

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: P858719

Luminaire Tested: **LD4C35W2N2050D010 4LBSWNL_4000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858719
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_4000K
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, W2N2050 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

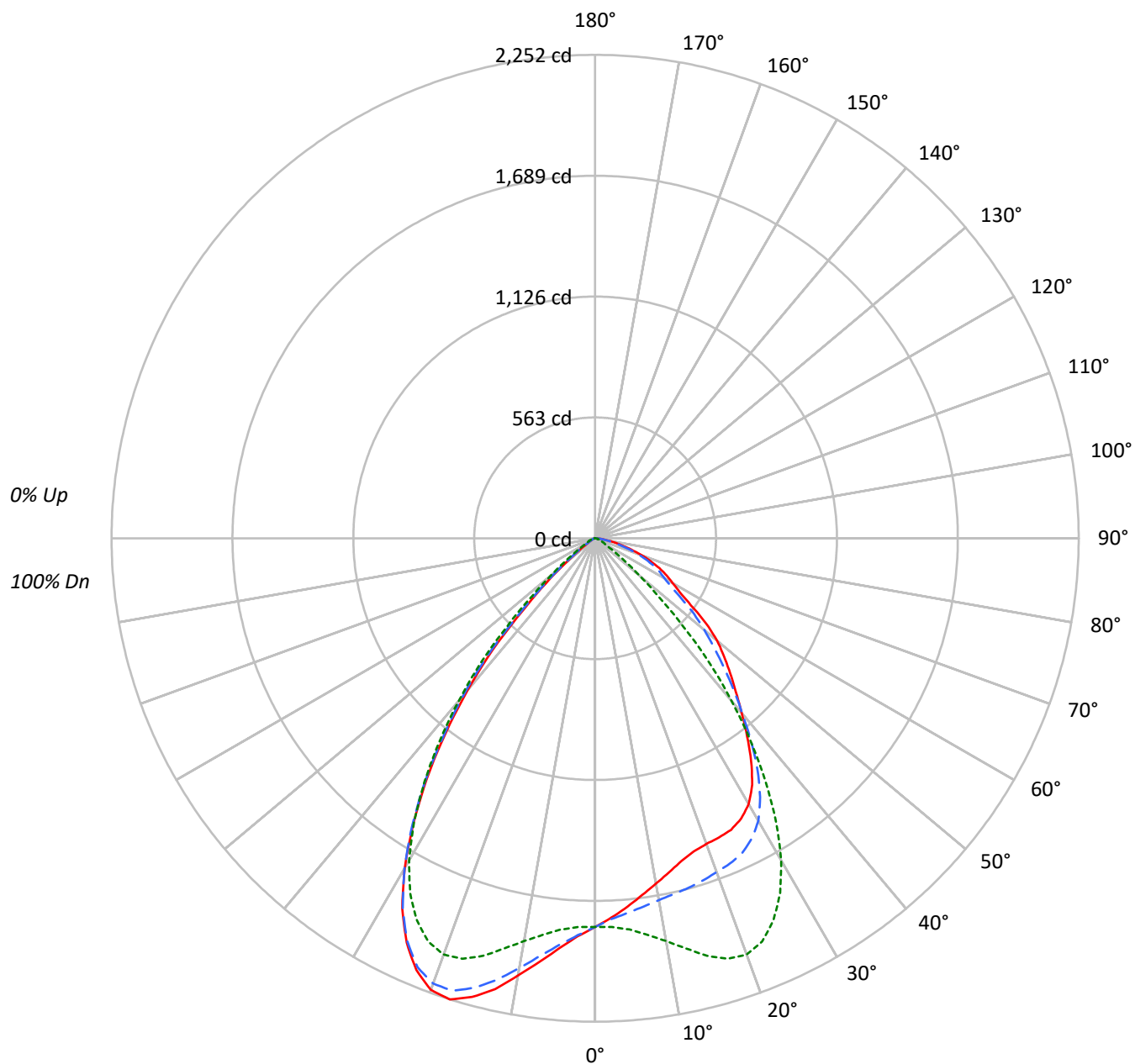
Lumens per Lamp: N/A
Luminaire Lumens: 3341.0 lumens
Efficiency: N/A
Efficacy: 63.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: LD4C35W2N2050D010 4LBSWNL1_4000K

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°	222426	222426	222426
5°	212485	225607	236385
10°	203740	237659	257993
15°	197802	256130	281376
20°	198068	269765	292631
25°	203114	266241	281627
30°	202844	245756	251459
35°	190005	207717	204883
40°	170189	158433	147833
45°	154404	100596	82527
50°	141854	51050	35244
55°	116454	22790	11652
60°	102214	12777	6388
65°	96191	9622	4826
70°	82364	7651	4274
75°	62799	5649	3370
80°	45138	3325	1698
85°	33266	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.9	5.3
10°-20°	548.1	16.4
20°-30°	848.0	25.4
30°-40°	835.5	25.0
40°-50°	513.0	15.4
50°-60°	228.1	6.8
60°-70°	127.4	3.8
70°-80°	55.1	1.7
80°-90°	9.9	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°	1571.9	47.0
0°-40°	2407.4	72.1
0°-60°	3148.6	94.2
0°-90°	3341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3341.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1810	1810	1810	1810	1810	
5°	1723	1751	1829	1900	1917	162
15°	1555	1685	2014	2167	2212	441
25°	1498	1619	1964	2070	2078	688
35°	1267	1319	1385	1380	1366	786
45°	889	844	579	506	475	688
55°	544	492	106	62	54	500
65°	331	298	33	19	17	324
75°	132	113	12	7	7	146
85°	24	19	0	0	0	29
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°	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5
2.5°	1767.9	1767.9	1767.9	1767.9	1772.6	1765.6	1772.6	1772.6	1779.8	1782.1	1775.0
5°	1723.0	1720.7	1723.0	1723.0	1727.7	1725.4	1732.4	1737.2	1746.7	1751.4	1751.4
7.5°	1675.8	1675.8	1675.8	1680.5	1687.5	1685.2	1692.3	1699.4	1713.6	1723.0	1730.1
10°	1633.2	1630.9	1637.9	1640.3	1647.3	1647.3	1659.2	1666.3	1682.8	1701.8	1711.2
12.5°	1593.0	1590.7	1595.4	1602.5	1614.3	1614.3	1623.7	1635.6	1659.2	1680.5	1697.0
15°	1555.2	1557.6	1564.7	1569.4	1583.5	1583.5	1595.4	1609.6	1635.6	1661.6	1685.2
17.5°	1529.2	1531.6	1536.3	1543.4	1557.6	1557.6	1569.4	1586.0	1614.3	1642.6	1671.1
20°	1515.0	1517.4	1522.2	1529.2	1541.0	1543.4	1552.9	1571.8	1597.7	1628.5	1654.5
22.5°	1508.0	1512.7	1517.4	1522.2	1533.9	1533.9	1545.8	1559.9	1586.0	1616.7	1640.3
25°	1498.4	1503.2	1505.6	1512.7	1522.2	1522.2	1529.2	1545.8	1569.4	1595.4	1619.0
27.5°	1472.5	1477.2	1479.6	1486.7	1496.1	1493.7	1503.2	1515.0	1536.3	1559.9	1578.8
30°	1429.9	1432.3	1437.1	1439.4	1446.5	1446.5	1453.5	1465.4	1479.6	1500.9	1519.7
32.5°	1361.4	1366.1	1368.5	1370.8	1378.0	1375.6	1378.0	1385.0	1399.2	1418.2	1429.9
35°	1266.9	1276.3	1276.3	1281.0	1283.4	1281.0	1281.0	1290.5	1297.6	1311.8	1318.9
37.5°	1162.9	1170.0	1167.6	1172.3	1174.7	1167.6	1172.3	1174.7	1184.2	1191.2	1193.6
40°	1061.2	1063.6	1063.6	1063.6	1063.6	1061.2	1063.6	1065.9	1073.0	1073.0	1065.9
42.5°	969.1	971.5	971.5	966.6	971.5	969.1	969.1	969.1	969.1	959.6	952.5
45°	888.7	891.1	891.1	888.7	888.7	884.0	881.6	879.2	872.1	860.3	843.8
47.5°	813.0	817.7	820.2	815.4	813.0	808.3	808.3	794.1	784.7	770.5	746.9
50°	742.2	746.9	746.9	742.2	742.2	735.1	728.0	723.2	709.0	692.6	664.1
52.5°	652.4	659.4	659.4	657.1	657.1	647.6	645.2	635.8	623.9	605.0	581.4
55°	543.7	553.1	550.7	548.4	543.7	543.7	543.7	536.5	529.4	515.2	491.6
57.5°	465.6	468.0	468.0	465.6	465.6	460.9	460.9	453.8	451.4	437.3	418.4
60°	416.0	416.0	418.4	416.0	413.6	411.2	408.9	404.2	397.1	387.6	373.5
62.5°	375.8	378.2	378.2	375.8	373.5	371.0	368.7	364.0	359.3	352.2	338.0
65°	330.9	335.6	333.3	330.9	328.5	326.1	326.1	321.4	316.7	312.0	297.8
67.5°	281.2	283.6	285.9	281.2	281.2	278.9	278.9	274.2	271.8	262.3	252.9
70°	229.3	231.6	231.6	229.3	229.3	226.9	226.9	224.6	222.1	215.1	205.7
72.5°	179.6	182.0	179.6	177.2	177.2	177.2	174.9	172.5	170.2	165.5	158.3
75°	132.3	132.3	134.7	132.3	130.0	130.0	127.6	127.6	122.9	120.6	113.4
77.5°	94.5	96.9	94.5	94.5	92.1	89.8	89.8	87.4	87.4	85.1	80.4
80°	63.8	63.8	66.2	63.8	61.5	63.8	61.5	59.1	59.1	56.8	52.0
82.5°	40.2	42.5	40.2	40.2	40.2	40.2	40.2	37.8	37.8	35.5	33.1
85°	23.6	23.6	23.6	23.6	23.6	23.6	23.6	21.3	21.3	21.3	18.9
87.5°	11.9	11.9	9.4	9.4	11.9	11.9	11.9	9.4	9.4	9.4	9.4
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°	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5
2.5°	1784.5	1786.8	1791.5	1798.7	1798.7	1793.9	1805.8	1805.8	1810.5	1812.8	1822.3
5°	1765.6	1770.3	1779.8	1791.5	1793.9	1791.5	1808.1	1815.2	1822.3	1829.4	1843.6
7.5°	1749.0	1758.5	1775.0	1791.5	1798.7	1798.7	1824.7	1834.1	1848.3	1862.5	1879.0
10°	1739.6	1753.7	1777.4	1803.4	1810.5	1817.5	1848.3	1867.2	1886.1	1905.1	1928.7
12.5°	1727.7	1753.7	1784.5	1817.5	1831.7	1841.2	1883.8	1907.4	1933.4	1957.0	1987.7
15°	1725.4	1756.2	1796.3	1838.8	1857.7	1871.9	1919.2	1952.3	1983.0	2013.8	2044.5
17.5°	1716.0	1753.7	1803.4	1850.7	1874.3	1893.2	1947.6	1987.7	2023.2	2054.0	2089.4
20°	1704.1	1746.7	1801.1	1853.0	1879.0	1897.9	1957.0	1994.9	2035.0	2063.4	2096.5
22.5°	1687.5	1730.1	1784.5	1836.4	1860.1	1876.6	1935.7	1968.9	2004.3	2032.7	2063.4
25°	1659.2	1699.4	1746.7	1789.2	1812.8	1827.0	1879.0	1909.8	1935.7	1964.1	1992.5
27.5°	1619.0	1649.8	1689.9	1720.7	1734.9	1749.0	1791.5	1817.5	1841.2	1864.9	1883.8
30°	1548.1	1571.8	1600.1	1626.1	1640.3	1642.6	1682.8	1697.0	1716.0	1732.4	1746.7
32.5°	1453.5	1472.5	1489.0	1503.2	1512.7	1515.0	1545.8	1550.5	1569.4	1569.4	1590.7
35°	1333.1	1342.5	1354.3	1354.3	1361.4	1354.3	1375.6	1380.3	1382.7	1385.0	1401.6
37.5°	1195.9	1200.6	1207.8	1193.6	1193.6	1186.5	1193.6	1198.3	1188.9	1188.9	1200.6
40°	1065.9	1056.5	1047.0	1032.9	1025.8	1011.6	1011.6	999.8	992.7	987.9	990.4
42.5°	940.7	919.4	898.1	867.4	853.2	839.0	824.9	808.3	803.6	791.8	784.7
45°	820.2	789.4	761.1	711.4	683.1	668.8	638.2	605.0	583.8	579.0	560.1
47.5°	718.5	673.6	626.3	567.3	538.9	512.9	468.0	439.7	411.2	397.1	385.2
50°	628.7	588.6	527.1	463.3	427.8	401.8	352.2	319.1	288.4	267.1	252.9
52.5°	550.7	505.8	449.1	375.8	340.4	312.0	257.6	219.8	193.8	172.5	156.0
55°	463.3	427.8	371.0	302.5	267.1	234.0	186.7	146.6	120.6	106.4	94.5
57.5°	399.5	368.7	314.4	248.2	215.1	184.4	137.0	104.0	82.7	68.5	61.5
60°	356.9	328.5	281.2	217.4	186.7	158.3	113.4	82.7	63.8	52.0	47.2
62.5°	321.4	293.1	250.6	191.4	165.5	137.0	96.9	68.5	52.0	42.5	35.5
65°	281.2	255.3	217.4	165.5	141.8	118.2	82.7	56.8	42.5	33.1	28.3
67.5°	238.7	215.1	182.0	137.0	118.2	99.3	66.2	47.2	35.5	28.3	23.6
70°	193.8	174.9	144.2	111.1	94.5	78.0	54.4	37.8	26.0	21.3	18.9
72.5°	148.9	132.3	111.1	85.1	70.9	59.1	40.2	28.3	21.3	16.6	14.2
75°	106.4	94.5	78.0	61.5	52.0	42.5	30.7	21.3	14.2	11.9	9.4
77.5°	73.2	66.2	54.4	42.5	35.5	30.7	21.3	14.2	11.9	9.4	7.1
80°	47.2	42.5	35.5	26.0	21.3	18.9	11.9	9.4	7.1	4.7	4.7
82.5°	28.3	26.0	21.3	14.2	11.9	9.4	7.1	4.7	4.7	2.4	2.4
85°	16.6	14.2	9.4	7.1	7.1	4.7	4.7	2.4	2.4	0.0	0.0
87.5°	7.1	4.7	4.7	2.4	2.4	2.4	2.4	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°	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5
2.5°	1817.5	1829.4	1827.0	1834.1	1831.7	1831.7	1843.6	1838.8	1850.7	1850.7	1853.0
5°	1843.6	1860.1	1860.1	1871.9	1869.6	1874.3	1886.1	1886.1	1900.3	1905.1	1905.1
7.5°	1881.3	1902.6	1907.4	1919.2	1921.5	1931.0	1940.5	1942.8	1961.7	1966.4	1968.9
10°	1933.4	1959.4	1966.4	1978.3	1983.0	1992.5	2004.3	2009.0	2032.7	2035.0	2044.5
12.5°	1997.2	2025.5	2032.7	2046.8	2049.2	2061.0	2077.6	2082.3	2105.9	2113.0	2120.1
15°	2058.7	2084.6	2096.5	2110.6	2113.0	2127.2	2141.4	2146.1	2167.4	2176.8	2184.0
17.5°	2101.2	2131.9	2139.1	2157.9	2157.9	2169.7	2184.0	2188.7	2209.9	2217.0	2221.7
20°	2110.6	2139.1	2148.5	2162.7	2165.0	2172.1	2184.0	2188.7	2207.6	2209.9	2217.0
22.5°	2075.2	2103.6	2108.3	2122.5	2124.8	2131.9	2141.4	2139.1	2162.7	2160.3	2162.7
25°	1999.6	2025.5	2025.5	2042.1	2039.8	2046.8	2051.5	2049.2	2070.4	2070.4	2070.4
27.5°	1890.8	1914.5	1916.8	1928.7	1921.5	1923.9	1928.7	1926.3	1940.5	1940.5	1940.5
30°	1756.2	1775.0	1767.9	1777.4	1772.6	1777.4	1772.6	1770.3	1775.0	1779.8	1777.4
32.5°	1588.3	1602.5	1602.5	1604.8	1604.8	1590.7	1586.0	1586.0	1583.5	1581.2	1581.2
35°	1394.5	1406.3	1401.6	1401.6	1399.2	1385.0	1378.0	1373.3	1380.3	1366.1	1375.6
37.5°	1195.9	1198.3	1191.2	1188.9	1177.0	1177.0	1165.3	1155.7	1160.5	1158.1	1148.7
40°	978.5	987.9	973.8	969.1	976.2	966.6	954.9	943.0	952.5	940.7	945.4
42.5°	765.8	763.4	758.7	758.7	758.7	744.5	742.2	739.8	742.2	732.7	725.6
45°	553.1	546.0	538.9	538.9	529.4	524.7	524.7	517.6	505.8	505.8	491.6
47.5°	373.5	356.9	352.2	349.8	345.1	345.1	340.4	335.6	333.3	321.4	321.4
50°	243.4	226.9	222.1	219.8	222.1	217.4	212.7	208.0	203.3	200.9	196.2
52.5°	146.6	139.5	134.7	132.3	127.6	125.3	122.9	118.2	115.8	115.8	113.4
55°	87.4	80.4	70.9	70.9	70.9	68.5	66.2	63.8	61.5	61.5	59.1
57.5°	54.4	49.6	44.9	42.5	42.5	42.5	40.2	40.2	40.2	40.2	37.8
60°	40.2	35.5	33.1	33.1	33.1	30.7	30.7	30.7	30.7	28.3	28.3
62.5°	30.7	28.3	26.0	26.0	23.6	23.6	23.6	23.6	23.6	23.6	21.3
65°	26.0	21.3	21.3	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9
67.5°	18.9	16.6	16.6	16.6	16.6	14.2	14.2	14.2	14.2	14.2	14.2
70°	14.2	14.2	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
72.5°	11.9	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
75°	9.4	9.4	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
77.5°	7.1	7.1	7.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
80°	4.7	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
82.5°	2.4	2.4	2.4	2.4	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: P858719

CATALOG NUMBER: LD4C35W2N2050D010 4LBSWNL_4000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5	1810.5
2.5°	1853.0	1864.9	1853.0	1853.0	1860.1	1857.7	1862.5	1855.4
5°	1907.4	1923.9	1912.1	1909.8	1921.5	1919.2	1921.5	1916.8
7.5°	1973.6	1990.2	1978.3	1978.3	1990.2	1987.7	1994.9	1990.2
10°	2049.2	2068.1	2051.5	2054.0	2070.4	2068.1	2068.1	2068.1
12.5°	2127.2	2146.1	2136.6	2136.6	2148.5	2150.8	2153.2	2150.8
15°	2191.0	2209.9	2198.1	2198.1	2214.6	2212.3	2214.6	2212.3
17.5°	2228.8	2247.8	2233.6	2233.6	2247.8	2247.8	2250.1	2252.5
20°	2219.3	2240.6	2228.8	2224.1	2240.6	2240.6	2238.3	2238.3
22.5°	2165.0	2184.0	2174.4	2169.7	2181.6	2176.8	2174.4	2176.8
25°	2070.4	2089.4	2070.4	2070.4	2079.9	2077.6	2079.9	2077.6
27.5°	1942.8	1957.0	1938.1	1935.7	1945.2	1940.5	1938.1	1945.2
30°	1772.6	1786.8	1777.4	1770.3	1782.1	1775.0	1770.3	1772.6
32.5°	1578.8	1588.3	1583.5	1571.8	1578.8	1574.1	1571.8	1574.1
35°	1366.1	1378.0	1359.1	1356.7	1368.5	1359.1	1354.3	1366.1
37.5°	1146.3	1160.5	1144.0	1146.3	1139.3	1141.6	1136.8	1144.0
40°	938.3	936.0	931.3	928.9	931.3	924.1	928.9	921.8
42.5°	713.8	718.5	716.2	713.8	716.2	706.7	702.0	711.4
45°	496.3	494.0	489.3	484.5	484.5	482.2	482.2	475.0
47.5°	319.1	316.7	307.2	309.7	314.4	309.7	302.5	312.0
50°	193.8	191.4	191.4	189.1	193.8	189.1	184.4	184.4
52.5°	108.7	108.7	106.4	106.4	106.4	106.4	104.0	101.7
55°	59.1	56.8	56.8	56.8	54.4	54.4	54.4	54.4
57.5°	37.8	37.8	37.8	37.8	37.8	37.8	35.5	35.5
60°	28.3	28.3	28.3	28.3	26.0	28.3	26.0	26.0
62.5°	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3
65°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
67.5°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
70°	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
72.5°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
75°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
77.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
80°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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)