

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 EX4C359030 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 EX4C359030 4LBSQLWWLI
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

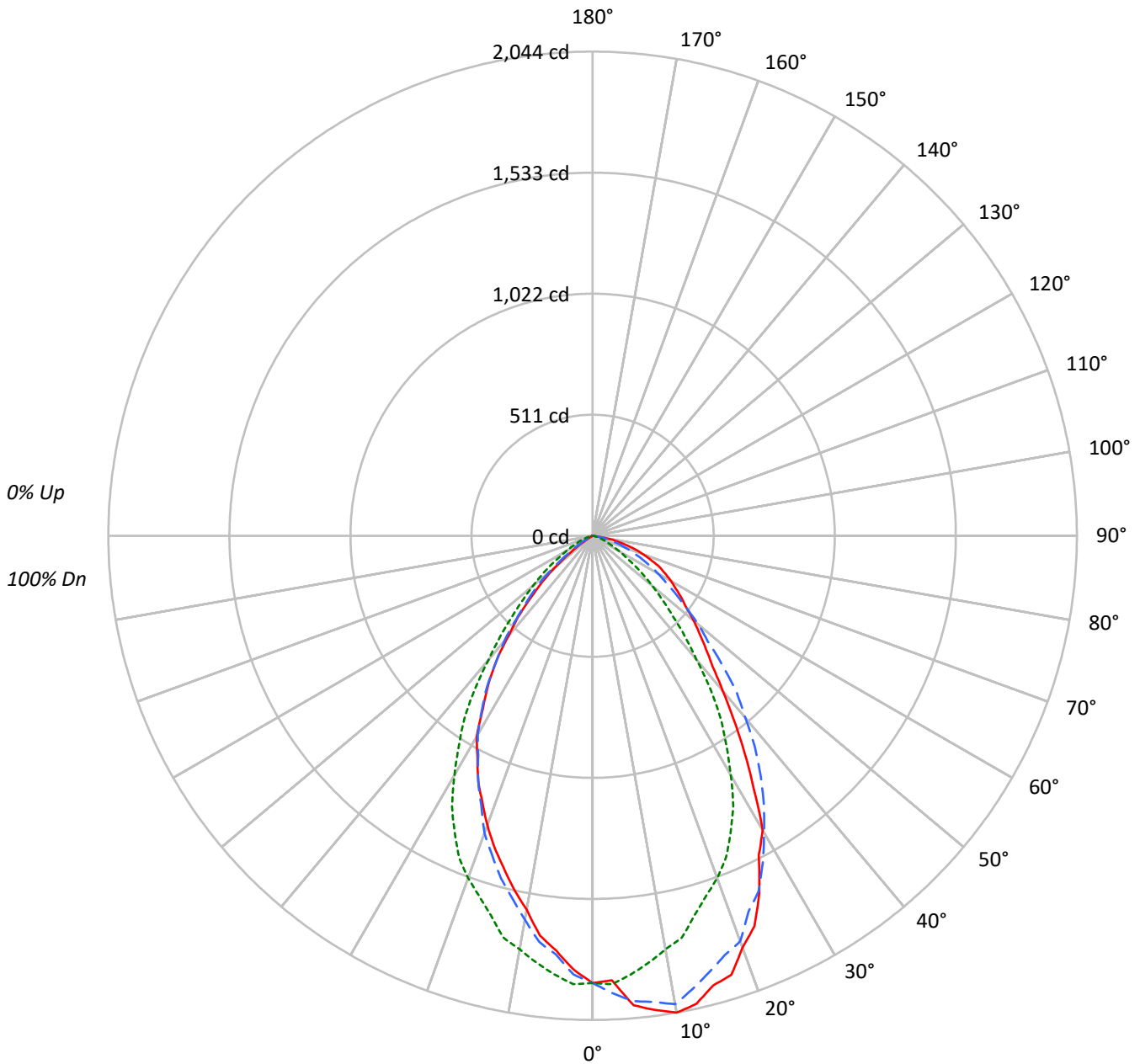
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2706.0 lumens
Efficiency: N/A
Efficacy: 67.0 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 (A_{in}): 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					0
RW	70	50	30	10	70	50	30	10	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					100			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72					72			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58					58			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53					53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41					41			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	182152	182152	182152
5°	192717	180000	170353
10°	200266	173655	157019
15°	196259	165732	144934
20°	189899	157811	133414
25°	177134	146760	121699
30°	159893	129877	108953
35°	131714	111183	90393
40°	107492	85815	69566
45°	92353	65171	50038
50°	83581	49611	31598
55°	76912	35781	11422
60°	73833	24450	1737
65°	71302	16553	525
70°	63843	11482	649
75°	52342	5928	0
80°	32728	2500	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.9	6.5
10°-20°	476.5	17.6
20°-30°	636.3	23.5
30°-40°	604.0	22.3
40°-50°	417.5	15.4
50°-60°	230.7	8.5
60°-70°	114.6	4.2
70°-80°	45.1	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°	1289.7	47.7
0°-40°	1893.8	70.0
0°-60°	2542.0	93.9
0°-90°	2706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2706.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1888	1888	1888	1888	1888	
5°	1990	1972	1858	1775	1759	190
15°	1965	1906	1659	1496	1451	556
25°	1664	1657	1378	1143	1143	758
35°	1118	1236	944	776	767	701
45°	677	776	478	392	367	528
55°	457	430	213	109	68	412
65°	312	226	72	2	2	303
75°	140	86	16	0	0	150
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°	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8
2.5°	1878.7	1930.8	1935.3	1930.8	1937.6	1935.3	1946.7	1935.3	1949.0	1928.6	1933.1
5°	1989.7	1969.3	2012.3	1989.7	1989.7	1987.4	1980.6	1978.3	1987.4	1958.0	1971.6
7.5°	2019.1	2048.5	2087.0	2039.5	2041.7	2041.7	2028.2	2023.6	2023.6	1969.3	1985.1
10°	2044.0	2025.8	2046.2	2028.2	2044.0	2041.7	2050.8	2021.3	2041.7	2010.1	2007.8
12.5°	2023.6	2016.8	2044.0	2014.6	2005.5	2007.8	1996.5	1989.7	1996.5	1960.2	1958.0
15°	1964.7	1971.6	2012.3	1980.6	1976.1	1971.6	1958.0	1935.3	1953.5	1903.6	1905.9
17.5°	1944.4	1933.1	1939.9	1912.7	1919.5	1915.0	1912.7	1892.4	1887.8	1856.1	1856.1
20°	1849.4	1874.2	1874.2	1856.1	1856.1	1853.9	1824.4	1842.5	1822.1	1813.1	1822.1
22.5°	1783.7	1786.0	1786.0	1770.1	1772.4	1763.3	1747.5	1736.1	1747.5	1736.1	1718.0
25°	1663.8	1668.3	1695.4	1666.0	1661.5	1670.5	1656.9	1650.1	1647.9	1620.7	1656.9
27.5°	1518.9	1564.1	1561.9	1550.5	1564.1	1546.0	1539.2	1541.5	1548.3	1546.0	1555.0
30°	1435.1	1441.9	1448.7	1439.7	1441.9	1435.1	1435.1	1437.4	1455.4	1448.7	1446.4
32.5°	1265.3	1287.9	1306.1	1306.1	1308.3	1315.1	1312.8	1360.4	1371.7	1349.1	1344.6
35°	1118.2	1134.1	1149.8	1152.2	1181.6	1183.8	1186.1	1199.7	1231.3	1238.2	1235.9
37.5°	977.9	993.7	998.2	1018.6	1034.5	1050.3	1068.4	1086.5	1113.7	1136.3	1125.0
40°	853.4	860.1	871.5	880.5	912.2	912.2	921.2	957.5	986.9	1005.0	1002.7
42.5°	749.3	751.5	760.5	776.4	805.9	799.0	805.9	830.8	873.7	876.0	900.9
45°	676.8	674.5	681.3	683.6	701.7	710.8	715.3	733.4	769.6	774.1	776.4
47.5°	611.2	608.9	620.2	624.8	631.5	640.5	640.5	642.9	656.4	667.8	658.7
50°	556.8	556.8	556.8	561.4	572.7	570.4	572.7	581.8	588.5	584.0	581.8
52.5°	497.9	507.0	513.8	516.1	518.3	518.3	520.7	516.1	513.8	507.0	493.4
55°	457.2	466.3	466.3	466.3	466.3	475.3	464.1	466.3	466.3	448.2	430.1
57.5°	416.5	425.6	432.3	423.3	432.3	423.3	418.8	416.5	411.9	393.8	366.7
60°	382.6	387.1	384.8	382.6	387.1	380.3	375.7	366.7	362.2	337.3	319.2
62.5°	344.1	346.3	348.6	344.1	339.6	337.3	328.2	314.6	305.6	285.2	269.3
65°	312.3	305.6	303.3	301.1	296.6	289.7	283.0	267.1	260.3	242.2	226.3
67.5°	264.8	262.6	267.1	260.3	249.0	249.0	242.2	228.6	212.7	201.5	185.6
70°	226.3	224.1	219.6	212.7	210.5	201.5	201.5	185.6	181.1	160.7	147.1
72.5°	185.6	185.6	178.8	172.0	165.2	160.7	158.5	147.1	140.4	129.0	117.7
75°	140.4	140.4	138.1	131.2	126.7	122.2	120.0	110.9	104.1	92.8	86.0
77.5°	99.6	99.6	90.5	86.0	88.2	83.7	79.2	77.0	74.7	67.9	58.9
80°	58.9	56.6	49.8	52.1	49.8	49.8	47.5	45.2	40.7	36.2	31.7
82.5°	15.9	18.1	18.1	18.1	20.4	15.9	15.9	15.9	18.1	18.1	11.4
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	4.5	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°	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8
2.5°	1910.5	1908.2	1910.5	1894.6	1930.8	1903.6	1899.1	1894.6	1910.5	1894.6	1872.0
5°	1951.2	1928.6	1921.7	1915.0	1935.3	1903.6	1896.9	1899.1	1887.8	1858.4	1860.6
7.5°	1964.7	1944.4	1924.0	1881.0	1899.1	1892.4	1874.2	1860.6	1842.5	1817.6	1813.1
10°	1969.3	1946.7	1917.2	1903.6	1876.5	1867.5	1860.6	1838.0	1815.4	1772.4	1761.0
12.5°	1955.7	1928.6	1892.4	1881.0	1860.6	1831.2	1815.4	1792.7	1772.4	1738.4	1713.5
15°	1896.9	1874.2	1862.9	1824.4	1815.4	1797.2	1765.6	1733.9	1704.5	1659.1	1645.6
17.5°	1829.0	1819.9	1808.6	1779.1	1776.9	1758.8	1729.4	1702.2	1663.8	1593.5	1570.9
20°	1758.8	1758.8	1722.6	1711.3	1733.9	1697.6	1675.0	1650.1	1570.9	1536.9	1496.2
22.5°	1706.8	1681.8	1661.5	1643.4	1645.6	1623.0	1591.3	1541.5	1512.0	1471.3	1423.8
25°	1604.9	1613.9	1568.7	1561.9	1568.7	1516.5	1500.8	1460.0	1417.0	1378.5	1342.3
27.5°	1541.5	1516.5	1487.2	1462.3	1462.3	1441.9	1396.6	1387.6	1321.9	1285.7	1240.4
30°	1446.4	1428.3	1403.4	1367.2	1362.7	1346.8	1310.6	1287.9	1220.1	1165.7	1140.8
32.5°	1326.4	1319.7	1299.3	1258.6	1245.0	1226.8	1181.6	1143.1	1111.4	1050.3	1020.9
35°	1240.4	1215.6	1172.5	1138.6	1127.2	1095.6	1059.3	1032.2	998.2	943.9	905.4
37.5°	1111.4	1086.5	1045.7	1005.0	1005.0	973.4	923.5	896.4	848.9	817.1	785.5
40°	998.2	966.5	925.8	878.3	871.5	826.2	805.9	760.5	731.1	681.3	676.8
42.5°	871.5	842.0	805.9	769.6	742.4	719.8	667.8	633.8	602.1	577.2	570.4
45°	756.0	717.5	685.9	640.5	613.4	586.3	552.3	529.7	504.8	477.6	461.8
47.5°	656.4	624.8	579.4	538.7	511.6	497.9	459.5	434.6	414.2	396.1	384.8
50°	554.6	516.1	491.2	445.9	441.4	409.7	378.1	357.7	346.3	330.5	314.6
52.5°	477.6	441.4	407.4	373.5	355.3	344.1	314.6	294.2	278.5	267.1	258.1
55°	402.9	371.2	344.1	310.1	298.8	283.0	249.0	244.5	228.6	212.7	201.5
57.5°	346.3	316.9	285.2	262.6	242.2	230.9	203.7	185.6	176.6	163.0	151.6
60°	294.2	262.6	237.7	210.5	201.5	185.6	165.2	149.4	138.1	126.7	115.5
62.5°	246.7	219.6	192.4	169.7	156.2	147.1	131.2	117.7	106.4	97.4	88.2
65°	203.7	178.8	156.2	133.6	126.7	115.5	104.1	92.8	83.7	72.5	63.4
67.5°	167.5	144.9	122.2	106.4	99.6	95.1	81.5	70.1	63.4	56.6	47.5
70°	131.2	115.5	97.4	83.7	77.0	70.1	61.1	54.4	45.2	40.7	34.0
72.5°	101.9	88.2	72.5	61.1	56.6	52.1	43.0	36.2	31.7	27.1	22.6
75°	72.5	61.1	52.1	40.7	38.5	36.2	29.4	24.9	20.4	15.9	13.6
77.5°	49.8	40.7	31.7	27.1	24.9	20.4	18.1	13.6	11.4	9.0	6.8
80°	27.1	20.4	15.9	13.6	11.4	9.0	9.0	6.8	4.5	4.5	2.3
82.5°	9.0	6.8	4.5	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°	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8
2.5°	1885.6	1860.6	1867.5	1867.5	1862.9	1862.9	1858.4	1851.6	1853.9	1840.2	1810.9
5°	1865.2	1833.5	1829.0	1833.5	1815.4	1810.9	1801.8	1815.4	1774.6	1790.5	1772.4
7.5°	1806.4	1776.9	1770.1	1786.0	1763.3	1749.7	1747.5	1765.6	1729.4	1711.3	1690.9
10°	1740.6	1729.4	1709.0	1697.6	1690.9	1693.1	1675.0	1652.4	1645.6	1641.1	1623.0
12.5°	1681.8	1656.9	1638.8	1625.3	1620.7	1620.7	1591.3	1586.8	1566.4	1561.9	1534.7
15°	1611.6	1582.3	1570.9	1552.8	1536.9	1546.0	1512.0	1503.0	1496.2	1466.8	1471.3
17.5°	1550.5	1518.9	1491.7	1480.4	1466.8	1453.2	1421.5	1428.3	1412.4	1412.4	1371.7
20°	1471.3	1437.4	1417.0	1394.3	1394.3	1376.3	1353.6	1355.9	1335.5	1315.1	1278.9
22.5°	1387.6	1351.3	1326.4	1317.4	1294.8	1290.2	1263.1	1256.3	1229.1	1231.3	1199.7
25°	1299.3	1263.1	1229.1	1231.3	1211.0	1202.0	1186.1	1154.5	1143.1	1129.5	1120.5
27.5°	1195.2	1170.2	1140.8	1138.6	1100.1	1102.3	1082.0	1073.0	1045.7	1052.6	1032.2
30°	1100.1	1063.9	1036.7	1029.9	1014.1	1009.6	977.9	964.2	968.8	950.7	939.4
32.5°	1002.7	948.5	937.1	923.5	914.5	903.1	880.5	889.6	869.2	873.7	855.6
35°	873.7	851.1	821.6	821.6	812.6	803.5	787.8	796.8	776.4	767.4	749.3
37.5°	765.1	744.7	715.3	724.4	708.5	694.9	681.3	683.6	665.5	663.3	645.1
40°	647.4	636.0	615.7	615.7	604.4	604.4	597.5	590.8	579.4	565.9	545.5
42.5°	536.4	527.4	518.3	520.7	504.8	518.3	500.3	511.6	475.3	473.1	459.5
45°	454.9	434.6	436.8	427.8	418.8	423.3	407.4	411.9	391.6	387.1	373.5
47.5°	369.0	362.2	348.6	344.1	344.1	337.3	330.5	328.2	319.2	307.8	289.7
50°	303.3	278.5	273.8	267.1	262.6	262.6	253.5	240.0	242.2	230.9	212.7
52.5°	237.7	217.3	208.2	206.0	197.0	192.4	181.1	172.0	165.2	160.7	149.4
55°	183.3	165.2	154.0	154.0	140.4	140.4	124.5	117.7	108.6	99.6	92.8
57.5°	138.1	129.0	117.7	108.6	104.1	92.8	83.7	72.5	65.6	52.1	43.0
60°	104.1	95.1	83.7	77.0	72.5	61.1	49.8	40.7	24.9	20.4	18.1
62.5°	77.0	67.9	56.6	52.1	47.5	38.5	27.1	13.6	6.8	6.8	6.8
65°	56.6	45.2	36.2	31.7	27.1	20.4	9.0	4.5	2.3	2.3	2.3
67.5°	38.5	29.4	20.4	18.1	13.6	6.8	2.3	2.3	2.3	2.3	2.3
70°	24.9	18.1	9.0	6.8	4.5	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	15.9	9.0	4.5	2.3	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	2.3	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 EX4C359030 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8	1887.8
2.5°	1842.5	1826.7	1835.7	1815.4	1824.4	1840.2	1829.0	1833.5
5°	1779.1	1770.1	1758.8	1729.4	1752.0	1770.1	1761.0	1758.8
7.5°	1711.3	1679.5	1695.4	1686.4	1681.8	1699.9	1679.5	1702.2
10°	1641.1	1618.4	1616.2	1600.4	1600.4	1613.9	1616.2	1602.6
12.5°	1536.9	1525.7	1525.7	1523.4	1521.1	1534.7	1536.9	1530.2
15°	1462.3	1457.7	1446.4	1444.2	1430.6	1450.9	1453.2	1450.9
17.5°	1371.7	1373.9	1362.7	1362.7	1371.7	1378.5	1360.4	1378.5
20°	1310.6	1299.3	1294.8	1274.4	1285.7	1297.1	1297.1	1299.3
22.5°	1222.3	1204.2	1211.0	1199.7	1192.9	1208.7	1208.7	1215.6
25°	1122.7	1122.7	1127.2	1120.5	1125.0	1134.1	1127.2	1143.1
27.5°	1027.6	1036.7	1036.7	1027.6	1032.2	1059.3	1070.7	1052.6
30°	939.4	941.6	948.5	943.9	957.5	966.5	964.2	977.9
32.5°	839.8	851.1	855.6	848.9	853.4	873.7	862.4	860.1
35°	762.8	742.4	740.2	742.4	751.5	756.0	751.5	767.4
37.5°	651.9	645.1	636.0	638.3	645.1	654.2	658.7	670.0
40°	545.5	536.4	536.4	534.2	527.4	552.3	552.3	552.3
42.5°	452.7	450.4	439.2	439.2	448.2	454.9	450.4	466.3
45°	371.2	362.2	355.3	355.3	362.2	362.2	369.0	366.7
47.5°	292.0	283.0	285.2	278.5	285.2	294.2	283.0	285.2
50°	219.6	219.6	215.1	219.6	217.3	219.6	215.1	210.5
52.5°	149.4	169.7	172.0	163.0	142.6	124.5	113.2	122.2
55°	86.0	77.0	77.0	74.7	70.1	67.9	61.1	67.9
57.5°	43.0	38.5	38.5	38.5	36.2	34.0	29.4	29.4
60°	18.1	15.9	15.9	13.6	11.4	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°	2.3	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)