

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: P857899

Luminaire Tested: **LX4C40D010 EX4C409027 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P857899
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C40D010 EX4C409027 4LBSWNH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

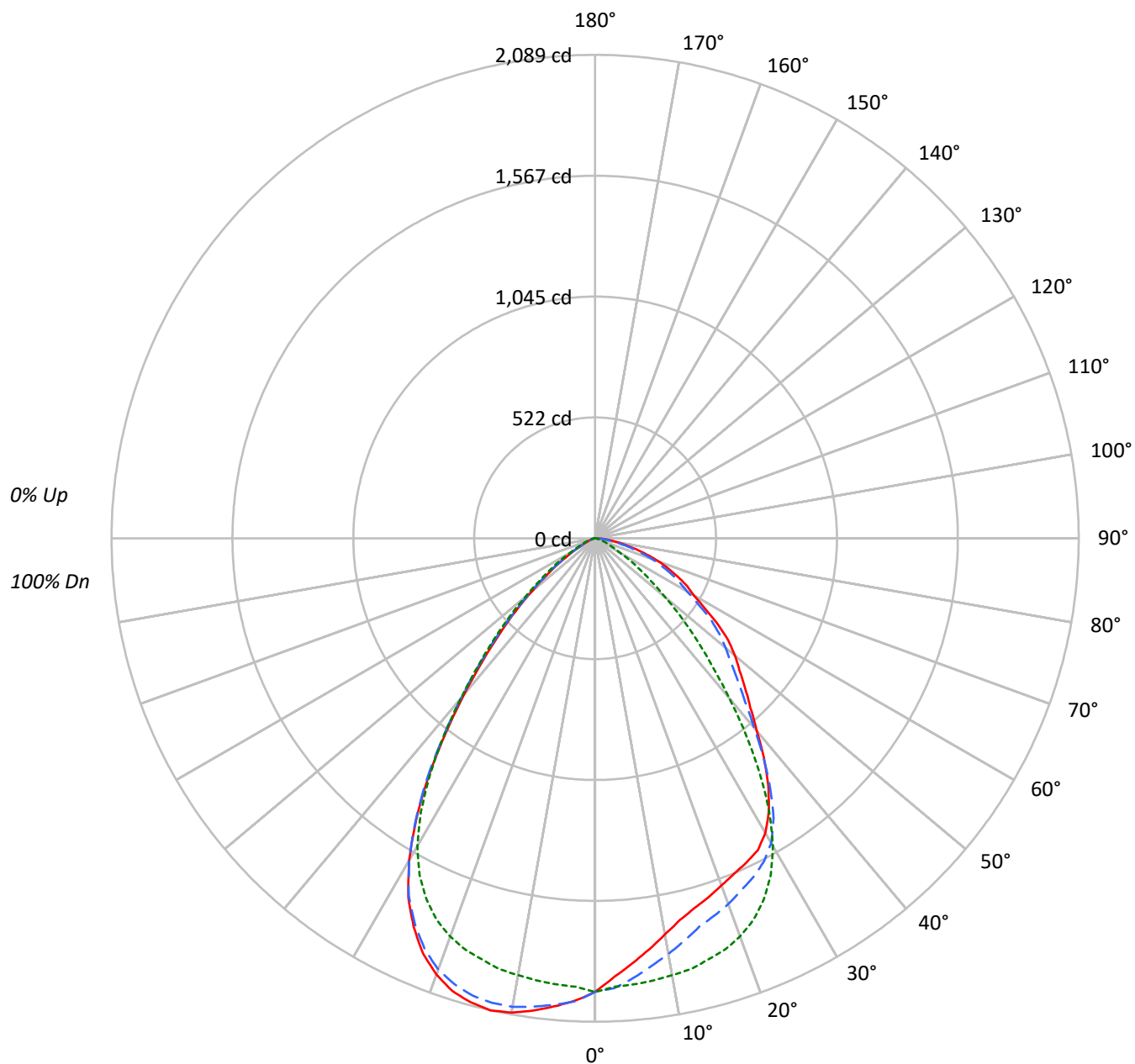
Lumens per Lamp: N/A
Luminaire Lumens: 3436.0 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
Input Voltage (V):
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	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89		
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79		
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70		
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62		
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56		
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50		
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46		
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42		
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38		
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	240817	240817	240817
5°	227395	238617	250456
10°	216801	239168	259652
15°	210431	239672	264079
20°	208710	239433	262208
25°	209553	233519	251317
30°	208547	217867	227896
35°	195479	186016	187905
40°	174182	144224	140985
45°	159303	107528	100926
50°	150626	75323	68079
55°	138516	50848	42731
60°	121011	29780	23563
65°	114563	19070	13198
70°	104347	13614	8190
75°	86342	9588	6028
80°	67848	5377	3537
85°	60612	3665	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.2	5.4
10°-20°	531.3	15.5
20°-30°	787.6	22.9
30°-40°	788.7	23.0
40°-50°	551.2	16.0
50°-60°	328.0	9.5
60°-70°	171.2	5.0
70°-80°	76.1	2.2
80°-90°	16.6	0.5
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°	1504.2	43.8
0°-40°	2292.9	66.7
0°-60°	3172.1	92.3
0°-90°	3436.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3436.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1960	1960	1960	1960	1960	
5°	1844	1907	1935	2023	2031	173
15°	1654	1738	1884	2046	2076	468
25°	1546	1617	1723	1842	1854	712
35°	1303	1318	1240	1263	1253	808
45°	917	872	619	599	581	712
55°	647	606	237	207	200	574
65°	394	361	66	48	45	390
75°	182	159	20	13	13	197
85°	43	33	3	3	0	48
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°	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2
2.5°	1897.0	1919.8	1897.0	1904.6	1934.9	1907.1	1922.3	1922.3	1914.7	1932.4	1945.0
5°	1843.9	1866.7	1843.9	1854.0	1886.9	1859.1	1876.8	1871.8	1874.3	1889.5	1907.1
7.5°	1791.0	1808.6	1788.4	1801.1	1831.4	1808.6	1823.7	1823.7	1826.3	1849.0	1864.2
10°	1737.9	1753.0	1737.9	1748.0	1780.9	1760.7	1770.8	1773.2	1780.9	1801.1	1823.7
12.5°	1689.9	1702.5	1687.4	1702.5	1730.3	1710.1	1722.7	1725.2	1732.8	1755.6	1780.9
15°	1654.5	1667.2	1652.0	1664.6	1689.9	1674.7	1684.8	1689.9	1694.9	1715.1	1737.9
17.5°	1626.8	1636.9	1624.2	1639.4	1659.6	1641.9	1657.1	1657.1	1664.6	1684.8	1710.1
20°	1596.4	1606.5	1596.4	1609.1	1631.8	1616.7	1629.3	1629.3	1636.9	1659.6	1682.3
22.5°	1568.7	1573.7	1568.7	1578.8	1601.4	1588.9	1596.4	1599.0	1606.5	1626.8	1647.0
25°	1545.9	1556.0	1550.9	1561.0	1576.2	1563.6	1571.1	1573.7	1581.2	1599.0	1616.7
27.5°	1520.6	1525.7	1520.6	1533.3	1545.9	1535.8	1543.4	1540.8	1545.9	1561.0	1576.2
30°	1470.1	1475.2	1475.2	1482.7	1492.9	1487.9	1495.4	1487.9	1492.9	1505.5	1520.6
32.5°	1396.9	1399.4	1401.9	1409.5	1417.1	1409.5	1414.6	1414.6	1414.6	1424.7	1434.8
35°	1303.4	1308.4	1306.0	1311.0	1318.5	1316.1	1316.1	1313.5	1308.4	1313.5	1318.5
37.5°	1197.3	1189.7	1189.7	1197.3	1202.4	1192.3	1197.3	1192.3	1192.3	1194.8	1194.8
40°	1086.1	1078.6	1086.1	1088.7	1091.2	1086.1	1083.7	1078.6	1071.0	1073.6	1068.5
42.5°	992.8	987.6	990.2	990.2	992.8	987.6	990.2	980.1	972.5	967.4	959.9
45°	916.9	909.4	916.9	911.9	911.9	909.4	906.8	901.8	891.7	884.1	871.5
47.5°	846.2	846.2	848.7	848.7	848.7	843.6	843.6	833.5	823.4	813.3	795.7
50°	788.1	783.0	793.1	793.1	785.6	783.0	785.6	772.9	765.4	752.7	735.0
52.5°	724.9	724.9	727.5	727.5	724.9	719.9	722.4	712.3	704.7	692.1	674.4
55°	646.7	641.6	649.2	649.2	646.7	644.1	646.7	639.1	631.5	621.4	606.2
57.5°	558.3	555.7	560.7	563.3	558.3	558.3	560.7	553.2	550.6	540.5	525.4
60°	492.5	490.0	495.1	497.7	492.5	492.5	492.5	482.4	477.4	467.3	457.2
62.5°	447.1	444.6	449.6	447.1	444.6	442.0	444.6	434.5	429.4	419.3	409.2
65°	394.1	396.6	399.1	399.1	396.6	394.1	394.1	389.0	384.0	373.9	361.2
67.5°	343.5	343.5	346.1	348.5	346.1	346.1	346.1	338.4	333.4	325.9	310.7
70°	290.5	287.9	295.6	295.6	290.5	293.0	290.5	287.9	282.9	272.8	260.2
72.5°	234.9	234.9	237.4	237.4	234.9	234.9	234.9	232.4	224.8	219.7	207.1
75°	181.9	181.9	184.4	186.9	181.9	181.9	184.4	179.3	174.3	166.7	159.1
77.5°	136.4	133.9	136.4	136.4	133.9	133.9	133.9	131.4	128.8	121.2	113.7
80°	95.9	93.5	95.9	95.9	95.9	93.5	93.5	90.9	90.9	85.8	78.3
82.5°	65.6	63.2	65.6	65.6	65.6	63.2	63.2	63.2	60.6	58.1	53.1
85°	43.0	40.4	40.4	43.0	40.4	40.4	40.4	40.4	37.9	35.3	32.9
87.5°	20.2	20.2	20.2	20.2	20.2	20.2	20.2	17.7	17.7	17.7	15.1
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°	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2
2.5°	1934.9	1929.9	1945.0	1940.0	1942.5	1929.9	1950.1	1940.0	1952.6	1940.0	1965.2
5°	1902.1	1897.0	1919.8	1917.2	1919.8	1909.7	1932.4	1929.9	1945.0	1934.9	1962.7
7.5°	1866.7	1861.7	1886.9	1889.5	1894.5	1884.4	1914.7	1914.7	1929.9	1927.3	1957.6
10°	1826.3	1828.8	1854.0	1859.1	1869.3	1864.2	1892.0	1899.6	1919.8	1917.2	1955.1
12.5°	1788.4	1788.4	1821.3	1831.4	1838.9	1836.4	1869.3	1879.4	1902.1	1907.1	1942.5
15°	1750.6	1753.0	1783.3	1798.5	1808.6	1806.1	1841.5	1854.0	1881.9	1884.4	1927.3
17.5°	1720.2	1717.7	1750.6	1763.1	1778.3	1775.8	1813.6	1828.8	1856.6	1864.2	1904.6
20°	1694.9	1692.4	1722.7	1737.9	1748.0	1745.5	1783.3	1801.1	1826.3	1831.4	1871.8
22.5°	1664.6	1659.6	1689.9	1702.5	1712.6	1710.1	1742.9	1755.6	1780.9	1785.9	1823.7
25°	1629.3	1624.2	1652.0	1659.6	1667.2	1662.1	1689.9	1697.5	1717.7	1722.7	1760.7
27.5°	1588.9	1576.2	1599.0	1599.0	1604.0	1596.4	1616.7	1624.2	1641.9	1641.9	1677.3
30°	1525.7	1508.1	1520.6	1518.2	1520.6	1510.5	1523.2	1525.7	1538.4	1535.8	1561.0
32.5°	1437.3	1412.0	1419.6	1412.0	1404.5	1389.3	1404.5	1399.4	1409.5	1399.4	1422.1
35°	1316.1	1290.8	1288.2	1278.1	1270.6	1257.9	1257.9	1245.4	1247.8	1240.3	1255.5
37.5°	1184.7	1151.9	1146.8	1126.6	1114.0	1098.8	1098.8	1088.7	1076.0	1071.0	1083.7
40°	1055.8	1020.5	1007.9	975.0	962.4	947.2	937.1	924.5	919.5	899.3	909.4
42.5°	944.7	906.8	879.1	843.6	831.1	808.3	793.1	778.0	770.5	747.7	757.8
45°	851.3	805.8	775.5	730.0	712.3	687.1	664.3	646.7	629.0	618.9	613.8
47.5°	772.9	724.9	684.5	634.0	606.2	583.5	553.2	535.5	512.8	500.1	492.5
50°	707.3	654.2	608.8	550.6	522.9	497.7	462.2	434.5	414.3	394.1	389.0
52.5°	649.2	593.6	543.1	477.4	444.6	414.3	376.4	346.1	328.3	305.7	303.1
55°	580.9	533.0	477.4	409.2	376.4	346.1	305.7	275.4	252.6	237.4	232.4
57.5°	507.8	462.2	409.2	341.0	308.1	275.4	237.4	209.6	189.4	176.8	174.3
60°	439.5	396.6	346.1	277.8	245.0	217.2	176.8	149.0	131.4	121.2	116.1
62.5°	389.0	348.5	300.6	237.4	207.1	179.3	141.5	116.1	101.0	90.9	85.8
65°	341.0	300.6	257.6	199.5	174.3	149.0	113.7	90.9	75.7	65.6	60.6
67.5°	290.5	255.2	214.7	166.7	141.5	121.2	90.9	70.7	58.1	50.5	45.4
70°	239.9	207.1	174.3	133.9	116.1	95.9	70.7	55.5	43.0	37.9	32.9
72.5°	189.4	164.2	136.4	103.6	88.4	75.7	55.5	40.4	32.9	27.8	22.8
75°	141.5	123.8	101.0	78.3	65.6	55.5	40.4	30.3	25.2	20.2	17.7
77.5°	101.0	85.8	70.7	53.1	48.0	40.4	27.8	22.8	17.7	12.7	10.1
80°	68.2	60.6	48.0	37.9	30.3	27.8	20.2	15.1	10.1	7.6	7.6
82.5°	45.4	37.9	30.3	22.8	20.2	17.7	12.7	10.1	7.6	5.0	5.0
85°	27.8	22.8	17.7	12.7	12.7	10.1	7.6	5.0	2.6	2.6	2.6
87.5°	12.7	10.1	7.6	5.0	5.0	2.6	2.6	2.6	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°	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2
2.5°	1985.4	1970.3	1960.2	1972.8	1977.8	1970.3	1977.8	1990.5	2003.2	2005.6	1970.3
5°	1988.0	1972.8	1967.7	1982.9	1985.4	1982.9	1990.5	2008.2	2023.4	2028.4	1993.1
7.5°	1988.0	1977.8	1975.3	1993.1	1995.5	1993.1	2005.6	2025.8	2041.0	2051.1	2015.7
10°	1982.9	1977.8	1980.4	1995.5	2000.6	2000.6	2018.3	2041.0	2056.1	2066.2	2030.9
12.5°	1975.3	1975.3	1975.3	1993.1	1998.1	2000.6	2015.7	2046.0	2056.1	2071.3	2035.9
15°	1962.7	1962.7	1962.7	1980.4	1988.0	1988.0	2005.6	2033.5	2046.0	2061.2	2025.8
17.5°	1940.0	1940.0	1942.5	1957.6	1965.2	1965.2	1982.9	2013.3	2020.8	2038.5	2003.2
20°	1907.1	1907.1	1909.7	1924.8	1932.4	1927.3	1950.1	1975.3	1982.9	1998.1	1962.7
22.5°	1859.1	1859.1	1859.1	1874.3	1879.4	1876.8	1899.6	1922.3	1922.3	1942.5	1904.6
25°	1788.4	1793.4	1788.4	1803.5	1808.6	1806.1	1826.3	1846.5	1841.5	1864.2	1826.3
27.5°	1702.5	1700.0	1700.0	1712.6	1712.6	1710.1	1725.2	1748.0	1742.9	1758.1	1722.7
30°	1583.8	1591.3	1578.8	1596.4	1588.9	1583.8	1593.9	1614.1	1606.5	1619.2	1591.3
32.5°	1447.4	1437.3	1437.3	1437.3	1442.3	1429.7	1439.8	1449.9	1442.3	1455.0	1424.7
35°	1268.0	1270.6	1263.0	1265.6	1268.0	1252.9	1263.0	1273.1	1263.0	1270.6	1242.8
37.5°	1088.7	1091.2	1073.6	1083.7	1073.6	1068.5	1078.6	1083.7	1073.6	1081.1	1050.8
40°	909.4	904.3	901.8	901.8	904.3	891.7	899.3	906.8	899.3	904.3	876.5
42.5°	752.7	750.3	745.2	747.7	740.1	737.6	740.1	747.7	740.1	745.2	724.9
45°	616.3	611.2	603.7	606.2	606.2	593.6	601.1	606.2	598.7	601.1	583.5
47.5°	490.0	482.4	482.4	479.9	479.9	474.9	482.4	479.9	472.3	477.4	459.7
50°	381.4	376.4	376.4	376.4	376.4	368.7	371.3	376.4	368.7	368.7	358.6
52.5°	298.0	290.5	285.5	285.5	285.5	282.9	282.9	285.5	277.8	277.8	275.4
55°	224.8	222.3	214.7	214.7	214.7	207.1	209.6	209.6	207.1	207.1	199.5
57.5°	166.7	159.1	154.1	154.1	149.0	149.0	146.5	149.0	144.0	144.0	138.9
60°	111.1	106.0	103.6	101.0	101.0	98.5	101.0	98.5	98.5	95.9	93.5
62.5°	80.8	75.7	70.7	70.7	70.7	68.2	68.2	68.2	68.2	68.2	65.6
65°	58.1	53.1	53.1	50.5	50.5	48.0	48.0	48.0	48.0	48.0	45.4
67.5°	40.4	37.9	35.3	35.3	35.3	35.3	35.3	35.3	32.9	32.9	32.9
70°	30.3	27.8	25.2	25.2	25.2	25.2	25.2	22.8	25.2	25.2	22.8
72.5°	20.2	20.2	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
75°	15.1	15.1	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
77.5°	10.1	10.1	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
80°	7.6	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
82.5°	5.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	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: P857899

CATALOG NUMBER: LX4C40D010 EX4C409027 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2	1960.2
2.5°	2008.2	2005.6	2000.6	2008.2	1988.0	1980.4	1977.8	2000.6
5°	2035.9	2030.9	2030.9	2038.5	2015.7	2010.7	2005.6	2030.9
7.5°	2061.2	2056.1	2056.1	2063.8	2043.6	2038.5	2033.5	2058.7
10°	2076.3	2076.3	2076.3	2081.4	2063.8	2058.7	2056.1	2081.4
12.5°	2084.0	2084.0	2081.4	2091.5	2068.8	2068.8	2063.8	2089.0
15°	2073.9	2073.9	2073.9	2081.4	2061.2	2056.1	2056.1	2076.3
17.5°	2048.6	2048.6	2046.0	2053.7	2030.9	2030.9	2028.4	2051.1
20°	2010.7	2010.7	2005.6	2015.7	1993.1	1985.4	1982.9	2005.6
22.5°	1950.1	1947.5	1945.0	1950.1	1929.9	1924.8	1922.3	1942.5
25°	1871.8	1869.3	1864.2	1869.3	1846.5	1838.9	1838.9	1854.0
27.5°	1760.7	1760.7	1753.0	1760.7	1735.3	1732.8	1730.3	1748.0
30°	1624.2	1614.1	1609.1	1619.2	1593.9	1593.9	1588.9	1606.5
32.5°	1455.0	1444.9	1442.3	1447.4	1424.7	1417.1	1427.2	1437.3
35°	1260.5	1263.0	1252.9	1252.9	1232.7	1235.2	1237.7	1252.9
37.5°	1073.6	1068.5	1065.9	1068.5	1053.4	1048.3	1043.3	1058.4
40°	899.3	886.6	884.1	884.1	871.5	869.0	871.5	879.1
42.5°	735.0	732.5	722.4	727.5	714.8	719.9	717.4	717.4
45°	593.6	596.1	586.0	593.6	583.5	575.9	575.9	580.9
47.5°	469.8	469.8	467.3	467.3	459.7	462.2	457.2	464.8
50°	363.7	363.7	358.6	361.2	356.2	356.2	353.6	356.2
52.5°	277.8	275.4	275.4	272.8	267.7	270.3	272.8	267.7
55°	202.1	204.6	199.5	202.1	197.0	199.5	197.0	199.5
57.5°	138.9	141.5	136.4	141.5	136.4	138.9	136.4	136.4
60°	95.9	95.9	93.5	95.9	93.5	93.5	90.9	95.9
62.5°	65.6	65.6	65.6	65.6	65.6	63.2	65.6	65.6
65°	48.0	45.4	45.4	45.4	45.4	45.4	45.4	45.4
67.5°	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9
70°	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
72.5°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
75°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
77.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
80°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	2.6	2.6	2.6	0.0	2.6	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



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)