

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: P843559

Luminaire Tested: **LD4C25DE010B2750 EU4C25B50 4LBSWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843559
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C25DE010B2750 EU4C25B50 4LBSWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

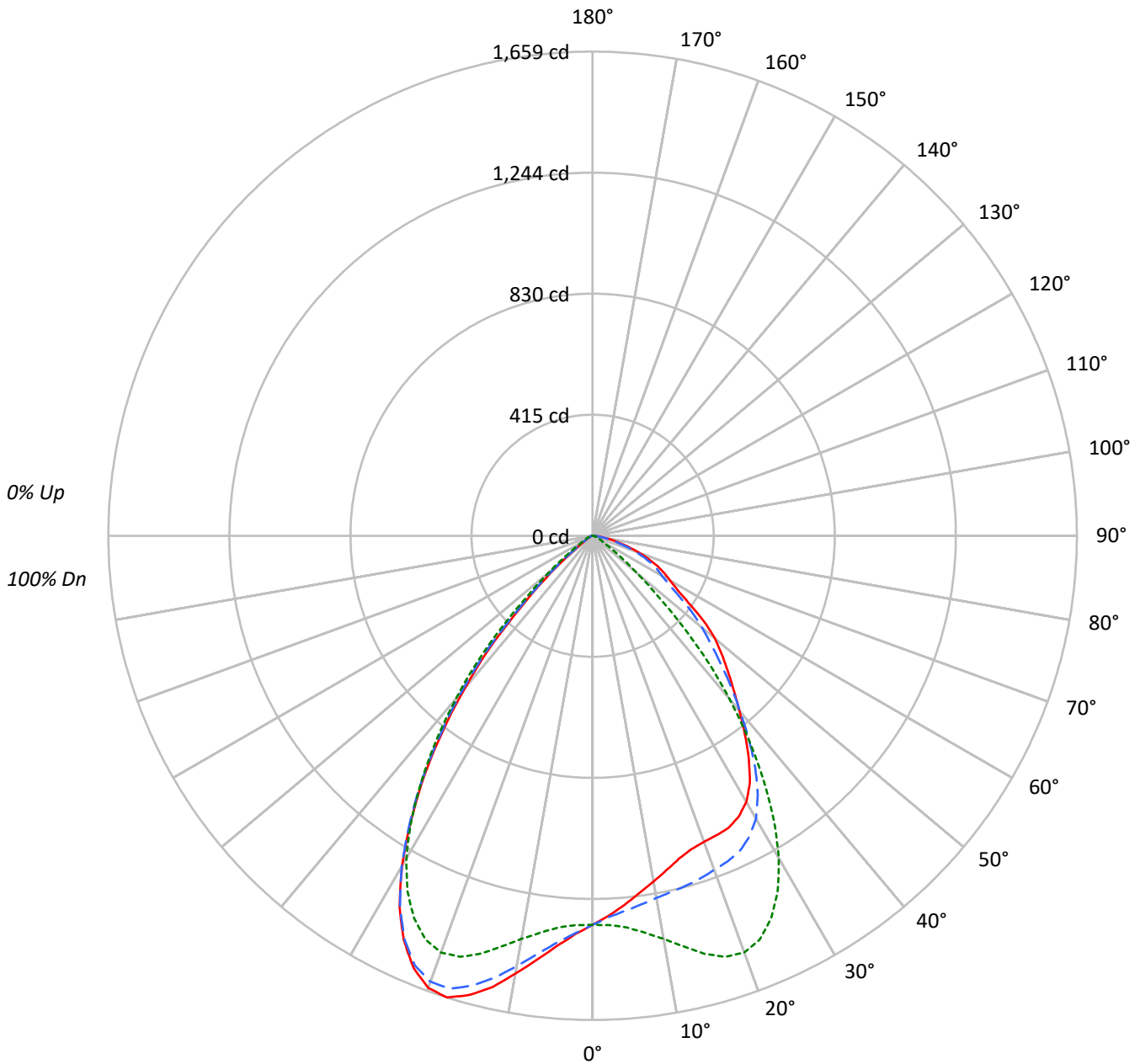
Lumens per Lamp: N/A
Luminaire Lumens: 2460.1 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V):
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					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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90								
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72								
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48								
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44								
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40								
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	163776	163776	163776
5°	156460	166116	174058
10°	150010	174985	189967
15°	145642	188593	207188
20°	145851	198630	215469
25°	149557	196038	207370
30°	149363	180955	185154
35°	139898	152946	150861
40°	125316	116656	108862
45°	113696	74066	60775
50°	104450	37575	25955
55°	85740	16792	8568
60°	75260	9411	4693
65°	70814	7064	3546
70°	60633	5639	3161
75°	46233	4177	2516
80°	33252	2476	1273
85°	24386	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.5	5.3
10°-20°	403.6	16.4
20°-30°	624.4	25.4
30°-40°	615.2	25.0
40°-50°	377.8	15.4
50°-60°	168.0	6.8
60°-70°	93.8	3.8
70°-80°	40.6	1.7
80°-90°	7.3	0.3
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°	1157.5	47.0
0°-40°	1772.6	72.1
0°-60°	2318.4	94.2
0°-90°	2460.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2460.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1333	1333	1333	1333	1333	
5°	1269	1290	1347	1399	1411	119
15°	1145	1241	1483	1596	1629	325
25°	1103	1192	1446	1524	1530	506
35°	933	971	1020	1016	1006	579
45°	654	621	426	372	350	507
55°	400	362	78	45	40	368
65°	244	219	24	14	12	239
75°	97	84	9	5	5	107
85°	17	14	0	0	0	22
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°	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1
2.5°	1301.7	1301.7	1301.7	1301.7	1305.2	1300.0	1305.2	1305.2	1310.5	1312.2	1307.0
5°	1268.7	1266.9	1268.7	1268.7	1272.1	1270.4	1275.6	1279.1	1286.2	1289.6	1289.6
7.5°	1233.9	1233.9	1233.9	1237.4	1242.6	1240.8	1246.0	1251.3	1261.8	1268.7	1273.9
10°	1202.5	1200.8	1206.0	1207.8	1213.0	1213.0	1221.7	1227.0	1239.1	1253.1	1260.1
12.5°	1172.9	1171.2	1174.7	1180.0	1188.7	1188.7	1195.5	1204.3	1221.7	1237.4	1249.5
15°	1145.1	1146.9	1152.1	1155.6	1166.0	1166.0	1174.7	1185.2	1204.3	1223.5	1240.8
17.5°	1126.0	1127.8	1131.2	1136.4	1146.9	1146.9	1155.6	1167.7	1188.7	1209.5	1230.5
20°	1115.6	1117.3	1120.8	1126.0	1134.7	1136.4	1143.4	1157.4	1176.4	1199.0	1218.2
22.5°	1110.4	1113.8	1117.3	1120.8	1129.4	1129.4	1138.2	1148.6	1167.7	1190.4	1207.8
25°	1103.3	1106.8	1108.6	1113.8	1120.8	1120.8	1126.0	1138.2	1155.6	1174.7	1192.2
27.5°	1084.3	1087.8	1089.5	1094.7	1101.6	1099.8	1106.8	1115.6	1131.2	1148.6	1162.6
30°	1052.9	1054.7	1058.2	1059.9	1065.1	1065.1	1070.2	1079.0	1089.5	1105.1	1119.0
32.5°	1002.4	1005.9	1007.7	1009.4	1014.6	1012.9	1014.6	1019.8	1030.2	1044.2	1052.9
35°	932.8	939.8	939.8	943.2	945.0	943.2	943.2	950.2	955.5	965.8	971.1
37.5°	856.3	861.4	859.8	863.2	864.9	859.8	863.2	864.9	871.9	877.1	878.9
40°	781.4	783.2	783.2	783.2	783.2	781.4	783.2	784.9	790.2	790.2	784.9
42.5°	713.6	715.3	715.3	711.8	715.3	713.6	713.6	713.6	713.6	706.6	701.3
45°	654.4	656.2	656.2	654.4	654.4	650.9	649.2	647.4	642.2	633.5	621.3
47.5°	598.6	602.1	603.9	600.4	598.6	595.1	595.1	584.8	577.8	567.3	550.0
50°	546.5	550.0	550.0	546.5	546.5	541.2	536.0	532.5	522.0	510.0	489.0
52.5°	480.4	485.6	485.6	483.9	483.9	476.9	475.1	468.1	459.4	445.5	428.1
55°	400.3	407.3	405.5	403.8	400.3	400.3	400.3	395.0	389.8	379.4	362.0
57.5°	342.8	344.6	344.6	342.8	342.8	339.4	339.4	334.2	332.4	321.9	308.1
60°	306.3	306.3	308.1	306.3	304.6	302.8	301.1	297.6	292.3	285.5	275.0
62.5°	276.7	278.5	278.5	276.7	275.0	273.2	271.5	268.0	264.5	259.3	248.9
65°	243.6	247.1	245.4	243.6	241.9	240.2	240.2	236.7	233.2	229.7	219.2
67.5°	207.1	208.9	210.6	207.1	207.1	205.4	205.4	201.9	200.1	193.1	186.2
70°	168.8	170.5	170.5	168.8	168.8	167.0	167.0	165.3	163.6	158.4	151.5
72.5°	132.3	134.0	132.3	130.5	130.5	130.5	128.8	127.0	125.3	121.8	116.6
75°	97.4	97.4	99.2	97.4	95.7	95.7	93.9	93.9	90.4	88.7	83.6
77.5°	69.6	71.3	69.6	69.6	67.8	66.1	66.1	64.4	64.4	62.6	59.2
80°	47.0	47.0	48.8	47.0	45.3	47.0	45.3	43.5	43.5	41.8	38.3
82.5°	29.6	31.3	29.6	29.6	29.6	29.6	29.6	27.8	27.8	26.1	24.3
85°	17.3	17.3	17.3	17.3	17.3	17.3	17.3	15.7	15.7	15.7	14.0
87.5°	8.8	8.8	7.0	7.0	8.8	8.8	8.8	7.0	7.0	7.0	7.0
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°	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1
2.5°	1314.0	1315.7	1319.2	1324.4	1324.4	1320.9	1329.7	1329.7	1333.1	1334.8	1341.8
5°	1300.0	1303.5	1310.5	1319.2	1320.9	1319.2	1331.3	1336.6	1341.8	1347.0	1357.5
7.5°	1287.9	1294.8	1307.0	1319.2	1324.4	1324.4	1343.5	1350.5	1361.0	1371.3	1383.6
10°	1280.9	1291.4	1308.7	1327.9	1333.1	1338.3	1361.0	1374.8	1388.8	1402.7	1420.1
12.5°	1272.1	1291.4	1314.0	1338.3	1348.7	1355.7	1387.1	1404.4	1423.6	1441.0	1463.7
15°	1270.4	1293.1	1322.7	1354.0	1367.9	1378.3	1413.2	1437.5	1460.2	1482.8	1505.4
17.5°	1263.6	1291.4	1327.9	1362.8	1380.1	1394.0	1434.0	1463.7	1489.8	1512.4	1538.4
20°	1254.8	1286.2	1326.2	1364.5	1383.6	1397.5	1441.0	1468.8	1498.3	1519.3	1543.6
22.5°	1242.6	1273.9	1314.0	1352.2	1369.6	1381.8	1425.3	1449.7	1475.8	1496.7	1519.3
25°	1221.7	1251.3	1286.2	1317.4	1334.8	1345.2	1383.6	1406.2	1425.3	1446.2	1467.1
27.5°	1192.2	1214.8	1244.3	1266.9	1277.4	1287.9	1319.2	1338.3	1355.7	1373.1	1387.1
30°	1139.9	1157.4	1178.2	1197.3	1207.8	1209.5	1239.1	1249.5	1263.6	1275.6	1286.2
32.5°	1070.2	1084.3	1096.3	1106.8	1113.8	1115.6	1138.2	1141.6	1155.6	1155.6	1171.2
35°	981.6	988.6	997.1	997.1	1002.4	997.1	1012.9	1016.4	1018.1	1019.8	1032.0
37.5°	880.6	884.1	889.4	878.9	878.9	873.6	878.9	882.4	875.4	875.4	884.1
40°	784.9	777.9	770.9	760.5	755.4	744.8	744.8	736.2	730.9	727.4	729.2
42.5°	692.6	677.0	661.3	638.7	628.2	617.8	607.4	595.1	591.7	583.1	577.8
45°	603.9	581.3	560.4	523.8	503.0	492.5	469.9	445.5	429.9	426.3	412.5
47.5°	529.0	495.9	461.2	417.7	396.8	377.7	344.6	323.7	302.8	292.3	283.7
50°	462.9	433.4	388.2	341.1	315.0	295.8	259.3	235.0	212.4	196.6	186.2
52.5°	405.5	372.4	330.7	276.7	250.7	229.7	189.6	161.8	142.7	127.0	114.9
55°	341.1	315.0	273.2	222.7	196.6	172.3	137.5	108.0	88.7	78.4	69.6
57.5°	294.1	271.5	231.5	182.8	158.4	135.8	100.9	76.6	60.9	50.4	45.3
60°	262.8	241.9	207.1	160.1	137.5	116.6	83.6	60.9	47.0	38.3	34.8
62.5°	236.7	215.8	184.5	141.0	121.8	100.9	71.3	50.4	38.3	31.3	26.1
65°	207.1	187.9	160.1	121.8	104.4	87.0	60.9	41.8	31.3	24.3	20.8
67.5°	175.8	158.4	134.0	100.9	87.0	73.1	48.8	34.8	26.1	20.8	17.3
70°	142.7	128.8	106.2	81.9	69.6	57.4	40.0	27.8	19.1	15.7	14.0
72.5°	109.7	97.4	81.9	62.6	52.2	43.5	29.6	20.8	15.7	12.2	10.5
75°	78.4	69.6	57.4	45.3	38.3	31.3	22.6	15.7	10.5	8.8	7.0
77.5°	53.9	48.8	40.0	31.3	26.1	22.6	15.7	10.5	8.8	7.0	5.3
80°	34.8	31.3	26.1	19.1	15.7	14.0	8.8	7.0	5.3	3.5	3.5
82.5°	20.8	19.1	15.7	10.5	8.8	7.0	5.3	3.5	3.5	1.8	1.8
85°	12.2	10.5	7.0	5.3	5.3	3.5	3.5	1.8	1.8	0.0	0.0
87.5°	5.3	3.5	3.5	1.8	1.8	1.8	1.8	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°	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1
2.5°	1338.3	1347.0	1345.2	1350.5	1348.7	1348.7	1357.5	1354.0	1362.8	1362.8	1364.5
5°	1357.5	1369.6	1369.6	1378.3	1376.6	1380.1	1388.8	1388.8	1399.2	1402.7	1402.7
7.5°	1385.3	1400.9	1404.4	1413.2	1414.9	1421.8	1428.9	1430.6	1444.4	1447.9	1449.7
10°	1423.6	1442.7	1447.9	1456.7	1460.2	1467.1	1475.8	1479.3	1496.7	1498.3	1505.4
12.5°	1470.5	1491.5	1496.7	1507.1	1508.9	1517.6	1529.8	1533.3	1550.6	1555.9	1561.1
15°	1515.8	1534.9	1543.6	1554.1	1555.9	1566.4	1576.7	1580.2	1595.9	1602.8	1608.1
17.5°	1547.1	1569.7	1575.0	1589.0	1589.0	1597.6	1608.1	1611.6	1627.2	1632.5	1635.9
20°	1554.1	1575.0	1582.0	1592.4	1594.2	1599.4	1608.1	1611.6	1625.5	1627.2	1632.5
22.5°	1528.0	1548.9	1552.4	1562.9	1564.6	1569.7	1576.7	1575.0	1592.4	1590.7	1592.4
25°	1472.3	1491.5	1491.5	1503.6	1501.9	1507.1	1510.6	1508.9	1524.5	1524.5	1524.5
27.5°	1392.3	1409.7	1411.4	1420.1	1414.9	1416.6	1420.1	1418.4	1428.9	1428.9	1428.9
30°	1293.1	1307.0	1301.7	1308.7	1305.2	1308.7	1305.2	1303.5	1307.0	1310.5	1308.7
32.5°	1169.5	1180.0	1180.0	1181.7	1181.7	1171.2	1167.7	1167.7	1166.0	1164.3	1164.3
35°	1026.8	1035.5	1032.0	1032.0	1030.2	1019.8	1014.6	1011.2	1016.4	1005.9	1012.9
37.5°	880.6	882.4	877.1	875.4	866.6	866.6	858.1	851.0	854.5	852.8	845.8
40°	720.5	727.4	717.0	713.6	718.8	711.8	703.1	694.3	701.3	692.6	696.1
42.5°	563.8	562.1	558.6	558.6	558.6	548.2	546.5	544.7	546.5	539.5	534.3
45°	407.3	402.0	396.8	396.8	389.8	386.4	386.4	381.2	372.4	372.4	362.0
47.5°	275.0	262.8	259.3	257.6	254.1	254.1	250.7	247.1	245.4	236.7	236.7
50°	179.3	167.0	163.6	161.8	163.6	160.1	156.6	153.1	149.7	148.0	144.5
52.5°	108.0	102.7	99.2	97.4	93.9	92.2	90.4	87.0	85.2	85.2	83.6
55°	64.4	59.2	52.2	52.2	52.2	50.4	48.8	47.0	45.3	45.3	43.5
57.5°	40.0	36.6	33.1	31.3	31.3	31.3	29.6	29.6	29.6	29.6	27.8
60°	29.6	26.1	24.3	24.3	24.3	22.6	22.6	22.6	22.6	20.8	20.8
62.5°	22.6	20.8	19.1	19.1	17.3	17.3	17.3	17.3	17.3	17.3	15.7
65°	19.1	15.7	15.7	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
67.5°	14.0	12.2	12.2	12.2	12.2	10.5	10.5	10.5	10.5	10.5	10.5
70°	10.5	10.5	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
72.5°	8.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
75°	7.0	7.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
77.5°	5.3	5.3	5.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
80°	3.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P843559

CATALOG NUMBER: LD4C25DE010B2750 EU4C25B50 4LBSWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1	1333.1
2.5°	1364.5	1373.1	1364.5	1364.5	1369.6	1367.9	1371.3	1366.1
5°	1404.4	1416.6	1407.9	1406.2	1414.9	1413.2	1414.9	1411.4
7.5°	1453.2	1465.4	1456.7	1456.7	1465.4	1463.7	1468.8	1465.4
10°	1508.9	1522.8	1510.6	1512.4	1524.5	1522.8	1522.8	1522.8
12.5°	1566.4	1580.2	1573.2	1573.2	1582.0	1583.7	1585.5	1583.7
15°	1613.3	1627.2	1618.5	1618.5	1630.7	1629.0	1630.7	1629.0
17.5°	1641.1	1655.1	1644.6	1644.6	1655.1	1655.1	1656.8	1658.6
20°	1634.1	1649.8	1641.1	1637.6	1649.8	1649.8	1648.1	1648.1
22.5°	1594.2	1608.1	1601.0	1597.6	1606.3	1602.8	1601.0	1602.8
25°	1524.5	1538.4	1524.5	1524.5	1531.5	1529.8	1531.5	1529.8
27.5°	1430.6	1441.0	1427.1	1425.3	1432.4	1428.9	1427.1	1432.4
30°	1305.2	1315.7	1308.7	1303.5	1312.2	1307.0	1303.5	1305.2
32.5°	1162.6	1169.5	1166.0	1157.4	1162.6	1159.1	1157.4	1159.1
35°	1005.9	1014.6	1000.7	998.9	1007.7	1000.7	997.1	1005.9
37.5°	844.0	854.5	842.3	844.0	838.8	840.6	837.1	842.3
40°	691.0	689.2	685.8	684.0	685.8	680.5	684.0	678.8
42.5°	525.5	529.0	527.3	525.5	527.3	520.4	516.9	523.8
45°	365.4	363.7	360.2	356.7	356.7	355.0	355.0	349.8
47.5°	235.0	233.2	226.2	228.0	231.5	228.0	222.7	229.7
50°	142.7	141.0	141.0	139.2	142.7	139.2	135.8	135.8
52.5°	80.1	80.1	78.4	78.4	78.4	78.4	76.6	74.9
55°	43.5	41.8	41.8	41.8	40.0	40.0	40.0	40.0
57.5°	27.8	27.8	27.8	27.8	27.8	27.8	26.1	26.1
60°	20.8	20.8	20.8	20.8	19.1	20.8	19.1	19.1
62.5°	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
65°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
67.5°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
70°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
72.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
75°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
77.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
80°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	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



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)