

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: P858631

Luminaire Tested: **LD4C30W2N2050D010 4LBSWNL1_2000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858631
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 11/9/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C30W2N2050D010 4LBSWNLI_2000K
Description: 4 INCH 3000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2000K, W2N2050 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

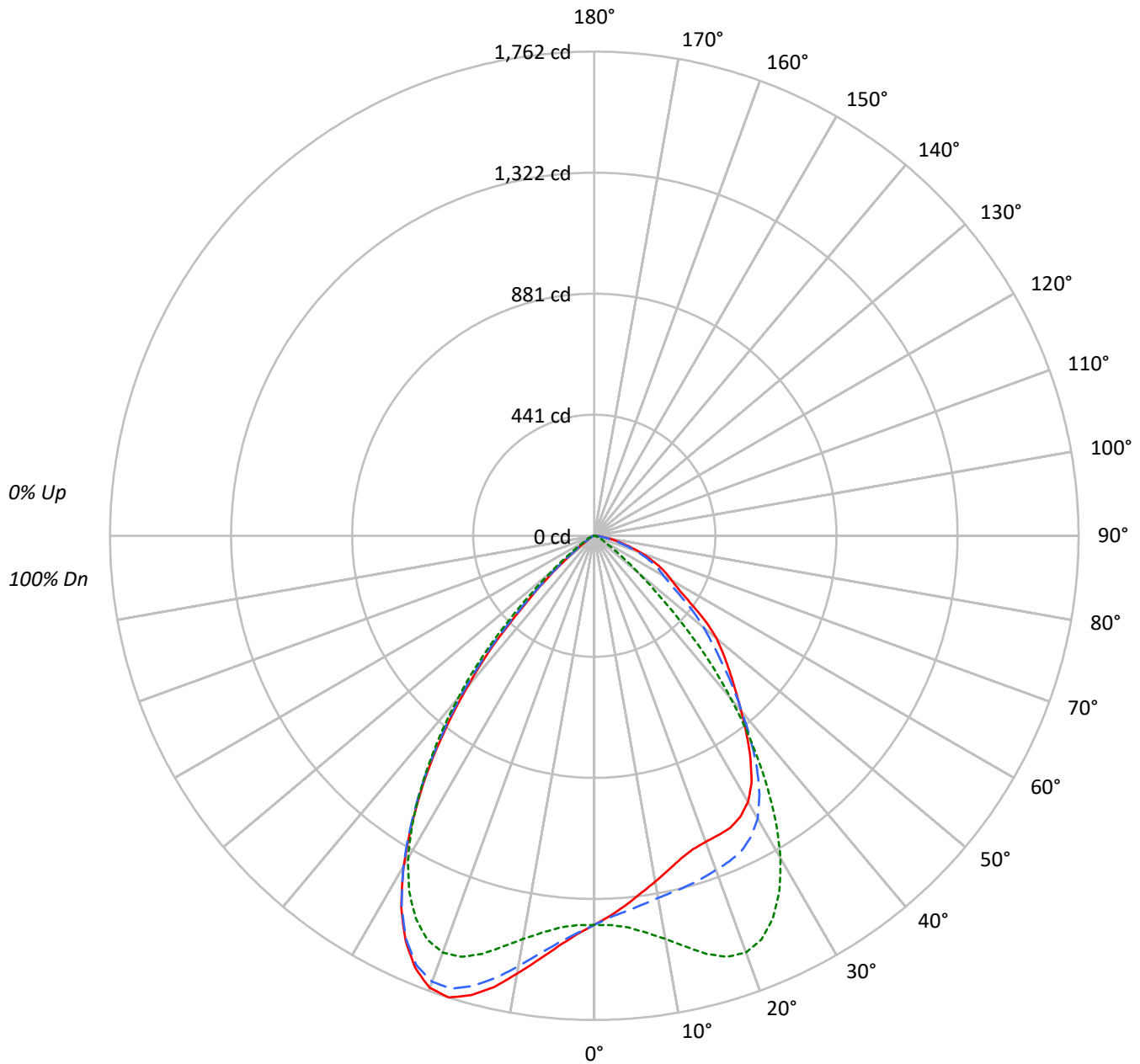
Lumens per Lamp: N/A
Luminaire Lumens: 2613.0 lumens
Efficiency: N/A
Efficacy: 66.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 39.6
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	112	108	105	102	109	106	103	101	102	100	98		98	96	95		95
2	104	98	93	89	102	96	92	88	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	75	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	67	62	83	74	67	62	72	66	61		70	65	60		68
6	79	69	61	56	78	68	61	56	66	60	55		64	59	55		63
7	75	63	56	51	73	62	55	51	61	55	50		60	54	50		58
8	70	58	51	46	69	58	51	46	57	50	46		55	50	46		54
9	66	54	47	42	65	54	47	42	53	46	42		52	46	42		51
10	62	51	44	39	61	50	43	39	49	43	39		48	43	39		47

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	173961	173961	173961
5°	166190	176450	184873
10°	159341	185863	201781
15°	154698	200320	220059
20°	154911	210985	228870
25°	158856	208224	220261
30°	158641	192205	196673
35°	148597	162454	160235
40°	133110	123921	115630
45°	120750	78687	64545
50°	110949	39926	27560
55°	91073	17820	9103
60°	79928	10000	5012
65°	75232	7529	3779
70°	64404	5999	3341
75°	49128	4414	2658
80°	35303	2618	1344
85°	26077	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.5	5.3
10°-20°	428.7	16.4
20°-30°	663.2	25.4
30°-40°	653.4	25.0
40°-50°	401.2	15.4
50°-60°	178.4	6.8
60°-70°	99.7	3.8
70°-80°	43.1	1.7
80°-90°	7.7	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°	1229.4	47.0
0°-40°	1882.8	72.1
0°-60°	2462.5	94.2
0°-90°	2613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2613.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1416	1416	1416	1416	1416	
5°	1348	1370	1431	1486	1499	126
15°	1216	1318	1575	1695	1730	345
25°	1172	1266	1536	1619	1625	538
35°	991	1032	1083	1080	1068	615
45°	695	660	453	396	372	538
55°	425	384	83	48	42	391
65°	259	233	26	15	13	253
75°	104	89	9	6	6	114
85°	18	15	0	0	0	23
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°	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0
2.5°	1382.7	1382.7	1382.7	1382.7	1386.4	1380.9	1386.4	1386.4	1392.0	1393.8	1388.3
5°	1347.6	1345.8	1347.6	1347.6	1351.3	1349.4	1354.9	1358.6	1366.1	1369.8	1369.8
7.5°	1310.6	1310.6	1310.6	1314.3	1319.8	1318.0	1323.5	1329.1	1340.2	1347.6	1353.1
10°	1277.3	1275.5	1281.0	1282.9	1288.4	1288.4	1297.7	1303.2	1316.1	1331.0	1338.4
12.5°	1245.9	1244.1	1247.8	1253.3	1262.5	1262.5	1269.9	1279.2	1297.7	1314.3	1327.2
15°	1216.3	1218.2	1223.7	1227.4	1238.5	1238.5	1247.8	1258.8	1279.2	1299.5	1318.0
17.5°	1196.0	1197.9	1201.6	1207.1	1218.2	1218.2	1227.4	1240.4	1262.5	1284.7	1306.9
20°	1184.9	1186.8	1190.5	1196.0	1205.3	1207.1	1214.5	1229.3	1249.6	1273.6	1294.0
22.5°	1179.4	1183.1	1186.8	1190.5	1199.7	1199.7	1208.9	1220.0	1240.4	1264.4	1282.9
25°	1171.9	1175.6	1177.5	1183.1	1190.5	1190.5	1196.0	1208.9	1227.4	1247.8	1266.2
27.5°	1151.7	1155.4	1157.2	1162.7	1170.1	1168.2	1175.6	1184.9	1201.6	1220.0	1234.8
30°	1118.3	1120.2	1123.9	1125.7	1131.3	1131.3	1136.8	1146.1	1157.2	1173.8	1188.6
32.5°	1064.8	1068.4	1070.3	1072.1	1077.7	1075.8	1077.7	1083.2	1094.3	1109.1	1118.3
35°	990.8	998.2	998.2	1001.9	1003.8	1001.9	1001.9	1009.3	1014.9	1025.9	1031.5
37.5°	909.5	915.1	913.2	916.9	918.7	913.2	916.9	918.7	926.1	931.6	933.5
40°	830.0	831.8	831.8	831.8	831.8	830.0	831.8	833.7	839.2	839.2	833.7
42.5°	757.9	759.8	759.8	756.0	759.8	757.9	757.9	757.9	757.9	750.5	744.9
45°	695.0	696.9	696.9	695.0	695.0	691.3	689.5	687.6	682.1	672.9	659.9
47.5°	635.9	639.6	641.4	637.8	635.9	632.2	632.2	621.1	613.7	602.6	584.2
50°	580.5	584.2	584.2	580.5	580.5	574.9	569.4	565.6	554.5	541.6	519.4
52.5°	510.2	515.7	515.7	513.9	513.9	506.5	504.6	497.3	488.0	473.2	454.7
55°	425.2	432.6	430.7	428.9	425.2	425.2	425.2	419.6	414.0	403.0	384.5
57.5°	364.1	366.0	366.0	364.1	364.1	360.4	360.4	354.9	353.1	342.0	327.2
60°	325.3	325.3	327.2	325.3	323.5	321.6	319.8	316.1	310.5	303.2	292.1
62.5°	293.9	295.8	295.8	293.9	292.1	290.2	288.4	284.7	281.0	275.4	264.3
65°	258.8	262.5	260.6	258.8	257.0	255.1	255.1	251.4	247.7	244.0	232.9
67.5°	219.9	221.8	223.6	219.9	219.9	218.1	218.1	214.4	212.6	205.2	197.8
70°	179.3	181.1	181.1	179.3	179.3	177.4	177.4	175.6	173.7	168.2	160.8
72.5°	140.5	142.3	140.5	138.6	138.6	138.6	136.8	134.9	133.1	129.4	123.8
75°	103.5	103.5	105.4	103.5	101.7	101.7	99.8	99.8	96.1	94.3	88.7
77.5°	73.9	75.8	73.9	73.9	72.1	70.2	70.2	68.4	68.4	66.6	62.9
80°	49.9	49.9	51.8	49.9	48.1	49.9	48.1	46.2	46.2	44.4	40.7
82.5°	31.4	33.2	31.4	31.4	31.4	31.4	31.4	29.5	29.5	27.7	25.9
85°	18.5	18.5	18.5	18.5	18.5	18.5	18.5	16.7	16.7	16.7	14.8
87.5°	9.3	9.3	7.4	7.4	9.3	9.3	9.3	7.4	7.4	7.4	7.4
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°	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0
2.5°	1395.6	1397.5	1401.2	1406.7	1406.7	1403.0	1412.3	1412.3	1416.0	1417.8	1425.2
5°	1380.9	1384.6	1392.0	1401.2	1403.0	1401.2	1414.1	1419.7	1425.2	1430.8	1441.9
7.5°	1367.9	1375.3	1388.3	1401.2	1406.7	1406.7	1427.1	1434.5	1445.5	1456.6	1469.6
10°	1360.5	1371.6	1390.1	1410.4	1416.0	1421.5	1445.5	1460.3	1475.1	1489.9	1508.4
12.5°	1351.3	1371.6	1395.6	1421.5	1432.6	1440.0	1473.3	1491.8	1512.1	1530.6	1554.6
15°	1349.4	1373.5	1404.9	1438.2	1452.9	1464.0	1501.0	1526.9	1550.9	1575.0	1599.0
17.5°	1342.1	1371.6	1410.4	1447.4	1465.9	1480.7	1523.2	1554.6	1582.4	1606.4	1634.1
20°	1332.8	1366.1	1408.6	1449.2	1469.6	1484.4	1530.6	1560.2	1591.6	1613.8	1639.6
22.5°	1319.8	1353.1	1395.6	1436.3	1454.8	1467.7	1513.9	1539.8	1567.6	1589.7	1613.8
25°	1297.7	1329.1	1366.1	1399.3	1417.8	1428.9	1469.6	1493.6	1513.9	1536.1	1558.3
27.5°	1266.2	1290.3	1321.7	1345.8	1356.8	1367.9	1401.2	1421.5	1440.0	1458.5	1473.3
30°	1210.8	1229.3	1251.5	1271.8	1282.9	1284.7	1316.1	1327.2	1342.1	1354.9	1366.1
32.5°	1136.8	1151.7	1164.5	1175.6	1183.1	1184.9	1208.9	1212.6	1227.4	1227.4	1244.1
35°	1042.6	1050.0	1059.2	1059.2	1064.8	1059.2	1075.8	1079.5	1081.4	1083.2	1096.2
37.5°	935.3	939.0	944.6	933.5	933.5	927.9	933.5	937.2	929.8	929.8	939.0
40°	833.7	826.3	818.9	807.8	802.3	791.1	791.1	781.9	776.4	772.7	774.6
42.5°	735.7	719.1	702.4	678.4	667.3	656.2	645.1	632.2	628.5	619.3	613.7
45°	641.4	617.4	595.2	556.4	534.3	523.1	499.1	473.2	456.6	452.9	438.1
47.5°	561.9	526.8	489.9	443.7	421.5	401.1	366.0	343.9	321.6	310.5	301.3
50°	491.7	460.3	412.2	362.3	334.6	314.2	275.4	249.6	225.5	208.9	197.8
52.5°	430.7	395.6	351.2	293.9	266.2	244.0	201.5	171.9	151.6	134.9	122.0
55°	362.3	334.6	290.2	236.6	208.9	183.0	146.0	114.6	94.3	83.2	73.9
57.5°	312.4	288.4	245.9	194.1	168.2	144.2	107.2	81.3	64.7	53.6	48.1
60°	279.1	257.0	219.9	170.0	146.0	123.8	88.7	64.7	49.9	40.7	36.9
62.5°	251.4	229.2	196.0	149.7	129.4	107.2	75.8	53.6	40.7	33.2	27.7
65°	219.9	199.7	170.0	129.4	110.9	92.4	64.7	44.4	33.2	25.9	22.2
67.5°	186.7	168.2	142.3	107.2	92.4	77.6	51.8	36.9	27.7	22.2	18.5
70°	151.6	136.8	112.8	86.9	73.9	61.0	42.5	29.5	20.4	16.7	14.8
72.5°	116.5	103.5	86.9	66.6	55.5	46.2	31.4	22.2	16.7	13.0	11.1
75°	83.2	73.9	61.0	48.1	40.7	33.2	24.0	16.7	11.1	9.3	7.4
77.5°	57.3	51.8	42.5	33.2	27.7	24.0	16.7	11.1	9.3	7.4	5.6
80°	36.9	33.2	27.7	20.4	16.7	14.8	9.3	7.4	5.6	3.7	3.7
82.5°	22.2	20.4	16.7	11.1	9.3	7.4	5.6	3.7	3.7	1.9	1.9
85°	13.0	11.1	7.4	5.6	5.6	3.7	3.7	1.9	1.9	0.0	0.0
87.5°	5.6	3.7	3.7	1.9	1.9	1.9	1.9	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°	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0
2.5°	1421.5	1430.8	1428.9	1434.5	1432.6	1432.6	1441.9	1438.2	1447.4	1447.4	1449.2
5°	1441.9	1454.8	1454.8	1464.0	1462.2	1465.9	1475.1	1475.1	1486.2	1489.9	1489.9
7.5°	1471.4	1488.1	1491.8	1501.0	1502.8	1510.2	1517.7	1519.5	1534.3	1538.0	1539.8
10°	1512.1	1532.5	1538.0	1547.2	1550.9	1558.3	1567.6	1571.3	1589.7	1591.6	1599.0
12.5°	1562.0	1584.2	1589.7	1600.8	1602.7	1611.9	1624.9	1628.6	1647.0	1652.6	1658.1
15°	1610.1	1630.4	1639.6	1650.7	1652.6	1663.7	1674.8	1678.5	1695.1	1702.5	1708.1
17.5°	1643.3	1667.4	1673.0	1687.7	1687.7	1696.9	1708.1	1711.8	1728.4	1733.9	1737.6
20°	1650.7	1673.0	1680.3	1691.4	1693.2	1698.8	1708.1	1711.8	1726.5	1728.4	1733.9
22.5°	1623.0	1645.2	1648.9	1660.0	1661.8	1667.4	1674.8	1673.0	1691.4	1689.5	1691.4
25°	1563.9	1584.2	1584.2	1597.1	1595.3	1600.8	1604.5	1602.7	1619.3	1619.3	1619.3
27.5°	1478.8	1497.3	1499.1	1508.4	1502.8	1504.7	1508.4	1506.5	1517.7	1517.7	1517.7
30°	1373.5	1388.3	1382.7	1390.1	1386.4	1390.1	1386.4	1384.6	1388.3	1392.0	1390.1
32.5°	1242.2	1253.3	1253.3	1255.1	1255.1	1244.1	1240.4	1240.4	1238.5	1236.7	1236.7
35°	1090.6	1099.9	1096.2	1096.2	1094.3	1083.2	1077.7	1074.0	1079.5	1068.4	1075.8
37.5°	935.3	937.2	931.6	929.8	920.6	920.6	911.4	903.9	907.6	905.8	898.4
40°	765.3	772.7	761.6	757.9	763.5	756.0	746.8	737.5	744.9	735.7	739.4
42.5°	598.9	597.0	593.4	593.4	593.4	582.3	580.5	578.6	580.5	573.1	567.5
45°	432.6	427.0	421.5	421.5	414.0	410.3	410.3	404.8	395.6	395.6	384.5
47.5°	292.1	279.1	275.4	273.6	269.9	269.9	266.2	262.5	260.6	251.4	251.4
50°	190.4	177.4	173.7	171.9	173.7	170.0	166.4	162.7	159.0	157.2	153.5
52.5°	114.6	109.1	105.4	103.5	99.8	98.0	96.1	92.4	90.6	90.6	88.7
55°	68.4	62.9	55.5	55.5	55.5	53.6	51.8	49.9	48.1	48.1	46.2
57.5°	42.5	38.8	35.1	33.2	33.2	33.2	31.4	31.4	31.4	31.4	29.5
60°	31.4	27.7	25.9	25.9	25.9	24.0	24.0	24.0	24.0	22.2	22.2
62.5°	24.0	22.2	20.4	20.4	18.5	18.5	18.5	18.5	18.5	18.5	16.7
65°	20.4	16.7	16.7	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
67.5°	14.8	13.0	13.0	13.0	13.0	11.1	11.1	11.1	11.1	11.1	11.1
70°	11.1	11.1	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
72.5°	9.3	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
75°	7.4	7.4	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
77.5°	5.6	5.6	5.6	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
80°	3.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
82.5°	1.9	1.9	1.9	1.9	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: P858631

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNL1_2000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0	1416.0
2.5°	1449.2	1458.5	1449.2	1449.2	1454.8	1452.9	1456.6	1451.1
5°	1491.8	1504.7	1495.4	1493.6	1502.8	1501.0	1502.8	1499.1
7.5°	1543.5	1556.5	1547.2	1547.2	1556.5	1554.6	1560.2	1556.5
10°	1602.7	1617.5	1604.5	1606.4	1619.3	1617.5	1617.5	1617.5
12.5°	1663.7	1678.5	1671.1	1671.1	1680.3	1682.2	1684.0	1682.2
15°	1713.6	1728.4	1719.2	1719.2	1732.1	1730.2	1732.1	1730.2
17.5°	1743.1	1758.0	1746.9	1746.9	1758.0	1758.0	1759.8	1761.7
20°	1735.7	1752.4	1743.1	1739.4	1752.4	1752.4	1750.6	1750.6
22.5°	1693.2	1708.1	1700.6	1696.9	1706.2	1702.5	1700.6	1702.5
25°	1619.3	1634.1	1619.3	1619.3	1626.7	1624.9	1626.7	1624.9
27.5°	1519.5	1530.6	1515.8	1513.9	1521.4	1517.7	1515.8	1521.4
30°	1386.4	1397.5	1390.1	1384.6	1393.8	1388.3	1384.6	1386.4
32.5°	1234.8	1242.2	1238.5	1229.3	1234.8	1231.1	1229.3	1231.1
35°	1068.4	1077.7	1062.9	1061.1	1070.3	1062.9	1059.2	1068.4
37.5°	896.5	907.6	894.7	896.5	891.0	892.8	889.1	894.7
40°	733.9	732.0	728.4	726.5	728.4	722.8	726.5	721.0
42.5°	558.2	561.9	560.1	558.2	560.1	552.7	549.0	556.4
45°	388.2	386.4	382.7	378.9	378.9	377.1	377.1	371.5
47.5°	249.6	247.7	240.3	242.2	245.9	242.2	236.6	244.0
50°	151.6	149.7	149.7	147.9	151.6	147.9	144.2	144.2
52.5°	85.0	85.0	83.2	83.2	83.2	83.2	81.3	79.5
55°	46.2	44.4	44.4	44.4	42.5	42.5	42.5	42.5
57.5°	29.5	29.5	29.5	29.5	29.5	29.5	27.7	27.7
60°	22.2	22.2	22.2	22.2	20.4	22.2	20.4	20.4
62.5°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
65°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
67.5°	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
70°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
72.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
75°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
77.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
80°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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)