

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: **LD4C25D010 EX4C259040 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: LD4C25D010 EX4C259040 4LBSQLWWLI
Description: 4 INCH 2500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

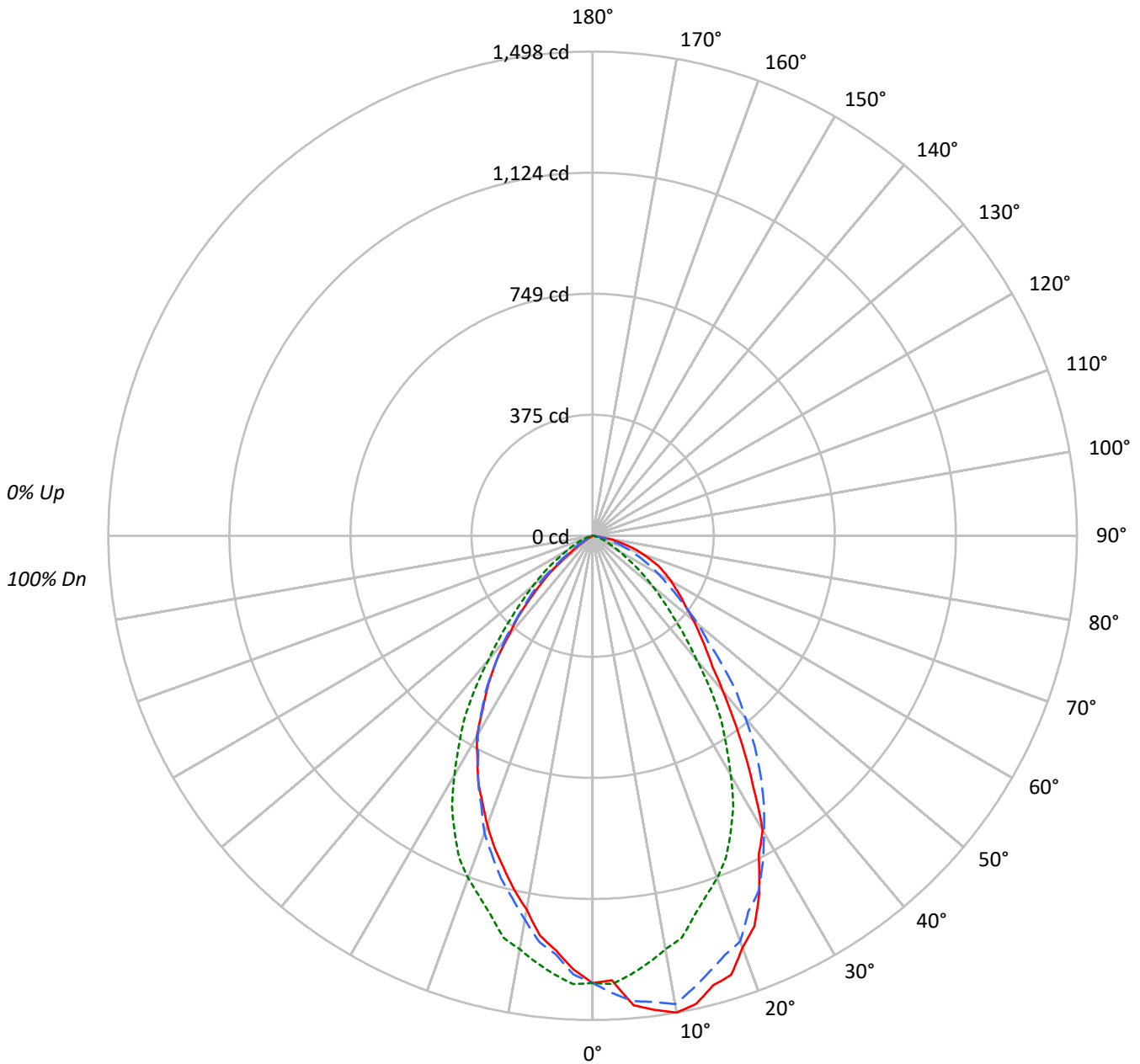
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1983.0 lumens
Efficiency: N/A
Efficacy: 63.0 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): 31.5
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

TEST NUMBER: P#
CATALOG NUMBER: LD4C25D010 EX4C259040 4LBSQLWWLI

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	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°	133483	133483	133483
5°	141228	131910	124840
10°	146760	127253	115065
15°	143825	121449	106216
20°	139154	115650	97763
25°	129801	107550	89185
30°	117176	95182	79841
35°	96518	81476	66234
40°	78774	62890	50975
45°	67682	47760	36666
50°	61260	36357	23162
55°	56372	26226	8378
60°	54111	17928	1274
65°	52261	12123	388
70°	46775	8407	480
75°	38362	4325	0
80°	24004	1834	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C25D010 EX4C259040 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.6	6.5
10°-20°	349.2	17.6
20°-30°	466.3	23.5
30°-40°	442.7	22.3
40°-50°	306.0	15.4
50°-60°	169.1	8.5
60°-70°	84.0	4.2
70°-80°	33.1	1.7
80°-90°	3.1	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°	945.1	47.7
0°-40°	1387.8	70.0
0°-60°	1862.8	93.9
0°-90°	1983.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1983.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1383	1383	1383	1383	1383	
5°	1458	1445	1362	1300	1289	140
15°	1440	1397	1216	1096	1063	407
25°	1219	1214	1010	838	838	556
35°	819	906	692	569	562	513
45°	496	569	350	287	269	387
55°	335	315	156	80	50	302
65°	229	166	53	2	2	222
75°	103	63	12	0	0	110
85°	0	2	0	0	0	9
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C25D010 EX4C259040 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4
2.5°	1376.8	1414.9	1418.2	1414.9	1419.9	1418.2	1426.5	1418.2	1428.2	1413.3	1416.6
5°	1458.1	1443.1	1474.6	1458.1	1458.1	1456.4	1451.4	1449.7	1456.4	1434.9	1444.8
7.5°	1479.6	1501.2	1529.4	1494.6	1496.2	1496.2	1486.3	1482.9	1482.9	1443.1	1454.7
10°	1497.9	1484.6	1499.5	1486.3	1497.9	1496.2	1502.8	1481.3	1496.2	1473.0	1471.3
12.5°	1482.9	1477.9	1497.9	1476.3	1469.7	1471.3	1463.1	1458.1	1463.1	1436.5	1434.9
15°	1439.8	1444.8	1474.6	1451.4	1448.1	1444.8	1434.9	1418.2	1431.5	1395.0	1396.7
17.5°	1424.9	1416.6	1421.6	1401.6	1406.7	1403.3	1401.6	1386.8	1383.4	1360.2	1360.2
20°	1355.2	1373.4	1373.4	1360.2	1360.2	1358.6	1337.0	1350.2	1335.3	1328.7	1335.3
22.5°	1307.1	1308.8	1308.8	1297.1	1298.8	1292.2	1280.6	1272.3	1280.6	1272.3	1259.0
25°	1219.2	1222.5	1242.4	1220.9	1217.5	1224.2	1214.2	1209.2	1207.6	1187.7	1214.2
27.5°	1113.0	1146.2	1144.6	1136.2	1146.2	1132.9	1128.0	1129.6	1134.6	1132.9	1139.6
30°	1051.7	1056.6	1061.6	1055.0	1056.6	1051.7	1051.7	1053.3	1066.6	1061.6	1059.9
32.5°	927.2	943.8	957.1	957.1	958.8	963.8	962.1	996.9	1005.2	988.7	985.3
35°	819.4	831.1	842.6	844.3	865.9	867.5	869.2	879.1	902.3	907.4	905.7
37.5°	716.6	728.2	731.5	746.4	758.1	769.6	783.0	796.2	816.1	832.7	824.4
40°	625.4	630.3	638.6	645.3	668.5	668.5	675.1	701.7	723.2	736.5	734.8
42.5°	549.1	550.7	557.3	569.0	590.5	585.5	590.5	608.8	640.3	641.9	660.2
45°	496.0	494.3	499.3	500.9	514.2	520.9	524.2	537.4	564.0	567.3	569.0
47.5°	447.9	446.2	454.5	457.8	462.8	469.4	469.4	471.1	481.0	489.4	482.7
50°	408.1	408.1	408.1	411.4	419.7	418.0	419.7	426.3	431.3	427.9	426.3
52.5°	364.9	371.5	376.5	378.2	379.9	379.9	381.5	378.2	376.5	371.5	361.6
55°	335.1	341.7	341.7	341.7	341.7	348.3	340.1	341.7	341.7	328.4	315.2
57.5°	305.2	311.9	316.8	310.2	316.8	310.2	306.9	305.2	301.9	288.6	268.7
60°	280.4	283.7	282.0	280.4	283.7	278.7	275.4	268.7	265.4	247.1	233.9
62.5°	252.2	253.8	255.5	252.2	248.8	247.1	240.5	230.6	223.9	209.0	197.4
65°	228.9	223.9	222.3	220.6	217.3	212.3	207.4	195.7	190.7	177.5	165.8
67.5°	194.1	192.4	195.7	190.7	182.5	182.5	177.5	167.5	155.9	147.7	136.0
70°	165.8	164.2	160.9	155.9	154.3	147.7	147.7	136.0	132.7	117.8	107.8
72.5°	136.0	136.0	131.0	126.1	121.1	117.8	116.1	107.8	102.9	94.6	86.2
75°	102.9	102.9	101.2	96.2	92.9	89.6	87.9	81.3	76.3	68.0	63.0
77.5°	73.0	73.0	66.4	63.0	64.7	61.3	58.0	56.4	54.7	49.8	43.2
80°	43.2	41.5	36.5	38.1	36.5	36.5	34.8	33.1	29.8	26.5	23.2
82.5°	11.6	13.3	13.3	13.3	14.9	11.6	11.6	11.6	13.3	13.3	8.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7
87.5°	1.7	3.3	6.6	6.6	6.6	6.6	6.6	5.0	5.0	5.0	3.3
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: LD4C25D010 EX4C259040 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4
2.5°	1400.0	1398.3	1400.0	1388.4	1414.9	1395.0	1391.7	1388.4	1400.0	1388.4	1371.8
5°	1429.9	1413.3	1408.3	1403.3	1418.2	1395.0	1390.1	1391.7	1383.4	1361.9	1363.5
7.5°	1439.8	1424.9	1410.0	1378.4	1391.7	1386.8	1373.4	1363.5	1350.2	1332.0	1328.7
10°	1443.1	1426.5	1405.0	1395.0	1375.1	1368.5	1363.5	1346.9	1330.4	1298.8	1290.5
12.5°	1433.2	1413.3	1386.8	1378.4	1363.5	1341.9	1330.4	1313.7	1298.8	1273.9	1255.7
15°	1390.1	1373.4	1365.2	1337.0	1330.4	1317.0	1293.8	1270.6	1249.1	1215.8	1205.9
17.5°	1340.3	1333.7	1325.4	1303.8	1302.2	1288.9	1267.3	1247.4	1219.2	1167.8	1151.2
20°	1288.9	1288.9	1262.3	1254.1	1270.6	1244.1	1227.5	1209.2	1151.2	1126.3	1096.5
22.5°	1250.7	1232.5	1217.5	1204.3	1205.9	1189.3	1166.1	1129.6	1108.0	1078.2	1043.4
25°	1176.1	1182.7	1149.6	1144.6	1149.6	1111.3	1099.8	1069.9	1038.4	1010.2	983.6
27.5°	1129.6	1111.3	1089.8	1071.6	1071.6	1056.6	1023.5	1016.9	968.7	942.2	909.0
30°	1059.9	1046.7	1028.4	1001.9	998.6	987.0	960.4	943.8	894.1	854.3	836.0
32.5°	972.0	967.1	952.1	922.3	912.4	899.0	865.9	837.7	814.5	769.6	748.1
35°	909.0	890.8	859.3	834.4	826.1	802.9	776.3	756.4	731.5	691.7	663.5
37.5°	814.5	796.2	766.3	736.5	736.5	713.3	676.8	656.9	622.1	598.8	575.6
40°	731.5	708.3	678.5	643.6	638.6	605.4	590.5	557.3	535.8	499.3	496.0
42.5°	638.6	617.1	590.5	564.0	544.1	527.5	489.4	464.5	441.3	423.0	418.0
45°	554.0	525.8	502.6	469.4	449.5	429.6	404.7	388.2	369.9	350.0	338.4
47.5°	481.0	457.8	424.6	394.8	374.9	364.9	336.7	318.5	303.6	290.3	282.0
50°	406.4	378.2	360.0	326.8	323.4	300.2	277.0	262.1	253.8	242.2	230.6
52.5°	350.0	323.4	298.6	273.7	260.4	252.2	230.6	215.6	204.1	195.7	189.1
55°	295.2	272.0	252.2	227.3	218.9	207.4	182.5	179.2	167.5	155.9	147.7
57.5°	253.8	232.2	209.0	192.4	177.5	169.2	149.3	136.0	129.4	119.4	111.1
60°	215.6	192.4	174.2	154.3	147.7	136.0	121.1	109.5	101.2	92.9	84.6
62.5°	180.8	160.9	141.0	124.4	114.4	107.8	96.2	86.2	78.0	71.4	64.7
65°	149.3	131.0	114.4	97.9	92.9	84.6	76.3	68.0	61.3	53.1	46.5
67.5°	122.8	106.2	89.6	78.0	73.0	69.7	59.7	51.4	46.5	41.5	34.8
70°	96.2	84.6	71.4	61.3	56.4	51.4	44.8	39.8	33.1	29.8	24.9
72.5°	74.7	64.7	53.1	44.8	41.5	38.1	31.5	26.5	23.2	19.9	16.6
75°	53.1	44.8	38.1	29.8	28.2	26.5	21.6	18.3	14.9	11.6	9.9
77.5°	36.5	29.8	23.2	19.9	18.3	14.9	13.3	9.9	8.3	6.6	5.0
80°	19.9	14.9	11.6	9.9	8.3	6.6	6.6	5.0	3.3	3.3	1.7
82.5°	6.6	5.0	3.3	1.7	1.7	1.7	1.7	1.7	1.7	0.0	1.7
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°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	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: LD4C25D010 EX4C259040 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4
2.5°	1381.8	1363.5	1368.5	1368.5	1365.2	1365.2	1361.9	1356.9	1358.6	1348.6	1327.0
5°	1366.8	1343.6	1340.3	1343.6	1330.4	1327.0	1320.4	1330.4	1300.5	1312.1	1298.8
7.5°	1323.7	1302.2	1297.1	1308.8	1292.2	1282.2	1280.6	1293.8	1267.3	1254.1	1239.1
10°	1275.6	1267.3	1252.4	1244.1	1239.1	1240.7	1227.5	1210.9	1205.9	1202.6	1189.3
12.5°	1232.5	1214.2	1201.0	1191.0	1187.7	1187.7	1166.1	1162.8	1147.9	1144.6	1124.7
15°	1181.0	1159.5	1151.2	1137.9	1126.3	1132.9	1108.0	1101.4	1096.5	1074.9	1078.2
17.5°	1136.2	1113.0	1093.2	1084.8	1074.9	1064.9	1041.7	1046.7	1035.1	1035.1	1005.2
20°	1078.2	1053.3	1038.4	1021.8	1021.8	1008.5	992.0	993.6	978.6	963.8	937.2
22.5°	1016.9	990.3	972.0	965.4	948.8	945.5	925.6	920.6	900.7	902.3	879.1
25°	952.1	925.6	900.7	902.3	887.5	880.8	869.2	846.0	837.7	827.7	821.1
27.5°	875.8	857.6	836.0	834.4	806.2	807.8	792.9	786.3	766.3	771.3	756.4
30°	806.2	779.7	759.7	754.8	743.1	739.8	716.6	706.6	710.0	696.7	688.4
32.5°	734.8	695.0	686.7	676.8	670.1	661.8	645.3	651.9	636.9	640.3	627.0
35°	640.3	623.7	602.1	602.1	595.5	588.9	577.3	583.9	569.0	562.3	549.1
37.5°	560.6	545.8	524.2	530.8	519.2	509.2	499.3	500.9	487.7	486.0	472.7
40°	474.4	466.1	451.2	451.2	442.9	442.9	437.9	432.9	424.6	414.7	399.7
42.5°	393.1	386.5	379.9	381.5	369.9	379.9	366.6	374.9	348.3	346.7	336.7
45°	333.4	318.5	320.1	313.5	306.9	310.2	298.6	301.9	287.0	283.7	273.7
47.5°	270.4	265.4	255.5	252.2	252.2	247.1	242.2	240.5	233.9	225.6	212.3
50°	222.3	204.1	200.7	195.7	192.4	192.4	185.8	175.9	177.5	169.2	155.9
52.5°	174.2	159.2	152.6	151.0	144.3	141.0	132.7	126.1	121.1	117.8	109.5
55°	134.3	121.1	112.8	112.8	102.9	102.9	91.2	86.2	79.6	73.0	68.0
57.5°	101.2	94.6	86.2	79.6	76.3	68.0	61.3	53.1	48.1	38.1	31.5
60°	76.3	69.7	61.3	56.4	53.1	44.8	36.5	29.8	18.3	14.9	13.3
62.5°	56.4	49.8	41.5	38.1	34.8	28.2	19.9	9.9	5.0	5.0	5.0
65°	41.5	33.1	26.5	23.2	19.9	14.9	6.6	3.3	1.7	1.7	1.7
67.5°	28.2	21.6	14.9	13.3	9.9	5.0	1.7	1.7	1.7	1.7	1.7
70°	18.3	13.3	6.6	5.0	3.3	1.7	1.7	1.7	1.7	1.7	1.7
72.5°	11.6	6.6	3.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	6.6	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	3.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.7	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	1.7	1.7	1.7
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: LD4C25D010 EX4C259040 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4	1383.4
2.5°	1350.2	1338.6	1345.2	1330.4	1337.0	1348.6	1340.3	1343.6
5°	1303.8	1297.1	1288.9	1267.3	1283.9	1297.1	1290.5	1288.9
7.5°	1254.1	1230.8	1242.4	1235.8	1232.5	1245.7	1230.8	1247.4
10°	1202.6	1186.0	1184.4	1172.8	1172.8	1182.7	1184.4	1174.4
12.5°	1126.3	1118.0	1118.0	1116.4	1114.7	1124.7	1126.3	1121.4
15°	1071.6	1068.3	1059.9	1058.3	1048.4	1063.3	1064.9	1063.3
17.5°	1005.2	1006.8	998.6	998.6	1005.2	1010.2	996.9	1010.2
20°	960.4	952.1	948.8	933.9	942.2	950.5	950.5	952.1
22.5°	895.7	882.5	887.5	879.1	874.1	885.8	885.8	890.8
25°	822.7	822.7	826.1	821.1	824.4	831.1	826.1	837.7
27.5°	753.1	759.7	759.7	753.1	756.4	776.3	784.6	771.3
30°	688.4	690.0	695.0	691.7	701.7	708.3	706.6	716.6
32.5°	615.4	623.7	627.0	622.1	625.4	640.3	632.0	630.3
35°	559.0	544.1	542.4	544.1	550.7	554.0	550.7	562.3
37.5°	477.7	472.7	466.1	467.8	472.7	479.4	482.7	491.0
40°	399.7	393.1	393.1	391.5	386.5	404.7	404.7	404.7
42.5°	331.8	330.1	321.8	321.8	328.4	333.4	330.1	341.7
45°	272.0	265.4	260.4	260.4	265.4	265.4	270.4	268.7
47.5°	214.0	207.4	209.0	204.1	209.0	215.6	207.4	209.0
50°	160.9	160.9	157.6	160.9	159.2	160.9	157.6	154.3
52.5°	109.5	124.4	126.1	119.4	104.5	91.2	82.9	89.6
55°	63.0	56.4	56.4	54.7	51.4	49.8	44.8	49.8
57.5°	31.5	28.2	28.2	28.2	26.5	24.9	21.6	21.6
60°	13.3	11.6	11.6	9.9	8.3	6.6	5.0	6.6
62.5°	5.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3
65°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
67.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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)