

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: P212728

Luminaire Tested: **LD4B20D010 EU4B10209050 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212728
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 EU4B10209050 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1601.9 lumens
Efficiency: N/A
Efficacy: 77.0 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

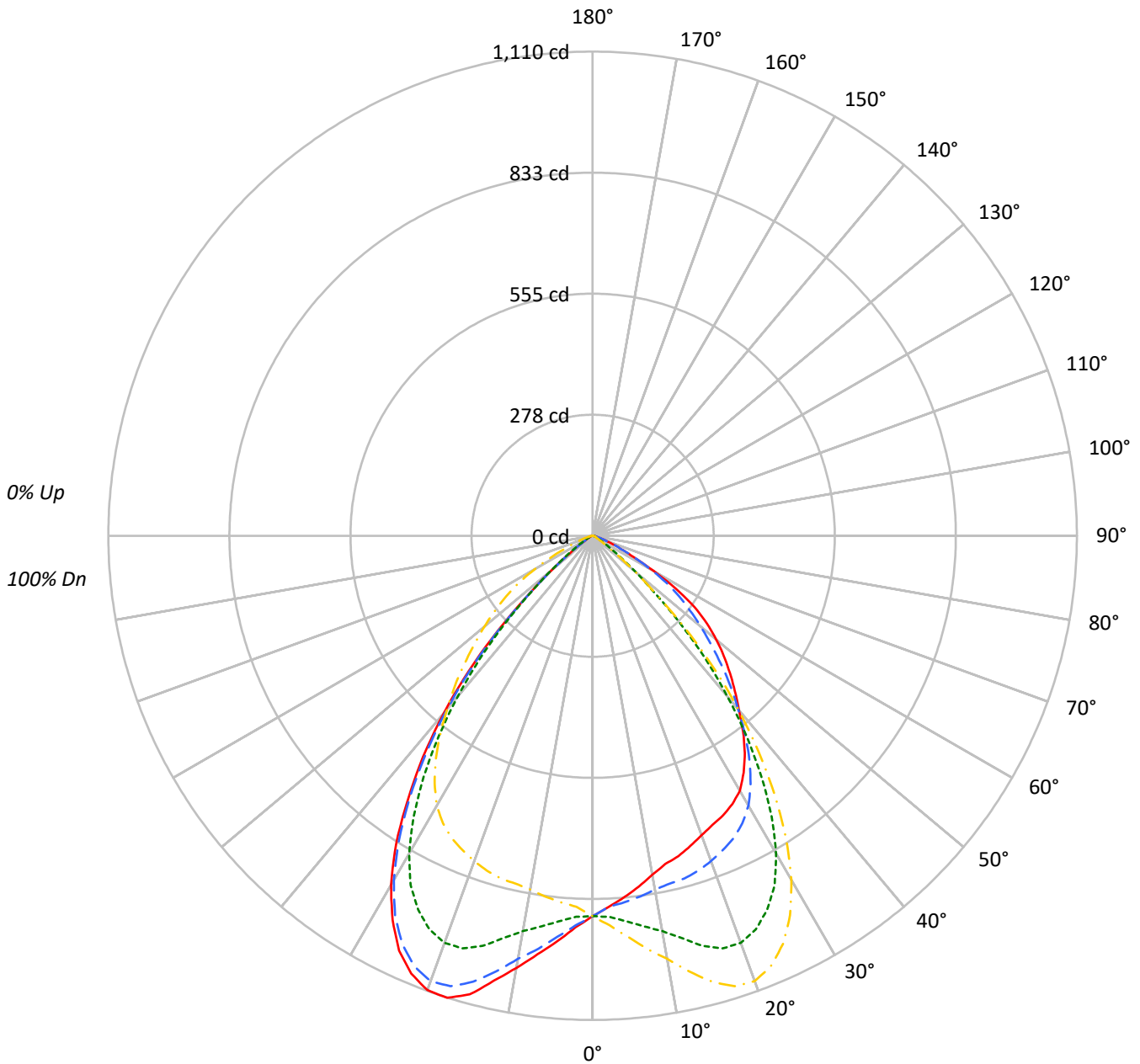
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	107557	107557	107557	107557
5°	102978	109825	115533	109825
10°	98834	115279	125962	115279
15°	97088	124300	139011	124300
20°	95860	130343	145464	130343
25°	96261	128720	142820	128720
30°	96138	119767	131589	119767
35°	91581	101640	111186	101640
40°	84018	77352	85323	77352
45°	77572	49226	53046	49226
50°	70962	23871	23219	23871
55°	61439	10408	7441	10408
60°	39791	5107	3404	5107
65°	20839	3356	2685	3356
70°	11216	2488	2092	2488
75°	6052	2192	1668	2192
80°	4120	1634	852	1634
85°	3255	1698	0	1698



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	5.3
10°-20°	265.9	16.6
20°-30°	413.5	25.8
30°-40°	417.6	26.1
40°-50°	264.4	16.5
50°-60°	111.0	6.9
60°-70°	35.2	2.2
70°-80°	8.1	0.5
80°-90°	1.2	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°	764.4	47.7
0°-40°	1182.0	73.8
0°-60°	1557.5	97.2
0°-90°	1601.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1601.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	872	872	872	872	872	
5°	832	887	933	887	832	78
15°	760	973	1089	973	760	214
25°	707	946	1049	946	707	326
35°	608	675	738	675	608	378
45°	445	282	304	282	445	343
55°	286	48	35	48	286	247
65°	71	12	9	12	71	79
75°	13	5	4	5	13	15
85°	2	1	0	1	2	2
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°	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0
2.5°	851.3	843.2	850.1	852.4	852.4	851.3	853.6	851.3	847.8	861.7	851.3
5°	831.7	826.0	831.7	834.0	835.2	836.3	838.6	838.6	837.5	850.1	843.2
7.5°	811.0	807.5	812.1	815.6	820.2	819.0	822.5	823.6	826.0	840.9	834.0
10°	789.1	785.6	791.4	793.7	799.5	800.6	802.9	806.4	811.0	826.0	823.6
12.5°	770.7	769.5	773.0	777.6	783.3	784.5	786.8	792.5	799.5	815.6	816.7
15°	760.3	759.1	762.6	767.2	771.8	774.1	776.4	784.5	791.4	808.7	813.3
17.5°	745.3	745.3	748.8	753.4	759.1	761.4	764.9	773.0	782.2	799.5	805.2
20°	730.3	731.5	733.8	738.4	744.2	746.5	749.9	758.0	768.4	785.6	793.7
22.5°	717.7	721.1	722.3	725.7	731.5	734.9	736.1	745.3	754.5	769.5	779.9
25°	707.3	711.9	711.9	714.2	721.1	722.3	723.4	732.6	740.7	754.5	764.9
27.5°	693.5	698.1	698.1	701.5	706.1	708.5	708.5	716.5	724.6	734.9	743.0
30°	675.0	678.5	678.5	679.7	684.3	686.6	685.4	693.5	699.2	706.1	714.2
32.5°	643.9	649.7	647.4	650.9	653.2	655.5	653.2	660.1	664.7	671.6	673.9
35°	608.2	612.8	609.4	611.7	616.3	616.3	615.1	619.8	622.1	625.5	626.7
37.5°	566.8	570.2	567.9	569.1	571.4	572.5	570.2	574.8	574.8	576.0	573.7
40°	521.8	527.6	524.1	524.1	526.4	527.6	524.1	526.4	528.7	523.0	518.4
42.5°	482.7	488.4	485.0	485.0	485.0	486.1	481.5	482.7	482.7	474.6	467.7
45°	444.7	449.3	445.8	442.4	443.5	444.7	440.0	438.9	435.4	426.2	415.9
47.5°	407.8	412.4	407.8	405.5	405.5	405.5	399.7	396.3	391.7	379.0	366.3
50°	369.8	374.4	370.9	368.6	366.3	366.3	361.7	357.1	350.2	337.5	323.7
52.5°	330.6	334.1	330.6	328.3	326.0	326.0	320.2	316.8	308.7	296.1	281.1
55°	285.7	288.0	284.5	282.2	281.1	281.1	276.5	273.0	266.1	255.7	241.9
57.5°	225.8	230.4	224.6	226.9	226.9	225.8	222.3	221.2	218.9	209.7	199.3
60°	161.3	161.3	160.1	164.7	163.6	165.9	163.6	164.7	165.9	159.0	152.1
62.5°	106.0	109.4	107.1	109.4	111.7	111.7	110.6	112.9	115.2	111.7	108.3
65°	71.4	71.4	71.4	72.6	72.6	73.7	72.6	73.7	74.9	73.7	71.4
67.5°	47.2	48.4	47.2	48.4	47.2	48.4	48.4	48.4	49.5	48.4	47.2
70°	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	32.3	31.1	30.0
72.5°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
75°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
77.5°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
80°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8	4.6	4.6
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.2	2.3	1.2	1.2
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°	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0
2.5°	857.1	853.6	870.9	855.9	864.0	862.8	864.0	870.9	870.9	874.3	873.2
5°	852.4	849.0	868.6	857.1	866.3	866.3	869.7	880.1	880.1	887.0	888.2
7.5°	845.5	846.7	867.4	860.5	870.9	872.0	877.8	890.5	893.9	903.1	907.7
10°	837.5	842.1	864.0	861.7	875.5	876.6	888.2	903.1	907.7	920.4	928.5
12.5°	834.0	842.1	867.4	869.7	883.5	889.3	902.0	921.6	929.6	944.6	956.1
15°	832.9	844.4	872.0	880.1	896.2	904.3	921.6	944.6	953.8	973.4	987.2
17.5°	827.1	842.1	872.0	884.7	902.0	910.0	931.9	958.4	969.9	991.8	1008.0
20°	816.7	832.9	862.8	878.9	897.4	908.9	930.8	958.4	969.9	993.0	1011.4
22.5°	802.9	819.0	847.8	866.3	882.4	895.1	918.1	944.6	955.0	976.9	995.3
25°	785.6	801.8	826.0	844.4	859.4	870.9	890.5	918.1	925.0	945.8	965.3
27.5°	761.4	776.4	794.8	812.1	826.0	835.2	852.4	876.6	882.4	903.1	919.3
30°	729.2	738.4	754.5	766.1	776.4	785.6	798.3	820.2	822.5	840.9	855.9
32.5°	685.4	690.0	701.5	707.3	716.5	720.0	730.3	748.8	746.5	763.7	776.4
35°	632.4	634.7	634.7	641.6	643.9	645.1	653.2	663.5	660.1	675.0	684.3
37.5°	574.8	573.7	566.8	566.8	567.9	564.5	567.9	572.5	567.9	579.4	587.5
40°	516.1	509.2	496.5	489.6	486.1	485.0	478.1	483.8	472.3	480.4	486.1
42.5°	459.6	448.1	428.5	414.7	408.9	403.2	391.7	391.7	376.7	382.4	383.6
45°	402.0	382.4	356.0	343.3	328.3	319.1	304.1	289.1	278.8	282.2	278.8
47.5°	349.0	326.0	294.9	273.0	255.7	243.1	222.3	205.0	194.7	190.1	185.5
50°	303.0	279.9	244.2	216.6	199.3	184.3	163.6	144.0	131.3	124.4	121.0
52.5°	261.5	237.3	202.7	173.9	155.5	141.7	118.7	99.1	85.2	77.2	72.6
55°	222.3	200.4	168.2	141.7	124.4	110.6	87.5	69.1	56.4	48.4	42.6
57.5°	183.2	163.6	137.1	111.7	96.8	84.1	64.5	48.4	38.0	31.1	26.5
60°	140.5	125.6	103.7	84.1	71.4	61.1	46.1	33.4	26.5	20.7	18.4
62.5°	99.1	89.9	73.7	59.9	51.8	43.8	32.3	24.2	18.4	15.0	13.8
65°	66.8	59.9	50.7	40.3	34.6	30.0	23.0	17.3	13.8	11.5	10.4
67.5°	43.8	40.3	33.4	27.6	24.2	20.7	16.1	12.7	10.4	9.2	8.1
70°	28.8	26.5	21.9	18.4	17.3	15.0	11.5	9.2	8.1	6.9	6.9
72.5°	18.4	16.1	15.0	12.7	11.5	10.4	8.1	6.9	5.8	5.8	5.8
75°	11.5	10.4	9.2	8.1	8.1	6.9	5.8	5.8	4.6	4.6	4.6
77.5°	6.9	6.9	5.8	5.8	4.6	4.6	4.6	3.5	3.5	3.5	3.5
80°	4.6	4.6	3.5	3.5	3.5	3.5	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	1.2	1.2	1.2	1.2	1.2
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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°	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0
2.5°	878.9	881.2	878.9	885.9	874.3	887.0	882.4	884.7	893.9	890.5	893.9
5°	896.2	900.8	900.8	908.9	898.5	913.5	908.9	913.5	922.7	922.7	927.3
7.5°	918.1	923.9	926.2	934.2	923.9	942.3	937.7	943.5	955.0	955.0	958.4
10°	941.1	948.1	952.7	961.9	950.4	971.1	966.5	974.6	984.9	986.1	991.8
12.5°	969.9	979.2	984.9	993.0	984.9	1005.7	1001.0	1009.1	1022.9	1024.1	1031.0
15°	1002.2	1013.7	1020.6	1029.8	1020.6	1043.7	1039.1	1048.3	1058.6	1063.3	1070.2
17.5°	1022.9	1036.8	1042.5	1052.9	1043.7	1066.7	1061.0	1073.6	1082.8	1085.1	1093.2
20°	1026.4	1039.1	1047.1	1055.2	1047.1	1070.2	1064.4	1074.8	1086.3	1088.6	1094.4
22.5°	1011.4	1021.8	1031.0	1037.9	1031.0	1054.0	1046.0	1057.5	1067.9	1070.2	1074.8
25°	976.9	989.5	998.7	1004.5	997.6	1019.5	1012.6	1022.9	1032.2	1036.8	1037.9
27.5°	928.5	940.0	949.2	952.7	948.1	968.8	959.6	972.3	980.3	982.6	986.1
30°	862.8	873.2	882.4	884.7	881.2	896.2	891.6	903.1	911.2	913.5	915.8
32.5°	782.2	792.5	798.3	800.6	797.2	812.1	807.5	816.7	826.0	826.0	826.0
35°	691.2	700.4	703.8	710.8	702.7	717.7	713.1	721.1	729.2	729.2	730.3
37.5°	593.3	600.2	602.5	609.4	601.3	615.1	611.7	618.6	625.5	624.4	626.7
40°	488.4	495.3	497.6	503.4	496.5	508.0	505.7	512.6	518.4	518.4	518.4
42.5°	387.1	391.7	391.7	397.4	390.5	400.9	400.9	405.5	411.2	410.1	410.1
45°	281.1	279.9	282.2	281.1	281.1	290.3	290.3	292.6	297.2	294.9	296.1
47.5°	186.6	187.8	183.2	186.6	182.0	190.1	190.1	190.1	193.5	191.2	193.5
50°	118.7	115.2	112.9	112.9	111.7	117.5	115.2	116.3	118.7	116.3	118.7
52.5°	66.8	65.7	63.4	64.5	62.2	63.4	63.4	63.4	64.5	63.4	65.7
55°	39.2	35.7	34.6	34.6	33.4	34.6	33.4	33.4	33.4	32.3	33.4
57.5°	23.0	21.9	20.7	20.7	19.6	19.6	19.6	19.6	19.6	19.6	19.6
60°	16.1	15.0	15.0	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
62.5°	12.7	11.5	11.5	11.5	10.4	10.4	10.4	10.4	10.4	11.5	10.4
65°	9.2	9.2	9.2	9.2	9.2	9.2	8.1	9.2	9.2	9.2	9.2
67.5°	8.1	8.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
70°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
72.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
75°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	0.0	1.2	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



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0
2.5°	897.4	892.8	882.4	889.3	890.5	885.9	891.6	898.5	891.6	885.9	890.5
5°	930.8	927.3	918.1	923.9	925.0	923.9	927.3	933.1	927.3	923.9	925.0
7.5°	964.2	961.9	951.5	958.4	960.7	958.4	961.9	967.6	961.9	958.4	960.7
10°	996.4	995.3	984.9	994.1	995.3	993.0	996.4	1005.7	996.4	993.0	995.3
12.5°	1033.3	1035.6	1024.1	1034.5	1035.6	1033.3	1037.9	1044.8	1037.9	1033.3	1035.6
15°	1075.9	1074.8	1065.6	1073.6	1075.9	1073.6	1079.4	1088.6	1079.4	1073.6	1075.9
17.5°	1096.7	1096.7	1089.7	1097.8	1099.0	1099.0	1103.6	1110.5	1103.6	1099.0	1099.0
20°	1097.8	1099.0	1090.9	1100.1	1100.1	1100.1	1104.7	1108.2	1104.7	1100.1	1100.1
22.5°	1079.4	1080.5	1072.5	1080.5	1080.5	1081.7	1084.0	1086.3	1084.0	1081.7	1080.5
25°	1043.7	1044.8	1037.9	1044.8	1043.7	1043.7	1046.0	1049.4	1046.0	1043.7	1043.7
27.5°	990.7	991.8	982.6	990.7	989.5	988.4	991.8	993.0	991.8	988.4	989.5
30°	920.4	921.6	913.5	920.4	919.3	918.1	922.7	923.9	922.7	918.1	919.3
32.5°	836.3	834.0	828.3	834.0	832.9	832.9	835.2	838.6	835.2	832.9	832.9
35°	734.9	734.9	731.5	736.1	732.6	737.3	737.3	738.4	737.3	737.3	732.6
37.5°	631.3	631.3	629.0	631.3	630.1	634.7	634.7	638.2	634.7	634.7	630.1
40°	523.0	523.0	520.7	523.0	526.4	526.4	525.3	529.9	525.3	526.4	526.4
42.5°	413.6	413.6	412.4	418.2	418.2	418.2	414.7	419.3	414.7	418.2	418.2
45°	300.7	298.4	297.2	297.2	298.4	303.0	298.4	304.1	298.4	303.0	298.4
47.5°	191.2	192.4	193.5	197.0	194.7	193.5	193.5	197.0	193.5	193.5	194.7
50°	117.5	118.7	118.7	121.0	117.5	119.8	118.7	121.0	118.7	119.8	117.5
52.5°	64.5	64.5	64.5	66.8	64.5	65.7	64.5	66.8	64.5	65.7	64.5
55°	33.4	33.4	33.4	34.6	33.4	33.4	33.4	34.6	33.4	33.4	33.4
57.5°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
60°	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
62.5°	11.5	10.4	10.4	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
65°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
67.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
70°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
72.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
75°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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: P212728

CATALOG NUMBER: LD4B20D010 EU4B10209050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0
2.5°	889.3	882.4	892.8	897.4	893.9	890.5	893.9	884.7	882.4	887.0	874.3
5°	923.9	918.1	927.3	930.8	927.3	922.7	922.7	913.5	908.9	913.5	898.5
7.5°	958.4	951.5	961.9	964.2	958.4	955.0	955.0	943.5	937.7	942.3	923.9
10°	994.1	984.9	995.3	996.4	991.8	986.1	984.9	974.6	966.5	971.1	950.4
12.5°	1034.5	1024.1	1035.6	1033.3	1031.0	1024.1	1022.9	1009.1	1001.0	1005.7	984.9
15°	1073.6	1065.6	1074.8	1075.9	1070.2	1063.3	1058.6	1048.3	1039.1	1043.7	1020.6
17.5°	1097.8	1089.7	1096.7	1096.7	1093.2	1085.1	1082.8	1073.6	1061.0	1066.7	1043.7
20°	1100.1	1090.9	1099.0	1097.8	1094.4	1088.6	1086.3	1074.8	1064.4	1070.2	1047.1
22.5°	1080.5	1072.5	1080.5	1079.4	1074.8	1070.2	1067.9	1057.5	1046.0	1054.0	1031.0
25°	1044.8	1037.9	1044.8	1043.7	1037.9	1036.8	1032.2	1022.9	1012.6	1019.5	997.6
27.5°	990.7	982.6	991.8	990.7	986.1	982.6	980.3	972.3	959.6	968.8	948.1
30°	920.4	913.5	921.6	920.4	915.8	913.5	911.2	903.1	891.6	896.2	881.2
32.5°	834.0	828.3	834.0	836.3	826.0	826.0	826.0	816.7	807.5	812.1	797.2
35°	736.1	731.5	734.9	734.9	730.3	729.2	729.2	721.1	713.1	717.7	702.7
37.5°	631.3	629.0	631.3	631.3	626.7	624.4	625.5	618.6	611.7	615.1	601.3
40°	523.0	520.7	523.0	523.0	518.4	518.4	518.4	512.6	505.7	508.0	496.5
42.5°	418.2	412.4	413.6	413.6	410.1	410.1	411.2	405.5	400.9	400.9	390.5
45°	297.2	297.2	298.4	300.7	296.1	294.9	297.2	292.6	290.3	290.3	281.1
47.5°	197.0	193.5	192.4	191.2	193.5	191.2	193.5	190.1	190.1	190.1	182.0
50°	121.0	118.7	118.7	117.5	118.7	116.3	118.7	116.3	115.2	117.5	111.7
52.5°	66.8	64.5	64.5	64.5	65.7	63.4	64.5	63.4	63.4	63.4	62.2
55°	34.6	33.4	33.4	33.4	33.4	32.3	33.4	33.4	33.4	34.6	33.4
57.5°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
60°	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
62.5°	11.5	10.4	10.4	11.5	10.4	11.5	10.4	10.4	10.4	10.4	10.4
65°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	8.1	9.2	9.2
67.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
70°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
72.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
75°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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: P212728

CATALOG NUMBER: LD4B20D010 EU4B10209050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0
2.5°	885.9	878.9	881.2	878.9	873.2	874.3	870.9	870.9	864.0	862.8	864.0
5°	908.9	900.8	900.8	896.2	888.2	887.0	880.1	880.1	869.7	866.3	866.3
7.5°	934.2	926.2	923.9	918.1	907.7	903.1	893.9	890.5	877.8	872.0	870.9
10°	961.9	952.7	948.1	941.1	928.5	920.4	907.7	903.1	888.2	876.6	875.5
12.5°	993.0	984.9	979.2	969.9	956.1	944.6	929.6	921.6	902.0	889.3	883.5
15°	1029.8	1020.6	1013.7	1002.2	987.2	973.4	953.8	944.6	921.6	904.3	896.2
17.5°	1052.9	1042.5	1036.8	1022.9	1008.0	991.8	969.9	958.4	931.9	910.0	902.0
20°	1055.2	1047.1	1039.1	1026.4	1011.4	993.0	969.9	958.4	930.8	908.9	897.4
22.5°	1037.9	1031.0	1021.8	1011.4	995.3	976.9	955.0	944.6	918.1	895.1	882.4
25°	1004.5	998.7	989.5	976.9	965.3	945.8	925.0	918.1	890.5	870.9	859.4
27.5°	952.7	949.2	940.0	928.5	919.3	903.1	882.4	876.6	852.4	835.2	826.0
30°	884.7	882.4	873.2	862.8	855.9	840.9	822.5	820.2	798.3	785.6	776.4
32.5°	800.6	798.3	792.5	782.2	776.4	763.7	746.5	748.8	730.3	720.0	716.5
35°	710.8	703.8	700.4	691.2	684.3	675.0	660.1	663.5	653.2	645.1	643.9
37.5°	609.4	602.5	600.2	593.3	587.5	579.4	567.9	572.5	567.9	564.5	567.9
40°	503.4	497.6	495.3	488.4	486.1	480.4	472.3	483.8	478.1	485.0	486.1
42.5°	397.4	391.7	391.7	387.1	383.6	382.4	376.7	391.7	391.7	403.2	408.9
45°	281.1	282.2	279.9	281.1	278.8	282.2	278.8	289.1	304.1	319.1	328.3
47.5°	186.6	183.2	187.8	186.6	185.5	190.1	194.7	205.0	222.3	243.1	255.7
50°	112.9	112.9	115.2	118.7	121.0	124.4	131.3	144.0	163.6	184.3	199.3
52.5°	64.5	63.4	65.7	66.8	72.6	77.2	85.2	99.1	118.7	141.7	155.5
55°	34.6	34.6	35.7	39.2	42.6	48.4	56.4	69.1	87.5	110.6	124.4
57.5°	20.7	20.7	21.9	23.0	26.5	31.1	38.0	48.4	64.5	84.1	96.8
60°	13.8	15.0	15.0	16.1	18.4	20.7	26.5	33.4	46.1	61.1	71.4
62.5°	11.5	11.5	11.5	12.7	13.8	15.0	18.4	24.2	32.3	43.8	51.8
65°	9.2	9.2	9.2	9.2	10.4	11.5	13.8	17.3	23.0	30.0	34.6
67.5°	6.9	6.9	8.1	8.1	8.1	9.2	10.4	12.7	16.1	20.7	24.2
70°	5.8	5.8	5.8	5.8	6.9	6.9	8.1	9.2	11.5	15.0	17.3
72.5°	4.6	4.6	4.6	4.6	5.8	5.8	5.8	6.9	8.1	10.4	11.5
75°	3.5	3.5	3.5	3.5	4.6	4.6	4.6	5.8	5.8	6.9	8.1
77.5°	2.3	2.3	2.3	2.3	3.5	3.5	3.5	3.5	4.6	4.6	4.6
80°	1.2	1.2	1.2	2.3	2.3	2.3	2.3	2.3	2.3	3.5	3.5
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3	2.3
85°	0.0	0.0	1.2	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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: P212728

CATALOG NUMBER: LD4B20D010 EU4B10209050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0	872.0
2.5°	855.9	870.9	853.6	857.1	851.3	861.7	847.8	851.3	853.6	851.3	852.4
5°	857.1	868.6	849.0	852.4	843.2	850.1	837.5	838.6	838.6	836.3	835.2
7.5°	860.5	867.4	846.7	845.5	834.0	840.9	826.0	823.6	822.5	819.0	820.2
10°	861.7	864.0	842.1	837.5	823.6	826.0	811.0	806.4	802.9	800.6	799.5
12.5°	869.7	867.4	842.1	834.0	816.7	815.6	799.5	792.5	786.8	784.5	783.3
15°	880.1	872.0	844.4	832.9	813.3	808.7	791.4	784.5	776.4	774.1	771.8
17.5°	884.7	872.0	842.1	827.1	805.2	799.5	782.2	773.0	764.9	761.4	759.1
20°	878.9	862.8	832.9	816.7	793.7	785.6	768.4	758.0	749.9	746.5	744.2
22.5°	866.3	847.8	819.0	802.9	779.9	769.5	754.5	745.3	736.1	734.9	731.5
25°	844.4	826.0	801.8	785.6	764.9	754.5	740.7	732.6	723.4	722.3	721.1
27.5°	812.1	794.8	776.4	761.4	743.0	734.9	724.6	716.5	708.5	708.5	706.1
30°	766.1	754.5	738.4	729.2	714.2	706.1	699.2	693.5	685.4	686.6	684.3
32.5°	707.3	701.5	690.0	685.4	673.9	671.6	664.7	660.1	653.2	655.5	653.2
35°	641.6	634.7	634.7	632.4	626.7	625.5	622.1	619.8	615.1	616.3	616.3
37.5°	566.8	566.8	573.7	574.8	573.7	576.0	574.8	574.8	570.2	572.5	571.4
40°	489.6	496.5	509.2	516.1	518.4	523.0	528.7	526.4	524.1	527.6	526.4
42.5°	414.7	428.5	448.1	459.6	467.7	474.6	482.7	482.7	481.5	486.1	485.0
45°	343.3	356.0	382.4	402.0	415.9	426.2	435.4	438.9	440.0	444.7	443.5
47.5°	273.0	294.9	326.0	349.0	366.3	379.0	391.7	396.3	399.7	405.5	405.5
50°	216.6	244.2	279.9	303.0	323.7	337.5	350.2	357.1	361.7	366.3	366.3
52.5°	173.9	202.7	237.3	261.5	281.1	296.1	308.7	316.8	320.2	326.0	326.0
55°	141.7	168.2	200.4	222.3	241.9	255.7	266.1	273.0	276.5	281.1	281.1
57.5°	111.7	137.1	163.6	183.2	199.3	209.7	218.9	221.2	222.3	225.8	226.9
60°	84.1	103.7	125.6	140.5	152.1	159.0	165.9	164.7	163.6	165.9	163.6
62.5°	59.9	73.7	89.9	99.1	108.3	111.7	115.2	112.9	110.6	111.7	111.7
65°	40.3	50.7	59.9	66.8	71.4	73.7	74.9	73.7	72.6	73.7	72.6
67.5°	27.6	33.4	40.3	43.8	47.2	48.4	49.5	48.4	48.4	48.4	47.2
70°	18.4	21.9	26.5	28.8	30.0	31.1	32.3	31.1	31.1	31.1	31.1
72.5°	12.7	15.0	16.1	18.4	19.6	19.6	19.6	19.6	19.6	19.6	19.6
75°	8.1	9.2	10.4	11.5	12.7	12.7	12.7	12.7	12.7	12.7	12.7
77.5°	5.8	5.8	6.9	6.9	8.1	8.1	8.1	8.1	8.1	8.1	8.1
80°	3.5	3.5	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8	5.8
82.5°	2.3	2.3	2.3	2.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	1.2	1.2	1.2	1.2	1.2	1.2	2.3	1.2	2.3	2.3	2.3
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: P212728

CATALOG NUMBER: LD4B20D010 EU4B10209050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	872.0	872.0	872.0	872.0
2.5°	852.4	850.1	843.2	851.3
5°	834.0	831.7	826.0	831.7
7.5°	815.6	812.1	807.5	811.0
10°	793.7	791.4	785.6	789.1
12.5°	777.6	773.0	769.5	770.7
15°	767.2	762.6	759.1	760.3
17.5°	753.4	748.8	745.3	745.3
20°	738.4	733.8	731.5	730.3
22.5°	725.7	722.3	721.1	717.7
25°	714.2	711.9	711.9	707.3
27.5°	701.5	698.1	698.1	693.5
30°	679.7	678.5	678.5	675.0
32.5°	650.9	647.4	649.7	643.9
35°	611.7	609.4	612.8	608.2
37.5°	569.1	567.9	570.2	566.8
40°	524.1	524.1	527.6	521.8
42.5°	485.0	485.0	488.4	482.7
45°	442.4	445.8	449.3	444.7
47.5°	405.5	407.8	412.4	407.8
50°	368.6	370.9	374.4	369.8
52.5°	328.3	330.6	334.1	330.6
55°	282.2	284.5	288.0	285.7
57.5°	226.9	224.6	230.4	225.8
60°	164.7	160.1	161.3	161.3
62.5°	109.4	107.1	109.4	106.0
65°	72.6	71.4	71.4	71.4
67.5°	48.4	47.2	48.4	47.2
70°	31.1	31.1	31.1	31.1
72.5°	19.6	19.6	19.6	19.6
75°	12.7	12.7	12.7	12.7
77.5°	8.1	8.1	8.1	8.1
80°	5.8	5.8	5.8	5.8
82.5°	3.5	3.5	3.5	3.5
85°	2.3	2.3	2.3	2.3
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)