

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: P879442

Luminaire Tested: **LD4C50D010 EU4509035 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: P879442
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 EU4509035 4LBLDWWH
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBLDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

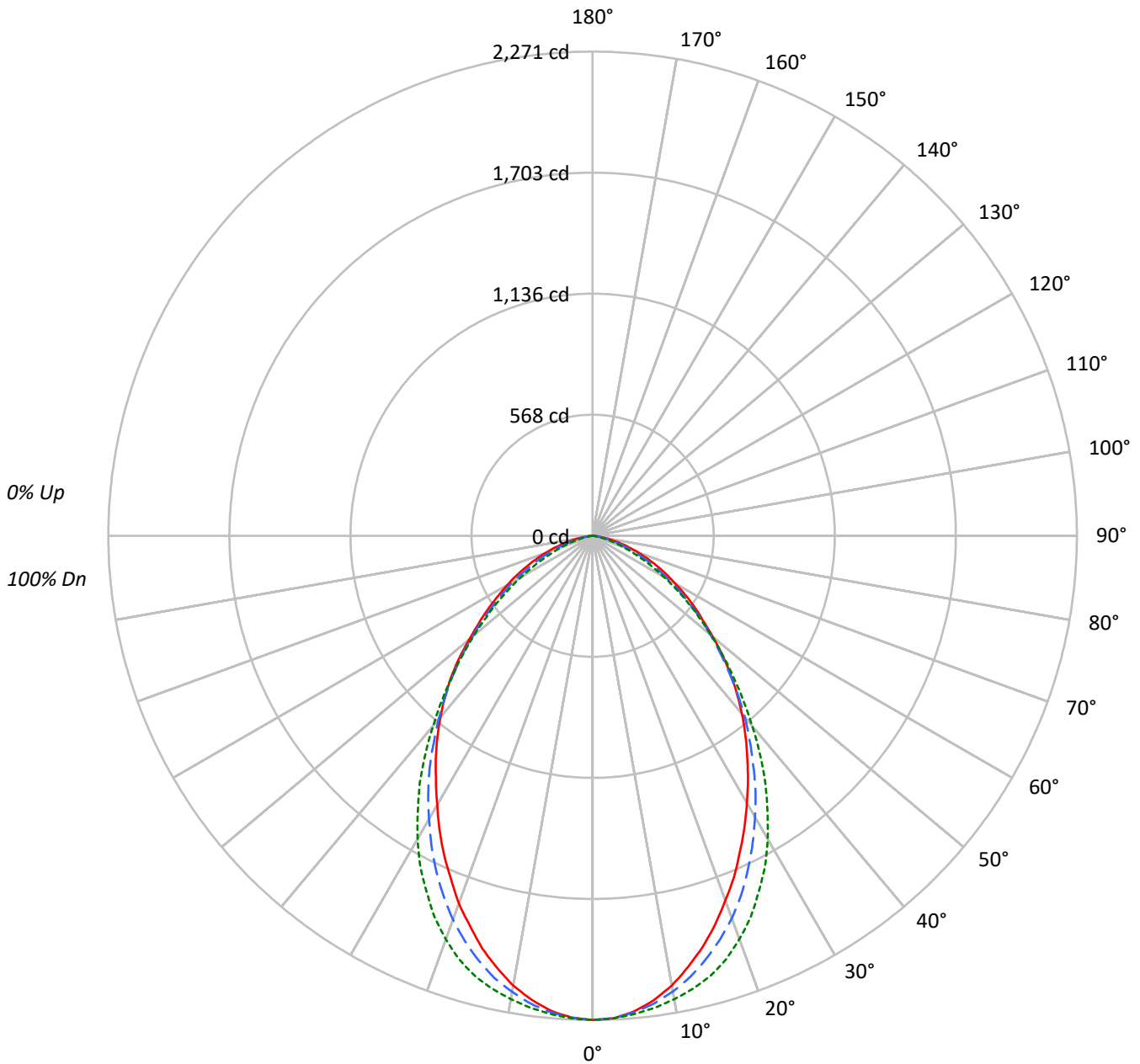
Lumens per Lamp: N/A
Luminaire Lumens: 4062.0 lumens
Efficiency: N/A
Efficacy: 69.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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									
RC	80									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																			
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	279000	279000	279000
5°	276157	277698	275848
10°	267174	275295	267287
15°	253840	271761	254680
20°	237917	263215	239878
25°	221576	249731	223623
30°	205270	232961	206802
35°	189375	211767	192255
40°	174679	186579	177887
45°	158226	161701	163021
50°	140267	138509	143784
55°	125043	116647	127892
60°	109438	94671	113517
65°	95755	73226	99156
70°	80568	53628	84771
75°	62941	34841	66501
80°	41317	18324	45421
85°	14096	8176	18747



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.0	5.2
10°-20°	579.2	14.3
20°-30°	796.7	19.6
30°-40°	831.1	20.5
40°-50°	711.0	17.5
50°-60°	508.6	12.5
60°-70°	295.1	7.3
70°-80°	113.8	2.8
80°-90°	14.5	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°	1587.9	39.1
0°-40°	2419.0	59.6
0°-60°	3638.6	89.6
0°-90°	4062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4062.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2271	2271	2271	2271	2271	
5°	2239	2244	2252	2244	2237	211
15°	1996	2056	2137	2063	2002	559
25°	1635	1725	1842	1736	1650	752
35°	1263	1313	1412	1334	1282	791
45°	911	903	931	926	938	702
55°	584	555	545	570	597	522
65°	329	291	252	301	341	328
75°	133	99	73	105	140	143
85°	10	8	6	8	13	19
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°	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0
2.5°	2265.2	2263.5	2264.3	2264.3	2264.3	2263.5	2265.2	2265.2	2264.3	2264.3	2264.3
5°	2239.3	2237.6	2238.5	2239.3	2239.3	2239.3	2240.1	2241.0	2241.8	2242.6	2243.5
7.5°	2197.6	2195.1	2197.6	2200.9	2200.9	2201.8	2202.6	2203.4	2205.9	2210.1	2212.6
10°	2141.7	2141.7	2142.6	2145.1	2149.2	2148.4	2150.9	2155.1	2160.1	2165.9	2170.1
12.5°	2070.8	2072.5	2075.0	2077.5	2081.7	2084.2	2088.3	2093.3	2101.7	2110.0	2119.2
15°	1995.8	1996.6	1997.4	2003.3	2007.4	2013.3	2016.6	2026.6	2034.1	2045.8	2055.8
17.5°	1911.5	1910.7	1913.2	1918.2	1928.2	1930.7	1934.9	1945.7	1956.6	1972.4	1985.8
20°	1819.8	1824.8	1828.1	1834.8	1840.6	1847.3	1850.7	1864.0	1876.5	1891.5	1909.0
22.5°	1733.1	1728.9	1734.7	1742.2	1747.2	1752.2	1758.1	1772.3	1785.6	1804.0	1821.5
25°	1634.6	1637.1	1641.3	1647.2	1653.8	1660.5	1667.2	1682.2	1689.7	1708.9	1724.7
27.5°	1541.2	1545.4	1547.1	1554.6	1560.4	1565.4	1568.8	1586.3	1592.9	1609.6	1625.5
30°	1447.0	1451.2	1451.2	1459.5	1463.7	1468.7	1477.0	1488.7	1498.7	1510.4	1522.1
32.5°	1356.1	1356.1	1359.4	1366.9	1371.1	1376.9	1379.4	1387.8	1397.8	1409.5	1422.0
35°	1262.7	1265.2	1268.5	1268.5	1276.0	1279.4	1282.7	1291.0	1297.7	1302.7	1312.7
37.5°	1176.8	1176.8	1174.3	1178.4	1183.5	1182.6	1187.6	1191.8	1196.0	1201.8	1210.1
40°	1089.2	1089.2	1085.9	1088.4	1091.7	1090.9	1089.2	1093.4	1096.7	1100.9	1109.2
42.5°	1000.0	998.3	997.5	997.5	999.1	997.5	999.1	1000.0	1000.0	1000.0	1005.0
45°	910.7	914.9	909.9	908.2	905.7	903.2	902.4	903.2	906.6	902.4	903.2
47.5°	823.2	824.8	821.5	819.0	816.5	814.8	816.5	811.5	813.2	814.0	810.7
50°	733.9	730.6	730.6	728.1	728.9	728.1	726.4	724.7	724.7	720.6	718.1
52.5°	651.4	653.0	654.7	648.9	649.7	645.5	646.4	642.2	642.2	637.2	638.8
55°	583.8	581.3	581.3	578.8	578.0	573.8	573.0	570.5	564.6	561.3	554.6
57.5°	513.7	512.9	509.6	510.4	505.4	504.6	502.9	498.7	494.6	490.4	482.9
60°	445.4	446.2	446.2	444.5	442.0	437.9	438.7	432.8	427.0	419.5	412.8
62.5°	388.6	386.1	385.3	383.6	378.6	378.6	374.5	370.3	364.5	357.0	351.1
65°	329.4	330.3	327.8	325.3	320.3	319.4	316.1	312.8	306.9	299.4	291.1
67.5°	276.1	274.4	273.6	271.1	266.0	265.2	262.7	255.2	250.2	242.7	236.0
70°	224.3	222.7	223.5	219.3	214.3	211.8	211.0	205.2	197.7	191.8	185.1
72.5°	176.0	176.0	175.1	171.0	168.5	166.8	163.5	156.8	152.6	146.0	140.9
75°	132.6	131.8	130.1	127.6	124.3	122.6	120.9	116.8	110.9	103.4	99.2
77.5°	91.7	92.6	90.9	90.1	85.9	83.4	82.6	80.1	75.1	70.1	65.9
80°	58.4	57.5	56.7	55.0	54.2	53.4	50.9	49.2	44.2	41.7	39.2
82.5°	31.7	30.0	30.0	29.2	27.5	26.7	25.9	24.2	23.4	21.7	20.0
85°	10.0	10.8	10.0	10.0	10.0	9.2	9.2	9.2	8.3	8.3	7.5
87.5°	0.8	1.7	0.8	0.8	1.7	0.8	0.8	1.7	0.8	0.8	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°	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0
2.5°	2264.3	2265.2	2265.2	2266.0	2266.0	2266.0	2266.0	2266.0	2266.0	2266.0	2266.0
5°	2246.0	2246.0	2247.6	2249.3	2249.3	2249.3	2250.1	2251.8	2251.8	2251.8	2251.0
7.5°	2215.9	2219.3	2222.6	2226.0	2226.8	2227.6	2229.3	2232.6	2232.6	2232.6	2232.6
10°	2176.7	2184.3	2188.4	2193.4	2195.9	2197.6	2202.6	2203.4	2205.9	2206.8	2205.9
12.5°	2126.7	2136.7	2145.9	2154.2	2157.6	2160.9	2165.9	2170.9	2173.4	2175.9	2175.1
15°	2070.8	2081.7	2095.9	2105.0	2111.7	2116.7	2124.2	2130.9	2135.0	2136.7	2136.7
17.5°	2003.3	2016.6	2031.6	2046.6	2050.8	2059.2	2067.5	2076.7	2081.7	2082.5	2081.7
20°	1928.2	1943.2	1955.7	1970.8	1979.9	1984.1	1995.8	2007.4	2012.5	2013.3	2012.5
22.5°	1839.0	1853.2	1869.8	1885.7	1893.2	1900.7	1913.2	1924.9	1931.6	1936.6	1931.6
25°	1739.7	1759.7	1775.6	1788.9	1799.8	1807.3	1823.1	1832.3	1843.1	1842.3	1843.1
27.5°	1642.2	1658.8	1676.3	1692.2	1698.9	1707.2	1719.7	1734.7	1743.9	1749.7	1748.9
30°	1542.1	1555.4	1570.4	1584.6	1595.4	1602.1	1620.5	1627.1	1638.8	1642.2	1639.7
32.5°	1436.2	1445.3	1460.3	1479.5	1483.7	1490.4	1502.0	1518.7	1522.9	1524.6	1525.4
35°	1323.6	1341.1	1353.6	1365.3	1368.6	1374.4	1387.8	1400.3	1404.5	1412.0	1408.6
37.5°	1219.3	1229.3	1235.2	1246.8	1256.8	1261.8	1268.5	1276.9	1285.2	1288.5	1287.7
40°	1115.1	1120.1	1125.1	1137.6	1138.4	1138.4	1148.4	1160.1	1160.1	1163.4	1163.4
42.5°	1008.3	1009.1	1015.8	1022.5	1024.2	1025.8	1035.8	1037.5	1042.5	1045.0	1048.3
45°	904.9	909.9	914.1	914.9	919.1	919.9	922.4	924.9	932.4	930.7	932.4
47.5°	810.7	813.2	815.7	815.7	818.2	817.3	821.5	819.0	824.0	825.7	828.2
50°	718.1	722.2	719.7	721.4	720.6	723.1	721.4	721.4	721.4	724.7	727.3
52.5°	633.0	633.8	631.3	632.2	632.2	630.5	632.2	631.3	630.5	630.5	631.3
55°	554.6	551.3	549.6	546.3	542.1	547.1	544.6	542.9	546.3	544.6	546.3
57.5°	478.7	474.5	471.2	469.5	463.7	467.0	463.7	462.0	462.0	462.0	466.2
60°	407.0	402.8	398.7	393.6	392.8	391.1	389.5	385.3	386.1	385.3	387.0
62.5°	344.4	336.1	330.3	326.1	325.3	322.8	320.3	316.1	316.9	316.9	317.8
65°	286.9	277.7	269.4	263.5	263.5	259.4	255.2	255.2	250.2	251.9	252.7
67.5°	229.4	221.8	213.5	209.3	206.8	203.5	201.0	199.3	196.8	196.8	198.5
70°	177.6	170.1	166.0	159.3	158.5	156.0	152.6	150.1	149.3	149.3	148.5
72.5°	134.3	127.6	122.6	118.4	115.9	113.4	110.1	109.3	107.6	107.6	109.3
75°	93.4	89.2	85.1	80.9	79.2	78.4	75.9	74.2	74.2	73.4	74.2
77.5°	62.6	58.4	54.2	52.5	50.9	49.2	48.4	47.5	45.0	45.0	45.0
80°	35.9	34.2	32.5	30.0	30.0	29.2	27.5	26.7	25.9	25.9	25.9
82.5°	18.3	17.5	15.8	15.0	15.0	15.0	14.2	14.2	13.3	13.3	13.3
85°	7.5	6.7	5.8	5.8	5.8	5.8	5.8	5.8	6.7	5.8	6.7
87.5°	0.8	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°	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0
2.5°	2266.0	2265.2	2265.2	2265.2	2265.2	2265.2	2264.3	2264.3	2263.5	2263.5	2263.5
5°	2251.8	2251.0	2250.1	2249.3	2248.5	2247.6	2246.8	2246.0	2243.5	2242.6	2241.0
7.5°	2231.8	2230.1	2227.6	2226.8	2225.1	2222.6	2219.3	2217.6	2214.3	2210.1	2208.4
10°	2205.1	2201.8	2199.3	2195.1	2194.3	2190.9	2182.6	2178.4	2172.6	2167.6	2161.7
12.5°	2172.6	2169.2	2163.4	2157.6	2154.2	2146.7	2139.2	2132.5	2125.0	2114.2	2105.9
15°	2132.5	2127.5	2115.9	2114.2	2109.2	2097.5	2087.5	2075.0	2063.3	2051.6	2041.6
17.5°	2079.2	2068.3	2062.5	2055.0	2049.1	2034.1	2023.3	2009.1	1993.3	1979.9	1965.7
20°	2009.1	1997.4	1987.4	1983.3	1975.8	1962.4	1949.1	1931.6	1915.7	1899.0	1886.5
22.5°	1925.7	1918.2	1903.2	1898.2	1889.0	1875.7	1859.8	1843.1	1828.1	1809.8	1793.1
25°	1836.5	1825.6	1814.0	1804.0	1797.3	1784.8	1764.8	1752.2	1735.6	1715.5	1703.0
27.5°	1741.4	1728.9	1712.2	1705.5	1699.7	1683.0	1666.3	1650.5	1637.1	1619.6	1608.8
30°	1631.3	1622.1	1611.3	1603.0	1594.6	1581.3	1566.3	1547.9	1533.7	1525.4	1510.4
32.5°	1519.6	1512.0	1497.9	1493.7	1484.5	1473.7	1462.8	1449.5	1434.5	1422.0	1410.3
35°	1400.3	1392.8	1382.8	1375.3	1371.9	1364.4	1352.8	1341.1	1333.6	1319.4	1313.6
37.5°	1281.0	1278.5	1268.5	1261.0	1258.5	1249.3	1243.5	1235.2	1224.3	1221.0	1214.3
40°	1158.4	1156.8	1150.9	1150.1	1145.1	1142.6	1134.2	1127.6	1122.6	1120.1	1115.9
42.5°	1045.8	1044.2	1039.2	1040.0	1035.0	1033.3	1032.5	1026.7	1022.5	1017.5	1018.3
45°	934.9	933.3	929.9	928.2	930.7	929.9	928.2	925.7	925.7	926.6	924.1
47.5°	828.2	829.8	826.5	828.2	828.2	825.7	825.7	829.0	829.8	831.5	833.2
50°	727.3	732.3	730.6	733.1	733.9	734.8	732.3	736.4	735.6	743.1	741.4
52.5°	635.5	636.3	639.7	640.5	641.3	642.2	646.4	649.7	650.5	653.9	659.7
55°	547.1	547.9	554.6	554.6	558.8	559.6	565.5	567.1	569.6	578.8	580.5
57.5°	463.7	468.7	472.0	473.7	476.2	480.4	483.7	491.2	495.4	501.2	507.1
60°	388.6	394.5	398.7	400.3	403.7	408.7	412.8	421.2	428.7	435.3	439.5
62.5°	319.4	324.4	327.8	333.6	333.6	337.8	347.8	352.8	361.1	367.0	374.5
65°	257.7	261.0	266.9	266.9	270.2	276.9	285.2	292.7	301.1	309.4	316.9
67.5°	201.8	204.3	207.7	211.0	212.7	221.0	227.7	238.5	246.0	251.9	261.0
70°	152.6	154.3	158.5	161.8	164.3	170.1	177.6	185.1	192.7	199.3	208.5
72.5°	109.3	112.6	116.8	119.3	120.9	125.1	132.6	140.1	146.8	153.5	158.5
75°	75.1	77.6	79.2	81.7	84.2	87.6	92.6	97.6	105.1	111.8	117.6
77.5°	46.7	49.2	51.7	52.5	53.4	56.7	60.0	65.1	70.1	75.1	79.2
80°	27.5	28.4	29.2	30.0	31.7	34.2	35.9	39.2	42.5	45.9	50.0
82.5°	14.2	15.0	15.8	15.8	15.8	16.7	19.2	20.9	21.7	23.4	25.9
85°	5.8	5.8	5.8	6.7	6.7	7.5	7.5	8.3	8.3	9.2	10.0
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: P879442

CATALOG NUMBER: LD4C50D010 EU4509035 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0	2271.0
2.5°	2262.7	2262.7	2262.7	2261.8	2262.7	2262.7	2262.7	2261.8
5°	2241.0	2239.3	2239.3	2238.5	2237.6	2237.6	2238.5	2236.8
7.5°	2205.1	2202.6	2200.9	2200.9	2200.1	2199.3	2199.3	2195.1
10°	2158.4	2153.4	2153.4	2151.7	2145.1	2144.2	2142.6	2142.6
12.5°	2100.0	2094.2	2090.8	2086.7	2082.5	2079.2	2078.3	2075.0
15°	2030.8	2023.3	2017.5	2015.8	2009.1	2004.1	2004.1	2002.4
17.5°	1955.7	1944.1	1939.9	1935.7	1926.5	1925.7	1924.0	1916.5
20°	1870.7	1859.8	1854.0	1849.8	1844.0	1835.6	1834.0	1834.8
22.5°	1781.4	1766.4	1761.4	1757.2	1751.4	1743.9	1743.9	1738.1
25°	1688.9	1675.5	1670.5	1665.5	1656.3	1653.0	1648.8	1649.7
27.5°	1594.6	1582.1	1577.9	1568.8	1562.9	1558.8	1554.6	1554.6
30°	1496.2	1489.5	1482.9	1482.0	1470.3	1465.3	1461.2	1457.8
32.5°	1401.1	1392.8	1389.5	1386.1	1380.3	1373.6	1372.8	1366.9
35°	1307.7	1299.4	1295.2	1291.9	1285.2	1282.7	1280.2	1281.9
37.5°	1209.3	1207.6	1205.1	1201.0	1196.8	1196.0	1192.6	1196.8
40°	1112.6	1111.7	1108.4	1109.2	1109.2	1107.6	1109.2	1109.2
42.5°	1019.2	1019.2	1015.8	1017.5	1018.3	1020.0	1022.5	1024.2
45°	928.2	927.4	928.2	929.9	928.2	932.4	935.8	938.3
47.5°	834.8	835.7	839.0	839.8	841.5	847.3	847.3	847.3
50°	745.6	749.8	748.1	753.1	752.3	755.6	752.3	752.3
52.5°	660.5	664.7	665.5	666.4	671.4	672.2	672.2	671.4
55°	584.6	590.5	588.0	592.1	594.6	596.3	598.8	597.1
57.5°	514.6	517.1	519.6	520.4	523.8	525.4	527.1	525.4
60°	445.4	450.4	454.5	455.4	457.0	458.7	459.5	462.0
62.5°	380.3	388.6	390.3	391.1	395.3	397.8	399.5	401.2
65°	322.8	328.6	332.8	335.3	338.6	338.6	341.1	341.1
67.5°	266.9	272.7	275.2	276.9	281.9	282.7	286.9	286.9
70°	216.0	220.2	221.8	224.3	229.4	232.7	234.4	236.0
72.5°	166.8	171.8	174.3	177.6	181.0	183.5	184.3	186.8
75°	121.8	129.3	130.1	133.4	135.9	139.3	140.9	140.1
77.5°	85.1	87.6	90.9	92.6	95.1	97.6	100.1	100.1
80°	52.5	55.9	56.7	57.5	60.9	62.6	64.2	64.2
82.5°	27.5	29.2	30.9	31.7	33.4	33.4	34.2	35.0
85°	10.8	11.7	11.7	11.7	12.5	13.3	13.3	13.3
87.5°	1.7	2.5	1.7	1.7	2.5	2.5	2.5	2.5
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)