

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: P858717

Luminaire Tested: **LD4C35W2N2050D010 4LBSWNL1_3000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858717
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: LD4C35W2N2050D010 4LBSWNLI_3000K
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, W2N2050 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

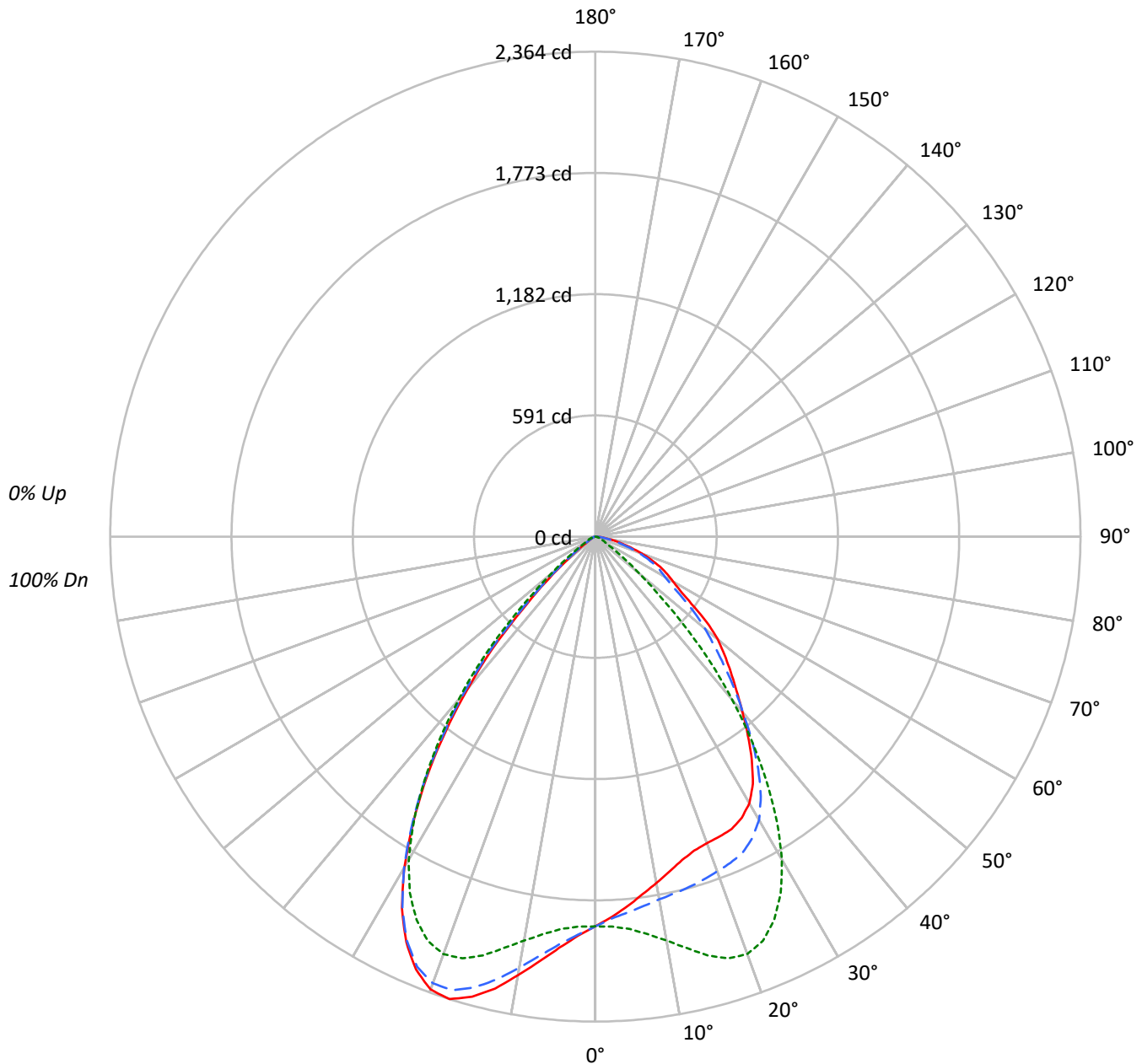
Lumens per Lamp: N/A
Luminaire Lumens: 3506.0 lumens
Efficiency: N/A
Efficacy: 66.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 52.8
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				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°	233409	233409	233409
5°	222980	236743	248064
10°	213794	249385	270742
15°	207570	268772	295278
20°	207847	283087	307090
25°	213145	279390	295534
30°	212859	257900	263886
35°	199379	217976	215006
40°	178592	166260	155146
45°	162031	105565	86610
50°	148849	53554	36983
55°	122195	23925	12209
60°	107251	13416	6708
65°	100930	10087	5058
70°	86423	8010	4454
75°	65932	5886	3560
80°	47401	3537	1769
85°	34958	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.5	5.3
10°-20°	575.2	16.4
20°-30°	889.9	25.4
30°-40°	876.8	25.0
40°-50°	538.4	15.4
50°-60°	239.4	6.8
60°-70°	133.7	3.8
70°-80°	57.9	1.7
80°-90°	10.3	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°	1649.6	47.0
0°-40°	2526.3	72.1
0°-60°	3304.1	94.2
0°-90°	3506.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3506.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1900	1900	1900	1900	1900	
5°	1808	1838	1920	1994	2012	170
15°	1632	1768	2113	2274	2322	463
25°	1572	1699	2061	2173	2180	722
35°	1329	1384	1453	1448	1434	825
45°	933	885	608	531	498	722
55°	570	516	112	64	57	524
65°	347	312	35	20	17	340
75°	139	119	12	8	8	153
85°	25	20	0	0	0	31
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°	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9
2.5°	1855.2	1855.2	1855.2	1855.2	1860.2	1852.8	1860.2	1860.2	1867.7	1870.1	1862.7
5°	1808.1	1805.7	1808.1	1808.1	1813.0	1810.6	1818.0	1823.0	1833.0	1837.9	1837.9
7.5°	1758.5	1758.5	1758.5	1763.5	1770.9	1768.4	1775.8	1783.3	1798.2	1808.1	1815.6
10°	1713.8	1711.4	1718.8	1721.3	1728.7	1728.7	1741.1	1748.6	1765.9	1785.8	1795.8
12.5°	1671.7	1669.2	1674.2	1681.7	1694.0	1694.0	1703.9	1716.4	1741.1	1763.5	1780.8
15°	1632.0	1634.5	1641.9	1646.9	1661.8	1661.8	1674.2	1689.1	1716.4	1743.7	1768.4
17.5°	1604.7	1607.2	1612.2	1619.6	1634.5	1634.5	1646.9	1664.3	1694.0	1723.7	1753.6
20°	1589.8	1592.4	1597.3	1604.7	1617.1	1619.6	1629.6	1649.4	1676.6	1708.9	1736.2
22.5°	1582.5	1587.4	1592.4	1597.3	1609.7	1609.7	1622.1	1637.0	1664.3	1696.5	1721.3
25°	1572.4	1577.4	1579.9	1587.4	1597.3	1597.3	1604.7	1622.1	1646.9	1674.2	1699.0
27.5°	1545.2	1550.2	1552.6	1560.1	1570.0	1567.5	1577.4	1589.8	1612.2	1637.0	1656.8
30°	1500.5	1503.1	1508.0	1510.5	1517.9	1517.9	1525.3	1537.8	1552.6	1575.0	1594.8
32.5°	1428.6	1433.6	1436.1	1438.5	1446.0	1443.5	1446.0	1453.4	1468.3	1488.2	1500.5
35°	1329.4	1339.3	1339.3	1344.3	1346.8	1344.3	1344.3	1354.2	1361.7	1376.5	1384.0
37.5°	1220.3	1227.8	1225.3	1230.2	1232.7	1225.3	1230.2	1232.7	1242.6	1250.0	1252.6
40°	1113.6	1116.1	1116.1	1116.1	1116.1	1113.6	1116.1	1118.6	1126.0	1126.0	1118.6
42.5°	1016.9	1019.4	1019.4	1014.4	1019.4	1016.9	1016.9	1016.9	1016.9	1007.0	999.5
45°	932.6	935.1	935.1	932.6	932.6	927.6	925.2	922.7	915.2	902.8	885.4
47.5°	853.2	858.1	860.7	855.7	853.2	848.2	848.2	833.4	823.4	808.6	783.8
50°	778.8	783.8	783.8	778.8	778.8	771.4	764.0	758.9	744.1	726.8	696.9
52.5°	684.6	692.0	692.0	689.5	689.5	679.6	677.1	667.2	654.8	634.9	610.1
55°	570.5	580.4	577.9	575.5	570.5	570.5	570.5	563.0	555.5	540.7	515.9
57.5°	488.6	491.1	491.1	488.6	488.6	483.6	483.6	476.2	473.7	458.8	439.0
60°	436.5	436.5	439.0	436.5	434.1	431.5	429.1	424.2	416.7	406.8	391.9
62.5°	394.3	396.9	396.9	394.3	391.9	389.4	386.9	382.0	377.0	369.5	354.7
65°	347.2	352.2	349.7	347.2	344.8	342.2	342.2	337.3	332.3	327.4	312.5
67.5°	295.1	297.6	300.1	295.1	295.1	292.7	292.7	287.7	285.2	275.3	265.4
70°	240.6	243.0	243.0	240.6	240.6	238.1	238.1	235.6	233.1	225.7	215.8
72.5°	188.5	190.9	188.5	186.0	186.0	186.0	183.6	181.0	178.6	173.6	166.2
75°	138.9	138.9	141.4	138.9	136.4	136.4	133.9	133.9	128.9	126.5	119.0
77.5°	99.2	101.6	99.2	99.2	96.7	94.3	94.3	91.7	91.7	89.3	84.3
80°	67.0	67.0	69.5	67.0	64.5	67.0	64.5	62.0	62.0	59.6	54.6
82.5°	42.2	44.6	42.2	42.2	42.2	42.2	42.2	39.6	39.6	37.2	34.7
85°	24.8	24.8	24.8	24.8	24.8	24.8	24.8	22.3	22.3	22.3	19.8
87.5°	12.4	12.4	9.9	9.9	12.4	12.4	12.4	9.9	9.9	9.9	9.9
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°	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9
2.5°	1872.6	1875.0	1880.0	1887.5	1887.5	1882.5	1895.0	1895.0	1899.9	1902.4	1912.3
5°	1852.8	1857.7	1867.7	1880.0	1882.5	1880.0	1897.4	1904.9	1912.3	1919.7	1934.6
7.5°	1835.4	1845.3	1862.7	1880.0	1887.5	1887.5	1914.8	1924.7	1939.6	1954.4	1971.8
10°	1825.5	1840.4	1865.1	1892.4	1899.9	1907.3	1939.6	1959.4	1979.2	1999.1	2023.9
12.5°	1813.0	1840.4	1872.6	1907.3	1922.2	1932.1	1976.8	2001.6	2028.9	2053.6	2085.9
15°	1810.6	1842.9	1885.1	1929.7	1949.5	1964.3	2014.0	2048.7	2081.0	2113.2	2145.5
17.5°	1800.7	1840.4	1892.4	1942.1	1966.9	1986.7	2043.7	2085.9	2123.1	2155.4	2192.6
20°	1788.3	1833.0	1890.0	1944.5	1971.8	1991.7	2053.6	2093.4	2135.5	2165.3	2200.0
22.5°	1770.9	1815.6	1872.6	1927.1	1952.0	1969.3	2031.3	2066.1	2103.3	2133.0	2165.3
25°	1741.1	1783.3	1833.0	1877.6	1902.4	1917.2	1971.8	2004.1	2031.3	2061.1	2090.9
27.5°	1699.0	1731.2	1773.4	1805.7	1820.5	1835.4	1880.0	1907.3	1932.1	1957.0	1976.8
30°	1624.5	1649.4	1679.1	1706.5	1721.3	1723.7	1765.9	1780.8	1800.7	1818.0	1833.0
32.5°	1525.3	1545.2	1562.5	1577.4	1587.4	1589.8	1622.1	1627.1	1646.9	1646.9	1669.2
35°	1398.9	1408.8	1421.2	1421.2	1428.6	1421.2	1443.5	1448.5	1451.0	1453.4	1470.8
37.5°	1255.0	1259.9	1267.4	1252.6	1252.6	1245.1	1252.6	1257.5	1247.6	1247.6	1259.9
40°	1118.6	1108.6	1098.7	1083.9	1076.5	1061.5	1061.5	1049.2	1041.7	1036.7	1039.3
42.5°	987.2	964.8	942.5	910.2	895.3	880.5	865.6	848.2	843.3	830.9	823.4
45°	860.7	828.4	798.7	746.6	716.8	701.9	669.7	634.9	612.7	607.6	587.8
47.5°	754.0	706.8	657.3	595.3	565.5	538.2	491.1	461.4	431.5	416.7	404.2
50°	659.7	617.6	553.1	486.2	448.9	421.6	369.5	334.9	302.6	280.2	265.4
52.5°	577.9	530.8	471.3	394.3	357.2	327.4	270.3	230.7	203.4	181.0	163.7
55°	486.2	448.9	389.4	317.5	280.2	245.6	195.9	153.8	126.5	111.7	99.2
57.5°	419.2	386.9	329.9	260.4	225.7	193.5	143.8	109.1	86.8	71.9	64.5
60°	374.5	344.8	295.1	228.2	195.9	166.2	119.0	86.8	67.0	54.6	49.6
62.5°	337.3	307.6	262.9	200.9	173.6	143.8	101.6	71.9	54.6	44.6	37.2
65°	295.1	267.9	228.2	173.6	148.8	124.0	86.8	59.6	44.6	34.7	29.7
67.5°	250.5	225.7	190.9	143.8	124.0	104.2	69.5	49.6	37.2	29.7	24.8
70°	203.4	183.6	151.3	116.6	99.2	81.8	57.0	39.6	27.3	22.3	19.8
72.5°	156.3	138.9	116.6	89.3	74.4	62.0	42.2	29.7	22.3	17.4	14.9
75°	111.7	99.2	81.8	64.5	54.6	44.6	32.3	22.3	14.9	12.4	9.9
77.5°	76.9	69.5	57.0	44.6	37.2	32.3	22.3	14.9	12.4	9.9	7.5
80°	49.6	44.6	37.2	27.3	22.3	19.8	12.4	9.9	7.5	5.0	5.0
82.5°	29.7	27.3	22.3	14.9	12.4	9.9	7.5	5.0	5.0	2.5	2.5
85°	17.4	14.9	9.9	7.5	7.5	5.0	5.0	2.5	2.5	0.0	0.0
87.5°	7.5	5.0	5.0	2.5	2.5	2.5	2.5	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°	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9
2.5°	1907.3	1919.7	1917.2	1924.7	1922.2	1922.2	1934.6	1929.7	1942.1	1942.1	1944.5
5°	1934.6	1952.0	1952.0	1964.3	1961.9	1966.9	1979.2	1979.2	1994.2	1999.1	1999.1
7.5°	1974.3	1996.6	2001.6	2014.0	2016.4	2026.3	2036.4	2038.8	2058.6	2063.6	2066.1
10°	2028.9	2056.2	2063.6	2076.0	2081.0	2090.9	2103.3	2108.3	2133.0	2135.5	2145.5
12.5°	2095.8	2125.6	2133.0	2147.9	2150.4	2162.8	2180.2	2185.1	2209.9	2217.4	2224.8
15°	2160.3	2187.6	2200.0	2214.9	2217.4	2232.3	2247.1	2252.1	2274.4	2284.3	2291.8
17.5°	2204.9	2237.2	2244.7	2264.5	2264.5	2276.9	2291.8	2296.8	2319.0	2326.5	2331.5
20°	2214.9	2244.7	2254.6	2269.5	2271.9	2279.4	2291.8	2296.8	2316.6	2319.0	2326.5
22.5°	2177.6	2207.5	2212.4	2227.3	2229.7	2237.2	2247.1	2244.7	2269.5	2266.9	2269.5
25°	2098.3	2125.6	2125.6	2143.0	2140.5	2147.9	2152.9	2150.4	2172.7	2172.7	2172.7
27.5°	1984.2	2009.0	2011.5	2023.9	2016.4	2019.0	2023.9	2021.4	2036.4	2036.4	2036.4
30°	1842.9	1862.7	1855.2	1865.1	1860.2	1865.1	1860.2	1857.7	1862.7	1867.7	1865.1
32.5°	1666.7	1681.7	1681.7	1684.1	1684.1	1669.2	1664.3	1664.3	1661.8	1659.3	1659.3
35°	1463.3	1475.8	1470.8	1470.8	1468.3	1453.4	1446.0	1441.1	1448.5	1433.6	1443.5
37.5°	1255.0	1257.5	1250.0	1247.6	1235.2	1235.2	1222.8	1212.8	1217.8	1215.3	1205.4
40°	1026.8	1036.7	1021.9	1016.9	1024.4	1014.4	1002.0	989.6	999.5	987.2	992.1
42.5°	803.6	801.1	796.1	796.1	796.1	781.3	778.8	776.3	778.8	768.9	761.4
45°	580.4	572.9	565.5	565.5	555.5	550.6	550.6	543.2	530.8	530.8	515.9
47.5°	391.9	374.5	369.5	367.1	362.2	362.2	357.2	352.2	349.7	337.3	337.3
50°	255.5	238.1	233.1	230.7	233.1	228.2	223.2	218.3	213.3	210.9	205.9
52.5°	153.8	146.3	141.4	138.9	133.9	131.5	128.9	124.0	121.6	121.6	119.0
55°	91.7	84.3	74.4	74.4	74.4	71.9	69.5	67.0	64.5	64.5	62.0
57.5°	57.0	52.1	47.1	44.6	44.6	44.6	42.2	42.2	42.2	42.2	39.6
60°	42.2	37.2	34.7	34.7	34.7	32.3	32.3	32.3	32.3	29.7	29.7
62.5°	32.3	29.7	27.3	27.3	24.8	24.8	24.8	24.8	24.8	24.8	22.3
65°	27.3	22.3	22.3	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8
67.5°	19.8	17.4	17.4	17.4	17.4	14.9	14.9	14.9	14.9	14.9	14.9
70°	14.9	14.9	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
72.5°	12.4	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
75°	9.9	9.9	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
77.5°	7.5	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
80°	5.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	2.5	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: P858717

CATALOG NUMBER: LD4C35W2N2050D010 4LBSWNL1_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9	1899.9
2.5°	1944.5	1957.0	1944.5	1944.5	1952.0	1949.5	1954.4	1947.1
5°	2001.6	2019.0	2006.5	2004.1	2016.4	2014.0	2016.4	2011.5
7.5°	2071.0	2088.4	2076.0	2076.0	2088.4	2085.9	2093.4	2088.4
10°	2150.4	2170.3	2152.9	2155.4	2172.7	2170.3	2170.3	2170.3
12.5°	2232.3	2252.1	2242.2	2242.2	2254.6	2257.0	2259.6	2257.0
15°	2299.2	2319.0	2306.7	2306.7	2324.0	2321.6	2324.0	2321.6
17.5°	2338.9	2358.8	2343.9	2343.9	2358.8	2358.8	2361.2	2363.7
20°	2328.9	2351.3	2338.9	2333.9	2351.3	2351.3	2348.9	2348.9
22.5°	2271.9	2291.8	2281.8	2276.9	2289.3	2284.3	2281.8	2284.3
25°	2172.7	2192.6	2172.7	2172.7	2182.6	2180.2	2182.6	2180.2
27.5°	2038.8	2053.6	2033.8	2031.3	2041.3	2036.4	2033.8	2041.3
30°	1860.2	1875.0	1865.1	1857.7	1870.1	1862.7	1857.7	1860.2
32.5°	1656.8	1666.7	1661.8	1649.4	1656.8	1651.8	1649.4	1651.8
35°	1433.6	1446.0	1426.2	1423.7	1436.1	1426.2	1421.2	1433.6
37.5°	1202.9	1217.8	1200.5	1202.9	1195.5	1197.9	1193.0	1200.5
40°	984.7	982.2	977.3	974.7	977.3	969.8	974.7	967.4
42.5°	749.0	754.0	751.5	749.0	751.5	741.6	736.7	746.6
45°	520.8	518.4	513.5	508.4	508.4	506.0	506.0	498.5
47.5°	334.9	332.3	322.4	324.9	329.9	324.9	317.5	327.4
50°	203.4	200.9	200.9	198.4	203.4	198.4	193.5	193.5
52.5°	114.1	114.1	111.7	111.7	111.7	111.7	109.1	106.7
55°	62.0	59.6	59.6	59.6	57.0	57.0	57.0	57.0
57.5°	39.6	39.6	39.6	39.6	39.6	39.6	37.2	37.2
60°	29.7	29.7	29.7	29.7	27.3	29.7	27.3	27.3
62.5°	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
65°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
67.5°	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
70°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
72.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
75°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
77.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)