

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: P212722

Luminaire Tested: **LD4B20D010 EU4B10208050 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212722
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 EU4B10208050 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1903.1 lumens
Efficiency: N/A
Efficacy: 91.5 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

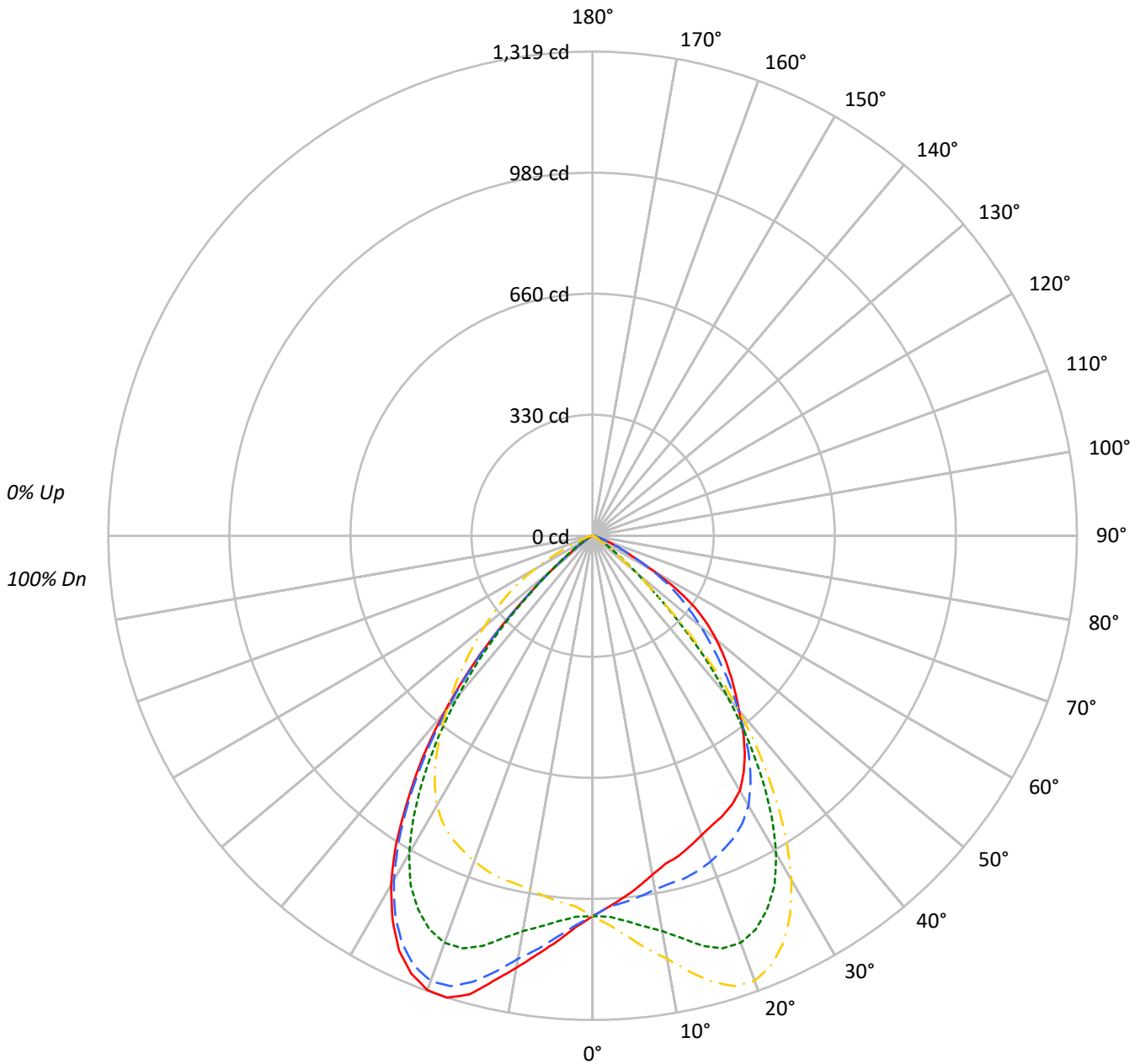
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	127798	127798	127798	127798
5°	122343	130478	137263	130478
10°	117420	136959	149647	136959
15°	115349	147681	165163	147681
20°	113896	154863	172819	154863
25°	114362	152918	169686	152918
30°	114227	142299	156328	142299
35°	108807	120763	132101	120763
40°	99830	91892	101376	91892
45°	92155	58489	63024	58489
50°	84298	28362	27575	28362
55°	72987	12365	8838	12365
60°	47266	6069	4046	6069
65°	24779	3998	3181	3998
70°	13344	2957	2452	2957
75°	7196	2621	1954	2621
80°	4830	1918	994	1918
85°	3821	1981	0	1981



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	5.3
10°-20°	316.0	16.6
20°-30°	491.2	25.8
30°-40°	496.2	26.1
40°-50°	314.2	16.5
50°-60°	131.9	6.9
60°-70°	41.8	2.2
70°-80°	9.6	0.5
80°-90°	1.4	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°	908.2	47.7
0°-40°	1404.4	73.8
0°-60°	1850.4	97.2
0°-90°	1903.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1903.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1036	1036	1036	1036	1036	
5°	988	1054	1109	1054	988	93
15°	903	1156	1293	1156	903	255
25°	840	1124	1247	1124	840	387
35°	723	802	877	802	723	449
45°	528	335	361	335	528	408
55°	339	58	41	58	339	293
65°	85	14	11	14	85	94
75°	15	6	4	6	15	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°	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1
2.5°	1011.4	1001.8	1010.0	1012.8	1012.8	1011.4	1014.2	1011.4	1007.3	1023.7	1011.4
5°	988.1	981.3	988.1	990.9	992.3	993.6	996.4	996.4	995.0	1010.0	1001.8
7.5°	963.5	959.4	964.9	969.0	974.5	973.1	977.2	978.6	981.3	999.1	990.9
10°	937.5	933.4	940.2	943.0	949.8	951.2	953.9	958.0	963.5	981.3	978.6
12.5°	915.6	914.2	918.3	923.8	930.7	932.0	934.8	941.6	949.8	969.0	970.4
15°	903.3	901.9	906.0	911.5	917.0	919.7	922.5	932.0	940.2	960.8	966.3
17.5°	885.5	885.5	889.6	895.1	901.9	904.7	908.8	918.3	929.3	949.8	956.7
20°	867.7	869.1	871.8	877.3	884.1	886.9	891.0	900.6	912.9	933.4	943.0
22.5°	852.7	856.8	858.1	862.2	869.1	873.2	874.6	885.5	896.5	914.2	926.6
25°	840.3	845.8	845.8	848.5	856.8	858.1	859.5	870.4	880.0	896.5	908.8
27.5°	823.9	829.4	829.4	833.5	839.0	841.7	841.7	851.3	860.9	873.2	882.8
30°	802.0	806.1	806.1	807.5	813.0	815.7	814.3	823.9	830.8	839.0	848.5
32.5°	765.1	771.9	769.2	773.3	776.0	778.7	776.0	784.2	789.7	797.9	800.6
35°	722.6	728.1	724.0	726.7	732.2	732.2	730.8	736.3	739.1	743.2	744.5
37.5°	673.4	677.5	674.7	676.1	678.8	680.2	677.5	682.9	682.9	684.3	681.6
40°	620.0	626.8	622.7	622.7	625.5	626.8	622.7	625.5	628.2	621.4	615.9
42.5°	573.5	580.3	576.2	576.2	576.2	577.6	572.1	573.5	573.5	563.9	555.7
45°	528.3	533.8	529.7	525.6	526.9	528.3	522.8	521.4	517.3	506.4	494.1
47.5°	484.5	490.0	484.5	481.8	481.8	481.8	474.9	470.8	465.3	450.3	435.2
50°	439.3	444.8	440.7	438.0	435.2	435.2	429.7	424.3	416.1	401.0	384.6
52.5°	392.8	396.9	392.8	390.1	387.3	387.3	380.5	376.4	366.8	351.7	333.9
55°	339.4	342.2	338.1	335.3	333.9	333.9	328.5	324.4	316.2	303.8	287.4
57.5°	268.3	273.7	266.9	269.6	269.6	268.3	264.1	262.8	260.0	249.1	236.8
60°	191.6	191.6	190.2	195.7	194.3	197.1	194.3	195.7	197.1	188.9	180.7
62.5°	125.9	130.0	127.3	130.0	132.8	132.8	131.4	134.1	136.9	132.8	128.7
65°	84.9	84.9	84.9	86.2	86.2	87.6	86.2	87.6	89.0	87.6	84.9
67.5°	56.1	57.5	56.1	57.5	56.1	57.5	57.5	57.5	58.9	57.5	56.1
70°	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	38.3	37.0	35.6
72.5°	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
75°	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
77.5°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
80°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	5.5	6.8	5.5	5.5
82.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.4	2.7	1.4	1.4
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°	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1
2.5°	1018.3	1014.2	1034.7	1016.9	1026.5	1025.1	1026.5	1034.7	1034.7	1038.8	1037.4
5°	1012.8	1008.7	1031.9	1018.3	1029.2	1029.2	1033.3	1045.6	1045.6	1053.8	1055.2
7.5°	1004.6	1005.9	1030.6	1022.4	1034.7	1036.1	1042.9	1058.0	1062.1	1073.0	1078.5
10°	995.0	1000.5	1026.5	1023.7	1040.2	1041.5	1055.2	1073.0	1078.5	1093.5	1103.1
12.5°	990.9	1000.5	1030.6	1033.3	1049.7	1056.6	1071.6	1094.9	1104.5	1122.3	1136.0
15°	989.5	1003.2	1036.1	1045.6	1064.8	1074.4	1094.9	1122.3	1133.2	1156.5	1172.9
17.5°	982.7	1000.5	1036.1	1051.1	1071.6	1081.2	1107.2	1138.7	1152.4	1178.4	1197.6
20°	970.4	989.5	1025.1	1044.3	1066.2	1079.8	1105.9	1138.7	1152.4	1179.8	1201.7
22.5°	953.9	973.1	1007.3	1029.2	1048.4	1063.4	1090.8	1122.3	1134.6	1160.6	1182.5
25°	933.4	952.6	981.3	1003.2	1021.0	1034.7	1058.0	1090.8	1099.0	1123.6	1146.9
27.5°	904.7	922.5	944.4	964.9	981.3	992.3	1012.8	1041.5	1048.4	1073.0	1092.2
30°	866.3	877.3	896.5	910.1	922.5	933.4	948.5	974.5	977.2	999.1	1016.9
32.5°	814.3	819.8	833.5	840.3	851.3	855.4	867.7	889.6	886.9	907.4	922.5
35°	751.4	754.1	754.1	762.3	765.1	766.4	776.0	788.3	784.2	802.0	813.0
37.5°	682.9	681.6	673.4	673.4	674.7	670.6	674.7	680.2	674.7	688.4	698.0
40°	613.1	604.9	589.9	581.7	577.6	576.2	568.0	574.8	561.1	570.7	577.6
42.5°	546.1	532.4	509.1	492.7	485.9	479.0	465.3	465.3	447.5	454.4	455.8
45°	477.7	454.4	422.9	407.9	390.1	379.1	361.3	343.5	331.2	335.3	331.2
47.5°	414.7	387.3	350.4	324.4	303.8	288.8	264.1	243.6	231.3	225.8	220.3
50°	359.9	332.6	290.1	257.3	236.8	219.0	194.3	171.1	156.0	147.8	143.7
52.5°	310.7	281.9	240.9	206.7	184.8	168.3	141.0	117.7	101.3	91.7	86.2
55°	264.1	238.1	199.8	168.3	147.8	131.4	104.0	82.1	67.1	57.5	50.6
57.5°	217.6	194.3	162.9	132.8	115.0	99.9	76.6	57.5	45.2	37.0	31.5
60°	167.0	149.2	123.2	99.9	84.9	72.5	54.7	39.7	31.5	24.6	21.9
62.5°	117.7	106.8	87.6	71.2	61.6	52.0	38.3	28.7	21.9	17.8	16.4
65°	79.4	71.2	60.2	47.9	41.1	35.6	27.4	20.5	16.4	13.7	12.3
67.5°	52.0	47.9	39.7	32.8	28.7	24.6	19.2	15.1	12.3	10.9	9.6
70°	34.2	31.5	26.0	21.9	20.5	17.8	13.7	10.9	9.6	8.2	8.2
72.5°	21.9	19.2	17.8	15.1	13.7	12.3	9.6	8.2	6.8	6.8	6.8
75°	13.7	12.3	10.9	9.6	9.6	8.2	6.8	6.8	5.5	5.5	5.5
77.5°	8.2	8.2	6.8	6.8	5.5	5.5	5.5	4.1	4.1	4.1	4.1
80°	5.5	5.5	4.1	4.1	4.1	4.1	2.7	2.7	2.7	2.7	2.7
82.5°	2.7	2.7	2.7	2.7	2.7	2.7	1.4	1.4	1.4	1.4	1.4
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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°	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1
2.5°	1044.3	1047.0	1044.3	1052.5	1038.8	1053.8	1048.4	1051.1	1062.1	1058.0	1062.1
5°	1064.8	1070.3	1070.3	1079.8	1067.5	1085.3	1079.8	1085.3	1096.3	1096.3	1101.7
7.5°	1090.8	1097.6	1100.4	1110.0	1097.6	1119.5	1114.1	1120.9	1134.6	1134.6	1138.7
10°	1118.2	1126.4	1131.9	1142.8	1129.1	1153.8	1148.3	1157.9	1170.2	1171.5	1178.4
12.5°	1152.4	1163.3	1170.2	1179.8	1170.2	1194.8	1189.3	1198.9	1215.3	1216.7	1224.9
15°	1190.7	1204.4	1212.6	1223.6	1212.6	1240.0	1234.5	1245.5	1257.8	1263.2	1271.5
17.5°	1215.3	1231.8	1238.6	1250.9	1240.0	1267.4	1260.5	1275.6	1286.5	1289.2	1298.8
20°	1219.4	1234.5	1244.1	1253.7	1244.1	1271.5	1264.6	1276.9	1290.6	1293.4	1300.2
22.5°	1201.7	1214.0	1224.9	1233.1	1224.9	1252.3	1242.7	1256.4	1268.7	1271.5	1276.9
25°	1160.6	1175.7	1186.6	1193.4	1185.2	1211.2	1203.0	1215.3	1226.3	1231.8	1233.1
27.5°	1103.1	1116.8	1127.8	1131.9	1126.4	1151.0	1140.1	1155.1	1164.7	1167.4	1171.5
30°	1025.1	1037.4	1048.4	1051.1	1047.0	1064.8	1059.3	1073.0	1082.6	1085.3	1088.1
32.5°	929.3	941.6	948.5	951.2	947.1	964.9	959.4	970.4	981.3	981.3	981.3
35°	821.2	832.1	836.2	844.4	834.9	852.7	847.2	856.8	866.3	866.3	867.7
37.5°	704.8	713.1	715.8	724.0	714.4	730.8	726.7	735.0	743.2	741.8	744.5
40°	580.3	588.5	591.2	598.1	589.9	603.6	600.8	609.0	615.9	615.9	615.9
42.5°	459.9	465.3	465.3	472.2	464.0	476.3	476.3	481.8	488.6	487.2	487.2
45°	333.9	332.6	335.3	333.9	333.9	344.9	344.9	347.6	353.1	350.4	351.7
47.5°	221.7	223.1	217.6	221.7	216.2	225.8	225.8	225.8	229.9	227.2	229.9
50°	141.0	136.9	134.1	134.1	132.8	139.6	136.9	138.2	141.0	138.2	141.0
52.5°	79.4	78.0	75.3	76.6	73.9	75.3	75.3	75.3	76.6	75.3	78.0
55°	46.5	42.4	41.1	41.1	39.7	41.1	39.7	39.7	39.7	38.3	39.7
57.5°	27.4	26.0	24.6	24.6	23.3	23.3	23.3	23.3	23.3	23.3	23.3
60°	19.2	17.8	17.8	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
62.5°	15.1	13.7	13.7	13.7	12.3	12.3	12.3	12.3	12.3	13.7	12.3
65°	10.9	10.9	10.9	10.9	10.9	10.9	9.6	10.9	10.9	10.9	10.9
67.5°	9.6	9.6	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
70°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
72.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
75°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
85°	0.0	1.4	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: P212722

CATALOG NUMBER: LD4B20D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1
2.5°	1066.2	1060.7	1048.4	1056.6	1058.0	1052.5	1059.3	1067.5	1059.3	1052.5	1058.0
5°	1105.9	1101.7	1090.8	1097.6	1099.0	1097.6	1101.7	1108.6	1101.7	1097.6	1099.0
7.5°	1145.5	1142.8	1130.5	1138.7	1141.4	1138.7	1142.8	1149.6	1142.8	1138.7	1141.4
10°	1183.9	1182.5	1170.2	1181.1	1182.5	1179.8	1183.9	1194.8	1183.9	1179.8	1182.5
12.5°	1227.7	1230.4	1216.7	1229.0	1230.4	1227.7	1233.1	1241.3	1233.1	1227.7	1230.4
15°	1278.3	1276.9	1266.0	1275.6	1278.3	1275.6	1282.4	1293.4	1282.4	1275.6	1278.3
17.5°	1302.9	1302.9	1294.7	1304.3	1305.7	1305.7	1311.1	1319.4	1311.1	1305.7	1305.7
20°	1304.3	1305.7	1296.1	1307.0	1307.0	1307.0	1312.5	1316.6	1312.5	1307.0	1307.0
22.5°	1282.4	1283.8	1274.2	1283.8	1283.8	1285.1	1287.9	1290.6	1287.9	1285.1	1283.8
25°	1240.0	1241.3	1233.1	1241.3	1240.0	1240.0	1242.7	1246.8	1242.7	1240.0	1240.0
27.5°	1177.0	1178.4	1167.4	1177.0	1175.7	1174.3	1178.4	1179.8	1178.4	1174.3	1175.7
30°	1093.5	1094.9	1085.3	1093.5	1092.2	1090.8	1096.3	1097.6	1096.3	1090.8	1092.2
32.5°	993.6	990.9	984.0	990.9	989.5	989.5	992.3	996.4	992.3	989.5	989.5
35°	873.2	873.2	869.1	874.6	870.4	875.9	875.9	877.3	875.9	875.9	870.4
37.5°	750.0	750.0	747.3	750.0	748.6	754.1	754.1	758.2	754.1	754.1	748.6
40°	621.4	621.4	618.6	621.4	625.5	625.5	624.1	629.6	624.1	625.5	625.5
42.5°	491.3	491.3	490.0	496.8	496.8	496.8	492.7	498.2	492.7	496.8	496.8
45°	357.2	354.5	353.1	353.1	354.5	359.9	354.5	361.3	354.5	359.9	354.5
47.5°	227.2	228.6	229.9	234.0	231.3	229.9	229.9	234.0	229.9	229.9	231.3
50°	139.6	141.0	141.0	143.7	139.6	142.3	141.0	143.7	141.0	142.3	139.6
52.5°	76.6	76.6	76.6	79.4	76.6	78.0	76.6	79.4	76.6	78.0	76.6
55°	39.7	39.7	39.7	41.1	39.7	39.7	39.7	41.1	39.7	39.7	39.7
57.5°	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
60°	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
62.5°	13.7	12.3	12.3	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
65°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
67.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
70°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
72.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
75°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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: P212722

CATALOG NUMBER: LD4B20D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1
2.5°	1056.6	1048.4	1060.7	1066.2	1062.1	1058.0	1062.1	1051.1	1048.4	1053.8	1038.8
5°	1097.6	1090.8	1101.7	1105.9	1101.7	1096.3	1096.3	1085.3	1079.8	1085.3	1067.5
7.5°	1138.7	1130.5	1142.8	1145.5	1138.7	1134.6	1134.6	1120.9	1114.1	1119.5	1097.6
10°	1181.1	1170.2	1182.5	1183.9	1178.4	1171.5	1170.2	1157.9	1148.3	1153.8	1129.1
12.5°	1229.0	1216.7	1230.4	1227.7	1224.9	1216.7	1215.3	1198.9	1189.3	1194.8	1170.2
15°	1275.6	1266.0	1276.9	1278.3	1271.5	1263.2	1257.8	1245.5	1234.5	1240.0	1212.6
17.5°	1304.3	1294.7	1302.9	1302.9	1298.8	1289.2	1286.5	1275.6	1260.5	1267.4	1240.0
20°	1307.0	1296.1	1305.7	1304.3	1300.2	1293.4	1290.6	1276.9	1264.6	1271.5	1244.1
22.5°	1283.8	1274.2	1283.8	1282.4	1276.9	1271.5	1268.7	1256.4	1242.7	1252.3	1224.9
25°	1241.3	1233.1	1241.3	1240.0	1233.1	1231.8	1226.3	1215.3	1203.0	1211.2	1185.2
27.5°	1177.0	1167.4	1178.4	1177.0	1171.5	1167.4	1164.7	1155.1	1140.1	1151.0	1126.4
30°	1093.5	1085.3	1094.9	1093.5	1088.1	1085.3	1082.6	1073.0	1059.3	1064.8	1047.0
32.5°	990.9	984.0	990.9	993.6	981.3	981.3	981.3	970.4	959.4	964.9	947.1
35°	874.6	869.1	873.2	873.2	867.7	866.3	866.3	856.8	847.2	852.7	834.9
37.5°	750.0	747.3	750.0	750.0	744.5	741.8	743.2	735.0	726.7	730.8	714.4
40°	621.4	618.6	621.4	621.4	615.9	615.9	615.9	609.0	600.8	603.6	589.9
42.5°	496.8	490.0	491.3	491.3	487.2	487.2	488.6	481.8	476.3	476.3	464.0
45°	353.1	353.1	354.5	357.2	351.7	350.4	353.1	347.6	344.9	344.9	333.9
47.5°	234.0	229.9	228.6	227.2	229.9	227.2	229.9	225.8	225.8	225.8	216.2
50°	143.7	141.0	141.0	139.6	141.0	138.2	141.0	138.2	136.9	139.6	132.8
52.5°	79.4	76.6	76.6	76.6	78.0	75.3	76.6	75.3	75.3	75.3	73.9
55°	41.1	39.7	39.7	39.7	39.7	38.3	39.7	39.7	39.7	41.1	39.7
57.5°	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
60°	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
62.5°	13.7	12.3	12.3	13.7	12.3	13.7	12.3	12.3	12.3	12.3	12.3
65°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	9.6	10.9	10.9
67.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
70°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
72.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
75°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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: P212722

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CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1
2.5°	1052.5	1044.3	1047.0	1044.3	1037.4	1038.8	1034.7	1034.7	1026.5	1025.1	1026.5
5°	1079.8	1070.3	1070.3	1064.8	1055.2	1053.8	1045.6	1045.6	1033.3	1029.2	1029.2
7.5°	1110.0	1100.4	1097.6	1090.8	1078.5	1073.0	1062.1	1058.0	1042.9	1036.1	1034.7
10°	1142.8	1131.9	1126.4	1118.2	1103.1	1093.5	1078.5	1073.0	1055.2	1041.5	1040.2
12.5°	1179.8	1170.2	1163.3	1152.4	1136.0	1122.3	1104.5	1094.9	1071.6	1056.6	1049.7
15°	1223.6	1212.6	1204.4	1190.7	1172.9	1156.5	1133.2	1122.3	1094.9	1074.4	1064.8
17.5°	1250.9	1238.6	1231.8	1215.3	1197.6	1178.4	1152.4	1138.7	1107.2	1081.2	1071.6
20°	1253.7	1244.1	1234.5	1219.4	1201.7	1179.8	1152.4	1138.7	1105.9	1079.8	1066.2
22.5°	1233.1	1224.9	1214.0	1201.7	1182.5	1160.6	1134.6	1122.3	1090.8	1063.4	1048.4
25°	1193.4	1186.6	1175.7	1160.6	1146.9	1123.6	1099.0	1090.8	1058.0	1034.7	1021.0
27.5°	1131.9	1127.8	1116.8	1103.1	1092.2	1073.0	1048.4	1041.5	1012.8	992.3	981.3
30°	1051.1	1048.4	1037.4	1025.1	1016.9	999.1	977.2	974.5	948.5	933.4	922.5
32.5°	951.2	948.5	941.6	929.3	922.5	907.4	886.9	889.6	867.7	855.4	851.3
35°	844.4	836.2	832.1	821.2	813.0	802.0	784.2	788.3	776.0	766.4	765.1
37.5°	724.0	715.8	713.1	704.8	698.0	688.4	674.7	680.2	674.7	670.6	674.7
40°	598.1	591.2	588.5	580.3	577.6	570.7	561.1	574.8	568.0	576.2	577.6
42.5°	472.2	465.3	465.3	459.9	455.8	454.4	447.5	465.3	465.3	479.0	485.9
45°	333.9	335.3	332.6	333.9	331.2	335.3	331.2	343.5	361.3	379.1	390.1
47.5°	221.7	217.6	223.1	221.7	220.3	225.8	231.3	243.6	264.1	288.8	303.8
50°	134.1	134.1	136.9	141.0	143.7	147.8	156.0	171.1	194.3	219.0	236.8
52.5°	76.6	75.3	78.0	79.4	86.2	91.7	101.3	117.7	141.0	168.3	184.8
55°	41.1	41.1	42.4	46.5	50.6	57.5	67.1	82.1	104.0	131.4	147.8
57.5°	24.6	24.6	26.0	27.4	31.5	37.0	45.2	57.5	76.6	99.9	115.0
60°	16.4	17.8	17.8	19.2	21.9	24.6	31.5	39.7	54.7	72.5	84.9
62.5°	13.7	13.7	13.7	15.1	16.4	17.8	21.9	28.7	38.3	52.0	61.6
65°	10.9	10.9	10.9	10.9	12.3	13.7	16.4	20.5	27.4	35.6	41.1
67.5°	8.2	8.2	9.6	9.6	9.6	10.9	12.3	15.1	19.2	24.6	28.7
70°	6.8	6.8	6.8	6.8	8.2	8.2	9.6	10.9	13.7	17.8	20.5
72.5°	5.5	5.5	5.5	5.5	6.8	6.8	6.8	8.2	9.6	12.3	13.7
75°	4.1	4.1	4.1	4.1	5.5	5.5	5.5	6.8	6.8	8.2	9.6
77.5°	2.7	2.7	2.7	2.7	4.1	4.1	4.1	4.1	5.5	5.5	5.5
80°	1.4	1.4	1.4	2.7	2.7	2.7	2.7	2.7	2.7	4.1	4.1
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	2.7
85°	0.0	0.0	1.4	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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: P212722

CATALOG NUMBER: LD4B20D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1	1036.1
2.5°	1016.9	1034.7	1014.2	1018.3	1011.4	1023.7	1007.3	1011.4	1014.2	1011.4	1012.8
5°	1018.3	1031.9	1008.7	1012.8	1001.8	1010.0	995.0	996.4	996.4	993.6	992.3
7.5°	1022.4	1030.6	1005.9	1004.6	990.9	999.1	981.3	978.6	977.2	973.1	974.5
10°	1023.7	1026.5	1000.5	995.0	978.6	981.3	963.5	958.0	953.9	951.2	949.8
12.5°	1033.3	1030.6	1000.5	990.9	970.4	969.0	949.8	941.6	934.8	932.0	930.7
15°	1045.6	1036.1	1003.2	989.5	966.3	960.8	940.2	932.0	922.5	919.7	917.0
17.5°	1051.1	1036.1	1000.5	982.7	956.7	949.8	929.3	918.3	908.8	904.7	901.9
20°	1044.3	1025.1	989.5	970.4	943.0	933.4	912.9	900.6	891.0	886.9	884.1
22.5°	1029.2	1007.3	973.1	953.9	926.6	914.2	896.5	885.5	874.6	873.2	869.1
25°	1003.2	981.3	952.6	933.4	908.8	896.5	880.0	870.4	859.5	858.1	856.8
27.5°	964.9	944.4	922.5	904.7	882.8	873.2	860.9	851.3	841.7	841.7	839.0
30°	910.1	896.5	877.3	866.3	848.5	839.0	830.8	823.9	814.3	815.7	813.0
32.5°	840.3	833.5	819.8	814.3	800.6	797.9	789.7	784.2	776.0	778.7	776.0
35°	762.3	754.1	754.1	751.4	744.5	743.2	739.1	736.3	730.8	732.2	732.2
37.5°	673.4	673.4	681.6	682.9	681.6	684.3	682.9	682.9	677.5	680.2	678.8
40°	581.7	589.9	604.9	613.1	615.9	621.4	628.2	625.5	622.7	626.8	625.5
42.5°	492.7	509.1	532.4	546.1	555.7	563.9	573.5	573.5	572.1	577.6	576.2
45°	407.9	422.9	454.4	477.7	494.1	506.4	517.3	521.4	522.8	528.3	526.9
47.5°	324.4	350.4	387.3	414.7	435.2	450.3	465.3	470.8	474.9	481.8	481.8
50°	257.3	290.1	332.6	359.9	384.6	401.0	416.1	424.3	429.7	435.2	435.2
52.5°	206.7	240.9	281.9	310.7	333.9	351.7	366.8	376.4	380.5	387.3	387.3
55°	168.3	199.8	238.1	264.1	287.4	303.8	316.2	324.4	328.5	333.9	333.9
57.5°	132.8	162.9	194.3	217.6	236.8	249.1	260.0	262.8	264.1	268.3	269.6
60°	99.9	123.2	149.2	167.0	180.7	188.9	197.1	195.7	194.3	197.1	194.3
62.5°	71.2	87.6	106.8	117.7	128.7	132.8	136.9	134.1	131.4	132.8	132.8
65°	47.9	60.2	71.2	79.4	84.9	87.6	89.0	87.6	86.2	87.6	86.2
67.5°	32.8	39.7	47.9	52.0	56.1	57.5	58.9	57.5	57.5	57.5	56.1
70°	21.9	26.0	31.5	34.2	35.6	37.0	38.3	37.0	37.0	37.0	37.0
72.5°	15.1	17.8	19.2	21.9	23.3	23.3	23.3	23.3	23.3	23.3	23.3
75°	9.6	10.9	12.3	13.7	15.1	15.1	15.1	15.1	15.1	15.1	15.1
77.5°	6.8	6.8	8.2	8.2	9.6	9.6	9.6	9.6	9.6	9.6	9.6
80°	4.1	4.1	5.5	5.5	5.5	5.5	6.8	5.5	6.8	6.8	6.8
82.5°	2.7	2.7	2.7	2.7	4.1	4.1	4.1	4.1	4.1	4.1	4.1
85°	1.4	1.4	1.4	1.4	1.4	1.4	2.7	1.4	2.7	2.7	2.7
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: P212722

CATALOG NUMBER: LD4B20D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1036.1	1036.1	1036.1	1036.1
2.5°	1012.8	1010.0	1001.8	1011.4
5°	990.9	988.1	981.3	988.1
7.5°	969.0	964.9	959.4	963.5
10°	943.0	940.2	933.4	937.5
12.5°	923.8	918.3	914.2	915.6
15°	911.5	906.0	901.9	903.3
17.5°	895.1	889.6	885.5	885.5
20°	877.3	871.8	869.1	867.7
22.5°	862.2	858.1	856.8	852.7
25°	848.5	845.8	845.8	840.3
27.5°	833.5	829.4	829.4	823.9
30°	807.5	806.1	806.1	802.0
32.5°	773.3	769.2	771.9	765.1
35°	726.7	724.0	728.1	722.6
37.5°	676.1	674.7	677.5	673.4
40°	622.7	622.7	626.8	620.0
42.5°	576.2	576.2	580.3	573.5
45°	525.6	529.7	533.8	528.3
47.5°	481.8	484.5	490.0	484.5
50°	438.0	440.7	444.8	439.3
52.5°	390.1	392.8	396.9	392.8
55°	335.3	338.1	342.2	339.4
57.5°	269.6	266.9	273.7	268.3
60°	195.7	190.2	191.6	191.6
62.5°	130.0	127.3	130.0	125.9
65°	86.2	84.9	84.9	84.9
67.5°	57.5	56.1	57.5	56.1
70°	37.0	37.0	37.0	37.0
72.5°	23.3	23.3	23.3	23.3
75°	15.1	15.1	15.1	15.1
77.5°	9.6	9.6	9.6	9.6
80°	6.8	6.8	6.8	6.8
82.5°	4.1	4.1	4.1	4.1
85°	2.7	2.7	2.7	2.7
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)