

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: P879426

Luminaire Tested: **LD4C40D010 EU4409050 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: P879426
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: LD4C40D010 EU4409050 4LBLDWWH
Description: 4 INCH 4000 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

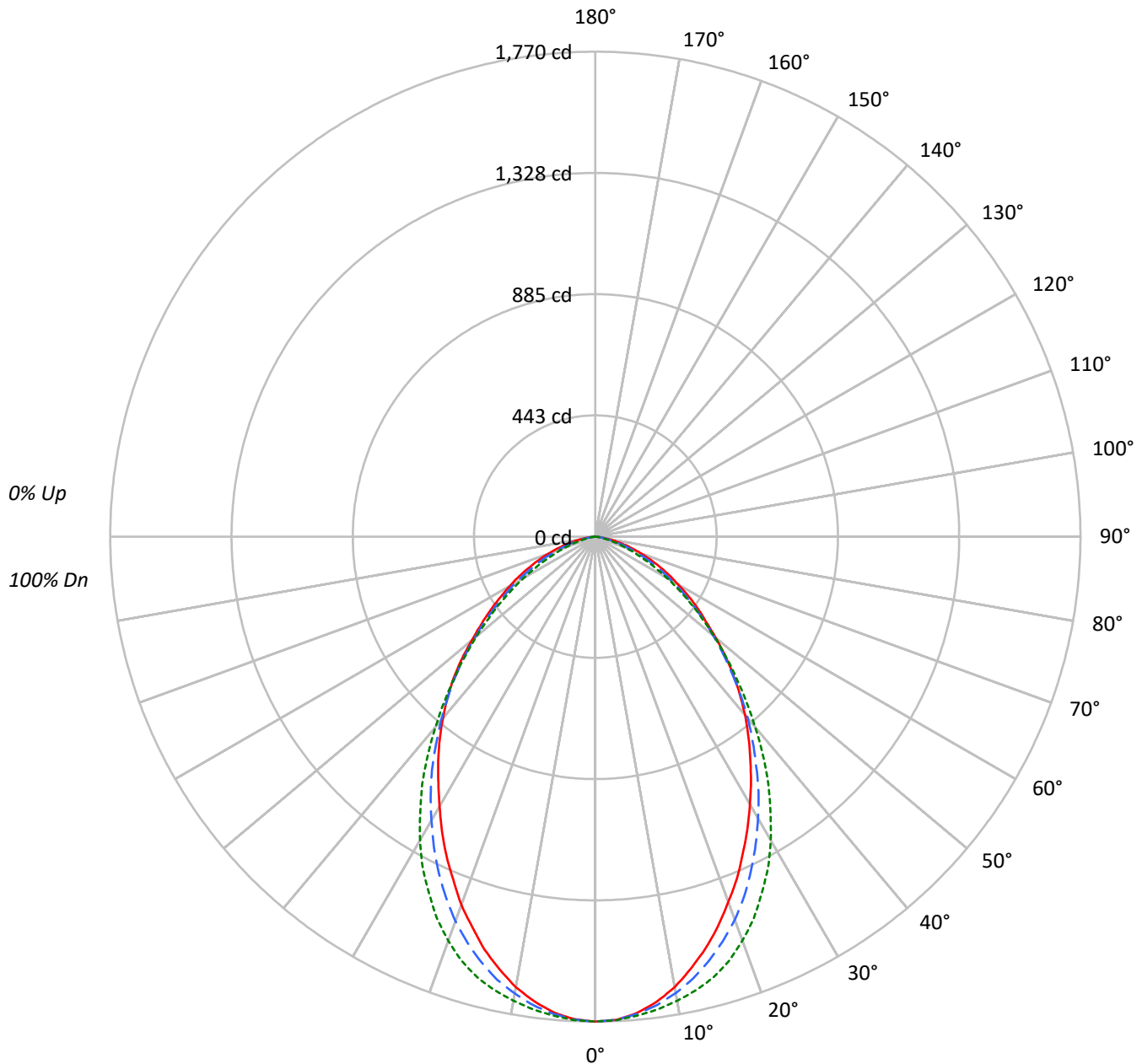
Lumens per Lamp: N/A
Luminaire Lumens: 3166.1 lumens
Efficiency: N/A
Efficacy: 67.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	217463	217463	217463
5°	215248	216444	215001
10°	208243	214568	208318
15°	197840	211818	198501
20°	185439	205154	186968
25°	172709	194642	174295
30°	159989	181565	161194
35°	147607	165049	149841
40°	136157	145427	138659
45°	123321	126032	127057
50°	109324	107967	112057
55°	97456	90923	99683
60°	85285	73786	88479
65°	74651	57064	77296
70°	62824	41811	66093
75°	49081	27151	51834
80°	32191	14291	35445
85°	10995	6484	14660



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.2	5.2
10°-20°	451.5	14.3
20°-30°	620.9	19.6
30°-40°	647.8	20.5
40°-50°	554.2	17.5
50°-60°	396.4	12.5
60°-70°	230.0	7.3
70°-80°	88.7	2.8
80°-90°	11.3	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°	1237.6	39.1
0°-40°	1885.4	59.6
0°-60°	2836.0	89.6
0°-90°	3166.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3166.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1770	1770	1770	1770	1770	
5°	1745	1749	1755	1749	1743	164
15°	1556	1602	1665	1608	1561	436
25°	1274	1344	1436	1353	1286	586
35°	984	1023	1100	1039	999	616
45°	710	704	725	722	731	547
55°	455	432	424	444	465	407
65°	257	227	196	235	266	256
75°	103	77	57	82	109	111
85°	8	6	5	6	10	15
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°	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1
2.5°	1765.5	1764.2	1764.9	1764.9	1764.9	1764.2	1765.5	1765.5	1764.9	1764.9	1764.9
5°	1745.4	1744.1	1744.7	1745.4	1745.4	1745.4	1746.0	1746.7	1747.3	1748.0	1748.6
7.5°	1712.9	1710.9	1712.9	1715.5	1715.5	1716.1	1716.8	1717.4	1719.4	1722.6	1724.6
10°	1669.3	1669.3	1669.9	1671.9	1675.1	1674.5	1676.4	1679.7	1683.6	1688.1	1691.4
12.5°	1614.0	1615.3	1617.3	1619.2	1622.5	1624.4	1627.7	1631.6	1638.1	1644.6	1651.7
15°	1555.5	1556.2	1556.8	1561.4	1564.6	1569.2	1571.8	1579.6	1585.4	1594.5	1602.3
17.5°	1489.9	1489.2	1491.2	1495.1	1502.9	1504.8	1508.1	1516.5	1525.0	1537.3	1547.7
20°	1418.4	1422.3	1424.9	1430.1	1434.6	1439.8	1442.4	1452.8	1462.6	1474.3	1487.9
22.5°	1350.8	1347.5	1352.1	1357.9	1361.8	1365.7	1370.3	1381.3	1391.7	1406.0	1419.7
25°	1274.1	1276.0	1279.3	1283.8	1289.0	1294.2	1299.4	1311.1	1317.0	1331.9	1344.3
27.5°	1201.3	1204.5	1205.8	1211.7	1216.2	1220.1	1222.7	1236.4	1241.6	1254.6	1266.9
30°	1127.8	1131.1	1131.1	1137.6	1140.8	1144.7	1151.2	1160.3	1168.1	1177.2	1186.3
32.5°	1057.0	1057.0	1059.6	1065.4	1068.7	1073.2	1075.2	1081.7	1089.5	1098.6	1108.3
35°	984.2	986.1	988.7	988.7	994.6	997.2	999.8	1006.3	1011.5	1015.4	1023.2
37.5°	917.2	917.2	915.3	918.5	922.4	921.8	925.7	928.9	932.2	936.7	943.2
40°	849.0	849.0	846.3	848.3	850.9	850.3	849.0	852.2	854.8	858.1	864.6
42.5°	779.4	778.1	777.4	777.4	778.7	777.4	778.7	779.4	779.4	779.4	783.3
45°	709.8	713.1	709.2	707.9	705.9	704.0	703.3	704.0	706.6	703.3	704.0
47.5°	641.6	642.9	640.3	638.3	636.4	635.1	636.4	632.5	633.8	634.4	631.8
50°	572.0	569.4	569.4	567.5	568.1	567.5	566.2	564.9	564.9	561.6	559.7
52.5°	507.7	509.0	510.3	505.7	506.4	503.1	503.8	500.5	500.5	496.6	497.9
55°	455.0	453.1	453.1	451.1	450.5	447.2	446.6	444.6	440.1	437.5	432.3
57.5°	400.4	399.8	397.2	397.8	393.9	393.3	392.0	388.7	385.5	382.2	376.4
60°	347.1	347.8	347.8	346.5	344.5	341.3	341.9	337.4	332.8	327.0	321.8
62.5°	302.9	301.0	300.3	299.0	295.1	295.1	291.9	288.6	284.1	278.2	273.7
65°	256.8	257.4	255.5	253.5	249.6	249.0	246.4	243.8	239.2	233.4	226.9
67.5°	215.2	213.9	213.2	211.3	207.4	206.7	204.8	198.9	195.0	189.2	184.0
70°	174.9	173.6	174.2	171.0	167.1	165.1	164.5	159.9	154.1	149.5	144.3
72.5°	137.2	137.2	136.5	133.3	131.3	130.0	127.4	122.2	119.0	113.8	109.9
75°	103.4	102.7	101.4	99.5	96.9	95.6	94.3	91.0	86.5	80.6	77.4
77.5°	71.5	72.2	70.9	70.2	67.0	65.0	64.4	62.4	58.5	54.6	51.4
80°	45.5	44.9	44.2	42.9	42.3	41.6	39.7	38.4	34.5	32.5	30.6
82.5°	24.7	23.4	23.4	22.8	21.5	20.8	20.2	18.9	18.2	16.9	15.6
85°	7.8	8.5	7.8	7.8	7.8	7.2	7.2	7.2	6.5	6.5	5.9
87.5°	0.7	1.3	0.7	0.7	1.3	0.7	0.7	1.3	0.7	0.7	1.3
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°	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1
2.5°	1764.9	1765.5	1765.5	1766.2	1766.2	1766.2	1766.2	1766.2	1766.2	1766.2	1766.2
5°	1750.6	1750.6	1751.9	1753.2	1753.2	1753.2	1753.8	1755.1	1755.1	1755.1	1754.5
7.5°	1727.2	1729.8	1732.4	1735.0	1735.6	1736.3	1737.6	1740.2	1740.2	1740.2	1740.2
10°	1696.6	1702.5	1705.7	1709.6	1711.6	1712.9	1716.8	1717.4	1719.4	1720.0	1719.4
12.5°	1657.6	1665.4	1672.5	1679.0	1681.6	1684.2	1688.1	1692.0	1694.0	1696.0	1695.3
15°	1614.0	1622.5	1633.5	1640.7	1645.9	1649.8	1655.6	1660.8	1664.1	1665.4	1665.4
17.5°	1561.4	1571.8	1583.5	1595.2	1598.4	1604.9	1611.4	1618.6	1622.5	1623.1	1622.5
20°	1502.9	1514.6	1524.3	1536.0	1543.2	1546.4	1555.5	1564.6	1568.5	1569.2	1568.5
22.5°	1433.3	1444.4	1457.4	1469.7	1475.6	1481.4	1491.2	1500.3	1505.5	1509.4	1505.5
25°	1356.0	1371.6	1383.9	1394.3	1402.8	1408.6	1421.0	1428.1	1436.6	1435.9	1436.6
27.5°	1279.9	1292.9	1306.6	1318.9	1324.1	1330.6	1340.4	1352.1	1359.2	1363.8	1363.1
30°	1201.9	1212.3	1224.0	1235.1	1243.5	1248.7	1263.0	1268.2	1277.3	1279.9	1278.0
32.5°	1119.4	1126.5	1138.2	1153.2	1156.4	1161.6	1170.7	1183.7	1187.0	1188.3	1188.9
35°	1031.6	1045.3	1055.0	1064.1	1066.7	1071.3	1081.7	1091.4	1094.7	1100.5	1097.9
37.5°	950.4	958.2	962.7	971.8	979.6	983.5	988.7	995.2	1001.7	1004.3	1003.7
40°	869.1	873.0	876.9	886.7	887.3	887.3	895.1	904.2	904.2	906.8	906.8
42.5°	785.9	786.5	791.7	796.9	798.2	799.5	807.3	808.6	812.5	814.5	817.1
45°	705.3	709.2	712.4	713.1	716.3	717.0	718.9	720.9	726.7	725.4	726.7
47.5°	631.8	633.8	635.7	635.7	637.7	637.0	640.3	638.3	642.2	643.5	645.5
50°	559.7	562.9	561.0	562.3	561.6	563.6	562.3	562.3	562.3	564.9	566.8
52.5°	493.4	494.0	492.1	492.7	492.7	491.4	492.7	492.1	491.4	491.4	492.1
55°	432.3	429.7	428.4	425.8	422.5	426.4	424.5	423.2	425.8	424.5	425.8
57.5°	373.1	369.9	367.3	366.0	361.4	364.0	361.4	360.1	360.1	360.1	363.4
60°	317.2	314.0	310.7	306.8	306.2	304.9	303.6	300.3	301.0	300.3	301.6
62.5°	268.5	262.0	257.4	254.2	253.5	251.6	249.6	246.4	247.0	247.0	247.7
65°	223.6	216.5	210.0	205.4	205.4	202.2	198.9	198.9	195.0	196.3	197.0
67.5°	178.8	172.9	166.4	163.2	161.2	158.6	156.7	155.4	153.4	153.4	154.7
70°	138.5	132.6	129.4	124.2	123.5	121.6	119.0	117.0	116.4	116.4	115.7
72.5°	104.7	99.5	95.6	92.3	90.4	88.4	85.8	85.2	83.9	83.9	85.2
75°	72.8	69.6	66.3	63.1	61.8	61.1	59.2	57.9	57.9	57.2	57.9
77.5°	48.8	45.5	42.3	41.0	39.7	38.4	37.7	37.1	35.1	35.1	35.1
80°	28.0	26.7	25.4	23.4	23.4	22.8	21.5	20.8	20.2	20.2	20.2
82.5°	14.3	13.7	12.4	11.7	11.7	11.7	11.1	11.1	10.4	10.4	10.4
85°	5.9	5.2	4.6	4.6	4.6	4.6	4.6	4.6	5.2	4.6	5.2
87.5°	0.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1
2.5°	1766.2	1765.5	1765.5	1765.5	1765.5	1765.5	1764.9	1764.9	1764.2	1764.2	1764.2
5°	1755.1	1754.5	1753.8	1753.2	1752.5	1751.9	1751.2	1750.6	1748.6	1748.0	1746.7
7.5°	1739.5	1738.2	1736.3	1735.6	1734.3	1732.4	1729.8	1728.5	1725.9	1722.6	1721.3
10°	1718.7	1716.1	1714.2	1710.9	1710.3	1707.7	1701.2	1697.9	1693.4	1689.4	1684.9
12.5°	1693.4	1690.7	1686.2	1681.6	1679.0	1673.2	1667.3	1662.1	1656.3	1647.8	1641.3
15°	1662.1	1658.2	1649.1	1647.8	1643.9	1634.8	1627.0	1617.3	1608.2	1599.1	1591.3
17.5°	1620.5	1612.1	1607.5	1601.7	1597.1	1585.4	1577.0	1565.9	1553.6	1543.2	1532.1
20°	1565.9	1556.8	1549.0	1545.8	1539.9	1529.5	1519.1	1505.5	1493.1	1480.1	1470.4
22.5°	1500.9	1495.1	1483.4	1479.5	1472.3	1461.9	1449.6	1436.6	1424.9	1410.6	1397.6
25°	1431.4	1422.9	1413.8	1406.0	1400.8	1391.1	1375.5	1365.7	1352.7	1337.1	1327.4
27.5°	1357.3	1347.5	1334.5	1329.3	1324.8	1311.8	1298.8	1286.4	1276.0	1262.4	1253.9
30°	1271.5	1264.3	1255.9	1249.4	1242.9	1232.5	1220.8	1206.5	1195.4	1188.9	1177.2
32.5°	1184.4	1178.5	1167.5	1164.2	1157.1	1148.6	1140.2	1129.8	1118.1	1108.3	1099.2
35°	1091.4	1085.6	1077.8	1071.9	1069.3	1063.5	1054.4	1045.3	1039.4	1028.4	1023.8
37.5°	998.5	996.5	988.7	982.9	980.9	973.8	969.2	962.7	954.3	951.7	946.5
40°	902.9	901.6	897.1	896.4	892.5	890.6	884.1	878.9	875.0	873.0	869.8
42.5°	815.1	813.8	809.9	810.6	806.7	805.4	804.7	800.2	796.9	793.0	793.7
45°	728.7	727.4	724.8	723.5	725.4	724.8	723.5	721.5	721.5	722.2	720.2
47.5°	645.5	646.8	644.2	645.5	645.5	643.5	643.5	646.1	646.8	648.1	649.4
50°	566.8	570.7	569.4	571.4	572.0	572.7	570.7	574.0	573.3	579.2	577.9
52.5°	495.3	496.0	498.6	499.2	499.9	500.5	503.8	506.4	507.0	509.6	514.2
55°	426.4	427.1	432.3	432.3	435.5	436.2	440.7	442.0	444.0	451.1	452.4
57.5°	361.4	365.3	367.9	369.2	371.2	374.4	377.0	382.9	386.1	390.7	395.2
60°	302.9	307.5	310.7	312.0	314.6	318.5	321.8	328.3	334.1	339.3	342.6
62.5°	249.0	252.9	255.5	260.0	260.0	263.3	271.1	275.0	281.5	286.0	291.9
65°	200.9	203.5	208.0	208.0	210.6	215.8	222.3	228.2	234.7	241.2	247.0
67.5°	157.3	159.3	161.9	164.5	165.8	172.3	177.5	185.9	191.8	196.3	203.5
70°	119.0	120.3	123.5	126.1	128.1	132.6	138.5	144.3	150.2	155.4	162.5
72.5°	85.2	87.8	91.0	93.0	94.3	97.5	103.4	109.2	114.4	119.6	123.5
75°	58.5	60.5	61.8	63.7	65.7	68.3	72.2	76.1	81.9	87.1	91.7
77.5°	36.4	38.4	40.3	41.0	41.6	44.2	46.8	50.7	54.6	58.5	61.8
80°	21.5	22.1	22.8	23.4	24.7	26.7	28.0	30.6	33.2	35.8	39.0
82.5°	11.1	11.7	12.4	12.4	12.4	13.0	15.0	16.3	16.9	18.2	20.2
85°	4.6	4.6	4.6	5.2	5.2	5.9	5.9	6.5	6.5	7.2	7.8
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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: P879426

CATALOG NUMBER: LD4C40D010 EU4409050 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1	1770.1
2.5°	1763.6	1763.6	1763.6	1762.9	1763.6	1763.6	1763.6	1762.9
5°	1746.7	1745.4	1745.4	1744.7	1744.1	1744.1	1744.7	1743.4
7.5°	1718.7	1716.8	1715.5	1715.5	1714.8	1714.2	1714.2	1710.9
10°	1682.3	1678.4	1678.4	1677.1	1671.9	1671.2	1669.9	1669.9
12.5°	1636.8	1632.2	1629.6	1626.4	1623.1	1620.5	1619.9	1617.3
15°	1582.8	1577.0	1572.4	1571.1	1565.9	1562.0	1562.0	1560.7
17.5°	1524.3	1515.2	1512.0	1508.7	1501.6	1500.9	1499.6	1493.8
20°	1458.0	1449.6	1445.0	1441.8	1437.2	1430.7	1429.4	1430.1
22.5°	1388.5	1376.8	1372.9	1369.6	1365.1	1359.2	1359.2	1354.7
25°	1316.3	1305.9	1302.0	1298.1	1291.0	1288.4	1285.1	1285.8
27.5°	1242.9	1233.1	1229.9	1222.7	1218.2	1214.9	1211.7	1211.7
30°	1166.2	1161.0	1155.8	1155.1	1146.0	1142.1	1138.9	1136.3
32.5°	1092.1	1085.6	1083.0	1080.4	1075.8	1070.6	1070.0	1065.4
35°	1019.3	1012.8	1009.5	1006.9	1001.7	999.8	997.8	999.1
37.5°	942.6	941.3	939.3	936.1	932.8	932.2	929.6	932.8
40°	867.2	866.5	863.9	864.6	864.6	863.3	864.6	864.6
42.5°	794.3	794.3	791.7	793.0	793.7	795.0	796.9	798.2
45°	723.5	722.8	723.5	724.8	723.5	726.7	729.3	731.3
47.5°	650.7	651.3	653.9	654.6	655.9	660.4	660.4	660.4
50°	581.1	584.4	583.1	587.0	586.3	588.9	586.3	586.3
52.5°	514.8	518.1	518.7	519.4	523.3	523.9	523.9	523.3
55°	455.7	460.2	458.3	461.5	463.5	464.8	466.7	465.4
57.5°	401.1	403.0	405.0	405.6	408.2	409.5	410.8	409.5
60°	347.1	351.0	354.3	354.9	356.2	357.5	358.2	360.1
62.5°	296.4	302.9	304.2	304.9	308.1	310.1	311.4	312.7
65°	251.6	256.1	259.4	261.3	263.9	263.9	265.9	265.9
67.5°	208.0	212.6	214.5	215.8	219.7	220.4	223.6	223.6
70°	168.4	171.6	172.9	174.9	178.8	181.4	182.7	184.0
72.5°	130.0	133.9	135.9	138.5	141.1	143.0	143.7	145.6
75°	94.9	100.8	101.4	104.0	106.0	108.6	109.9	109.2
77.5°	66.3	68.3	70.9	72.2	74.1	76.1	78.0	78.0
80°	41.0	43.6	44.2	44.9	47.5	48.8	50.1	50.1
82.5°	21.5	22.8	24.1	24.7	26.0	26.0	26.7	27.3
85°	8.5	9.1	9.1	9.1	9.8	10.4	10.4	10.4
87.5°	1.3	2.0	1.3	1.3	2.0	2.0	2.0	2.0
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)