

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: **LD4C40D010 EX4C409050 4LBSQLWWH**

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: LD4C40D010 EX4C409050 4LBSQLWWH  
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

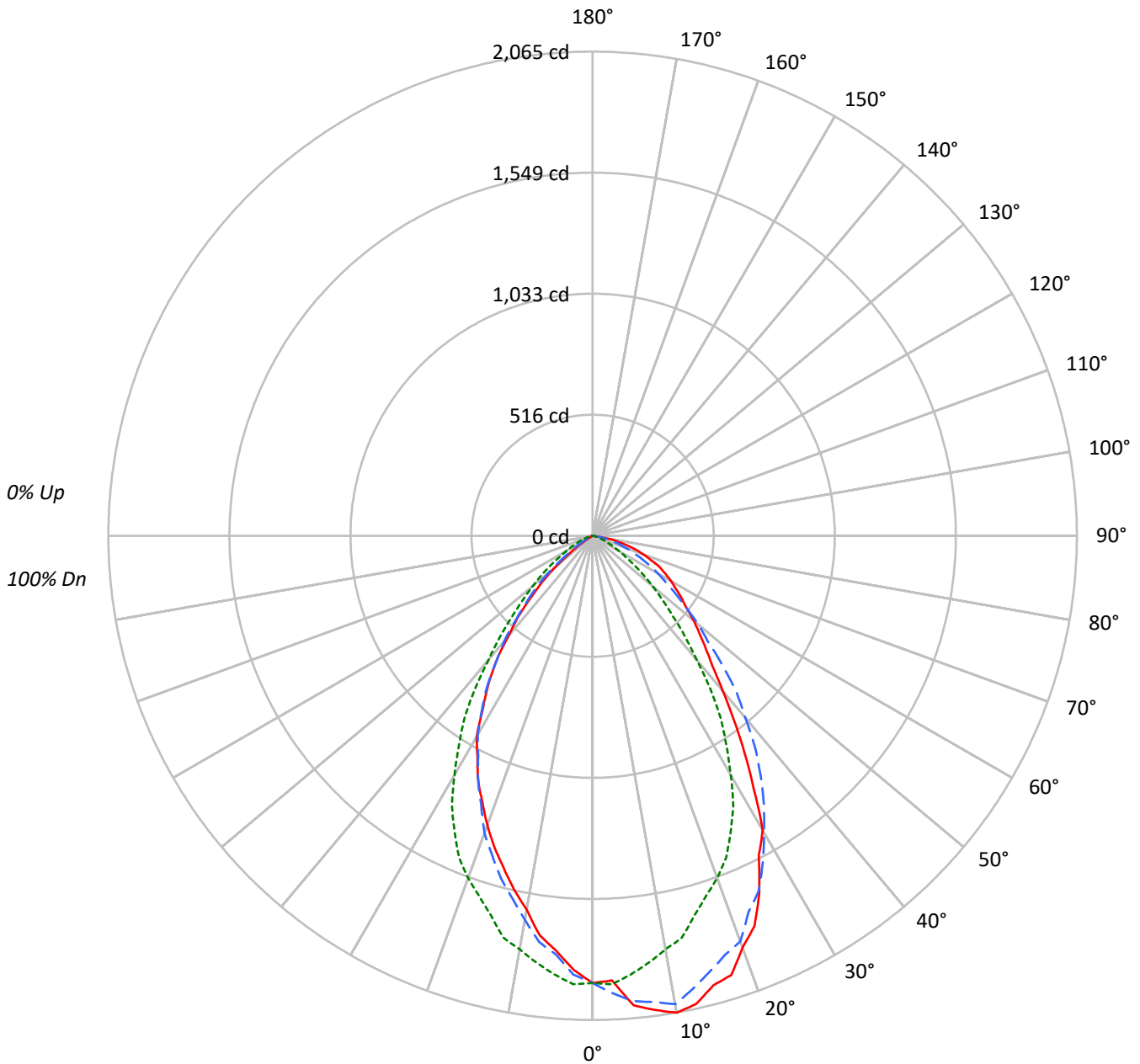
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2734.0 lumens  
Efficiency: N/A  
Efficacy: 58.2 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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### 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°	184033	184033	184033
5°	194713	181860	172116
10°	202343	175448	158635
15°	198297	167450	146433
20°	191860	159444	134790
25°	178966	148272	122955
30°	161553	131226	110079
35°	133080	112337	91324
40°	108600	86709	70284
45°	93309	65854	50557
50°	84452	50122	31928
55°	77719	36151	11540
60°	74586	24701	1756
65°	72055	16712	525
70°	64520	11595	649
75°	52864	5965	0
80°	33062	2556	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.7	6.5
10°-20°	481.5	17.6
20°-30°	642.9	23.5
30°-40°	610.3	22.3
40°-50°	421.9	15.4
50°-60°	233.1	8.5
60°-70°	115.7	4.2
70°-80°	45.6	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°	1303.1	47.7
0°-40°	1913.4	70.0
0°-60°	2568.3	93.9
0°-90°	2734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2734.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1907	1907	1907	1907	1907	
5°	2010	1992	1878	1793	1777	192
15°	1985	1926	1676	1512	1466	562
25°	1681	1674	1393	1155	1155	766
35°	1130	1249	954	784	775	708
45°	684	784	483	396	370	533
55°	462	435	215	110	69	416
65°	316	229	73	2	2	306
75°	142	87	16	0	0	151
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°	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3
2.5°	1898.2	1950.8	1955.3	1950.8	1957.7	1955.3	1966.8	1955.3	1969.1	1948.5	1953.1
5°	2010.3	1989.6	2033.1	2010.3	2010.3	2008.0	2001.1	1998.8	2008.0	1978.3	1992.0
7.5°	2040.0	2069.7	2108.6	2060.6	2062.8	2062.8	2049.1	2044.6	2044.6	1989.6	2005.7
10°	2065.2	2046.8	2067.4	2049.1	2065.2	2062.8	2072.0	2042.2	2062.8	2030.9	2028.5
12.5°	2044.6	2037.7	2065.2	2035.4	2026.3	2028.5	2017.1	2010.3	2017.1	1980.5	1978.3
15°	1985.1	1992.0	2033.1	2001.1	1996.5	1992.0	1978.3	1955.3	1973.7	1923.3	1925.7
17.5°	1964.6	1953.1	1960.0	1932.5	1939.4	1934.8	1932.5	1912.0	1907.3	1875.3	1875.3
20°	1868.5	1893.6	1893.6	1875.3	1875.3	1873.1	1843.3	1861.6	1841.0	1831.9	1841.0
22.5°	1802.1	1804.4	1804.4	1788.4	1790.7	1781.6	1765.6	1754.1	1765.6	1754.1	1735.8
25°	1681.0	1685.5	1713.0	1683.2	1678.6	1687.8	1674.1	1667.2	1664.9	1637.5	1674.1
27.5°	1534.6	1580.3	1578.0	1566.6	1580.3	1562.0	1555.2	1557.4	1564.3	1562.0	1571.1
30°	1450.0	1456.8	1463.7	1454.6	1456.8	1450.0	1450.0	1452.2	1470.5	1463.7	1461.4
32.5°	1278.4	1301.3	1319.6	1319.6	1321.9	1328.8	1326.4	1374.5	1385.9	1363.1	1358.5
35°	1129.8	1145.8	1161.7	1164.1	1193.8	1196.1	1198.4	1212.1	1244.1	1251.0	1248.7
37.5°	988.0	1004.0	1008.5	1029.1	1045.2	1061.1	1079.5	1097.8	1125.2	1148.0	1136.7
40°	862.2	869.0	880.5	889.6	921.6	921.6	930.8	967.4	997.2	1015.4	1013.1
42.5°	757.0	759.3	768.4	784.4	814.2	807.3	814.2	839.4	882.7	885.1	910.2
45°	683.8	681.5	688.4	690.6	709.0	718.1	722.7	741.0	777.5	782.1	784.4
47.5°	617.5	615.2	626.7	631.2	638.0	647.2	647.2	649.5	663.2	674.7	665.5
50°	562.6	562.6	562.6	567.2	578.6	576.3	578.6	587.8	594.6	590.0	587.8
52.5°	503.1	512.2	519.1	521.5	523.7	523.7	526.0	521.5	519.1	512.2	498.5
55°	462.0	471.1	471.1	471.1	471.1	480.3	468.9	471.1	471.1	452.8	434.6
57.5°	420.8	430.0	436.8	427.7	436.8	427.7	423.1	420.8	416.2	397.9	370.5
60°	386.5	391.1	388.8	386.5	391.1	384.2	379.6	370.5	365.9	340.7	322.5
62.5°	347.6	349.9	352.2	347.6	343.1	340.7	331.6	317.9	308.8	288.2	272.1
65°	315.6	308.8	306.4	304.2	299.6	292.7	285.9	269.9	263.0	244.7	228.7
67.5°	267.5	265.3	269.9	263.0	251.6	251.6	244.7	231.0	214.9	203.6	187.5
70°	228.7	226.4	221.8	214.9	212.7	203.6	203.6	187.5	183.0	162.4	148.6
72.5°	187.5	187.5	180.6	173.8	166.9	162.4	160.1	148.6	141.8	130.4	118.9
75°	141.8	141.8	139.5	132.6	128.0	123.5	121.2	112.1	105.2	93.8	86.9
77.5°	100.6	100.6	91.5	86.9	89.2	84.6	80.0	77.8	75.4	68.6	59.5
80°	59.5	57.2	50.4	52.6	50.4	50.4	48.0	45.7	41.1	36.6	32.0
82.5°	16.0	18.3	18.3	18.3	20.6	16.0	16.0	16.0	18.3	18.3	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	9.1	9.1	9.1	9.1	9.1	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°	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3
2.5°	1930.2	1927.9	1930.2	1914.2	1950.8	1923.3	1918.8	1914.2	1930.2	1914.2	1891.4
5°	1971.4	1948.5	1941.6	1934.8	1955.3	1923.3	1916.5	1918.8	1907.3	1877.6	1879.9
7.5°	1985.1	1964.6	1943.9	1900.5	1918.8	1912.0	1893.6	1879.9	1861.6	1836.4	1831.9
10°	1989.6	1966.8	1937.0	1923.3	1895.9	1886.8	1879.9	1857.0	1834.2	1790.7	1779.3
12.5°	1975.9	1948.5	1912.0	1900.5	1879.9	1850.1	1834.2	1811.3	1790.7	1756.4	1731.2
15°	1916.5	1893.6	1882.2	1843.3	1834.2	1815.8	1783.8	1751.8	1722.1	1676.3	1662.6
17.5°	1847.9	1838.8	1827.3	1797.5	1795.3	1777.0	1747.3	1719.8	1681.0	1610.0	1587.2
20°	1777.0	1777.0	1740.4	1729.0	1751.8	1715.2	1692.4	1667.2	1587.2	1552.8	1511.7
22.5°	1724.4	1699.3	1678.6	1660.4	1662.6	1639.8	1607.8	1557.4	1527.7	1486.5	1438.5
25°	1621.5	1630.6	1584.9	1578.0	1584.9	1532.2	1516.3	1475.1	1431.6	1392.7	1356.2
27.5°	1557.4	1532.2	1502.6	1477.4	1477.4	1456.8	1411.1	1402.0	1335.6	1299.0	1253.2
30°	1461.4	1443.1	1417.9	1381.4	1376.8	1360.7	1324.2	1301.3	1232.7	1177.8	1152.6
32.5°	1340.1	1333.3	1312.7	1271.6	1257.9	1239.5	1193.8	1154.9	1122.9	1061.1	1031.5
35°	1253.2	1228.1	1184.7	1150.4	1138.9	1106.9	1070.3	1042.8	1008.5	953.7	914.8
37.5°	1122.9	1097.8	1056.6	1015.4	1015.4	983.4	933.1	905.7	857.6	825.6	793.6
40°	1008.5	976.5	935.4	887.4	880.5	834.7	814.2	768.4	738.7	688.4	683.8
42.5°	880.5	850.7	814.2	777.5	750.1	727.3	674.7	640.4	608.4	583.2	576.3
45°	763.8	724.9	693.0	647.2	619.8	592.3	558.0	535.2	510.0	482.6	466.5
47.5°	663.2	631.2	585.4	544.3	516.9	503.1	464.2	439.1	418.5	400.2	388.8
50°	560.4	521.5	496.3	450.5	445.9	413.9	382.0	361.4	349.9	333.9	317.9
52.5°	482.6	445.9	411.6	377.4	359.0	347.6	317.9	297.3	281.3	269.9	260.7
55°	407.0	375.1	347.6	313.3	301.9	285.9	251.6	247.0	231.0	214.9	203.6
57.5°	349.9	320.1	288.2	265.3	244.7	233.3	205.8	187.5	178.4	164.7	153.2
60°	297.3	265.3	240.1	212.7	203.6	187.5	166.9	151.0	139.5	128.0	116.7
62.5°	249.3	221.8	194.4	171.5	157.8	148.6	132.6	118.9	107.5	98.4	89.2
65°	205.8	180.6	157.8	134.9	128.0	116.7	105.2	93.8	84.6	73.2	64.1
67.5°	169.3	146.4	123.5	107.5	100.6	96.1	82.3	70.9	64.1	57.2	48.0
70°	132.6	116.7	98.4	84.6	77.8	70.9	61.7	54.9	45.7	41.1	34.3
72.5°	102.9	89.2	73.2	61.7	57.2	52.6	43.5	36.6	32.0	27.4	22.8
75°	73.2	61.7	52.6	41.1	38.9	36.6	29.7	25.2	20.6	16.0	13.7
77.5°	50.4	41.1	32.0	27.4	25.2	20.6	18.3	13.7	11.5	9.1	6.9
80°	27.4	20.6	16.0	13.7	11.5	9.1	9.1	6.9	4.6	4.6	2.3
82.5°	9.1	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°	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3
2.5°	1905.1	1879.9	1886.8	1886.8	1882.2	1882.2	1877.6	1870.7	1873.1	1859.3	1829.6
5°	1884.5	1852.5	1847.9	1852.5	1834.2	1829.6	1820.5	1834.2	1793.0	1809.0	1790.7
7.5°	1825.0	1795.3	1788.4	1804.4	1781.6	1767.8	1765.6	1783.8	1747.3	1729.0	1708.4
10°	1758.7	1747.3	1726.7	1715.2	1708.4	1710.6	1692.4	1669.5	1662.6	1658.0	1639.8
12.5°	1699.3	1674.1	1655.8	1642.1	1637.5	1637.5	1607.8	1603.2	1582.6	1578.0	1550.6
15°	1628.3	1598.6	1587.2	1568.9	1552.8	1562.0	1527.7	1518.5	1511.7	1482.0	1486.5
17.5°	1566.6	1534.6	1507.2	1495.7	1482.0	1468.3	1436.2	1443.1	1427.0	1427.0	1385.9
20°	1486.5	1452.2	1431.6	1408.8	1408.8	1390.5	1367.6	1369.9	1349.3	1328.8	1292.1
22.5°	1402.0	1365.3	1340.1	1331.0	1308.2	1303.6	1276.2	1269.3	1241.8	1244.1	1212.1
25°	1312.7	1276.2	1241.8	1244.1	1223.6	1214.4	1198.4	1166.4	1154.9	1141.2	1132.1
27.5°	1207.5	1182.4	1152.6	1150.4	1111.5	1113.7	1093.2	1084.1	1056.6	1063.5	1042.8
30°	1111.5	1074.9	1047.4	1040.6	1024.6	1020.0	988.0	974.2	978.9	960.5	949.1
32.5°	1013.1	958.3	946.8	933.1	923.9	912.5	889.6	898.8	878.2	882.7	864.5
35°	882.7	859.9	830.1	830.1	821.0	811.9	795.9	805.0	784.4	775.3	757.0
37.5°	773.0	752.5	722.7	731.8	715.8	702.1	688.4	690.6	672.4	670.1	651.7
40°	654.1	642.6	622.1	622.1	610.6	610.6	603.7	596.9	585.4	571.7	551.1
42.5°	542.0	532.8	523.7	526.0	510.0	523.7	505.4	516.9	480.3	478.0	464.2
45°	459.6	439.1	441.4	432.2	423.1	427.7	411.6	416.2	395.7	391.1	377.4
47.5°	372.8	365.9	352.2	347.6	347.6	340.7	333.9	331.6	322.5	311.0	292.7
50°	306.4	281.3	276.7	269.9	265.3	265.3	256.2	242.5	244.7	233.3	214.9
52.5°	240.1	219.5	210.4	208.1	199.0	194.4	183.0	173.8	166.9	162.4	151.0
55°	185.2	166.9	155.5	155.5	141.8	141.8	125.8	118.9	109.8	100.6	93.8
57.5°	139.5	130.4	118.9	109.8	105.2	93.8	84.6	73.2	66.3	52.6	43.5
60°	105.2	96.1	84.6	77.8	73.2	61.7	50.4	41.1	25.2	20.6	18.3
62.5°	77.8	68.6	57.2	52.6	48.0	38.9	27.4	13.7	6.9	6.9	6.9
65°	57.2	45.7	36.6	32.0	27.4	20.6	9.1	4.6	2.3	2.3	2.3
67.5°	38.9	29.7	20.6	18.3	13.7	6.9	2.3	2.3	2.3	2.3	2.3
70°	25.2	18.3	9.1	6.9	4.6	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	16.0	9.1	4.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	9.1	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: LD4C40D010 EX4C409050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3	1907.3
2.5°	1861.6	1845.6	1854.7	1834.2	1843.3	1859.3	1847.9	1852.5
5°	1797.5	1788.4	1777.0	1747.3	1770.1	1788.4	1779.3	1777.0
7.5°	1729.0	1696.9	1713.0	1703.8	1699.3	1717.5	1696.9	1719.8
10°	1658.0	1635.2	1632.9	1616.9	1616.9	1630.6	1632.9	1619.1
12.5°	1552.8	1541.5	1541.5	1539.1	1536.8	1550.6	1552.8	1546.0
15°	1477.4	1472.8	1461.4	1459.1	1445.4	1465.9	1468.3	1465.9
17.5°	1385.9	1388.2	1376.8	1376.8	1385.9	1392.7	1374.5	1392.7
20°	1324.2	1312.7	1308.2	1287.5	1299.0	1310.5	1310.5	1312.7
22.5°	1234.9	1216.7	1223.6	1212.1	1205.2	1221.2	1221.2	1228.1
25°	1134.3	1134.3	1138.9	1132.1	1136.7	1145.8	1138.9	1154.9
27.5°	1038.3	1047.4	1047.4	1038.3	1042.8	1070.3	1081.7	1063.5
30°	949.1	951.4	958.3	953.7	967.4	976.5	974.2	988.0
32.5°	848.5	859.9	864.5	857.6	862.2	882.7	871.4	869.0
35°	770.7	750.1	747.9	750.1	759.3	763.8	759.3	775.3
37.5°	658.6	651.7	642.6	644.9	651.7	661.0	665.5	676.9
40°	551.1	542.0	542.0	539.7	532.8	558.0	558.0	558.0
42.5°	457.4	455.1	443.7	443.7	452.8	459.6	455.1	471.1
45°	375.1	365.9	359.0	359.0	365.9	365.9	372.8	370.5
47.5°	295.1	285.9	288.2	281.3	288.2	297.3	285.9	288.2
50°	221.8	221.8	217.3	221.8	219.5	221.8	217.3	212.7
52.5°	151.0	171.5	173.8	164.7	144.1	125.8	114.3	123.5
55°	86.9	77.8	77.8	75.4	70.9	68.6	61.7	68.6
57.5°	43.5	38.9	38.9	38.9	36.6	34.3	29.7	29.7
60°	18.3	16.0	16.0	13.7	11.5	9.1	6.9	9.1
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)