

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: P879428

Luminaire Tested: **LD4C45D010 EU4459027 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: P879428
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: LD4C45D010 EU4459027 4LBLDWWH
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBLDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

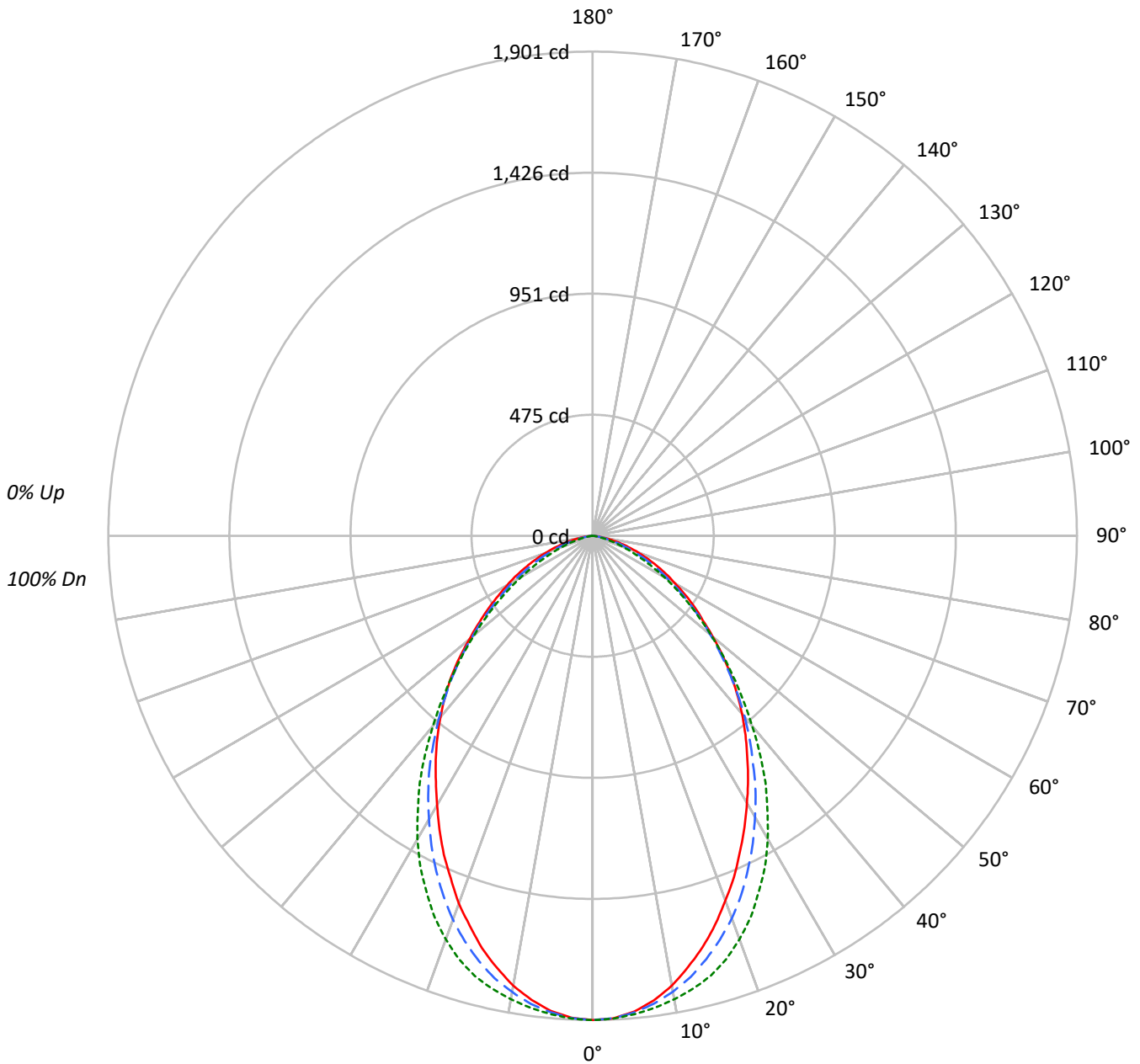
Lumens per Lamp: N/A
Luminaire Lumens: 3401.0 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 49.6
Input Voltage (V): NR
Input Current (A_{in}): 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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47	47	47	47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35	35	35	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	233594	233594	233594
5°	231218	232513	230959
10°	223699	230498	223787
15°	212530	227538	213242
20°	199205	220385	200840
25°	185519	209092	187227
30°	171862	195042	173153
35°	158555	177302	160970
40°	146261	156220	148939
45°	132478	135396	136491
50°	117447	115975	120390
55°	104695	97670	107094
60°	91624	79265	95064
65°	80174	61308	83023
70°	67458	44900	70978
75°	52688	29145	55679
80°	34596	15282	38063
85°	11841	6907	15787



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.5	5.2
10°-20°	485.0	14.3
20°-30°	667.0	19.6
30°-40°	695.9	20.5
40°-50°	595.3	17.5
50°-60°	425.8	12.5
60°-70°	247.1	7.3
70°-80°	95.3	2.8
80°-90°	12.1	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°	1329.5	39.1
0°-40°	2025.4	59.6
0°-60°	3046.5	89.6
0°-90°	3401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3401.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1901	1901	1901	1901	1901	
5°	1875	1878	1885	1878	1873	176
15°	1671	1721	1789	1728	1677	468
25°	1369	1444	1542	1453	1381	630
35°	1057	1099	1182	1117	1073	662
45°	762	756	779	775	786	588
55°	489	464	456	477	500	437
65°	276	244	211	252	286	275
75°	111	83	61	88	117	119
85°	8	6	5	7	11	16
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°	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4
2.5°	1896.6	1895.2	1895.9	1895.9	1895.9	1895.2	1896.6	1896.6	1895.9	1895.9	1895.9
5°	1874.9	1873.5	1874.2	1874.9	1874.9	1874.9	1875.6	1876.3	1877.0	1877.7	1878.4
7.5°	1840.0	1837.9	1840.0	1842.8	1842.8	1843.5	1844.2	1844.9	1847.0	1850.5	1852.6
10°	1793.2	1793.2	1793.9	1796.0	1799.5	1798.8	1800.9	1804.4	1808.6	1813.5	1816.9
12.5°	1733.8	1735.2	1737.3	1739.4	1742.9	1745.0	1748.5	1752.7	1759.7	1766.7	1774.4
15°	1671.0	1671.7	1672.4	1677.3	1680.8	1685.7	1688.5	1696.8	1703.1	1712.9	1721.3
17.5°	1600.5	1599.8	1601.9	1606.1	1614.4	1616.5	1620.0	1629.1	1638.2	1651.5	1662.6
20°	1523.7	1527.9	1530.6	1536.2	1541.1	1546.7	1549.5	1560.7	1571.1	1583.7	1598.4
22.5°	1451.0	1447.6	1452.4	1458.7	1462.9	1467.1	1472.0	1483.9	1495.0	1510.4	1525.1
25°	1368.6	1370.7	1374.2	1379.1	1384.7	1390.3	1395.9	1408.4	1414.7	1430.8	1444.1
27.5°	1290.4	1293.9	1295.3	1301.6	1306.5	1310.7	1313.5	1328.1	1333.7	1347.7	1361.0
30°	1211.5	1215.0	1215.0	1222.0	1225.5	1229.7	1236.7	1246.4	1254.8	1264.6	1274.4
32.5°	1135.4	1135.4	1138.2	1144.5	1148.0	1152.9	1155.0	1162.0	1170.3	1180.1	1190.6
35°	1057.2	1059.3	1062.1	1062.1	1068.4	1071.2	1074.0	1081.0	1086.5	1090.7	1099.1
37.5°	985.3	985.3	983.2	986.7	990.9	990.2	994.4	997.9	1001.3	1006.2	1013.2
40°	912.0	912.0	909.2	911.3	914.1	913.4	912.0	915.5	918.2	921.7	928.7
42.5°	837.2	835.9	835.2	835.2	836.5	835.2	836.5	837.2	837.2	837.2	841.4
45°	762.5	766.0	761.8	760.4	758.3	756.2	755.5	756.2	759.0	755.5	756.2
47.5°	689.2	690.6	687.8	685.7	683.6	682.2	683.6	679.4	680.8	681.5	678.7
50°	614.5	611.7	611.7	609.6	610.3	609.6	608.2	606.8	606.8	603.3	601.2
52.5°	545.4	546.8	548.2	543.3	544.0	540.5	541.2	537.7	537.7	533.5	534.9
55°	488.8	486.7	486.7	484.6	483.9	480.4	479.7	477.6	472.7	469.9	464.4
57.5°	430.1	429.4	426.7	427.4	423.2	422.5	421.1	417.6	414.1	410.6	404.3
60°	372.9	373.6	373.6	372.2	370.1	366.6	367.3	362.4	357.5	351.2	345.7
62.5°	325.4	323.3	322.6	321.2	317.0	317.0	313.5	310.0	305.2	298.9	294.0
65°	275.8	276.5	274.4	272.3	268.1	267.4	264.7	261.9	257.0	250.7	243.7
67.5°	231.1	229.7	229.0	226.9	222.8	222.1	220.0	213.7	209.5	203.2	197.6
70°	187.8	186.4	187.1	183.6	179.5	177.4	176.7	171.8	165.5	160.6	155.0
72.5°	147.3	147.3	146.6	143.1	141.1	139.7	136.9	131.3	127.8	122.2	118.0
75°	111.0	110.3	108.9	106.8	104.0	102.6	101.3	97.8	92.9	86.6	83.1
77.5°	76.8	77.5	76.1	75.4	71.9	69.8	69.1	67.0	62.8	58.7	55.2
80°	48.9	48.2	47.5	46.1	45.4	44.7	42.6	41.2	37.0	34.9	32.8
82.5°	26.5	25.1	25.1	24.4	23.0	22.3	21.6	20.3	19.6	18.2	16.8
85°	8.4	9.1	8.4	8.4	8.4	7.7	7.7	7.7	7.0	7.0	6.3
87.5°	0.7	1.4	0.7	0.7	1.4	0.7	0.7	1.4	0.7	0.7	1.4
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°	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4
2.5°	1895.9	1896.6	1896.6	1897.2	1897.2	1897.2	1897.2	1897.2	1897.2	1897.2	1897.2
5°	1880.5	1880.5	1881.9	1883.3	1883.3	1883.3	1884.0	1885.4	1885.4	1885.4	1884.7
7.5°	1855.4	1858.1	1860.9	1863.7	1864.4	1865.1	1866.5	1869.3	1869.3	1869.3	1869.3
10°	1822.5	1828.8	1832.3	1836.5	1838.6	1840.0	1844.2	1844.9	1847.0	1847.7	1847.0
12.5°	1780.6	1789.0	1796.7	1803.7	1806.5	1809.3	1813.5	1817.6	1819.7	1821.8	1821.1
15°	1733.8	1742.9	1754.8	1762.5	1768.1	1772.3	1778.5	1784.1	1787.6	1789.0	1789.0
17.5°	1677.3	1688.5	1701.0	1713.6	1717.1	1724.1	1731.1	1738.7	1742.9	1743.6	1742.9
20°	1614.4	1627.0	1637.5	1650.1	1657.7	1661.2	1671.0	1680.8	1685.0	1685.7	1685.0
22.5°	1539.7	1551.6	1565.6	1578.8	1585.1	1591.4	1601.9	1611.6	1617.2	1621.4	1617.2
25°	1456.6	1473.4	1486.7	1497.8	1506.9	1513.2	1526.5	1534.1	1543.2	1542.5	1543.2
27.5°	1374.9	1388.9	1403.6	1416.8	1422.4	1429.4	1439.9	1452.4	1460.1	1465.0	1464.3
30°	1291.1	1302.3	1314.9	1326.7	1335.8	1341.4	1356.8	1362.4	1372.1	1374.9	1372.8
32.5°	1202.5	1210.1	1222.7	1238.8	1242.3	1247.8	1257.6	1271.6	1275.1	1276.5	1277.2
35°	1108.2	1122.8	1133.3	1143.1	1145.9	1150.8	1162.0	1172.4	1175.9	1182.2	1179.4
37.5°	1020.9	1029.3	1034.2	1043.9	1052.3	1056.5	1062.1	1069.1	1076.1	1078.9	1078.2
40°	933.6	937.8	942.0	952.5	953.2	953.2	961.5	971.3	971.3	974.1	974.1
42.5°	844.2	844.9	850.5	856.1	857.5	858.9	867.3	868.7	872.9	875.0	877.7
45°	757.6	761.8	765.3	766.0	769.5	770.2	772.3	774.4	780.7	779.3	780.7
47.5°	678.7	680.8	682.9	682.9	685.0	684.3	687.8	685.7	689.9	691.3	693.4
50°	601.2	604.7	602.6	604.0	603.3	605.4	604.0	604.0	604.0	606.8	608.9
52.5°	530.0	530.7	528.6	529.3	529.3	527.9	529.3	528.6	527.9	527.9	528.6
55°	464.4	461.6	460.2	457.4	453.9	458.1	456.0	454.6	457.4	456.0	457.4
57.5°	400.8	397.3	394.5	393.1	388.2	391.0	388.2	386.9	386.9	386.9	390.3
60°	340.8	337.3	333.8	329.6	328.9	327.5	326.1	322.6	323.3	322.6	324.0
62.5°	288.4	281.4	276.5	273.0	272.3	270.2	268.1	264.7	265.3	265.3	266.0
65°	240.2	232.5	225.5	220.7	220.7	217.2	213.7	213.7	209.5	210.9	211.6
67.5°	192.0	185.7	178.8	175.3	173.2	170.4	168.3	166.9	164.8	164.8	166.2
70°	148.7	142.5	139.0	133.4	132.7	130.6	127.8	125.7	125.0	125.0	124.3
72.5°	112.4	106.8	102.6	99.2	97.1	95.0	92.2	91.5	90.1	90.1	91.5
75°	78.2	74.7	71.2	67.7	66.3	65.6	63.5	62.1	62.1	61.4	62.1
77.5°	52.4	48.9	45.4	44.0	42.6	41.2	40.5	39.8	37.7	37.7	37.7
80°	30.0	28.6	27.2	25.1	25.1	24.4	23.0	22.3	21.6	21.6	21.6
82.5°	15.4	14.7	13.3	12.6	12.6	12.6	11.9	11.9	11.2	11.2	11.2
85°	6.3	5.6	4.9	4.9	4.9	4.9	4.9	4.9	5.6	4.9	5.6
87.5°	0.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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°	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4
2.5°	1897.2	1896.6	1896.6	1896.6	1896.6	1896.6	1895.9	1895.9	1895.2	1895.2	1895.2
5°	1885.4	1884.7	1884.0	1883.3	1882.6	1881.9	1881.2	1880.5	1878.4	1877.7	1876.3
7.5°	1868.6	1867.2	1865.1	1864.4	1863.0	1860.9	1858.1	1856.7	1854.0	1850.5	1849.1
10°	1846.3	1843.5	1841.4	1837.9	1837.2	1834.4	1827.4	1823.9	1819.0	1814.9	1810.0
12.5°	1819.0	1816.2	1811.4	1806.5	1803.7	1797.4	1791.1	1785.5	1779.2	1770.2	1763.2
15°	1785.5	1781.3	1771.6	1770.2	1766.0	1756.2	1747.8	1737.3	1727.6	1717.8	1709.4
17.5°	1740.8	1731.8	1726.9	1720.6	1715.7	1703.1	1694.0	1682.2	1668.9	1657.7	1645.9
20°	1682.2	1672.4	1664.0	1660.5	1654.2	1643.1	1631.9	1617.2	1604.0	1590.0	1579.5
22.5°	1612.3	1606.1	1593.5	1589.3	1581.6	1570.5	1557.2	1543.2	1530.6	1515.3	1501.3
25°	1537.6	1528.6	1518.8	1510.4	1504.8	1494.3	1477.6	1467.1	1453.1	1436.4	1425.9
27.5°	1458.0	1447.6	1433.6	1428.0	1423.1	1409.1	1395.2	1381.9	1370.7	1356.1	1347.0
30°	1365.9	1358.2	1349.1	1342.1	1335.1	1324.0	1311.4	1296.0	1284.2	1277.2	1264.6
32.5°	1272.3	1266.0	1254.1	1250.6	1243.0	1233.9	1224.8	1213.6	1201.1	1190.6	1180.8
35°	1172.4	1166.1	1157.8	1151.5	1148.7	1142.4	1132.6	1122.8	1116.6	1104.7	1099.8
37.5°	1072.6	1070.5	1062.1	1055.8	1053.7	1046.0	1041.1	1034.2	1025.1	1022.3	1016.7
40°	969.9	968.5	963.6	962.9	958.7	956.7	949.7	944.1	939.9	937.8	934.3
42.5°	875.7	874.3	870.1	870.8	866.6	865.2	864.5	859.6	856.1	851.9	852.6
45°	782.8	781.4	778.6	777.2	779.3	778.6	777.2	775.1	775.1	775.8	773.7
47.5°	693.4	694.8	692.0	693.4	693.4	691.3	691.3	694.1	694.8	696.2	697.6
50°	608.9	613.1	611.7	613.8	614.5	615.2	613.1	616.6	615.9	622.2	620.8
52.5°	532.1	532.8	535.6	536.3	537.0	537.7	541.2	544.0	544.7	547.5	552.3
55°	458.1	458.8	464.4	464.4	467.9	468.6	473.4	474.8	476.9	484.6	486.0
57.5°	388.2	392.4	395.2	396.6	398.7	402.2	405.0	411.3	414.8	419.7	424.6
60°	325.4	330.3	333.8	335.2	338.0	342.2	345.7	352.6	358.9	364.5	368.0
62.5°	267.4	271.6	274.4	279.3	279.3	282.8	291.2	295.4	302.4	307.2	313.5
65°	215.8	218.6	223.5	223.5	226.2	231.8	238.8	245.1	252.1	259.1	265.3
67.5°	169.0	171.1	173.9	176.7	178.1	185.0	190.6	199.7	206.0	210.9	218.6
70°	127.8	129.2	132.7	135.5	137.6	142.5	148.7	155.0	161.3	166.9	174.6
72.5°	91.5	94.3	97.8	99.9	101.3	104.7	111.0	117.3	122.9	128.5	132.7
75°	62.8	64.9	66.3	68.4	70.5	73.3	77.5	81.7	88.0	93.6	98.5
77.5°	39.1	41.2	43.3	44.0	44.7	47.5	50.3	54.5	58.7	62.8	66.3
80°	23.0	23.7	24.4	25.1	26.5	28.6	30.0	32.8	35.6	38.4	41.9
82.5°	11.9	12.6	13.3	13.3	13.3	14.0	16.1	17.5	18.2	19.6	21.6
85°	4.9	4.9	4.9	5.6	5.6	6.3	6.3	7.0	7.0	7.7	8.4
87.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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: P879428

CATALOG NUMBER: LD4C45D010 EU4459027 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4	1901.4
2.5°	1894.5	1894.5	1894.5	1893.8	1894.5	1894.5	1894.5	1893.8
5°	1876.3	1874.9	1874.9	1874.2	1873.5	1873.5	1874.2	1872.8
7.5°	1846.3	1844.2	1842.8	1842.8	1842.1	1841.4	1841.4	1837.9
10°	1807.2	1803.0	1803.0	1801.6	1796.0	1795.3	1793.9	1793.9
12.5°	1758.3	1753.4	1750.6	1747.1	1743.6	1740.8	1740.1	1737.3
15°	1700.3	1694.0	1689.2	1687.8	1682.2	1678.0	1678.0	1676.6
17.5°	1637.5	1627.7	1624.2	1620.7	1613.0	1612.3	1611.0	1604.7
20°	1566.3	1557.2	1552.3	1548.8	1543.9	1536.9	1535.5	1536.2
22.5°	1491.5	1479.0	1474.8	1471.3	1466.4	1460.1	1460.1	1455.2
25°	1414.0	1402.9	1398.7	1394.5	1386.8	1384.0	1380.5	1381.2
27.5°	1335.1	1324.7	1321.2	1313.5	1308.6	1305.1	1301.6	1301.6
30°	1252.7	1247.1	1241.6	1240.9	1231.1	1226.9	1223.4	1220.6
32.5°	1173.1	1166.1	1163.3	1160.6	1155.7	1150.1	1149.4	1144.5
35°	1094.9	1087.9	1084.4	1081.6	1076.1	1074.0	1071.9	1073.3
37.5°	1012.5	1011.1	1009.0	1005.5	1002.0	1001.3	998.6	1002.0
40°	931.5	930.8	928.0	928.7	928.7	927.3	928.7	928.7
42.5°	853.3	853.3	850.5	851.9	852.6	854.0	856.1	857.5
45°	777.2	776.5	777.2	778.6	777.2	780.7	783.5	785.6
47.5°	699.0	699.7	702.5	703.2	704.6	709.5	709.5	709.5
50°	624.3	627.8	626.4	630.6	629.9	632.6	629.9	629.9
52.5°	553.0	556.5	557.2	557.9	562.1	562.8	562.8	562.1
55°	489.5	494.4	492.3	495.8	497.9	499.3	501.4	500.0
57.5°	430.8	432.9	435.0	435.7	438.5	439.9	441.3	439.9
60°	372.9	377.1	380.6	381.3	382.7	384.1	384.8	386.9
62.5°	318.4	325.4	326.8	327.5	331.0	333.1	334.5	335.9
65°	270.2	275.1	278.6	280.7	283.5	283.5	285.6	285.6
67.5°	223.5	228.3	230.4	231.8	236.0	236.7	240.2	240.2
70°	180.9	184.3	185.7	187.8	192.0	194.8	196.2	197.6
72.5°	139.7	143.8	145.9	148.7	151.5	153.6	154.3	156.4
75°	102.0	108.2	108.9	111.7	113.8	116.6	118.0	117.3
77.5°	71.2	73.3	76.1	77.5	79.6	81.7	83.8	83.8
80°	44.0	46.8	47.5	48.2	51.0	52.4	53.8	53.8
82.5°	23.0	24.4	25.8	26.5	27.9	27.9	28.6	29.3
85°	9.1	9.8	9.8	9.8	10.5	11.2	11.2	11.2
87.5°	1.4	2.1	1.4	1.4	2.1	2.1	2.1	2.1
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)