

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: P880571

Luminaire Tested: **LD4C35D010 EU4359050 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: P880571
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: LD4C35D010 EU4359050 4LBDWNH
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

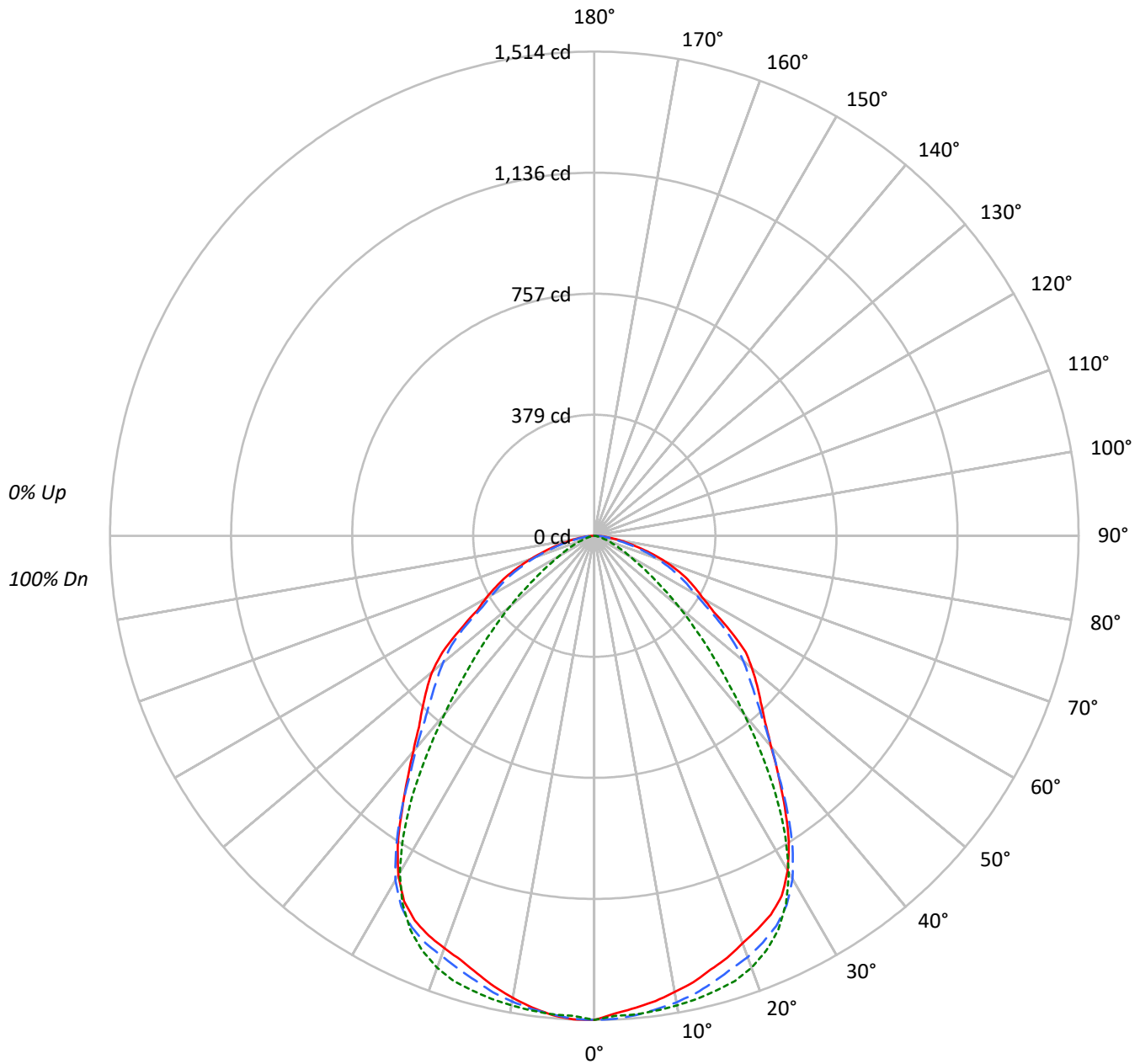
Lumens per Lamp: N/A
Luminaire Lumens: 3081.0 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
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
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	111	107	103	100	108	104	101	98		100	98	95			96	94	92			93
2	102	95	89	84	100	93	88	83		90	85	81			87	83	80			84
3	94	85	78	72	92	84	77	72		81	75	70			78	73	69			76
4	87	77	69	63	85	75	68	62		73	67	62			71	65	61			69
5	81	69	61	55	79	68	61	55		66	60	54			64	58	54			63
6	75	63	55	49	73	62	55	49		60	54	49			59	53	48			57
7	70	58	50	44	68	57	49	44		56	49	44			54	48	43			53
8	66	53	45	40	64	52	45	40		51	44	40			50	44	39			49
9	62	49	41	36	60	49	41	36		47	41	36			46	40	36			45
10	58	46	38	33	57	45	38	33		44	38	33			43	37	33			42

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	185988	185988	185988
5°	182678	185268	185539
10°	180723	185963	183044
15°	178622	187207	180097
20°	177202	187883	179346
25°	177115	184380	179948
30°	171479	172472	173791
35°	155780	148462	157190
40°	137825	116896	141177
45°	127856	89025	131922
50°	122856	65900	126430
55°	111250	45408	109750
60°	96710	30910	96145
65°	93430	22355	88691
70°	84484	15086	75288
75°	69634	9921	59713
80°	56033	6580	44501
85°	46093	3242	29460



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.9	4.6
10°-20°	408.6	13.3
20°-30°	617.3	20.0
30°-40°	646.0	21.0
40°-50°	523.2	17.0
50°-60°	380.6	12.4
60°-70°	234.7	7.6
70°-80°	106.0	3.4
80°-90°	21.5	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°	1168.8	37.9
0°-40°	1814.9	58.9
0°-60°	2718.7	88.2
0°-90°	3081.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3081.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1514	1514	1514	1514	1514	
5°	1481	1504	1502	1502	1504	140
15°	1404	1444	1472	1439	1416	397
25°	1307	1346	1360	1351	1328	599
35°	1039	1053	990	1053	1048	647
45°	736	713	512	722	759	572
55°	519	487	212	491	512	463
65°	321	289	77	284	305	315
75°	147	126	21	109	126	159
85°	33	26	2	19	21	37
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°	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9
2.5°	1495.2	1495.2	1509.3	1525.5	1511.6	1497.5	1506.8	1502.3	1518.6	1518.6	1511.6
5°	1481.3	1485.9	1497.5	1511.6	1500.0	1485.9	1497.5	1492.9	1509.3	1509.3	1504.5
7.5°	1467.3	1469.6	1483.6	1500.0	1488.2	1474.3	1483.6	1481.3	1495.2	1497.5	1492.9
10°	1448.7	1451.0	1465.0	1481.3	1469.6	1458.0	1467.3	1465.0	1483.6	1483.6	1481.3
12.5°	1430.1	1432.4	1446.4	1460.3	1448.7	1437.1	1446.4	1446.4	1465.0	1467.3	1465.0
15°	1404.4	1409.0	1420.8	1434.6	1427.8	1413.7	1423.0	1423.0	1439.4	1444.0	1444.0
17.5°	1383.5	1385.8	1397.4	1411.4	1402.1	1390.4	1399.7	1399.7	1416.0	1420.8	1420.8
20°	1355.4	1360.2	1371.8	1385.8	1378.8	1369.5	1376.5	1376.5	1395.1	1399.7	1402.1
22.5°	1332.2	1336.8	1346.1	1364.9	1353.1	1346.1	1355.4	1353.1	1374.2	1376.5	1376.5
25°	1306.6	1311.3	1322.9	1334.5	1327.5	1320.6	1327.5	1327.5	1343.8	1346.1	1346.1
27.5°	1269.4	1271.6	1283.2	1295.0	1288.0	1278.7	1288.0	1285.7	1301.9	1304.3	1301.9
30°	1208.8	1213.5	1218.1	1234.4	1227.4	1220.4	1229.7	1225.1	1241.4	1241.4	1239.0
32.5°	1131.8	1131.8	1141.3	1152.9	1143.6	1138.9	1145.9	1148.2	1159.9	1159.9	1152.9
35°	1038.7	1043.5	1050.3	1057.4	1050.3	1045.8	1052.8	1050.3	1064.4	1059.7	1052.8
37.5°	945.6	947.9	955.0	964.3	955.0	947.9	950.2	947.9	959.5	959.5	947.9
40°	859.4	864.1	868.7	878.0	868.7	864.1	866.4	859.4	873.5	868.7	861.7
42.5°	789.5	791.8	798.8	803.6	794.2	791.8	794.2	789.5	796.5	791.8	777.9
45°	735.9	735.9	738.4	745.3	735.9	733.7	733.7	728.9	735.9	726.6	712.7
47.5°	689.4	691.7	694.1	698.7	691.7	684.8	687.1	677.8	682.4	675.4	656.7
50°	642.8	647.4	649.9	654.4	647.4	642.8	645.1	635.8	635.8	624.2	607.9
52.5°	596.3	598.6	596.3	600.9	596.3	589.3	591.6	582.3	582.3	568.4	552.0
55°	519.4	521.7	524.1	528.7	524.1	517.1	521.7	514.8	514.8	505.3	486.7
57.5°	442.5	444.9	447.2	449.5	449.5	444.9	447.2	442.5	440.2	433.1	419.3
60°	393.6	393.6	393.6	395.9	393.6	391.3	391.3	386.6	386.6	377.3	363.4
62.5°	356.4	358.7	358.7	361.0	358.7	356.4	354.1	349.4	347.1	337.7	326.0
65°	321.4	321.4	319.1	323.7	321.4	319.1	319.1	314.4	309.8	300.5	288.8
67.5°	279.5	281.7	279.5	281.7	281.7	279.5	277.2	272.4	270.1	263.1	249.2
70°	235.2	235.2	235.2	237.6	235.2	235.2	237.6	230.6	228.3	218.9	207.3
72.5°	190.9	193.4	193.4	190.9	193.4	188.6	188.6	188.6	186.3	177.0	165.3
75°	146.7	149.1	149.1	151.4	149.1	146.7	146.7	144.4	142.1	135.1	125.8
77.5°	109.4	109.4	111.7	111.7	111.7	109.4	109.4	104.8	104.8	100.1	90.8
80°	79.2	79.2	76.9	79.2	79.2	76.9	76.9	74.5	74.5	69.9	62.9
82.5°	51.3	53.6	53.6	53.6	53.6	51.3	51.3	51.3	48.8	46.6	42.0
85°	32.7	32.7	32.7	32.7	34.9	32.7	34.9	32.7	32.7	27.9	25.6
87.5°	14.0	14.0	14.0	16.3	16.3	14.0	14.0	14.0	14.0	14.0	11.6
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°	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9
2.5°	1511.6	1513.9	1506.8	1516.1	1509.3	1511.6	1513.9	1511.6	1502.3	1502.3	1527.9
5°	1502.3	1506.8	1500.0	1511.6	1506.8	1506.8	1511.6	1509.3	1500.0	1502.3	1525.5
7.5°	1492.9	1500.0	1495.2	1506.8	1500.0	1500.0	1504.5	1504.5	1495.2	1497.5	1518.6
10°	1478.9	1488.2	1485.9	1497.5	1490.7	1490.7	1497.5	1497.5	1488.2	1490.7	1511.6
12.5°	1467.3	1476.6	1474.3	1485.9	1481.3	1483.6	1485.9	1490.7	1478.9	1483.6	1502.3
15°	1448.7	1458.0	1458.0	1469.6	1465.0	1469.6	1474.3	1481.3	1471.9	1471.9	1490.7
17.5°	1427.8	1439.4	1439.4	1448.7	1448.7	1451.0	1460.3	1467.3	1458.0	1460.3	1476.6
20°	1404.4	1418.5	1418.5	1430.1	1427.8	1432.4	1439.4	1446.4	1437.1	1437.1	1455.7
22.5°	1381.1	1392.8	1395.1	1402.1	1402.1	1404.4	1411.4	1416.0	1404.4	1404.4	1423.0
25°	1348.6	1360.2	1362.5	1367.2	1362.5	1362.5	1367.2	1371.8	1360.2	1360.2	1376.5
27.5°	1304.3	1315.9	1315.9	1313.6	1308.9	1311.3	1308.9	1311.3	1299.6	1297.3	1313.6
30°	1239.0	1246.0	1246.0	1243.7	1236.7	1236.7	1229.7	1232.1	1215.8	1215.8	1229.7
32.5°	1150.6	1157.5	1152.9	1148.2	1138.9	1134.3	1129.6	1127.3	1110.9	1110.9	1127.3
35°	1045.8	1050.3	1043.5	1034.2	1022.4	1015.4	1008.5	999.2	987.5	989.9	999.2
37.5°	938.6	938.6	929.3	910.7	901.4	889.6	878.0	878.0	859.4	857.1	864.1
40°	847.8	838.5	822.2	796.5	780.2	768.6	752.3	743.0	728.9	728.9	740.7
42.5°	766.3	747.7	726.6	691.7	675.4	661.5	640.5	631.2	614.9	612.5	619.5
45°	694.1	675.4	645.1	607.9	587.0	570.7	540.3	528.7	514.8	512.4	517.1
47.5°	635.8	614.9	577.7	528.7	507.8	486.7	456.5	440.2	428.6	421.5	428.6
50°	584.5	556.6	517.1	465.8	437.9	419.3	382.0	365.7	349.4	344.8	347.1
52.5°	528.7	500.8	458.8	405.2	379.6	351.6	316.7	293.5	279.5	272.4	279.5
55°	468.1	440.2	398.3	344.8	316.7	291.2	253.8	235.2	218.9	212.0	218.9
57.5°	402.9	377.3	340.0	286.5	260.8	237.6	202.7	184.1	167.7	163.0	167.7
60°	347.1	326.0	288.8	237.6	216.6	190.9	160.7	142.1	128.1	125.8	128.1
62.5°	309.8	286.5	251.5	202.7	181.6	160.7	132.8	114.2	102.4	100.1	102.4
65°	272.4	246.9	214.3	172.3	151.4	135.1	107.1	90.8	79.2	76.9	79.2
67.5°	230.6	207.3	179.3	142.1	125.8	109.4	86.2	69.9	60.6	58.3	60.6
70°	190.9	170.0	142.1	114.2	97.8	86.2	65.2	53.6	44.3	42.0	44.3
72.5°	151.4	132.8	109.4	86.2	76.9	65.2	51.3	39.5	32.7	30.2	32.7
75°	116.5	102.4	83.8	62.9	55.9	48.8	34.9	27.9	23.3	20.9	23.3
77.5°	81.5	72.2	58.3	46.6	39.5	34.9	25.6	18.6	16.3	14.0	16.3
80°	55.9	48.8	39.5	30.2	25.6	20.9	16.3	11.6	9.3	9.3	9.3
82.5°	37.2	30.2	23.3	18.6	16.3	14.0	9.3	7.0	7.0	4.7	4.7
85°	20.9	18.6	14.0	11.6	9.3	7.0	4.7	4.7	2.3	2.3	2.3
87.5°	9.3	7.0	4.7	4.7	2.3	2.3	2.3	2.3	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°	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9
2.5°	1520.9	1513.9	1523.2	1513.9	1509.3	1513.9	1509.3	1523.2	1511.6	1502.3	1511.6
5°	1518.6	1509.3	1518.6	1511.6	1504.5	1506.8	1502.3	1516.1	1502.3	1495.2	1500.0
7.5°	1513.9	1506.8	1511.6	1504.5	1497.5	1500.0	1495.2	1506.8	1492.9	1485.9	1490.7
10°	1506.8	1500.0	1502.3	1497.5	1490.7	1490.7	1485.9	1495.2	1478.9	1469.6	1474.3
12.5°	1497.5	1488.2	1492.9	1485.9	1476.6	1476.6	1471.9	1478.9	1462.6	1453.3	1455.7
15°	1485.9	1476.6	1476.6	1469.6	1460.3	1460.3	1451.0	1458.0	1439.4	1430.1	1430.1
17.5°	1471.9	1460.3	1460.3	1453.3	1441.7	1439.4	1432.4	1439.4	1418.5	1409.0	1409.0
20°	1451.0	1441.7	1439.4	1434.6	1423.0	1420.8	1411.4	1413.7	1397.4	1390.4	1388.1
22.5°	1423.0	1413.7	1416.0	1409.0	1399.7	1397.4	1388.1	1395.1	1378.8	1371.8	1374.2
25°	1374.2	1369.5	1374.2	1371.8	1364.9	1364.9	1360.2	1364.9	1350.9	1346.1	1348.6
27.5°	1318.2	1315.9	1318.2	1318.2	1313.6	1313.6	1313.6	1320.6	1306.6	1304.3	1304.3
30°	1236.7	1236.7	1239.0	1241.4	1241.4	1246.0	1243.7	1253.0	1243.7	1239.0	1243.7
32.5°	1129.6	1138.9	1145.9	1145.9	1145.9	1150.6	1155.2	1162.2	1152.9	1155.2	1155.2
35°	1008.5	1015.4	1020.1	1031.7	1024.9	1041.0	1045.8	1055.1	1052.8	1057.4	1055.1
37.5°	873.5	882.8	892.1	908.4	906.0	924.6	933.9	952.5	947.9	957.2	961.8
40°	747.7	761.6	775.6	787.2	796.5	815.2	833.8	857.1	864.1	871.0	873.5
42.5°	626.5	640.5	663.8	680.1	694.1	724.3	750.0	777.9	784.9	798.8	803.6
45°	528.7	540.3	568.4	589.3	600.9	645.1	675.4	710.3	722.1	738.4	745.3
47.5°	437.9	458.8	486.7	512.4	528.7	575.2	614.9	652.2	668.5	687.1	696.4
50°	358.7	382.0	419.3	442.5	465.8	517.1	561.3	600.9	617.2	638.1	647.4
52.5°	293.5	319.1	354.1	379.6	405.2	458.8	505.3	542.7	563.6	577.7	591.6
55°	230.6	258.5	293.5	321.4	342.3	400.6	440.2	477.4	491.4	503.0	510.1
57.5°	179.3	200.2	235.2	258.5	284.2	335.3	375.0	402.9	414.5	428.6	433.1
60°	139.8	160.7	193.4	216.6	239.9	288.8	328.4	356.4	368.0	379.6	386.6
62.5°	111.7	132.8	163.0	184.1	205.0	249.2	284.2	312.1	326.0	337.7	344.8
65°	88.5	107.1	132.8	153.7	170.0	209.6	244.5	270.1	284.2	295.8	302.8
67.5°	69.9	86.2	109.4	123.5	139.8	172.3	202.7	225.9	237.6	251.5	258.5
70°	53.6	65.2	86.2	97.8	109.4	137.4	160.7	184.1	195.7	205.0	209.6
72.5°	39.5	48.8	65.2	74.5	81.5	104.8	123.5	139.8	149.1	158.4	163.0
75°	27.9	34.9	46.6	53.6	58.3	74.5	90.8	102.4	109.4	116.5	123.5
77.5°	18.6	23.3	30.2	34.9	39.5	51.3	60.6	69.9	76.9	83.8	86.2
80°	11.6	16.3	20.9	23.3	25.6	32.7	42.0	46.6	51.3	55.9	58.3
82.5°	7.0	9.3	11.6	14.0	16.3	20.9	25.6	30.2	32.7	37.2	39.5
85°	2.3	4.7	4.7	7.0	7.0	11.6	14.0	16.3	18.6	20.9	23.3
87.5°	0.0	0.0	2.3	2.3	2.3	2.3	4.7	4.7	4.7	4.7	4.7
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: P880571

CATALOG NUMBER: LD4C35D010 EU4359050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9	1513.9
2.5°	1520.9	1513.9	1509.3	1506.8	1523.2	1502.3	1511.6	1513.9
5°	1511.6	1504.5	1500.0	1497.5	1511.6	1492.9	1500.0	1504.5
7.5°	1497.5	1492.9	1485.9	1483.6	1497.5	1476.6	1485.9	1488.2
10°	1481.3	1474.3	1469.6	1467.3	1478.9	1458.0	1467.3	1467.3
12.5°	1460.3	1455.7	1446.4	1446.4	1455.7	1437.1	1444.0	1444.0
15°	1432.4	1427.8	1418.5	1418.5	1427.8	1409.0	1416.0	1416.0
17.5°	1409.0	1404.4	1397.4	1395.1	1404.4	1385.8	1392.8	1390.4
20°	1390.4	1385.8	1376.5	1376.5	1383.5	1364.9	1371.8	1371.8
22.5°	1374.2	1371.8	1362.5	1362.5	1371.8	1353.1	1357.9	1353.1
25°	1348.6	1346.1	1336.8	1339.3	1343.8	1325.2	1332.2	1327.5
27.5°	1306.6	1306.6	1297.3	1295.0	1301.9	1285.7	1290.3	1288.0
30°	1241.4	1243.7	1232.1	1232.1	1234.4	1220.4	1227.4	1225.1
32.5°	1152.9	1155.2	1145.9	1143.6	1150.6	1138.9	1143.6	1143.6
35°	1055.1	1057.4	1050.3	1050.3	1057.4	1050.3	1050.3	1048.1
37.5°	957.2	961.8	957.2	959.5	964.3	957.2	961.8	959.5
40°	878.0	882.8	875.7	880.3	885.1	878.0	885.1	880.3
42.5°	805.8	812.9	808.1	812.9	817.4	812.9	817.4	810.6
45°	752.3	757.0	754.6	757.0	761.6	759.3	761.6	759.3
47.5°	701.0	710.3	705.7	710.3	717.3	712.7	717.3	710.3
50°	654.4	661.5	659.2	663.8	666.0	663.8	668.5	661.5
52.5°	593.9	600.9	598.6	598.6	603.2	598.6	603.2	598.6
55°	514.8	517.1	517.1	519.4	517.1	514.8	517.1	512.4
57.5°	437.9	442.5	435.6	442.5	440.2	437.9	437.9	433.1
60°	388.9	395.9	391.3	395.9	393.6	393.6	393.6	391.3
62.5°	349.4	354.1	349.4	351.6	351.6	351.6	349.4	347.1
65°	305.1	312.1	307.4	309.8	307.4	305.1	307.4	305.1
67.5°	260.8	263.1	263.1	260.8	260.8	260.8	260.8	256.2
70°	212.0	214.3	212.0	216.6	214.3	212.0	214.3	209.6
72.5°	165.3	167.7	165.3	167.7	165.3	165.3	165.3	165.3
75°	123.5	125.8	125.8	125.8	125.8	125.8	121.2	125.8
77.5°	88.5	88.5	88.5	90.8	88.5	88.5	88.5	88.5
80°	60.6	60.6	60.6	62.9	60.6	62.9	60.6	62.9
82.5°	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5
85°	20.9	23.3	23.3	20.9	20.9	20.9	20.9	20.9
87.5°	4.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)