

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P212719

Luminaire Tested: **LD4B20D010 EU4B10208030 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212719
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29201)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B20D010 EU4B10208030 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1838.1 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

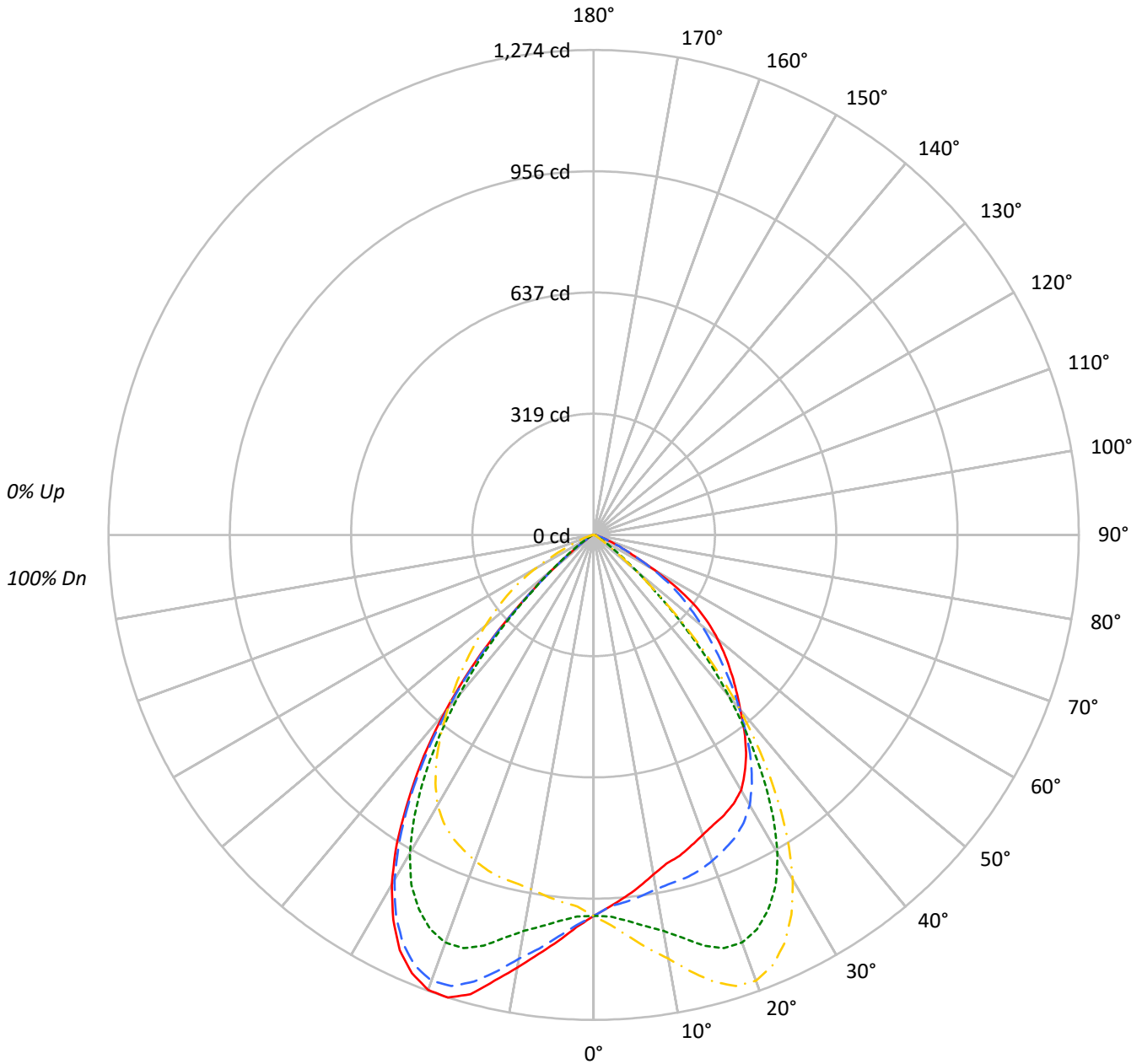
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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			100
1	112	109	106	103	110	107	104	102	103	100	99	99	97	96	95	94	93	91			91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82			82
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73			73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66			66
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60			60
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54			54
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49			49
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45			45
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	52	46	43	41			41
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38			38

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	123432	123432	123432	123432
5°	118171	126021	132571	126021
10°	113412	132287	144537	132287
15°	111403	142637	159519	142637
20°	110010	149560	166912	149560
25°	110456	147706	163888	147706
30°	110324	137442	150987	137442
35°	105088	116637	127584	116637
40°	96417	88752	97914	88752
45°	88998	56500	60879	56500
50°	81420	27402	26635	27402
55°	70492	11935	8537	11935
60°	45663	5871	3922	5871
65°	23933	3853	3094	3853
70°	12875	2849	2380	2849
75°	6910	2526	1906	2526
80°	4688	1847	923	1847
85°	3680	1840	0	1840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	5.3
10°-20°	305.2	16.6
20°-30°	474.5	25.8
30°-40°	479.2	26.1
40°-50°	303.4	16.5
50°-60°	127.4	6.9
60°-70°	40.4	2.2
70°-80°	9.2	0.5
80°-90°	1.3	0.1
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°	877.2	47.7
0°-40°	1356.4	73.8
0°-60°	1787.2	97.2
0°-90°	1838.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1838.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1001	1001	1001	1001	1001	
5°	954	1018	1071	1018	954	90
15°	872	1117	1249	1117	872	246
25°	812	1085	1204	1085	812	374
35°	698	775	847	775	698	433
45°	510	324	349	324	510	394
55°	328	56	40	56	328	283
65°	82	13	11	13	82	90
75°	14	5	4	5	14	18
85°	3	1	0	1	3	3
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°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	976.9	967.6	975.5	978.2	978.2	976.9	979.5	976.9	972.9	988.8	976.9
5°	954.4	947.8	954.4	957.0	958.4	959.7	962.3	962.3	961.0	975.5	967.6
7.5°	930.6	926.6	931.9	935.9	941.2	939.8	943.8	945.1	947.8	965.0	957.0
10°	905.5	901.5	908.1	910.8	917.4	918.7	921.3	925.3	930.6	947.8	945.1
12.5°	884.3	883.0	887.0	892.3	898.9	900.2	902.8	909.4	917.4	935.9	937.2
15°	872.4	871.1	875.1	880.4	885.6	888.3	890.9	900.2	908.1	927.9	933.2
17.5°	855.2	855.2	859.2	864.5	871.1	873.8	877.7	887.0	897.5	917.4	924.0
20°	838.1	839.4	842.0	847.3	853.9	856.6	860.5	869.8	881.7	901.5	910.8
22.5°	823.5	827.5	828.8	832.8	839.4	843.3	844.7	855.2	865.8	883.0	894.9
25°	811.6	816.9	816.9	819.6	827.5	828.8	830.1	840.7	850.0	865.8	877.7
27.5°	795.8	801.0	801.0	805.0	810.3	812.9	812.9	822.2	831.5	843.3	852.6
30°	774.6	778.6	778.6	779.9	785.2	787.8	786.5	795.8	802.4	810.3	819.6
32.5°	738.9	745.5	742.9	746.9	749.5	752.1	749.5	757.4	762.7	770.6	773.3
35°	697.9	703.2	699.3	701.9	707.2	707.2	705.9	711.2	713.8	717.8	719.1
37.5°	650.4	654.3	651.7	653.0	655.6	657.0	654.3	659.6	659.6	660.9	658.3
40°	598.8	605.4	601.4	601.4	604.1	605.4	601.4	604.1	606.7	600.1	594.8
42.5°	553.9	560.5	556.5	556.5	556.5	557.8	552.5	553.9	553.9	544.6	536.7
45°	510.2	515.5	511.6	507.6	508.9	510.2	505.0	503.6	499.7	489.1	477.2
47.5°	467.9	473.2	467.9	465.3	465.3	465.3	458.7	454.7	449.4	434.9	420.4
50°	424.3	429.6	425.6	423.0	420.4	420.4	415.1	409.8	401.8	387.3	371.4
52.5°	379.4	383.3	379.4	376.7	374.1	374.1	367.5	363.5	354.3	339.7	322.5
55°	327.8	330.5	326.5	323.9	322.5	322.5	317.2	313.3	305.4	293.5	277.6
57.5°	259.1	264.4	257.8	260.4	260.4	259.1	255.1	253.8	251.2	240.6	228.7
60°	185.1	185.1	183.7	189.0	187.7	190.3	187.7	189.0	190.3	182.4	174.5
62.5°	121.6	125.6	122.9	125.6	128.2	128.2	126.9	129.5	132.2	128.2	124.3
65°	82.0	82.0	82.0	83.3	83.3	84.6	83.3	84.6	85.9	84.6	82.0
67.5°	54.2	55.5	54.2	55.5	54.2	55.5	55.5	55.5	56.8	55.5	54.2
70°	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	37.0	35.7	34.4
72.5°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
75°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
77.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
80°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	5.3	6.6	5.3	5.3
82.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.3	2.6	1.3	1.3
87.5°	0.0	0.0	0.0	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	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°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	983.5	979.5	999.3	982.1	991.4	990.1	991.4	999.3	999.3	1003.3	1002.0
5°	978.2	974.2	996.7	983.5	994.0	994.0	998.0	1009.9	1009.9	1017.8	1019.2
7.5°	970.2	971.6	995.4	987.4	999.3	1000.7	1007.3	1021.8	1025.8	1036.3	1041.6
10°	961.0	966.3	991.4	988.8	1004.6	1005.9	1019.2	1036.3	1041.6	1056.2	1065.4
12.5°	957.0	966.3	995.4	998.0	1013.9	1020.5	1035.0	1057.5	1066.7	1083.9	1097.1
15°	955.7	968.9	1000.7	1009.9	1028.4	1037.7	1057.5	1083.9	1094.5	1117.0	1132.8
17.5°	949.1	966.3	1000.7	1015.2	1035.0	1044.3	1069.4	1099.8	1113.0	1138.1	1156.6
20°	937.2	955.7	990.1	1008.6	1029.7	1043.0	1068.1	1099.8	1113.0	1139.4	1160.6
22.5°	921.3	939.8	972.9	994.0	1012.5	1027.1	1053.5	1083.9	1095.8	1120.9	1142.1
25°	901.5	920.0	947.8	968.9	986.1	999.3	1021.8	1053.5	1061.5	1085.3	1107.7
27.5°	873.8	890.9	912.1	931.9	947.8	958.4	978.2	1005.9	1012.5	1036.3	1054.8
30°	836.7	847.3	865.8	879.0	890.9	901.5	916.1	941.2	943.8	965.0	982.1
32.5°	786.5	791.8	805.0	811.6	822.2	826.2	838.1	859.2	856.6	876.4	890.9
35°	725.7	728.3	728.3	736.3	738.9	740.2	749.5	761.4	757.4	774.6	785.2
37.5°	659.6	658.3	650.4	650.4	651.7	647.7	651.7	657.0	651.7	664.9	674.2
40°	592.2	584.3	569.7	561.8	557.8	556.5	548.6	555.2	542.0	551.2	557.8
42.5°	527.4	514.2	491.7	475.9	469.3	462.7	449.4	449.4	432.2	438.9	440.2
45°	461.3	438.9	408.5	393.9	376.7	366.2	349.0	331.8	319.9	323.9	319.9
47.5°	400.5	374.1	338.4	313.3	293.5	278.9	255.1	235.3	223.4	218.1	212.8
50°	347.7	321.2	280.2	248.5	228.7	211.5	187.7	165.2	150.7	142.8	138.8
52.5°	300.1	272.3	232.6	199.6	178.5	162.6	136.2	113.7	97.8	88.6	83.3
55°	255.1	230.0	193.0	162.6	142.8	126.9	100.5	79.3	64.8	55.5	48.9
57.5°	210.2	187.7	157.3	128.2	111.0	96.5	74.0	55.5	43.6	35.7	30.4
60°	161.3	144.1	119.0	96.5	82.0	70.1	52.9	38.3	30.4	23.8	21.1
62.5°	113.7	103.1	84.6	68.7	59.5	50.2	37.0	27.8	21.1	17.2	15.9
65°	76.7	68.7	58.2	46.3	39.7	34.4	26.4	19.8	15.9	13.2	11.9
67.5°	50.2	46.3	38.3	31.7	27.8	23.8	18.5	14.5	11.9	10.6	9.3
70°	33.0	30.4	25.1	21.1	19.8	17.2	13.2	10.6	9.3	7.9	7.9
72.5°	21.1	18.5	17.2	14.5	13.2	11.9	9.3	7.9	6.6	6.6	6.6
75°	13.2	11.9	10.6	9.3	9.3	7.9	6.6	6.6	5.3	5.3	5.3
77.5°	7.9	7.9	6.6	6.6	5.3	5.3	5.3	4.0	4.0	4.0	4.0
80°	5.3	5.3	4.0	4.0	4.0	4.0	2.6	2.6	2.6	2.6	2.6
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
87.5°	0.0	0.0	0.0	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	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°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1008.6	1011.2	1008.6	1016.5	1003.3	1017.8	1012.5	1015.2	1025.8	1021.8	1025.8
5°	1028.4	1033.7	1033.7	1043.0	1031.1	1048.2	1043.0	1048.2	1058.8	1058.8	1064.1
7.5°	1053.5	1060.1	1062.8	1072.0	1060.1	1081.3	1076.0	1082.6	1095.8	1095.8	1099.8
10°	1080.0	1087.9	1093.2	1103.8	1090.5	1114.3	1109.0	1118.3	1130.2	1131.5	1138.1
12.5°	1113.0	1123.6	1130.2	1139.4	1130.2	1154.0	1148.7	1158.0	1173.8	1175.1	1183.1
15°	1150.0	1163.2	1171.2	1181.7	1171.2	1197.6	1192.3	1202.9	1214.8	1220.1	1228.0
17.5°	1173.8	1189.7	1196.3	1208.2	1197.6	1224.0	1217.4	1232.0	1242.6	1245.2	1254.4
20°	1177.8	1192.3	1201.6	1210.8	1201.6	1228.0	1221.4	1233.3	1246.5	1249.2	1255.8
22.5°	1160.6	1172.5	1183.1	1191.0	1183.1	1209.5	1200.3	1213.5	1225.4	1228.0	1233.3
25°	1120.9	1135.5	1146.1	1152.7	1144.7	1169.9	1161.9	1173.8	1184.4	1189.7	1191.0
27.5°	1065.4	1078.6	1089.2	1093.2	1087.9	1111.7	1101.1	1115.7	1124.9	1127.6	1131.5
30°	990.1	1002.0	1012.5	1015.2	1011.2	1028.4	1023.1	1036.3	1045.6	1048.2	1050.9
32.5°	897.5	909.4	916.1	918.7	914.7	931.9	926.6	937.2	947.8	947.8	947.8
35°	793.1	803.7	807.7	815.6	806.3	823.5	818.2	827.5	836.7	836.7	838.1
37.5°	680.8	688.7	691.3	699.3	690.0	705.9	701.9	709.8	717.8	716.5	719.1
40°	560.5	568.4	571.0	577.7	569.7	582.9	580.3	588.2	594.8	594.8	594.8
42.5°	444.1	449.4	449.4	456.0	448.1	460.0	460.0	465.3	471.9	470.6	470.6
45°	322.5	321.2	323.9	322.5	322.5	333.1	333.1	335.8	341.0	338.4	339.7
47.5°	214.1	215.5	210.2	214.1	208.9	218.1	218.1	218.1	222.1	219.4	222.1
50°	136.2	132.2	129.5	129.5	128.2	134.8	132.2	133.5	136.2	133.5	136.2
52.5°	76.7	75.3	72.7	74.0	71.4	72.7	72.7	72.7	74.0	72.7	75.3
55°	44.9	41.0	39.7	39.7	38.3	39.7	38.3	38.3	38.3	37.0	38.3
57.5°	26.4	25.1	23.8	23.8	22.5	22.5	22.5	22.5	22.5	22.5	22.5
60°	18.5	17.2	17.2	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
62.5°	14.5	13.2	13.2	13.2	11.9	11.9	11.9	11.9	11.9	13.2	11.9
65°	10.6	10.6	10.6	10.6	10.6	10.6	9.3	10.6	10.6	10.6	10.6
67.5°	9.3	9.3	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
70°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
72.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
75°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	0.0	1.3	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	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: P212719

CATALOG NUMBER: LD4B20D010 EU4B10208030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1029.7	1024.4	1012.5	1020.5	1021.8	1016.5	1023.1	1031.1	1023.1	1016.5	1021.8
5°	1068.1	1064.1	1053.5	1060.1	1061.5	1060.1	1064.1	1070.7	1064.1	1060.1	1061.5
7.5°	1106.4	1103.8	1091.9	1099.8	1102.4	1099.8	1103.8	1110.4	1103.8	1099.8	1102.4
10°	1143.4	1142.1	1130.2	1140.8	1142.1	1139.4	1143.4	1154.0	1143.4	1139.4	1142.1
12.5°	1185.7	1188.4	1175.1	1187.0	1188.4	1185.7	1191.0	1198.9	1191.0	1185.7	1188.4
15°	1234.6	1233.3	1222.7	1232.0	1234.6	1232.0	1238.6	1249.2	1238.6	1232.0	1234.6
17.5°	1258.4	1258.4	1250.5	1259.7	1261.1	1261.1	1266.3	1274.3	1266.3	1261.1	1261.1
20°	1259.7	1261.1	1251.8	1262.4	1262.4	1262.4	1267.7	1271.6	1267.7	1262.4	1262.4
22.5°	1238.6	1239.9	1230.7	1239.9	1239.9	1241.2	1243.9	1246.5	1243.9	1241.2	1239.9
25°	1197.6	1198.9	1191.0	1198.9	1197.6	1197.6	1200.3	1204.2	1200.3	1197.6	1197.6
27.5°	1136.8	1138.1	1127.6	1136.8	1135.5	1134.2	1138.1	1139.4	1138.1	1134.2	1135.5
30°	1056.2	1057.5	1048.2	1056.2	1054.8	1053.5	1058.8	1060.1	1058.8	1053.5	1054.8
32.5°	959.7	957.0	950.4	957.0	955.7	955.7	958.4	962.3	958.4	955.7	955.7
35°	843.3	843.3	839.4	844.7	840.7	846.0	846.0	847.3	846.0	846.0	840.7
37.5°	724.4	724.4	721.7	724.4	723.1	728.3	728.3	732.3	728.3	728.3	723.1
40°	600.1	600.1	597.5	600.1	604.1	604.1	602.8	608.1	602.8	604.1	604.1
42.5°	474.5	474.5	473.2	479.8	479.8	479.8	475.9	481.2	475.9	479.8	479.8
45°	345.0	342.4	341.0	341.0	342.4	347.7	342.4	349.0	342.4	347.7	342.4
47.5°	219.4	220.8	222.1	226.0	223.4	222.1	222.1	226.0	222.1	222.1	223.4
50°	134.8	136.2	136.2	138.8	134.8	137.5	136.2	138.8	136.2	137.5	134.8
52.5°	74.0	74.0	74.0	76.7	74.0	75.3	74.0	76.7	74.0	75.3	74.0
55°	38.3	38.3	38.3	39.7	38.3	38.3	38.3	39.7	38.3	38.3	38.3
57.5°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
60°	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
62.5°	13.2	11.9	11.9	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
65°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
67.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
70°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
72.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
75°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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	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: P212719

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1020.5	1012.5	1024.4	1029.7	1025.8	1021.8	1025.8	1015.2	1012.5	1017.8	1003.3
5°	1060.1	1053.5	1064.1	1068.1	1064.1	1058.8	1058.8	1048.2	1043.0	1048.2	1031.1
7.5°	1099.8	1091.9	1103.8	1106.4	1099.8	1095.8	1095.8	1082.6	1076.0	1081.3	1060.1
10°	1140.8	1130.2	1142.1	1143.4	1138.1	1131.5	1130.2	1118.3	1109.0	1114.3	1090.5
12.5°	1187.0	1175.1	1188.4	1185.7	1183.1	1175.1	1173.8	1158.0	1148.7	1154.0	1130.2
15°	1232.0	1222.7	1233.3	1234.6	1228.0	1220.1	1214.8	1202.9	1192.3	1197.6	1171.2
17.5°	1259.7	1250.5	1258.4	1258.4	1254.4	1245.2	1242.6	1232.0	1217.4	1224.0	1197.6
20°	1262.4	1251.8	1261.1	1259.7	1255.8	1249.2	1246.5	1233.3	1221.4	1228.0	1201.6
22.5°	1239.9	1230.7	1239.9	1238.6	1233.3	1228.0	1225.4	1213.5	1200.3	1209.5	1183.1
25°	1198.9	1191.0	1198.9	1197.6	1191.0	1189.7	1184.4	1173.8	1161.9	1169.9	1144.7
27.5°	1136.8	1127.6	1138.1	1136.8	1131.5	1127.6	1124.9	1115.7	1101.1	1111.7	1087.9
30°	1056.2	1048.2	1057.5	1056.2	1050.9	1048.2	1045.6	1036.3	1023.1	1028.4	1011.2
32.5°	957.0	950.4	957.0	959.7	947.8	947.8	947.8	937.2	926.6	931.9	914.7
35°	844.7	839.4	843.3	843.3	838.1	836.7	836.7	827.5	818.2	823.5	806.3
37.5°	724.4	721.7	724.4	724.4	719.1	716.5	717.8	709.8	701.9	705.9	690.0
40°	600.1	597.5	600.1	600.1	594.8	594.8	594.8	588.2	580.3	582.9	569.7
42.5°	479.8	473.2	474.5	474.5	470.6	470.6	471.9	465.3	460.0	460.0	448.1
45°	341.0	341.0	342.4	345.0	339.7	338.4	341.0	335.8	333.1	333.1	322.5
47.5°	226.0	222.1	220.8	219.4	222.1	219.4	222.1	218.1	218.1	218.1	208.9
50°	138.8	136.2	136.2	134.8	136.2	133.5	136.2	133.5	132.2	134.8	128.2
52.5°	76.7	74.0	74.0	74.0	75.3	72.7	74.0	72.7	72.7	72.7	71.4
55°	39.7	38.3	38.3	38.3	38.3	37.0	38.3	38.3	38.3	39.7	38.3
57.5°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
60°	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
62.5°	13.2	11.9	11.9	13.2	11.9	13.2	11.9	11.9	11.9	11.9	11.9
65°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	9.3	10.6	10.6
67.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
70°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
72.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
75°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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	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: P212719

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CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1016.5	1008.6	1011.2	1008.6	1002.0	1003.3	999.3	999.3	991.4	990.1	991.4
5°	1043.0	1033.7	1033.7	1028.4	1019.2	1017.8	1009.9	1009.9	998.0	994.0	994.0
7.5°	1072.0	1062.8	1060.1	1053.5	1041.6	1036.3	1025.8	1021.8	1007.3	1000.7	999.3
10°	1103.8	1093.2	1087.9	1080.0	1065.4	1056.2	1041.6	1036.3	1019.2	1005.9	1004.6
12.5°	1139.4	1130.2	1123.6	1113.0	1097.1	1083.9	1066.7	1057.5	1035.0	1020.5	1013.9
15°	1181.7	1171.2	1163.2	1150.0	1132.8	1117.0	1094.5	1083.9	1057.5	1037.7	1028.4
17.5°	1208.2	1196.3	1189.7	1173.8	1156.6	1138.1	1113.0	1099.8	1069.4	1044.3	1035.0
20°	1210.8	1201.6	1192.3	1177.8	1160.6	1139.4	1113.0	1099.8	1068.1	1043.0	1029.7
22.5°	1191.0	1183.1	1172.5	1160.6	1142.1	1120.9	1095.8	1083.9	1053.5	1027.1	1012.5
25°	1152.7	1146.1	1135.5	1120.9	1107.7	1085.3	1061.5	1053.5	1021.8	999.3	986.1
27.5°	1093.2	1089.2	1078.6	1065.4	1054.8	1036.3	1012.5	1005.9	978.2	958.4	947.8
30°	1015.2	1012.5	1002.0	990.1	982.1	965.0	943.8	941.2	916.1	901.5	890.9
32.5°	918.7	916.1	909.4	897.5	890.9	876.4	856.6	859.2	838.1	826.2	822.2
35°	815.6	807.7	803.7	793.1	785.2	774.6	757.4	761.4	749.5	740.2	738.9
37.5°	699.3	691.3	688.7	680.8	674.2	664.9	651.7	657.0	651.7	647.7	651.7
40°	577.7	571.0	568.4	560.5	557.8	551.2	542.0	555.2	548.6	556.5	557.8
42.5°	456.0	449.4	449.4	444.1	440.2	438.9	432.2	449.4	449.4	462.7	469.3
45°	322.5	323.9	321.2	322.5	319.9	323.9	319.9	331.8	349.0	366.2	376.7
47.5°	214.1	210.2	215.5	214.1	212.8	218.1	223.4	235.3	255.1	278.9	293.5
50°	129.5	129.5	132.2	136.2	138.8	142.8	150.7	165.2	187.7	211.5	228.7
52.5°	74.0	72.7	75.3	76.7	83.3	88.6	97.8	113.7	136.2	162.6	178.5
55°	39.7	39.7	41.0	44.9	48.9	55.5	64.8	79.3	100.5	126.9	142.8
57.5°	23.8	23.8	25.1	26.4	30.4	35.7	43.6	55.5	74.0	96.5	111.0
60°	15.9	17.2	17.2	18.5	21.1	23.8	30.4	38.3	52.9	70.1	82.0
62.5°	13.2	13.2	13.2	14.5	15.9	17.2	21.1	27.8	37.0	50.2	59.5
65°	10.6	10.6	10.6	10.6	11.9	13.2	15.9	19.8	26.4	34.4	39.7
67.5°	7.9	7.9	9.3	9.3	9.3	10.6	11.9	14.5	18.5	23.8	27.8
70°	6.6	6.6	6.6	6.6	7.9	7.9	9.3	10.6	13.2	17.2	19.8
72.5°	5.3	5.3	5.3	5.3	6.6	6.6	6.6	7.9	9.3	11.9	13.2
75°	4.0	4.0	4.0	4.0	5.3	5.3	5.3	6.6	6.6	7.9	9.3
77.5°	2.6	2.6	2.6	2.6	4.0	4.0	4.0	4.0	5.3	5.3	5.3
80°	1.3	1.3	1.3	2.6	2.6	2.6	2.6	2.6	2.6	4.0	4.0
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.6	2.6
85°	0.0	0.0	1.3	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P212719

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CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	982.1	999.3	979.5	983.5	976.9	988.8	972.9	976.9	979.5	976.9	978.2
5°	983.5	996.7	974.2	978.2	967.6	975.5	961.0	962.3	962.3	959.7	958.4
7.5°	987.4	995.4	971.6	970.2	957.0	965.0	947.8	945.1	943.8	939.8	941.2
10°	988.8	991.4	966.3	961.0	945.1	947.8	930.6	925.3	921.3	918.7	917.4
12.5°	998.0	995.4	966.3	957.0	937.2	935.9	917.4	909.4	902.8	900.2	898.9
15°	1009.9	1000.7	968.9	955.7	933.2	927.9	908.1	900.2	890.9	888.3	885.6
17.5°	1015.2	1000.7	966.3	949.1	924.0	917.4	897.5	887.0	877.7	873.8	871.1
20°	1008.6	990.1	955.7	937.2	910.8	901.5	881.7	869.8	860.5	856.6	853.9
22.5°	994.0	972.9	939.8	921.3	894.9	883.0	865.8	855.2	844.7	843.3	839.4
25°	968.9	947.8	920.0	901.5	877.7	865.8	850.0	840.7	830.1	828.8	827.5
27.5°	931.9	912.1	890.9	873.8	852.6	843.3	831.5	822.2	812.9	812.9	810.3
30°	879.0	865.8	847.3	836.7	819.6	810.3	802.4	795.8	786.5	787.8	785.2
32.5°	811.6	805.0	791.8	786.5	773.3	770.6	762.7	757.4	749.5	752.1	749.5
35°	736.3	728.3	728.3	725.7	719.1	717.8	713.8	711.2	705.9	707.2	707.2
37.5°	650.4	650.4	658.3	659.6	658.3	660.9	659.6	659.6	654.3	657.0	655.6
40°	561.8	569.7	584.3	592.2	594.8	600.1	606.7	604.1	601.4	605.4	604.1
42.5°	475.9	491.7	514.2	527.4	536.7	544.6	553.9	553.9	552.5	557.8	556.5
45°	393.9	408.5	438.9	461.3	477.2	489.1	499.7	503.6	505.0	510.2	508.9
47.5°	313.3	338.4	374.1	400.5	420.4	434.9	449.4	454.7	458.7	465.3	465.3
50°	248.5	280.2	321.2	347.7	371.4	387.3	401.8	409.8	415.1	420.4	420.4
52.5°	199.6	232.6	272.3	300.1	322.5	339.7	354.3	363.5	367.5	374.1	374.1
55°	162.6	193.0	230.0	255.1	277.6	293.5	305.4	313.3	317.2	322.5	322.5
57.5°	128.2	157.3	187.7	210.2	228.7	240.6	251.2	253.8	255.1	259.1	260.4
60°	96.5	119.0	144.1	161.3	174.5	182.4	190.3	189.0	187.7	190.3	187.7
62.5°	68.7	84.6	103.1	113.7	124.3	128.2	132.2	129.5	126.9	128.2	128.2
65°	46.3	58.2	68.7	76.7	82.0	84.6	85.9	84.6	83.3	84.6	83.3
67.5°	31.7	38.3	46.3	50.2	54.2	55.5	56.8	55.5	55.5	55.5	54.2
70°	21.1	25.1	30.4	33.0	34.4	35.7	37.0	35.7	35.7	35.7	35.7
72.5°	14.5	17.2	18.5	21.1	22.5	22.5	22.5	22.5	22.5	22.5	22.5
75°	9.3	10.6	11.9	13.2	14.5	14.5	14.5	14.5	14.5	14.5	14.5
77.5°	6.6	6.6	7.9	7.9	9.3	9.3	9.3	9.3	9.3	9.3	9.3
80°	4.0	4.0	5.3	5.3	5.3	5.3	6.6	5.3	6.6	6.6	6.6
82.5°	2.6	2.6	2.6	2.6	4.0	4.0	4.0	4.0	4.0	4.0	4.0
85°	1.3	1.3	1.3	1.3	1.3	1.3	2.6	1.3	2.6	2.6	2.6
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P212719

CATALOG NUMBER: LD4B20D010 EU4B10208030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1000.7	1000.7	1000.7	1000.7
2.5°	978.2	975.5	967.6	976.9
5°	957.0	954.4	947.8	954.4
7.5°	935.9	931.9	926.6	930.6
10°	910.8	908.1	901.5	905.5
12.5°	892.3	887.0	883.0	884.3
15°	880.4	875.1	871.1	872.4
17.5°	864.5	859.2	855.2	855.2
20°	847.3	842.0	839.4	838.1
22.5°	832.8	828.8	827.5	823.5
25°	819.6	816.9	816.9	811.6
27.5°	805.0	801.0	801.0	795.8
30°	779.9	778.6	778.6	774.6
32.5°	746.9	742.9	745.5	738.9
35°	701.9	699.3	703.2	697.9
37.5°	653.0	651.7	654.3	650.4
40°	601.4	601.4	605.4	598.8
42.5°	556.5	556.5	560.5	553.9
45°	507.6	511.6	515.5	510.2
47.5°	465.3	467.9	473.2	467.9
50°	423.0	425.6	429.6	424.3
52.5°	376.7	379.4	383.3	379.4
55°	323.9	326.5	330.5	327.8
57.5°	260.4	257.8	264.4	259.1
60°	189.0	183.7	185.1	185.1
62.5°	125.6	122.9	125.6	121.6
65°	83.3	82.0	82.0	82.0
67.5°	55.5	54.2	55.5	54.2
70°	35.7	35.7	35.7	35.7
72.5°	22.5	22.5	22.5	22.5
75°	14.5	14.5	14.5	14.5
77.5°	9.3	9.3	9.3	9.3
80°	6.6	6.6	6.6	6.6
82.5°	4.0	4.0	4.0	4.0
85°	2.6	2.6	2.6	2.6
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°





















(END OF REPORT)