

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: P858720

Luminaire Tested: **LD4C35W2N2050D010 4LBSWNL1_5000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858720
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_5000K
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, W2N2050 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

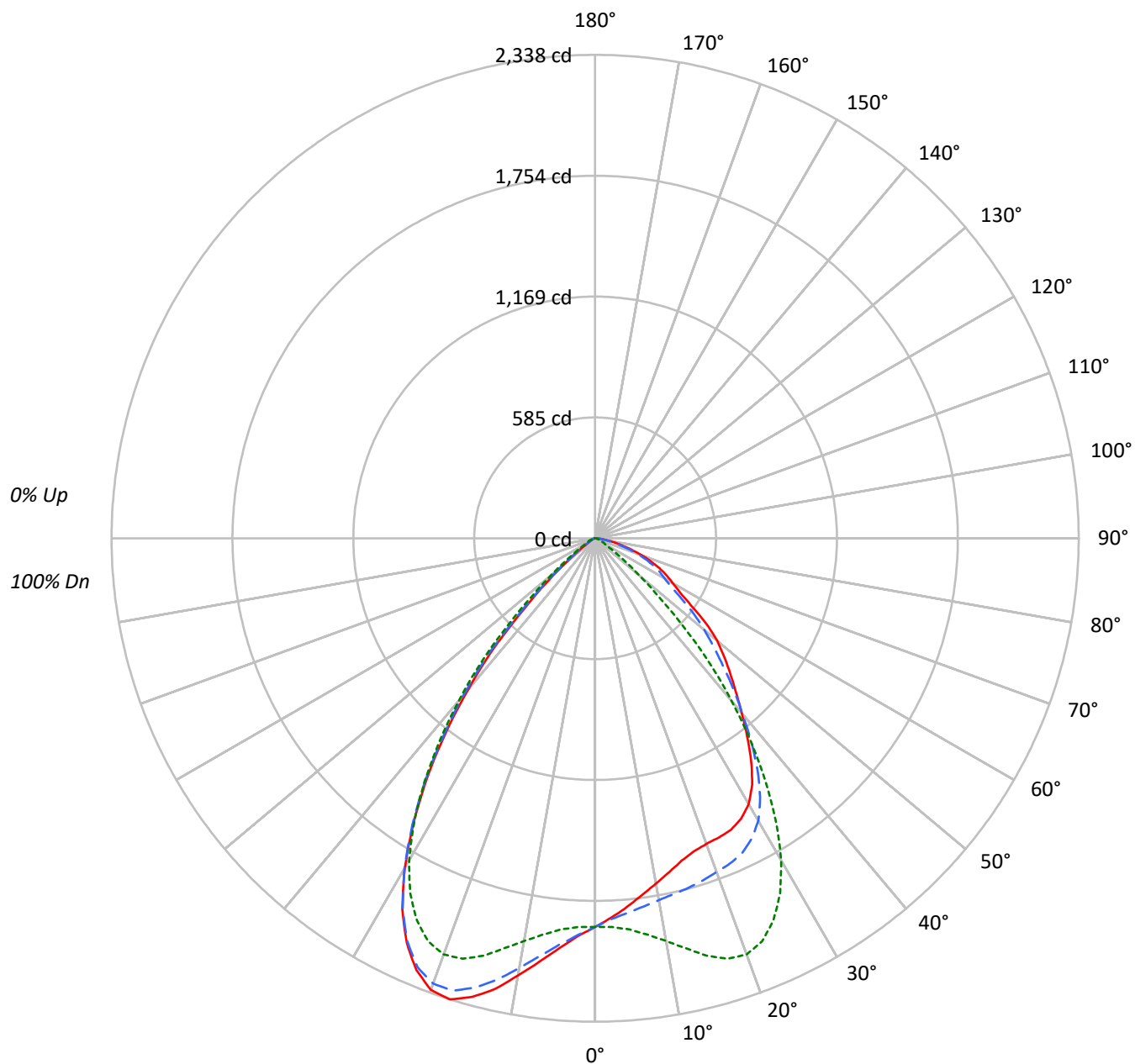
Lumens per Lamp: N/A
Luminaire Lumens: 3468.0 lumens
Efficiency: N/A
Efficacy: 65.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	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	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°	230879	230879	230879
5°	220563	234178	245375
10°	211486	246691	267798
15°	205318	265860	292073
20°	205598	280015	303757
25°	210840	276367	292322
30°	210561	255105	261021
35°	197219	215621	212682
40°	176652	164463	153462
45°	160276	104418	85672
50°	147244	52980	36582
55°	120867	23646	12080
60°	106096	13268	6634
65°	99825	9971	5000
70°	85489	7938	4418
75°	65220	5838	3513
80°	46836	3467	1769
85°	34535	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.5	5.3
10°-20°	568.9	16.4
20°-30°	880.2	25.4
30°-40°	867.3	25.0
40°-50°	532.5	15.4
50°-60°	236.8	6.8
60°-70°	132.2	3.8
70°-80°	57.2	1.7
80°-90°	10.2	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°	1631.7	47.0
0°-40°	2498.9	72.1
0°-60°	3268.3	94.2
0°-90°	3468.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3468.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1879	1879	1879	1879	1879	
5°	1788	1818	1899	1973	1990	168
15°	1614	1749	2090	2250	2296	458
25°	1555	1681	2039	2149	2156	714
35°	1315	1369	1438	1433	1418	816
45°	922	876	601	525	493	714
55°	564	510	110	64	56	519
65°	343	309	34	20	17	336
75°	137	118	12	7	7	151
85°	24	20	0	0	0	30
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°	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3
2.5°	1835.1	1835.1	1835.1	1835.1	1840.0	1832.7	1840.0	1840.0	1847.4	1849.8	1842.5
5°	1788.5	1786.1	1788.5	1788.5	1793.4	1791.0	1798.3	1803.2	1813.1	1818.0	1818.0
7.5°	1739.5	1739.5	1739.5	1744.4	1751.7	1749.3	1756.6	1764.0	1778.7	1788.5	1795.9
10°	1695.3	1692.9	1700.2	1702.7	1710.0	1710.0	1722.3	1729.7	1746.8	1766.5	1776.3
12.5°	1653.5	1651.1	1656.0	1663.4	1675.7	1675.7	1685.5	1697.8	1722.3	1744.4	1761.5
15°	1614.3	1616.8	1624.1	1629.0	1643.7	1643.7	1656.0	1670.7	1697.8	1724.8	1749.3
17.5°	1587.3	1589.8	1594.7	1602.0	1616.8	1616.8	1629.0	1646.2	1675.7	1705.1	1734.6
20°	1572.6	1575.1	1580.0	1587.3	1599.6	1602.0	1611.9	1631.5	1658.4	1690.4	1717.4
22.5°	1565.3	1570.2	1575.1	1580.0	1592.2	1592.2	1604.5	1619.2	1646.2	1678.2	1702.7
25°	1555.4	1560.3	1562.8	1570.2	1580.0	1580.0	1587.3	1604.5	1629.0	1656.0	1680.6
27.5°	1528.5	1533.4	1535.8	1543.2	1553.0	1550.5	1560.3	1572.6	1594.7	1619.2	1638.8
30°	1484.3	1486.8	1491.7	1494.1	1501.5	1501.5	1508.8	1521.1	1535.8	1557.9	1577.5
32.5°	1413.1	1418.1	1420.6	1423.0	1430.4	1427.9	1430.4	1437.7	1452.4	1472.1	1484.3
35°	1315.0	1324.8	1324.8	1329.7	1332.2	1329.7	1329.7	1339.5	1346.9	1361.6	1369.0
37.5°	1207.1	1214.5	1212.0	1216.9	1219.4	1212.0	1216.9	1219.4	1229.2	1236.5	1239.0
40°	1101.5	1104.0	1104.0	1104.0	1104.0	1101.5	1104.0	1106.4	1113.8	1113.8	1106.4
42.5°	1005.9	1008.4	1008.4	1003.4	1008.4	1005.9	1005.9	1005.9	1005.9	996.1	988.7
45°	922.5	925.0	925.0	922.5	922.5	917.6	915.2	912.7	905.3	893.0	875.8
47.5°	843.9	848.8	851.3	846.4	843.9	839.0	839.0	824.3	814.5	799.8	775.3
50°	770.4	775.3	775.3	770.4	770.4	763.0	755.7	750.7	736.0	718.9	689.4
52.5°	677.2	684.5	684.5	682.1	682.1	672.3	669.8	660.0	647.7	628.0	603.5
55°	564.3	574.1	571.6	569.2	564.3	564.3	564.3	556.9	549.5	534.8	510.3
57.5°	483.3	485.8	485.8	483.3	483.3	478.4	478.4	471.1	468.6	453.9	434.3
60°	431.8	431.8	434.3	431.8	429.4	426.9	424.5	419.6	412.2	402.4	387.7
62.5°	390.1	392.6	392.6	390.1	387.7	385.2	382.7	377.8	372.9	365.5	350.8
65°	343.4	348.3	345.9	343.4	341.0	338.5	338.5	333.6	328.7	323.8	309.1
67.5°	291.9	294.4	296.8	291.9	291.9	289.5	289.5	284.6	282.1	272.3	262.5
70°	238.0	240.4	240.4	238.0	238.0	235.5	235.5	233.1	230.6	223.3	213.5
72.5°	186.5	188.9	186.5	184.0	184.0	184.0	181.6	179.1	176.7	171.8	164.4
75°	137.4	137.4	139.9	137.4	135.0	135.0	132.5	132.5	127.6	125.1	117.7
77.5°	98.1	100.5	98.1	98.1	95.6	93.2	93.2	90.7	90.7	88.3	83.4
80°	66.2	66.2	68.7	66.2	63.8	66.2	63.8	61.3	61.3	58.9	54.0
82.5°	41.7	44.1	41.7	41.7	41.7	41.7	41.7	39.2	39.2	36.8	34.3
85°	24.5	24.5	24.5	24.5	24.5	24.5	24.5	22.1	22.1	22.1	19.6
87.5°	12.3	12.3	9.8	9.8	12.3	12.3	12.3	9.8	9.8	9.8	9.8
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°	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3
2.5°	1852.3	1854.7	1859.6	1867.0	1867.0	1862.1	1874.4	1874.4	1879.3	1881.7	1891.5
5°	1832.7	1837.6	1847.4	1859.6	1862.1	1859.6	1876.8	1884.2	1891.5	1898.9	1913.6
7.5°	1815.5	1825.3	1842.5	1859.6	1867.0	1867.0	1894.0	1903.8	1918.5	1933.3	1950.5
10°	1805.7	1820.4	1844.9	1871.9	1879.3	1886.6	1918.5	1938.2	1957.8	1977.5	2002.0
12.5°	1793.4	1820.4	1852.3	1886.6	1901.3	1911.1	1955.4	1979.9	2006.9	2031.4	2063.3
15°	1791.0	1822.9	1864.6	1908.7	1928.4	1943.1	1992.2	2026.5	2058.4	2090.3	2122.2
17.5°	1781.2	1820.4	1871.9	1921.0	1945.6	1965.2	2021.6	2063.3	2100.1	2132.0	2168.8
20°	1768.9	1813.1	1869.5	1923.4	1950.5	1970.1	2031.4	2070.7	2112.3	2141.8	2176.1
22.5°	1751.7	1795.9	1852.3	1906.2	1930.8	1948.0	2009.3	2043.7	2080.5	2109.9	2141.8
25°	1722.3	1764.0	1813.1	1857.2	1881.7	1896.4	1950.5	1982.4	2009.3	2038.8	2068.2
27.5°	1680.6	1712.5	1754.2	1786.1	1800.8	1815.5	1859.6	1886.6	1911.1	1935.8	1955.4
30°	1606.9	1631.5	1660.9	1688.0	1702.7	1705.1	1746.8	1761.5	1781.2	1798.3	1813.1
32.5°	1508.8	1528.5	1545.6	1560.3	1570.2	1572.6	1604.5	1609.4	1629.0	1629.0	1651.1
35°	1383.7	1393.5	1405.7	1405.7	1413.1	1405.7	1427.9	1432.8	1435.3	1437.7	1454.9
37.5°	1241.4	1246.3	1253.7	1239.0	1239.0	1231.6	1239.0	1243.9	1234.1	1234.1	1246.3
40°	1106.4	1096.6	1086.8	1072.1	1064.8	1050.0	1050.0	1037.8	1030.4	1025.5	1028.0
42.5°	976.5	954.4	932.3	900.4	885.6	870.9	856.2	839.0	834.1	821.9	814.5
45°	851.3	819.4	790.0	738.5	709.1	694.3	662.5	628.0	606.0	601.0	581.4
47.5°	745.8	699.2	650.2	588.8	559.4	532.4	485.8	456.4	426.9	412.2	399.9
50°	652.6	610.9	547.1	480.9	444.1	417.1	365.5	331.2	299.3	277.2	262.5
52.5°	571.6	525.0	466.2	390.1	353.3	323.8	267.4	228.2	201.2	179.1	162.0
55°	480.9	444.1	385.2	314.0	277.2	242.9	193.8	152.2	125.1	110.4	98.1
57.5°	414.7	382.7	326.3	257.6	223.3	191.4	142.3	107.9	85.8	71.1	63.8
60°	370.4	341.0	291.9	225.7	193.8	164.4	117.7	85.8	66.2	54.0	49.0
62.5°	333.6	304.2	260.1	198.7	171.8	142.3	100.5	71.1	54.0	44.1	36.8
65°	291.9	265.0	225.7	171.8	147.2	122.6	85.8	58.9	44.1	34.3	29.4
67.5°	247.8	223.3	188.9	142.3	122.6	103.0	68.7	49.0	36.8	29.4	24.5
70°	201.2	181.6	149.7	115.3	98.1	80.9	56.4	39.2	27.0	22.1	19.6
72.5°	154.6	137.4	115.3	88.3	73.6	61.3	41.7	29.4	22.1	17.2	14.7
75°	110.4	98.1	80.9	63.8	54.0	44.1	31.9	22.1	14.7	12.3	9.8
77.5°	76.0	68.7	56.4	44.1	36.8	31.9	22.1	14.7	12.3	9.8	7.4
80°	49.0	44.1	36.8	27.0	22.1	19.6	12.3	9.8	7.4	4.9	4.9
82.5°	29.4	27.0	22.1	14.7	12.3	9.8	7.4	4.9	4.9	2.5	2.5
85°	17.2	14.7	9.8	7.4	7.4	4.9	4.9	2.5	2.5	0.0	0.0
87.5°	7.4	4.9	4.9	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°	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3
2.5°	1886.6	1898.9	1896.4	1903.8	1901.3	1901.3	1913.6	1908.7	1921.0	1921.0	1923.4
5°	1913.6	1930.8	1930.8	1943.1	1940.7	1945.6	1957.8	1957.8	1972.6	1977.5	1977.5
7.5°	1952.9	1975.0	1979.9	1992.2	1994.6	2004.4	2014.3	2016.7	2036.3	2041.2	2043.7
10°	2006.9	2033.9	2041.2	2053.5	2058.4	2068.2	2080.5	2085.4	2109.9	2112.3	2122.2
12.5°	2073.1	2102.5	2109.9	2124.6	2127.1	2139.3	2156.5	2161.4	2186.0	2193.4	2200.7
15°	2136.9	2163.8	2176.1	2190.9	2193.4	2208.1	2222.8	2227.7	2249.8	2259.6	2267.0
17.5°	2181.0	2213.0	2220.4	2240.0	2240.0	2252.2	2267.0	2271.9	2293.9	2301.3	2306.2
20°	2190.9	2220.4	2230.2	2244.9	2247.3	2254.7	2267.0	2271.9	2291.5	2293.9	2301.3
22.5°	2154.0	2183.5	2188.4	2203.2	2205.6	2213.0	2222.8	2220.4	2244.9	2242.4	2244.9
25°	2075.6	2102.5	2102.5	2119.7	2117.3	2124.6	2129.5	2127.1	2149.1	2149.1	2149.1
27.5°	1962.7	1987.3	1989.7	2002.0	1994.6	1997.1	2002.0	1999.5	2014.3	2014.3	2014.3
30°	1822.9	1842.5	1835.1	1844.9	1840.0	1844.9	1840.0	1837.6	1842.5	1847.4	1844.9
32.5°	1648.6	1663.4	1663.4	1665.8	1665.8	1651.1	1646.2	1646.2	1643.7	1641.3	1641.3
35°	1447.5	1459.8	1454.9	1454.9	1452.4	1437.7	1430.4	1425.5	1432.8	1418.1	1427.9
37.5°	1241.4	1243.9	1236.5	1234.1	1221.8	1221.8	1209.6	1199.7	1204.6	1202.2	1192.4
40°	1015.7	1025.5	1010.8	1005.9	1013.3	1003.4	991.2	978.9	988.7	976.5	981.4
42.5°	794.9	792.4	787.5	787.5	787.5	772.8	770.4	767.9	770.4	760.6	753.2
45°	574.1	566.7	559.4	559.4	549.5	544.6	544.6	537.3	525.0	525.0	510.3
47.5°	387.7	370.4	365.5	363.1	358.2	358.2	353.3	348.3	345.9	333.6	333.6
50°	252.7	235.5	230.6	228.2	230.6	225.7	220.8	215.9	211.0	208.6	203.7
52.5°	152.2	144.8	139.9	137.4	132.5	130.0	127.6	122.6	120.2	120.2	117.7
55°	90.7	83.4	73.6	73.6	73.6	71.1	68.7	66.2	63.8	63.8	61.3
57.5°	56.4	51.5	46.6	44.1	44.1	44.1	41.7	41.7	41.7	41.7	39.2
60°	41.7	36.8	34.3	34.3	34.3	31.9	31.9	31.9	31.9	29.4	29.4
62.5°	31.9	29.4	27.0	27.0	24.5	24.5	24.5	24.5	24.5	24.5	22.1
65°	27.0	22.1	22.1	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
67.5°	19.6	17.2	17.2	17.2	17.2	14.7	14.7	14.7	14.7	14.7	14.7
70°	14.7	14.7	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
72.5°	12.3	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
75°	9.8	9.8	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	7.4	7.4	7.4	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	4.9	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: P858720

CATALOG NUMBER: LD4C35W2N2050D010 4LBSWNL1_5000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3	1879.3
2.5°	1923.4	1935.8	1923.4	1923.4	1930.8	1928.4	1933.3	1925.9
5°	1979.9	1997.1	1984.8	1982.4	1994.6	1992.2	1994.6	1989.7
7.5°	2048.6	2065.8	2053.5	2053.5	2065.8	2063.3	2070.7	2065.8
10°	2127.1	2146.7	2129.5	2132.0	2149.1	2146.7	2146.7	2146.7
12.5°	2208.1	2227.7	2217.9	2217.9	2230.2	2232.6	2235.1	2232.6
15°	2274.3	2293.9	2281.7	2281.7	2298.8	2296.4	2298.8	2296.4
17.5°	2313.5	2333.2	2318.5	2318.5	2333.2	2333.2	2335.6	2338.1
20°	2303.7	2325.8	2313.5	2308.6	2325.8	2325.8	2323.4	2323.4
22.5°	2247.3	2267.0	2257.1	2252.2	2264.5	2259.6	2257.1	2259.6
25°	2149.1	2168.8	2149.1	2149.1	2158.9	2156.5	2158.9	2156.5
27.5°	2016.7	2031.4	2011.8	2009.3	2019.2	2014.3	2011.8	2019.2
30°	1840.0	1854.7	1844.9	1837.6	1849.8	1842.5	1837.6	1840.0
32.5°	1638.8	1648.6	1643.7	1631.5	1638.8	1633.9	1631.5	1633.9
35°	1418.1	1430.4	1410.7	1408.2	1420.6	1410.7	1405.7	1418.1
37.5°	1189.9	1204.6	1187.5	1189.9	1182.6	1185.0	1180.1	1187.5
40°	974.0	971.6	966.7	964.2	966.7	959.3	964.2	956.9
42.5°	740.9	745.8	743.4	740.9	743.4	733.6	728.7	738.5
45°	515.2	512.8	507.9	502.9	502.9	500.5	500.5	493.1
47.5°	331.2	328.7	318.9	321.4	326.3	321.4	314.0	323.8
50°	201.2	198.7	198.7	196.3	201.2	196.3	191.4	191.4
52.5°	112.8	112.8	110.4	110.4	110.4	110.4	107.9	105.5
55°	61.3	58.9	58.9	58.9	56.4	56.4	56.4	56.4
57.5°	39.2	39.2	39.2	39.2	39.2	39.2	36.8	36.8
60°	29.4	29.4	29.4	29.4	27.0	29.4	27.0	27.0
62.5°	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
65°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
67.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
70°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
72.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
75°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
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)