

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: P563836

Luminaire Tested: **LD4C40D010 EX4C409030 4LBSQLWWH**

Issue Date: 2/18/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P563836  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/18/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C40D010 EX4C409030 4LBSQLWWH  
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH, DIM TO WARM  
Light Source: -  
Ballast/Driver: -

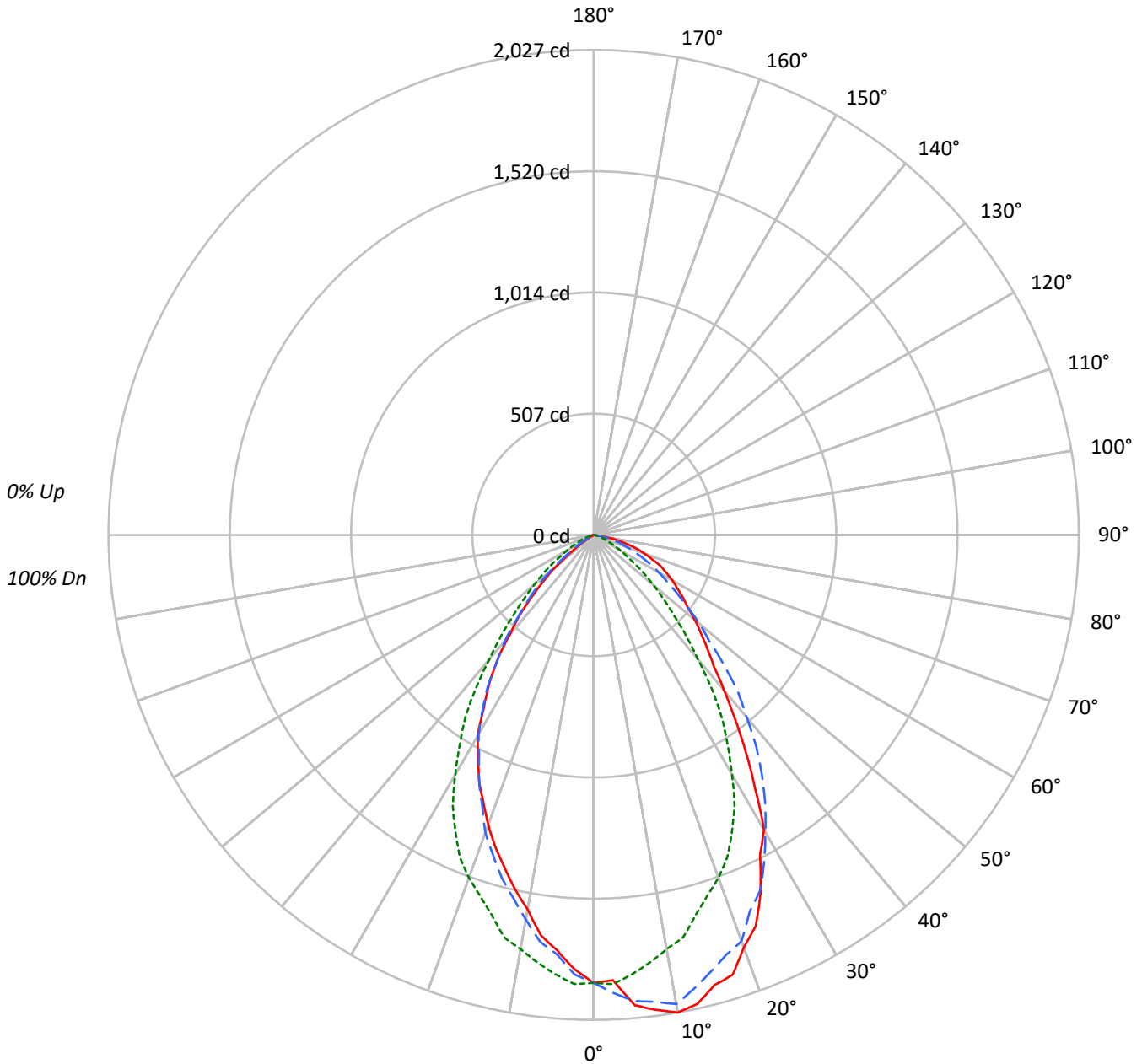
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2683.3 lumens  
Efficiency: N/A  
Efficacy: 57.1 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 47  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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: LD4C40D010 EX4C409030 4LBSQLWWH

### 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	84	82	80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72			
4	91	81	74	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	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	180627	180627	180627
5°	191109	178499	168929
10°	198600	172205	155706
15°	194621	164353	143726
20°	188307	156497	132295
25°	175644	145525	120687
30°	158567	128785	108040
35°	130607	110253	89639
40°	106585	85097	68987
45°	91576	64626	49615
50°	82876	49191	31328
55°	76289	35495	11321
60°	73216	24238	1737
65°	70708	16393	502
70°	63307	11397	621
75°	51932	5890	0
80°	32450	2500	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.4	6.5
10°-20°	472.5	17.6
20°-30°	631.0	23.5
30°-40°	599.0	22.3
40°-50°	414.0	15.4
50°-60°	228.8	8.5
60°-70°	113.6	4.2
70°-80°	44.8	1.7
80°-90°	4.3	0.2
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°	1278.9	47.7
0°-40°	1877.9	70.0
0°-60°	2520.7	93.9
0°-90°	2683.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2683.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1872	1872	1872	1872	1872	
5°	1973	1955	1843	1760	1744	189
15°	1948	1890	1645	1484	1439	551
25°	1650	1643	1367	1134	1134	752
35°	1109	1226	936	770	761	695
45°	671	770	474	388	364	523
55°	454	426	211	108	67	408
65°	310	224	72	2	2	301
75°	139	85	16	0	0	148
85°	0	2	0	0	0	13
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°	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0
2.5°	1863.0	1914.7	1919.2	1914.7	1921.4	1919.2	1930.3	1919.2	1932.7	1912.4	1916.9
5°	1973.1	1952.8	1995.4	1973.1	1973.1	1970.8	1964.0	1961.8	1970.8	1941.6	1955.1
7.5°	2002.3	2031.5	2069.6	2022.5	2024.6	2024.6	2011.2	2006.7	2006.7	1952.8	1968.6
10°	2027.0	2008.9	2029.1	2011.2	2027.0	2024.6	2033.6	2004.4	2024.6	1993.2	1991.0
12.5°	2006.7	1999.9	2027.0	1997.8	1988.7	1991.0	1979.8	1973.1	1979.8	1943.9	1941.6
15°	1948.3	1955.1	1995.4	1964.0	1959.5	1955.1	1941.6	1919.2	1937.2	1887.7	1890.1
17.5°	1928.2	1916.9	1923.7	1896.7	1903.5	1899.0	1896.7	1876.5	1872.0	1840.6	1840.6
20°	1833.9	1858.5	1858.5	1840.6	1840.6	1838.4	1809.2	1827.1	1807.0	1797.9	1807.0
22.5°	1768.7	1771.0	1771.0	1755.3	1757.6	1748.6	1732.9	1721.6	1732.9	1721.6	1703.7
25°	1649.8	1654.4	1681.2	1652.0	1647.6	1656.5	1643.1	1636.3	1634.1	1607.2	1643.1
27.5°	1506.2	1551.0	1548.8	1537.5	1551.0	1533.0	1526.4	1528.5	1535.4	1533.0	1542.1
30°	1423.2	1429.8	1436.6	1427.6	1429.8	1423.2	1423.2	1425.3	1443.3	1436.6	1434.4
32.5°	1254.7	1277.2	1295.2	1295.2	1297.3	1304.2	1301.9	1349.0	1360.3	1337.8	1333.3
35°	1108.8	1124.6	1140.3	1142.5	1171.7	1174.0	1176.2	1189.6	1221.0	1227.9	1225.5
37.5°	969.7	985.4	989.8	1010.1	1025.8	1041.5	1059.5	1077.4	1104.4	1126.8	1115.6
40°	846.2	852.9	864.2	873.2	904.6	904.6	913.5	949.5	978.6	996.7	994.3
42.5°	743.0	745.2	754.2	769.9	799.1	792.3	799.1	823.8	866.3	868.7	893.4
45°	671.1	668.9	675.6	677.9	695.9	704.8	709.3	727.3	763.1	767.6	769.9
47.5°	606.0	603.8	615.1	619.6	626.2	635.2	635.2	637.5	650.9	662.2	653.2
50°	552.1	552.1	552.1	556.6	567.9	565.7	567.9	576.9	583.6	579.1	576.9
52.5°	493.7	502.8	509.5	511.9	514.0	514.0	516.3	511.9	509.5	502.8	489.3
55°	453.5	462.4	462.4	462.4	462.4	471.4	460.2	462.4	462.4	444.4	426.5
57.5°	413.1	422.0	428.7	419.7	428.7	419.7	415.2	413.1	408.5	390.5	363.6
60°	379.4	383.9	381.6	379.4	383.9	377.1	372.6	363.6	359.2	334.5	316.5
62.5°	341.2	343.4	345.6	341.2	336.7	334.5	325.5	312.0	303.0	282.8	267.1
65°	309.7	303.0	300.8	298.5	294.1	287.3	280.6	264.9	258.1	240.2	224.4
67.5°	262.5	260.4	264.9	258.1	247.0	247.0	240.2	226.7	211.0	199.8	184.0
70°	224.4	222.3	217.8	211.0	208.7	199.8	199.8	184.0	179.5	159.4	145.9
72.5°	184.0	184.0	177.3	170.6	163.9	159.4	157.2	145.9	139.3	128.0	116.7
75°	139.3	139.3	136.9	130.2	125.6	121.1	119.0	110.1	103.2	92.1	85.3
77.5°	98.8	98.8	89.8	85.3	87.5	83.0	78.5	76.3	74.1	67.3	58.4
80°	58.4	56.1	49.4	51.6	49.4	49.4	47.1	44.9	40.4	35.9	31.4
82.5°	15.8	17.9	17.9	17.9	20.2	15.8	15.8	15.8	17.9	17.9	11.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	2.2
87.5°	2.2	4.5	9.0	9.0	9.0	9.0	9.0	6.8	6.8	6.8	4.5
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°	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0
2.5°	1894.5	1892.2	1894.5	1878.8	1914.7	1887.7	1883.2	1878.8	1894.5	1878.8	1856.3
5°	1934.8	1912.4	1905.6	1899.0	1919.2	1887.7	1881.0	1883.2	1872.0	1842.9	1845.1
7.5°	1948.3	1928.2	1908.0	1865.3	1883.2	1876.5	1858.5	1845.1	1827.1	1802.4	1797.9
10°	1952.8	1930.3	1901.1	1887.7	1860.8	1851.8	1845.1	1822.6	1800.2	1757.6	1746.3
12.5°	1939.4	1912.4	1876.5	1865.3	1845.1	1815.9	1800.2	1777.8	1757.6	1723.8	1699.1
15°	1881.0	1858.5	1847.3	1809.2	1800.2	1782.2	1750.8	1719.4	1690.2	1645.3	1631.8
17.5°	1813.7	1804.7	1793.4	1764.2	1762.1	1744.1	1714.9	1687.9	1649.8	1580.2	1557.7
20°	1744.1	1744.1	1708.2	1697.0	1719.4	1683.5	1661.0	1636.3	1557.7	1524.1	1483.7
22.5°	1692.5	1667.8	1647.6	1629.7	1631.8	1609.4	1578.0	1528.5	1499.4	1459.0	1411.9
25°	1591.4	1600.5	1555.6	1548.8	1555.6	1503.8	1488.2	1447.8	1405.1	1366.9	1331.1
27.5°	1528.5	1503.8	1474.7	1450.0	1450.0	1429.8	1385.0	1376.0	1310.9	1275.0	1230.0
30°	1434.4	1416.3	1391.6	1355.7	1351.2	1335.6	1299.7	1277.2	1209.9	1155.9	1131.2
32.5°	1315.3	1308.6	1288.4	1248.0	1234.6	1216.6	1171.7	1133.6	1102.1	1041.5	1012.3
35°	1230.0	1205.4	1162.8	1129.1	1117.8	1086.4	1050.5	1023.5	989.8	936.0	897.9
37.5°	1102.1	1077.4	1037.0	996.7	996.7	965.2	915.8	888.9	841.7	810.3	778.9
40°	989.8	958.5	918.1	870.9	864.2	819.3	799.1	754.2	725.0	675.6	671.1
42.5°	864.2	835.0	799.1	763.1	736.2	713.8	662.2	628.5	597.1	572.4	565.7
45°	749.7	711.5	680.1	635.2	608.3	581.3	547.7	525.3	500.6	473.6	457.9
47.5°	650.9	619.6	574.6	534.2	507.3	493.7	455.6	431.0	410.7	392.8	381.6
50°	550.0	511.9	487.1	442.2	437.7	406.3	374.8	354.7	343.4	327.7	312.0
52.5°	473.6	437.7	404.0	370.4	352.4	341.2	312.0	291.8	276.2	264.9	255.9
55°	399.6	368.1	341.2	307.5	296.3	280.6	247.0	242.5	226.7	211.0	199.8
57.5°	343.4	314.2	282.8	260.4	240.2	229.0	202.0	184.0	175.1	161.6	150.3
60°	291.8	260.4	235.7	208.7	199.8	184.0	163.9	148.2	136.9	125.6	114.5
62.5°	244.6	217.8	190.8	168.3	154.8	145.9	130.2	116.7	105.5	96.5	87.5
65°	202.0	177.3	154.8	132.4	125.6	114.5	103.2	92.1	83.0	71.8	62.9
67.5°	166.1	143.7	121.1	105.5	98.8	94.3	80.9	69.6	62.9	56.1	47.1
70°	130.2	114.5	96.5	83.0	76.3	69.6	60.6	53.9	44.9	40.4	33.7
72.5°	101.0	87.5	71.8	60.6	56.1	51.6	42.6	35.9	31.4	27.0	22.4
75°	71.8	60.6	51.6	40.4	38.1	35.9	29.2	24.7	20.2	15.8	13.4
77.5°	49.4	40.4	31.4	27.0	24.7	20.2	17.9	13.4	11.3	9.0	6.8
80°	27.0	20.2	15.8	13.4	11.3	9.0	9.0	6.8	4.5	4.5	2.2
82.5°	9.0	6.8	4.5	2.2	2.2	2.2	2.2	2.2	2.2	0.0	2.2
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°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	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°	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0
2.5°	1869.8	1845.1	1851.8	1851.8	1847.3	1847.3	1842.9	1836.1	1838.4	1824.9	1795.8
5°	1849.6	1818.1	1813.7	1818.1	1800.2	1795.8	1786.8	1800.2	1759.8	1775.5	1757.6
7.5°	1791.3	1762.1	1755.3	1771.0	1748.6	1735.0	1732.9	1750.8	1714.9	1697.0	1676.8
10°	1726.1	1714.9	1694.7	1683.5	1676.8	1679.0	1661.0	1638.6	1631.8	1627.3	1609.4
12.5°	1667.8	1643.1	1625.2	1611.7	1607.2	1607.2	1578.0	1573.5	1553.3	1548.8	1521.9
15°	1598.1	1569.0	1557.7	1539.8	1524.1	1533.0	1499.4	1490.4	1483.7	1454.5	1459.0
17.5°	1537.5	1506.2	1479.2	1468.0	1454.5	1441.1	1409.6	1416.3	1400.6	1400.6	1360.3
20°	1459.0	1425.3	1405.1	1382.7	1382.7	1364.8	1342.3	1344.5	1324.3	1304.2	1268.1
22.5°	1376.0	1340.1	1315.3	1306.4	1283.9	1279.4	1252.6	1245.8	1218.8	1221.0	1189.6
25°	1288.4	1252.6	1218.8	1221.0	1200.9	1192.0	1176.2	1144.8	1133.6	1120.1	1111.1
27.5°	1185.1	1160.4	1131.2	1129.1	1090.9	1093.1	1072.9	1064.0	1037.0	1043.7	1023.5
30°	1090.9	1055.0	1028.0	1021.4	1005.6	1001.1	969.7	956.2	960.7	942.7	931.6
32.5°	994.3	940.5	929.3	915.8	906.8	895.5	873.2	882.1	861.9	866.3	848.4
35°	866.3	844.0	814.8	814.8	805.8	796.9	781.2	790.2	769.9	761.0	743.0
37.5°	758.6	738.5	709.3	718.2	702.6	689.1	675.6	677.9	659.9	657.7	639.7
40°	642.0	630.7	610.5	610.5	599.3	599.3	592.5	585.9	574.6	561.2	540.9
42.5°	532.0	522.9	514.0	516.3	500.6	514.0	496.1	507.3	471.4	469.1	455.6
45°	451.1	431.0	433.2	424.3	415.2	419.7	404.0	408.5	388.4	383.9	370.4
47.5°	365.9	359.2	345.6	341.2	341.2	334.5	327.7	325.5	316.5	305.3	287.3
50°	300.8	276.2	271.6	264.9	260.4	260.4	251.5	237.9	240.2	229.0	211.0
52.5°	235.7	215.4	206.5	204.3	195.3	190.8	179.5	170.6	163.9	159.4	148.2
55°	181.8	163.9	152.7	152.7	139.3	139.3	123.5	116.7	107.7	98.8	92.1
57.5°	136.9	128.0	116.7	107.7	103.2	92.1	83.0	71.8	65.1	51.6	42.6
60°	103.2	94.3	83.0	76.3	71.8	60.6	49.4	40.4	24.7	20.2	17.9
62.5°	76.3	67.3	56.1	51.6	47.1	38.1	27.0	13.4	6.8	6.8	6.8
65°	56.1	44.9	35.9	31.4	27.0	20.2	9.0	4.5	2.2	2.2	2.2
67.5°	38.1	29.2	20.2	17.9	13.4	6.8	2.2	2.2	2.2	2.2	2.2
70°	24.7	17.9	9.0	6.8	4.5	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	15.8	9.0	4.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	9.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	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	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	2.2
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: P563836

CATALOG NUMBER: LD4C40D010 EX4C409030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0	1872.0
2.5°	1827.1	1811.4	1820.4	1800.2	1809.2	1824.9	1813.7	1818.1
5°	1764.2	1755.3	1744.1	1714.9	1737.4	1755.3	1746.3	1744.1
7.5°	1697.0	1665.5	1681.2	1672.3	1667.8	1685.7	1665.5	1687.9
10°	1627.3	1604.9	1602.7	1586.9	1586.9	1600.5	1602.7	1589.2
12.5°	1524.1	1512.9	1512.9	1510.6	1508.3	1521.9	1524.1	1517.4
15°	1450.0	1445.5	1434.4	1432.1	1418.7	1438.8	1441.1	1438.8
17.5°	1360.3	1362.4	1351.2	1351.2	1360.3	1366.9	1349.0	1366.9
20°	1299.7	1288.4	1283.9	1263.7	1275.0	1286.2	1286.2	1288.4
22.5°	1212.1	1194.1	1200.9	1189.6	1182.9	1198.7	1198.7	1205.4
25°	1113.3	1113.3	1117.8	1111.1	1115.6	1124.6	1117.8	1133.6
27.5°	1019.0	1028.0	1028.0	1019.0	1023.5	1050.5	1061.7	1043.7
30°	931.6	933.8	940.5	936.0	949.5	958.5	956.2	969.7
32.5°	832.8	844.0	848.4	841.7	846.2	866.3	855.3	852.9
35°	756.5	736.2	734.0	736.2	745.2	749.7	745.2	761.0
37.5°	646.4	639.7	630.7	633.0	639.7	648.8	653.2	664.4
40°	540.9	532.0	532.0	529.8	522.9	547.7	547.7	547.7
42.5°	448.9	446.7	435.5	435.5	444.4	451.1	446.7	462.4
45°	368.1	359.2	352.4	352.4	359.2	359.2	365.9	363.6
47.5°	289.6	280.6	282.8	276.2	282.8	291.8	280.6	282.8
50°	217.8	217.8	213.2	217.8	215.4	217.8	213.2	208.7
52.5°	148.2	168.3	170.6	161.6	141.4	123.5	112.2	121.1
55°	85.3	76.3	76.3	74.1	69.6	67.3	60.6	67.3
57.5°	42.6	38.1	38.1	38.1	35.9	33.7	29.2	29.2
60°	17.9	15.8	15.8	13.4	11.3	9.0	6.8	9.0
62.5°	6.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5
65°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
67.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
70°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)