

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: P212727

Luminaire Tested: **LD4B20D010 EU4B10209040 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212727
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 EU4B10209040 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1594.6 lumens
Efficiency: N/A
Efficacy: 76.7 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

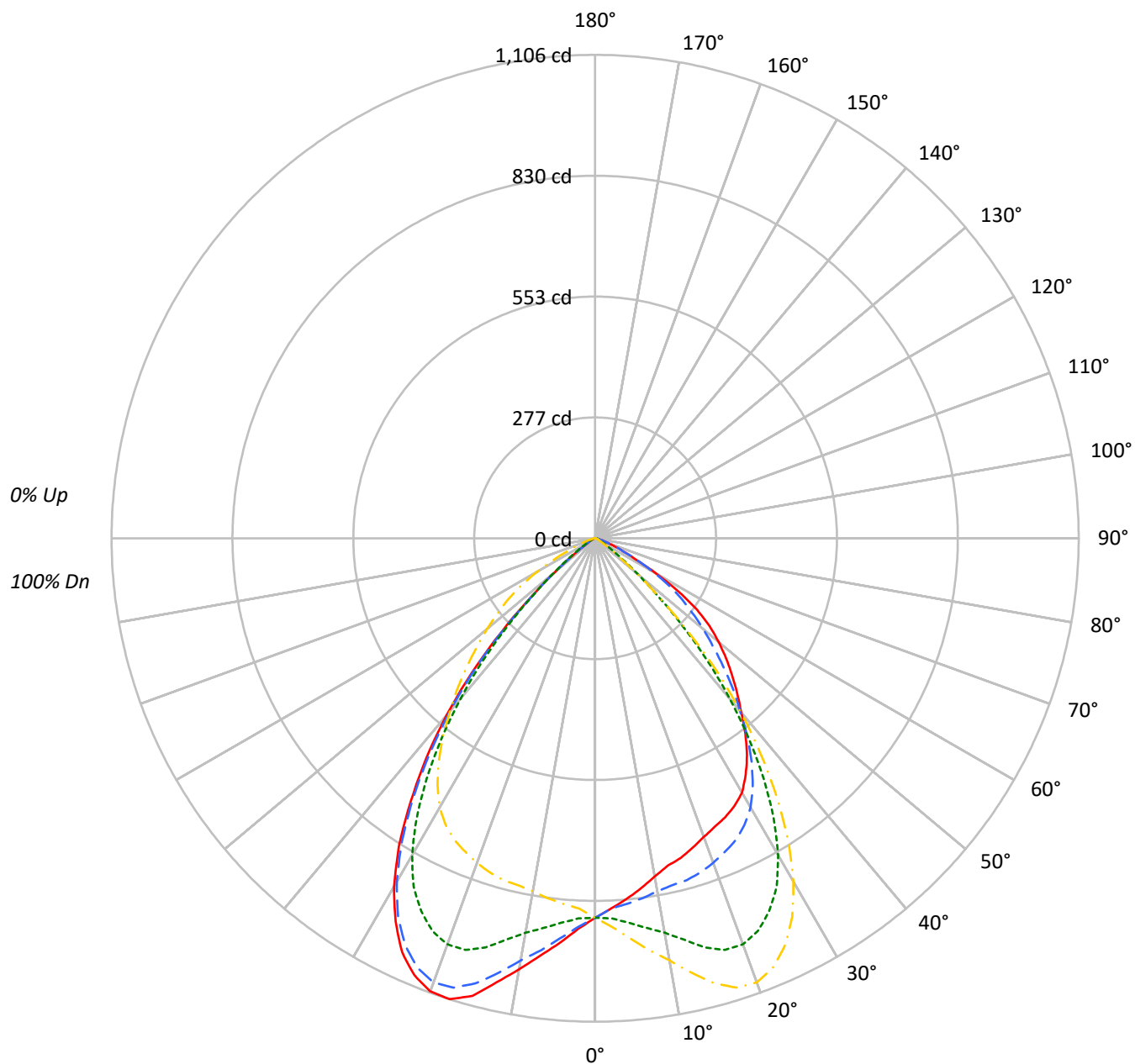
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	107076	107076	107076	107076
5°	102520	109330	115013	109330
10°	98383	114765	125386	114765
15°	96654	123738	138385	123738
20°	95427	129752	144808	129752
25°	95826	128135	142180	128135
30°	95711	119226	130990	119226
35°	91174	101188	110689	101188
40°	83648	76998	84936	76998
45°	77206	49017	52802	49017
50°	70635	23756	23104	23756
55°	61159	10365	7398	10365
60°	39594	5082	3404	5082
65°	20751	3356	2685	3356
70°	11180	2488	2056	2488
75°	6005	2192	1620	2192
80°	4049	1634	781	1634
85°	3255	1557	0	1557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.6	5.3
10°-20°	264.7	16.6
20°-30°	411.6	25.8
30°-40°	415.7	26.1
40°-50°	263.2	16.5
50°-60°	110.5	6.9
60°-70°	35.0	2.2
70°-80°	8.0	0.5
80°-90°	1.1	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°	761.0	47.7
0°-40°	1176.7	73.8
0°-60°	1550.4	97.2
0°-90°	1594.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1594.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	868	868	868	868	868	
5°	828	883	929	883	828	78
15°	757	969	1084	969	757	213
25°	704	942	1045	942	704	324
35°	606	672	735	672	606	376
45°	443	281	303	281	443	342
55°	284	48	34	48	284	246
65°	71	12	9	12	71	78
75°	13	5	3	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°	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1
2.5°	847.5	839.4	846.3	848.6	848.6	847.5	849.7	847.5	844.0	857.8	847.5
5°	828.0	822.2	828.0	830.3	831.4	832.5	834.8	834.8	833.7	846.3	839.4
7.5°	807.3	803.9	808.5	811.9	816.5	815.3	818.8	819.9	822.2	837.1	830.3
10°	785.5	782.1	787.8	790.1	795.9	797.0	799.3	802.7	807.3	822.2	819.9
12.5°	767.2	766.0	769.5	774.1	779.8	780.9	783.2	789.0	795.9	811.9	813.1
15°	756.9	755.7	759.2	763.7	768.3	770.6	772.9	780.9	787.8	805.0	809.6
17.5°	742.0	742.0	745.4	750.0	755.7	758.0	761.4	769.5	778.6	795.9	801.6
20°	727.0	728.2	730.5	735.1	740.8	743.1	746.5	754.6	764.9	782.1	790.1
22.5°	714.4	717.9	719.0	722.5	728.2	731.6	732.8	742.0	751.1	766.0	776.4
25°	704.1	708.7	708.7	711.0	717.9	719.0	720.2	729.3	737.4	751.1	761.4
27.5°	690.3	694.9	694.9	698.4	703.0	705.3	705.3	713.3	721.3	731.6	739.7
30°	672.0	675.4	675.4	676.6	681.2	683.5	682.3	690.3	696.1	703.0	711.0
32.5°	641.0	646.8	644.5	647.9	650.2	652.5	650.2	657.1	661.7	668.6	670.9
35°	605.5	610.1	606.6	608.9	613.5	613.5	612.4	617.0	619.2	622.7	623.8
37.5°	564.2	567.6	565.4	566.5	568.8	569.9	567.6	572.2	572.2	573.4	571.1
40°	519.5	525.2	521.8	521.8	524.1	525.2	521.8	524.1	526.4	520.6	516.0
42.5°	480.5	486.2	482.8	482.8	482.8	483.9	479.3	480.5	480.5	472.5	465.6
45°	442.6	447.2	443.8	440.4	441.5	442.6	438.1	436.9	433.5	424.3	414.0
47.5°	406.0	410.5	406.0	403.7	403.7	403.7	397.9	394.5	389.9	377.3	364.7
50°	368.1	372.7	369.3	367.0	364.7	364.7	360.1	355.5	348.6	336.0	322.2
52.5°	329.1	332.6	329.1	326.8	324.5	324.5	318.8	315.4	307.3	294.7	279.8
55°	284.4	286.7	283.2	281.0	279.8	279.8	275.2	271.8	264.9	254.6	240.8
57.5°	224.8	229.4	223.6	225.9	225.9	224.8	221.3	220.2	217.9	208.7	198.4
60°	160.5	160.5	159.4	164.0	162.8	165.1	162.8	164.0	165.1	158.3	151.4
62.5°	105.5	108.9	106.6	108.9	111.2	111.2	110.1	112.4	114.7	111.2	107.8
65°	71.1	71.1	71.1	72.2	72.2	73.4	72.2	73.4	74.5	73.4	71.1
67.5°	47.0	48.2	47.0	48.2	47.0	48.2	48.2	48.2	49.3	48.2	47.0
70°	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	32.1	31.0	29.8
72.5°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
75°	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
77.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
80°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	4.6	5.7	4.6	4.6
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.1	2.3	1.1	1.1
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°	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1
2.5°	853.2	849.7	866.9	852.0	860.1	858.9	860.1	866.9	866.9	870.4	869.2
5°	848.6	845.2	864.7	853.2	862.4	862.4	865.8	876.1	876.1	883.0	884.2
7.5°	841.7	842.9	863.5	856.6	866.9	868.1	873.8	886.4	889.9	899.1	903.6
10°	833.7	838.3	860.1	857.8	871.5	872.7	884.2	899.1	903.6	916.3	924.3
12.5°	830.3	838.3	863.5	865.8	879.6	885.3	897.9	917.4	925.4	940.3	951.8
15°	829.1	840.6	868.1	876.1	892.2	900.2	917.4	940.3	949.5	969.0	982.8
17.5°	823.4	838.3	868.1	880.7	897.9	905.9	927.7	954.1	965.6	987.4	1003.4
20°	813.1	829.1	858.9	875.0	893.3	904.8	926.6	954.1	965.6	988.5	1006.9
22.5°	799.3	815.3	844.0	862.4	878.4	891.0	914.0	940.3	950.7	972.5	990.8
25°	782.1	798.1	822.2	840.6	855.5	866.9	886.4	914.0	920.8	941.5	961.0
27.5°	758.0	772.9	791.3	808.5	822.2	831.4	848.6	872.7	878.4	899.1	915.1
30°	725.9	735.1	751.1	762.6	772.9	782.1	794.7	816.5	818.8	837.1	852.0
32.5°	682.3	686.9	698.4	704.1	713.3	716.7	727.0	745.4	743.1	760.3	772.9
35°	629.6	631.9	631.9	638.7	641.0	642.2	650.2	660.5	657.1	672.0	681.2
37.5°	572.2	571.1	564.2	564.2	565.4	561.9	565.4	569.9	565.4	576.8	584.8
40°	513.7	506.9	494.3	487.4	483.9	482.8	475.9	481.6	470.2	478.2	483.9
42.5°	457.6	446.1	426.6	412.8	407.1	401.4	389.9	389.9	375.0	380.7	381.9
45°	400.2	380.7	354.3	341.7	326.8	317.7	302.7	287.8	277.5	281.0	277.5
47.5°	347.5	324.5	293.6	271.8	254.6	242.0	221.3	204.1	193.8	189.2	184.6
50°	301.6	278.7	243.1	215.6	198.4	183.5	162.8	143.3	130.7	123.8	120.4
52.5°	260.3	236.2	201.8	173.2	154.8	141.1	118.1	98.6	84.9	76.8	72.2
55°	221.3	199.5	167.4	141.1	123.8	110.1	87.2	68.8	56.2	48.2	42.4
57.5°	182.3	162.8	136.5	111.2	96.3	83.7	64.2	48.2	37.8	31.0	26.4
60°	139.9	125.0	103.2	83.7	71.1	60.8	45.9	33.3	26.4	20.6	18.3
62.5°	98.6	89.4	73.4	59.6	51.6	43.6	32.1	24.1	18.3	14.9	13.8
65°	66.5	59.6	50.5	40.1	34.4	29.8	22.9	17.2	13.8	11.5	10.3
67.5°	43.6	40.1	33.3	27.5	24.1	20.6	16.1	12.6	10.3	9.2	8.0
70°	28.7	26.4	21.8	18.3	17.2	14.9	11.5	9.2	8.0	6.9	6.9
72.5°	18.3	16.1	14.9	12.6	11.5	10.3	8.0	6.9	5.7	5.7	5.7
75°	11.5	10.3	9.2	8.0	8.0	6.9	5.7	5.7	4.6	4.6	4.6
77.5°	6.9	6.9	5.7	5.7	4.6	4.6	4.6	3.4	3.4	3.4	3.4
80°	4.6	4.6	3.4	3.4	3.4	3.4	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1	1.1	1.1
85°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1
2.5°	875.0	877.3	875.0	881.9	870.4	883.0	878.4	880.7	889.9	886.4	889.9
5°	892.2	896.8	896.8	904.8	894.5	909.4	904.8	909.4	918.6	918.6	923.1
7.5°	914.0	919.7	922.0	930.0	919.7	938.0	933.5	939.2	950.7	950.7	954.1
10°	936.9	943.8	948.4	957.5	946.1	966.7	962.1	970.2	980.5	981.6	987.4
12.5°	965.6	974.7	980.5	988.5	980.5	1001.1	996.5	1004.6	1018.3	1019.5	1026.3
15°	997.7	1009.1	1016.0	1025.2	1016.0	1039.0	1034.4	1043.6	1053.9	1058.5	1065.3
17.5°	1018.3	1032.1	1037.8	1048.1	1039.0	1061.9	1056.2	1068.8	1078.0	1080.2	1088.3
20°	1021.8	1034.4	1042.4	1050.4	1042.4	1065.3	1059.6	1069.9	1081.4	1083.7	1089.4
22.5°	1006.9	1017.2	1026.3	1033.2	1026.3	1049.3	1041.3	1052.7	1063.0	1065.3	1069.9
25°	972.5	985.1	994.2	1000.0	993.1	1014.9	1008.0	1018.3	1027.5	1032.1	1033.2
27.5°	924.3	935.8	944.9	948.4	943.8	964.4	955.3	967.9	975.9	978.2	981.6
30°	858.9	869.2	878.4	880.7	877.3	892.2	887.6	899.1	907.1	909.4	911.7
32.5°	778.6	789.0	794.7	797.0	793.6	808.5	803.9	813.1	822.2	822.2	822.2
35°	688.1	697.2	700.7	707.6	699.5	714.4	709.8	717.9	725.9	725.9	727.0
37.5°	590.6	597.5	599.8	606.6	598.6	612.4	608.9	615.8	622.7	621.5	623.8
40°	486.2	493.1	495.4	501.1	494.3	505.7	503.4	510.3	516.0	516.0	516.0
42.5°	385.3	389.9	389.9	395.6	388.8	399.1	399.1	403.7	409.4	408.2	408.2
45°	279.8	278.7	281.0	279.8	279.8	289.0	289.0	291.3	295.9	293.6	294.7
47.5°	185.8	186.9	182.3	185.8	181.2	189.2	189.2	189.2	192.7	190.4	192.7
50°	118.1	114.7	112.4	112.4	111.2	117.0	114.7	115.8	118.1	115.8	118.1
52.5°	66.5	65.4	63.1	64.2	61.9	63.1	63.1	63.1	64.2	63.1	65.4
55°	39.0	35.5	34.4	34.4	33.3	34.4	33.3	33.3	33.3	32.1	33.3
57.5°	22.9	21.8	20.6	20.6	19.5	19.5	19.5	19.5	19.5	19.5	19.5
60°	16.1	14.9	14.9	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
62.5°	12.6	11.5	11.5	11.5	10.3	10.3	10.3	10.3	10.3	11.5	10.3
65°	9.2	9.2	9.2	9.2	9.2	9.2	8.0	9.2	9.2	9.2	9.2
67.5°	8.0	8.0	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
70°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
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°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	0.0	1.1	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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CATALOG NUMBER: LD4B20D010 EU4B10209040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1
2.5°	893.3	888.7	878.4	885.3	886.4	881.9	887.6	894.5	887.6	881.9	886.4
5°	926.6	923.1	914.0	919.7	920.8	919.7	923.1	928.9	923.1	919.7	920.8
7.5°	959.8	957.5	947.2	954.1	956.4	954.1	957.5	963.3	957.5	954.1	956.4
10°	991.9	990.8	980.5	989.7	990.8	988.5	991.9	1001.1	991.9	988.5	990.8
12.5°	1028.6	1030.9	1019.5	1029.8	1030.9	1028.6	1033.2	1040.1	1033.2	1028.6	1030.9
15°	1071.1	1069.9	1060.8	1068.8	1071.1	1068.8	1074.5	1083.7	1074.5	1068.8	1071.1
17.5°	1091.7	1091.7	1084.8	1092.9	1094.0	1094.0	1098.6	1105.5	1098.6	1094.0	1094.0
20°	1092.9	1094.0	1086.0	1095.2	1095.2	1095.2	1099.7	1103.2	1099.7	1095.2	1095.2
22.5°	1074.5	1075.7	1067.6	1075.7	1075.7	1076.8	1079.1	1081.4	1079.1	1076.8	1075.7
25°	1039.0	1040.1	1033.2	1040.1	1039.0	1039.0	1041.3	1044.7	1041.3	1039.0	1039.0
27.5°	986.2	987.4	978.2	986.2	985.1	983.9	987.4	988.5	987.4	983.9	985.1
30°	916.3	917.4	909.4	916.3	915.1	914.0	918.6	919.7	918.6	914.0	915.1
32.5°	832.5	830.3	824.5	830.3	829.1	829.1	831.4	834.8	831.4	829.1	829.1
35°	731.6	731.6	728.2	732.8	729.3	733.9	733.9	735.1	733.9	733.9	729.3
37.5°	628.4	628.4	626.1	628.4	627.3	631.9	631.9	635.3	631.9	631.9	627.3
40°	520.6	520.6	518.3	520.6	524.1	524.1	522.9	527.5	522.9	524.1	524.1
42.5°	411.7	411.7	410.5	416.3	416.3	416.3	412.8	417.4	412.8	416.3	416.3
45°	299.3	297.0	295.9	295.9	297.0	301.6	297.0	302.7	297.0	301.6	297.0
47.5°	190.4	191.5	192.7	196.1	193.8	192.7	192.7	196.1	192.7	192.7	193.8
50°	117.0	118.1	118.1	120.4	117.0	119.3	118.1	120.4	118.1	119.3	117.0
52.5°	64.2	64.2	64.2	66.5	64.2	65.4	64.2	66.5	64.2	65.4	64.2
55°	33.3	33.3	33.3	34.4	33.3	33.3	33.3	34.4	33.3	33.3	33.3
57.5°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
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	10.3	10.3	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°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
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°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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: P212727

CATALOG NUMBER: LD4B20D010 EU4B10209040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1
2.5°	885.3	878.4	888.7	893.3	889.9	886.4	889.9	880.7	878.4	883.0	870.4
5°	919.7	914.0	923.1	926.6	923.1	918.6	918.6	909.4	904.8	909.4	894.5
7.5°	954.1	947.2	957.5	959.8	954.1	950.7	950.7	939.2	933.5	938.0	919.7
10°	989.7	980.5	990.8	991.9	987.4	981.6	980.5	970.2	962.1	966.7	946.1
12.5°	1029.8	1019.5	1030.9	1028.6	1026.3	1019.5	1018.3	1004.6	996.5	1001.1	980.5
15°	1068.8	1060.8	1069.9	1071.1	1065.3	1058.5	1053.9	1043.6	1034.4	1039.0	1016.0
17.5°	1092.9	1084.8	1091.7	1091.7	1088.3	1080.2	1078.0	1068.8	1056.2	1061.9	1039.0
20°	1095.2	1086.0	1094.0	1092.9	1089.4	1083.7	1081.4	1069.9	1059.6	1065.3	1042.4
22.5°	1075.7	1067.6	1075.7	1074.5	1069.9	1065.3	1063.0	1052.7	1041.3	1049.3	1026.3
25°	1040.1	1033.2	1040.1	1039.0	1033.2	1032.1	1027.5	1018.3	1008.0	1014.9	993.1
27.5°	986.2	978.2	987.4	986.2	981.6	978.2	975.9	967.9	955.3	964.4	943.8
30°	916.3	909.4	917.4	916.3	911.7	909.4	907.1	899.1	887.6	892.2	877.3
32.5°	830.3	824.5	830.3	832.5	822.2	822.2	822.2	813.1	803.9	808.5	793.6
35°	732.8	728.2	731.6	731.6	727.0	725.9	725.9	717.9	709.8	714.4	699.5
37.5°	628.4	626.1	628.4	628.4	623.8	621.5	622.7	615.8	608.9	612.4	598.6
40°	520.6	518.3	520.6	520.6	516.0	516.0	516.0	510.3	503.4	505.7	494.3
42.5°	416.3	410.5	411.7	411.7	408.2	408.2	409.4	403.7	399.1	399.1	388.8
45°	295.9	295.9	297.0	299.3	294.7	293.6	295.9	291.3	289.0	289.0	279.8
47.5°	196.1	192.7	191.5	190.4	192.7	190.4	192.7	189.2	189.2	189.2	181.2
50°	120.4	118.1	118.1	117.0	118.1	115.8	118.1	115.8	114.7	117.0	111.2
52.5°	66.5	64.2	64.2	64.2	65.4	63.1	64.2	63.1	63.1	63.1	61.9
55°	34.4	33.3	33.3	33.3	33.3	32.1	33.3	33.3	33.3	34.4	33.3
57.5°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
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	10.3	10.3	11.5	10.3	11.5	10.3	10.3	10.3	10.3	10.3
65°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	8.0	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°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
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°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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: P212727

CATALOG NUMBER: LD4B20D010 EU4B10209040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1
2.5°	881.9	875.0	877.3	875.0	869.2	870.4	866.9	866.9	860.1	858.9	860.1
5°	904.8	896.8	896.8	892.2	884.2	883.0	876.1	876.1	865.8	862.4	862.4
7.5°	930.0	922.0	919.7	914.0	903.6	899.1	889.9	886.4	873.8	868.1	866.9
10°	957.5	948.4	943.8	936.9	924.3	916.3	903.6	899.1	884.2	872.7	871.5
12.5°	988.5	980.5	974.7	965.6	951.8	940.3	925.4	917.4	897.9	885.3	879.6
15°	1025.2	1016.0	1009.1	997.7	982.8	969.0	949.5	940.3	917.4	900.2	892.2
17.5°	1048.1	1037.8	1032.1	1018.3	1003.4	987.4	965.6	954.1	927.7	905.9	897.9
20°	1050.4	1042.4	1034.4	1021.8	1006.9	988.5	965.6	954.1	926.6	904.8	893.3
22.5°	1033.2	1026.3	1017.2	1006.9	990.8	972.5	950.7	940.3	914.0	891.0	878.4
25°	1000.0	994.2	985.1	972.5	961.0	941.5	920.8	914.0	886.4	866.9	855.5
27.5°	948.4	944.9	935.8	924.3	915.1	899.1	878.4	872.7	848.6	831.4	822.2
30°	880.7	878.4	869.2	858.9	852.0	837.1	818.8	816.5	794.7	782.1	772.9
32.5°	797.0	794.7	789.0	778.6	772.9	760.3	743.1	745.4	727.0	716.7	713.3
35°	707.6	700.7	697.2	688.1	681.2	672.0	657.1	660.5	650.2	642.2	641.0
37.5°	606.6	599.8	597.5	590.6	584.8	576.8	565.4	569.9	565.4	561.9	565.4
40°	501.1	495.4	493.1	486.2	483.9	478.2	470.2	481.6	475.9	482.8	483.9
42.5°	395.6	389.9	389.9	385.3	381.9	380.7	375.0	389.9	389.9	401.4	407.1
45°	279.8	281.0	278.7	279.8	277.5	281.0	277.5	287.8	302.7	317.7	326.8
47.5°	185.8	182.3	186.9	185.8	184.6	189.2	193.8	204.1	221.3	242.0	254.6
50°	112.4	112.4	114.7	118.1	120.4	123.8	130.7	143.3	162.8	183.5	198.4
52.5°	64.2	63.1	65.4	66.5	72.2	76.8	84.9	98.6	118.1	141.1	154.8
55°	34.4	34.4	35.5	39.0	42.4	48.2	56.2	68.8	87.2	110.1	123.8
57.5°	20.6	20.6	21.8	22.9	26.4	31.0	37.8	48.2	64.2	83.7	96.3
60°	13.8	14.9	14.9	16.1	18.3	20.6	26.4	33.3	45.9	60.8	71.1
62.5°	11.5	11.5	11.5	12.6	13.8	14.9	18.3	24.1	32.1	43.6	51.6
65°	9.2	9.2	9.2	9.2	10.3	11.5	13.8	17.2	22.9	29.8	34.4
67.5°	6.9	6.9	8.0	8.0	8.0	9.2	10.3	12.6	16.1	20.6	24.1
70°	5.7	5.7	5.7	5.7	6.9	6.9	8.0	9.2	11.5	14.9	17.2
72.5°	4.6	4.6	4.6	4.6	5.7	5.7	5.7	6.9	8.0	10.3	11.5
75°	3.4	3.4	3.4	3.4	4.6	4.6	4.6	5.7	5.7	6.9	8.0
77.5°	2.3	2.3	2.3	2.3	3.4	3.4	3.4	3.4	4.6	4.6	4.6
80°	1.1	1.1	1.1	2.3	2.3	2.3	2.3	2.3	2.3	3.4	3.4
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3	2.3
85°	0.0	0.0	1.1	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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: P212727

CATALOG NUMBER: LD4B20D010 EU4B10209040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1	868.1
2.5°	852.0	866.9	849.7	853.2	847.5	857.8	844.0	847.5	849.7	847.5	848.6
5°	853.2	864.7	845.2	848.6	839.4	846.3	833.7	834.8	834.8	832.5	831.4
7.5°	856.6	863.5	842.9	841.7	830.3	837.1	822.2	819.9	818.8	815.3	816.5
10°	857.8	860.1	838.3	833.7	819.9	822.2	807.3	802.7	799.3	797.0	795.9
12.5°	865.8	863.5	838.3	830.3	813.1	811.9	795.9	789.0	783.2	780.9	779.8
15°	876.1	868.1	840.6	829.1	809.6	805.0	787.8	780.9	772.9	770.6	768.3
17.5°	880.7	868.1	838.3	823.4	801.6	795.9	778.6	769.5	761.4	758.0	755.7
20°	875.0	858.9	829.1	813.1	790.1	782.1	764.9	754.6	746.5	743.1	740.8
22.5°	862.4	844.0	815.3	799.3	776.4	766.0	751.1	742.0	732.8	731.6	728.2
25°	840.6	822.2	798.1	782.1	761.4	751.1	737.4	729.3	720.2	719.0	717.9
27.5°	808.5	791.3	772.9	758.0	739.7	731.6	721.3	713.3	705.3	705.3	703.0
30°	762.6	751.1	735.1	725.9	711.0	703.0	696.1	690.3	682.3	683.5	681.2
32.5°	704.1	698.4	686.9	682.3	670.9	668.6	661.7	657.1	650.2	652.5	650.2
35°	638.7	631.9	631.9	629.6	623.8	622.7	619.2	617.0	612.4	613.5	613.5
37.5°	564.2	564.2	571.1	572.2	571.1	573.4	572.2	572.2	567.6	569.9	568.8
40°	487.4	494.3	506.9	513.7	516.0	520.6	526.4	524.1	521.8	525.2	524.1
42.5°	412.8	426.6	446.1	457.6	465.6	472.5	480.5	480.5	479.3	483.9	482.8
45°	341.7	354.3	380.7	400.2	414.0	424.3	433.5	436.9	438.1	442.6	441.5
47.5°	271.8	293.6	324.5	347.5	364.7	377.3	389.9	394.5	397.9	403.7	403.7
50°	215.6	243.1	278.7	301.6	322.2	336.0	348.6	355.5	360.1	364.7	364.7
52.5°	173.2	201.8	236.2	260.3	279.8	294.7	307.3	315.4	318.8	324.5	324.5
55°	141.1	167.4	199.5	221.3	240.8	254.6	264.9	271.8	275.2	279.8	279.8
57.5°	111.2	136.5	162.8	182.3	198.4	208.7	217.9	220.2	221.3	224.8	225.9
60°	83.7	103.2	125.0	139.9	151.4	158.3	165.1	164.0	162.8	165.1	162.8
62.5°	59.6	73.4	89.4	98.6	107.8	111.2	114.7	112.4	110.1	111.2	111.2
65°	40.1	50.5	59.6	66.5	71.1	73.4	74.5	73.4	72.2	73.4	72.2
67.5°	27.5	33.3	40.1	43.6	47.0	48.2	49.3	48.2	48.2	48.2	47.0
70°	18.3	21.8	26.4	28.7	29.8	31.0	32.1	31.0	31.0	31.0	31.0
72.5°	12.6	14.9	16.1	18.3	19.5	19.5	19.5	19.5	19.5	19.5	19.5
75°	8.0	9.2	10.3	11.5	12.6	12.6	12.6	12.6	12.6	12.6	12.6
77.5°	5.7	5.7	6.9	6.9	8.0	8.0	8.0	8.0	8.0	8.0	8.0
80°	3.4	3.4	4.6	4.6	4.6	4.6	5.7	4.6	5.7	5.7	5.7
82.5°	2.3	2.3	2.3	2.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4
85°	1.1	1.1	1.1	1.1	1.1	1.1	2.3	1.1	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: P212727

CATALOG NUMBER: LD4B20D010 EU4B10209040 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	868.1	868.1	868.1	868.1
2.5°	848.6	846.3	839.4	847.5
5°	830.3	828.0	822.2	828.0
7.5°	811.9	808.5	803.9	807.3
10°	790.1	787.8	782.1	785.5
12.5°	774.1	769.5	766.0	767.2
15°	763.7	759.2	755.7	756.9
17.5°	750.0	745.4	742.0	742.0
20°	735.1	730.5	728.2	727.0
22.5°	722.5	719.0	717.9	714.4
25°	711.0	708.7	708.7	704.1
27.5°	698.4	694.9	694.9	690.3
30°	676.6	675.4	675.4	672.0
32.5°	647.9	644.5	646.8	641.0
35°	608.9	606.6	610.1	605.5
37.5°	566.5	565.4	567.6	564.2
40°	521.8	521.8	525.2	519.5
42.5°	482.8	482.8	486.2	480.5
45°	440.4	443.8	447.2	442.6
47.5°	403.7	406.0	410.5	406.0
50°	367.0	369.3	372.7	368.1
52.5°	326.8	329.1	332.6	329.1
55°	281.0	283.2	286.7	284.4
57.5°	225.9	223.6	229.4	224.8
60°	164.0	159.4	160.5	160.5
62.5°	108.9	106.6	108.9	105.5
65°	72.2	71.1	71.1	71.1
67.5°	48.2	47.0	48.2	47.0
70°	31.0	31.0	31.0	31.0
72.5°	19.5	19.5	19.5	19.5
75°	12.6	12.6	12.6	12.6
77.5°	8.0	8.0	8.0	8.0
80°	5.7	5.7	5.7	5.7
82.5°	3.4	3.4	3.4	3.4
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)