

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: P#

Luminaire Tested: **LD4C35D010 EX4C359040 4LBSQLWWLI**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P#  
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: LD4C35D010 EX4C359040 4LBSQLWWLI  
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

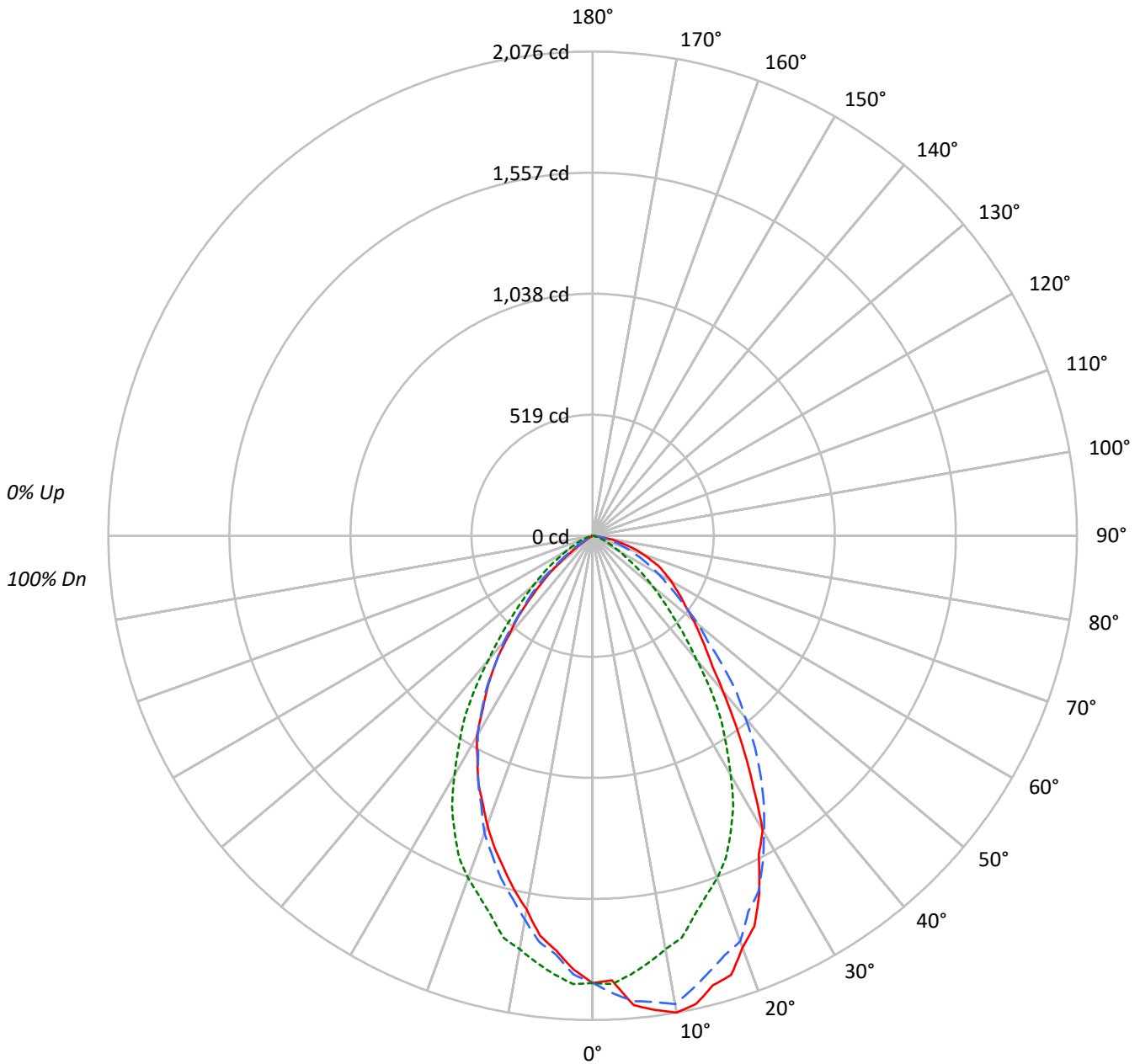
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2748.0 lumens  
Efficiency: N/A  
Efficacy: 68.0 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): 40.4  
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									
RC	80									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°	184979	184979	184979
5°	195701	182799	172997
10°	203381	176350	159448
15°	199306	168309	147182
20°	192846	160265	135478
25°	179881	149039	123583
30°	162377	131894	110647
35°	133752	112915	91795
40°	109155	87150	70649
45°	93786	66195	50816
50°	84887	50377	32094
55°	78106	36336	11607
60°	74972	24836	1775
65°	72421	16804	525
70°	64830	11651	649
75°	53162	6002	0
80°	33228	2556	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.6	6.5
10°-20°	483.9	17.6
20°-30°	646.2	23.5
30°-40°	613.4	22.3
40°-50°	424.0	15.4
50°-60°	234.3	8.5
60°-70°	116.3	4.2
70°-80°	45.8	1.7
80°-90°	4.4	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°	1309.7	47.7
0°-40°	1923.2	70.0
0°-60°	2581.5	93.9
0°-90°	2748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2748.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1917	1917	1917	1917	1917	
5°	2020	2002	1887	1802	1786	193
15°	1995	1936	1685	1520	1473	564
25°	1690	1683	1400	1161	1161	770
35°	1136	1255	959	788	779	711
45°	687	788	485	398	372	536
55°	464	437	216	110	69	418
65°	317	230	74	2	2	308
75°	143	87	16	0	0	152
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°	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1
2.5°	1907.9	1960.7	1965.3	1960.7	1967.7	1965.3	1976.9	1965.3	1979.2	1958.5	1963.1
5°	2020.5	1999.8	2043.5	2020.5	2020.5	2018.3	2011.4	2009.0	2018.3	1988.4	2002.2
7.5°	2050.4	2080.3	2119.4	2071.2	2073.4	2073.4	2059.6	2055.0	2055.0	1999.8	2016.0
10°	2075.8	2057.3	2078.0	2059.6	2075.8	2073.4	2082.6	2052.7	2073.4	2041.3	2038.9
12.5°	2055.0	2048.1	2075.8	2045.9	2036.7	2038.9	2027.5	2020.5	2027.5	1990.6	1988.4
15°	1995.2	2002.2	2043.5	2011.4	2006.8	2002.2	1988.4	1965.3	1983.8	1933.2	1935.5
17.5°	1974.6	1963.1	1970.0	1942.4	1949.3	1944.7	1942.4	1921.8	1917.1	1884.9	1884.9
20°	1878.1	1903.3	1903.3	1884.9	1884.9	1882.7	1852.8	1871.1	1850.4	1841.2	1850.4
22.5°	1811.3	1813.7	1813.7	1797.6	1799.9	1790.7	1774.6	1763.1	1774.6	1763.1	1744.7
25°	1689.6	1694.2	1721.7	1691.8	1687.2	1696.4	1682.6	1675.7	1673.5	1645.9	1682.6
27.5°	1542.4	1588.4	1586.1	1574.6	1588.4	1570.0	1563.1	1565.4	1572.3	1570.0	1579.2
30°	1457.4	1464.3	1471.2	1462.0	1464.3	1457.4	1457.4	1459.7	1478.0	1471.2	1468.8
32.5°	1284.9	1307.9	1326.4	1326.4	1328.6	1335.6	1333.2	1381.5	1393.0	1370.1	1365.5
35°	1135.5	1151.7	1167.7	1170.0	1199.9	1202.2	1204.5	1218.3	1250.5	1257.4	1255.1
37.5°	993.1	1009.1	1013.7	1034.4	1050.5	1066.6	1085.0	1103.4	1131.0	1153.9	1142.5
40°	866.6	873.5	885.0	894.2	926.3	926.3	935.5	972.4	1002.3	1020.6	1018.3
42.5°	760.9	763.2	772.3	788.5	818.4	811.4	818.4	843.7	887.3	889.6	914.9
45°	687.3	685.0	691.9	694.2	712.6	721.8	726.4	744.8	781.5	786.1	788.5
47.5°	620.7	618.3	629.9	634.5	641.3	650.5	650.5	652.8	666.6	678.1	669.0
50°	565.5	565.5	565.5	570.1	581.6	579.3	581.6	590.8	597.6	593.0	590.8
52.5°	505.7	514.9	521.8	524.1	526.4	526.4	528.7	524.1	521.8	514.9	501.1
55°	464.3	473.5	473.5	473.5	473.5	482.7	471.3	473.5	473.5	455.2	436.8
57.5°	423.0	432.2	439.0	429.8	439.0	429.8	425.3	423.0	418.3	399.9	372.4
60°	388.5	393.1	390.8	388.5	393.1	386.2	381.6	372.4	367.8	342.5	324.1
62.5°	349.4	351.7	354.0	349.4	344.8	342.5	333.3	319.5	310.3	289.6	273.5
65°	317.2	310.3	308.0	305.7	301.2	294.2	287.4	271.3	264.3	245.9	229.8
67.5°	268.9	266.7	271.3	264.3	252.9	252.9	245.9	232.2	216.0	204.6	188.5
70°	229.8	227.6	223.0	216.0	213.8	204.6	204.6	188.5	183.9	163.2	149.4
72.5°	188.5	188.5	181.6	174.7	167.8	163.2	160.9	149.4	142.6	131.0	119.5
75°	142.6	142.6	140.2	133.3	128.7	124.1	121.8	112.7	105.7	94.3	87.4
77.5°	101.1	101.1	91.9	87.4	89.6	85.0	80.4	78.2	75.8	69.0	59.8
80°	59.8	57.5	50.6	52.9	50.6	50.6	48.3	45.9	41.3	36.7	32.2
82.5°	16.1	18.4	18.4	18.4	20.7	16.1	16.1	16.1	18.4	18.4	11.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	2.3
87.5°	2.3	4.6	9.2	9.2	9.2	9.2	9.2	6.9	6.9	6.9	4.6
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°	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1
2.5°	1940.1	1937.8	1940.1	1924.0	1960.7	1933.2	1928.6	1924.0	1940.1	1924.0	1901.0
5°	1981.5	1958.5	1951.6	1944.7	1965.3	1933.2	1926.3	1928.6	1917.1	1887.3	1889.5
7.5°	1995.2	1974.6	1953.9	1910.2	1928.6	1921.8	1903.3	1889.5	1871.1	1845.8	1841.2
10°	1999.8	1976.9	1947.0	1933.2	1905.6	1896.4	1889.5	1866.5	1843.6	1799.9	1788.4
12.5°	1986.1	1958.5	1921.8	1910.2	1889.5	1859.6	1843.6	1820.5	1799.9	1765.4	1740.1
15°	1926.3	1903.3	1891.9	1852.8	1843.6	1825.1	1793.0	1760.8	1730.9	1684.9	1671.1
17.5°	1857.4	1848.2	1836.6	1806.7	1804.5	1786.1	1756.2	1728.6	1689.6	1618.3	1595.3
20°	1786.1	1786.1	1749.3	1737.9	1760.8	1724.0	1701.0	1675.7	1595.3	1560.8	1519.5
22.5°	1733.3	1708.0	1687.2	1668.9	1671.1	1648.2	1616.0	1565.4	1535.5	1494.2	1445.9
25°	1629.8	1639.0	1593.0	1586.1	1593.0	1540.1	1524.1	1482.6	1438.9	1399.9	1363.1
27.5°	1565.4	1540.1	1510.3	1485.0	1485.0	1464.3	1418.3	1409.1	1342.4	1305.7	1259.6
30°	1468.8	1450.5	1425.2	1388.4	1383.8	1367.7	1331.0	1307.9	1239.0	1183.8	1158.5
32.5°	1347.0	1340.2	1319.4	1278.1	1264.3	1245.9	1199.9	1160.8	1128.7	1066.6	1036.7
35°	1259.6	1234.4	1190.7	1156.3	1144.7	1112.6	1075.7	1048.2	1013.7	958.6	919.5
37.5°	1128.7	1103.4	1062.0	1020.6	1020.6	988.5	937.9	910.3	862.0	829.8	797.6
40°	1013.7	981.5	940.2	891.9	885.0	839.0	818.4	772.3	742.4	691.9	687.3
42.5°	885.0	855.1	818.4	781.5	754.0	731.0	678.1	643.6	611.5	586.2	579.3
45°	767.7	728.7	696.5	650.5	622.9	595.4	560.9	537.9	512.6	485.1	468.9
47.5°	666.6	634.5	588.4	547.1	519.5	505.7	466.6	441.4	420.7	402.3	390.8
50°	563.2	524.1	498.8	452.8	448.2	416.1	383.9	363.2	351.7	335.6	319.5
52.5°	485.1	448.2	413.7	379.3	360.9	349.4	319.5	298.8	282.8	271.3	262.1
55°	409.1	377.0	349.4	314.9	303.4	287.4	252.9	248.3	232.2	216.0	204.6
57.5°	351.7	321.8	289.6	266.7	245.9	234.5	206.9	188.5	179.3	165.5	154.0
60°	298.8	266.7	241.4	213.8	204.6	188.5	167.8	151.7	140.2	128.7	117.3
62.5°	250.5	223.0	195.4	172.4	158.6	149.4	133.3	119.5	108.1	98.9	89.6
65°	206.9	181.6	158.6	135.6	128.7	117.3	105.7	94.3	85.0	73.6	64.4
67.5°	170.1	147.2	124.1	108.1	101.1	96.5	82.8	71.2	64.4	57.5	48.3
70°	133.3	117.3	98.9	85.0	78.2	71.2	62.1	55.2	45.9	41.3	34.5
72.5°	103.5	89.6	73.6	62.1	57.5	52.9	43.7	36.7	32.2	27.6	23.0
75°	73.6	62.1	52.9	41.3	39.1	36.7	29.9	25.3	20.7	16.1	13.8
77.5°	50.6	41.3	32.2	27.6	25.3	20.7	18.4	13.8	11.5	9.2	6.9
80°	27.6	20.7	16.1	13.8	11.5	9.2	9.2	6.9	4.6	4.6	2.3
82.5°	9.2	6.9	4.6	2.3	2.3	2.3	2.3	2.3	2.3	0.0	2.3
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°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	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°	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1
2.5°	1914.8	1889.5	1896.4	1896.4	1891.9	1891.9	1887.3	1880.3	1882.7	1868.8	1839.0
5°	1894.1	1862.0	1857.4	1862.0	1843.6	1839.0	1829.8	1843.6	1802.2	1818.3	1799.9
7.5°	1834.4	1804.5	1797.6	1813.7	1790.7	1776.8	1774.6	1793.0	1756.2	1737.9	1717.1
10°	1767.7	1756.2	1735.5	1724.0	1717.1	1719.4	1701.0	1678.1	1671.1	1666.5	1648.2
12.5°	1708.0	1682.6	1664.3	1650.5	1645.9	1645.9	1616.0	1611.4	1590.7	1586.1	1558.5
15°	1636.6	1606.8	1595.3	1576.9	1560.8	1570.0	1535.5	1526.3	1519.5	1489.6	1494.2
17.5°	1574.6	1542.4	1514.9	1503.3	1489.6	1475.8	1443.5	1450.5	1434.4	1434.4	1393.0
20°	1494.2	1459.7	1438.9	1416.0	1416.0	1397.6	1374.6	1376.9	1356.2	1335.6	1298.7
22.5°	1409.1	1372.3	1347.0	1337.8	1314.8	1310.3	1282.7	1275.8	1248.2	1250.5	1218.3
25°	1319.4	1282.7	1248.2	1250.5	1229.8	1220.6	1204.5	1172.4	1160.8	1147.1	1137.9
27.5°	1213.7	1188.4	1158.5	1156.3	1117.2	1119.4	1098.8	1089.6	1062.0	1068.9	1048.2
30°	1117.2	1080.4	1052.8	1045.9	1029.8	1025.2	993.1	979.2	983.9	965.4	954.0
32.5°	1018.3	963.2	951.6	937.9	928.7	917.2	894.2	903.4	882.7	887.3	868.9
35°	887.3	864.3	834.4	834.4	825.2	816.0	800.0	809.2	788.5	779.3	760.9
37.5°	776.9	756.3	726.4	735.6	719.5	705.7	691.9	694.2	675.8	673.5	655.1
40°	657.4	645.9	625.3	625.3	613.7	613.7	606.8	600.0	588.4	574.7	553.9
42.5°	544.8	535.6	526.4	528.7	512.6	526.4	508.0	519.5	482.7	480.5	466.6
45°	462.0	441.4	443.6	434.4	425.3	429.8	413.7	418.3	397.7	393.1	379.3
47.5°	374.7	367.8	354.0	349.4	349.4	342.5	335.6	333.3	324.1	312.6	294.2
50°	308.0	282.8	278.1	271.3	266.7	266.7	257.5	243.7	245.9	234.5	216.0
52.5°	241.4	220.6	211.5	209.2	200.0	195.4	183.9	174.7	167.8	163.2	151.7
55°	186.2	167.8	156.3	156.3	142.6	142.6	126.4	119.5	110.3	101.1	94.3
57.5°	140.2	131.0	119.5	110.3	105.7	94.3	85.0	73.6	66.6	52.9	43.7
60°	105.7	96.5	85.0	78.2	73.6	62.1	50.6	41.3	25.3	20.7	18.4
62.5°	78.2	69.0	57.5	52.9	48.3	39.1	27.6	13.8	6.9	6.9	6.9
65°	57.5	45.9	36.7	32.2	27.6	20.7	9.2	4.6	2.3	2.3	2.3
67.5°	39.1	29.9	20.7	18.4	13.8	6.9	2.3	2.3	2.3	2.3	2.3
70°	25.3	18.4	9.2	6.9	4.6	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	16.1	9.2	4.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	9.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.3	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	2.3	2.3	2.3
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: P#

CATALOG NUMBER: LD4C35D010 EX4C359040 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1	1917.1
2.5°	1871.1	1855.0	1864.2	1843.6	1852.8	1868.8	1857.4	1862.0
5°	1806.7	1797.6	1786.1	1756.2	1779.2	1797.6	1788.4	1786.1
7.5°	1737.9	1705.6	1721.7	1712.5	1708.0	1726.3	1705.6	1728.6
10°	1666.5	1643.6	1641.3	1625.2	1625.2	1639.0	1641.3	1627.4
12.5°	1560.8	1549.4	1549.4	1547.0	1544.7	1558.5	1560.8	1554.0
15°	1485.0	1480.4	1468.8	1466.6	1452.8	1473.4	1475.8	1473.4
17.5°	1393.0	1395.3	1383.8	1383.8	1393.0	1399.9	1381.5	1399.9
20°	1331.0	1319.4	1314.8	1294.1	1305.7	1317.2	1317.2	1319.4
22.5°	1241.3	1222.9	1229.8	1218.3	1211.4	1227.5	1227.5	1234.4
25°	1140.1	1140.1	1144.7	1137.9	1142.5	1151.7	1144.7	1160.8
27.5°	1043.6	1052.8	1052.8	1043.6	1048.2	1075.7	1087.3	1068.9
30°	954.0	956.2	963.2	958.6	972.4	981.5	979.2	993.1
32.5°	852.9	864.3	868.9	862.0	866.6	887.3	875.8	873.5
35°	774.7	754.0	751.7	754.0	763.2	767.7	763.2	779.3
37.5°	662.0	655.1	645.9	648.2	655.1	664.4	669.0	680.4
40°	553.9	544.8	544.8	542.5	535.6	560.9	560.9	560.9
42.5°	459.7	457.4	446.0	446.0	455.2	462.0	457.4	473.5
45°	377.0	367.8	360.9	360.9	367.8	367.8	374.7	372.4
47.5°	296.6	287.4	289.6	282.8	289.6	298.8	287.4	289.6
50°	223.0	223.0	218.4	223.0	220.6	223.0	218.4	213.8
52.5°	151.7	172.4	174.7	165.5	144.8	126.4	114.9	124.1
55°	87.4	78.2	78.2	75.8	71.2	69.0	62.1	69.0
57.5°	43.7	39.1	39.1	39.1	36.7	34.5	29.9	29.9
60°	18.4	16.1	16.1	13.8	11.5	9.2	6.9	9.2
62.5°	6.9	4.6	4.6	4.6	4.6	4.6	4.6	4.6
65°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
67.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
70°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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)