

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

Luminaire Equipment: Sample No. Condition Description

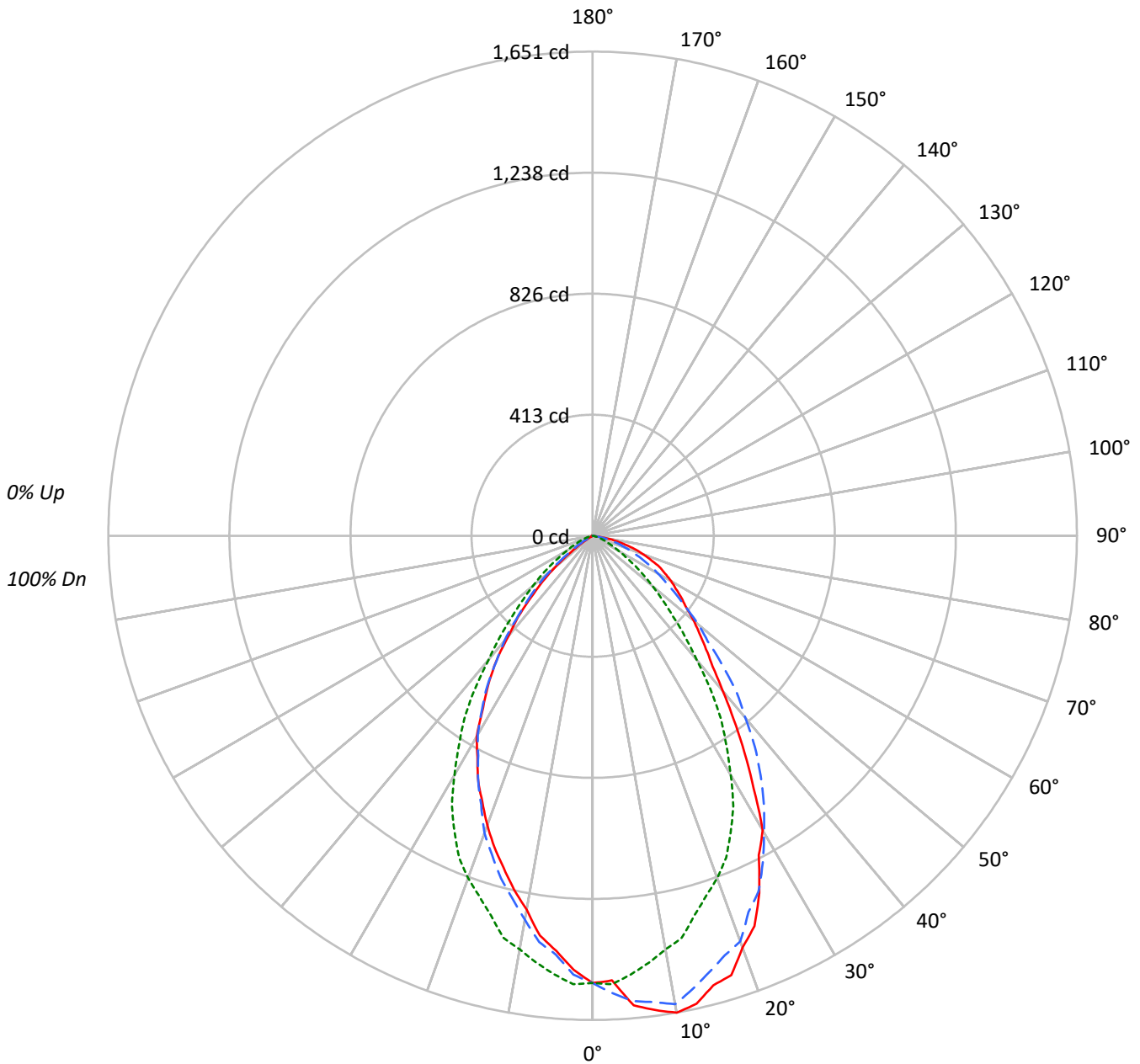
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2186.0 lumens
Efficiency: N/A
Efficacy: 54.1 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 EX4C359027 4LBSQLWWH

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359027 4LBSQLWWH

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	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°	147146	147146	147146
5°	155679	145412	137615
10°	161780	140284	126842
15°	158550	133886	117084
20°	153406	127489	107774
25°	143087	118558	98309
30°	129175	104920	88018
35°	106401	89816	73019
40°	86835	69327	56202
45°	74614	52658	40418
50°	67520	40079	25534
55°	62142	28918	9235
60°	59649	19761	1409
65°	57603	13356	434
70°	51571	9282	536
75°	42276	4772	0
80°	26449	2056	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359027 4LBSQLWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.9	6.5
10°-20°	385.0	17.6
20°-30°	514.0	23.5
30°-40°	488.0	22.3
40°-50°	337.3	15.4
50°-60°	186.4	8.5
60°-70°	92.6	4.2
70°-80°	36.5	1.7
80°-90°	3.5	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°	1041.9	47.7
0°-40°	1529.8	70.0
0°-60°	2053.5	93.9
0°-90°	2186.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2186.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1525	1525	1525	1525	1525	
5°	1607	1593	1501	1434	1421	154
15°	1587	1540	1340	1209	1172	449
25°	1344	1338	1114	923	923	613
35°	903	998	762	627	620	566
45°	547	627	386	316	296	426
55°	369	348	172	88	55	332
65°	252	183	58	2	2	245
75°	113	70	13	0	0	121
85°	0	2	0	0	0	10
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359027 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0
2.5°	1517.7	1559.7	1563.4	1559.7	1565.3	1563.4	1572.6	1563.4	1574.4	1558.0	1561.6
5°	1607.3	1590.8	1625.6	1607.3	1607.3	1605.5	1600.0	1598.1	1605.5	1581.7	1592.7
7.5°	1631.1	1654.9	1686.0	1647.6	1649.4	1649.4	1638.4	1634.8	1634.8	1590.8	1603.7
10°	1651.2	1636.5	1653.0	1638.4	1651.2	1649.4	1656.7	1632.9	1649.4	1623.8	1621.9
12.5°	1634.8	1629.2	1651.2	1627.4	1620.1	1621.9	1612.8	1607.3	1612.8	1583.5	1581.7
15°	1587.2	1592.7	1625.6	1600.0	1596.4	1592.7	1581.7	1563.4	1578.1	1537.8	1539.7
17.5°	1570.8	1561.6	1567.1	1545.1	1550.7	1547.0	1545.1	1528.7	1525.0	1499.4	1499.4
20°	1494.0	1514.0	1514.0	1499.4	1499.4	1497.6	1473.9	1488.5	1472.0	1464.7	1472.0
22.5°	1440.9	1442.8	1442.8	1429.9	1431.8	1424.5	1411.7	1402.5	1411.7	1402.5	1387.9
25°	1344.0	1347.7	1369.6	1345.8	1342.2	1349.5	1338.5	1333.0	1331.2	1309.3	1338.5
27.5°	1227.0	1263.5	1261.7	1252.6	1263.5	1248.9	1243.5	1245.2	1250.8	1248.9	1256.2
30°	1159.4	1164.8	1170.3	1163.0	1164.8	1159.4	1159.4	1161.1	1175.8	1170.3	1168.5
32.5°	1022.2	1040.4	1055.1	1055.1	1056.9	1062.4	1060.6	1099.0	1108.1	1089.9	1086.2
35°	903.3	916.1	928.9	930.7	954.5	956.3	958.2	969.1	994.7	1000.2	998.4
37.5°	790.0	802.7	806.4	822.9	835.7	848.4	863.1	877.7	899.7	917.9	908.8
40°	689.4	694.8	704.0	711.3	736.9	736.9	744.2	773.5	797.3	811.9	810.0
42.5°	605.3	607.1	614.4	627.2	651.0	645.5	651.0	671.1	705.8	707.7	727.8
45°	546.8	544.9	550.4	552.2	566.9	574.2	577.8	592.5	621.7	625.3	627.2
47.5°	493.7	491.9	501.1	504.7	510.1	517.5	517.5	519.3	530.3	539.5	532.1
50°	449.8	449.8	449.8	453.5	462.7	460.8	462.7	470.0	475.4	471.8	470.0
52.5°	402.3	409.6	415.1	416.9	418.7	418.7	420.6	416.9	415.1	409.6	398.6
55°	369.4	376.7	376.7	376.7	376.7	384.0	374.9	376.7	376.7	362.1	347.5
57.5°	336.5	343.8	349.2	341.9	349.2	341.9	338.3	336.5	332.8	318.2	296.2
60°	309.1	312.7	310.8	309.1	312.7	307.2	303.5	296.2	292.6	272.4	257.8
62.5°	278.0	279.8	281.6	278.0	274.3	272.4	265.1	254.2	246.9	230.4	217.6
65°	252.3	246.9	245.0	243.2	239.6	234.0	228.6	215.8	210.3	195.6	182.8
67.5°	213.9	212.1	215.8	210.3	201.2	201.2	195.6	184.7	171.9	162.8	149.9
70°	182.8	181.0	177.4	171.9	170.1	162.8	162.8	149.9	146.3	129.8	118.9
72.5°	149.9	149.9	144.4	139.0	133.5	129.8	128.0	118.9	113.4	104.2	95.1
75°	113.4	113.4	111.5	106.0	102.4	98.7	96.9	89.6	84.1	75.0	69.5
77.5°	80.5	80.5	73.1	69.5	71.3	67.6	64.0	62.2	60.3	54.9	47.6
80°	47.6	45.7	40.3	42.1	40.3	40.3	38.4	36.5	32.9	29.2	25.6
82.5°	12.8	14.6	14.6	14.6	16.5	12.8	12.8	12.8	14.6	14.6	9.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9
87.5°	1.9	3.7	7.3	7.3	7.3	7.3	7.3	5.5	5.5	5.5	3.7
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 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0
2.5°	1543.3	1541.5	1543.3	1530.5	1559.7	1537.8	1534.2	1530.5	1543.3	1530.5	1512.3
5°	1576.2	1558.0	1552.4	1547.0	1563.4	1537.8	1532.4	1534.2	1525.0	1501.3	1503.1
7.5°	1587.2	1570.8	1554.3	1519.6	1534.2	1528.7	1514.0	1503.1	1488.5	1468.3	1464.7
10°	1590.8	1572.6	1548.8	1537.8	1515.9	1508.6	1503.1	1484.8	1466.5	1431.8	1422.6
12.5°	1579.9	1558.0	1528.7	1519.6	1503.1	1479.3	1466.5	1448.2	1431.8	1404.4	1384.2
15°	1532.4	1514.0	1504.9	1473.9	1466.5	1451.9	1426.3	1400.7	1376.9	1340.3	1329.4
17.5°	1477.5	1470.2	1461.0	1437.2	1435.5	1420.8	1397.1	1375.1	1344.0	1287.3	1269.0
20°	1420.8	1420.8	1391.5	1382.4	1400.7	1371.4	1353.1	1333.0	1269.0	1241.6	1208.7
22.5°	1378.8	1358.7	1342.2	1327.6	1329.4	1311.1	1285.5	1245.2	1221.5	1188.6	1150.2
25°	1296.5	1303.8	1267.2	1261.7	1267.2	1225.1	1212.4	1179.4	1144.7	1113.6	1084.3
27.5°	1245.2	1225.1	1201.4	1181.3	1181.3	1164.8	1128.3	1121.0	1067.9	1038.6	1002.0
30°	1168.5	1153.8	1133.7	1104.5	1100.8	1088.0	1058.8	1040.4	985.6	941.7	921.6
32.5°	1071.5	1066.1	1049.6	1016.7	1005.8	991.1	954.5	923.4	897.9	848.4	824.7
35°	1002.0	982.0	947.2	919.8	910.6	885.0	855.7	833.8	806.4	762.5	731.4
37.5°	897.9	877.7	844.8	811.9	811.9	786.3	746.1	724.1	685.7	660.1	634.5
40°	806.4	780.8	747.9	709.5	704.0	667.4	651.0	614.4	590.6	550.4	546.8
42.5°	704.0	680.2	651.0	621.7	599.8	581.5	539.5	512.0	486.4	466.3	460.8
45°	610.7	579.6	554.1	517.5	495.5	473.6	446.2	427.9	407.8	385.9	373.0
47.5°	530.3	504.7	468.1	435.2	413.3	402.3	371.2	351.1	334.6	320.0	310.8
50°	448.0	416.9	396.8	360.2	356.6	331.0	305.4	288.9	279.8	267.0	254.2
52.5°	385.9	356.6	329.1	301.7	287.1	278.0	254.2	237.7	225.0	215.8	208.5
55°	325.5	299.9	278.0	250.5	241.4	228.6	201.2	197.5	184.7	171.9	162.8
57.5°	279.8	256.0	230.4	212.1	195.6	186.6	164.6	149.9	142.6	131.7	122.5
60°	237.7	212.1	192.0	170.1	162.8	149.9	133.5	120.7	111.5	102.4	93.3
62.5°	199.3	177.4	155.5	137.1	126.2	118.9	106.0	95.1	86.0	78.7	71.3
65°	164.6	144.4	126.2	107.9	102.4	93.3	84.1	75.0	67.6	58.5	51.2
67.5°	135.3	117.1	98.7	86.0	80.5	76.8	65.8	56.7	51.2	45.7	38.4
70°	106.0	93.3	78.7	67.6	62.2	56.7	49.4	43.9	36.5	32.9	27.4
72.5°	82.3	71.3	58.5	49.4	45.7	42.1	34.7	29.2	25.6	21.9	18.3
75°	58.5	49.4	42.1	32.9	31.1	29.2	23.8	20.1	16.5	12.8	11.0
77.5°	40.3	32.9	25.6	21.9	20.1	16.5	14.6	11.0	9.2	7.3	5.5
80°	21.9	16.5	12.8	11.0	9.2	7.3	7.3	5.5	3.7	3.7	1.9
82.5°	7.3	5.5	3.7	1.9	1.9	1.9	1.9	1.9	1.9	0.0	1.9
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°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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 EX4C359027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0
2.5°	1523.2	1503.1	1508.6	1508.6	1504.9	1504.9	1501.3	1495.8	1497.6	1486.6	1462.9
5°	1506.7	1481.2	1477.5	1481.2	1466.5	1462.9	1455.6	1466.5	1433.6	1446.4	1431.8
7.5°	1459.2	1435.5	1429.9	1442.8	1424.5	1413.5	1411.7	1426.3	1397.1	1382.4	1366.0
10°	1406.2	1397.1	1380.6	1371.4	1366.0	1367.8	1353.1	1334.9	1329.4	1325.7	1311.1
12.5°	1358.7	1338.5	1323.9	1312.9	1309.3	1309.3	1285.5	1281.9	1265.4	1261.7	1239.8
15°	1301.9	1278.2	1269.0	1254.4	1241.6	1248.9	1221.5	1214.2	1208.7	1184.9	1188.6
17.5°	1252.6	1227.0	1205.1	1195.9	1184.9	1174.0	1148.3	1153.8	1141.0	1141.0	1108.1
20°	1188.6	1161.1	1144.7	1126.4	1126.4	1111.8	1093.5	1095.3	1078.8	1062.4	1033.1
22.5°	1121.0	1091.7	1071.5	1064.2	1045.9	1042.3	1020.4	1014.9	992.9	994.7	969.1
25°	1049.6	1020.4	992.9	994.7	978.3	971.0	958.2	932.6	923.4	912.5	905.2
27.5°	965.5	945.4	921.6	919.8	888.7	890.5	874.1	866.8	844.8	850.3	833.8
30°	888.7	859.5	837.5	832.0	819.2	815.6	790.0	778.9	782.7	768.0	758.9
32.5°	810.0	766.2	757.0	746.1	738.8	729.6	711.3	718.6	702.1	705.8	691.2
35°	705.8	687.5	663.7	663.7	656.4	649.1	636.4	643.7	627.2	619.9	605.3
37.5°	618.0	601.6	577.8	585.2	572.3	561.4	550.4	552.2	537.6	535.8	521.1
40°	523.0	513.8	497.4	497.4	488.2	488.2	482.7	477.3	468.1	457.1	440.7
42.5°	433.4	426.0	418.7	420.6	407.8	418.7	404.1	413.3	384.0	382.2	371.2
45°	367.5	351.1	352.9	345.6	338.3	341.9	329.1	332.8	316.4	312.7	301.7
47.5°	298.1	292.6	281.6	278.0	278.0	272.4	267.0	265.1	257.8	248.7	234.0
50°	245.0	225.0	221.2	215.8	212.1	212.1	204.8	193.9	195.6	186.6	171.9
52.5°	192.0	175.5	168.2	166.4	159.1	155.5	146.3	139.0	133.5	129.8	120.7
55°	148.1	133.5	124.4	124.4	113.4	113.4	100.6	95.1	87.8	80.5	75.0
57.5°	111.5	104.2	95.1	87.8	84.1	75.0	67.6	58.5	53.0	42.1	34.7
60°	84.1	76.8	67.6	62.2	58.5	49.4	40.3	32.9	20.1	16.5	14.6
62.5°	62.2	54.9	45.7	42.1	38.4	31.1	21.9	11.0	5.5	5.5	5.5
65°	45.7	36.5	29.2	25.6	21.9	16.5	7.3	3.7	1.9	1.9	1.9
67.5°	31.1	23.8	16.5	14.6	11.0	5.5	1.9	1.9	1.9	1.9	1.9
70°	20.1	14.6	7.3	5.5	3.7	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	12.8	7.3	3.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.3	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	3.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.9	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	1.9	1.9	1.9
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 EX4C359027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0	1525.0
2.5°	1488.5	1475.6	1483.0	1466.5	1473.9	1486.6	1477.5	1481.2
5°	1437.2	1429.9	1420.8	1397.1	1415.3	1429.9	1422.6	1420.8
7.5°	1382.4	1356.8	1369.6	1362.3	1358.7	1373.3	1356.8	1375.1
10°	1325.7	1307.4	1305.6	1292.8	1292.8	1303.8	1305.6	1294.6
12.5°	1241.6	1232.5	1232.5	1230.6	1228.8	1239.8	1241.6	1236.2
15°	1181.3	1177.6	1168.5	1166.7	1155.7	1172.1	1174.0	1172.1
17.5°	1108.1	1109.9	1100.8	1100.8	1108.1	1113.6	1099.0	1113.6
20°	1058.8	1049.6	1045.9	1029.5	1038.6	1047.8	1047.8	1049.6
22.5°	987.4	972.8	978.3	969.1	963.6	976.5	976.5	982.0
25°	907.0	907.0	910.6	905.2	908.8	916.1	910.6	923.4
27.5°	830.2	837.5	837.5	830.2	833.8	855.7	864.9	850.3
30°	758.9	760.7	766.2	762.5	773.5	780.8	778.9	790.0
32.5°	678.4	687.5	691.2	685.7	689.4	705.8	696.7	694.8
35°	616.2	599.8	598.0	599.8	607.1	610.7	607.1	619.9
37.5°	526.6	521.1	513.8	515.7	521.1	528.5	532.1	541.2
40°	440.7	433.4	433.4	431.6	426.0	446.2	446.2	446.2
42.5°	365.7	363.9	354.8	354.8	362.1	367.5	363.9	376.7
45°	299.9	292.6	287.1	287.1	292.6	292.6	298.1	296.2
47.5°	235.9	228.6	230.4	225.0	230.4	237.7	228.6	230.4
50°	177.4	177.4	173.7	177.4	175.5	177.4	173.7	170.1
52.5°	120.7	137.1	139.0	131.7	115.2	100.6	91.4	98.7
55°	69.5	62.2	62.2	60.3	56.7	54.9	49.4	54.9
57.5°	34.7	31.1	31.1	31.1	29.2	27.4	23.8	23.8
60°	14.6	12.8	12.8	11.0	9.2	7.3	5.5	7.3
62.5°	5.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7
65°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
67.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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)