

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 EX4C259035 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 EX4C259035 4LBSQLWWLI
Description: 4 INCH 2500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

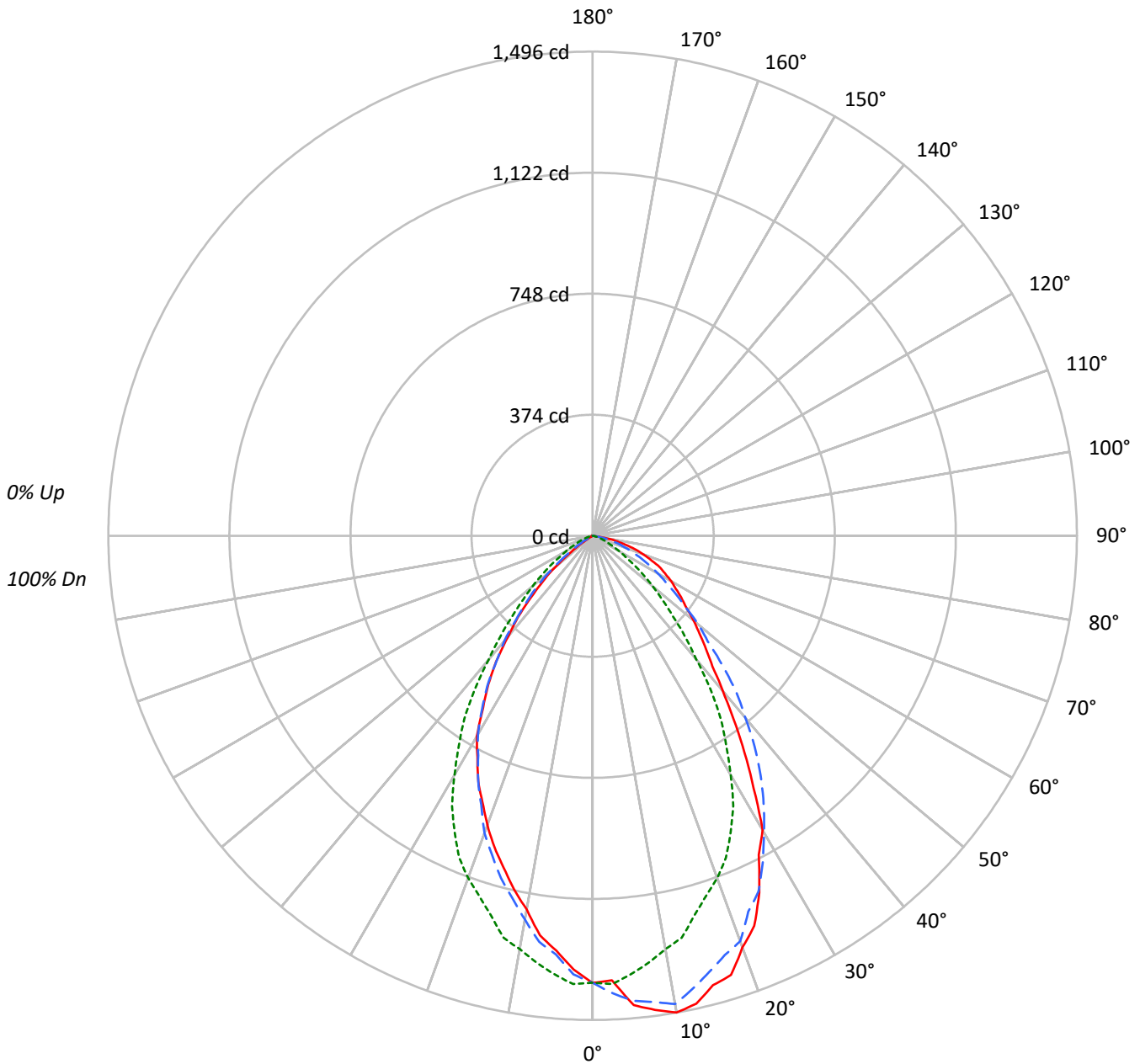
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1980.0 lumens
Efficiency: N/A
Efficacy: 62.9 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 (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					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°	133280	133280	133280
5°	141015	131707	124646
10°	146535	127067	114888
15°	143606	121270	106046
20°	138948	115475	97619
25°	129609	107379	89046
30°	116998	95038	79718
35°	96377	81358	66140
40°	78648	62790	50899
45°	67573	47691	36611
50°	61155	36297	23117
55°	56288	26192	8361
60°	54014	17889	1274
65°	52169	12101	388
70°	46718	8407	480
75°	38287	4325	0
80°	23949	1834	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	6.5
10°-20°	348.7	17.6
20°-30°	465.6	23.5
30°-40°	442.0	22.3
40°-50°	305.5	15.4
50°-60°	168.8	8.5
60°-70°	83.8	4.2
70°-80°	33.0	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°	943.7	47.7
0°-40°	1385.7	70.0
0°-60°	1860.0	93.9
0°-90°	1980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1980.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1381	1381	1381	1381	1381	
5°	1456	1443	1360	1298	1287	139
15°	1438	1395	1214	1095	1062	407
25°	1217	1212	1009	836	836	555
35°	818	904	691	568	562	513
45°	495	568	350	287	268	386
55°	335	315	156	80	50	301
65°	228	166	53	2	2	222
75°	103	63	12	0	0	109
85°	0	2	0	0	0	9
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°	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3
2.5°	1374.7	1412.8	1416.1	1412.8	1417.8	1416.1	1424.4	1416.1	1426.1	1411.1	1414.5
5°	1455.9	1440.9	1472.4	1455.9	1455.9	1454.2	1449.2	1447.5	1454.2	1432.7	1442.6
7.5°	1477.4	1498.9	1527.1	1492.3	1493.9	1493.9	1484.0	1480.7	1480.7	1440.9	1452.5
10°	1495.6	1482.3	1497.3	1484.0	1495.6	1493.9	1500.6	1479.0	1493.9	1470.8	1469.1
12.5°	1480.7	1475.7	1495.6	1474.1	1467.5	1469.1	1460.8	1455.9	1460.8	1434.3	1432.7
15°	1437.6	1442.6	1472.4	1449.2	1445.9	1442.6	1432.7	1416.1	1429.4	1392.9	1394.6
17.5°	1422.8	1414.5	1419.4	1399.5	1404.5	1401.2	1399.5	1384.7	1381.3	1358.1	1358.1
20°	1353.2	1371.4	1371.4	1358.1	1358.1	1356.5	1335.0	1348.2	1333.3	1326.7	1333.3
22.5°	1305.1	1306.8	1306.8	1295.2	1296.9	1290.3	1278.6	1270.3	1278.6	1270.3	1257.1
25°	1217.4	1220.7	1240.5	1219.0	1215.7	1222.3	1212.4	1207.4	1205.8	1185.9	1212.4
27.5°	1111.4	1144.4	1142.8	1134.5	1144.4	1131.2	1126.3	1127.9	1132.9	1131.2	1137.8
30°	1050.1	1055.0	1060.0	1053.4	1055.0	1050.1	1050.1	1051.7	1065.0	1060.0	1058.3
32.5°	925.8	942.4	955.7	955.7	957.3	962.3	960.6	995.4	1003.7	987.2	983.8
35°	818.2	829.8	841.4	843.0	864.6	866.2	867.9	877.8	901.0	906.0	904.3
37.5°	715.5	727.1	730.4	745.3	756.9	768.5	781.8	795.0	814.9	831.4	823.2
40°	624.4	629.4	637.7	644.3	667.4	667.4	674.1	700.6	722.2	735.4	733.7
42.5°	548.2	549.9	556.5	568.1	589.6	584.7	589.6	607.9	639.3	641.0	659.2
45°	495.2	493.5	498.5	500.2	513.5	520.1	523.4	536.6	563.1	566.4	568.1
47.5°	447.2	445.5	453.8	457.1	462.1	468.7	468.7	470.4	480.3	488.6	482.0
50°	407.4	407.4	407.4	410.7	419.1	417.4	419.1	425.7	430.6	427.3	425.7
52.5°	364.4	371.0	376.0	377.7	379.3	379.3	381.0	377.7	376.0	371.0	361.0
55°	334.6	341.2	341.2	341.2	341.2	347.8	339.6	341.2	341.2	327.9	314.7
57.5°	304.8	311.4	316.3	309.7	316.3	309.7	306.4	304.8	301.4	288.2	268.3
60°	279.9	283.2	281.6	279.9	283.2	278.2	274.9	268.3	265.0	246.8	233.5
62.5°	251.8	253.4	255.1	251.8	248.5	246.8	240.2	230.2	223.6	208.7	197.1
65°	228.5	223.6	221.9	220.3	217.0	212.0	207.1	195.4	190.4	177.2	165.6
67.5°	193.8	192.1	195.4	190.4	182.2	182.2	177.2	167.3	155.7	147.4	135.8
70°	165.6	164.0	160.7	155.7	154.0	147.4	147.4	135.8	132.5	117.6	107.7
72.5°	135.8	135.8	130.8	125.9	120.9	117.6	116.0	107.7	102.7	94.4	86.1
75°	102.7	102.7	101.0	96.0	92.7	89.4	87.8	81.2	76.2	67.9	62.9
77.5°	72.9	72.9	66.3	62.9	64.6	61.3	57.9	56.3	54.6	49.7	43.1
80°	43.1	41.4	36.5	38.1	36.5	36.5	34.8	33.1	29.8	26.5	23.2
82.5°	11.6	13.2	13.2	13.2	14.9	11.6	11.6	11.6	13.2	13.2	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3
2.5°	1397.9	1396.2	1397.9	1386.3	1412.8	1392.9	1389.6	1386.3	1397.9	1386.3	1369.7
5°	1427.7	1411.1	1406.1	1401.2	1416.1	1392.9	1388.0	1389.6	1381.3	1359.8	1361.4
7.5°	1437.6	1422.8	1407.8	1376.4	1389.6	1384.7	1371.4	1361.4	1348.2	1330.0	1326.7
10°	1440.9	1424.4	1402.8	1392.9	1373.1	1366.4	1361.4	1344.9	1328.3	1296.9	1288.6
12.5°	1431.0	1411.1	1384.7	1376.4	1361.4	1339.9	1328.3	1311.7	1296.9	1272.0	1253.8
15°	1388.0	1371.4	1363.1	1335.0	1328.3	1315.0	1291.9	1268.7	1247.2	1214.0	1204.1
17.5°	1338.3	1331.7	1323.3	1301.8	1300.2	1286.9	1265.4	1245.5	1217.4	1166.0	1149.4
20°	1286.9	1286.9	1260.4	1252.2	1268.7	1242.2	1225.6	1207.4	1149.4	1124.6	1094.8
22.5°	1248.9	1230.6	1215.7	1202.5	1204.1	1187.5	1164.4	1127.9	1106.4	1076.6	1041.8
25°	1174.3	1180.9	1147.8	1142.8	1147.8	1109.7	1098.1	1068.3	1036.8	1008.6	982.2
27.5°	1127.9	1109.7	1088.2	1070.0	1070.0	1055.0	1021.9	1015.3	967.2	940.8	907.6
30°	1058.3	1045.1	1026.9	1000.4	997.1	985.5	959.0	942.4	892.7	853.0	834.7
32.5°	970.5	965.6	950.7	920.9	911.0	897.7	864.6	836.4	813.3	768.5	747.0
35°	907.6	889.4	858.0	833.1	824.8	801.6	775.1	755.2	730.4	690.7	662.5
37.5°	813.3	795.0	765.2	735.4	735.4	712.2	675.8	655.9	621.1	597.9	574.7
40°	730.4	707.2	677.4	642.7	637.7	604.5	589.6	556.5	534.9	498.5	495.2
42.5°	637.7	616.1	589.6	563.1	543.3	526.7	488.6	463.8	440.6	422.4	417.4
45°	553.2	525.0	501.9	468.7	448.8	429.0	404.1	387.6	369.3	349.5	337.9
47.5°	480.3	457.1	424.0	394.2	374.3	364.4	336.2	318.0	303.1	289.9	281.6
50°	405.8	377.7	359.4	326.3	323.0	299.8	276.6	261.7	253.4	241.8	230.2
52.5°	349.5	323.0	298.1	273.3	260.0	251.8	230.2	215.3	203.8	195.4	188.8
55°	294.8	271.6	251.8	226.9	218.6	207.1	182.2	178.9	167.3	155.7	147.4
57.5°	253.4	231.8	208.7	192.1	177.2	169.0	149.1	135.8	129.2	119.3	111.0
60°	215.3	192.1	173.9	154.0	147.4	135.8	120.9	109.3	101.0	92.7	84.5
62.5°	180.5	160.7	140.8	124.2	114.3	107.7	96.0	86.1	77.9	71.2	64.6
65°	149.1	130.8	114.3	97.7	92.7	84.5	76.2	67.9	61.3	53.0	46.4
67.5°	122.6	106.0	89.4	77.9	72.9	69.6	59.6	51.3	46.4	41.4	34.8
70°	96.0	84.5	71.2	61.3	56.3	51.3	44.7	39.8	33.1	29.8	24.9
72.5°	74.6	64.6	53.0	44.7	41.4	38.1	31.5	26.5	23.2	19.9	16.5
75°	53.0	44.7	38.1	29.8	28.2	26.5	21.5	18.2	14.9	11.6	9.9
77.5°	36.5	29.8	23.2	19.9	18.2	14.9	13.2	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3
2.5°	1379.7	1361.4	1366.4	1366.4	1363.1	1363.1	1359.8	1354.8	1356.5	1346.5	1325.0
5°	1364.7	1341.6	1338.3	1341.6	1328.3	1325.0	1318.4	1328.3	1298.5	1310.1	1296.9
7.5°	1321.7	1300.2	1295.2	1306.8	1290.3	1280.3	1278.6	1291.9	1265.4	1252.2	1237.2
10°	1273.6	1265.4	1250.5	1242.2	1237.2	1238.9	1225.6	1209.1	1204.1	1200.8	1187.5
12.5°	1230.6	1212.4	1199.1	1189.2	1185.9	1185.9	1164.4	1161.1	1146.1	1142.8	1123.0
15°	1179.2	1157.8	1149.4	1136.2	1124.6	1131.2	1106.4	1099.7	1094.8	1073.3	1076.6
17.5°	1134.5	1111.4	1091.5	1083.2	1073.3	1063.3	1040.1	1045.1	1033.5	1033.5	1003.7
20°	1076.6	1051.7	1036.8	1020.3	1020.3	1007.0	990.5	992.1	977.2	962.3	935.8
22.5°	1015.3	988.8	970.5	963.9	947.4	944.1	924.2	919.2	899.4	901.0	877.8
25°	950.7	924.2	899.4	901.0	886.1	879.5	867.9	844.7	836.4	826.5	819.9
27.5°	874.5	856.3	834.7	833.1	804.9	806.6	791.7	785.1	765.2	770.2	755.2
30°	804.9	778.5	758.6	753.6	742.0	738.7	715.5	705.5	708.9	695.6	687.4
32.5°	733.7	694.0	685.7	675.8	669.1	660.8	644.3	650.9	636.0	639.3	626.0
35°	639.3	622.7	601.2	601.2	594.6	588.0	576.4	583.0	568.1	561.5	548.2
37.5°	559.8	544.9	523.4	530.0	518.4	508.5	498.5	500.2	486.9	485.3	472.0
40°	473.7	465.4	450.5	450.5	442.2	442.2	437.2	432.3	424.0	414.1	399.1
42.5°	392.5	385.9	379.3	381.0	369.3	379.3	366.0	374.3	347.8	346.2	336.2
45°	332.9	318.0	319.6	313.0	306.4	309.7	298.1	301.4	286.6	283.2	273.3
47.5°	270.0	265.0	255.1	251.8	251.8	246.8	241.8	240.2	233.5	225.2	212.0
50°	221.9	203.8	200.4	195.4	192.1	192.1	185.5	175.6	177.2	169.0	155.7
52.5°	173.9	159.0	152.4	150.7	144.1	140.8	132.5	125.9	120.9	117.6	109.3
55°	134.1	120.9	112.6	112.6	102.7	102.7	91.1	86.1	79.5	72.9	67.9
57.5°	101.0	94.4	86.1	79.5	76.2	67.9	61.3	53.0	48.0	38.1	31.5
60°	76.2	69.6	61.3	56.3	53.0	44.7	36.5	29.8	18.2	14.9	13.2
62.5°	56.3	49.7	41.4	38.1	34.8	28.2	19.9	9.9	5.0	5.0	5.0
65°	41.4	33.1	26.5	23.2	19.9	14.9	6.6	3.3	1.7	1.7	1.7
67.5°	28.2	21.5	14.9	13.2	9.9	5.0	1.7	1.7	1.7	1.7	1.7
70°	18.2	13.2	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 EX4C259035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3	1381.3
2.5°	1348.2	1336.6	1343.2	1328.3	1335.0	1346.5	1338.3	1341.6
5°	1301.8	1295.2	1286.9	1265.4	1281.9	1295.2	1288.6	1286.9
7.5°	1252.2	1228.9	1240.5	1233.9	1230.6	1243.9	1228.9	1245.5
10°	1200.8	1184.2	1182.6	1171.0	1171.0	1180.9	1182.6	1172.6
12.5°	1124.6	1116.4	1116.4	1114.7	1113.0	1123.0	1124.6	1119.7
15°	1070.0	1066.6	1058.3	1056.7	1046.8	1061.6	1063.3	1061.6
17.5°	1003.7	1005.3	997.1	997.1	1003.7	1008.6	995.4	1008.6
20°	959.0	950.7	947.4	932.5	940.8	949.1	949.1	950.7
22.5°	894.4	881.1	886.1	877.8	872.8	884.4	884.4	889.4
25°	821.5	821.5	824.8	819.9	823.2	829.8	824.8	836.4
27.5°	751.9	758.6	758.6	751.9	755.2	775.1	783.4	770.2
30°	687.4	689.0	694.0	690.7	700.6	707.2	705.5	715.5
32.5°	614.5	622.7	626.0	621.1	624.4	639.3	631.0	629.4
35°	558.2	543.3	541.6	543.3	549.9	553.2	549.9	561.5
37.5°	477.0	472.0	465.4	467.1	472.0	478.7	482.0	490.2
40°	399.1	392.5	392.5	390.9	385.9	404.1	404.1	404.1
42.5°	331.3	329.6	321.3	321.3	327.9	332.9	329.6	341.2
45°	271.6	265.0	260.0	260.0	265.0	265.0	270.0	268.3
47.5°	213.7	207.1	208.7	203.8	208.7	215.3	207.1	208.7
50°	160.7	160.7	157.4	160.7	159.0	160.7	157.4	154.0
52.5°	109.3	124.2	125.9	119.3	104.3	91.1	82.8	89.4
55°	62.9	56.3	56.3	54.6	51.3	49.7	44.7	49.7
57.5°	31.5	28.2	28.2	28.2	26.5	24.9	21.5	21.5
60°	13.2	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)