.1	1132.7	1133.5	1133.5	1131.8	1133.5	1133.5
42.5°	1041.5	1041.5	1038.1	1039.8	1040.6	1042.3	1044.9	1046.6
45°	948.6	947.7	948.6	950.3	948.6	952.8	956.3	958.8
47.5°	853.1	854.0	857.4	858.2	859.9	865.9	865.9	865.9
50°	761.9	766.2	764.5	769.6	768.8	772.2	768.8	768.8
52.5°	675.0	679.3	680.1	681.0	686.1	686.9	686.9	686.1
55°	597.4	603.4	600.9	605.1	607.7	609.4	611.9	610.2
57.5°	525.9	528.4	531.0	531.8	535.2	536.9	538.6	536.9
60°	455.1	460.2	464.5	465.3	467.0	468.8	469.6	472.2
62.5°	388.6	397.2	398.9	399.7	404.0	406.5	408.2	409.9
65°	329.8	335.8	340.1	342.6	346.0	346.0	348.6	348.6
67.5°	272.7	278.7	281.3	283.0	288.1	288.9	293.2	293.2
70°	220.7	225.0	226.7	229.3	234.4	237.8	239.5	241.2
72.5°	170.5	175.6	178.1	181.5	184.9	187.5	188.4	190.9
75°	124.4	132.1	133.0	136.4	138.9	142.3	144.0	143.2
77.5°	86.9	89.5	92.9	94.6	97.2	99.7	102.3	102.3
80°	53.7	57.1	58.0	58.8	62.2	63.9	65.6	65.6
82.5°	28.1	29.8	31.5	32.4	34.1	34.1	34.9	35.8
85°	11.1	11.9	11.9	11.9	12.8	13.6	13.6	13.6
87.5°	1.7	2.6	1.7	1.7	2.6	2.6	2.6	2.6
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)