

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: P212718

Luminaire Tested: **LD4B20D010 EU4B10208027 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212718
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 EU4B10208027 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1758.6 lumens
Efficiency: N/A
Efficacy: 84.5 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

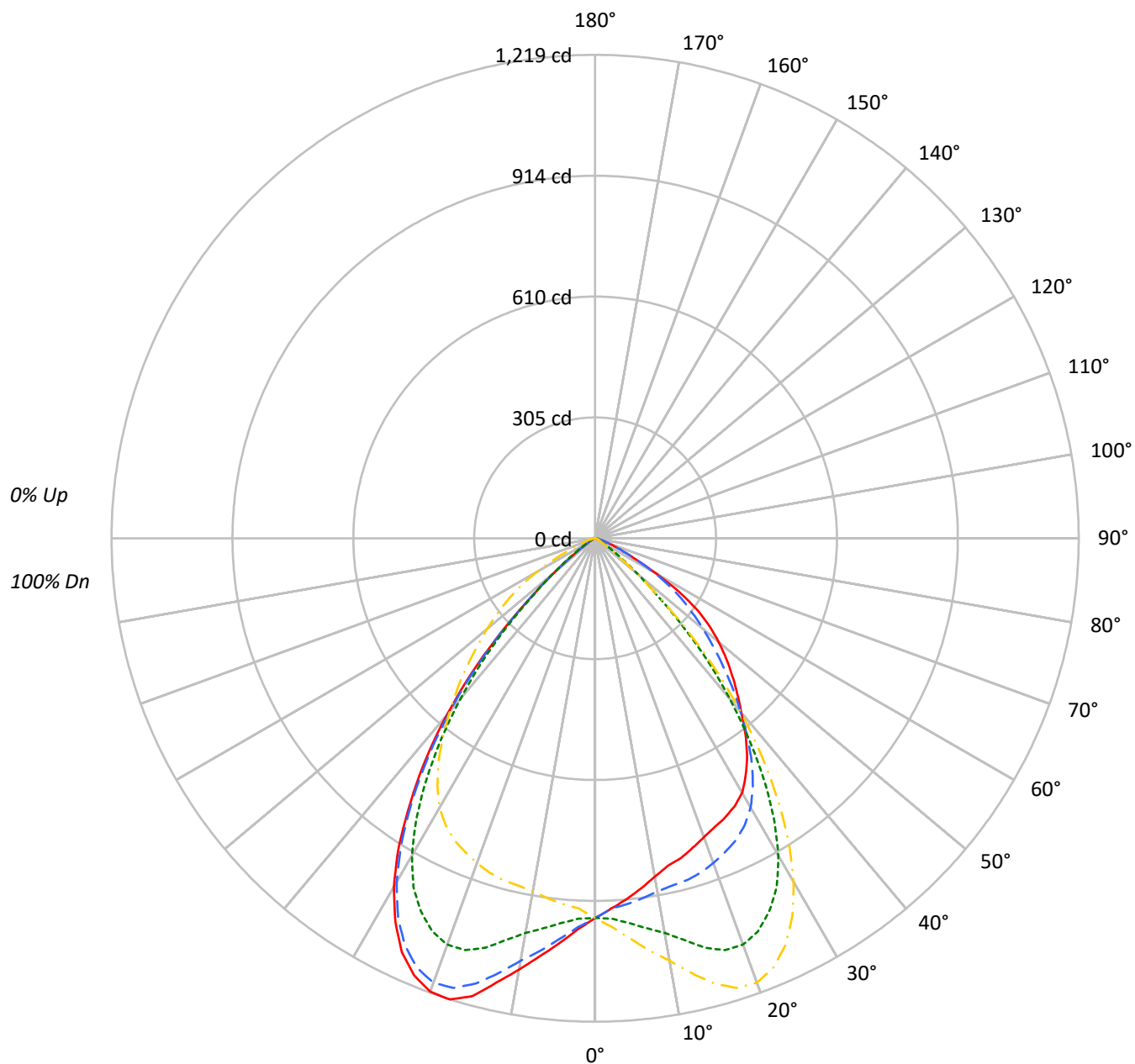
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	118091	118091	118091	118091
5°	113057	120573	126838	120573
10°	108503	126564	138287	126564
15°	106589	136470	152610	136470
20°	105246	143101	159693	143101
25°	105679	141309	156797	141309
30°	105553	131489	144464	131489
35°	100555	111593	122073	111593
40°	92246	84920	93679	84920
45°	85160	54058	58245	54058
50°	77908	26212	25483	26212
55°	67439	11419	8150	11419
60°	43689	5625	3750	5625
65°	22882	3677	2948	3677
70°	12298	2741	2272	2741
75°	6624	2431	1811	2431
80°	4475	1776	923	1776
85°	3538	1840	0	1840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.3	5.3
10°-20°	292.0	16.6
20°-30°	453.9	25.8
30°-40°	458.5	26.1
40°-50°	290.3	16.5
50°-60°	121.8	6.9
60°-70°	38.6	2.2
70°-80°	8.8	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°	839.2	47.7
0°-40°	1297.7	73.8
0°-60°	1709.9	97.2
0°-90°	1758.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1758.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	957	957	957	957	957	
5°	913	974	1024	974	913	86
15°	835	1069	1195	1069	835	235
25°	776	1038	1152	1038	776	358
35°	668	741	811	741	668	415
45°	488	310	334	310	488	377
55°	314	53	38	53	314	271
65°	78	13	10	13	78	87
75°	14	5	4	5	14	17
85°	2	1	0	1	2	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°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
2.5°	934.6	925.8	933.4	935.9	935.9	934.6	937.1	934.6	930.8	946.0	934.6
5°	913.1	906.8	913.1	915.6	916.9	918.2	920.7	920.7	919.4	933.4	925.8
7.5°	890.4	886.6	891.6	895.4	900.5	899.2	903.0	904.3	906.8	923.2	915.6
10°	866.3	862.5	868.9	871.4	877.7	879.0	881.5	885.3	890.4	906.8	904.3
12.5°	846.1	844.8	848.6	853.7	860.0	861.3	863.8	870.1	877.7	895.4	896.7
15°	834.7	833.4	837.2	842.3	847.4	849.9	852.4	861.3	868.9	887.8	892.9
17.5°	818.3	818.3	822.1	827.1	833.4	836.0	839.8	848.6	858.7	877.7	884.0
20°	801.8	803.1	805.6	810.7	817.0	819.5	823.3	832.2	843.6	862.5	871.4
22.5°	787.9	791.7	793.0	796.8	803.1	806.9	808.1	818.3	828.4	844.8	856.2
25°	776.5	781.6	781.6	784.1	791.7	793.0	794.2	804.4	813.2	828.4	839.8
27.5°	761.4	766.4	766.4	770.2	775.3	777.8	777.8	786.6	795.5	806.9	815.7
30°	741.1	744.9	744.9	746.2	751.2	753.8	752.5	761.4	767.7	775.3	784.1
32.5°	707.0	713.3	710.8	714.6	717.1	719.6	717.1	724.7	729.7	737.3	739.9
35°	667.8	672.8	669.0	671.6	676.6	676.6	675.4	680.4	682.9	686.7	688.0
37.5°	622.2	626.0	623.5	624.8	627.3	628.6	626.0	631.1	631.1	632.4	629.8
40°	572.9	579.2	575.4	575.4	578.0	579.2	575.4	578.0	580.5	574.2	569.1
42.5°	529.9	536.2	532.4	532.4	532.4	533.7	528.6	529.9	529.9	521.1	513.5
45°	488.2	493.2	489.4	485.6	486.9	488.2	483.1	481.9	478.1	467.9	456.6
47.5°	447.7	452.8	447.7	445.2	445.2	445.2	438.9	435.1	430.0	416.1	402.2
50°	406.0	411.0	407.2	404.7	402.2	402.2	397.1	392.1	384.5	370.6	355.4
52.5°	363.0	366.8	363.0	360.4	357.9	357.9	351.6	347.8	338.9	325.0	308.6
55°	313.6	316.2	312.4	309.9	308.6	308.6	303.5	299.7	292.1	280.8	265.6
57.5°	247.9	252.9	246.6	249.1	249.1	247.9	244.1	242.8	240.3	230.2	218.8
60°	177.1	177.1	175.8	180.9	179.6	182.1	179.6	180.9	182.1	174.5	166.9
62.5°	116.4	120.1	117.6	120.1	122.7	122.7	121.4	123.9	126.5	122.7	118.9
65°	78.4	78.4	78.4	79.7	79.7	80.9	79.7	80.9	82.2	80.9	78.4
67.5°	51.9	53.1	51.9	53.1	51.9	53.1	53.1	53.1	54.4	53.1	51.9
70°	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	35.4	34.1	32.9
72.5°	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
75°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
77.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
80°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	5.1	6.3	5.1	5.1
82.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.3	2.5	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°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
2.5°	940.9	937.1	956.1	939.7	948.5	947.3	948.5	956.1	956.1	959.9	958.6
5°	935.9	932.1	953.6	940.9	951.1	951.1	954.9	966.2	966.2	973.8	975.1
7.5°	928.3	929.6	952.3	944.7	956.1	957.4	963.7	977.6	981.4	991.5	996.6
10°	919.4	924.5	948.5	946.0	961.2	962.4	975.1	991.5	996.6	1010.5	1019.4
12.5°	915.6	924.5	952.3	954.9	970.0	976.4	990.3	1011.8	1020.6	1037.1	1049.7
15°	914.4	927.0	957.4	966.2	983.9	992.8	1011.8	1037.1	1047.2	1068.7	1083.9
17.5°	908.1	924.5	957.4	971.3	990.3	999.1	1023.1	1052.2	1064.9	1088.9	1106.6
20°	896.7	914.4	947.3	965.0	985.2	997.9	1021.9	1052.2	1064.9	1090.2	1110.4
22.5°	881.5	899.2	930.8	951.1	968.8	982.7	1008.0	1037.1	1048.4	1072.5	1092.7
25°	862.5	880.2	906.8	927.0	943.5	956.1	977.6	1008.0	1015.6	1038.3	1059.8
27.5°	836.0	852.4	872.6	891.6	906.8	916.9	935.9	962.4	968.8	991.5	1009.2
30°	800.6	810.7	828.4	841.0	852.4	862.5	876.4	900.5	903.0	923.2	939.7
32.5°	752.5	757.6	770.2	776.5	786.6	790.4	801.8	822.1	819.5	838.5	852.4
35°	694.3	696.9	696.9	704.4	707.0	708.2	717.1	728.5	724.7	741.1	751.2
37.5°	631.1	629.8	622.2	622.2	623.5	619.7	623.5	628.6	623.5	636.1	645.0
40°	566.6	559.0	545.1	537.5	533.7	532.4	524.9	531.2	518.5	527.4	533.7
42.5°	504.6	492.0	470.5	455.3	449.0	442.6	430.0	430.0	413.6	419.9	421.1
45°	441.4	419.9	390.8	376.9	360.4	350.3	333.9	317.4	306.1	309.9	306.1
47.5°	383.2	357.9	323.8	299.7	280.8	266.9	244.1	225.1	213.7	208.7	203.6
50°	332.6	307.3	268.1	237.8	218.8	202.4	179.6	158.1	144.2	136.6	132.8
52.5°	287.1	260.5	222.6	191.0	170.7	155.6	130.3	108.8	93.6	84.7	79.7
55°	244.1	220.1	184.6	155.6	136.6	121.4	96.1	75.9	62.0	53.1	46.8
57.5°	201.1	179.6	150.5	122.7	106.2	92.3	70.8	53.1	41.7	34.1	29.1
60°	154.3	137.9	113.8	92.3	78.4	67.0	50.6	36.7	29.1	22.8	20.2
62.5°	108.8	98.6	80.9	65.8	56.9	48.1	35.4	26.6	20.2	16.4	15.2
65°	73.4	65.8	55.6	44.3	37.9	32.9	25.3	19.0	15.2	12.6	11.4
67.5°	48.1	44.3	36.7	30.4	26.6	22.8	17.7	13.9	11.4	10.1	8.9
70°	31.6	29.1	24.0	20.2	19.0	16.4	12.6	10.1	8.9	7.6	7.6
72.5°	20.2	17.7	16.4	13.9	12.6	11.4	8.9	7.6	6.3	6.3	6.3
75°	12.6	11.4	10.1	8.9	8.9	7.6	6.3	6.3	5.1	5.1	5.1
77.5°	7.6	7.6	6.3	6.3	5.1	5.1	5.1	3.8	3.8	3.8	3.8
80°	5.1	5.1	3.8	3.8	3.8	3.8	2.5	2.5	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	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°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
2.5°	965.0	967.5	965.0	972.6	959.9	973.8	968.8	971.3	981.4	977.6	981.4
5°	983.9	989.0	989.0	997.9	986.5	1002.9	997.9	1002.9	1013.0	1013.0	1018.1
7.5°	1008.0	1014.3	1016.8	1025.7	1014.3	1034.5	1029.5	1035.8	1048.4	1048.4	1052.2
10°	1033.3	1040.9	1045.9	1056.0	1043.4	1066.1	1061.1	1069.9	1081.3	1082.6	1088.9
12.5°	1064.9	1075.0	1081.3	1090.2	1081.3	1104.1	1099.0	1107.9	1123.1	1124.3	1131.9
15°	1100.3	1112.9	1120.5	1130.6	1120.5	1145.8	1140.8	1150.9	1162.3	1167.3	1174.9
17.5°	1123.1	1138.2	1144.6	1155.9	1145.8	1171.1	1164.8	1178.7	1188.8	1191.4	1200.2
20°	1126.9	1140.8	1149.6	1158.5	1149.6	1174.9	1168.6	1180.0	1192.6	1195.1	1201.5
22.5°	1110.4	1121.8	1131.9	1139.5	1131.9	1157.2	1148.4	1161.0	1172.4	1174.9	1180.0
25°	1072.5	1086.4	1096.5	1102.8	1095.2	1119.3	1111.7	1123.1	1133.2	1138.2	1139.5
27.5°	1019.4	1032.0	1042.1	1045.9	1040.9	1063.6	1053.5	1067.4	1076.3	1078.8	1082.6
30°	947.3	958.6	968.8	971.3	967.5	983.9	978.9	991.5	1000.4	1002.9	1005.4
32.5°	858.7	870.1	876.4	879.0	875.2	891.6	886.6	896.7	906.8	906.8	906.8
35°	758.8	768.9	772.7	780.3	771.5	787.9	782.9	791.7	800.6	800.6	801.8
37.5°	651.3	658.9	661.4	669.0	660.2	675.4	671.6	679.1	686.7	685.5	688.0
40°	536.2	543.8	546.4	552.7	545.1	557.7	555.2	562.8	569.1	569.1	569.1
42.5°	424.9	430.0	430.0	436.3	428.7	440.1	440.1	445.2	451.5	450.2	450.2
45°	308.6	307.3	309.9	308.6	308.6	318.7	318.7	321.2	326.3	323.8	325.0
47.5°	204.9	206.1	201.1	204.9	199.8	208.7	208.7	208.7	212.5	209.9	212.5
50°	130.3	126.5	123.9	123.9	122.7	129.0	126.5	127.7	130.3	127.7	130.3
52.5°	73.4	72.1	69.6	70.8	68.3	69.6	69.6	69.6	70.8	69.6	72.1
55°	43.0	39.2	37.9	37.9	36.7	37.9	36.7	36.7	36.7	35.4	36.7
57.5°	25.3	24.0	22.8	22.8	21.5	21.5	21.5	21.5	21.5	21.5	21.5
60°	17.7	16.4	16.4	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
62.5°	13.9	12.6	12.6	12.6	11.4	11.4	11.4	11.4	11.4	12.6	11.4
65°	10.1	10.1	10.1	10.1	10.1	10.1	8.9	10.1	10.1	10.1	10.1
67.5°	8.9	8.9	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
70°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
72.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
75°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
80°	2.5	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: P212718

CATALOG NUMBER: LD4B20D010 EU4B10208027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
2.5°	985.2	980.1	968.8	976.4	977.6	972.6	978.9	986.5	978.9	972.6	977.6
5°	1021.9	1018.1	1008.0	1014.3	1015.6	1014.3	1018.1	1024.4	1018.1	1014.3	1015.6
7.5°	1058.6	1056.0	1044.6	1052.2	1054.8	1052.2	1056.0	1062.4	1056.0	1052.2	1054.8
10°	1094.0	1092.7	1081.3	1091.4	1092.7	1090.2	1094.0	1104.1	1094.0	1090.2	1092.7
12.5°	1134.4	1137.0	1124.3	1135.7	1137.0	1134.4	1139.5	1147.1	1139.5	1134.4	1137.0
15°	1181.2	1180.0	1169.9	1178.7	1181.2	1178.7	1185.0	1195.1	1185.0	1178.7	1181.2
17.5°	1204.0	1204.0	1196.4	1205.3	1206.5	1206.5	1211.6	1219.2	1211.6	1206.5	1206.5
20°	1205.3	1206.5	1197.7	1207.8	1207.8	1207.8	1212.9	1216.6	1212.9	1207.8	1207.8
22.5°	1185.0	1186.3	1177.4	1186.3	1186.3	1187.6	1190.1	1192.6	1190.1	1187.6	1186.3
25°	1145.8	1147.1	1139.5	1147.1	1145.8	1145.8	1148.4	1152.1	1148.4	1145.8	1145.8
27.5°	1087.6	1088.9	1078.8	1087.6	1086.4	1085.1	1088.9	1090.2	1088.9	1085.1	1086.4
30°	1010.5	1011.8	1002.9	1010.5	1009.2	1008.0	1013.0	1014.3	1013.0	1008.0	1009.2
32.5°	918.2	915.6	909.3	915.6	914.4	914.4	916.9	920.7	916.9	914.4	914.4
35°	806.9	806.9	803.1	808.1	804.4	809.4	809.4	810.7	809.4	809.4	804.4
37.5°	693.1	693.1	690.5	693.1	691.8	696.9	696.9	700.6	696.9	696.9	691.8
40°	574.2	574.2	571.6	574.2	578.0	578.0	576.7	581.8	576.7	578.0	578.0
42.5°	454.0	454.0	452.8	459.1	459.1	459.1	455.3	460.4	455.3	459.1	459.1
45°	330.1	327.6	326.3	326.3	327.6	332.6	327.6	333.9	327.6	332.6	327.6
47.5°	209.9	211.2	212.5	216.3	213.7	212.5	212.5	216.3	212.5	212.5	213.7
50°	129.0	130.3	130.3	132.8	129.0	131.5	130.3	132.8	130.3	131.5	129.0
52.5°	70.8	70.8	70.8	73.4	70.8	72.1	70.8	73.4	70.8	72.1	70.8
55°	36.7	36.7	36.7	37.9	36.7	36.7	36.7	37.9	36.7	36.7	36.7
57.5°	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
60°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
62.5°	12.6	11.4	11.4	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
65°	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
67.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
70°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
72.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
75°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P212718

CATALOG NUMBER: LD4B20D010 EU4B10208027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
2.5°	976.4	968.8	980.1	985.2	981.4	977.6	981.4	971.3	968.8	973.8	959.9
5°	1014.3	1008.0	1018.1	1021.9	1018.1	1013.0	1013.0	1002.9	997.9	1002.9	986.5
7.5°	1052.2	1044.6	1056.0	1058.6	1052.2	1048.4	1048.4	1035.8	1029.5	1034.5	1014.3
10°	1091.4	1081.3	1092.7	1094.0	1088.9	1082.6	1081.3	1069.9	1061.1	1066.1	1043.4
12.5°	1135.7	1124.3	1137.0	1134.4	1131.9	1124.3	1123.1	1107.9	1099.0	1104.1	1081.3
15°	1178.7	1169.9	1180.0	1181.2	1174.9	1167.3	1162.3	1150.9	1140.8	1145.8	1120.5
17.5°	1205.3	1196.4	1204.0	1204.0	1200.2	1191.4	1188.8	1178.7	1164.8	1171.1	1145.8
20°	1207.8	1197.7	1206.5	1205.3	1201.5	1195.1	1192.6	1180.0	1168.6	1174.9	1149.6
22.5°	1186.3	1177.4	1186.3	1185.0	1180.0	1174.9	1172.4	1161.0	1148.4	1157.2	1131.9
25°	1147.1	1139.5	1147.1	1145.8	1139.5	1138.2	1133.2	1123.1	1111.7	1119.3	1095.2
27.5°	1087.6	1078.8	1088.9	1087.6	1082.6	1078.8	1076.3	1067.4	1053.5	1063.6	1040.9
30°	1010.5	1002.9	1011.8	1010.5	1005.4	1002.9	1000.4	991.5	978.9	983.9	967.5
32.5°	915.6	909.3	915.6	918.2	906.8	906.8	906.8	896.7	886.6	891.6	875.2
35°	808.1	803.1	806.9	806.9	801.8	800.6	800.6	791.7	782.9	787.9	771.5
37.5°	693.1	690.5	693.1	693.1	688.0	685.5	686.7	679.1	671.6	675.4	660.2
40°	574.2	571.6	574.2	574.2	569.1	569.1	569.1	562.8	555.2	557.7	545.1
42.5°	459.1	452.8	454.0	454.0	450.2	450.2	451.5	445.2	440.1	440.1	428.7
45°	326.3	326.3	327.6	330.1	325.0	323.8	326.3	321.2	318.7	318.7	308.6
47.5°	216.3	212.5	211.2	209.9	212.5	209.9	212.5	208.7	208.7	208.7	199.8
50°	132.8	130.3	130.3	129.0	130.3	127.7	130.3	127.7	126.5	129.0	122.7
52.5°	73.4	70.8	70.8	70.8	72.1	69.6	70.8	69.6	69.6	69.6	68.3
55°	37.9	36.7	36.7	36.7	36.7	35.4	36.7	36.7	36.7	37.9	36.7
57.5°	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
60°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
62.5°	12.6	11.4	11.4	12.6	11.4	12.6	11.4	11.4	11.4	11.4	11.4
65°	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	8.9	10.1	10.1
67.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
70°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
72.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
75°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P212718

CATALOG NUMBER: LD4B20D010 EU4B10208027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
2.5°	972.6	965.0	967.5	965.0	958.6	959.9	956.1	956.1	948.5	947.3	948.5
5°	997.9	989.0	989.0	983.9	975.1	973.8	966.2	966.2	954.9	951.1	951.1
7.5°	1025.7	1016.8	1014.3	1008.0	996.6	991.5	981.4	977.6	963.7	957.4	956.1
10°	1056.0	1045.9	1040.9	1033.3	1019.4	1010.5	996.6	991.5	975.1	962.4	961.2
12.5°	1090.2	1081.3	1075.0	1064.9	1049.7	1037.1	1020.6	1011.8	990.3	976.4	970.0
15°	1130.6	1120.5	1112.9	1100.3	1083.9	1068.7	1047.2	1037.1	1011.8	992.8	983.9
17.5°	1155.9	1144.6	1138.2	1123.1	1106.6	1088.9	1064.9	1052.2	1023.1	999.1	990.3
20°	1158.5	1149.6	1140.8	1126.9	1110.4	1090.2	1064.9	1052.2	1021.9	997.9	985.2
22.5°	1139.5	1131.9	1121.8	1110.4	1092.7	1072.5	1048.4	1037.1	1008.0	982.7	968.8
25°	1102.8	1096.5	1086.4	1072.5	1059.8	1038.3	1015.6	1008.0	977.6	956.1	943.5
27.5°	1045.9	1042.1	1032.0	1019.4	1009.2	991.5	968.8	962.4	935.9	916.9	906.8
30°	971.3	968.8	958.6	947.3	939.7	923.2	903.0	900.5	876.4	862.5	852.4
32.5°	879.0	876.4	870.1	858.7	852.4	838.5	819.5	822.1	801.8	790.4	786.6
35°	780.3	772.7	768.9	758.8	751.2	741.1	724.7	728.5	717.1	708.2	707.0
37.5°	669.0	661.4	658.9	651.3	645.0	636.1	623.5	628.6	623.5	619.7	623.5
40°	552.7	546.4	543.8	536.2	533.7	527.4	518.5	531.2	524.9	532.4	533.7
42.5°	436.3	430.0	430.0	424.9	421.1	419.9	413.6	430.0	430.0	442.6	449.0
45°	308.6	309.9	307.3	308.6	306.1	309.9	306.1	317.4	333.9	350.3	360.4
47.5°	204.9	201.1	206.1	204.9	203.6	208.7	213.7	225.1	244.1	266.9	280.8
50°	123.9	123.9	126.5	130.3	132.8	136.6	144.2	158.1	179.6	202.4	218.8
52.5°	70.8	69.6	72.1	73.4	79.7	84.7	93.6	108.8	130.3	155.6	170.7
55°	37.9	37.9	39.2	43.0	46.8	53.1	62.0	75.9	96.1	121.4	136.6
57.5°	22.8	22.8	24.0	25.3	29.1	34.1	41.7	53.1	70.8	92.3	106.2
60°	15.2	16.4	16.4	17.7	20.2	22.8	29.1	36.7	50.6	67.0	78.4
62.5°	12.6	12.6	12.6	13.9	15.2	16.4	20.2	26.6	35.4	48.1	56.9
65°	10.1	10.1	10.1	10.1	11.4	12.6	15.2	19.0	25.3	32.9	37.9
67.5°	7.6	7.6	8.9	8.9	8.9	10.1	11.4	13.9	17.7	22.8	26.6
70°	6.3	6.3	6.3	6.3	7.6	7.6	8.9	10.1	12.6	16.4	19.0
72.5°	5.1	5.1	5.1	5.1	6.3	6.3	6.3	7.6	8.9	11.4	12.6
75°	3.8	3.8	3.8	3.8	5.1	5.1	5.1	6.3	6.3	7.6	8.9
77.5°	2.5	2.5	2.5	2.5	3.8	3.8	3.8	3.8	5.1	5.1	5.1
80°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5	2.5	3.8	3.8
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5
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: P212718

CATALOG NUMBER: LD4B20D010 EU4B10208027 4LBSWL11

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
2.5°	939.7	956.1	937.1	940.9	934.6	946.0	930.8	934.6	937.1	934.6	935.9
5°	940.9	953.6	932.1	935.9	925.8	933.4	919.4	920.7	920.7	918.2	916.9
7.5°	944.7	952.3	929.6	928.3	915.6	923.2	906.8	904.3	903.0	899.2	900.5
10°	946.0	948.5	924.5	919.4	904.3	906.8	890.4	885.3	881.5	879.0	877.7
12.5°	954.9	952.3	924.5	915.6	896.7	895.4	877.7	870.1	863.8	861.3	860.0
15°	966.2	957.4	927.0	914.4	892.9	887.8	868.9	861.3	852.4	849.9	847.4
17.5°	971.3	957.4	924.5	908.1	884.0	877.7	858.7	848.6	839.8	836.0	833.4
20°	965.0	947.3	914.4	896.7	871.4	862.5	843.6	832.2	823.3	819.5	817.0
22.5°	951.1	930.8	899.2	881.5	856.2	844.8	828.4	818.3	808.1	806.9	803.1
25°	927.0	906.8	880.2	862.5	839.8	828.4	813.2	804.4	794.2	793.0	791.7
27.5°	891.6	872.6	852.4	836.0	815.7	806.9	795.5	786.6	777.8	777.8	775.3
30°	841.0	828.4	810.7	800.6	784.1	775.3	767.7	761.4	752.5	753.8	751.2
32.5°	776.5	770.2	757.6	752.5	739.9	737.3	729.7	724.7	717.1	719.6	717.1
35°	704.4	696.9	696.9	694.3	688.0	686.7	682.9	680.4	675.4	676.6	676.6
37.5°	622.2	622.2	629.8	631.1	629.8	632.4	631.1	631.1	626.0	628.6	627.3
40°	537.5	545.1	559.0	566.6	569.1	574.2	580.5	578.0	575.4	579.2	578.0
42.5°	455.3	470.5	492.0	504.6	513.5	521.1	529.9	529.9	528.6	533.7	532.4
45°	376.9	390.8	419.9	441.4	456.6	467.9	478.1	481.9	483.1	488.2	486.9
47.5°	299.7	323.8	357.9	383.2	402.2	416.1	430.0	435.1	438.9	445.2	445.2
50°	237.8	268.1	307.3	332.6	355.4	370.6	384.5	392.1	397.1	402.2	402.2
52.5°	191.0	222.6	260.5	287.1	308.6	325.0	338.9	347.8	351.6	357.9	357.9
55°	155.6	184.6	220.1	244.1	265.6	280.8	292.1	299.7	303.5	308.6	308.6
57.5°	122.7	150.5	179.6	201.1	218.8	230.2	240.3	242.8	244.1	247.9	249.1
60°	92.3	113.8	137.9	154.3	166.9	174.5	182.1	180.9	179.6	182.1	179.6
62.5°	65.8	80.9	98.6	108.8	118.9	122.7	126.5	123.9	121.4	122.7	122.7
65°	44.3	55.6	65.8	73.4	78.4	80.9	82.2	80.9	79.7	80.9	79.7
67.5°	30.4	36.7	44.3	48.1	51.9	53.1	54.4	53.1	53.1	53.1	51.9
70°	20.2	24.0	29.1	31.6	32.9	34.1	35.4	34.1	34.1	34.1	34.1
72.5°	13.9	16.4	17.7	20.2	21.5	21.5	21.5	21.5	21.5	21.5	21.5
75°	8.9	10.1	11.4	12.6	13.9	13.9	13.9	13.9	13.9	13.9	13.9
77.5°	6.3	6.3	7.6	7.6	8.9	8.9	8.9	8.9	8.9	8.9	8.9
80°	3.8	3.8	5.1	5.1	5.1	5.1	6.3	5.1	6.3	6.3	6.3
82.5°	2.5	2.5	2.5	2.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8
85°	1.3	1.3	1.3	1.3	1.3	1.3	2.5	1.3	2.5	2.5	2.5
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: P212718

CATALOG NUMBER: LD4B20D010 EU4B10208027 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	957.4	957.4	957.4	957.4
2.5°	935.9	933.4	925.8	934.6
5°	915.6	913.1	906.8	913.1
7.5°	895.4	891.6	886.6	890.4
10°	871.4	868.9	862.5	866.3
12.5°	853.7	848.6	844.8	846.1
15°	842.3	837.2	833.4	834.7
17.5°	827.1	822.1	818.3	818.3
20°	810.7	805.6	803.1	801.8
22.5°	796.8	793.0	791.7	787.9
25°	784.1	781.6	781.6	776.5
27.5°	770.2	766.4	766.4	761.4
30°	746.2	744.9	744.9	741.1
32.5°	714.6	710.8	713.3	707.0
35°	671.6	669.0	672.8	667.8
37.5°	624.8	623.5	626.0	622.2
40°	575.4	575.4	579.2	572.9
42.5°	532.4	532.4	536.2	529.9
45°	485.6	489.4	493.2	488.2
47.5°	445.2	447.7	452.8	447.7
50°	404.7	407.2	411.0	406.0
52.5°	360.4	363.0	366.8	363.0
55°	309.9	312.4	316.2	313.6
57.5°	249.1	246.6	252.9	247.9
60°	180.9	175.8	177.1	177.1
62.5°	120.1	117.6	120.1	116.4
65°	79.7	78.4	78.4	78.4
67.5°	53.1	51.9	53.1	51.9
70°	34.1	34.1	34.1	34.1
72.5°	21.5	21.5	21.5	21.5
75°	13.9	13.9	13.9	13.9
77.5°	8.9	8.9	8.9	8.9
80°	6.3	6.3	6.3	6.3
82.5°	3.8	3.8	3.8	3.8
85°	2.5	2.5	2.5	2.5
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)