

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: P858636

Luminaire Tested: **LD4C30W2N2050D010 4LBSWNL1_5000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858636
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_5000K
Description: 4 INCH 3000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, W2N2050 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

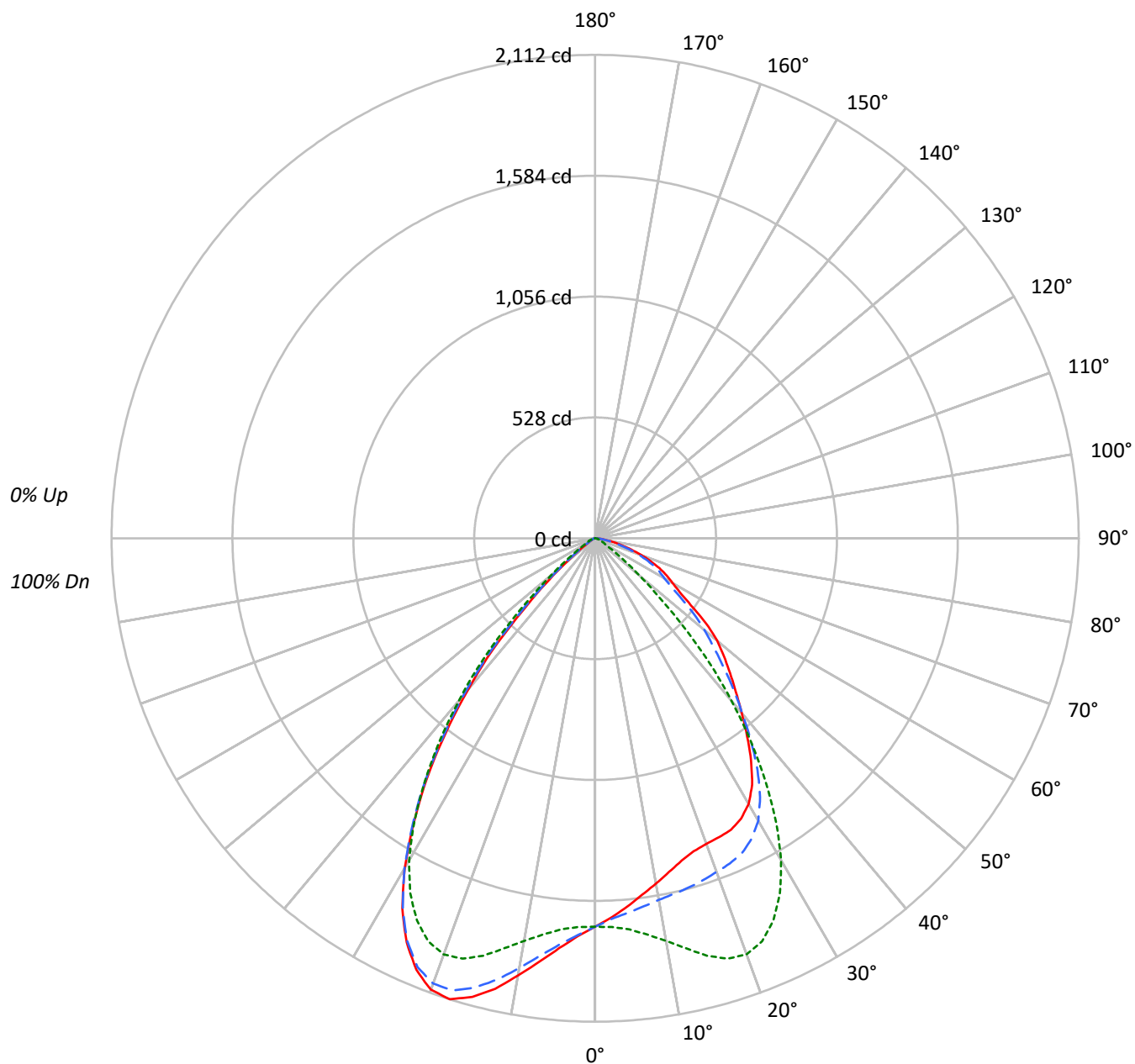
Lumens per Lamp: N/A
Luminaire Lumens: 3132.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P858636

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNL1_5000K

Luminous Intensity Polar Plot





TEST NUMBER: P858636

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNL1_5000K

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
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	112	108	105	102		109	106	103	101		102	100	98		98	96	95		95	93	92
2	104	98	93	89		102	96	92	88		93	89	86		90	87	84		87	85	82
3	97	89	83	78		95	88	82	77		85	80	76		82	78	75		80	77	74
4	91	81	75	69		89	80	74	69		78	72	68		76	71	67		74	70	66
5	85	75	67	62		83	74	67	62		72	66	61		70	65	60		68	64	60
6	79	69	61	56		78	68	61	56		66	60	55		64	59	55		63	58	54
7	75	63	56	51		73	62	55	51		61	55	50		60	54	50		58	53	50
8	70	58	51	46		69	58	51	46		57	50	46		55	50	46		54	49	45
9	66	54	47	42		65	54	47	42		53	46	42		52	46	42		51	46	42
10	62	51	44	39		61	50	43	39		49	43	39		48	43	39		47	42	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	208507	208507	208507
5°	199191	211499	221599
10°	190990	222789	241850
15°	185426	240104	263774
20°	185674	252886	274327
25°	190412	249595	264005
30°	190162	230393	235727
35°	178112	194729	192075
40°	159540	148522	138595
45°	144744	94307	77367
50°	132986	47858	33027
55°	109150	21355	10924
60°	95801	11990	5995
65°	90174	9012	4506
70°	77192	7184	3987
75°	58859	5269	3180
80°	42308	3113	1627
85°	31152	0	0



TEST NUMBER: P858636

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNL1_5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.9	5.3
10°-20°	513.8	16.4
20°-30°	794.9	25.4
30°-40°	783.2	25.0
40°-50°	480.9	15.4
50°-60°	213.8	6.8
60°-70°	119.4	3.8
70°-80°	51.7	1.7
80°-90°	9.3	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°	1473.6	47.0
0°-40°	2256.8	72.1
0°-60°	2951.6	94.2
0°-90°	3132.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3132.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1697	1697	1697	1697	1697	
5°	1615	1642	1715	1782	1797	152
15°	1458	1580	1888	2032	2074	414
25°	1405	1518	1841	1941	1948	645
35°	1188	1236	1298	1294	1281	737
45°	833	791	543	474	445	645
55°	510	461	100	58	51	468
65°	310	279	31	18	16	304
75°	124	106	11	7	7	136
85°	22	18	0	0	0	27
90°	0	0	0	0	0	



TEST NUMBER: P858636

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNLI_5000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2
2.5°	1657.3	1657.3	1657.3	1657.3	1661.7	1655.1	1661.7	1661.7	1668.4	1670.6	1664.0
5°	1615.2	1613.0	1615.2	1615.2	1619.6	1617.5	1624.1	1628.5	1637.4	1641.9	1641.9
7.5°	1570.9	1570.9	1570.9	1575.4	1582.0	1579.8	1586.4	1593.1	1606.4	1615.2	1621.9
10°	1531.0	1528.8	1535.4	1537.7	1544.3	1544.3	1555.4	1562.1	1577.5	1595.3	1604.2
12.5°	1493.3	1491.2	1495.6	1502.3	1513.3	1513.3	1522.2	1533.3	1555.4	1575.4	1590.8
15°	1457.9	1460.2	1466.8	1471.2	1484.5	1484.5	1495.6	1508.9	1533.3	1557.7	1579.8
17.5°	1433.5	1435.8	1440.2	1446.8	1460.2	1460.2	1471.2	1486.7	1513.3	1539.9	1566.5
20°	1420.2	1422.5	1426.9	1433.5	1444.6	1446.8	1455.8	1473.5	1497.8	1526.6	1551.0
22.5°	1413.7	1418.1	1422.5	1426.9	1438.0	1438.0	1449.1	1462.3	1486.7	1515.6	1537.7
25°	1404.7	1409.1	1411.4	1418.1	1426.9	1426.9	1433.5	1449.1	1471.2	1495.6	1517.7
27.5°	1380.4	1384.8	1387.0	1393.7	1402.5	1400.3	1409.1	1420.2	1440.2	1462.3	1480.1
30°	1340.5	1342.7	1347.2	1349.3	1356.0	1356.0	1362.6	1373.7	1387.0	1407.0	1424.7
32.5°	1276.2	1280.7	1282.9	1285.1	1291.8	1289.5	1291.8	1298.4	1311.7	1329.4	1340.5
35°	1187.6	1196.5	1196.5	1200.9	1203.1	1200.9	1200.9	1209.7	1216.4	1229.7	1236.4
37.5°	1090.1	1096.8	1094.5	1099.0	1101.2	1094.5	1099.0	1101.2	1110.1	1116.7	1118.9
40°	994.8	997.1	997.1	997.1	997.1	994.8	997.1	999.2	1005.9	1005.9	999.2
42.5°	908.4	910.7	910.7	906.2	910.7	908.4	908.4	908.4	908.4	899.6	892.9
45°	833.1	835.3	835.3	833.1	833.1	828.7	826.5	824.2	817.5	806.5	791.0
47.5°	762.2	766.6	768.8	764.4	762.2	757.7	757.7	744.5	735.6	722.3	700.2
50°	695.8	700.2	700.2	695.8	695.8	689.1	682.5	678.0	664.7	649.2	622.6
52.5°	611.6	618.2	618.2	616.0	616.0	607.1	604.9	596.0	584.9	567.2	545.1
55°	509.6	518.5	516.2	514.1	509.6	509.6	509.6	503.0	496.3	483.0	460.9
57.5°	436.5	438.7	438.7	436.5	436.5	432.0	432.0	425.4	423.2	409.9	392.2
60°	389.9	389.9	392.2	389.9	387.8	385.5	383.3	378.9	372.2	363.4	350.1
62.5°	352.3	354.5	354.5	352.3	350.1	347.8	345.7	341.2	336.8	330.1	316.8
65°	310.2	314.6	312.4	310.2	308.0	305.7	305.7	301.3	296.9	292.5	279.2
67.5°	263.6	265.9	268.1	263.6	263.6	261.5	261.5	257.0	254.8	245.9	237.1
70°	214.9	217.1	217.1	214.9	214.9	212.7	212.7	210.5	208.2	201.7	192.8
72.5°	168.4	170.6	168.4	166.1	166.1	166.1	164.0	161.7	159.6	155.1	148.4
75°	124.0	124.0	126.3	124.0	121.9	121.9	119.6	119.6	115.2	113.0	106.3
77.5°	88.6	90.8	88.6	88.6	86.4	84.2	84.2	81.9	81.9	79.8	75.3
80°	59.8	59.8	62.1	59.8	57.6	59.8	57.6	55.4	55.4	53.2	48.8
82.5°	37.7	39.8	37.7	37.7	37.7	37.7	37.7	35.4	35.4	33.2	31.0
85°	22.1	22.1	22.1	22.1	22.1	22.1	22.1	20.0	20.0	20.0	17.7
87.5°	11.1	11.1	8.9	8.9	11.1	11.1	11.1	8.9	8.9	8.9	8.9
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: P858636

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNLI_5000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2
2.5°	1672.9	1675.0	1679.5	1686.1	1686.1	1681.7	1692.8	1692.8	1697.2	1699.4	1708.3
5°	1655.1	1659.6	1668.4	1679.5	1681.7	1679.5	1695.0	1701.7	1708.3	1715.0	1728.2
7.5°	1639.6	1648.5	1664.0	1679.5	1686.1	1686.1	1710.5	1719.4	1732.7	1745.9	1761.5
10°	1630.8	1644.0	1666.2	1690.6	1697.2	1703.8	1732.7	1750.4	1768.1	1785.9	1808.0
12.5°	1619.6	1644.0	1672.9	1703.8	1717.1	1726.0	1765.9	1788.0	1812.4	1834.6	1863.4
15°	1617.5	1646.3	1684.0	1723.8	1741.5	1754.8	1799.2	1830.2	1859.0	1887.8	1916.6
17.5°	1608.6	1644.0	1690.6	1734.9	1757.1	1774.8	1825.7	1863.4	1896.6	1925.5	1958.7
20°	1597.5	1637.4	1688.4	1737.1	1761.5	1779.2	1834.6	1870.1	1907.7	1934.3	1965.3
22.5°	1582.0	1621.9	1672.9	1721.6	1743.8	1759.2	1814.6	1845.7	1878.9	1905.5	1934.3
25°	1555.4	1593.1	1637.4	1677.3	1699.4	1712.7	1761.5	1790.3	1814.6	1841.3	1867.8
27.5°	1517.7	1546.6	1584.2	1613.0	1626.3	1639.6	1679.5	1703.8	1726.0	1748.2	1765.9
30°	1451.2	1473.5	1500.0	1524.4	1537.7	1539.9	1577.5	1590.8	1608.6	1624.1	1637.4
32.5°	1362.6	1380.4	1395.9	1409.1	1418.1	1420.2	1449.1	1453.5	1471.2	1471.2	1491.2
35°	1249.7	1258.5	1269.6	1269.6	1276.2	1269.6	1289.5	1293.9	1296.2	1298.4	1313.9
37.5°	1121.1	1125.5	1132.2	1118.9	1118.9	1112.3	1118.9	1123.4	1114.5	1114.5	1125.5
40°	999.2	990.4	981.5	968.2	961.6	948.3	948.3	937.3	930.6	926.1	928.4
42.5°	881.9	861.9	841.9	813.1	799.8	786.6	773.3	757.7	753.3	742.3	735.6
45°	768.8	740.0	713.5	666.9	640.4	627.0	598.3	567.2	547.3	542.8	525.1
47.5°	673.5	631.4	587.2	531.8	505.2	480.8	438.7	412.2	385.5	372.2	361.1
50°	589.3	551.7	494.1	434.3	401.0	376.7	330.1	299.1	270.3	250.4	237.1
52.5°	516.2	474.1	421.0	352.3	319.1	292.5	241.5	206.1	181.7	161.7	146.3
55°	434.3	401.0	347.8	283.6	250.4	219.4	175.0	137.4	113.0	99.7	88.6
57.5°	374.5	345.7	294.7	232.6	201.7	172.8	128.5	97.5	77.5	64.2	57.6
60°	334.6	308.0	263.6	203.8	175.0	148.4	106.3	77.5	59.8	48.8	44.3
62.5°	301.3	274.7	234.9	179.4	155.1	128.5	90.8	64.2	48.8	39.8	33.2
65°	263.6	239.3	203.8	155.1	132.9	110.8	77.5	53.2	39.8	31.0	26.6
67.5°	223.8	201.7	170.6	128.5	110.8	93.1	62.1	44.3	33.2	26.6	22.1
70°	181.7	164.0	135.2	104.2	88.6	73.1	51.0	35.4	24.4	20.0	17.7
72.5°	139.6	124.0	104.2	79.8	66.5	55.4	37.7	26.6	20.0	15.5	13.3
75°	99.7	88.6	73.1	57.6	48.8	39.8	28.8	20.0	13.3	11.1	8.9
77.5°	68.7	62.1	51.0	39.8	33.2	28.8	20.0	13.3	11.1	8.9	6.7
80°	44.3	39.8	33.2	24.4	20.0	17.7	11.1	8.9	6.7	4.4	4.4
82.5°	26.6	24.4	20.0	13.3	11.1	8.9	6.7	4.4	4.4	2.3	2.3
85°	15.5	13.3	8.9	6.7	6.7	4.4	4.4	2.3	2.3	0.0	0.0
87.5°	6.7	4.4	4.4	2.3	2.3	2.3	2.3	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: P858636

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNL1_5000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2
2.5°	1703.8	1715.0	1712.7	1719.4	1717.1	1717.1	1728.2	1723.8	1734.9	1734.9	1737.1
5°	1728.2	1743.8	1743.8	1754.8	1752.6	1757.1	1768.1	1768.1	1781.5	1785.9	1785.9
7.5°	1763.7	1783.6	1788.0	1799.2	1801.3	1810.2	1819.1	1821.3	1839.0	1843.4	1845.7
10°	1812.4	1836.8	1843.4	1854.5	1859.0	1867.8	1878.9	1883.4	1905.5	1907.7	1916.6
12.5°	1872.3	1898.8	1905.5	1918.8	1921.0	1932.1	1947.6	1952.0	1974.2	1980.8	1987.4
15°	1929.9	1954.2	1965.3	1978.6	1980.8	1994.1	2007.4	2011.8	2031.8	2040.7	2047.3
17.5°	1969.7	1998.6	2005.2	2022.9	2022.9	2034.0	2047.3	2051.8	2071.6	2078.3	2082.8
20°	1978.6	2005.2	2014.1	2027.4	2029.5	2036.2	2047.3	2051.8	2069.5	2071.6	2078.3
22.5°	1945.3	1972.0	1976.4	1989.7	1991.9	1998.6	2007.4	2005.2	2027.4	2025.1	2027.4
25°	1874.5	1898.8	1898.8	1914.4	1912.2	1918.8	1923.2	1921.0	1940.9	1940.9	1940.9
27.5°	1772.5	1794.7	1796.9	1808.0	1801.3	1803.6	1808.0	1805.8	1819.1	1819.1	1819.1
30°	1646.3	1664.0	1657.3	1666.2	1661.7	1666.2	1661.7	1659.6	1664.0	1668.4	1666.2
32.5°	1488.9	1502.3	1502.3	1504.5	1504.5	1491.2	1486.7	1486.7	1484.5	1482.3	1482.3
35°	1307.2	1318.3	1313.9	1313.9	1311.7	1298.4	1291.8	1287.3	1293.9	1280.7	1289.5
37.5°	1121.1	1123.4	1116.7	1114.5	1103.4	1103.4	1092.4	1083.4	1087.9	1085.7	1076.8
40°	917.3	926.1	912.9	908.4	915.1	906.2	895.2	884.0	892.9	881.9	886.3
42.5°	717.9	715.6	711.2	711.2	711.2	697.9	695.8	693.5	695.8	686.9	680.2
45°	518.5	511.8	505.2	505.2	496.3	491.8	491.8	485.3	474.1	474.1	460.9
47.5°	350.1	334.6	330.1	328.0	323.5	323.5	319.1	314.6	312.4	301.3	301.3
50°	228.2	212.7	208.2	206.1	208.2	203.8	199.4	195.0	190.5	188.4	183.9
52.5°	137.4	130.7	126.3	124.0	119.6	117.4	115.2	110.8	108.6	108.6	106.3
55°	81.9	75.3	66.5	66.5	66.5	64.2	62.1	59.8	57.6	57.6	55.4
57.5°	51.0	46.5	42.1	39.8	39.8	39.8	37.7	37.7	37.7	37.7	35.4
60°	37.7	33.2	31.0	31.0	31.0	28.8	28.8	28.8	28.8	26.6	26.6
62.5°	28.8	26.6	24.4	24.4	22.1	22.1	22.1	22.1	22.1	22.1	20.0
65°	24.4	20.0	20.0	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
67.5°	17.7	15.5	15.5	15.5	15.5	13.3	13.3	13.3	13.3	13.3	13.3
70°	13.3	13.3	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
72.5°	11.1	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
75°	8.9	8.9	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
77.5°	6.7	6.7	6.7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
80°	4.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	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: P858636

CATALOG NUMBER: LD4C30W2N2050D010 4LBSWNL1_5000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2	1697.2
2.5°	1737.1	1748.2	1737.1	1737.1	1743.8	1741.5	1745.9	1739.4
5°	1788.0	1803.6	1792.5	1790.3	1801.3	1799.2	1801.3	1796.9
7.5°	1850.1	1865.7	1854.5	1854.5	1865.7	1863.4	1870.1	1865.7
10°	1921.0	1938.7	1923.2	1925.5	1940.9	1938.7	1938.7	1938.7
12.5°	1994.1	2011.8	2003.0	2003.0	2014.1	2016.3	2018.5	2016.3
15°	2053.9	2071.6	2060.6	2060.6	2076.1	2073.9	2076.1	2073.9
17.5°	2089.4	2107.2	2093.9	2093.9	2107.2	2107.2	2109.3	2111.6
20°	2080.5	2100.5	2089.4	2084.9	2100.5	2100.5	2098.3	2098.3
22.5°	2029.5	2047.3	2038.4	2034.0	2045.1	2040.7	2038.4	2040.7
25°	1940.9	1958.7	1940.9	1940.9	1949.8	1947.6	1949.8	1947.6
27.5°	1821.3	1834.6	1816.9	1814.6	1823.6	1819.1	1816.9	1823.6
30°	1661.7	1675.0	1666.2	1659.6	1670.6	1664.0	1659.6	1661.7
32.5°	1480.1	1488.9	1484.5	1473.5	1480.1	1475.6	1473.5	1475.6
35°	1280.7	1291.8	1274.1	1271.8	1282.9	1274.1	1269.6	1280.7
37.5°	1074.6	1087.9	1072.4	1074.6	1068.0	1070.2	1065.7	1072.4
40°	879.6	877.4	873.0	870.8	873.0	866.3	870.8	864.2
42.5°	669.1	673.5	671.4	669.1	671.4	662.5	658.1	666.9
45°	465.3	463.1	458.7	454.2	454.2	452.0	452.0	445.3
47.5°	299.1	296.9	288.0	290.3	294.7	290.3	283.6	292.5
50°	181.7	179.4	179.4	177.3	181.7	177.3	172.8	172.8
52.5°	101.9	101.9	99.7	99.7	99.7	99.7	97.5	95.3
55°	55.4	53.2	53.2	53.2	51.0	51.0	51.0	51.0
57.5°	35.4	35.4	35.4	35.4	35.4	35.4	33.2	33.2
60°	26.6	26.6	26.6	26.6	24.4	26.6	24.4	24.4
62.5°	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
65°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
67.5°	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
70°	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
72.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
75°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
77.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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)