

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: P212720

Luminaire Tested: **LD4B20D010 EU4B10208035 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212720
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 EU4B10208035 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1883.6 lumens
Efficiency: N/A
Efficacy: 90.6 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

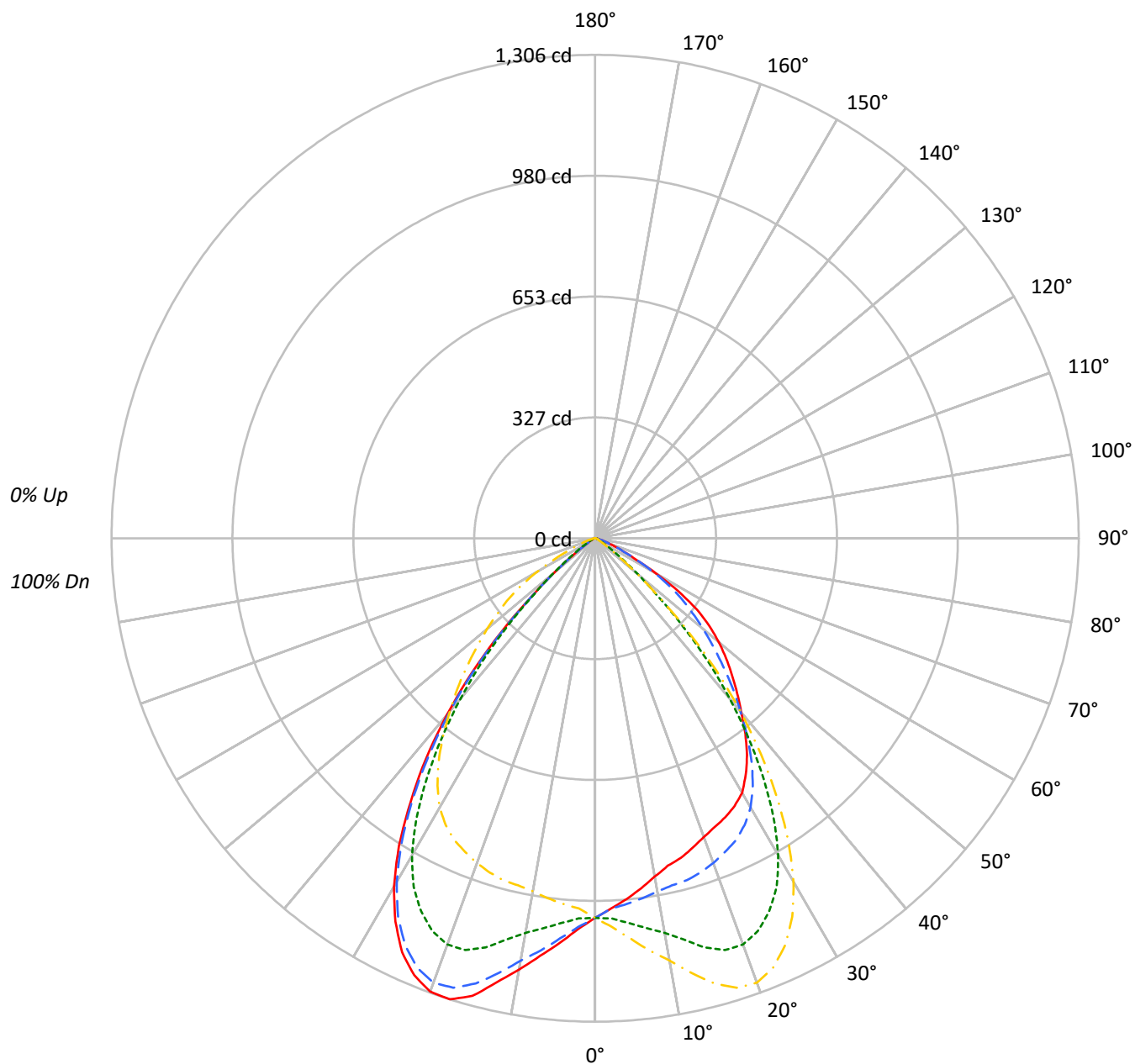
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWL11

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	109	106	103	110	107	104	102	103	100	99		99	97	96		95
2	105	99	94	90	103	97	93	89	94	90	87		91	88	85		88
3	98	90	84	80	96	89	83	79	86	81	78		84	80	76		81
4	92	83	76	71	90	81	75	70	79	74	69		77	72	69		75
5	86	76	69	63	84	75	68	63	73	67	62		71	66	62		69
6	80	70	62	57	79	69	62	57	67	61	56		66	60	56		64
7	75	64	57	52	74	63	57	52	62	56	51		61	55	51		59
8	71	59	52	47	69	59	52	47	57	51	47		56	51	47		55
9	66	55	48	43	65	54	48	43	53	47	43		52	47	43		52
10	63	51	44	40	62	51	44	40	50	44	40		49	43	39		48

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	126479	126479	126479	126479
5°	121093	129141	135852	129141
10°	116218	135556	148119	135556
15°	114161	146162	163465	146162
20°	112728	153274	171047	153274
25°	113192	151353	167944	151353
30°	113059	140846	154733	140846
35°	107693	119528	130746	119528
40°	98800	90958	100329	90958
45°	91213	57896	62379	57896
50°	83435	28074	27287	28074
55°	72234	12236	8731	12236
60°	46773	6019	4021	6019
65°	24516	3940	3152	3940
70°	13199	2921	2452	2921
75°	7101	2573	1954	2573
80°	4830	1918	994	1918
85°	3821	1981	0	1981



TEST NUMBER: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	5.3
10°-20°	312.7	16.6
20°-30°	486.2	25.8
30°-40°	491.1	26.1
40°-50°	310.9	16.5
50°-60°	130.5	6.9
60°-70°	41.4	2.2
70°-80°	9.5	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°	898.9	47.7
0°-40°	1390.0	73.8
0°-60°	1831.4	97.2
0°-90°	1883.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1883.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1025	1025	1025	1025	1025	
5°	978	1043	1097	1043	978	92
15°	894	1145	1280	1145	894	252
25°	832	1112	1234	1112	832	383
35°	715	794	868	794	715	444
45°	523	332	358	332	523	404
55°	336	57	41	57	336	290
65°	84	14	11	14	84	93
75°	15	5	4	5	15	18
85°	3	1	0	1	3	3
90°	0	0	0	0	0	



TEST NUMBER: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4
2.5°	1001.0	991.6	999.7	1002.4	1002.4	1001.0	1003.8	1001.0	997.0	1013.2	1001.0
5°	978.0	971.2	978.0	980.7	982.1	983.4	986.1	986.1	984.8	999.7	991.6
7.5°	953.6	949.6	955.0	959.1	964.5	963.1	967.2	968.5	971.2	988.9	980.7
10°	927.9	923.8	930.6	933.3	940.1	941.4	944.2	948.2	953.6	971.2	968.5
12.5°	906.2	904.9	908.9	914.4	921.1	922.5	925.2	932.0	940.1	959.1	960.4
15°	894.0	892.7	896.7	902.2	907.6	910.3	913.0	922.5	930.6	950.9	956.3
17.5°	876.4	876.4	880.5	885.9	892.7	895.4	899.5	908.9	919.8	940.1	946.9
20°	858.8	860.2	862.9	868.3	875.1	877.8	881.8	891.3	903.5	923.8	933.3
22.5°	843.9	848.0	849.3	853.4	860.2	864.2	865.6	876.4	887.3	904.9	917.1
25°	831.7	837.1	837.1	839.9	848.0	849.3	850.7	861.5	871.0	887.3	899.5
27.5°	815.5	820.9	820.9	825.0	830.4	833.1	833.1	842.6	852.0	864.2	873.7
30°	793.8	797.9	797.9	799.2	804.6	807.3	806.0	815.5	822.2	830.4	839.9
32.5°	757.2	764.0	761.3	765.3	768.1	770.8	768.1	776.2	781.6	789.7	792.4
35°	715.2	720.6	716.6	719.3	724.7	724.7	723.4	728.8	731.5	735.5	736.9
37.5°	666.5	670.5	667.8	669.2	671.9	673.2	670.5	675.9	675.9	677.3	674.6
40°	613.6	620.4	616.3	616.3	619.1	620.4	616.3	619.1	621.8	615.0	609.6
42.5°	567.6	574.4	570.3	570.3	570.3	571.6	566.2	567.6	567.6	558.1	550.0
45°	522.9	528.3	524.2	520.2	521.5	522.9	517.5	516.1	512.0	501.2	489.0
47.5°	479.5	484.9	479.5	476.8	476.8	476.8	470.0	466.0	460.6	445.7	430.8
50°	434.8	440.2	436.2	433.5	430.8	430.8	425.3	419.9	411.8	396.9	380.6
52.5°	388.8	392.8	388.8	386.1	383.4	383.4	376.6	372.5	363.0	348.1	330.5
55°	335.9	338.6	334.6	331.9	330.5	330.5	325.1	321.0	312.9	300.7	284.5
57.5°	265.5	270.9	264.1	266.9	266.9	265.5	261.4	260.1	257.4	246.5	234.3
60°	189.6	189.6	188.3	193.7	192.4	195.1	192.4	193.7	195.1	186.9	178.8
62.5°	124.6	128.7	126.0	128.7	131.4	131.4	130.0	132.8	135.5	131.4	127.3
65°	84.0	84.0	84.0	85.3	85.3	86.7	85.3	86.7	88.0	86.7	84.0
67.5°	55.5	56.9	55.5	56.9	55.5	56.9	56.9	56.9	58.2	56.9	55.5
70°	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	37.9	36.6	35.2
72.5°	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
75°	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
77.5°	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
80°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	5.4	6.8	5.4	5.4
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



TEST NUMBER: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4
2.5°	1007.8	1003.8	1024.1	1006.5	1015.9	1014.6	1015.9	1024.1	1024.1	1028.1	1026.8
5°	1002.4	998.3	1021.4	1007.8	1018.7	1018.7	1022.7	1034.9	1034.9	1043.0	1044.4
7.5°	994.3	995.6	1020.0	1011.9	1024.1	1025.4	1032.2	1047.1	1051.2	1062.0	1067.4
10°	984.8	990.2	1015.9	1013.2	1029.5	1030.9	1044.4	1062.0	1067.4	1082.3	1091.8
12.5°	980.7	990.2	1020.0	1022.7	1039.0	1045.8	1060.7	1083.7	1093.2	1110.8	1124.3
15°	979.4	992.9	1025.4	1034.9	1053.9	1063.4	1083.7	1110.8	1121.6	1144.6	1160.9
17.5°	972.6	990.2	1025.4	1040.3	1060.7	1070.1	1095.9	1127.0	1140.6	1166.3	1185.3
20°	960.4	979.4	1014.6	1033.6	1055.2	1068.8	1094.5	1127.0	1140.6	1167.7	1189.3
22.5°	944.2	963.1	997.0	1018.7	1037.6	1052.5	1079.6	1110.8	1123.0	1148.7	1170.4
25°	923.8	942.8	971.2	992.9	1010.5	1024.1	1047.1	1079.6	1087.7	1112.1	1135.2
27.5°	895.4	913.0	934.7	955.0	971.2	982.1	1002.4	1030.9	1037.6	1062.0	1081.0
30°	857.5	868.3	887.3	900.8	913.0	923.8	938.7	964.5	967.2	988.9	1006.5
32.5°	806.0	811.4	825.0	831.7	842.6	846.6	858.8	880.5	877.8	898.1	913.0
35°	743.7	746.4	746.4	754.5	757.2	758.6	768.1	780.2	776.2	793.8	804.6
37.5°	675.9	674.6	666.5	666.5	667.8	663.8	667.8	673.2	667.8	681.4	690.8
40°	606.9	598.7	583.8	575.7	571.6	570.3	562.2	568.9	555.4	564.9	571.6
42.5°	540.5	526.9	503.9	487.7	480.9	474.1	460.6	460.6	443.0	449.7	451.1
45°	472.8	449.7	418.6	403.7	386.1	375.2	357.6	340.0	327.8	331.9	327.8
47.5°	410.4	383.4	346.8	321.0	300.7	285.8	261.4	241.1	228.9	223.5	218.1
50°	356.3	329.2	287.2	254.7	234.3	216.7	192.4	169.3	154.4	146.3	142.2
52.5°	307.5	279.0	238.4	204.5	182.9	166.6	139.5	116.5	100.2	90.8	85.3
55°	261.4	235.7	197.8	166.6	146.3	130.0	102.9	81.3	66.4	56.9	50.1
57.5°	215.4	192.4	161.2	131.4	113.8	98.9	75.9	56.9	44.7	36.6	31.2
60°	165.3	147.7	121.9	98.9	84.0	71.8	54.2	39.3	31.2	24.4	21.7
62.5°	116.5	105.7	86.7	70.4	61.0	51.5	37.9	28.4	21.7	17.6	16.3
65°	78.6	70.4	59.6	47.4	40.6	35.2	27.1	20.3	16.3	13.5	12.2
67.5°	51.5	47.4	39.3	32.5	28.4	24.4	19.0	14.9	12.2	10.8	9.5
70°	33.9	31.2	25.7	21.7	20.3	17.6	13.5	10.8	9.5	8.1	8.1
72.5°	21.7	19.0	17.6	14.9	13.5	12.2	9.5	8.1	6.8	6.8	6.8
75°	13.5	12.2	10.8	9.5	9.5	8.1	6.8	6.8	5.4	5.4	5.4
77.5°	8.1	8.1	6.8	6.8	5.4	5.4	5.4	4.1	4.1	4.1	4.1
80°	5.4	5.4	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



TEST NUMBER: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4
2.5°	1033.6	1036.3	1033.6	1041.7	1028.1	1043.0	1037.6	1040.3	1051.2	1047.1	1051.2
5°	1053.9	1059.3	1059.3	1068.8	1056.6	1074.2	1068.8	1074.2	1085.0	1085.0	1090.5
7.5°	1079.6	1086.4	1089.1	1098.6	1086.4	1108.1	1102.6	1109.4	1123.0	1123.0	1127.0
10°	1106.7	1114.8	1120.3	1131.1	1117.5	1141.9	1136.5	1146.0	1158.2	1159.5	1166.3
12.5°	1140.6	1151.4	1158.2	1167.7	1158.2	1182.6	1177.1	1186.6	1202.9	1204.2	1212.4
15°	1178.5	1192.0	1200.2	1211.0	1200.2	1227.3	1221.8	1232.7	1244.9	1250.3	1258.4
17.5°	1202.9	1219.1	1225.9	1238.1	1227.3	1254.4	1247.6	1262.5	1273.3	1276.0	1285.5
20°	1206.9	1221.8	1231.3	1240.8	1231.3	1258.4	1251.6	1263.8	1277.4	1280.1	1286.9
22.5°	1189.3	1201.5	1212.4	1220.5	1212.4	1239.5	1230.0	1243.5	1255.7	1258.4	1263.8
25°	1148.7	1163.6	1174.4	1181.2	1173.1	1198.8	1190.7	1202.9	1213.7	1219.1	1220.5
27.5°	1091.8	1105.4	1116.2	1120.3	1114.8	1139.2	1128.4	1143.3	1152.8	1155.5	1159.5
30°	1014.6	1026.8	1037.6	1040.3	1036.3	1053.9	1048.5	1062.0	1071.5	1074.2	1076.9
32.5°	919.8	932.0	938.7	941.4	937.4	955.0	949.6	960.4	971.2	971.2	971.2
35°	812.8	823.6	827.7	835.8	826.3	843.9	838.5	848.0	857.5	857.5	858.8
37.5°	697.6	705.7	708.5	716.6	707.1	723.4	719.3	727.4	735.5	734.2	736.9
40°	574.4	582.5	585.2	592.0	583.8	597.4	594.7	602.8	609.6	609.6	609.6
42.5°	455.1	460.6	460.6	467.3	459.2	471.4	471.4	476.8	483.6	482.2	482.2
45°	330.5	329.2	331.9	330.5	330.5	341.4	341.4	344.1	349.5	346.8	348.1
47.5°	219.4	220.8	215.4	219.4	214.0	223.5	223.5	223.5	227.6	224.9	227.6
50°	139.5	135.5	132.8	132.8	131.4	138.2	135.5	136.8	139.5	136.8	139.5
52.5°	78.6	77.2	74.5	75.9	73.1	74.5	74.5	74.5	75.9	74.5	77.2
55°	46.1	42.0	40.6	40.6	39.3	40.6	39.3	39.3	39.3	37.9	39.3
57.5°	27.1	25.7	24.4	24.4	23.0	23.0	23.0	23.0	23.0	23.0	23.0
60°	19.0	17.6	17.6	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
62.5°	14.9	13.5	13.5	13.5	12.2	12.2	12.2	12.2	12.2	13.5	12.2
65°	10.8	10.8	10.8	10.8	10.8	10.8	9.5	10.8	10.8	10.8	10.8
67.5°	9.5	9.5	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
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°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
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: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4
2.5°	1055.2	1049.8	1037.6	1045.8	1047.1	1041.7	1048.5	1056.6	1048.5	1041.7	1047.1
5°	1094.5	1090.5	1079.6	1086.4	1087.7	1086.4	1090.5	1097.2	1090.5	1086.4	1087.7
7.5°	1133.8	1131.1	1118.9	1127.0	1129.7	1127.0	1131.1	1137.9	1131.1	1127.0	1129.7
10°	1171.7	1170.4	1158.2	1169.0	1170.4	1167.7	1171.7	1182.6	1171.7	1167.7	1170.4
12.5°	1215.1	1217.8	1204.2	1216.4	1217.8	1215.1	1220.5	1228.6	1220.5	1215.1	1217.8
15°	1265.2	1263.8	1253.0	1262.5	1265.2	1262.5	1269.3	1280.1	1269.3	1262.5	1265.2
17.5°	1289.6	1289.6	1281.5	1290.9	1292.3	1292.3	1297.7	1305.8	1297.7	1292.3	1292.3
20°	1290.9	1292.3	1282.8	1293.6	1293.6	1293.6	1299.1	1303.1	1299.1	1293.6	1293.6
22.5°	1269.3	1270.6	1261.1	1270.6	1270.6	1272.0	1274.7	1277.4	1274.7	1272.0	1270.6
25°	1227.3	1228.6	1220.5	1228.6	1227.3	1227.3	1230.0	1234.0	1230.0	1227.3	1227.3
27.5°	1165.0	1166.3	1155.5	1165.0	1163.6	1162.2	1166.3	1167.7	1166.3	1162.2	1163.6
30°	1082.3	1083.7	1074.2	1082.3	1081.0	1079.6	1085.0	1086.4	1085.0	1079.6	1081.0
32.5°	983.4	980.7	974.0	980.7	979.4	979.4	982.1	986.1	982.1	979.4	979.4
35°	864.2	864.2	860.2	865.6	861.5	866.9	866.9	868.3	866.9	866.9	861.5
37.5°	742.3	742.3	739.6	742.3	741.0	746.4	746.4	750.4	746.4	746.4	741.0
40°	615.0	615.0	612.3	615.0	619.1	619.1	617.7	623.1	617.7	619.1	619.1
42.5°	486.3	486.3	484.9	491.7	491.7	491.7	487.7	493.1	487.7	491.7	491.7
45°	353.6	350.8	349.5	349.5	350.8	356.3	350.8	357.6	350.8	356.3	350.8
47.5°	224.9	226.2	227.6	231.6	228.9	227.6	227.6	231.6	227.6	227.6	228.9
50°	138.2	139.5	139.5	142.2	138.2	140.9	139.5	142.2	139.5	140.9	138.2
52.5°	75.9	75.9	75.9	78.6	75.9	77.2	75.9	78.6	75.9	77.2	75.9
55°	39.3	39.3	39.3	40.6	39.3	39.3	39.3	40.6	39.3	39.3	39.3
57.5°	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
60°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
62.5°	13.5	12.2	12.2	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
65°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
67.5°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
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°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
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: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4
2.5°	1045.8	1037.6	1049.8	1055.2	1051.2	1047.1	1051.2	1040.3	1037.6	1043.0	1028.1
5°	1086.4	1079.6	1090.5	1094.5	1090.5	1085.0	1085.0	1074.2	1068.8	1074.2	1056.6
7.5°	1127.0	1118.9	1131.1	1133.8	1127.0	1123.0	1123.0	1109.4	1102.6	1108.1	1086.4
10°	1169.0	1158.2	1170.4	1171.7	1166.3	1159.5	1158.2	1146.0	1136.5	1141.9	1117.5
12.5°	1216.4	1204.2	1217.8	1215.1	1212.4	1204.2	1202.9	1186.6	1177.1	1182.6	1158.2
15°	1262.5	1253.0	1263.8	1265.2	1258.4	1250.3	1244.9	1232.7	1221.8	1227.3	1200.2
17.5°	1290.9	1281.5	1289.6	1289.6	1285.5	1276.0	1273.3	1262.5	1247.6	1254.4	1227.3
20°	1293.6	1282.8	1292.3	1290.9	1286.9	1280.1	1277.4	1263.8	1251.6	1258.4	1231.3
22.5°	1270.6	1261.1	1270.6	1269.3	1263.8	1258.4	1255.7	1243.5	1230.0	1239.5	1212.4
25°	1228.6	1220.5	1228.6	1227.3	1220.5	1219.1	1213.7	1202.9	1190.7	1198.8	1173.1
27.5°	1165.0	1155.5	1166.3	1165.0	1159.5	1155.5	1152.8	1143.3	1128.4	1139.2	1114.8
30°	1082.3	1074.2	1083.7	1082.3	1076.9	1074.2	1071.5	1062.0	1048.5	1053.9	1036.3
32.5°	980.7	974.0	980.7	983.4	971.2	971.2	971.2	960.4	949.6	955.0	937.4
35°	865.6	860.2	864.2	864.2	858.8	857.5	857.5	848.0	838.5	843.9	826.3
37.5°	742.3	739.6	742.3	742.3	736.9	734.2	735.5	727.4	719.3	723.4	707.1
40°	615.0	612.3	615.0	615.0	609.6	609.6	609.6	602.8	594.7	597.4	583.8
42.5°	491.7	484.9	486.3	486.3	482.2	482.2	483.6	476.8	471.4	471.4	459.2
45°	349.5	349.5	350.8	353.6	348.1	346.8	349.5	344.1	341.4	341.4	330.5
47.5°	231.6	227.6	226.2	224.9	227.6	224.9	227.6	223.5	223.5	223.5	214.0
50°	142.2	139.5	139.5	138.2	139.5	136.8	139.5	136.8	135.5	138.2	131.4
52.5°	78.6	75.9	75.9	75.9	77.2	74.5	75.9	74.5	74.5	74.5	73.1
55°	40.6	39.3	39.3	39.3	39.3	37.9	39.3	39.3	39.3	40.6	39.3
57.5°	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
60°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
62.5°	13.5	12.2	12.2	13.5	12.2	13.5	12.2	12.2	12.2	12.2	12.2
65°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	9.5	10.8	10.8
67.5°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
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°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
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: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4
2.5°	1041.7	1033.6	1036.3	1033.6	1026.8	1028.1	1024.1	1024.1	1015.9	1014.6	1015.9
5°	1068.8	1059.3	1059.3	1053.9	1044.4	1043.0	1034.9	1034.9	1022.7	1018.7	1018.7
7.5°	1098.6	1089.1	1086.4	1079.6	1067.4	1062.0	1051.2	1047.1	1032.2	1025.4	1024.1
10°	1131.1	1120.3	1114.8	1106.7	1091.8	1082.3	1067.4	1062.0	1044.4	1030.9	1029.5
12.5°	1167.7	1158.2	1151.4	1140.6	1124.3	1110.8	1093.2	1083.7	1060.7	1045.8	1039.0
15°	1211.0	1200.2	1192.0	1178.5	1160.9	1144.6	1121.6	1110.8	1083.7	1063.4	1053.9
17.5°	1238.1	1225.9	1219.1	1202.9	1185.3	1166.3	1140.6	1127.0	1095.9	1070.1	1060.7
20°	1240.8	1231.3	1221.8	1206.9	1189.3	1167.7	1140.6	1127.0	1094.5	1068.8	1055.2
22.5°	1220.5	1212.4	1201.5	1189.3	1170.4	1148.7	1123.0	1110.8	1079.6	1052.5	1037.6
25°	1181.2	1174.4	1163.6	1148.7	1135.2	1112.1	1087.7	1079.6	1047.1	1024.1	1010.5
27.5°	1120.3	1116.2	1105.4	1091.8	1081.0	1062.0	1037.6	1030.9	1002.4	982.1	971.2
30°	1040.3	1037.6	1026.8	1014.6	1006.5	988.9	967.2	964.5	938.7	923.8	913.0
32.5°	941.4	938.7	932.0	919.8	913.0	898.1	877.8	880.5	858.8	846.6	842.6
35°	835.8	827.7	823.6	812.8	804.6	793.8	776.2	780.2	768.1	758.6	757.2
37.5°	716.6	708.5	705.7	697.6	690.8	681.4	667.8	673.2	667.8	663.8	667.8
40°	592.0	585.2	582.5	574.4	571.6	564.9	555.4	568.9	562.2	570.3	571.6
42.5°	467.3	460.6	460.6	455.1	451.1	449.7	443.0	460.6	460.6	474.1	480.9
45°	330.5	331.9	329.2	330.5	327.8	331.9	327.8	340.0	357.6	375.2	386.1
47.5°	219.4	215.4	220.8	219.4	218.1	223.5	228.9	241.1	261.4	285.8	300.7
50°	132.8	132.8	135.5	139.5	142.2	146.3	154.4	169.3	192.4	216.7	234.3
52.5°	75.9	74.5	77.2	78.6	85.3	90.8	100.2	116.5	139.5	166.6	182.9
55°	40.6	40.6	42.0	46.1	50.1	56.9	66.4	81.3	102.9	130.0	146.3
57.5°	24.4	24.4	25.7	27.1	31.2	36.6	44.7	56.9	75.9	98.9	113.8
60°	16.3	17.6	17.6	19.0	21.7	24.4	31.2	39.3	54.2	71.8	84.0
62.5°	13.5	13.5	13.5	14.9	16.3	17.6	21.7	28.4	37.9	51.5	61.0
65°	10.8	10.8	10.8	10.8	12.2	13.5	16.3	20.3	27.1	35.2	40.6
67.5°	8.1	8.1	9.5	9.5	9.5	10.8	12.2	14.9	19.0	24.4	28.4
70°	6.8	6.8	6.8	6.8	8.1	8.1	9.5	10.8	13.5	17.6	20.3
72.5°	5.4	5.4	5.4	5.4	6.8	6.8	6.8	8.1	9.5	12.2	13.5
75°	4.1	4.1	4.1	4.1	5.4	5.4	5.4	6.8	6.8	8.1	9.5
77.5°	2.7	2.7	2.7	2.7	4.1	4.1	4.1	4.1	5.4	5.4	5.4
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: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWL11

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4	1025.4
2.5°	1006.5	1024.1	1003.8	1007.8	1001.0	1013.2	997.0	1001.0	1003.8	1001.0	1002.4
5°	1007.8	1021.4	998.3	1002.4	991.6	999.7	984.8	986.1	986.1	983.4	982.1
7.5°	1011.9	1020.0	995.6	994.3	980.7	988.9	971.2	968.5	967.2	963.1	964.5
10°	1013.2	1015.9	990.2	984.8	968.5	971.2	953.6	948.2	944.2	941.4	940.1
12.5°	1022.7	1020.0	990.2	980.7	960.4	959.1	940.1	932.0	925.2	922.5	921.1
15°	1034.9	1025.4	992.9	979.4	956.3	950.9	930.6	922.5	913.0	910.3	907.6
17.5°	1040.3	1025.4	990.2	972.6	946.9	940.1	919.8	908.9	899.5	895.4	892.7
20°	1033.6	1014.6	979.4	960.4	933.3	923.8	903.5	891.3	881.8	877.8	875.1
22.5°	1018.7	997.0	963.1	944.2	917.1	904.9	887.3	876.4	865.6	864.2	860.2
25°	992.9	971.2	942.8	923.8	899.5	887.3	871.0	861.5	850.7	849.3	848.0
27.5°	955.0	934.7	913.0	895.4	873.7	864.2	852.0	842.6	833.1	833.1	830.4
30°	900.8	887.3	868.3	857.5	839.9	830.4	822.2	815.5	806.0	807.3	804.6
32.5°	831.7	825.0	811.4	806.0	792.4	789.7	781.6	776.2	768.1	770.8	768.1
35°	754.5	746.4	746.4	743.7	736.9	735.5	731.5	728.8	723.4	724.7	724.7
37.5°	666.5	666.5	674.6	675.9	674.6	677.3	675.9	675.9	670.5	673.2	671.9
40°	575.7	583.8	598.7	606.9	609.6	615.0	621.8	619.1	616.3	620.4	619.1
42.5°	487.7	503.9	526.9	540.5	550.0	558.1	567.6	567.6	566.2	571.6	570.3
45°	403.7	418.6	449.7	472.8	489.0	501.2	512.0	516.1	517.5	522.9	521.5
47.5°	321.0	346.8	383.4	410.4	430.8	445.7	460.6	466.0	470.0	476.8	476.8
50°	254.7	287.2	329.2	356.3	380.6	396.9	411.8	419.9	425.3	430.8	430.8
52.5°	204.5	238.4	279.0	307.5	330.5	348.1	363.0	372.5	376.6	383.4	383.4
55°	166.6	197.8	235.7	261.4	284.5	300.7	312.9	321.0	325.1	330.5	330.5
57.5°	131.4	161.2	192.4	215.4	234.3	246.5	257.4	260.1	261.4	265.5	266.9
60°	98.9	121.9	147.7	165.3	178.8	186.9	195.1	193.7	192.4	195.1	192.4
62.5°	70.4	86.7	105.7	116.5	127.3	131.4	135.5	132.8	130.0	131.4	131.4
65°	47.4	59.6	70.4	78.6	84.0	86.7	88.0	86.7	85.3	86.7	85.3
67.5°	32.5	39.3	47.4	51.5	55.5	56.9	58.2	56.9	56.9	56.9	55.5
70°	21.7	25.7	31.2	33.9	35.2	36.6	37.9	36.6	36.6	36.6	36.6
72.5°	14.9	17.6	19.0	21.7	23.0	23.0	23.0	23.0	23.0	23.0	23.0
75°	9.5	10.8	12.2	13.5	14.9	14.9	14.9	14.9	14.9	14.9	14.9
77.5°	6.8	6.8	8.1	8.1	9.5	9.5	9.5	9.5	9.5	9.5	9.5
80°	4.1	4.1	5.4	5.4	5.4	5.4	6.8	5.4	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: P212720

CATALOG NUMBER: LD4B20D010 EU4B10208035 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1025.4	1025.4	1025.4	1025.4
2.5°	1002.4	999.7	991.6	1001.0
5°	980.7	978.0	971.2	978.0
7.5°	959.1	955.0	949.6	953.6
10°	933.3	930.6	923.8	927.9
12.5°	914.4	908.9	904.9	906.2
15°	902.2	896.7	892.7	894.0
17.5°	885.9	880.5	876.4	876.4
20°	868.3	862.9	860.2	858.8
22.5°	853.4	849.3	848.0	843.9
25°	839.9	837.1	837.1	831.7
27.5°	825.0	820.9	820.9	815.5
30°	799.2	797.9	797.9	793.8
32.5°	765.3	761.3	764.0	757.2
35°	719.3	716.6	720.6	715.2
37.5°	669.2	667.8	670.5	666.5
40°	616.3	616.3	620.4	613.6
42.5°	570.3	570.3	574.4	567.6
45°	520.2	524.2	528.3	522.9
47.5°	476.8	479.5	484.9	479.5
50°	433.5	436.2	440.2	434.8
52.5°	386.1	388.8	392.8	388.8
55°	331.9	334.6	338.6	335.9
57.5°	266.9	264.1	270.9	265.5
60°	193.7	188.3	189.6	189.6
62.5°	128.7	126.0	128.7	124.6
65°	85.3	84.0	84.0	84.0
67.5°	56.9	55.5	56.9	55.5
70°	36.6	36.6	36.6	36.6
72.5°	23.0	23.0	23.0	23.0
75°	14.9	14.9	14.9	14.9
77.5°	9.5	9.5	9.5	9.5
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)