

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: P212699

Luminaire Tested: **LD4B10D010 EU4B10209030 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212699
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: LD4B10D010 EU4B10209030 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 832.3 lumens
Efficiency: N/A
Efficacy: 82.8 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

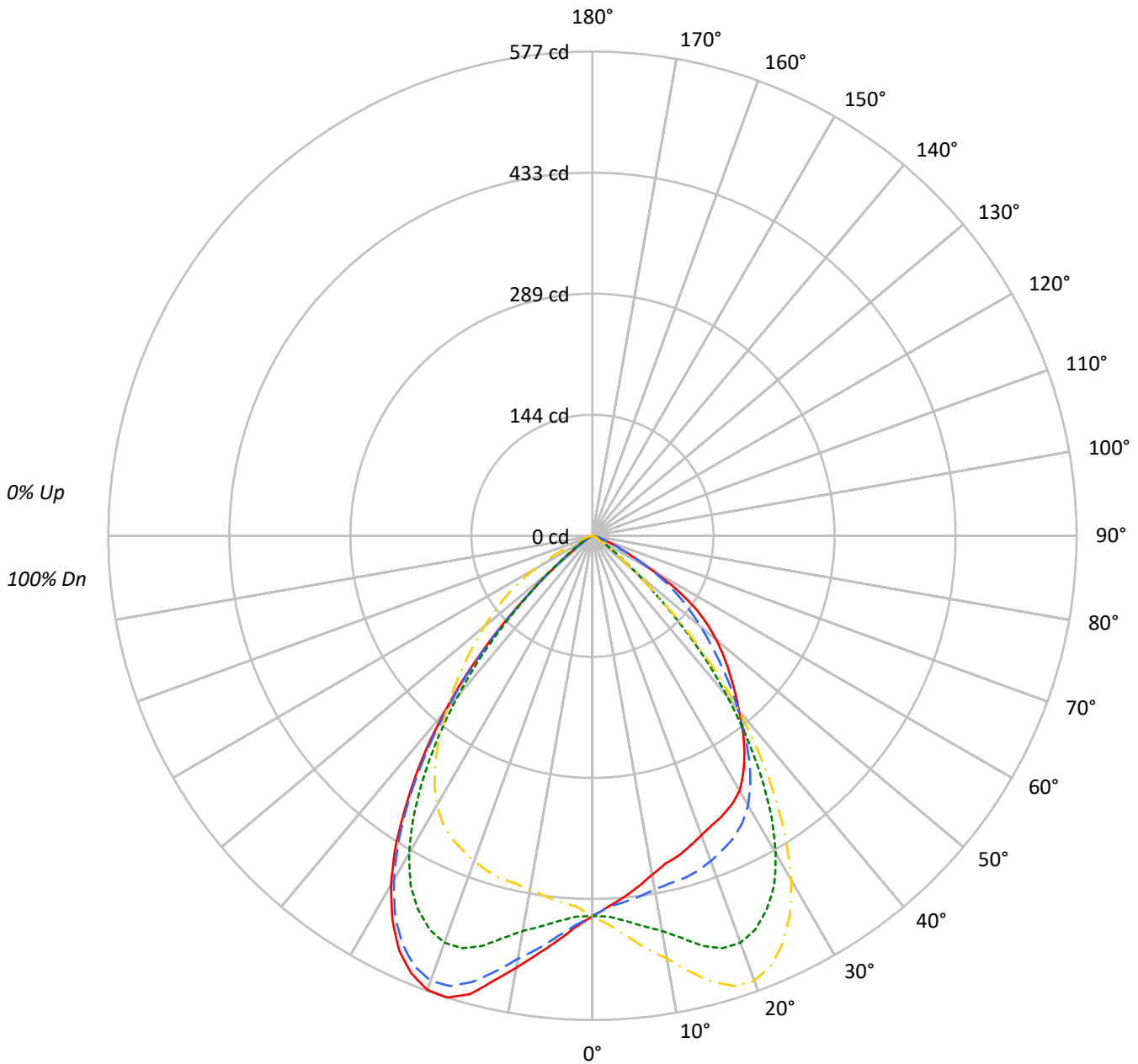
Input Watts (W): 10.05
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									20									20								
RC	80									70									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°	55888	55888	55888	55888
5°	53514	57067	60026	57067
10°	51352	59894	65442	59894
15°	50440	64589	72225	64589
20°	49814	67731	75580	67731
25°	50016	66878	74214	66878
30°	49963	62226	68365	62226
35°	47582	52822	57776	52822
40°	43652	40190	44328	40190
45°	40295	25572	27561	25572
50°	36862	12396	12051	12396
55°	31913	5398	3871	5398
60°	20673	2664	1776	2664
65°	10828	1751	1401	1751
70°	5842	1298	1082	1298
75°	3145	1144	858	1144
80°	2131	852	426	852
85°	1698	849	0	849



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.2	5.3
10°-20°	138.2	16.6
20°-30°	214.8	25.8
30°-40°	217.0	26.1
40°-50°	137.4	16.5
50°-60°	57.7	6.9
60°-70°	18.3	2.2
70°-80°	4.2	0.5
80°-90°	0.6	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°	397.2	47.7
0°-40°	614.2	73.8
0°-60°	809.3	97.2
0°-90°	832.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	832.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	453	453	453	453	453	
5°	432	461	485	461	432	41
15°	395	506	566	506	395	111
25°	368	491	545	491	368	169
35°	316	351	384	351	316	196
45°	231	147	158	147	231	178
55°	148	25	18	25	148	128
65°	37	6	5	6	37	41
75°	7	2	2	2	7	8
85°	1	1	0	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P212699
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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	442.3	438.1	441.7	442.9	442.9	442.3	443.5	442.3	440.5	447.7	442.3
5°	432.2	429.2	432.2	433.4	434.0	434.6	435.8	435.8	435.2	441.7	438.1
7.5°	421.4	419.6	422.0	423.8	426.2	425.6	427.4	428.0	429.2	436.9	433.4
10°	410.0	408.2	411.2	412.4	415.4	416.0	417.2	419.0	421.4	429.2	428.0
12.5°	400.4	399.8	401.6	404.0	407.0	407.6	408.8	411.8	415.4	423.8	424.4
15°	395.0	394.4	396.2	398.6	401.0	402.2	403.4	407.6	411.2	420.2	422.6
17.5°	387.3	387.3	389.1	391.5	394.4	395.6	397.4	401.6	406.4	415.4	418.4
20°	379.5	380.1	381.3	383.7	386.7	387.9	389.7	393.9	399.2	408.2	412.4
22.5°	372.9	374.7	375.3	377.1	380.1	381.9	382.5	387.3	392.1	399.8	405.2
25°	367.5	369.9	369.9	371.1	374.7	375.3	375.9	380.7	384.9	392.1	397.4
27.5°	360.3	362.7	362.7	364.5	366.9	368.1	368.1	372.3	376.5	381.9	386.1
30°	350.8	352.6	352.6	353.1	355.5	356.7	356.1	360.3	363.3	366.9	371.1
32.5°	334.6	337.6	336.4	338.2	339.4	340.6	339.4	343.0	345.4	349.0	350.2
35°	316.0	318.4	316.6	317.8	320.2	320.2	319.6	322.0	323.2	325.0	325.6
37.5°	294.5	296.3	295.1	295.7	296.9	297.5	296.3	298.7	298.7	299.3	298.1
40°	271.1	274.1	272.3	272.3	273.5	274.1	272.3	273.5	274.7	271.7	269.4
42.5°	250.8	253.8	252.0	252.0	252.0	252.6	250.2	250.8	250.8	246.6	243.0
45°	231.0	233.4	231.6	229.8	230.4	231.0	228.6	228.1	226.3	221.5	216.1
47.5°	211.9	214.3	211.9	210.7	210.7	210.7	207.7	205.9	203.5	196.9	190.3
50°	192.1	194.5	192.7	191.5	190.3	190.3	187.9	185.6	182.0	175.4	168.2
52.5°	171.8	173.6	171.8	170.6	169.4	169.4	166.4	164.6	160.4	153.8	146.0
55°	148.4	149.6	147.8	146.6	146.0	146.0	143.7	141.9	138.3	132.9	125.7
57.5°	117.3	119.7	116.7	117.9	117.9	117.3	115.5	114.9	113.7	108.9	103.6
60°	83.8	83.8	83.2	85.6	85.0	86.2	85.0	85.6	86.2	82.6	79.0
62.5°	55.1	56.9	55.7	56.9	58.1	58.1	57.5	58.7	59.9	58.1	56.3
65°	37.1	37.1	37.1	37.7	37.7	38.3	37.7	38.3	38.9	38.3	37.1
67.5°	24.5	25.1	24.5	25.1	24.5	25.1	25.1	25.1	25.7	25.1	24.5
70°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.8	16.2	15.6
72.5°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
75°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
77.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
80°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.4	3.0	2.4	2.4
82.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.6	1.2	0.6	0.6
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°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	445.3	443.5	452.5	444.7	448.9	448.3	448.9	452.5	452.5	454.3	453.7
5°	442.9	441.1	451.3	445.3	450.1	450.1	451.9	457.3	457.3	460.9	461.5
7.5°	439.3	439.9	450.7	447.1	452.5	453.1	456.1	462.7	464.5	469.3	471.7
10°	435.2	437.5	448.9	447.7	454.9	455.5	461.5	469.3	471.7	478.2	482.4
12.5°	433.4	437.5	450.7	451.9	459.1	462.1	468.7	478.8	483.0	490.8	496.8
15°	432.8	438.7	453.1	457.3	465.7	469.9	478.8	490.8	495.6	505.8	513.0
17.5°	429.8	437.5	453.1	459.7	468.7	472.9	484.2	498.0	504.0	515.4	523.7
20°	424.4	432.8	448.3	456.7	466.3	472.3	483.6	498.0	504.0	516.0	525.5
22.5°	417.2	425.6	440.5	450.1	458.5	465.1	477.1	490.8	496.2	507.6	517.2
25°	408.2	416.6	429.2	438.7	446.5	452.5	462.7	477.1	480.6	491.4	501.6
27.5°	395.6	403.4	413.0	422.0	429.2	434.0	442.9	455.5	458.5	469.3	477.6
30°	378.9	383.7	392.1	398.0	403.4	408.2	414.8	426.2	427.4	436.9	444.7
32.5°	356.1	358.5	364.5	367.5	372.3	374.1	379.5	389.1	387.9	396.8	403.4
35°	328.6	329.8	329.8	333.4	334.6	335.2	339.4	344.8	343.0	350.8	355.5
37.5°	298.7	298.1	294.5	294.5	295.1	293.3	295.1	297.5	295.1	301.1	305.3
40°	268.2	264.6	258.0	254.4	252.6	252.0	248.4	251.4	245.4	249.6	252.6
42.5°	238.8	232.8	222.7	215.5	212.5	209.5	203.5	203.5	195.7	198.7	199.3
45°	208.9	198.7	185.0	178.4	170.6	165.8	158.0	150.2	144.9	146.6	144.9
47.5°	181.4	169.4	153.2	141.9	132.9	126.3	115.5	106.5	101.2	98.8	96.4
50°	157.4	145.4	126.9	112.5	103.6	95.8	85.0	74.8	68.2	64.6	62.8
52.5°	135.9	123.3	105.3	90.4	80.8	73.6	61.7	51.5	44.3	40.1	37.7
55°	115.5	104.1	87.4	73.6	64.6	57.5	45.5	35.9	29.3	25.1	22.1
57.5°	95.2	85.0	71.2	58.1	50.3	43.7	33.5	25.1	19.8	16.2	13.8
60°	73.0	65.2	53.9	43.7	37.1	31.7	23.9	17.4	13.8	10.8	9.6
62.5°	51.5	46.7	38.3	31.1	26.9	22.7	16.8	12.6	9.6	7.8	7.2
65°	34.7	31.1	26.3	20.9	18.0	15.6	12.0	9.0	7.2	6.0	5.4
67.5°	22.7	20.9	17.4	14.4	12.6	10.8	8.4	6.6	5.4	4.8	4.2
70°	15.0	13.8	11.4	9.6	9.0	7.8	6.0	4.8	4.2	3.6	3.6
72.5°	9.6	8.4	7.8	6.6	6.0	5.4	4.2	3.6	3.0	3.0	3.0
75°	6.0	5.4	4.8	4.2	4.2	3.6	3.0	3.0	2.4	2.4	2.4
77.5°	3.6	3.6	3.0	3.0	2.4	2.4	2.4	1.8	1.8	1.8	1.8
80°	2.4	2.4	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.6	0.6	0.6	0.6	0.6
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	456.7	457.9	456.7	460.3	454.3	460.9	458.5	459.7	464.5	462.7	464.5
5°	465.7	468.1	468.1	472.3	466.9	474.7	472.3	474.7	479.4	479.4	481.8
7.5°	477.1	480.0	481.2	485.4	480.0	489.6	487.2	490.2	496.2	496.2	498.0
10°	489.0	492.6	495.0	499.8	493.8	504.6	502.2	506.4	511.8	512.4	515.4
12.5°	504.0	508.8	511.8	516.0	511.8	522.5	520.1	524.3	531.5	532.1	535.7
15°	520.7	526.7	530.3	535.1	530.3	542.3	539.9	544.7	550.1	552.5	556.1
17.5°	531.5	538.7	541.7	547.1	542.3	554.3	551.3	557.9	562.6	563.8	568.0
20°	533.3	539.9	544.1	548.3	544.1	556.1	553.1	558.5	564.4	565.6	568.6
22.5°	525.5	530.9	535.7	539.3	535.7	547.7	543.5	549.5	554.9	556.1	558.5
25°	507.6	514.2	518.9	521.9	518.4	529.7	526.1	531.5	536.3	538.7	539.3
27.5°	482.4	488.4	493.2	495.0	492.6	503.4	498.6	505.2	509.4	510.6	512.4
30°	448.3	453.7	458.5	459.7	457.9	465.7	463.3	469.3	473.5	474.7	475.9
32.5°	406.4	411.8	414.8	416.0	414.2	422.0	419.6	424.4	429.2	429.2	429.2
35°	359.1	363.9	365.7	369.3	365.1	372.9	370.5	374.7	378.9	378.9	379.5
37.5°	308.3	311.8	313.0	316.6	312.4	319.6	317.8	321.4	325.0	324.4	325.6
40°	253.8	257.4	258.6	261.6	258.0	264.0	262.8	266.4	269.4	269.4	269.4
42.5°	201.1	203.5	203.5	206.5	202.9	208.3	208.3	210.7	213.7	213.1	213.1
45°	146.0	145.4	146.6	146.0	146.0	150.8	150.8	152.0	154.4	153.2	153.8
47.5°	97.0	97.6	95.2	97.0	94.6	98.8	98.8	98.8	100.6	99.4	100.6
50°	61.7	59.9	58.7	58.7	58.1	61.1	59.9	60.5	61.7	60.5	61.7
52.5°	34.7	34.1	32.9	33.5	32.3	32.9	32.9	32.9	33.5	32.9	34.1
55°	20.4	18.6	18.0	18.0	17.4	18.0	17.4	17.4	17.4	16.8	17.4
57.5°	12.0	11.4	10.8	10.8	10.2	10.2	10.2	10.2	10.2	10.2	10.2
60°	8.4	7.8	7.8	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
62.5°	6.6	6.0	6.0	6.0	5.4	5.4	5.4	5.4	5.4	6.0	5.4
65°	4.8	4.8	4.8	4.8	4.8	4.8	4.2	4.8	4.8	4.8	4.8
67.5°	4.2	4.2	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.0	0.6	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: P212699

CATALOG NUMBER: LD4B10D010 EU4B10209030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	466.3	463.9	458.5	462.1	462.7	460.3	463.3	466.9	463.3	460.3	462.7
5°	483.6	481.8	477.1	480.0	480.6	480.0	481.8	484.8	481.8	480.0	480.6
7.5°	501.0	499.8	494.4	498.0	499.2	498.0	499.8	502.8	499.8	498.0	499.2
10°	517.8	517.2	511.8	516.6	517.2	516.0	517.8	522.5	517.8	516.0	517.2
12.5°	536.9	538.1	532.1	537.5	538.1	536.9	539.3	542.9	539.3	536.9	538.1
15°	559.1	558.5	553.7	557.9	559.1	557.9	560.8	565.6	560.8	557.9	559.1
17.5°	569.8	569.8	566.2	570.4	571.0	571.0	573.4	577.0	573.4	571.0	571.0
20°	570.4	571.0	566.8	571.6	571.6	571.6	574.0	575.8	574.0	571.6	571.6
22.5°	560.8	561.4	557.3	561.4	561.4	562.0	563.2	564.4	563.2	562.0	561.4
25°	542.3	542.9	539.3	542.9	542.3	542.3	543.5	545.3	543.5	542.3	542.3
27.5°	514.8	515.4	510.6	514.8	514.2	513.6	515.4	516.0	515.4	513.6	514.2
30°	478.2	478.8	474.7	478.2	477.6	477.1	479.4	480.0	479.4	477.1	477.6
32.5°	434.6	433.4	430.4	433.4	432.8	432.8	434.0	435.8	434.0	432.8	432.8
35°	381.9	381.9	380.1	382.5	380.7	383.1	383.1	383.7	383.1	383.1	380.7
37.5°	328.0	328.0	326.8	328.0	327.4	329.8	329.8	331.6	329.8	329.8	327.4
40°	271.7	271.7	270.5	271.7	273.5	273.5	272.9	275.3	272.9	273.5	273.5
42.5°	214.9	214.9	214.3	217.3	217.3	217.3	215.5	217.9	215.5	217.3	217.3
45°	156.2	155.0	154.4	154.4	155.0	157.4	155.0	158.0	155.0	157.4	155.0
47.5°	99.4	100.0	100.6	102.4	101.2	100.6	100.6	102.4	100.6	100.6	101.2
50°	61.1	61.7	61.7	62.8	61.1	62.3	61.7	62.8	61.7	62.3	61.1
52.5°	33.5	33.5	33.5	34.7	33.5	34.1	33.5	34.7	33.5	34.1	33.5
55°	17.4	17.4	17.4	18.0	17.4	17.4	17.4	18.0	17.4	17.4	17.4
57.5°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
60°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
62.5°	6.0	5.4	5.4	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
65°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
67.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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: P212699

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	462.1	458.5	463.9	466.3	464.5	462.7	464.5	459.7	458.5	460.9	454.3
5°	480.0	477.1	481.8	483.6	481.8	479.4	479.4	474.7	472.3	474.7	466.9
7.5°	498.0	494.4	499.8	501.0	498.0	496.2	496.2	490.2	487.2	489.6	480.0
10°	516.6	511.8	517.2	517.8	515.4	512.4	511.8	506.4	502.2	504.6	493.8
12.5°	537.5	532.1	538.1	536.9	535.7	532.1	531.5	524.3	520.1	522.5	511.8
15°	557.9	553.7	558.5	559.1	556.1	552.5	550.1	544.7	539.9	542.3	530.3
17.5°	570.4	566.2	569.8	569.8	568.0	563.8	562.6	557.9	551.3	554.3	542.3
20°	571.6	566.8	571.0	570.4	568.6	565.6	564.4	558.5	553.1	556.1	544.1
22.5°	561.4	557.3	561.4	560.8	558.5	556.1	554.9	549.5	543.5	547.7	535.7
25°	542.9	539.3	542.9	542.3	539.3	538.7	536.3	531.5	526.1	529.7	518.4
27.5°	514.8	510.6	515.4	514.8	512.4	510.6	509.4	505.2	498.6	503.4	492.6
30°	478.2	474.7	478.8	478.2	475.9	474.7	473.5	469.3	463.3	465.7	457.9
32.5°	433.4	430.4	433.4	434.6	429.2	429.2	429.2	424.4	419.6	422.0	414.2
35°	382.5	380.1	381.9	381.9	379.5	378.9	378.9	374.7	370.5	372.9	365.1
37.5°	328.0	326.8	328.0	328.0	325.6	324.4	325.0	321.4	317.8	319.6	312.4
40°	271.7	270.5	271.7	271.7	269.4	269.4	269.4	266.4	262.8	264.0	258.0
42.5°	217.3	214.3	214.9	214.9	213.1	213.1	213.7	210.7	208.3	208.3	202.9
45°	154.4	154.4	155.0	156.2	153.8	153.2	154.4	152.0	150.8	150.8	146.0
47.5°	102.4	100.6	100.0	99.4	100.6	99.4	100.6	98.8	98.8	98.8	94.6
50°	62.8	61.7	61.7	61.1	61.7	60.5	61.7	60.5	59.9	61.1	58.1
52.5°	34.7	33.5	33.5	33.5	34.1	32.9	33.5	32.9	32.9	32.9	32.3
55°	18.0	17.4	17.4	17.4	17.4	16.8	17.4	17.4	17.4	18.0	17.4
57.5°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
60°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
62.5°	6.0	5.4	5.4	6.0	5.4	6.0	5.4	5.4	5.4	5.4	5.4
65°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.2	4.8	4.8
67.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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: P212699

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CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	460.3	456.7	457.9	456.7	453.7	454.3	452.5	452.5	448.9	448.3	448.9
5°	472.3	468.1	468.1	465.7	461.5	460.9	457.3	457.3	451.9	450.1	450.1
7.5°	485.4	481.2	480.0	477.1	471.7	469.3	464.5	462.7	456.1	453.1	452.5
10°	499.8	495.0	492.6	489.0	482.4	478.2	471.7	469.3	461.5	455.5	454.9
12.5°	516.0	511.8	508.8	504.0	496.8	490.8	483.0	478.8	468.7	462.1	459.1
15°	535.1	530.3	526.7	520.7	513.0	505.8	495.6	490.8	478.8	469.9	465.7
17.5°	547.1	541.7	538.7	531.5	523.7	515.4	504.0	498.0	484.2	472.9	468.7
20°	548.3	544.1	539.9	533.3	525.5	516.0	504.0	498.0	483.6	472.3	466.3
22.5°	539.3	535.7	530.9	525.5	517.2	507.6	496.2	490.8	477.1	465.1	458.5
25°	521.9	518.9	514.2	507.6	501.6	491.4	480.6	477.1	462.7	452.5	446.5
27.5°	495.0	493.2	488.4	482.4	477.6	469.3	458.5	455.5	442.9	434.0	429.2
30°	459.7	458.5	453.7	448.3	444.7	436.9	427.4	426.2	414.8	408.2	403.4
32.5°	416.0	414.8	411.8	406.4	403.4	396.8	387.9	389.1	379.5	374.1	372.3
35°	369.3	365.7	363.9	359.1	355.5	350.8	343.0	344.8	339.4	335.2	334.6
37.5°	316.6	313.0	311.8	308.3	305.3	301.1	295.1	297.5	295.1	293.3	295.1
40°	261.6	258.6	257.4	253.8	252.6	249.6	245.4	251.4	248.4	252.0	252.6
42.5°	206.5	203.5	203.5	201.1	199.3	198.7	195.7	203.5	203.5	209.5	212.5
45°	146.0	146.6	145.4	146.0	144.9	146.6	144.9	150.2	158.0	165.8	170.6
47.5°	97.0	95.2	97.6	97.0	96.4	98.8	101.2	106.5	115.5	126.3	132.9
50°	58.7	58.7	59.9	61.7	62.8	64.6	68.2	74.8	85.0	95.8	103.6
52.5°	33.5	32.9	34.1	34.7	37.7	40.1	44.3	51.5	61.7	73.6	80.8
55°	18.0	18.0	18.6	20.4	22.1	25.1	29.3	35.9	45.5	57.5	64.6
57.5°	10.8	10.8	11.4	12.0	13.8	16.2	19.8	25.1	33.5	43.7	50.3
60°	7.2	7.8	7.8	8.4	9.6	10.8	13.8	17.4	23.9	31.7	37.1
62.5°	6.0	6.0	6.0	6.6	7.2	7.8	9.6	12.6	16.8	22.7	26.9
65°	4.8	4.8	4.8	4.8	5.4	6.0	7.2	9.0	12.0	15.6	18.0
67.5°	3.6	3.6	4.2	4.2	4.2	4.8	5.4	6.6	8.4	10.8	12.6
70°	3.0	3.0	3.0	3.0	3.6	3.6	4.2	4.8	6.0	7.8	9.0
72.5°	2.4	2.4	2.4	2.4	3.0	3.0	3.0	3.6	4.2	5.4	6.0
75°	1.8	1.8	1.8	1.8	2.4	2.4	2.4	3.0	3.0	3.6	4.2
77.5°	1.2	1.2	1.2	1.2	1.8	1.8	1.8	1.8	2.4	2.4	2.4
80°	0.6	0.6	0.6	1.2	1.2	1.2	1.2	1.2	1.2	1.8	1.8
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	1.2
85°	0.0	0.0	0.6	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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: P212699

CATALOG NUMBER: LD4B10D010 EU4B10209030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	444.7	452.5	443.5	445.3	442.3	447.7	440.5	442.3	443.5	442.3	442.9
5°	445.3	451.3	441.1	442.9	438.1	441.7	435.2	435.8	435.8	434.6	434.0
7.5°	447.1	450.7	439.9	439.3	433.4	436.9	429.2	428.0	427.4	425.6	426.2
10°	447.7	448.9	437.5	435.2	428.0	429.2	421.4	419.0	417.2	416.0	415.4
12.5°	451.9	450.7	437.5	433.4	424.4	423.8	415.4	411.8	408.8	407.6	407.0
15°	457.3	453.1	438.7	432.8	422.6	420.2	411.2	407.6	403.4	402.2	401.0
17.5°	459.7	453.1	437.5	429.8	418.4	415.4	406.4	401.6	397.4	395.6	394.4
20°	456.7	448.3	432.8	424.4	412.4	408.2	399.2	393.9	389.7	387.9	386.7
22.5°	450.1	440.5	425.6	417.2	405.2	399.8	392.1	387.3	382.5	381.9	380.1
25°	438.7	429.2	416.6	408.2	397.4	392.1	384.9	380.7	375.9	375.3	374.7
27.5°	422.0	413.0	403.4	395.6	386.1	381.9	376.5	372.3	368.1	368.1	366.9
30°	398.0	392.1	383.7	378.9	371.1	366.9	363.3	360.3	356.1	356.7	355.5
32.5°	367.5	364.5	358.5	356.1	350.2	349.0	345.4	343.0	339.4	340.6	339.4
35°	333.4	329.8	329.8	328.6	325.6	325.0	323.2	322.0	319.6	320.2	320.2
37.5°	294.5	294.5	298.1	298.7	298.1	299.3	298.7	298.7	296.3	297.5	296.9
40°	254.4	258.0	264.6	268.2	269.4	271.7	274.7	273.5	272.3	274.1	273.5
42.5°	215.5	222.7	232.8	238.8	243.0	246.6	250.8	250.8	250.2	252.6	252.0
45°	178.4	185.0	198.7	208.9	216.1	221.5	226.3	228.1	228.6	231.0	230.4
47.5°	141.9	153.2	169.4	181.4	190.3	196.9	203.5	205.9	207.7	210.7	210.7
50°	112.5	126.9	145.4	157.4	168.2	175.4	182.0	185.6	187.9	190.3	190.3
52.5°	90.4	105.3	123.3	135.9	146.0	153.8	160.4	164.6	166.4	169.4	169.4
55°	73.6	87.4	104.1	115.5	125.7	132.9	138.3	141.9	143.7	146.0	146.0
57.5°	58.1	71.2	85.0	95.2	103.6	108.9	113.7	114.9	115.5	117.3	117.9
60°	43.7	53.9	65.2	73.0	79.0	82.6	86.2	85.6	85.0	86.2	85.0
62.5°	31.1	38.3	46.7	51.5	56.3	58.1	59.9	58.7	57.5	58.1	58.1
65°	20.9	26.3	31.1	34.7	37.1	38.3	38.9	38.3	37.7	38.3	37.7
67.5°	14.4	17.4	20.9	22.7	24.5	25.1	25.7	25.1	25.1	25.1	24.5
70°	9.6	11.4	13.8	15.0	15.6	16.2	16.8	16.2	16.2	16.2	16.2
72.5°	6.6	7.8	8.4	9.6	10.2	10.2	10.2	10.2	10.2	10.2	10.2
75°	4.2	4.8	5.4	6.0	6.6	6.6	6.6	6.6	6.6	6.6	6.6
77.5°	3.0	3.0	3.6	3.6	4.2	4.2	4.2	4.2	4.2	4.2	4.2
80°	1.8	1.8	2.4	2.4	2.4	2.4	3.0	2.4	3.0	3.0	3.0
82.5°	1.2	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8
85°	0.6	0.6	0.6	0.6	0.6	0.6	1.2	0.6	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: P212699

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CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	453.1	453.1	453.1	453.1
2.5°	442.9	441.7	438.1	442.3
5°	433.4	432.2	429.2	432.2
7.5°	423.8	422.0	419.6	421.4
10°	412.4	411.2	408.2	410.0
12.5°	404.0	401.6	399.8	400.4
15°	398.6	396.2	394.4	395.0
17.5°	391.5	389.1	387.3	387.3
20°	383.7	381.3	380.1	379.5
22.5°	377.1	375.3	374.7	372.9
25°	371.1	369.9	369.9	367.5
27.5°	364.5	362.7	362.7	360.3
30°	353.1	352.6	352.6	350.8
32.5°	338.2	336.4	337.6	334.6
35°	317.8	316.6	318.4	316.0
37.5°	295.7	295.1	296.3	294.5
40°	272.3	272.3	274.1	271.1
42.5°	252.0	252.0	253.8	250.8
45°	229.8	231.6	233.4	231.0
47.5°	210.7	211.9	214.3	211.9
50°	191.5	192.7	194.5	192.1
52.5°	170.6	171.8	173.6	171.8
55°	146.6	147.8	149.6	148.4
57.5°	117.9	116.7	119.7	117.3
60°	85.6	83.2	83.8	83.8
62.5°	56.9	55.7	56.9	55.1
65°	37.7	37.1	37.1	37.1
67.5°	25.1	24.5	25.1	24.5
70°	16.2	16.2	16.2	16.2
72.5°	10.2	10.2	10.2	10.2
75°	6.6	6.6	6.6	6.6
77.5°	4.2	4.2	4.2	4.2
80°	3.0	3.0	3.0	3.0
82.5°	1.8	1.8	1.8	1.8
85°	1.2	1.2	1.2	1.2
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)