

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 EX4C359035 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: LD4C35D010 EX4C359035 4LBSQLWWH
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

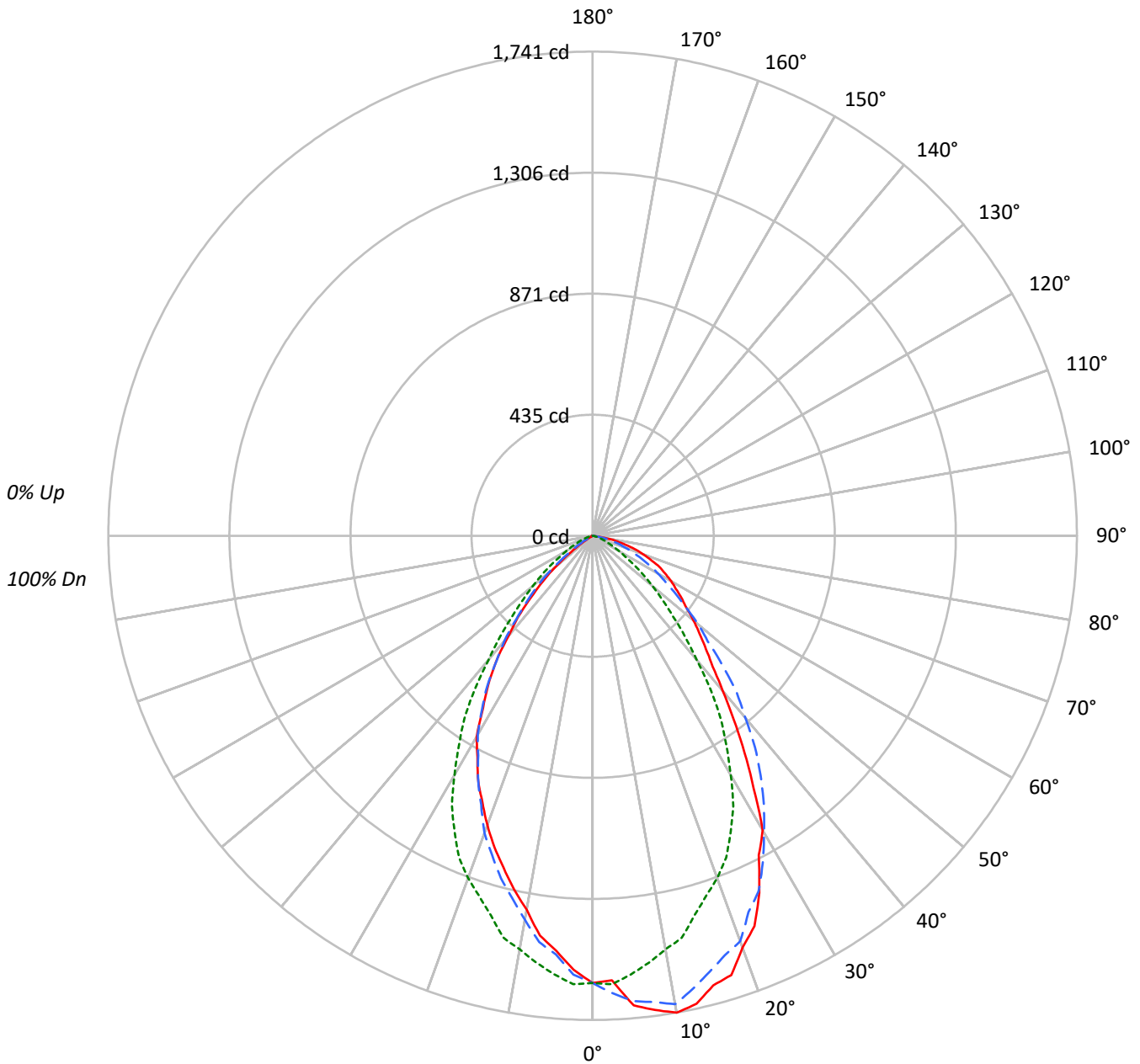
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2305.0 lumens
Efficiency: N/A
Efficacy: 57.1 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): 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

TEST NUMBER: P#
CATALOG NUMBER: LD4C35D010 EX4C359035 4LBSQLWWH

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359035 4LBSQLWWH

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°	155154	155154	155154
5°	164154	153325	145112
10°	170588	147916	133749
15°	167180	141178	123457
20°	161754	134430	113637
25°	150880	125010	103664
30°	136206	110636	92809
35°	112196	94704	76988
40°	91558	73106	59263
45°	78667	55524	42629
50°	71197	42256	26915
55°	65523	30482	9740
60°	62891	20822	1486
65°	60754	14087	457
70°	54392	9789	564
75°	44587	5033	0
80°	27894	2167	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359035 4LBSQLWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	6.5
10°-20°	405.9	17.6
20°-30°	542.0	23.5
30°-40°	514.5	22.3
40°-50°	355.7	15.4
50°-60°	196.5	8.5
60°-70°	97.6	4.2
70°-80°	38.4	1.7
80°-90°	3.7	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°	1098.6	47.7
0°-40°	1613.1	70.0
0°-60°	2165.3	93.9
0°-90°	2305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2305.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1608	1608	1608	1608	1608	
5°	1695	1679	1583	1512	1498	162
15°	1674	1624	1413	1274	1236	473
25°	1417	1411	1174	974	974	646
35°	952	1053	804	661	654	597
45°	576	661	407	334	312	450
55°	390	366	181	92	58	351
65°	266	193	62	2	2	258
75°	120	73	14	0	0	127
85°	0	2	0	0	0	11
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359035 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0
2.5°	1600.3	1644.7	1648.5	1644.7	1650.5	1648.5	1658.2	1648.5	1660.1	1642.8	1646.6
5°	1694.8	1677.4	1714.1	1694.8	1694.8	1692.9	1687.1	1685.1	1692.9	1667.8	1679.4
7.5°	1719.9	1745.0	1777.8	1737.3	1739.2	1739.2	1727.6	1723.7	1723.7	1677.4	1691.0
10°	1741.1	1725.6	1743.0	1727.6	1741.1	1739.2	1746.9	1721.8	1739.2	1712.2	1710.2
12.5°	1723.7	1717.9	1741.1	1716.0	1708.3	1710.2	1700.6	1694.8	1700.6	1669.7	1667.8
15°	1673.6	1679.4	1714.1	1687.1	1683.3	1679.4	1667.8	1648.5	1664.0	1621.5	1623.5
17.5°	1656.3	1646.6	1652.4	1629.2	1635.1	1631.2	1629.2	1611.9	1608.0	1581.1	1581.1
20°	1575.3	1596.5	1596.5	1581.1	1581.1	1579.2	1554.1	1569.5	1552.1	1544.4	1552.1
22.5°	1519.3	1521.3	1521.3	1507.8	1509.7	1502.0	1488.5	1478.8	1488.5	1478.8	1463.4
25°	1417.2	1421.1	1444.2	1419.1	1415.2	1422.9	1411.4	1405.6	1403.7	1380.6	1411.4
27.5°	1293.8	1332.3	1330.4	1320.7	1332.3	1316.9	1311.1	1313.0	1318.9	1316.9	1324.6
30°	1222.5	1228.2	1234.0	1226.3	1228.2	1222.5	1222.5	1224.4	1239.8	1234.0	1232.1
32.5°	1077.8	1097.1	1112.6	1112.6	1114.4	1120.3	1118.3	1158.8	1168.5	1149.2	1145.3
35°	952.5	966.0	979.5	981.4	1006.5	1008.4	1010.3	1021.9	1048.9	1054.7	1052.7
37.5°	833.0	846.4	850.3	867.7	881.2	894.6	910.1	925.5	948.6	967.9	958.3
40°	726.9	732.7	742.3	750.0	777.0	777.0	784.7	815.6	840.7	856.1	854.1
42.5°	638.2	640.1	647.8	661.4	686.4	680.6	686.4	707.7	744.2	746.2	767.4
45°	576.5	574.6	580.4	582.3	597.7	605.5	609.3	624.7	655.5	659.4	661.4
47.5°	520.6	518.7	528.3	532.2	537.9	545.6	545.6	547.6	559.1	568.8	561.1
50°	474.3	474.3	474.3	478.2	487.8	485.9	487.8	495.5	501.3	497.4	495.5
52.5°	424.2	431.9	437.7	439.6	441.5	441.5	443.5	439.6	437.7	431.9	420.3
55°	389.5	397.2	397.2	397.2	397.2	404.9	395.3	397.2	397.2	381.8	366.4
57.5°	354.8	362.5	368.3	360.6	368.3	360.6	356.7	354.8	350.9	335.5	312.4
60°	325.9	329.7	327.8	325.9	329.7	323.9	320.1	312.4	308.5	287.3	271.9
62.5°	293.1	295.0	296.9	293.1	289.2	287.3	279.6	268.0	260.3	242.9	229.4
65°	266.1	260.3	258.3	256.5	252.6	246.8	241.0	227.5	221.7	206.3	192.8
67.5°	225.6	223.7	227.5	221.7	212.1	212.1	206.3	194.7	181.2	171.6	158.1
70°	192.8	190.9	187.0	181.2	179.3	171.6	171.6	158.1	154.3	136.9	125.3
72.5°	158.1	158.1	152.3	146.5	140.7	136.9	135.0	125.3	119.6	109.9	100.2
75°	119.6	119.6	117.6	111.8	107.9	104.1	102.2	94.5	88.7	79.1	73.3
77.5°	84.8	84.8	77.1	73.3	75.2	71.3	67.5	65.6	63.6	57.9	50.2
80°	50.2	48.2	42.5	44.3	42.5	42.5	40.5	38.5	34.7	30.8	27.0
82.5°	13.5	15.4	15.4	15.4	17.4	13.5	13.5	13.5	15.4	15.4	9.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
87.5°	2.0	3.9	7.7	7.7	7.7	7.7	7.7	5.8	5.8	5.8	3.9
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 EX4C359035 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0
2.5°	1627.4	1625.4	1627.4	1613.8	1644.7	1621.5	1617.7	1613.8	1627.4	1613.8	1594.6
5°	1662.0	1642.8	1637.0	1631.2	1648.5	1621.5	1615.8	1617.7	1608.0	1583.0	1584.9
7.5°	1673.6	1656.3	1638.9	1602.3	1617.7	1611.9	1596.5	1584.9	1569.5	1548.3	1544.4
10°	1677.4	1658.2	1633.1	1621.5	1598.4	1590.7	1584.9	1565.6	1546.4	1509.7	1500.1
12.5°	1665.9	1642.8	1611.9	1602.3	1584.9	1559.8	1546.4	1527.0	1509.7	1480.8	1459.6
15°	1615.8	1596.5	1586.9	1554.1	1546.4	1530.9	1503.9	1477.0	1451.9	1413.3	1401.7
17.5°	1557.9	1550.2	1540.6	1515.5	1513.6	1498.2	1473.1	1449.9	1417.2	1357.4	1338.1
20°	1498.2	1498.2	1467.3	1457.7	1477.0	1446.1	1426.8	1405.6	1338.1	1309.2	1274.5
22.5°	1453.8	1432.6	1415.2	1399.8	1401.7	1382.5	1355.5	1313.0	1288.0	1253.3	1212.8
25°	1367.0	1374.8	1336.2	1330.4	1336.2	1291.8	1278.4	1243.6	1207.0	1174.2	1143.4
27.5°	1313.0	1291.8	1266.8	1245.6	1245.6	1228.2	1189.7	1182.0	1126.0	1095.2	1056.6
30°	1232.1	1216.6	1195.4	1164.6	1160.7	1147.2	1116.4	1097.1	1039.3	993.0	971.7
32.5°	1129.9	1124.1	1106.7	1072.1	1060.5	1045.0	1006.5	973.7	946.7	894.6	869.6
35°	1056.6	1035.4	998.8	969.9	960.2	933.2	902.3	879.2	850.3	804.0	771.3
37.5°	946.7	925.5	890.8	856.1	856.1	829.1	786.7	763.6	723.1	696.0	669.1
40°	850.3	823.3	788.6	748.1	742.3	703.7	686.4	647.8	622.8	580.4	576.5
42.5°	742.3	717.3	686.4	655.5	632.4	613.2	568.8	539.9	512.9	491.7	485.9
45°	644.0	611.2	584.2	545.6	522.5	499.4	470.5	451.2	430.0	406.9	393.3
47.5°	559.1	532.2	493.6	458.9	435.8	424.2	391.4	370.2	352.8	337.4	327.8
50°	472.4	439.6	418.4	379.8	376.0	349.0	322.0	304.7	295.0	281.5	268.0
52.5°	406.9	376.0	347.0	318.2	302.7	293.1	268.0	250.6	237.2	227.5	219.8
55°	343.2	316.2	293.1	264.2	254.5	241.0	212.1	208.3	194.7	181.2	171.6
57.5°	295.0	269.9	242.9	223.7	206.3	196.7	173.5	158.1	150.4	138.8	129.2
60°	250.6	223.7	202.4	179.3	171.6	158.1	140.7	127.3	117.6	107.9	98.4
62.5°	210.2	187.0	163.9	144.6	133.0	125.3	111.8	100.2	90.6	82.9	75.2
65°	173.5	152.3	133.0	113.8	107.9	98.4	88.7	79.1	71.3	61.7	54.0
67.5°	142.7	123.4	104.1	90.6	84.8	81.0	69.4	59.8	54.0	48.2	40.5
70°	111.8	98.4	82.9	71.3	65.6	59.8	52.0	46.3	38.5	34.7	28.9
72.5°	86.8	75.2	61.7	52.0	48.2	44.3	36.6	30.8	27.0	23.1	19.3
75°	61.7	52.0	44.3	34.7	32.8	30.8	25.1	21.2	17.4	13.5	11.6
77.5°	42.5	34.7	27.0	23.1	21.2	17.4	15.4	11.6	9.7	7.7	5.8
80°	23.1	17.4	13.5	11.6	9.7	7.7	7.7	5.8	3.9	3.9	2.0
82.5°	7.7	5.8	3.9	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0
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°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359035 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0
2.5°	1606.1	1584.9	1590.7	1590.7	1586.9	1586.9	1583.0	1577.2	1579.2	1567.5	1542.5
5°	1588.8	1561.8	1557.9	1561.8	1546.4	1542.5	1534.8	1546.4	1511.6	1525.2	1509.7
7.5°	1538.7	1513.6	1507.8	1521.3	1502.0	1490.4	1488.5	1503.9	1473.1	1457.7	1440.3
10°	1482.7	1473.1	1455.7	1446.1	1440.3	1442.2	1426.8	1407.5	1401.7	1397.9	1382.5
12.5°	1432.6	1411.4	1396.0	1384.4	1380.6	1380.6	1355.5	1351.6	1334.3	1330.4	1307.3
15°	1372.8	1347.8	1338.1	1322.7	1309.2	1316.9	1288.0	1280.3	1274.5	1249.4	1253.3
17.5°	1320.7	1293.8	1270.7	1261.0	1249.4	1237.9	1210.8	1216.6	1203.1	1203.1	1168.5
20°	1253.3	1224.4	1207.0	1187.7	1187.7	1172.3	1153.0	1154.9	1137.6	1120.3	1089.4
22.5°	1182.0	1151.1	1129.9	1122.1	1102.9	1099.0	1075.9	1070.1	1047.0	1048.9	1021.9
25°	1106.7	1075.9	1047.0	1048.9	1031.6	1023.9	1010.3	983.4	973.7	962.2	954.4
27.5°	1018.1	996.8	971.7	969.9	937.1	939.0	921.7	914.0	890.8	896.6	879.2
30°	937.1	906.3	883.1	877.3	863.8	859.9	833.0	821.3	825.3	809.8	800.2
32.5°	854.1	807.9	798.2	786.7	779.0	769.3	750.0	757.7	740.4	744.2	728.8
35°	744.2	725.0	699.9	699.9	692.2	684.5	671.0	678.7	661.4	653.6	638.2
37.5°	651.7	634.4	609.3	617.0	603.5	591.9	580.4	582.3	566.9	565.0	549.5
40°	551.4	541.8	524.5	524.5	514.8	514.8	509.0	503.2	493.6	482.0	464.6
42.5°	456.9	449.2	441.5	443.5	430.0	441.5	426.1	435.8	404.9	403.0	391.4
45°	387.5	370.2	372.1	364.4	356.7	360.6	347.0	350.9	333.6	329.7	318.2
47.5°	314.3	308.5	296.9	293.1	293.1	287.3	281.5	279.6	271.9	262.2	246.8
50°	258.3	237.2	233.3	227.5	223.7	223.7	216.0	204.4	206.3	196.7	181.2
52.5°	202.4	185.1	177.4	175.5	167.8	163.9	154.3	146.5	140.7	136.9	127.3
55°	156.1	140.7	131.1	131.1	119.6	119.6	106.1	100.2	92.5	84.8	79.1
57.5°	117.6	109.9	100.2	92.5	88.7	79.1	71.3	61.7	55.9	44.3	36.6
60°	88.7	81.0	71.3	65.6	61.7	52.0	42.5	34.7	21.2	17.4	15.4
62.5°	65.6	57.9	48.2	44.3	40.5	32.8	23.1	11.6	5.8	5.8	5.8
65°	48.2	38.5	30.8	27.0	23.1	17.4	7.7	3.9	2.0	2.0	2.0
67.5°	32.8	25.1	17.4	15.4	11.6	5.8	2.0	2.0	2.0	2.0	2.0
70°	21.2	15.4	7.7	5.8	3.9	2.0	2.0	2.0	2.0	2.0	2.0
72.5°	13.5	7.7	3.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	3.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.0	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	2.0	2.0	2.0
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 EX4C359035 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0	1608.0
2.5°	1569.5	1556.0	1563.7	1546.4	1554.1	1567.5	1557.9	1561.8
5°	1515.5	1507.8	1498.2	1473.1	1492.4	1507.8	1500.1	1498.2
7.5°	1457.7	1430.7	1444.2	1436.5	1432.6	1448.0	1430.7	1449.9
10°	1397.9	1378.6	1376.7	1363.2	1363.2	1374.8	1376.7	1365.1
12.5°	1309.2	1299.6	1299.6	1297.6	1295.7	1307.3	1309.2	1303.4
15°	1245.6	1241.7	1232.1	1230.2	1218.6	1235.9	1237.9	1235.9
17.5°	1168.5	1170.3	1160.7	1160.7	1168.5	1174.2	1158.8	1174.2
20°	1116.4	1106.7	1102.9	1085.5	1095.2	1104.8	1104.8	1106.7
22.5°	1041.2	1025.8	1031.6	1021.9	1016.1	1029.6	1029.6	1035.4
25°	956.3	956.3	960.2	954.4	958.3	966.0	960.2	973.7
27.5°	875.4	883.1	883.1	875.4	879.2	902.3	912.0	896.6
30°	800.2	802.1	807.9	804.0	815.6	823.3	821.3	833.0
32.5°	715.4	725.0	728.8	723.1	726.9	744.2	734.6	732.7
35°	649.8	632.4	630.5	632.4	640.1	644.0	640.1	653.6
37.5°	555.3	549.5	541.8	543.7	549.5	557.3	561.1	570.7
40°	464.6	456.9	456.9	455.1	449.2	470.5	470.5	470.5
42.5°	385.6	383.7	374.1	374.1	381.8	387.5	383.7	397.2
45°	316.2	308.5	302.7	302.7	308.5	308.5	314.3	312.4
47.5°	248.8	241.0	242.9	237.2	242.9	250.6	241.0	242.9
50°	187.0	187.0	183.2	187.0	185.1	187.0	183.2	179.3
52.5°	127.3	144.6	146.5	138.8	121.5	106.1	96.4	104.1
55°	73.3	65.6	65.6	63.6	59.8	57.9	52.0	57.9
57.5°	36.6	32.8	32.8	32.8	30.8	28.9	25.1	25.1
60°	15.4	13.5	13.5	11.6	9.7	7.7	5.8	7.7
62.5°	5.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9
65°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
67.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)