

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: P212709

Luminaire Tested: **LD4B15D010 EU4B10208050 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212709
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: LD4B15D010 EU4B10208050 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1405.1 lumens
Efficiency: N/A
Efficacy: 97.6 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

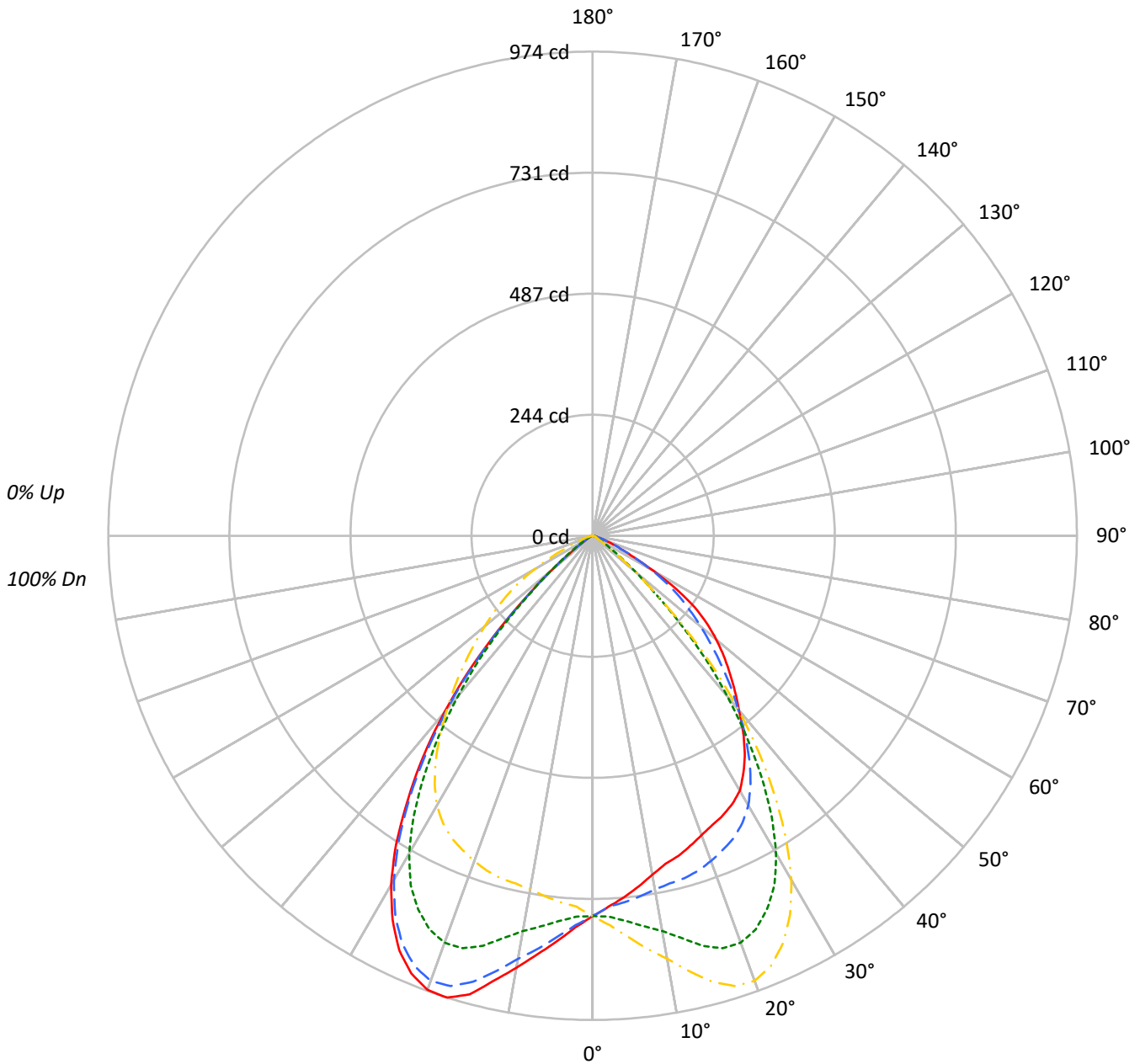
Input Watts (W): 14.39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWL11

Luminous Intensity Polar Plot





TEST NUMBER: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

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°	94347	94347	94347	94347
5°	90337	96342	101344	96342
10°	86697	101126	110482	101126
15°	85161	109028	121938	109028
20°	84086	114329	127599	114329
25°	84434	112906	125277	112906
30°	84331	105054	115423	105054
35°	80333	89157	97529	89157
40°	73697	67852	74840	67852
45°	68030	43191	46540	43191
50°	62250	20935	20360	20935
55°	53891	9118	6516	9118
60°	34907	4490	2985	4490
65°	18270	2948	2364	2948
70°	9845	2200	1839	2200
75°	5290	1906	1430	1906
80°	3623	1421	710	1421
85°	2830	1415	0	1415



TEST NUMBER: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.6	5.3
10°-20°	233.3	16.6
20°-30°	362.7	25.8
30°-40°	366.3	26.1
40°-50°	232.0	16.5
50°-60°	97.4	6.9
60°-70°	30.9	2.2
70°-80°	7.1	0.5
80°-90°	1.0	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°	670.5	47.7
0°-40°	1036.9	73.8
0°-60°	1366.2	97.2
0°-90°	1405.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1405.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	765	765	765	765	765	
5°	730	778	818	778	730	69
15°	667	854	955	854	667	188
25°	620	830	920	830	620	286
35°	534	592	648	592	534	331
45°	390	248	267	248	390	301
55°	251	42	30	42	251	216
65°	63	10	8	10	63	69
75°	11	4	3	4	11	14
85°	2	1	0	1	2	2
90°	0	0	0	0	0	



TEST NUMBER: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9
2.5°	746.7	739.7	745.7	747.7	747.7	746.7	748.8	746.7	743.7	755.8	746.7
5°	729.6	724.5	729.6	731.6	732.6	733.6	735.6	735.6	734.6	745.7	739.7
7.5°	711.4	708.3	712.4	715.4	719.4	718.4	721.5	722.5	724.5	737.6	731.6
10°	692.2	689.1	694.2	696.2	701.3	702.3	704.3	707.3	711.4	724.5	722.5
12.5°	676.0	675.0	678.0	682.1	687.1	688.1	690.1	695.2	701.3	715.4	716.4
15°	666.9	665.9	668.9	673.0	677.0	679.0	681.1	688.1	694.2	709.3	713.4
17.5°	653.8	653.8	656.8	660.8	665.9	667.9	670.9	678.0	686.1	701.3	706.3
20°	640.6	641.6	643.7	647.7	652.8	654.8	657.8	664.9	674.0	689.1	696.2
22.5°	629.5	632.5	633.6	636.6	641.6	644.7	645.7	653.8	661.9	675.0	684.1
25°	620.4	624.5	624.5	626.5	632.5	633.6	634.6	642.7	649.7	661.9	670.9
27.5°	608.3	612.3	612.3	615.4	619.4	621.4	621.4	628.5	635.6	644.7	651.7
30°	592.1	595.2	595.2	596.2	600.2	602.2	601.2	608.3	613.4	619.4	626.5
32.5°	564.8	569.9	567.9	570.9	572.9	575.0	572.9	579.0	583.0	589.1	591.1
35°	533.5	537.6	534.5	536.6	540.6	540.6	539.6	543.6	545.6	548.7	549.7
37.5°	497.1	500.2	498.2	499.2	501.2	502.2	500.2	504.2	504.2	505.2	503.2
40°	457.7	462.8	459.8	459.8	461.8	462.8	459.8	461.8	463.8	458.8	454.7
42.5°	423.4	428.4	425.4	425.4	425.4	426.4	422.4	423.4	423.4	416.3	410.2
45°	390.0	394.1	391.0	388.0	389.0	390.0	386.0	385.0	382.0	373.9	364.8
47.5°	357.7	361.7	357.7	355.7	355.7	355.7	350.6	347.6	343.6	332.4	321.3
50°	324.4	328.4	325.4	323.3	321.3	321.3	317.3	313.2	307.2	296.1	283.9
52.5°	290.0	293.0	290.0	288.0	286.0	286.0	280.9	277.9	270.8	259.7	246.6
55°	250.6	252.6	249.6	247.6	246.6	246.6	242.5	239.5	233.4	224.3	212.2
57.5°	198.1	202.1	197.0	199.1	199.1	198.1	195.0	194.0	192.0	183.9	174.8
60°	141.5	141.5	140.5	144.5	143.5	145.5	143.5	144.5	145.5	139.4	133.4
62.5°	93.0	96.0	94.0	96.0	98.0	98.0	97.0	99.0	101.0	98.0	95.0
65°	62.6	62.6	62.6	63.7	63.7	64.7	63.7	64.7	65.7	64.7	62.6
67.5°	41.4	42.4	41.4	42.4	41.4	42.4	42.4	42.4	43.4	42.4	41.4
70°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	28.3	27.3	26.3
72.5°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
75°	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
77.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
80°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.0	5.1	4.0	4.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	1.0	1.0
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: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9
2.5°	751.8	748.8	763.9	750.8	757.8	756.8	757.8	763.9	763.9	766.9	765.9
5°	747.7	744.7	761.9	751.8	759.9	759.9	762.9	772.0	772.0	778.1	779.1
7.5°	741.7	742.7	760.9	754.8	763.9	764.9	770.0	781.1	784.1	792.2	796.2
10°	734.6	738.6	757.8	755.8	768.0	769.0	779.1	792.2	796.2	807.4	814.4
12.5°	731.6	738.6	760.9	762.9	775.0	780.1	791.2	808.4	815.4	828.6	838.7
15°	730.6	740.7	764.9	772.0	786.1	793.2	808.4	828.6	836.7	853.8	866.0
17.5°	725.5	738.6	764.9	776.0	791.2	798.3	817.5	840.7	850.8	870.0	884.2
20°	716.4	730.6	756.8	771.0	787.2	797.3	816.5	840.7	850.8	871.0	887.2
22.5°	704.3	718.4	743.7	759.9	774.0	785.1	805.3	828.6	837.7	856.9	873.0
25°	689.1	703.3	724.5	740.7	753.8	763.9	781.1	805.3	811.4	829.6	846.8
27.5°	667.9	681.1	697.2	712.4	724.5	732.6	747.7	769.0	774.0	792.2	806.3
30°	639.6	647.7	661.9	672.0	681.1	689.1	700.3	719.4	721.5	737.6	750.8
32.5°	601.2	605.3	615.4	620.4	628.5	631.5	640.6	656.8	654.8	669.9	681.1
35°	554.7	556.8	556.8	562.8	564.8	565.9	572.9	582.0	579.0	592.1	600.2
37.5°	504.2	503.2	497.1	497.1	498.2	495.1	498.2	502.2	498.2	508.3	515.3
40°	452.7	446.6	435.5	429.4	426.4	425.4	419.3	424.4	414.3	421.4	426.4
42.5°	403.2	393.1	375.9	363.8	358.7	353.7	343.6	343.6	330.4	335.5	336.5
45°	352.7	335.5	312.2	301.1	288.0	279.9	266.8	253.6	244.5	247.6	244.5
47.5°	306.2	286.0	258.7	239.5	224.3	213.2	195.0	179.9	170.8	166.7	162.7
50°	265.8	245.5	214.2	190.0	174.8	161.7	143.5	126.3	115.2	109.1	106.1
52.5°	229.4	208.2	177.8	152.6	136.4	124.3	104.1	86.9	74.8	67.7	63.7
55°	195.0	175.8	147.5	124.3	109.1	97.0	76.8	60.6	49.5	42.4	37.4
57.5°	160.7	143.5	120.2	98.0	84.9	73.8	56.6	42.4	33.3	27.3	23.2
60°	123.3	110.1	90.9	73.8	62.6	53.6	40.4	29.3	23.2	18.2	16.2
62.5°	86.9	78.8	64.7	52.5	45.5	38.4	28.3	21.2	16.2	13.1	12.1
65°	58.6	52.5	44.5	35.4	30.3	26.3	20.2	15.2	12.1	10.1	9.1
67.5°	38.4	35.4	29.3	24.3	21.2	18.2	14.1	11.1	9.1	8.1	7.1
70°	25.3	23.2	19.2	16.2	15.2	13.1	10.1	8.1	7.1	6.1	6.1
72.5°	16.2	14.1	13.1	11.1	10.1	9.1	7.1	6.1	5.1	5.1	5.1
75°	10.1	9.1	8.1	7.1	7.1	6.1	5.1	5.1	4.0	4.0	4.0
77.5°	6.1	6.1	5.1	5.1	4.0	4.0	4.0	3.0	3.0	3.0	3.0
80°	4.0	4.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0
82.5°	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9
2.5°	771.0	773.0	771.0	777.0	766.9	778.1	774.0	776.0	784.1	781.1	784.1
5°	786.1	790.2	790.2	797.3	788.2	801.3	797.3	801.3	809.4	809.4	813.4
7.5°	805.3	810.4	812.4	819.5	810.4	826.6	822.5	827.6	837.7	837.7	840.7
10°	825.5	831.6	835.7	843.7	833.6	851.8	847.8	854.9	863.9	865.0	870.0
12.5°	850.8	858.9	863.9	871.0	863.9	882.1	878.1	885.2	897.3	898.3	904.4
15°	879.1	889.2	895.3	903.4	895.3	915.5	911.4	919.5	928.6	932.7	938.7
17.5°	897.3	909.4	914.5	923.6	915.5	935.7	930.6	941.8	949.8	951.9	958.9
20°	900.3	911.4	918.5	925.6	918.5	938.7	933.7	942.8	952.9	954.9	959.9
22.5°	887.2	896.3	904.4	910.4	904.4	924.6	917.5	927.6	936.7	938.7	942.8
25°	856.9	868.0	876.1	881.1	875.1	894.3	888.2	897.3	905.4	909.4	910.4
27.5°	814.4	824.5	832.6	835.7	831.6	849.8	841.7	852.8	859.9	861.9	865.0
30°	756.8	765.9	774.0	776.0	773.0	786.1	782.1	792.2	799.3	801.3	803.3
32.5°	686.1	695.2	700.3	702.3	699.2	712.4	708.3	716.4	724.5	724.5	724.5
35°	606.3	614.4	617.4	623.5	616.4	629.5	625.5	632.5	639.6	639.6	640.6
37.5°	520.4	526.5	528.5	534.5	527.5	539.6	536.6	542.6	548.7	547.7	549.7
40°	428.4	434.5	436.5	441.6	435.5	445.6	443.6	449.7	454.7	454.7	454.7
42.5°	339.5	343.6	343.6	348.6	342.5	351.6	351.6	355.7	360.7	359.7	359.7
45°	246.6	245.5	247.6	246.6	246.6	254.6	254.6	256.7	260.7	258.7	259.7
47.5°	163.7	164.7	160.7	163.7	159.7	166.7	166.7	166.7	169.8	167.7	169.8
50°	104.1	101.0	99.0	99.0	98.0	103.1	101.0	102.1	104.1	102.1	104.1
52.5°	58.6	57.6	55.6	56.6	54.6	55.6	55.6	55.6	56.6	55.6	57.6
55°	34.4	31.3	30.3	30.3	29.3	30.3	29.3	29.3	29.3	28.3	29.3
57.5°	20.2	19.2	18.2	18.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
60°	14.1	13.1	13.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
62.5°	11.1	10.1	10.1	10.1	9.1	9.1	9.1	9.1	9.1	10.1	9.1
65°	8.1	8.1	8.1	8.1	8.1	8.1	7.1	8.1	8.1	8.1	8.1
67.5°	7.1	7.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
70°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
72.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	0.0	1.0	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: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9
2.5°	787.2	783.1	774.0	780.1	781.1	777.0	782.1	788.2	782.1	777.0	781.1
5°	816.5	813.4	805.3	810.4	811.4	810.4	813.4	818.5	813.4	810.4	811.4
7.5°	845.8	843.7	834.6	840.7	842.7	840.7	843.7	848.8	843.7	840.7	842.7
10°	874.1	873.0	863.9	872.0	873.0	871.0	874.1	882.1	874.1	871.0	873.0
12.5°	906.4	908.4	898.3	907.4	908.4	906.4	910.4	916.5	910.4	906.4	908.4
15°	943.8	942.8	934.7	941.8	943.8	941.8	946.8	954.9	946.8	941.8	943.8
17.5°	962.0	962.0	955.9	963.0	964.0	964.0	968.0	974.1	968.0	964.0	964.0
20°	963.0	964.0	956.9	965.0	965.0	965.0	969.0	972.1	969.0	965.0	965.0
22.5°	946.8	947.8	940.7	947.8	947.8	948.8	950.8	952.9	950.8	948.8	947.8
25°	915.5	916.5	910.4	916.5	915.5	915.5	917.5	920.5	917.5	915.5	915.5
27.5°	869.0	870.0	861.9	869.0	868.0	867.0	870.0	871.0	870.0	867.0	868.0
30°	807.4	808.4	801.3	807.4	806.3	805.3	809.4	810.4	809.4	805.3	806.3
32.5°	733.6	731.6	726.5	731.6	730.6	730.6	732.6	735.6	732.6	730.6	730.6
35°	644.7	644.7	641.6	645.7	642.7	646.7	646.7	647.7	646.7	646.7	642.7
37.5°	553.7	553.7	551.7	553.7	552.7	556.8	556.8	559.8	556.8	556.8	552.7
40°	458.8	458.8	456.7	458.8	461.8	461.8	460.8	464.8	460.8	461.8	461.8
42.5°	362.8	362.8	361.7	366.8	366.8	366.8	363.8	367.8	363.8	366.8	366.8
45°	263.7	261.7	260.7	260.7	261.7	265.8	261.7	266.8	261.7	265.8	261.7
47.5°	167.7	168.7	169.8	172.8	170.8	169.8	169.8	172.8	169.8	169.8	170.8
50°	103.1	104.1	104.1	106.1	103.1	105.1	104.1	106.1	104.1	105.1	103.1
52.5°	56.6	56.6	56.6	58.6	56.6	57.6	56.6	58.6	56.6	57.6	56.6
55°	29.3	29.3	29.3	30.3	29.3	29.3	29.3	30.3	29.3	29.3	29.3
57.5°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
60°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
62.5°	10.1	9.1	9.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
65°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
67.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
70°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
72.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9
2.5°	780.1	774.0	783.1	787.2	784.1	781.1	784.1	776.0	774.0	778.1	766.9
5°	810.4	805.3	813.4	816.5	813.4	809.4	809.4	801.3	797.3	801.3	788.2
7.5°	840.7	834.6	843.7	845.8	840.7	837.7	837.7	827.6	822.5	826.6	810.4
10°	872.0	863.9	873.0	874.1	870.0	865.0	863.9	854.9	847.8	851.8	833.6
12.5°	907.4	898.3	908.4	906.4	904.4	898.3	897.3	885.2	878.1	882.1	863.9
15°	941.8	934.7	942.8	943.8	938.7	932.7	928.6	919.5	911.4	915.5	895.3
17.5°	963.0	955.9	962.0	962.0	958.9	951.9	949.8	941.8	930.6	935.7	915.5
20°	965.0	956.9	964.0	963.0	959.9	954.9	952.9	942.8	933.7	938.7	918.5
22.5°	947.8	940.7	947.8	946.8	942.8	938.7	936.7	927.6	917.5	924.6	904.4
25°	916.5	910.4	916.5	915.5	910.4	909.4	905.4	897.3	888.2	894.3	875.1
27.5°	869.0	861.9	870.0	869.0	865.0	861.9	859.9	852.8	841.7	849.8	831.6
30°	807.4	801.3	808.4	807.4	803.3	801.3	799.3	792.2	782.1	786.1	773.0
32.5°	731.6	726.5	731.6	733.6	724.5	724.5	724.5	716.4	708.3	712.4	699.2
35°	645.7	641.6	644.7	644.7	640.6	639.6	639.6	632.5	625.5	629.5	616.4
37.5°	553.7	551.7	553.7	553.7	549.7	547.7	548.7	542.6	536.6	539.6	527.5
40°	458.8	456.7	458.8	458.8	454.7	454.7	454.7	449.7	443.6	445.6	435.5
42.5°	366.8	361.7	362.8	362.8	359.7	359.7	360.7	355.7	351.6	351.6	342.5
45°	260.7	260.7	261.7	263.7	259.7	258.7	260.7	256.7	254.6	254.6	246.6
47.5°	172.8	169.8	168.7	167.7	169.8	167.7	169.8	166.7	166.7	166.7	159.7
50°	106.1	104.1	104.1	103.1	104.1	102.1	104.1	102.1	101.0	103.1	98.0
52.5°	58.6	56.6	56.6	56.6	57.6	55.6	56.6	55.6	55.6	55.6	54.6
55°	30.3	29.3	29.3	29.3	29.3	28.3	29.3	29.3	29.3	30.3	29.3
57.5°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
60°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
62.5°	10.1	9.1	9.1	10.1	9.1	10.1	9.1	9.1	9.1	9.1	9.1
65°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	7.1	8.1	8.1
67.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
70°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
72.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9
2.5°	777.0	771.0	773.0	771.0	765.9	766.9	763.9	763.9	757.8	756.8	757.8
5°	797.3	790.2	790.2	786.1	779.1	778.1	772.0	772.0	762.9	759.9	759.9
7.5°	819.5	812.4	810.4	805.3	796.2	792.2	784.1	781.1	770.0	764.9	763.9
10°	843.7	835.7	831.6	825.5	814.4	807.4	796.2	792.2	779.1	769.0	768.0
12.5°	871.0	863.9	858.9	850.8	838.7	828.6	815.4	808.4	791.2	780.1	775.0
15°	903.4	895.3	889.2	879.1	866.0	853.8	836.7	828.6	808.4	793.2	786.1
17.5°	923.6	914.5	909.4	897.3	884.2	870.0	850.8	840.7	817.5	798.3	791.2
20°	925.6	918.5	911.4	900.3	887.2	871.0	850.8	840.7	816.5	797.3	787.2
22.5°	910.4	904.4	896.3	887.2	873.0	856.9	837.7	828.6	805.3	785.1	774.0
25°	881.1	876.1	868.0	856.9	846.8	829.6	811.4	805.3	781.1	763.9	753.8
27.5°	835.7	832.6	824.5	814.4	806.3	792.2	774.0	769.0	747.7	732.6	724.5
30°	776.0	774.0	765.9	756.8	750.8	737.6	721.5	719.4	700.3	689.1	681.1
32.5°	702.3	700.3	695.2	686.1	681.1	669.9	654.8	656.8	640.6	631.5	628.5
35°	623.5	617.4	614.4	606.3	600.2	592.1	579.0	582.0	572.9	565.9	564.8
37.5°	534.5	528.5	526.5	520.4	515.3	508.3	498.2	502.2	498.2	495.1	498.2
40°	441.6	436.5	434.5	428.4	426.4	421.4	414.3	424.4	419.3	425.4	426.4
42.5°	348.6	343.6	343.6	339.5	336.5	335.5	330.4	343.6	343.6	353.7	358.7
45°	246.6	247.6	245.5	246.6	244.5	247.6	244.5	253.6	266.8	279.9	288.0
47.5°	163.7	160.7	164.7	163.7	162.7	166.7	170.8	179.9	195.0	213.2	224.3
50°	99.0	99.0	101.0	104.1	106.1	109.1	115.2	126.3	143.5	161.7	174.8
52.5°	56.6	55.6	57.6	58.6	63.7	67.7	74.8	86.9	104.1	124.3	136.4
55°	30.3	30.3	31.3	34.4	37.4	42.4	49.5	60.6	76.8	97.0	109.1
57.5°	18.2	18.2	19.2	20.2	23.2	27.3	33.3	42.4	56.6	73.8	84.9
60°	12.1	13.1	13.1	14.1	16.2	18.2	23.2	29.3	40.4	53.6	62.6
62.5°	10.1	10.1	10.1	11.1	12.1	13.1	16.2	21.2	28.3	38.4	45.5
65°	8.1	8.1	8.1	8.1	9.1	10.1	12.1	15.2	20.2	26.3	30.3
67.5°	6.1	6.1	7.1	7.1	7.1	8.1	9.1	11.1	14.1	18.2	21.2
70°	5.1	5.1	5.1	5.1	6.1	6.1	7.1	8.1	10.1	13.1	15.2
72.5°	4.0	4.0	4.0	4.0	5.1	5.1	5.1	6.1	7.1	9.1	10.1
75°	3.0	3.0	3.0	3.0	4.0	4.0	4.0	5.1	5.1	6.1	7.1
77.5°	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0
80°	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
85°	0.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9	764.9
2.5°	750.8	763.9	748.8	751.8	746.7	755.8	743.7	746.7	748.8	746.7	747.7
5°	751.8	761.9	744.7	747.7	739.7	745.7	734.6	735.6	735.6	733.6	732.6
7.5°	754.8	760.9	742.7	741.7	731.6	737.6	724.5	722.5	721.5	718.4	719.4
10°	755.8	757.8	738.6	734.6	722.5	724.5	711.4	707.3	704.3	702.3	701.3
12.5°	762.9	760.9	738.6	731.6	716.4	715.4	701.3	695.2	690.1	688.1	687.1
15°	772.0	764.9	740.7	730.6	713.4	709.3	694.2	688.1	681.1	679.0	677.0
17.5°	776.0	764.9	738.6	725.5	706.3	701.3	686.1	678.0	670.9	667.9	665.9
20°	771.0	756.8	730.6	716.4	696.2	689.1	674.0	664.9	657.8	654.8	652.8
22.5°	759.9	743.7	718.4	704.3	684.1	675.0	661.9	653.8	645.7	644.7	641.6
25°	740.7	724.5	703.3	689.1	670.9	661.9	649.7	642.7	634.6	633.6	632.5
27.5°	712.4	697.2	681.1	667.9	651.7	644.7	635.6	628.5	621.4	621.4	619.4
30°	672.0	661.9	647.7	639.6	626.5	619.4	613.4	608.3	601.2	602.2	600.2
32.5°	620.4	615.4	605.3	601.2	591.1	589.1	583.0	579.0	572.9	575.0	572.9
35°	562.8	556.8	556.8	554.7	549.7	548.7	545.6	543.6	539.6	540.6	540.6
37.5°	497.1	497.1	503.2	504.2	503.2	505.2	504.2	504.2	500.2	502.2	501.2
40°	429.4	435.5	446.6	452.7	454.7	458.8	463.8	461.8	459.8	462.8	461.8
42.5°	363.8	375.9	393.1	403.2	410.2	416.3	423.4	423.4	422.4	426.4	425.4
45°	301.1	312.2	335.5	352.7	364.8	373.9	382.0	385.0	386.0	390.0	389.0
47.5°	239.5	258.7	286.0	306.2	321.3	332.4	343.6	347.6	350.6	355.7	355.7
50°	190.0	214.2	245.5	265.8	283.9	296.1	307.2	313.2	317.3	321.3	321.3
52.5°	152.6	177.8	208.2	229.4	246.6	259.7	270.8	277.9	280.9	286.0	286.0
55°	124.3	147.5	175.8	195.0	212.2	224.3	233.4	239.5	242.5	246.6	246.6
57.5°	98.0	120.2	143.5	160.7	174.8	183.9	192.0	194.0	195.0	198.1	199.1
60°	73.8	90.9	110.1	123.3	133.4	139.4	145.5	144.5	143.5	145.5	143.5
62.5°	52.5	64.7	78.8	86.9	95.0	98.0	101.0	99.0	97.0	98.0	98.0
65°	35.4	44.5	52.5	58.6	62.6	64.7	65.7	64.7	63.7	64.7	63.7
67.5°	24.3	29.3	35.4	38.4	41.4	42.4	43.4	42.4	42.4	42.4	41.4
70°	16.2	19.2	23.2	25.3	26.3	27.3	28.3	27.3	27.3	27.3	27.3
72.5°	11.1	13.1	14.1	16.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
75°	7.1	8.1	9.1	10.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
77.5°	5.1	5.1	6.1	6.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
80°	3.0	3.0	4.0	4.0	4.0	4.0	5.1	4.0	5.1	5.1	5.1
82.5°	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	2.0	2.0	2.0
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: P212709

CATALOG NUMBER: LD4B15D010 EU4B10208050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	764.9	764.9	764.9	764.9
2.5°	747.7	745.7	739.7	746.7
5°	731.6	729.6	724.5	729.6
7.5°	715.4	712.4	708.3	711.4
10°	696.2	694.2	689.1	692.2
12.5°	682.1	678.0	675.0	676.0
15°	673.0	668.9	665.9	666.9
17.5°	660.8	656.8	653.8	653.8
20°	647.7	643.7	641.6	640.6
22.5°	636.6	633.6	632.5	629.5
25°	626.5	624.5	624.5	620.4
27.5°	615.4	612.3	612.3	608.3
30°	596.2	595.2	595.2	592.1
32.5°	570.9	567.9	569.9	564.8
35°	536.6	534.5	537.6	533.5
37.5°	499.2	498.2	500.2	497.1
40°	459.8	459.8	462.8	457.7
42.5°	425.4	425.4	428.4	423.4
45°	388.0	391.0	394.1	390.0
47.5°	355.7	357.7	361.7	357.7
50°	323.3	325.4	328.4	324.4
52.5°	288.0	290.0	293.0	290.0
55°	247.6	249.6	252.6	250.6
57.5°	199.1	197.0	202.1	198.1
60°	144.5	140.5	141.5	141.5
62.5°	96.0	94.0	96.0	93.0
65°	63.7	62.6	62.6	62.6
67.5°	42.4	41.4	42.4	41.4
70°	27.3	27.3	27.3	27.3
72.5°	17.2	17.2	17.2	17.2
75°	11.1	11.1	11.1	11.1
77.5°	7.1	7.1	7.1	7.1
80°	5.1	5.1	5.1	5.1
82.5°	3.0	3.0	3.0	3.0
85°	2.0	2.0	2.0	2.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°





















(END OF REPORT)