

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 EX4C409030 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 EX4C409030 4LBSQLWWH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

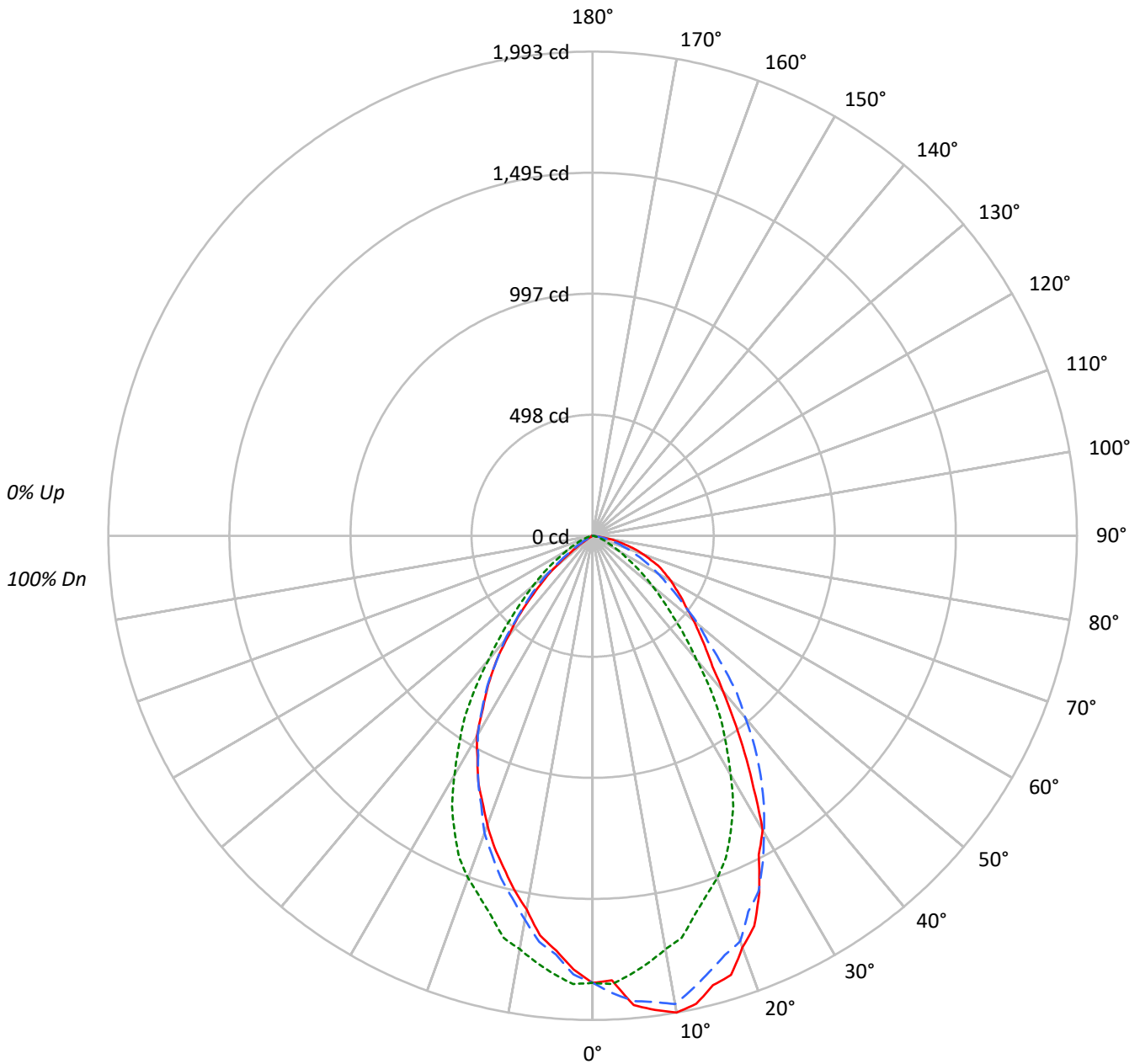
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2638.0 lumens
Efficiency: N/A
Efficacy: 56.1 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 (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°	177569	177569	177569
5°	187874	175477	166072
10°	195240	169295	153070
15°	191334	161576	141298
20°	185124	153847	130056
25°	172673	143066	118643
30°	155882	126613	106213
35°	128404	108391	88120
40°	104784	83661	67815
45°	90034	63534	48783
50°	81480	48365	30803
55°	74994	34890	11136
60°	71981	23833	1698
65°	69521	16119	502
70°	62234	11200	621
75°	51037	5778	0
80°	31895	2445	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.4	6.5
10°-20°	464.5	17.6
20°-30°	620.3	23.5
30°-40°	588.9	22.3
40°-50°	407.0	15.4
50°-60°	224.9	8.5
60°-70°	111.7	4.2
70°-80°	44.0	1.7
80°-90°	4.2	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°	1257.3	47.7
0°-40°	1846.2	70.0
0°-60°	2478.1	93.9
0°-90°	2638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2638.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1840	1840	1840	1840	1840	
5°	1940	1922	1812	1730	1715	186
15°	1915	1858	1618	1459	1414	542
25°	1622	1615	1344	1114	1114	739
35°	1090	1205	920	757	748	683
45°	660	757	466	382	358	515
55°	446	419	207	106	66	401
65°	304	221	71	2	2	296
75°	137	84	16	0	0	146
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°	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3
2.5°	1831.5	1882.3	1886.7	1882.3	1888.9	1886.7	1897.7	1886.7	1900.0	1880.1	1884.5
5°	1939.7	1919.8	1961.7	1939.7	1939.7	1937.5	1930.8	1928.6	1937.5	1908.8	1922.0
7.5°	1968.4	1997.1	2034.6	1988.3	1990.4	1990.4	1977.2	1972.8	1972.8	1919.8	1935.3
10°	1992.7	1974.9	1994.8	1977.2	1992.7	1990.4	1999.2	1970.5	1990.4	1959.5	1957.3
12.5°	1972.8	1966.1	1992.7	1964.0	1955.1	1957.3	1946.3	1939.7	1946.3	1911.0	1908.8
15°	1915.4	1922.0	1961.7	1930.8	1926.4	1922.0	1908.8	1886.7	1904.4	1855.8	1858.1
17.5°	1895.6	1884.5	1891.2	1864.6	1871.3	1866.9	1864.6	1844.8	1840.3	1809.5	1809.5
20°	1802.9	1827.1	1827.1	1809.5	1809.5	1807.3	1778.6	1796.2	1776.4	1767.5	1776.4
22.5°	1738.8	1741.1	1741.1	1725.6	1727.9	1719.0	1703.6	1692.5	1703.6	1692.5	1674.9
25°	1621.9	1626.4	1652.8	1624.1	1619.7	1628.5	1615.3	1608.6	1606.5	1580.0	1615.3
27.5°	1480.7	1524.8	1522.6	1511.5	1524.8	1507.1	1500.6	1502.7	1509.4	1507.1	1516.0
30°	1399.1	1405.6	1412.3	1403.5	1405.6	1399.1	1399.1	1401.2	1418.9	1412.3	1410.1
32.5°	1233.5	1255.6	1273.3	1273.3	1275.4	1282.1	1279.9	1326.2	1337.3	1315.2	1310.8
35°	1090.1	1105.6	1121.0	1123.2	1151.9	1154.1	1156.3	1169.5	1200.4	1207.1	1204.8
37.5°	953.3	968.7	973.1	993.0	1008.5	1023.9	1041.6	1059.2	1085.7	1107.7	1096.7
40°	831.9	838.5	849.6	858.4	889.3	889.3	898.1	933.4	962.1	979.8	977.5
42.5°	730.4	732.6	741.4	756.9	785.6	778.9	785.6	809.9	851.7	854.0	878.3
45°	659.8	657.6	664.2	666.4	684.1	692.9	697.3	715.0	750.2	754.6	756.9
47.5°	595.8	593.6	604.7	609.1	615.6	624.5	624.5	626.7	639.9	651.0	642.2
50°	542.8	542.8	542.8	547.2	558.3	556.1	558.3	567.1	573.7	569.3	567.1
52.5°	485.4	494.3	500.9	503.2	505.3	505.3	507.6	503.2	500.9	494.3	481.0
55°	445.8	454.6	454.6	454.6	454.6	463.4	452.4	454.6	454.6	436.9	419.3
57.5°	406.1	414.9	421.5	412.6	421.5	412.6	408.2	406.1	401.6	383.9	357.5
60°	373.0	377.4	375.1	373.0	377.4	370.7	366.3	357.5	353.1	328.8	311.1
62.5°	335.4	337.6	339.8	335.4	331.0	328.8	320.0	306.7	297.9	278.0	262.6
65°	304.5	297.9	295.7	293.5	289.1	282.4	275.9	260.4	253.7	236.1	220.6
67.5°	258.1	256.0	260.4	253.7	242.8	242.8	236.1	222.9	207.4	196.4	180.9
70°	220.6	218.5	214.1	207.4	205.2	196.4	196.4	180.9	176.5	156.7	143.4
72.5°	180.9	180.9	174.3	167.7	161.1	156.7	154.5	143.4	136.9	125.8	114.7
75°	136.9	136.9	134.6	128.0	123.5	119.1	117.0	108.2	101.5	90.5	83.9
77.5°	97.1	97.1	88.3	83.9	86.0	81.6	77.2	75.0	72.8	66.2	57.4
80°	57.4	55.2	48.6	50.7	48.6	48.6	46.3	44.1	39.7	35.3	30.9
82.5°	15.5	17.6	17.6	17.6	19.9	15.5	15.5	15.5	17.6	17.6	11.1
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	4.4	8.8	8.8	8.8	8.8	8.8	6.7	6.7	6.7	4.4
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°	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3
2.5°	1862.5	1860.2	1862.5	1847.0	1882.3	1855.8	1851.4	1847.0	1862.5	1847.0	1824.9
5°	1902.1	1880.1	1873.4	1866.9	1886.7	1855.8	1849.2	1851.4	1840.3	1811.7	1813.9
7.5°	1915.4	1895.6	1875.7	1833.8	1851.4	1844.8	1827.1	1813.9	1796.2	1771.9	1767.5
10°	1919.8	1897.7	1869.0	1855.8	1829.3	1820.5	1813.9	1791.8	1769.8	1727.9	1716.8
12.5°	1906.6	1880.1	1844.8	1833.8	1813.9	1785.2	1769.8	1747.7	1727.9	1694.7	1670.4
15°	1849.2	1827.1	1816.1	1778.6	1769.8	1752.1	1721.2	1690.3	1661.6	1617.5	1604.2
17.5°	1783.0	1774.2	1763.1	1734.4	1732.3	1714.6	1685.9	1659.4	1621.9	1553.5	1531.4
20°	1714.6	1714.6	1679.3	1668.3	1690.3	1655.0	1632.9	1608.6	1531.4	1498.3	1458.6
22.5°	1663.9	1639.6	1619.7	1602.1	1604.2	1582.2	1551.3	1502.7	1474.0	1434.3	1388.0
25°	1564.5	1573.4	1529.3	1522.6	1529.3	1478.4	1463.0	1423.3	1381.3	1343.8	1308.6
27.5°	1502.7	1478.4	1449.8	1425.5	1425.5	1405.6	1361.6	1352.7	1288.7	1253.4	1209.2
30°	1410.1	1392.4	1368.1	1332.8	1328.4	1313.0	1277.7	1255.6	1189.4	1136.4	1112.1
32.5°	1293.1	1286.5	1266.6	1226.9	1213.7	1196.0	1151.9	1114.4	1083.5	1023.9	995.2
35°	1209.2	1185.0	1143.1	1110.0	1098.9	1068.0	1032.7	1006.2	973.1	920.2	882.7
37.5°	1083.5	1059.2	1019.5	979.8	979.8	948.9	900.3	873.9	827.5	796.6	765.7
40°	973.1	942.3	902.6	856.2	849.6	805.4	785.6	741.4	712.7	664.2	659.8
42.5°	849.6	820.9	785.6	750.2	723.8	701.7	651.0	617.9	587.0	562.7	556.1
45°	737.0	699.5	668.6	624.5	598.0	571.5	538.4	516.4	492.1	465.6	450.2
47.5°	639.9	609.1	564.9	525.2	498.7	485.4	447.9	423.7	403.8	386.2	375.1
50°	540.7	503.2	478.9	434.7	430.3	399.4	368.5	348.7	337.6	322.2	306.7
52.5°	465.6	430.3	397.2	364.1	346.4	335.4	306.7	286.9	271.5	260.4	251.6
55°	392.8	361.9	335.4	302.3	291.3	275.9	242.8	238.4	222.9	207.4	196.4
57.5°	337.6	308.9	278.0	256.0	236.1	225.1	198.6	180.9	172.1	158.9	147.8
60°	286.9	256.0	231.7	205.2	196.4	180.9	161.1	145.7	134.6	123.5	112.6
62.5°	240.5	214.1	187.6	165.5	152.2	143.4	128.0	114.7	103.7	94.9	86.0
65°	198.6	174.3	152.2	130.2	123.5	112.6	101.5	90.5	81.6	70.6	61.8
67.5°	163.3	141.3	119.1	103.7	97.1	92.7	79.5	68.4	61.8	55.2	46.3
70°	128.0	112.6	94.9	81.6	75.0	68.4	59.6	53.0	44.1	39.7	33.1
72.5°	99.3	86.0	70.6	59.6	55.2	50.7	41.9	35.3	30.9	26.5	22.0
75°	70.6	59.6	50.7	39.7	37.5	35.3	28.7	24.3	19.9	15.5	13.2
77.5°	48.6	39.7	30.9	26.5	24.3	19.9	17.6	13.2	11.1	8.8	6.7
80°	26.5	19.9	15.5	13.2	11.1	8.8	8.8	6.7	4.4	4.4	2.2
82.5°	8.8	6.7	4.4	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°	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3
2.5°	1838.2	1813.9	1820.5	1820.5	1816.1	1816.1	1811.7	1805.1	1807.3	1794.0	1765.4
5°	1818.3	1787.4	1783.0	1787.4	1769.8	1765.4	1756.6	1769.8	1730.0	1745.5	1727.9
7.5°	1761.0	1732.3	1725.6	1741.1	1719.0	1705.7	1703.6	1721.2	1685.9	1668.3	1648.4
10°	1696.9	1685.9	1666.0	1655.0	1648.4	1650.6	1632.9	1610.9	1604.2	1599.8	1582.2
12.5°	1639.6	1615.3	1597.7	1584.4	1580.0	1580.0	1551.3	1546.9	1527.0	1522.6	1496.2
15°	1571.1	1542.5	1531.4	1513.8	1498.3	1507.1	1474.0	1465.2	1458.6	1429.9	1434.3
17.5°	1511.5	1480.7	1454.2	1443.2	1429.9	1416.7	1385.8	1392.4	1376.9	1376.9	1337.3
20°	1434.3	1401.2	1381.3	1359.3	1359.3	1341.7	1319.6	1321.8	1301.9	1282.1	1246.7
22.5°	1352.7	1317.4	1293.1	1284.3	1262.2	1257.8	1231.4	1224.7	1198.2	1200.4	1169.5
25°	1266.6	1231.4	1198.2	1200.4	1180.6	1171.8	1156.3	1125.4	1114.4	1101.2	1092.3
27.5°	1165.1	1140.8	1112.1	1110.0	1072.5	1074.6	1054.8	1046.0	1019.5	1026.1	1006.2
30°	1072.5	1037.2	1010.6	1004.1	988.6	984.2	953.3	940.0	944.5	926.8	915.8
32.5°	977.5	924.6	913.6	900.3	891.5	880.4	858.4	867.2	847.3	851.7	834.1
35°	851.7	829.7	801.0	801.0	792.2	783.4	768.0	776.8	756.9	748.1	730.4
37.5°	745.8	726.0	697.3	706.1	690.7	677.4	664.2	666.4	648.7	646.6	628.9
40°	631.1	620.0	600.2	600.2	589.2	589.2	582.5	576.0	564.9	551.7	531.8
42.5°	523.0	514.1	505.3	507.6	492.1	505.3	487.7	498.7	463.4	461.2	447.9
45°	443.5	423.7	425.9	417.1	408.2	412.6	397.2	401.6	381.8	377.4	364.1
47.5°	359.7	353.1	339.8	335.4	335.4	328.8	322.2	320.0	311.1	300.1	282.4
50°	295.7	271.5	267.0	260.4	256.0	256.0	247.2	233.9	236.1	225.1	207.4
52.5°	231.7	211.8	203.0	200.8	192.0	187.6	176.5	167.7	161.1	156.7	145.7
55°	178.7	161.1	150.1	150.1	136.9	136.9	121.4	114.7	105.9	97.1	90.5
57.5°	134.6	125.8	114.7	105.9	101.5	90.5	81.6	70.6	64.0	50.7	41.9
60°	101.5	92.7	81.6	75.0	70.6	59.6	48.6	39.7	24.3	19.9	17.6
62.5°	75.0	66.2	55.2	50.7	46.3	37.5	26.5	13.2	6.7	6.7	6.7
65°	55.2	44.1	35.3	30.9	26.5	19.9	8.8	4.4	2.2	2.2	2.2
67.5°	37.5	28.7	19.9	17.6	13.2	6.7	2.2	2.2	2.2	2.2	2.2
70°	24.3	17.6	8.8	6.7	4.4	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	15.5	8.8	4.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	8.8	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.4	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: P#

CATALOG NUMBER: LD4C40D010 EX4C409030 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3
2.5°	1796.2	1780.8	1789.6	1769.8	1778.6	1794.0	1783.0	1787.4
5°	1734.4	1725.6	1714.6	1685.9	1708.0	1725.6	1716.8	1714.6
7.5°	1668.3	1637.3	1652.8	1644.0	1639.6	1657.2	1637.3	1659.4
10°	1599.8	1577.8	1575.6	1560.1	1560.1	1573.4	1575.6	1562.3
12.5°	1498.3	1487.3	1487.3	1485.1	1482.8	1496.2	1498.3	1491.7
15°	1425.5	1421.1	1410.1	1407.9	1394.7	1414.5	1416.7	1414.5
17.5°	1337.3	1339.4	1328.4	1328.4	1337.3	1343.8	1326.2	1343.8
20°	1277.7	1266.6	1262.2	1242.3	1253.4	1264.5	1264.5	1266.6
22.5°	1191.6	1173.9	1180.6	1169.5	1162.9	1178.4	1178.4	1185.0
25°	1094.5	1094.5	1098.9	1092.3	1096.7	1105.6	1098.9	1114.4
27.5°	1001.8	1010.6	1010.6	1001.8	1006.2	1032.7	1043.7	1026.1
30°	915.8	918.0	924.6	920.2	933.4	942.3	940.0	953.3
32.5°	818.7	829.7	834.1	827.5	831.9	851.7	840.8	838.5
35°	743.7	723.8	721.6	723.8	732.6	737.0	732.6	748.1
37.5°	635.5	628.9	620.0	622.3	628.9	637.8	642.2	653.2
40°	531.8	523.0	523.0	520.8	514.1	538.4	538.4	538.4
42.5°	441.3	439.1	428.1	428.1	436.9	443.5	439.1	454.6
45°	361.9	353.1	346.4	346.4	353.1	353.1	359.7	357.5
47.5°	284.7	275.9	278.0	271.5	278.0	286.9	275.9	278.0
50°	214.1	214.1	209.6	214.1	211.8	214.1	209.6	205.2
52.5°	145.7	165.5	167.7	158.9	139.0	121.4	110.3	119.1
55°	83.9	75.0	75.0	72.8	68.4	66.2	59.6	66.2
57.5°	41.9	37.5	37.5	37.5	35.3	33.1	28.7	28.7
60°	17.6	15.5	15.5	13.2	11.1	8.8	6.7	8.8
62.5°	6.7	4.4	4.4	4.4	4.4	4.4	4.4	4.4
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)