

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: P212692

Luminaire Tested: **LD4B10D010 EU4B10208027 4LBSWLI1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P212692  
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 EU4B10208027 4LBSWLI1  
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 932.2 lumens  
Efficiency: N/A  
Efficacy: 92.8 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

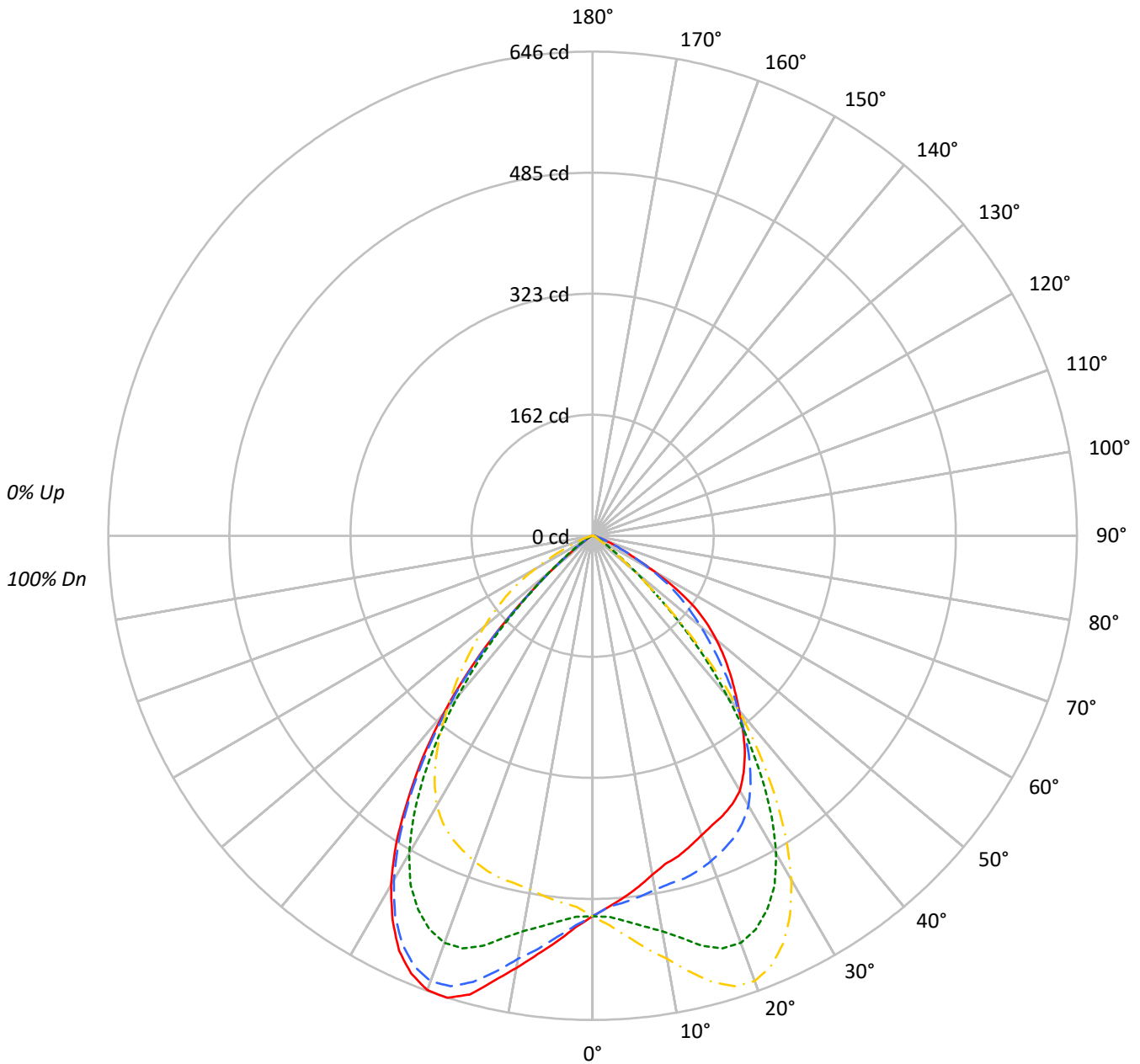
Input Watts (W): 10.05  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	62598	62598	62598	62598
5°	59927	63914	67233	63914
10°	57514	67096	73308	67096
15°	56506	72340	80909	72340
20°	55799	75856	84664	75856
25°	56017	74908	83128	74908
30°	55960	69704	76583	69704
35°	53304	59162	64703	59162
40°	48901	45020	49657	45020
45°	45144	28660	30875	28660
50°	41295	13893	13509	13893
55°	35762	6064	4322	6064
60°	23164	2985	1974	2985
65°	12141	1955	1576	1955
70°	6528	1443	1226	1443
75°	3527	1287	953	1287
80°	2415	923	497	923
85°	1840	991	0	991



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.5	5.3
10°-20°	154.8	16.6
20°-30°	240.6	25.8
30°-40°	243.1	26.1
40°-50°	153.9	16.5
50°-60°	64.6	6.9
60°-70°	20.5	2.2
70°-80°	4.7	0.5
80°-90°	0.7	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°	444.9	47.7
0°-40°	687.9	73.8
0°-60°	906.4	97.2
0°-90°	932.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	932.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	508	508	508	508	508	
5°	484	516	543	516	484	45
15°	442	566	634	566	442	125
25°	412	550	611	550	412	190
35°	354	393	430	393	354	220
45°	259	164	177	164	259	200
55°	166	28	20	28	166	144
65°	42	7	5	7	42	46
75°	7	3	2	3	7	9
85°	1	1	0	1	1	1
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°	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5
2.5°	495.4	490.8	494.8	496.1	496.1	495.4	496.8	495.4	493.4	501.5	495.4
5°	484.0	480.7	484.0	485.4	486.1	486.7	488.1	488.1	487.4	494.8	490.8
7.5°	472.0	470.0	472.7	474.7	477.3	476.7	478.7	479.4	480.7	489.4	485.4
10°	459.2	457.2	460.6	461.9	465.3	465.9	467.3	469.3	472.0	480.7	479.4
12.5°	448.5	447.8	449.9	452.5	455.9	456.6	457.9	461.3	465.3	474.7	475.3
15°	442.5	441.8	443.8	446.5	449.2	450.5	451.9	456.6	460.6	470.6	473.3
17.5°	433.8	433.8	435.8	438.5	441.8	443.2	445.2	449.9	455.2	465.3	468.6
20°	425.1	425.7	427.1	429.7	433.1	434.4	436.4	441.1	447.2	457.2	461.9
22.5°	417.7	419.7	420.4	422.4	425.7	427.7	428.4	433.8	439.1	447.8	453.9
25°	411.6	414.3	414.3	415.7	419.7	420.4	421.0	426.4	431.1	439.1	445.2
27.5°	403.6	406.3	406.3	408.3	411.0	412.3	412.3	417.0	421.7	427.7	432.4
30°	392.9	394.9	394.9	395.6	398.2	399.6	398.9	403.6	406.9	411.0	415.7
32.5°	374.8	378.1	376.8	378.8	380.1	381.5	380.1	384.2	386.8	390.9	392.2
35°	354.0	356.7	354.7	356.0	358.7	358.7	358.0	360.7	362.0	364.0	364.7
37.5°	329.9	331.9	330.5	331.2	332.5	333.2	331.9	334.5	334.5	335.2	333.9
40°	303.7	307.1	305.0	305.0	306.4	307.1	305.0	306.4	307.7	304.4	301.7
42.5°	280.9	284.3	282.2	282.2	282.2	282.9	280.2	280.9	280.9	276.2	272.2
45°	258.8	261.5	259.5	257.4	258.1	258.8	256.1	255.4	253.4	248.1	242.0
47.5°	237.3	240.0	237.3	236.0	236.0	236.0	232.6	230.6	227.9	220.6	213.2
50°	215.2	217.9	215.9	214.5	213.2	213.2	210.5	207.8	203.8	196.4	188.4
52.5°	192.4	194.4	192.4	191.1	189.7	189.7	186.4	184.4	179.7	172.3	163.6
55°	166.3	167.6	165.6	164.3	163.6	163.6	160.9	158.9	154.9	148.8	140.8
57.5°	131.4	134.1	130.7	132.1	132.1	131.4	129.4	128.7	127.4	122.0	116.0
60°	93.9	93.9	93.2	95.9	95.2	96.5	95.2	95.9	96.5	92.5	88.5
62.5°	61.7	63.7	62.3	63.7	65.0	65.0	64.4	65.7	67.0	65.0	63.0
65°	41.6	41.6	41.6	42.2	42.2	42.9	42.2	42.9	43.6	42.9	41.6
67.5°	27.5	28.2	27.5	28.2	27.5	28.2	28.2	28.2	28.8	28.2	27.5
70°	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.8	18.1	17.4
72.5°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
75°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
80°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.7	3.4	2.7	2.7
82.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.7	1.3	0.7	0.7
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°	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5
2.5°	498.8	496.8	506.8	498.1	502.8	502.1	502.8	506.8	506.8	508.9	508.2
5°	496.1	494.1	505.5	498.8	504.2	504.2	506.2	512.2	512.2	516.2	516.9
7.5°	492.1	492.8	504.8	500.8	506.8	507.5	510.9	518.2	520.3	525.6	528.3
10°	487.4	490.1	502.8	501.5	509.5	510.2	516.9	525.6	528.3	535.7	540.4
12.5°	485.4	490.1	504.8	506.2	514.2	517.6	524.9	536.3	541.0	549.8	556.5
15°	484.7	491.4	507.5	512.2	521.6	526.3	536.3	549.8	555.1	566.5	574.6
17.5°	481.4	490.1	507.5	514.9	524.9	529.6	542.4	557.8	564.5	577.2	586.6
20°	475.3	484.7	502.1	511.5	522.3	529.0	541.7	557.8	564.5	577.9	588.6
22.5°	467.3	476.7	493.4	504.2	513.5	520.9	534.3	549.8	555.8	568.5	579.2
25°	457.2	466.6	480.7	491.4	500.1	506.8	518.2	534.3	538.4	550.4	561.8
27.5°	443.2	451.9	462.6	472.7	480.7	486.1	496.1	510.2	513.5	525.6	535.0
30°	424.4	429.7	439.1	445.8	451.9	457.2	464.6	477.3	478.7	489.4	498.1
32.5°	398.9	401.6	408.3	411.6	417.0	419.0	425.1	435.8	434.4	444.5	451.9
35°	368.1	369.4	369.4	373.4	374.8	375.4	380.1	386.2	384.2	392.9	398.2
37.5°	334.5	333.9	329.9	329.9	330.5	328.5	330.5	333.2	330.5	337.2	341.9
40°	300.4	296.3	289.0	284.9	282.9	282.2	278.2	281.6	274.9	279.6	282.9
42.5°	267.5	260.8	249.4	241.4	238.0	234.6	227.9	227.9	219.2	222.6	223.3
45°	234.0	222.6	207.2	199.8	191.1	185.7	177.0	168.3	162.2	164.3	162.2
47.5°	203.1	189.7	171.6	158.9	148.8	141.5	129.4	119.3	113.3	110.6	107.9
50°	176.3	162.9	142.1	126.0	116.0	107.3	95.2	83.8	76.4	72.4	70.4
52.5°	152.2	138.1	118.0	101.2	90.5	82.5	69.1	57.7	49.6	44.9	42.2
55°	129.4	116.7	97.9	82.5	72.4	64.4	51.0	40.2	32.9	28.2	24.8
57.5°	106.6	95.2	79.8	65.0	56.3	48.9	37.5	28.2	22.1	18.1	15.4
60°	81.8	73.1	60.3	48.9	41.6	35.5	26.8	19.4	15.4	12.1	10.7
62.5°	57.7	52.3	42.9	34.9	30.2	25.5	18.8	14.1	10.7	8.7	8.0
65°	38.9	34.9	29.5	23.5	20.1	17.4	13.4	10.1	8.0	6.7	6.0
67.5°	25.5	23.5	19.4	16.1	14.1	12.1	9.4	7.4	6.0	5.4	4.7
70°	16.8	15.4	12.7	10.7	10.1	8.7	6.7	5.4	4.7	4.0	4.0
72.5°	10.7	9.4	8.7	7.4	6.7	6.0	4.7	4.0	3.4	3.4	3.4
75°	6.7	6.0	5.4	4.7	4.7	4.0	3.4	3.4	2.7	2.7	2.7
77.5°	4.0	4.0	3.4	3.4	2.7	2.7	2.7	2.0	2.0	2.0	2.0
80°	2.7	2.7	2.0	2.0	2.0	2.0	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5
2.5°	511.5	512.9	511.5	515.6	508.9	516.2	513.5	514.9	520.3	518.2	520.3
5°	521.6	524.3	524.3	529.0	522.9	531.6	529.0	531.6	537.0	537.0	539.7
7.5°	534.3	537.7	539.0	543.7	537.7	548.4	545.7	549.1	555.8	555.8	557.8
10°	547.7	551.8	554.4	559.8	553.1	565.2	562.5	567.2	573.2	573.9	577.2
12.5°	564.5	569.9	573.2	577.9	573.2	585.3	582.6	587.3	595.3	596.0	600.0
15°	583.3	590.0	594.0	599.4	594.0	607.4	604.7	610.1	616.1	618.8	622.8
17.5°	595.3	603.4	606.7	612.8	607.4	620.8	617.5	624.8	630.2	631.5	636.2
20°	597.4	604.7	609.4	614.1	609.4	622.8	619.5	625.5	632.2	633.6	636.9
22.5°	588.6	594.7	600.0	604.1	600.0	613.4	608.7	615.5	621.5	622.8	625.5
25°	568.5	575.9	581.3	584.6	580.6	593.3	589.3	595.3	600.7	603.4	604.1
27.5°	540.4	547.1	552.4	554.4	551.8	563.8	558.5	565.8	570.5	571.9	573.9
30°	502.1	508.2	513.5	514.9	512.9	521.6	518.9	525.6	530.3	531.6	533.0
32.5°	455.2	461.3	464.6	465.9	463.9	472.7	470.0	475.3	480.7	480.7	480.7
35°	402.3	407.6	409.6	413.7	409.0	417.7	415.0	419.7	424.4	424.4	425.1
37.5°	345.3	349.3	350.6	354.7	350.0	358.0	356.0	360.0	364.0	363.4	364.7
40°	284.3	288.3	289.6	293.0	289.0	295.7	294.3	298.3	301.7	301.7	301.7
42.5°	225.3	227.9	227.9	231.3	227.3	233.3	233.3	236.0	239.3	238.7	238.7
45°	163.6	162.9	164.3	163.6	163.6	168.9	168.9	170.3	173.0	171.6	172.3
47.5°	108.6	109.3	106.6	108.6	105.9	110.6	110.6	110.6	112.6	111.3	112.6
50°	69.1	67.0	65.7	65.7	65.0	68.4	67.0	67.7	69.1	67.7	69.1
52.5°	38.9	38.2	36.9	37.5	36.2	36.9	36.9	36.9	37.5	36.9	38.2
55°	22.8	20.8	20.1	20.1	19.4	20.1	19.4	19.4	19.4	18.8	19.4
57.5°	13.4	12.7	12.1	12.1	11.4	11.4	11.4	11.4	11.4	11.4	11.4
60°	9.4	8.7	8.7	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
62.5°	7.4	6.7	6.7	6.7	6.0	6.0	6.0	6.0	6.0	6.7	6.0
65°	5.4	5.4	5.4	5.4	5.4	5.4	4.7	5.4	5.4	5.4	5.4
67.5°	4.7	4.7	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
75°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.0	0.7	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°	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5
2.5°	522.3	519.6	513.5	517.6	518.2	515.6	518.9	522.9	518.9	515.6	518.2
5°	541.7	539.7	534.3	537.7	538.4	537.7	539.7	543.0	539.7	537.7	538.4
7.5°	561.1	559.8	553.8	557.8	559.1	557.8	559.8	563.2	559.8	557.8	559.1
10°	579.9	579.2	573.2	578.6	579.2	577.9	579.9	585.3	579.9	577.9	579.2
12.5°	601.4	602.7	596.0	602.0	602.7	601.4	604.1	608.1	604.1	601.4	602.7
15°	626.2	625.5	620.1	624.8	626.2	624.8	628.2	633.6	628.2	624.8	626.2
17.5°	638.2	638.2	634.2	638.9	639.6	639.6	642.3	646.3	642.3	639.6	639.6
20°	638.9	639.6	634.9	640.3	640.3	640.3	642.9	645.0	642.9	640.3	640.3
22.5°	628.2	628.9	624.2	628.9	628.9	629.5	630.9	632.2	630.9	629.5	628.9
25°	607.4	608.1	604.1	608.1	607.4	607.4	608.7	610.8	608.7	607.4	607.4
27.5°	576.6	577.2	571.9	576.6	575.9	575.2	577.2	577.9	577.2	575.2	575.9
30°	535.7	536.3	531.6	535.7	535.0	534.3	537.0	537.7	537.0	534.3	535.0
32.5°	486.7	485.4	482.0	485.4	484.7	484.7	486.1	488.1	486.1	484.7	484.7
35°	427.7	427.7	425.7	428.4	426.4	429.1	429.1	429.7	429.1	429.1	426.4
37.5°	367.4	367.4	366.1	367.4	366.7	369.4	369.4	371.4	369.4	369.4	366.7
40°	304.4	304.4	303.0	304.4	306.4	306.4	305.7	308.4	305.7	306.4	306.4
42.5°	240.7	240.7	240.0	243.4	243.4	243.4	241.4	244.0	241.4	243.4	243.4
45°	175.0	173.6	173.0	173.0	173.6	176.3	173.6	177.0	173.6	176.3	173.6
47.5°	111.3	112.0	112.6	114.6	113.3	112.6	112.6	114.6	112.6	112.6	113.3
50°	68.4	69.1	69.1	70.4	68.4	69.7	69.1	70.4	69.1	69.7	68.4
52.5°	37.5	37.5	37.5	38.9	37.5	38.2	37.5	38.9	37.5	38.2	37.5
55°	19.4	19.4	19.4	20.1	19.4	19.4	19.4	20.1	19.4	19.4	19.4
57.5°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
60°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
62.5°	6.7	6.0	6.0	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
65°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
67.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
75°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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: P212692

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**CANDELA DISTRIBUTION (continued):**

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5
2.5°	517.6	513.5	519.6	522.3	520.3	518.2	520.3	514.9	513.5	516.2	508.9
5°	537.7	534.3	539.7	541.7	539.7	537.0	537.0	531.6	529.0	531.6	522.9
7.5°	557.8	553.8	559.8	561.1	557.8	555.8	555.8	549.1	545.7	548.4	537.7
10°	578.6	573.2	579.2	579.9	577.2	573.9	573.2	567.2	562.5	565.2	553.1
12.5°	602.0	596.0	602.7	601.4	600.0	596.0	595.3	587.3	582.6	585.3	573.2
15°	624.8	620.1	625.5	626.2	622.8	618.8	616.1	610.1	604.7	607.4	594.0
17.5°	638.9	634.2	638.2	638.2	636.2	631.5	630.2	624.8	617.5	620.8	607.4
20°	640.3	634.9	639.6	638.9	636.9	633.6	632.2	625.5	619.5	622.8	609.4
22.5°	628.9	624.2	628.9	628.2	625.5	622.8	621.5	615.5	608.7	613.4	600.0
25°	608.1	604.1	608.1	607.4	604.1	603.4	600.7	595.3	589.3	593.3	580.6
27.5°	576.6	571.9	577.2	576.6	573.9	571.9	570.5	565.8	558.5	563.8	551.8
30°	535.7	531.6	536.3	535.7	533.0	531.6	530.3	525.6	518.9	521.6	512.9
32.5°	485.4	482.0	485.4	486.7	480.7	480.7	480.7	475.3	470.0	472.7	463.9
35°	428.4	425.7	427.7	427.7	425.1	424.4	424.4	419.7	415.0	417.7	409.0
37.5°	367.4	366.1	367.4	367.4	364.7	363.4	364.0	360.0	356.0	358.0	350.0
40°	304.4	303.0	304.4	304.4	301.7	301.7	301.7	298.3	294.3	295.7	289.0
42.5°	243.4	240.0	240.7	240.7	238.7	238.7	239.3	236.0	233.3	233.3	227.3
45°	173.0	173.0	173.6	175.0	172.3	171.6	173.0	170.3	168.9	168.9	163.6
47.5°	114.6	112.6	112.0	111.3	112.6	111.3	112.6	110.6	110.6	110.6	105.9
50°	70.4	69.1	69.1	68.4	69.1	67.7	69.1	67.7	67.0	68.4	65.0
52.5°	38.9	37.5	37.5	37.5	38.2	36.9	37.5	36.9	36.9	36.9	36.2
55°	20.1	19.4	19.4	19.4	19.4	18.8	19.4	19.4	19.4	20.1	19.4
57.5°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
60°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
62.5°	6.7	6.0	6.0	6.7	6.0	6.7	6.0	6.0	6.0	6.0	6.0
65°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	4.7	5.4	5.4
67.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
75°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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



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**CANDELA DISTRIBUTION (continued):**

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5
2.5°	515.6	511.5	512.9	511.5	508.2	508.9	506.8	506.8	502.8	502.1	502.8
5°	529.0	524.3	524.3	521.6	516.9	516.2	512.2	512.2	506.2	504.2	504.2
7.5°	543.7	539.0	537.7	534.3	528.3	525.6	520.3	518.2	510.9	507.5	506.8
10°	559.8	554.4	551.8	547.7	540.4	535.7	528.3	525.6	516.9	510.2	509.5
12.5°	577.9	573.2	569.9	564.5	556.5	549.8	541.0	536.3	524.9	517.6	514.2
15°	599.4	594.0	590.0	583.3	574.6	566.5	555.1	549.8	536.3	526.3	521.6
17.5°	612.8	606.7	603.4	595.3	586.6	577.2	564.5	557.8	542.4	529.6	524.9
20°	614.1	609.4	604.7	597.4	588.6	577.9	564.5	557.8	541.7	529.0	522.3
22.5°	604.1	600.0	594.7	588.6	579.2	568.5	555.8	549.8	534.3	520.9	513.5
25°	584.6	581.3	575.9	568.5	561.8	550.4	538.4	534.3	518.2	506.8	500.1
27.5°	554.4	552.4	547.1	540.4	535.0	525.6	513.5	510.2	496.1	486.1	480.7
30°	514.9	513.5	508.2	502.1	498.1	489.4	478.7	477.3	464.6	457.2	451.9
32.5°	465.9	464.6	461.3	455.2	451.9	444.5	434.4	435.8	425.1	419.0	417.0
35°	413.7	409.6	407.6	402.3	398.2	392.9	384.2	386.2	380.1	375.4	374.8
37.5°	354.7	350.6	349.3	345.3	341.9	337.2	330.5	333.2	330.5	328.5	330.5
40°	293.0	289.6	288.3	284.3	282.9	279.6	274.9	281.6	278.2	282.2	282.9
42.5°	231.3	227.9	227.9	225.3	223.3	222.6	219.2	227.9	227.9	234.6	238.0
45°	163.6	164.3	162.9	163.6	162.2	164.3	162.2	168.3	177.0	185.7	191.1
47.5°	108.6	106.6	109.3	108.6	107.9	110.6	113.3	119.3	129.4	141.5	148.8
50°	65.7	65.7	67.0	69.1	70.4	72.4	76.4	83.8	95.2	107.3	116.0
52.5°	37.5	36.9	38.2	38.9	42.2	44.9	49.6	57.7	69.1	82.5	90.5
55°	20.1	20.1	20.8	22.8	24.8	28.2	32.9	40.2	51.0	64.4	72.4
57.5°	12.1	12.1	12.7	13.4	15.4	18.1	22.1	28.2	37.5	48.9	56.3
60°	8.0	8.7	8.7	9.4	10.7	12.1	15.4	19.4	26.8	35.5	41.6
62.5°	6.7	6.7	6.7	7.4	8.0	8.7	10.7	14.1	18.8	25.5	30.2
65°	5.4	5.4	5.4	5.4	6.0	6.7	8.0	10.1	13.4	17.4	20.1
67.5°	4.0	4.0	4.7	4.7	4.7	5.4	6.0	7.4	9.4	12.1	14.1
70°	3.4	3.4	3.4	3.4	4.0	4.0	4.7	5.4	6.7	8.7	10.1
72.5°	2.7	2.7	2.7	2.7	3.4	3.4	3.4	4.0	4.7	6.0	6.7
75°	2.0	2.0	2.0	2.0	2.7	2.7	2.7	3.4	3.4	4.0	4.7
77.5°	1.3	1.3	1.3	1.3	2.0	2.0	2.0	2.0	2.7	2.7	2.7
80°	0.7	0.7	0.7	1.3	1.3	1.3	1.3	1.3	1.3	2.0	2.0
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3
85°	0.0	0.0	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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):**

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5	507.5
2.5°	498.1	506.8	496.8	498.8	495.4	501.5	493.4	495.4	496.8	495.4	496.1
5°	498.8	505.5	494.1	496.1	490.8	494.8	487.4	488.1	488.1	486.7	486.1
7.5°	500.8	504.8	492.8	492.1	485.4	489.4	480.7	479.4	478.7	476.7	477.3
10°	501.5	502.8	490.1	487.4	479.4	480.7	472.0	469.3	467.3	465.9	465.3
12.5°	506.2	504.8	490.1	485.4	475.3	474.7	465.3	461.3	457.9	456.6	455.9
15°	512.2	507.5	491.4	484.7	473.3	470.6	460.6	456.6	451.9	450.5	449.2
17.5°	514.9	507.5	490.1	481.4	468.6	465.3	455.2	449.9	445.2	443.2	441.8
20°	511.5	502.1	484.7	475.3	461.9	457.2	447.2	441.1	436.4	434.4	433.1
22.5°	504.2	493.4	476.7	467.3	453.9	447.8	439.1	433.8	428.4	427.7	425.7
25°	491.4	480.7	466.6	457.2	445.2	439.1	431.1	426.4	421.0	420.4	419.7
27.5°	472.7	462.6	451.9	443.2	432.4	427.7	421.7	417.0	412.3	412.3	411.0
30°	445.8	439.1	429.7	424.4	415.7	411.0	406.9	403.6	398.9	399.6	398.2
32.5°	411.6	408.3	401.6	398.9	392.2	390.9	386.8	384.2	380.1	381.5	380.1
35°	373.4	369.4	369.4	368.1	364.7	364.0	362.0	360.7	358.0	358.7	358.7
37.5°	329.9	329.9	333.9	334.5	333.9	335.2	334.5	334.5	331.9	333.2	332.5
40°	284.9	289.0	296.3	300.4	301.7	304.4	307.7	306.4	305.0	307.1	306.4
42.5°	241.4	249.4	260.8	267.5	272.2	276.2	280.9	280.9	280.2	282.9	282.2
45°	199.8	207.2	222.6	234.0	242.0	248.1	253.4	255.4	256.1	258.8	258.1
47.5°	158.9	171.6	189.7	203.1	213.2	220.6	227.9	230.6	232.6	236.0	236.0
50°	126.0	142.1	162.9	176.3	188.4	196.4	203.8	207.8	210.5	213.2	213.2
52.5°	101.2	118.0	138.1	152.2	163.6	172.3	179.7	184.4	186.4	189.7	189.7
55°	82.5	97.9	116.7	129.4	140.8	148.8	154.9	158.9	160.9	163.6	163.6
57.5°	65.0	79.8	95.2	106.6	116.0	122.0	127.4	128.7	129.4	131.4	132.1
60°	48.9	60.3	73.1	81.8	88.5	92.5	96.5	95.9	95.2	96.5	95.2
62.5°	34.9	42.9	52.3	57.7	63.0	65.0	67.0	65.7	64.4	65.0	65.0
65°	23.5	29.5	34.9	38.9	41.6	42.9	43.6	42.9	42.2	42.9	42.2
67.5°	16.1	19.4	23.5	25.5	27.5	28.2	28.8	28.2	28.2	28.2	27.5
70°	10.7	12.7	15.4	16.8	17.4	18.1	18.8	18.1	18.1	18.1	18.1
72.5°	7.4	8.7	9.4	10.7	11.4	11.4	11.4	11.4	11.4	11.4	11.4
75°	4.7	5.4	6.0	6.7	7.4	7.4	7.4	7.4	7.4	7.4	7.4
77.5°	3.4	3.4	4.0	4.0	4.7	4.7	4.7	4.7	4.7	4.7	4.7
80°	2.0	2.0	2.7	2.7	2.7	2.7	3.4	2.7	3.4	3.4	3.4
82.5°	1.3	1.3	1.3	1.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	0.7	0.7	0.7	0.7	0.7	0.7	1.3	0.7	1.3	1.3	1.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P212692

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**CANDELA DISTRIBUTION (continued):**

	345°	350°	355°	360°
0°	507.5	507.5	507.5	507.5
2.5°	496.1	494.8	490.8	495.4
5°	485.4	484.0	480.7	484.0
7.5°	474.7	472.7	470.0	472.0
10°	461.9	460.6	457.2	459.2
12.5°	452.5	449.9	447.8	448.5
15°	446.5	443.8	441.8	442.5
17.5°	438.5	435.8	433.8	433.8
20°	429.7	427.1	425.7	425.1
22.5°	422.4	420.4	419.7	417.7
25°	415.7	414.3	414.3	411.6
27.5°	408.3	406.3	406.3	403.6
30°	395.6	394.9	394.9	392.9
32.5°	378.8	376.8	378.1	374.8
35°	356.0	354.7	356.7	354.0
37.5°	331.2	330.5	331.9	329.9
40°	305.0	305.0	307.1	303.7
42.5°	282.2	282.2	284.3	280.9
45°	257.4	259.5	261.5	258.8
47.5°	236.0	237.3	240.0	237.3
50°	214.5	215.9	217.9	215.2
52.5°	191.1	192.4	194.4	192.4
55°	164.3	165.6	167.6	166.3
57.5°	132.1	130.7	134.1	131.4
60°	95.9	93.2	93.9	93.9
62.5°	63.7	62.3	63.7	61.7
65°	42.2	41.6	41.6	41.6
67.5°	28.2	27.5	28.2	27.5
70°	18.1	18.1	18.1	18.1
72.5°	11.4	11.4	11.4	11.4
75°	7.4	7.4	7.4	7.4
77.5°	4.7	4.7	4.7	4.7
80°	3.4	3.4	3.4	3.4
82.5°	2.0	2.0	2.0	2.0
85°	1.3	1.3	1.3	1.3
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)