

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: P879413

Luminaire Tested: **LD4C35D010 EU4359035 4LBDWWLI**

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: P879413
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C35D010 EU4359035 4LBLDWWLI
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBLDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

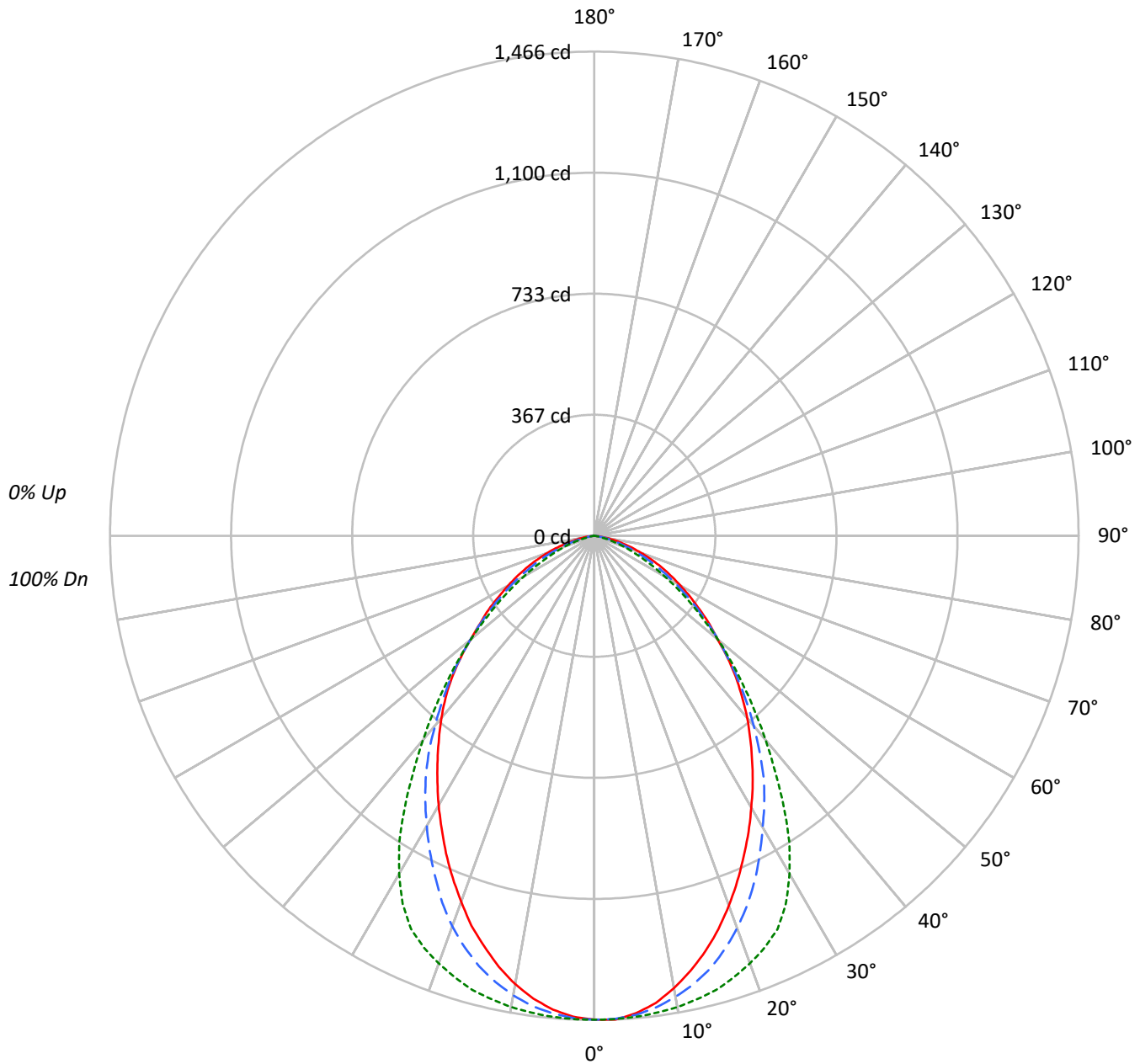
Lumens per Lamp: N/A
Luminaire Lumens: 2691.0 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	104	101	108	105	102	99		101	98	96			97	95	93			93
2	103	96	90	85	100	94	89	84		91	86	83			87	84	81			85
3	95	86	79	74	93	84	78	73		82	76	72			79	74	70			77
4	88	78	70	64	86	76	69	64		74	68	63			72	66	62			70
5	82	70	62	57	80	69	62	56		67	61	56			65	60	55			64
6	76	64	56	50	74	63	56	50		61	55	50			60	54	49			58
7	71	59	51	45	69	58	50	45		56	50	45			55	49	45			54
8	66	54	46	41	65	53	46	41		52	45	41			51	45	40			50
9	62	50	42	37	61	49	42	37		48	42	37			47	41	37			46
10	59	46	39	34	57	46	39	34		45	39	34			44	38	34			43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	180005	180005	180005
5°	178941	180286	177585
10°	173488	180736	171991
15°	165522	181127	163703
20°	155748	180105	154022
25°	145070	177969	143877
30°	134794	167592	133702
35°	124990	149901	124090
40°	115565	129261	115469
45°	105287	110343	106156
50°	93002	93308	93518
55°	83319	76294	83683
60°	73638	60591	73786
65°	64825	46192	64186
70°	53736	33082	53736
75°	41866	18987	40299
80°	27167	4669	25965
85°	10008	1551	7753



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.5	5.1
10°-20°	380.5	14.1
20°-30°	532.0	19.8
30°-40°	561.1	20.9
40°-50°	477.4	17.7
50°-60°	336.8	12.5
60°-70°	190.9	7.1
70°-80°	68.1	2.5
80°-90°	6.5	0.2
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°	1050.0	39.0
0°-40°	1611.2	59.9
0°-60°	2425.4	90.1
0°-90°	2691.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2691.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1465	1465	1465	1465	1465	
5°	1451	1456	1462	1452	1440	137
15°	1301	1356	1424	1348	1287	365
25°	1070	1150	1313	1140	1061	492
35°	833	894	1000	889	827	521
45°	606	615	635	618	611	466
55°	389	376	356	377	391	349
65°	223	191	159	192	221	221
75°	88	60	40	59	85	95
85°	7	3	1	3	6	13
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°	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2
2.5°	1466.3	1463.6	1463.6	1463.6	1463.6	1463.6	1463.6	1463.6	1463.6	1464.1	1464.1
5°	1451.0	1449.9	1449.3	1449.3	1449.3	1449.3	1449.9	1452.1	1453.2	1454.8	1455.9
7.5°	1426.9	1424.7	1425.8	1425.8	1426.9	1428.0	1429.6	1431.8	1435.1	1437.3	1440.0
10°	1390.7	1388.5	1391.3	1392.4	1395.6	1397.3	1400.0	1403.3	1409.9	1413.2	1417.6
12.5°	1348.5	1347.4	1348.5	1352.9	1356.2	1358.4	1361.7	1368.8	1375.4	1382.5	1390.2
15°	1301.4	1298.7	1300.3	1305.8	1311.3	1315.1	1317.8	1327.1	1335.9	1346.9	1356.2
17.5°	1248.8	1245.0	1249.3	1253.7	1260.8	1264.1	1268.0	1278.4	1290.4	1302.5	1312.9
20°	1191.3	1190.2	1192.9	1198.9	1206.1	1210.4	1213.7	1225.2	1235.6	1252.1	1264.1
22.5°	1131.5	1132.6	1134.8	1141.4	1146.3	1152.4	1157.3	1167.7	1179.7	1195.1	1210.4
25°	1070.2	1071.8	1075.6	1080.0	1088.2	1091.5	1097.6	1108.5	1118.9	1133.2	1150.2
27.5°	1011.0	1011.5	1015.9	1018.1	1025.8	1032.9	1035.6	1047.1	1059.2	1070.2	1085.0
30°	950.2	951.8	954.5	960.6	968.2	971.0	974.3	984.7	994.0	1007.7	1019.2
32.5°	892.1	891.0	894.3	897.6	906.3	911.3	912.9	924.9	933.2	946.9	957.8
35°	833.4	830.7	835.6	838.9	846.6	851.0	853.2	862.5	870.2	881.7	893.7
37.5°	774.8	777.0	779.2	781.9	785.8	786.9	793.4	795.6	805.5	814.3	820.8
40°	720.6	719.5	718.4	721.1	726.0	728.2	728.8	734.8	737.0	745.8	750.7
42.5°	662.5	663.0	662.5	663.0	665.8	665.8	667.4	671.2	672.9	675.6	681.7
45°	606.0	606.0	604.4	604.9	605.5	604.9	605.5	607.1	610.4	610.4	614.8
47.5°	547.4	546.3	548.5	546.9	545.8	545.2	546.9	545.2	548.5	548.5	549.6
50°	486.6	486.6	489.3	488.8	489.9	487.7	488.2	488.2	488.8	488.2	490.4
52.5°	439.5	438.4	437.3	434.5	435.6	433.4	433.4	434.0	432.3	431.8	429.0
55°	389.0	390.1	388.5	387.4	387.4	385.2	384.7	381.4	379.2	377.5	375.9
57.5°	343.6	344.7	344.1	341.4	338.1	338.6	337.5	334.3	329.3	326.0	323.3
60°	299.7	300.8	299.7	297.0	295.9	293.7	293.2	288.8	284.9	280.6	277.3
62.5°	260.3	260.3	259.7	255.9	253.2	253.7	251.0	247.7	242.7	236.7	231.8
65°	223.0	222.5	219.7	218.1	215.9	213.2	211.5	206.6	202.7	197.8	191.2
67.5°	185.8	184.1	183.0	181.4	176.4	175.9	173.7	169.3	163.8	160.0	154.5
70°	149.6	149.0	146.9	146.9	143.0	141.4	138.1	134.2	129.3	123.8	119.5
72.5°	118.4	117.3	115.1	112.9	109.6	108.5	105.8	101.9	97.5	92.1	86.6
75°	88.2	87.1	86.6	83.8	81.1	78.4	77.3	73.4	69.0	65.2	60.3
77.5°	61.9	60.8	59.2	57.5	55.9	54.2	52.6	49.3	45.5	42.2	37.8
80°	38.4	37.3	36.2	35.6	34.0	33.4	31.2	29.6	26.3	24.1	21.4
82.5°	19.7	19.7	18.6	18.1	17.0	16.4	15.9	14.2	12.6	11.0	9.3
85°	7.1	7.1	6.6	6.0	6.0	5.5	5.5	4.9	3.8	3.8	2.7
87.5°	0.5	0.5	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2
2.5°	1464.7	1464.1	1464.7	1464.7	1465.2	1465.2	1465.2	1464.7	1465.2	1464.7	1464.7
5°	1455.9	1457.6	1458.7	1459.8	1460.3	1460.8	1460.8	1461.4	1461.9	1461.9	1461.4
7.5°	1442.2	1445.5	1448.8	1451.0	1452.1	1453.2	1454.8	1455.9	1457.0	1456.5	1455.9
10°	1424.1	1429.6	1434.0	1438.4	1440.6	1442.2	1445.0	1447.2	1448.2	1448.8	1447.2
12.5°	1398.4	1406.1	1413.2	1420.3	1423.6	1425.8	1431.3	1435.1	1437.3	1437.3	1435.6
15°	1366.1	1377.0	1387.4	1396.7	1402.2	1405.5	1413.7	1419.2	1422.5	1424.1	1421.4
17.5°	1327.1	1339.8	1352.4	1364.4	1369.9	1374.8	1386.3	1394.0	1401.1	1402.2	1398.9
20°	1277.3	1293.2	1307.4	1322.2	1328.2	1335.9	1349.1	1361.7	1372.6	1377.6	1368.2
22.5°	1221.4	1238.9	1252.1	1270.2	1278.4	1286.6	1303.6	1319.5	1338.7	1349.1	1332.6
25°	1163.3	1178.1	1194.0	1211.5	1223.0	1231.8	1251.5	1271.8	1297.6	1312.9	1289.9
27.5°	1100.8	1114.0	1133.2	1152.4	1161.1	1172.1	1195.6	1217.6	1242.2	1255.9	1238.9
30°	1036.2	1052.6	1070.7	1088.2	1100.8	1111.3	1130.4	1149.1	1169.9	1181.4	1168.8
32.5°	972.1	988.0	1003.3	1022.5	1029.6	1038.9	1055.9	1071.8	1087.7	1098.1	1083.3
35°	904.7	918.9	933.2	946.3	949.6	960.6	974.3	983.6	991.3	999.5	989.6
37.5°	831.2	842.2	849.3	863.6	869.1	870.7	881.7	888.2	896.5	898.1	897.6
40°	756.7	766.6	772.6	781.4	785.8	785.8	793.4	799.5	805.5	806.0	805.5
42.5°	687.1	692.1	697.0	702.5	701.4	708.0	711.2	714.0	718.4	718.4	719.5
45°	617.0	620.8	625.2	626.3	630.7	630.7	633.4	634.5	636.7	635.1	632.9
47.5°	551.8	553.4	554.0	558.9	560.0	556.2	559.5	560.0	559.5	559.5	558.4
50°	489.9	491.0	490.4	488.8	489.3	491.0	489.3	487.1	488.2	488.2	489.3
52.5°	429.6	427.4	426.3	426.3	424.1	424.1	421.4	420.3	419.7	417.5	420.3
55°	374.3	371.0	366.0	364.9	363.3	362.7	359.5	356.7	355.6	356.2	355.6
57.5°	321.1	316.2	312.9	311.8	310.1	306.9	303.0	300.3	299.7	298.6	298.6
60°	272.9	267.4	262.5	257.5	258.1	255.9	252.1	250.4	248.8	246.6	248.2
62.5°	229.0	223.0	217.5	212.6	209.3	207.7	204.9	202.2	200.6	198.9	201.1
65°	185.8	180.8	174.8	169.9	168.2	166.6	163.8	159.5	158.9	158.9	160.0
67.5°	146.9	141.4	135.9	132.6	130.4	128.2	127.1	124.9	123.3	122.2	122.7
70°	112.9	107.4	103.0	99.7	98.1	97.5	93.7	93.2	92.6	92.1	91.5
72.5°	82.2	77.8	74.0	71.8	69.6	67.9	66.9	65.2	64.7	64.7	64.7
75°	56.4	53.2	48.8	46.0	44.9	43.3	41.6	40.5	39.5	40.0	40.0
77.5°	34.0	30.7	27.9	25.8	25.2	23.6	21.9	20.8	19.2	19.2	19.7
80°	18.6	15.9	13.7	12.1	11.0	10.4	8.8	8.2	7.1	6.6	6.6
82.5°	8.2	6.6	5.5	4.9	4.4	3.8	3.3	2.7	2.7	2.2	2.7
85°	2.7	2.2	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
87.5°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2
2.5°	1464.1	1464.1	1463.6	1463.6	1463.6	1462.5	1462.5	1461.9	1461.4	1460.8	1459.8
5°	1460.3	1459.8	1458.7	1458.1	1457.6	1455.9	1454.3	1453.2	1451.5	1449.3	1448.2
7.5°	1454.8	1453.2	1451.0	1449.9	1448.2	1444.4	1441.7	1438.9	1436.2	1432.4	1428.0
10°	1445.5	1442.2	1438.9	1436.7	1434.0	1429.1	1423.6	1419.2	1413.2	1407.7	1401.7
12.5°	1432.4	1428.5	1421.9	1418.7	1415.4	1408.2	1401.1	1391.8	1383.6	1375.9	1368.8
15°	1415.9	1408.8	1401.1	1396.7	1391.8	1380.3	1369.3	1359.5	1348.5	1339.2	1327.7
17.5°	1391.8	1381.4	1370.4	1365.5	1358.9	1345.8	1332.6	1318.9	1306.3	1294.8	1280.6
20°	1355.6	1344.1	1329.9	1322.2	1316.7	1299.2	1286.6	1271.3	1258.1	1243.9	1228.0
22.5°	1313.4	1297.6	1281.7	1270.7	1264.7	1247.1	1230.2	1216.5	1202.2	1185.8	1174.3
25°	1265.8	1246.1	1226.9	1215.9	1206.6	1188.0	1171.5	1157.3	1139.7	1125.5	1114.0
27.5°	1212.1	1189.6	1167.1	1156.2	1147.4	1127.1	1109.6	1094.8	1077.8	1065.2	1053.2
30°	1148.0	1127.7	1106.3	1097.6	1087.1	1066.3	1046.0	1032.9	1014.3	1001.1	988.0
32.5°	1068.0	1054.8	1037.8	1025.8	1020.3	1001.1	984.1	968.2	952.3	941.9	928.8
35°	980.3	968.8	954.5	948.0	940.8	928.8	915.1	901.4	888.8	878.9	866.9
37.5°	891.5	880.0	871.2	864.1	859.7	848.8	840.6	830.2	821.4	812.1	805.5
40°	799.5	796.2	786.9	783.6	782.5	770.4	763.3	755.1	749.6	744.1	740.3
42.5°	717.8	712.3	705.2	705.8	702.5	695.9	691.0	685.5	681.7	678.9	675.1
45°	637.3	632.9	629.6	632.3	626.9	624.7	620.8	620.3	617.5	612.6	611.0
47.5°	560.6	560.0	560.6	558.9	557.8	556.7	557.3	554.5	551.8	550.1	548.0
50°	490.4	491.0	492.1	493.7	489.9	491.5	491.0	490.4	490.4	488.8	489.9
52.5°	422.5	423.0	424.1	425.8	426.3	426.3	428.0	429.0	431.2	434.0	434.0
55°	358.4	362.2	364.4	367.1	365.5	368.8	370.4	375.3	377.0	377.0	379.2
57.5°	301.4	305.2	306.9	310.1	311.2	314.0	318.4	321.1	324.9	328.2	331.5
60°	249.3	251.0	255.3	260.3	259.2	265.8	269.0	273.4	278.4	280.6	284.9
62.5°	202.7	204.9	208.2	209.9	213.7	217.0	224.7	229.0	233.4	238.9	243.3
65°	161.1	163.3	166.6	169.9	171.5	176.4	180.3	187.9	191.8	197.8	202.7
67.5°	123.3	126.6	129.3	131.5	132.6	137.5	143.6	146.9	154.0	160.0	163.8
70°	92.1	94.8	98.1	97.5	99.7	103.6	107.9	112.9	118.4	123.8	128.2
72.5°	64.1	66.9	69.0	69.6	71.8	74.5	77.8	81.6	86.0	91.5	97.5
75°	40.5	41.1	43.3	44.4	45.5	48.8	51.5	55.3	59.2	63.6	67.4
77.5°	20.3	21.9	23.0	24.1	24.7	27.4	30.1	33.4	36.7	41.1	44.9
80°	7.7	8.2	9.9	10.4	11.5	13.2	15.3	17.0	19.7	23.0	25.2
82.5°	2.7	3.3	3.8	3.8	4.4	5.5	6.0	7.7	9.3	10.4	11.5
85°	1.1	1.1	1.1	1.1	1.1	1.6	1.6	2.2	2.7	3.3	3.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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



TEST NUMBER: P879413

CATALOG NUMBER: LD4C35D010 EU4359035 4LBLDWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2	1465.2
2.5°	1459.2	1459.2	1458.7	1458.1	1458.1	1458.1	1457.6	1457.6
5°	1446.1	1444.4	1443.9	1442.8	1442.2	1441.7	1440.0	1440.0
7.5°	1424.7	1422.5	1420.8	1419.2	1417.0	1415.4	1415.4	1413.2
10°	1396.2	1391.8	1389.6	1387.4	1384.7	1381.4	1380.3	1378.7
12.5°	1361.7	1352.9	1350.7	1346.9	1342.5	1340.3	1336.5	1336.5
15°	1318.9	1309.6	1304.7	1302.5	1297.0	1293.2	1291.5	1287.1
17.5°	1269.1	1261.9	1254.3	1251.0	1245.0	1240.0	1237.8	1237.3
20°	1218.7	1207.1	1202.2	1197.3	1190.2	1185.8	1182.5	1178.1
22.5°	1160.6	1150.2	1143.0	1139.7	1133.7	1126.0	1120.6	1120.6
25°	1099.2	1089.9	1086.0	1078.9	1071.8	1069.1	1062.5	1061.4
27.5°	1040.6	1031.3	1023.6	1019.7	1011.5	1007.7	1002.2	1000.0
30°	979.7	968.8	963.3	962.8	952.9	949.1	944.7	942.5
32.5°	918.9	909.6	904.1	900.8	896.5	889.9	886.0	883.9
35°	858.6	852.6	847.7	843.9	836.7	833.4	830.2	827.4
37.5°	795.6	790.2	788.0	784.7	781.4	775.4	774.3	772.1
40°	734.8	727.7	727.7	725.5	722.2	721.7	720.0	720.0
42.5°	671.2	668.0	667.4	668.0	665.8	664.7	663.0	666.9
45°	608.2	609.9	607.1	607.7	606.6	608.8	608.8	611.0
47.5°	550.1	548.0	549.1	550.1	551.8	551.8	551.2	550.7
50°	488.2	490.4	492.6	489.9	491.0	491.5	488.8	489.3
52.5°	435.1	435.6	437.3	435.6	437.3	436.7	437.8	435.6
55°	383.6	383.6	385.8	386.3	386.9	388.5	389.0	390.7
57.5°	333.7	336.4	339.2	338.6	340.8	343.0	341.4	343.0
60°	290.4	292.6	295.3	296.4	298.1	299.2	299.2	300.3
62.5°	246.6	251.0	253.2	255.3	255.3	257.5	259.7	260.3
65°	207.1	212.1	213.7	215.3	216.4	218.6	221.4	220.8
67.5°	169.9	173.2	175.3	176.4	179.7	180.8	183.0	185.2
70°	133.2	137.5	139.2	141.4	144.1	146.3	148.5	149.6
72.5°	101.9	105.2	106.3	108.5	111.2	113.4	114.5	116.2
75°	71.2	76.7	77.3	78.9	81.1	83.8	85.5	84.9
77.5°	47.1	51.0	51.5	53.7	55.9	58.1	58.6	59.2
80°	27.9	30.1	30.7	31.8	33.4	34.5	35.6	36.7
82.5°	13.2	14.2	15.3	15.3	16.4	17.5	17.5	18.1
85°	4.4	4.4	4.9	4.9	5.5	5.5	6.0	5.5
87.5°	0.5	0.5	0.0	0.5	0.5	0.5	0.5	0.5
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)