

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 EX4C359027 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 EX4C359027 4LBSQLWWLI
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

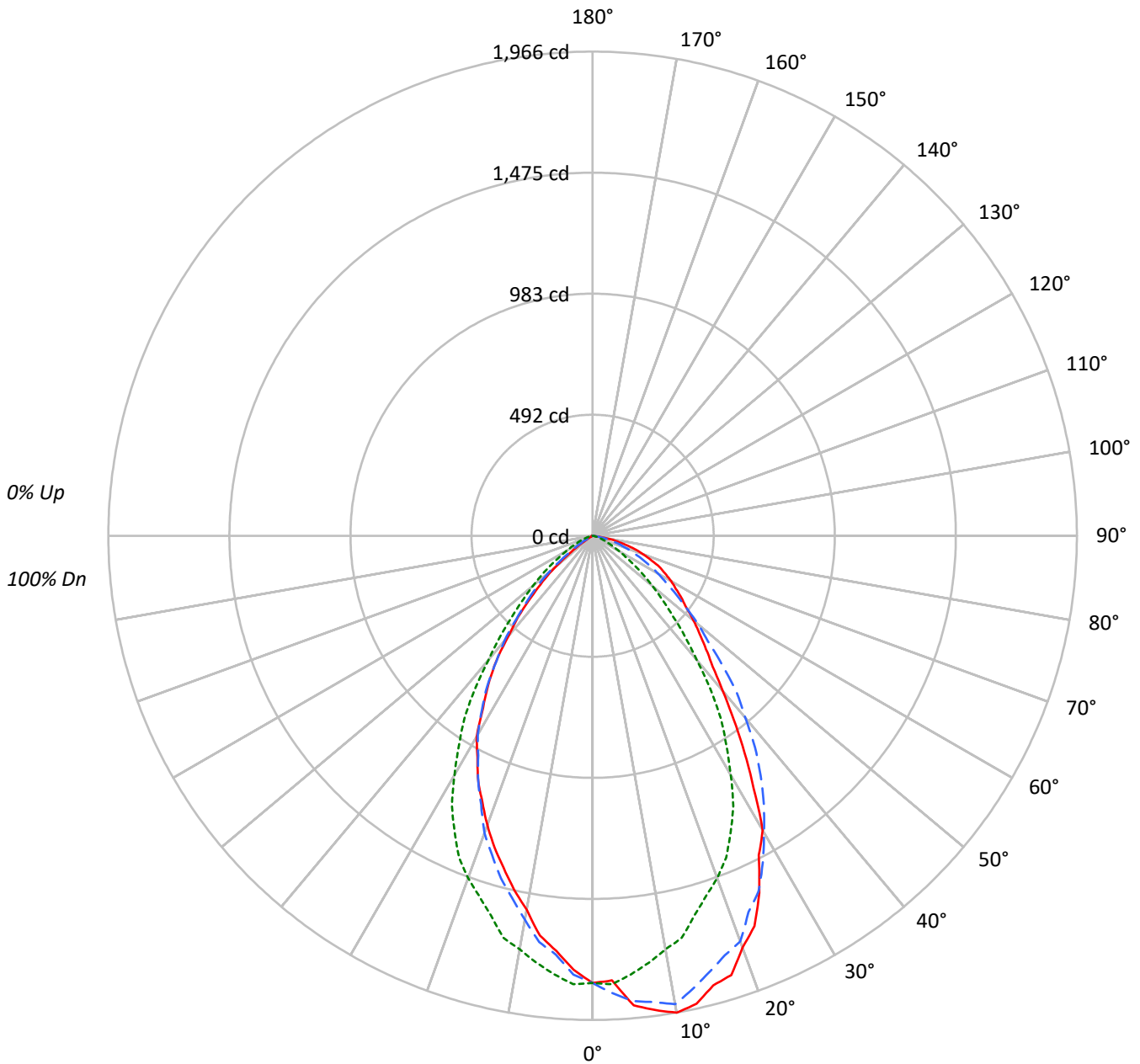
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2603.0 lumens
Efficiency: N/A
Efficacy: 64.4 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°	175214	175214	175214
5°	185376	173152	163873
10°	192643	167042	151042
15°	188797	159429	139420
20°	182670	151804	128331
25°	170385	141171	117068
30°	153809	124931	104809
35°	126696	106954	86953
40°	103398	82552	66921
45°	88846	62701	48128
50°	80399	47720	30397
55°	73985	34418	10985
60°	71016	23524	1679
65°	68585	15913	502
70°	61416	11059	621
75°	50329	5704	0
80°	31450	2445	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.1	6.5
10°-20°	458.4	17.6
20°-30°	612.1	23.5
30°-40°	581.1	22.3
40°-50°	401.6	15.4
50°-60°	221.9	8.5
60°-70°	110.2	4.2
70°-80°	43.4	1.7
80°-90°	4.1	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°	1240.6	47.7
0°-40°	1821.7	70.0
0°-60°	2445.2	93.9
0°-90°	2603.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2603.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1816	1816	1816	1816	1816	
5°	1914	1896	1788	1707	1692	183
15°	1890	1833	1596	1439	1396	535
25°	1600	1594	1326	1100	1100	730
35°	1076	1189	908	747	738	674
45°	651	747	460	377	353	508
55°	440	414	205	104	65	396
65°	300	218	70	2	2	292
75°	135	83	15	0	0	144
85°	0	2	0	0	0	12
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°	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9
2.5°	1807.2	1857.3	1861.6	1857.3	1863.9	1861.6	1872.6	1861.6	1874.8	1855.2	1859.5
5°	1913.9	1894.3	1935.7	1913.9	1913.9	1911.8	1905.2	1903.0	1911.8	1883.5	1896.5
7.5°	1942.3	1970.6	2007.6	1961.9	1964.0	1964.0	1951.0	1946.6	1946.6	1894.3	1909.6
10°	1966.2	1948.7	1968.4	1951.0	1966.2	1964.0	1972.7	1944.4	1964.0	1933.5	1931.3
12.5°	1946.6	1940.0	1966.2	1937.9	1929.2	1931.3	1920.5	1913.9	1920.5	1885.6	1883.5
15°	1890.0	1896.5	1935.7	1905.2	1900.9	1896.5	1883.5	1861.6	1879.1	1831.2	1833.4
17.5°	1870.4	1859.5	1866.1	1839.9	1846.5	1842.1	1839.9	1820.3	1815.9	1785.5	1785.5
20°	1779.0	1802.9	1802.9	1785.5	1785.5	1783.3	1755.0	1772.4	1752.8	1744.1	1752.8
22.5°	1715.8	1718.0	1718.0	1702.7	1704.9	1696.2	1681.0	1670.0	1681.0	1670.0	1652.6
25°	1600.4	1604.8	1630.9	1602.6	1598.2	1606.9	1593.9	1587.3	1585.2	1559.1	1593.9
27.5°	1461.0	1504.5	1502.4	1491.5	1504.5	1487.1	1480.7	1482.8	1489.4	1487.1	1495.8
30°	1380.5	1387.0	1393.6	1384.9	1387.0	1380.5	1380.5	1382.6	1400.0	1393.6	1391.3
32.5°	1217.1	1238.9	1256.4	1256.4	1258.5	1265.1	1262.9	1308.6	1319.5	1297.8	1293.4
35°	1075.6	1090.9	1106.1	1108.3	1136.6	1138.8	1141.0	1154.0	1184.5	1191.0	1188.8
37.5°	940.7	955.9	960.2	979.8	995.1	1010.3	1027.8	1045.2	1071.3	1093.0	1082.2
40°	820.9	827.4	838.3	847.0	877.5	877.5	886.2	921.1	949.4	966.8	964.6
42.5°	720.8	722.9	731.6	746.9	775.2	768.6	775.2	799.1	840.4	842.7	866.6
45°	651.1	648.8	655.4	657.5	675.0	683.7	688.1	705.5	740.3	744.6	746.9
47.5°	587.9	585.7	596.6	601.0	607.5	616.2	616.2	618.4	631.4	642.4	633.7
50°	535.6	535.6	535.6	540.0	550.9	548.7	550.9	559.6	566.1	561.7	559.6
52.5°	479.0	487.7	494.3	496.5	498.6	498.6	500.8	496.5	494.3	487.7	474.6
55°	439.8	448.5	448.5	448.5	448.5	457.2	446.4	448.5	448.5	431.1	413.7
57.5°	400.7	409.4	415.9	407.2	415.9	407.2	402.8	400.7	396.2	378.8	352.7
60°	368.0	372.4	370.1	368.0	372.4	365.8	361.4	352.7	348.4	324.4	307.0
62.5°	331.0	333.1	335.3	331.0	326.6	324.4	315.7	302.7	294.0	274.3	259.1
65°	300.4	294.0	291.7	289.6	285.3	278.7	272.2	256.9	250.4	233.0	217.7
67.5°	254.7	252.6	256.9	250.4	239.5	239.5	233.0	219.9	204.6	193.8	178.5
70°	217.7	215.6	211.2	204.6	202.5	193.8	193.8	178.5	174.2	154.6	141.5
72.5°	178.5	178.5	172.0	165.5	158.9	154.6	152.4	141.5	135.0	124.1	113.2
75°	135.0	135.0	132.8	126.3	121.9	117.6	115.4	106.7	100.1	89.3	82.7
77.5°	95.8	95.8	87.1	82.7	84.9	80.5	76.2	74.0	71.8	65.3	56.6
80°	56.6	54.4	47.9	50.1	47.9	47.9	45.7	43.5	39.2	34.8	30.5
82.5°	15.3	17.4	17.4	17.4	19.6	15.3	15.3	15.3	17.4	17.4	10.9
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	8.7	8.7	8.7	8.7	8.7	6.6	6.6	6.6	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°	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9
2.5°	1837.8	1835.5	1837.8	1822.5	1857.3	1831.2	1826.8	1822.5	1837.8	1822.5	1800.7
5°	1876.9	1855.2	1848.6	1842.1	1861.6	1831.2	1824.7	1826.8	1815.9	1787.7	1789.8
7.5°	1890.0	1870.4	1850.8	1809.4	1826.8	1820.3	1802.9	1789.8	1772.4	1748.4	1744.1
10°	1894.3	1872.6	1844.2	1831.2	1805.1	1796.4	1789.8	1768.1	1746.3	1704.9	1694.0
12.5°	1881.3	1855.2	1820.3	1809.4	1789.8	1761.5	1746.3	1724.5	1704.9	1672.3	1648.3
15°	1824.7	1802.9	1792.0	1755.0	1746.3	1728.8	1698.4	1667.9	1639.6	1596.0	1582.9
17.5°	1759.4	1750.7	1739.7	1711.4	1709.3	1691.9	1663.6	1637.4	1600.4	1532.9	1511.1
20°	1691.9	1691.9	1657.0	1646.2	1667.9	1633.0	1611.3	1587.3	1511.1	1478.4	1439.3
22.5°	1641.8	1617.8	1598.2	1580.8	1582.9	1561.2	1530.7	1482.8	1454.5	1415.3	1369.6
25°	1543.8	1552.5	1509.0	1502.4	1509.0	1458.8	1443.6	1404.4	1363.0	1326.0	1291.2
27.5°	1482.8	1458.8	1430.6	1406.6	1406.6	1387.0	1343.5	1334.8	1271.6	1236.8	1193.2
30°	1391.3	1373.9	1350.0	1315.2	1310.8	1295.5	1260.7	1238.9	1173.6	1121.3	1097.4
32.5°	1275.9	1269.4	1249.8	1210.7	1197.6	1180.1	1136.6	1099.6	1069.1	1010.3	982.0
35°	1193.2	1169.3	1127.9	1095.2	1084.3	1053.9	1019.0	992.9	960.2	908.0	871.0
37.5°	1069.1	1045.2	1005.9	966.8	966.8	936.3	888.4	862.3	816.6	786.0	755.6
40°	960.2	929.8	890.6	844.9	838.3	794.7	775.2	731.6	703.3	655.4	651.1
42.5°	838.3	810.0	775.2	740.3	714.2	692.4	642.4	609.7	579.2	555.3	548.7
45°	727.2	690.2	659.8	616.2	590.1	564.0	531.3	509.5	485.6	459.5	444.2
47.5°	631.4	601.0	557.4	518.2	492.1	479.0	442.0	418.1	398.5	381.1	370.1
50°	533.5	496.5	472.5	428.9	424.6	394.1	363.7	344.0	333.1	317.9	302.7
52.5°	459.5	424.6	391.9	359.3	341.8	331.0	302.7	283.0	267.9	256.9	248.2
55°	387.5	357.1	331.0	298.3	287.4	272.2	239.5	235.2	219.9	204.6	193.8
57.5°	333.1	304.8	274.3	252.6	233.0	222.1	195.9	178.5	169.8	156.8	145.9
60°	283.0	252.6	228.6	202.5	193.8	178.5	158.9	143.7	132.8	121.9	111.1
62.5°	237.3	211.2	185.1	163.3	150.2	141.5	126.3	113.2	102.4	93.7	84.9
65°	195.9	172.0	150.2	128.5	121.9	111.1	100.1	89.3	80.5	69.7	61.0
67.5°	161.1	139.4	117.6	102.4	95.8	91.4	78.4	67.5	61.0	54.4	45.7
70°	126.3	111.1	93.7	80.5	74.0	67.5	58.8	52.3	43.5	39.2	32.7
72.5°	98.0	84.9	69.7	58.8	54.4	50.1	41.4	34.8	30.5	26.1	21.8
75°	69.7	58.8	50.1	39.2	37.0	34.8	28.3	24.0	19.6	15.3	13.1
77.5°	47.9	39.2	30.5	26.1	24.0	19.6	17.4	13.1	10.9	8.7	6.6
80°	26.1	19.6	15.3	13.1	10.9	8.7	8.7	6.6	4.4	4.4	2.2
82.5°	8.7	6.6	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°	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9
2.5°	1813.8	1789.8	1796.4	1796.4	1792.0	1792.0	1787.7	1781.1	1783.3	1770.2	1742.0
5°	1794.2	1763.7	1759.4	1763.7	1746.3	1742.0	1733.3	1746.3	1707.1	1722.3	1704.9
7.5°	1737.6	1709.3	1702.7	1718.0	1696.2	1683.1	1681.0	1698.4	1663.6	1646.2	1626.5
10°	1674.4	1663.6	1643.9	1633.0	1626.5	1628.7	1611.3	1589.5	1582.9	1578.6	1561.2
12.5°	1617.8	1593.9	1576.5	1563.4	1559.1	1559.1	1530.7	1526.4	1506.8	1502.4	1476.3
15°	1550.3	1522.0	1511.1	1493.7	1478.4	1487.1	1454.5	1445.8	1439.3	1411.0	1415.3
17.5°	1491.5	1461.0	1434.9	1424.0	1411.0	1397.9	1367.4	1373.9	1358.7	1358.7	1319.5
20°	1415.3	1382.6	1363.0	1341.3	1341.3	1323.9	1302.1	1304.2	1284.6	1265.1	1230.2
22.5°	1334.8	1299.9	1275.9	1267.2	1245.5	1241.1	1215.0	1208.4	1182.3	1184.5	1154.0
25°	1249.8	1215.0	1182.3	1184.5	1164.9	1156.2	1141.0	1110.5	1099.6	1086.5	1077.8
27.5°	1149.7	1125.7	1097.4	1095.2	1058.2	1060.4	1040.8	1032.1	1005.9	1012.5	992.9
30°	1058.2	1023.4	997.2	990.7	975.5	971.1	940.7	927.5	932.0	914.5	903.6
32.5°	964.6	912.3	901.4	888.4	879.7	868.8	847.0	855.7	836.1	840.4	823.0
35°	840.4	818.7	790.4	790.4	781.7	773.0	757.8	766.5	746.9	738.2	720.8
37.5°	735.9	716.4	688.1	696.8	681.5	668.5	655.4	657.5	640.1	638.0	620.5
40°	622.7	611.8	592.3	592.3	581.4	581.4	574.8	568.3	557.4	544.3	524.7
42.5°	516.0	507.3	498.6	500.8	485.6	498.6	481.2	492.1	457.2	455.1	442.0
45°	437.6	418.1	420.2	411.5	402.8	407.2	391.9	396.2	376.7	372.4	359.3
47.5°	355.0	348.4	335.3	331.0	331.0	324.4	317.9	315.7	307.0	296.1	278.7
50°	291.7	267.9	263.4	256.9	252.6	252.6	243.9	230.8	233.0	222.1	204.6
52.5°	228.6	209.0	200.3	198.2	189.5	185.1	174.2	165.5	158.9	154.6	143.7
55°	176.3	158.9	148.1	148.1	135.0	135.0	119.8	113.2	104.5	95.8	89.3
57.5°	132.8	124.1	113.2	104.5	100.1	89.3	80.5	69.7	63.1	50.1	41.4
60°	100.1	91.4	80.5	74.0	69.7	58.8	47.9	39.2	24.0	19.6	17.4
62.5°	74.0	65.3	54.4	50.1	45.7	37.0	26.1	13.1	6.6	6.6	6.6
65°	54.4	43.5	34.8	30.5	26.1	19.6	8.7	4.4	2.2	2.2	2.2
67.5°	37.0	28.3	19.6	17.4	13.1	6.6	2.2	2.2	2.2	2.2	2.2
70°	24.0	17.4	8.7	6.6	4.4	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	15.3	8.7	4.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	8.7	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: LD4C35D010 EX4C359027 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9	1815.9
2.5°	1772.4	1757.1	1765.8	1746.3	1755.0	1770.2	1759.4	1763.7
5°	1711.4	1702.7	1691.9	1663.6	1685.3	1702.7	1694.0	1691.9
7.5°	1646.2	1615.6	1630.9	1622.2	1617.8	1635.2	1615.6	1637.4
10°	1578.6	1556.8	1554.7	1539.4	1539.4	1552.5	1554.7	1541.6
12.5°	1478.4	1467.6	1467.6	1465.4	1463.2	1476.3	1478.4	1472.0
15°	1406.6	1402.3	1391.3	1389.2	1376.2	1395.7	1397.9	1395.7
17.5°	1319.5	1321.6	1310.8	1310.8	1319.5	1326.0	1308.6	1326.0
20°	1260.7	1249.8	1245.5	1225.8	1236.8	1247.7	1247.7	1249.8
22.5°	1175.8	1158.4	1164.9	1154.0	1147.5	1162.7	1162.7	1169.3
25°	1080.0	1080.0	1084.3	1077.8	1082.2	1090.9	1084.3	1099.6
27.5°	988.5	997.2	997.2	988.5	992.9	1019.0	1029.9	1012.5
30°	903.6	905.8	912.3	908.0	921.1	929.8	927.5	940.7
32.5°	807.8	818.7	823.0	816.6	820.9	840.4	829.6	827.4
35°	733.8	714.2	712.1	714.2	722.9	727.2	722.9	738.2
37.5°	627.1	620.5	611.8	614.0	620.5	629.3	633.7	644.5
40°	524.7	516.0	516.0	513.9	507.3	531.3	531.3	531.3
42.5°	435.5	433.3	422.4	422.4	431.1	437.6	433.3	448.5
45°	357.1	348.4	341.8	341.8	348.4	348.4	355.0	352.7
47.5°	280.9	272.2	274.3	267.9	274.3	283.0	272.2	274.3
50°	211.2	211.2	206.9	211.2	209.0	211.2	206.9	202.5
52.5°	143.7	163.3	165.5	156.8	137.2	119.8	108.9	117.6
55°	82.7	74.0	74.0	71.8	67.5	65.3	58.8	65.3
57.5°	41.4	37.0	37.0	37.0	34.8	32.7	28.3	28.3
60°	17.4	15.3	15.3	13.1	10.9	8.7	6.6	8.7
62.5°	6.6	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)