

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 EX4C359050 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 EX4C359050 4LBSQLWWH  
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

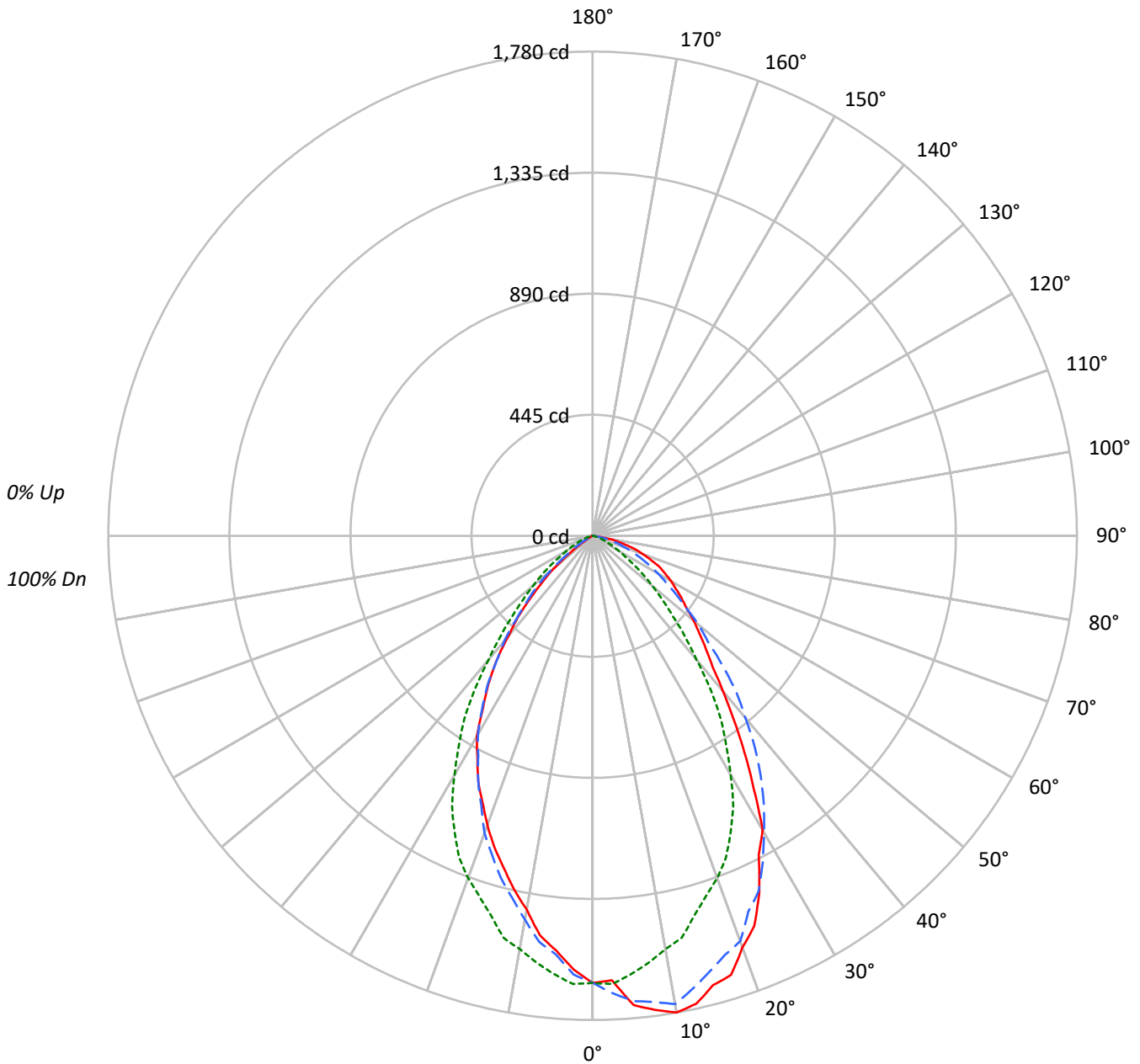
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2356.0 lumens  
Efficiency: N/A  
Efficacy: 58.3 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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CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P#

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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°	158589	158589	158589
5°	167786	156715	148318
10°	174361	151189	136708
15°	170876	144295	126194
20°	165337	137408	116153
25°	154223	127778	105963
30°	139214	113076	94859
35°	114682	96801	78696
40°	93586	74718	60573
45°	80413	56752	43570
50°	72773	43202	27515
55°	66970	31155	9942
60°	64281	21285	1525
65°	62078	14406	457
70°	55577	9987	564
75°	45557	5145	0
80°	28505	2167	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.0	6.5
10°-20°	414.9	17.6
20°-30°	554.0	23.5
30°-40°	525.9	22.3
40°-50°	363.5	15.4
50°-60°	200.9	8.5
60°-70°	99.7	4.2
70°-80°	39.3	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°	1122.9	47.7
0°-40°	1648.8	70.0
0°-60°	2213.2	93.9
0°-90°	2356.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2356.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1644	1644	1644	1644	1644	
5°	1732	1717	1618	1545	1531	166
15°	1711	1659	1444	1303	1263	484
25°	1449	1443	1200	995	995	660
35°	974	1076	822	676	668	610
45°	589	676	416	341	319	460
55°	398	374	185	95	59	358
65°	272	197	63	2	2	264
75°	122	75	14	0	0	130
85°	0	2	0	0	0	11
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6
2.5°	1635.7	1681.0	1685.0	1681.0	1687.0	1685.0	1694.9	1685.0	1696.9	1679.1	1683.1
5°	1732.3	1714.6	1752.0	1732.3	1732.3	1730.4	1724.4	1722.4	1730.4	1704.8	1716.6
7.5°	1757.9	1783.6	1817.1	1775.7	1777.6	1777.6	1765.8	1761.9	1761.9	1714.6	1728.4
10°	1779.6	1763.8	1781.6	1765.8	1779.6	1777.6	1785.5	1759.9	1777.6	1750.1	1748.1
12.5°	1761.9	1755.9	1779.6	1754.0	1746.1	1748.1	1738.3	1732.3	1738.3	1706.7	1704.8
15°	1710.6	1716.6	1752.0	1724.4	1720.5	1716.6	1704.8	1685.0	1700.8	1657.4	1659.4
17.5°	1692.9	1683.1	1689.0	1665.3	1671.2	1667.3	1665.3	1647.6	1643.6	1616.0	1616.0
20°	1610.2	1631.8	1631.8	1616.0	1616.0	1614.1	1588.5	1604.2	1586.5	1578.6	1586.5
22.5°	1553.0	1555.0	1555.0	1541.1	1543.1	1535.3	1521.5	1511.6	1521.5	1511.6	1495.8
25°	1448.6	1452.5	1476.1	1450.5	1446.6	1454.4	1442.6	1436.7	1434.7	1411.1	1442.6
27.5°	1322.4	1361.8	1359.8	1350.0	1361.8	1346.0	1340.2	1342.1	1348.0	1346.0	1353.9
30°	1249.5	1255.4	1261.3	1253.5	1255.4	1249.5	1249.5	1251.4	1267.2	1261.3	1259.3
32.5°	1101.7	1121.3	1137.2	1137.2	1139.1	1145.0	1143.0	1184.4	1194.3	1174.6	1170.7
35°	973.6	987.4	1001.1	1003.1	1028.8	1030.7	1032.7	1044.5	1072.1	1078.0	1076.0
37.5°	851.4	865.2	869.1	886.9	900.7	914.4	930.2	946.0	969.6	989.3	979.5
40°	743.0	748.9	758.8	766.6	794.2	794.2	802.1	833.7	859.3	875.0	873.0
42.5°	652.4	654.3	662.2	676.0	701.6	695.7	701.6	723.3	760.7	762.7	784.4
45°	589.3	587.3	593.2	595.1	611.0	618.8	622.8	638.5	670.0	674.0	676.0
47.5°	532.1	530.1	540.0	544.0	549.8	557.7	557.7	559.7	571.5	581.4	573.5
50°	484.8	484.8	484.8	488.7	498.6	496.6	498.6	506.5	512.4	508.4	506.5
52.5°	433.5	441.4	447.4	449.4	451.3	451.3	453.3	449.4	447.4	441.4	429.6
55°	398.1	406.0	406.0	406.0	406.0	413.9	404.0	406.0	406.0	390.2	374.5
57.5°	362.7	370.5	376.4	368.5	376.4	368.5	364.6	362.7	358.6	342.9	319.3
60°	333.1	337.0	335.0	333.1	337.0	331.1	327.1	319.3	315.3	293.6	277.9
62.5°	299.6	301.5	303.5	299.6	295.6	293.6	285.8	273.9	266.1	248.3	234.5
65°	271.9	266.1	264.1	262.1	258.2	252.2	246.4	232.6	226.6	210.9	197.0
67.5°	230.6	228.6	232.6	226.6	216.8	216.8	210.9	199.1	185.2	175.4	161.6
70°	197.0	195.1	191.2	185.2	183.3	175.4	175.4	161.6	157.7	139.9	128.1
72.5°	161.6	161.6	155.7	149.8	143.8	139.9	138.0	128.1	122.2	112.3	102.5
75°	122.2	122.2	120.2	114.3	110.3	106.4	104.5	96.6	90.6	80.8	74.9
77.5°	86.7	86.7	78.8	74.9	76.8	72.9	68.9	67.0	65.0	59.1	51.3
80°	51.3	49.3	43.4	45.3	43.4	43.4	41.4	39.4	35.4	31.5	27.6
82.5°	13.8	15.8	15.8	15.8	17.8	13.8	13.8	13.8	15.8	15.8	9.9
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	7.9	7.9	7.9	7.9	7.9	5.9	5.9	5.9	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 EX4C359050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6
2.5°	1663.4	1661.4	1663.4	1649.5	1681.0	1657.4	1653.5	1649.5	1663.4	1649.5	1629.9
5°	1698.8	1679.1	1673.2	1667.3	1685.0	1657.4	1651.6	1653.5	1643.6	1618.0	1620.0
7.5°	1710.6	1692.9	1675.2	1637.7	1653.5	1647.6	1631.8	1620.0	1604.2	1582.5	1578.6
10°	1714.6	1694.9	1669.2	1657.4	1633.8	1625.9	1620.0	1600.3	1580.6	1543.1	1533.3
12.5°	1702.7	1679.1	1647.6	1637.7	1620.0	1594.3	1580.6	1560.8	1543.1	1513.6	1491.9
15°	1651.6	1631.8	1622.0	1588.5	1580.6	1564.8	1537.2	1509.6	1484.0	1444.5	1432.7
17.5°	1592.4	1584.5	1574.6	1549.0	1547.1	1531.3	1505.7	1482.0	1448.6	1387.4	1367.7
20°	1531.3	1531.3	1499.8	1489.9	1509.6	1478.1	1458.4	1436.7	1367.7	1338.2	1302.7
22.5°	1486.0	1464.3	1446.6	1430.8	1432.7	1413.0	1385.5	1342.1	1316.5	1281.0	1239.6
25°	1397.3	1405.2	1365.8	1359.8	1365.8	1320.4	1306.6	1271.1	1233.7	1200.2	1168.7
27.5°	1342.1	1320.4	1294.8	1273.1	1273.1	1255.4	1216.0	1208.1	1150.9	1119.4	1080.0
30°	1259.3	1243.6	1221.9	1190.4	1186.4	1172.6	1141.1	1121.3	1062.3	1014.9	993.2
32.5°	1154.9	1149.0	1131.2	1095.8	1084.0	1068.1	1028.8	995.3	967.7	914.4	888.9
35°	1080.0	1058.3	1020.9	991.3	981.4	953.9	922.3	898.7	869.1	821.8	788.3
37.5°	967.7	946.0	910.5	875.0	875.0	847.5	804.1	780.5	739.1	711.4	683.9
40°	869.1	841.5	806.1	764.7	758.8	719.3	701.6	662.2	636.5	593.2	589.3
42.5°	758.8	733.1	701.6	670.0	646.4	626.7	581.4	551.8	524.3	502.6	496.6
45°	658.2	624.7	597.2	557.7	534.1	510.4	480.9	461.2	439.5	415.9	402.0
47.5°	571.5	544.0	504.5	469.1	445.4	433.5	400.0	378.4	360.7	344.9	335.0
50°	482.9	449.4	427.7	388.2	384.3	356.7	329.2	311.4	301.5	287.8	273.9
52.5°	415.9	384.3	354.7	325.2	309.4	299.6	273.9	256.2	242.4	232.6	224.7
55°	350.8	323.2	299.6	270.0	260.1	246.4	216.8	212.9	199.1	185.2	175.4
57.5°	301.5	275.9	248.3	228.6	210.9	201.1	177.4	161.6	153.7	141.9	132.0
60°	256.2	228.6	206.9	183.3	175.4	161.6	143.8	130.1	120.2	110.3	100.5
62.5°	214.8	191.2	167.5	147.8	136.0	128.1	114.3	102.5	92.7	84.8	76.8
65°	177.4	155.7	136.0	116.3	110.3	100.5	90.6	80.8	72.9	63.1	55.2
67.5°	145.9	126.2	106.4	92.7	86.7	82.8	71.0	61.1	55.2	49.3	41.4
70°	114.3	100.5	84.8	72.9	67.0	61.1	53.2	47.3	39.4	35.4	29.6
72.5°	88.7	76.8	63.1	53.2	49.3	45.3	37.4	31.5	27.6	23.6	19.7
75°	63.1	53.2	45.3	35.4	33.5	31.5	25.6	21.7	17.8	13.8	11.8
77.5°	43.4	35.4	27.6	23.6	21.7	17.8	15.8	11.8	9.9	7.9	5.9
80°	23.6	17.8	13.8	11.8	9.9	7.9	7.9	5.9	3.9	3.9	2.0
82.5°	7.9	5.9	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#

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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6
2.5°	1641.7	1620.0	1625.9	1625.9	1622.0	1622.0	1618.0	1612.1	1614.1	1602.2	1576.7
5°	1623.9	1596.3	1592.4	1596.3	1580.6	1576.7	1568.8	1580.6	1545.1	1558.9	1543.1
7.5°	1572.7	1547.1	1541.1	1555.0	1535.3	1523.4	1521.5	1537.2	1505.7	1489.9	1472.2
10°	1515.5	1505.7	1487.9	1478.1	1472.2	1474.1	1458.4	1438.7	1432.7	1428.8	1413.0
12.5°	1464.3	1442.6	1426.9	1415.1	1411.1	1411.1	1385.5	1381.5	1363.8	1359.8	1336.2
15°	1403.2	1377.6	1367.7	1352.0	1338.2	1346.0	1316.5	1308.6	1302.7	1277.1	1281.0
17.5°	1350.0	1322.4	1298.8	1288.9	1277.1	1265.3	1237.6	1243.6	1229.7	1229.7	1194.3
20°	1281.0	1251.4	1233.7	1214.0	1214.0	1198.2	1178.6	1180.5	1162.7	1145.0	1113.5
22.5°	1208.1	1176.5	1154.9	1147.0	1127.3	1123.3	1099.7	1093.8	1070.2	1072.1	1044.5
25°	1131.2	1099.7	1070.2	1072.1	1054.4	1046.5	1032.7	1005.1	995.3	983.4	975.6
27.5°	1040.6	1018.9	993.2	991.3	957.8	959.7	942.1	934.2	910.5	916.4	898.7
30°	957.8	926.3	902.6	896.7	882.9	879.0	851.4	839.5	843.5	827.7	817.9
32.5°	873.0	825.8	815.9	804.1	796.2	786.3	766.6	774.5	756.7	760.7	744.9
35°	760.7	741.0	715.4	715.4	707.5	699.6	685.9	693.7	676.0	668.1	652.4
37.5°	666.1	648.4	622.8	630.7	616.8	605.0	593.2	595.1	579.4	577.5	561.6
40°	563.6	553.8	536.1	536.1	526.2	526.2	520.3	514.4	504.5	492.7	474.9
42.5°	467.1	459.2	451.3	453.3	439.5	451.3	435.5	445.4	413.9	411.9	400.0
45°	396.1	378.4	380.3	372.5	364.6	368.5	354.7	358.6	341.0	337.0	325.2
47.5°	321.3	315.3	303.5	299.6	299.6	293.6	287.8	285.8	277.9	268.0	252.2
50°	264.1	242.4	238.4	232.6	228.6	228.6	220.7	208.9	210.9	201.1	185.2
52.5°	206.9	189.2	181.3	179.4	171.5	167.5	157.7	149.8	143.8	139.9	130.1
55°	159.6	143.8	134.0	134.0	122.2	122.2	108.4	102.5	94.6	86.7	80.8
57.5°	120.2	112.3	102.5	94.6	90.6	80.8	72.9	63.1	57.1	45.3	37.4
60°	90.6	82.8	72.9	67.0	63.1	53.2	43.4	35.4	21.7	17.8	15.8
62.5°	67.0	59.1	49.3	45.3	41.4	33.5	23.6	11.8	5.9	5.9	5.9
65°	49.3	39.4	31.5	27.6	23.6	17.8	7.9	3.9	2.0	2.0	2.0
67.5°	33.5	25.6	17.8	15.8	11.8	5.9	2.0	2.0	2.0	2.0	2.0
70°	21.7	15.8	7.9	5.9	3.9	2.0	2.0	2.0	2.0	2.0	2.0
72.5°	13.8	7.9	3.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.9	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 EX4C359050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6	1643.6
2.5°	1604.2	1590.4	1598.3	1580.6	1588.5	1602.2	1592.4	1596.3
5°	1549.0	1541.1	1531.3	1505.7	1525.4	1541.1	1533.3	1531.3
7.5°	1489.9	1462.3	1476.1	1468.3	1464.3	1480.1	1462.3	1482.0
10°	1428.8	1409.1	1407.2	1393.4	1393.4	1405.2	1407.2	1395.3
12.5°	1338.2	1328.3	1328.3	1326.3	1324.3	1336.2	1338.2	1332.3
15°	1273.1	1269.2	1259.3	1257.4	1245.6	1263.3	1265.3	1263.3
17.5°	1194.3	1196.2	1186.4	1186.4	1194.3	1200.2	1184.4	1200.2
20°	1141.1	1131.2	1127.3	1109.5	1119.4	1129.3	1129.3	1131.2
22.5°	1064.2	1048.5	1054.4	1044.5	1038.6	1052.4	1052.4	1058.3
25°	977.5	977.5	981.4	975.6	979.5	987.4	981.4	995.3
27.5°	894.7	902.6	902.6	894.7	898.7	922.3	932.2	916.4
30°	817.9	819.8	825.8	821.8	833.7	841.5	839.5	851.4
32.5°	731.2	741.0	744.9	739.1	743.0	760.7	750.9	748.9
35°	664.2	646.4	644.5	646.4	654.3	658.2	654.3	668.1
37.5°	567.6	561.6	553.8	555.8	561.6	569.6	573.5	583.3
40°	474.9	467.1	467.1	465.1	459.2	480.9	480.9	480.9
42.5°	394.2	392.2	382.4	382.4	390.2	396.1	392.2	406.0
45°	323.2	315.3	309.4	309.4	315.3	315.3	321.3	319.3
47.5°	254.3	246.4	248.3	242.4	248.3	256.2	246.4	248.3
50°	191.2	191.2	187.2	191.2	189.2	191.2	187.2	183.3
52.5°	130.1	147.8	149.8	141.9	124.2	108.4	98.5	106.4
55°	74.9	67.0	67.0	65.0	61.1	59.1	53.2	59.1
57.5°	37.4	33.5	33.5	33.5	31.5	29.6	25.6	25.6
60°	15.8	13.8	13.8	11.8	9.9	7.9	5.9	7.9
62.5°	5.9	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)