

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: P212715

Luminaire Tested: **LD4B15D010 EU4B10209050 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212715
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 EU4B10209050 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1182.3 lumens
Efficiency: N/A
Efficacy: 82.2 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

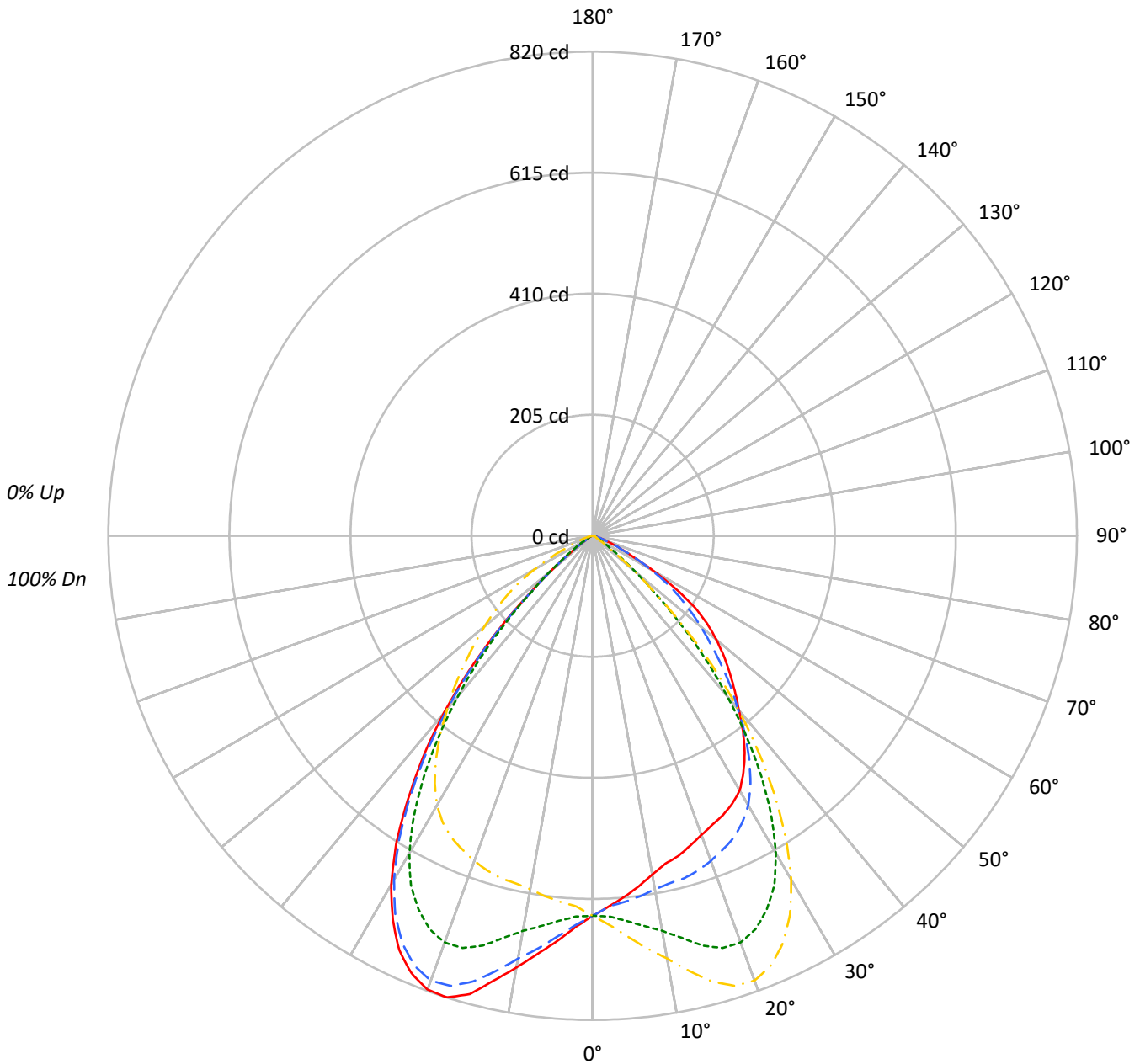
Input Watts (W): 14.39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	79385	79385	79385	79385
5°	76011	81063	85273	81063
10°	72945	85081	92959	85081
15°	71651	91737	102604	91737
20°	70750	96202	107359	96202
25°	71043	94996	105407	94996
30°	70957	88405	97121	88405
35°	67594	75018	82065	75018
40°	62007	57080	62973	57080
45°	57250	36335	39161	36335
50°	52367	17616	17136	17616
55°	45353	7677	5484	7677
60°	29356	3774	2516	3774
65°	15381	2481	1985	2481
70°	8295	1839	1551	1839
75°	4480	1620	1239	1620
80°	3054	1208	639	1208
85°	2406	1274	0	1274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.7	5.3
10°-20°	196.3	16.6
20°-30°	305.2	25.8
30°-40°	308.2	26.1
40°-50°	195.2	16.5
50°-60°	81.9	6.9
60°-70°	26.0	2.2
70°-80°	6.0	0.5
80°-90°	0.9	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°	564.2	47.7
0°-40°	872.4	73.8
0°-60°	1149.5	97.2
0°-90°	1182.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1182.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	644	644	644	644	644	
5°	614	655	689	655	614	58
15°	561	718	804	718	561	158
25°	522	698	774	698	522	240
35°	449	498	545	498	449	279
45°	328	208	224	208	328	253
55°	211	36	26	36	211	182
65°	53	8	7	8	53	58
75°	9	3	3	3	9	11
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°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6
2.5°	628.3	622.4	627.5	629.2	629.2	628.3	630.0	628.3	625.8	636.0	628.3
5°	613.9	609.6	613.9	615.6	616.4	617.3	619.0	619.0	618.1	627.5	622.4
7.5°	598.6	596.0	599.4	602.0	605.4	604.5	607.1	607.9	609.6	620.7	615.6
10°	582.4	579.8	584.1	585.8	590.0	590.9	592.6	595.2	598.6	609.6	607.9
12.5°	568.8	567.9	570.5	573.9	578.1	579.0	580.7	584.9	590.0	602.0	602.8
15°	561.1	560.3	562.8	566.2	569.6	571.3	573.0	579.0	584.1	596.9	600.3
17.5°	550.1	550.1	552.6	556.0	560.3	562.0	564.5	570.5	577.3	590.0	594.3
20°	539.0	539.9	541.6	545.0	549.2	550.9	553.5	559.4	567.1	579.8	585.8
22.5°	529.7	532.2	533.1	535.6	539.9	542.4	543.3	550.1	556.9	567.9	575.6
25°	522.0	525.4	525.4	527.1	532.2	533.1	533.9	540.7	546.7	556.9	564.5
27.5°	511.8	515.2	515.2	517.8	521.2	522.9	522.9	528.8	534.8	542.4	548.4
30°	498.2	500.8	500.8	501.6	505.0	506.7	505.9	511.8	516.1	521.2	527.1
32.5°	475.3	479.5	477.8	480.4	482.1	483.8	482.1	487.2	490.6	495.7	497.4
35°	448.9	452.3	449.8	451.5	454.9	454.9	454.0	457.4	459.1	461.7	462.5
37.5°	418.3	420.9	419.2	420.0	421.7	422.6	420.9	424.3	424.3	425.1	423.4
40°	385.1	389.4	386.8	386.8	388.5	389.4	386.8	388.5	390.2	386.0	382.6
42.5°	356.2	360.5	357.9	357.9	357.9	358.8	355.4	356.2	356.2	350.3	345.2
45°	328.2	331.6	329.0	326.5	327.3	328.2	324.8	323.9	321.4	314.6	306.9
47.5°	301.0	304.4	301.0	299.3	299.3	299.3	295.0	292.5	289.1	279.7	270.4
50°	272.9	276.3	273.8	272.1	270.4	270.4	267.0	263.6	258.5	249.1	238.9
52.5°	244.0	246.6	244.0	242.3	240.6	240.6	236.4	233.8	227.9	218.5	207.5
55°	210.9	212.6	210.0	208.3	207.5	207.5	204.1	201.5	196.4	188.7	178.5
57.5°	166.6	170.0	165.8	167.5	167.5	166.6	164.1	163.2	161.5	154.7	147.1
60°	119.0	119.0	118.2	121.6	120.7	122.4	120.7	121.6	122.4	117.3	112.2
62.5°	78.2	80.8	79.1	80.8	82.5	82.5	81.6	83.3	85.0	82.5	79.9
65°	52.7	52.7	52.7	53.6	53.6	54.4	53.6	54.4	55.3	54.4	52.7
67.5°	34.9	35.7	34.9	35.7	34.9	35.7	35.7	35.7	36.6	35.7	34.9
70°	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.8	23.0	22.1
72.5°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
75°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
77.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
80°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	3.4	4.3	3.4	3.4
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.9	1.7	0.9	0.9
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°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6
2.5°	632.6	630.0	642.8	631.7	637.7	636.8	637.7	642.8	642.8	645.3	644.5
5°	629.2	626.6	641.1	632.6	639.4	639.4	641.9	649.6	649.6	654.7	655.5
7.5°	624.1	624.9	640.2	635.1	642.8	643.6	647.9	657.2	659.8	666.6	670.0
10°	618.1	621.5	637.7	636.0	646.2	647.0	655.5	666.6	670.0	679.3	685.3
12.5°	615.6	621.5	640.2	641.9	652.1	656.4	665.7	680.2	686.1	697.2	705.7
15°	614.7	623.2	643.6	649.6	661.5	667.4	680.2	697.2	704.0	718.4	728.6
17.5°	610.5	621.5	643.6	653.0	665.7	671.7	687.8	707.4	715.9	732.0	743.9
20°	602.8	614.7	636.8	648.7	662.3	670.8	687.0	707.4	715.9	732.9	746.5
22.5°	592.6	604.5	625.8	639.4	651.3	660.6	677.6	697.2	704.8	721.0	734.6
25°	579.8	591.7	609.6	623.2	634.3	642.8	657.2	677.6	682.7	698.0	712.5
27.5°	562.0	573.0	586.6	599.4	609.6	616.4	629.2	647.0	651.3	666.6	678.5
30°	538.2	545.0	556.9	565.4	573.0	579.8	589.2	605.4	607.1	620.7	631.7
32.5°	505.9	509.3	517.8	522.0	528.8	531.4	539.0	552.6	550.9	563.7	573.0
35°	466.8	468.5	468.5	473.6	475.3	476.1	482.1	489.7	487.2	498.2	505.0
37.5°	424.3	423.4	418.3	418.3	419.2	416.6	419.2	422.6	419.2	427.7	433.6
40°	380.9	375.8	366.4	361.3	358.8	357.9	352.8	357.1	348.6	354.5	358.8
42.5°	339.2	330.7	316.3	306.1	301.8	297.6	289.1	289.1	278.0	282.3	283.1
45°	296.7	282.3	262.7	253.4	242.3	235.5	224.5	213.4	205.8	208.3	205.8
47.5°	257.6	240.6	217.7	201.5	188.7	179.4	164.1	151.3	143.7	140.3	136.9
50°	223.6	206.6	180.2	159.8	147.1	136.0	120.7	106.3	96.9	91.8	89.3
52.5°	193.0	175.1	149.6	128.4	114.8	104.6	87.6	73.1	62.9	57.0	53.6
55°	164.1	147.9	124.1	104.6	91.8	81.6	64.6	51.0	41.7	35.7	31.5
57.5°	135.2	120.7	101.2	82.5	71.4	62.1	47.6	35.7	28.1	23.0	19.6
60°	103.7	92.7	76.5	62.1	52.7	45.1	34.0	24.7	19.6	15.3	13.6
62.5°	73.1	66.3	54.4	44.2	38.3	32.3	23.8	17.9	13.6	11.1	10.2
65°	49.3	44.2	37.4	29.8	25.5	22.1	17.0	12.8	10.2	8.5	7.7
67.5°	32.3	29.8	24.7	20.4	17.9	15.3	11.9	9.4	7.7	6.8	6.0
70°	21.3	19.6	16.2	13.6	12.8	11.1	8.5	6.8	6.0	5.1	5.1
72.5°	13.6	11.9	11.1	9.4	8.5	7.7	6.0	5.1	4.3	4.3	4.3
75°	8.5	7.7	6.8	6.0	6.0	5.1	4.3	4.3	3.4	3.4	3.4
77.5°	5.1	5.1	4.3	4.3	3.4	3.4	3.4	2.6	2.6	2.6	2.6
80°	3.4	3.4	2.6	2.6	2.6	2.6	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	1.7	1.7	1.7	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6
2.5°	648.7	650.4	648.7	653.8	645.3	654.7	651.3	653.0	659.8	657.2	659.8
5°	661.5	664.9	664.9	670.8	663.2	674.2	670.8	674.2	681.0	681.0	684.4
7.5°	677.6	681.9	683.6	689.5	681.9	695.5	692.1	696.3	704.8	704.8	707.4
10°	694.6	699.7	703.1	709.9	701.4	716.7	713.3	719.3	726.9	727.8	732.0
12.5°	715.9	722.7	726.9	732.9	726.9	742.2	738.8	744.8	755.0	755.8	760.9
15°	739.7	748.2	753.3	760.1	753.3	770.3	766.9	773.7	781.3	784.7	789.9
17.5°	755.0	765.2	769.4	777.1	770.3	787.3	783.0	792.4	799.2	800.9	806.9
20°	757.5	766.9	772.8	778.8	772.8	789.9	785.6	793.3	801.8	803.5	807.7
22.5°	746.5	754.1	760.9	766.0	760.9	777.9	772.0	780.5	788.1	789.9	793.3
25°	721.0	730.3	737.1	741.4	736.3	752.4	747.3	755.0	761.8	765.2	766.0
27.5°	685.3	693.8	700.6	703.1	699.7	715.0	708.2	717.6	723.5	725.2	727.8
30°	636.8	644.5	651.3	653.0	650.4	661.5	658.1	666.6	672.5	674.2	675.9
32.5°	577.3	584.9	589.2	590.9	588.3	599.4	596.0	602.8	609.6	609.6	609.6
35°	510.1	516.9	519.5	524.6	518.6	529.7	526.3	532.2	538.2	538.2	539.0
37.5°	437.9	443.0	444.7	449.8	443.8	454.0	451.5	456.6	461.7	460.8	462.5
40°	360.5	365.6	367.3	371.5	366.4	374.9	373.2	378.3	382.6	382.6	382.6
42.5°	285.7	289.1	289.1	293.3	288.2	295.9	295.9	299.3	303.5	302.7	302.7
45°	207.5	206.6	208.3	207.5	207.5	214.3	214.3	216.0	219.4	217.7	218.5
47.5°	137.7	138.6	135.2	137.7	134.3	140.3	140.3	140.3	142.8	141.1	142.8
50°	87.6	85.0	83.3	83.3	82.5	86.7	85.0	85.9	87.6	85.9	87.6
52.5°	49.3	48.5	46.8	47.6	45.9	46.8	46.8	46.8	47.6	46.8	48.5
55°	28.9	26.4	25.5	25.5	24.7	25.5	24.7	24.7	24.7	23.8	24.7
57.5°	17.0	16.2	15.3	15.3	14.5	14.5	14.5	14.5	14.5	14.5	14.5
60°	11.9	11.1	11.1	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
62.5°	9.4	8.5	8.5	8.5	7.7	7.7	7.7	7.7	7.7	8.5	7.7
65°	6.8	6.8	6.8	6.8	6.8	6.8	6.0	6.8	6.8	6.8	6.8
67.5°	6.0	6.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
70°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
72.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	0.0	0.9	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°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6
2.5°	662.3	658.9	651.3	656.4	657.2	653.8	658.1	663.2	658.1	653.8	657.2
5°	687.0	684.4	677.6	681.9	682.7	681.9	684.4	688.7	684.4	681.9	682.7
7.5°	711.6	709.9	702.3	707.4	709.1	707.4	709.9	714.2	709.9	707.4	709.1
10°	735.4	734.6	726.9	733.7	734.6	732.9	735.4	742.2	735.4	732.9	734.6
12.5°	762.6	764.3	755.8	763.5	764.3	762.6	766.0	771.1	766.0	762.6	764.3
15°	794.1	793.3	786.4	792.4	794.1	792.4	796.7	803.5	796.7	792.4	794.1
17.5°	809.4	809.4	804.3	810.3	811.1	811.1	814.5	819.6	814.5	811.1	811.1
20°	810.3	811.1	805.2	812.0	812.0	812.0	815.4	817.9	815.4	812.0	812.0
22.5°	796.7	797.5	791.6	797.5	797.5	798.4	800.1	801.8	800.1	798.4	797.5
25°	770.3	771.1	766.0	771.1	770.3	770.3	772.0	774.5	772.0	770.3	770.3
27.5°	731.2	732.0	725.2	731.2	730.3	729.5	732.0	732.9	732.0	729.5	730.3
30°	679.3	680.2	674.2	679.3	678.5	677.6	681.0	681.9	681.0	677.6	678.5
32.5°	617.3	615.6	611.3	615.6	614.7	614.7	616.4	619.0	616.4	614.7	614.7
35°	542.4	542.4	539.9	543.3	540.7	544.1	544.1	545.0	544.1	544.1	540.7
37.5°	465.9	465.9	464.2	465.9	465.1	468.5	468.5	471.0	468.5	468.5	465.1
40°	386.0	386.0	384.3	386.0	388.5	388.5	387.7	391.1	387.7	388.5	388.5
42.5°	305.2	305.2	304.4	308.6	308.6	308.6	306.1	309.5	306.1	308.6	308.6
45°	221.9	220.2	219.4	219.4	220.2	223.6	220.2	224.5	220.2	223.6	220.2
47.5°	141.1	142.0	142.8	145.4	143.7	142.8	142.8	145.4	142.8	142.8	143.7
50°	86.7	87.6	87.6	89.3	86.7	88.4	87.6	89.3	87.6	88.4	86.7
52.5°	47.6	47.6	47.6	49.3	47.6	48.5	47.6	49.3	47.6	48.5	47.6
55°	24.7	24.7	24.7	25.5	24.7	24.7	24.7	25.5	24.7	24.7	24.7
57.5°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
60°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
62.5°	8.5	7.7	7.7	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
65°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
67.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
70°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
72.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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: P212715

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CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6
2.5°	656.4	651.3	658.9	662.3	659.8	657.2	659.8	653.0	651.3	654.7	645.3
5°	681.9	677.6	684.4	687.0	684.4	681.0	681.0	674.2	670.8	674.2	663.2
7.5°	707.4	702.3	709.9	711.6	707.4	704.8	704.8	696.3	692.1	695.5	681.9
10°	733.7	726.9	734.6	735.4	732.0	727.8	726.9	719.3	713.3	716.7	701.4
12.5°	763.5	755.8	764.3	762.6	760.9	755.8	755.0	744.8	738.8	742.2	726.9
15°	792.4	786.4	793.3	794.1	789.9	784.7	781.3	773.7	766.9	770.3	753.3
17.5°	810.3	804.3	809.4	809.4	806.9	800.9	799.2	792.4	783.0	787.3	770.3
20°	812.0	805.2	811.1	810.3	807.7	803.5	801.8	793.3	785.6	789.9	772.8
22.5°	797.5	791.6	797.5	796.7	793.3	789.9	788.1	780.5	772.0	777.9	760.9
25°	771.1	766.0	771.1	770.3	766.0	765.2	761.8	755.0	747.3	752.4	736.3
27.5°	731.2	725.2	732.0	731.2	727.8	725.2	723.5	717.6	708.2	715.0	699.7
30°	679.3	674.2	680.2	679.3	675.9	674.2	672.5	666.6	658.1	661.5	650.4
32.5°	615.6	611.3	615.6	617.3	609.6	609.6	609.6	602.8	596.0	599.4	588.3
35°	543.3	539.9	542.4	542.4	539.0	538.2	538.2	532.2	526.3	529.7	518.6
37.5°	465.9	464.2	465.9	465.9	462.5	460.8	461.7	456.6	451.5	454.0	443.8
40°	386.0	384.3	386.0	386.0	382.6	382.6	382.6	378.3	373.2	374.9	366.4
42.5°	308.6	304.4	305.2	305.2	302.7	302.7	303.5	299.3	295.9	295.9	288.2
45°	219.4	219.4	220.2	221.9	218.5	217.7	219.4	216.0	214.3	214.3	207.5
47.5°	145.4	142.8	142.0	141.1	142.8	141.1	142.8	140.3	140.3	140.3	134.3
50°	89.3	87.6	87.6	86.7	87.6	85.9	87.6	85.9	85.0	86.7	82.5
52.5°	49.3	47.6	47.6	47.6	48.5	46.8	47.6	46.8	46.8	46.8	45.9
55°	25.5	24.7	24.7	24.7	24.7	23.8	24.7	24.7	24.7	25.5	24.7
57.5°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
60°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
62.5°	8.5	7.7	7.7	8.5	7.7	8.5	7.7	7.7	7.7	7.7	7.7
65°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.0	6.8	6.8
67.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
70°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
72.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6
2.5°	653.8	648.7	650.4	648.7	644.5	645.3	642.8	642.8	637.7	636.8	637.7
5°	670.8	664.9	664.9	661.5	655.5	654.7	649.6	649.6	641.9	639.4	639.4
7.5°	689.5	683.6	681.9	677.6	670.0	666.6	659.8	657.2	647.9	643.6	642.8
10°	709.9	703.1	699.7	694.6	685.3	679.3	670.0	666.6	655.5	647.0	646.2
12.5°	732.9	726.9	722.7	715.9	705.7	697.2	686.1	680.2	665.7	656.4	652.1
15°	760.1	753.3	748.2	739.7	728.6	718.4	704.0	697.2	680.2	667.4	661.5
17.5°	777.1	769.4	765.2	755.0	743.9	732.0	715.9	707.4	687.8	671.7	665.7
20°	778.8	772.8	766.9	757.5	746.5	732.9	715.9	707.4	687.0	670.8	662.3
22.5°	766.0	760.9	754.1	746.5	734.6	721.0	704.8	697.2	677.6	660.6	651.3
25°	741.4	737.1	730.3	721.0	712.5	698.0	682.7	677.6	657.2	642.8	634.3
27.5°	703.1	700.6	693.8	685.3	678.5	666.6	651.3	647.0	629.2	616.4	609.6
30°	653.0	651.3	644.5	636.8	631.7	620.7	607.1	605.4	589.2	579.8	573.0
32.5°	590.9	589.2	584.9	577.3	573.0	563.7	550.9	552.6	539.0	531.4	528.8
35°	524.6	519.5	516.9	510.1	505.0	498.2	487.2	489.7	482.1	476.1	475.3
37.5°	449.8	444.7	443.0	437.9	433.6	427.7	419.2	422.6	419.2	416.6	419.2
40°	371.5	367.3	365.6	360.5	358.8	354.5	348.6	357.1	352.8	357.9	358.8
42.5°	293.3	289.1	289.1	285.7	283.1	282.3	278.0	289.1	289.1	297.6	301.8
45°	207.5	208.3	206.6	207.5	205.8	208.3	205.8	213.4	224.5	235.5	242.3
47.5°	137.7	135.2	138.6	137.7	136.9	140.3	143.7	151.3	164.1	179.4	188.7
50°	83.3	83.3	85.0	87.6	89.3	91.8	96.9	106.3	120.7	136.0	147.1
52.5°	47.6	46.8	48.5	49.3	53.6	57.0	62.9	73.1	87.6	104.6	114.8
55°	25.5	25.5	26.4	28.9	31.5	35.7	41.7	51.0	64.6	81.6	91.8
57.5°	15.3	15.3	16.2	17.0	19.6	23.0	28.1	35.7	47.6	62.1	71.4
60°	10.2	11.1	11.1	11.9	13.6	15.3	19.6	24.7	34.0	45.1	52.7
62.5°	8.5	8.5	8.5	9.4	10.2	11.1	13.6	17.9	23.8	32.3	38.3
65°	6.8	6.8	6.8	6.8	7.7	8.5	10.2	12.8	17.0	22.1	25.5
67.5°	5.1	5.1	6.0	6.0	6.0	6.8	7.7	9.4	11.9	15.3	17.9
70°	4.3	4.3	4.3	4.3	5.1	5.1	6.0	6.8	8.5	11.1	12.8
72.5°	3.4	3.4	3.4	3.4	4.3	4.3	4.3	5.1	6.0	7.7	8.5
75°	2.6	2.6	2.6	2.6	3.4	3.4	3.4	4.3	4.3	5.1	6.0
77.5°	1.7	1.7	1.7	1.7	2.6	2.6	2.6	2.6	3.4	3.4	3.4
80°	0.9	0.9	0.9	1.7	1.7	1.7	1.7	1.7	1.7	2.6	2.6
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7
85°	0.0	0.0	0.9	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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: P212715

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CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6	643.6
2.5°	631.7	642.8	630.0	632.6	628.3	636.0	625.8	628.3	630.0	628.3	629.2
5°	632.6	641.1	626.6	629.2	622.4	627.5	618.1	619.0	619.0	617.3	616.4
7.5°	635.1	640.2	624.9	624.1	615.6	620.7	609.6	607.9	607.1	604.5	605.4
10°	636.0	637.7	621.5	618.1	607.9	609.6	598.6	595.2	592.6	590.9	590.0
12.5°	641.9	640.2	621.5	615.6	602.8	602.0	590.0	584.9	580.7	579.0	578.1
15°	649.6	643.6	623.2	614.7	600.3	596.9	584.1	579.0	573.0	571.3	569.6
17.5°	653.0	643.6	621.5	610.5	594.3	590.0	577.3	570.5	564.5	562.0	560.3
20°	648.7	636.8	614.7	602.8	585.8	579.8	567.1	559.4	553.5	550.9	549.2
22.5°	639.4	625.8	604.5	592.6	575.6	567.9	556.9	550.1	543.3	542.4	539.9
25°	623.2	609.6	591.7	579.8	564.5	556.9	546.7	540.7	533.9	533.1	532.2
27.5°	599.4	586.6	573.0	562.0	548.4	542.4	534.8	528.8	522.9	522.9	521.2
30°	565.4	556.9	545.0	538.2	527.1	521.2	516.1	511.8	505.9	506.7	505.0
32.5°	522.0	517.8	509.3	505.9	497.4	495.7	490.6	487.2	482.1	483.8	482.1
35°	473.6	468.5	468.5	466.8	462.5	461.7	459.1	457.4	454.0	454.9	454.9
37.5°	418.3	418.3	423.4	424.3	423.4	425.1	424.3	424.3	420.9	422.6	421.7
40°	361.3	366.4	375.8	380.9	382.6	386.0	390.2	388.5	386.8	389.4	388.5
42.5°	306.1	316.3	330.7	339.2	345.2	350.3	356.2	356.2	355.4	358.8	357.9
45°	253.4	262.7	282.3	296.7	306.9	314.6	321.4	323.9	324.8	328.2	327.3
47.5°	201.5	217.7	240.6	257.6	270.4	279.7	289.1	292.5	295.0	299.3	299.3
50°	159.8	180.2	206.6	223.6	238.9	249.1	258.5	263.6	267.0	270.4	270.4
52.5°	128.4	149.6	175.1	193.0	207.5	218.5	227.9	233.8	236.4	240.6	240.6
55°	104.6	124.1	147.9	164.1	178.5	188.7	196.4	201.5	204.1	207.5	207.5
57.5°	82.5	101.2	120.7	135.2	147.1	154.7	161.5	163.2	164.1	166.6	167.5
60°	62.1	76.5	92.7	103.7	112.2	117.3	122.4	121.6	120.7	122.4	120.7
62.5°	44.2	54.4	66.3	73.1	79.9	82.5	85.0	83.3	81.6	82.5	82.5
65°	29.8	37.4	44.2	49.3	52.7	54.4	55.3	54.4	53.6	54.4	53.6
67.5°	20.4	24.7	29.8	32.3	34.9	35.7	36.6	35.7	35.7	35.7	34.9
70°	13.6	16.2	19.6	21.3	22.1	23.0	23.8	23.0	23.0	23.0	23.0
72.5°	9.4	11.1	11.9	13.6	14.5	14.5	14.5	14.5	14.5	14.5	14.5
75°	6.0	6.8	7.7	8.5	9.4	9.4	9.4	9.4	9.4	9.4	9.4
77.5°	4.3	4.3	5.1	5.1	6.0	6.0	6.0	6.0	6.0	6.0	6.0
80°	2.6	2.6	3.4	3.4	3.4	3.4	4.3	3.4	4.3	4.3	4.3
82.5°	1.7	1.7	1.7	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	0.9	0.9	0.9	0.9	0.9	0.9	1.7	0.9	1.7	1.7	1.7
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



TEST NUMBER: P212715

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CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	643.6	643.6	643.6	643.6
2.5°	629.2	627.5	622.4	628.3
5°	615.6	613.9	609.6	613.9
7.5°	602.0	599.4	596.0	598.6
10°	585.8	584.1	579.8	582.4
12.5°	573.9	570.5	567.9	568.8
15°	566.2	562.8	560.3	561.1
17.5°	556.0	552.6	550.1	550.1
20°	545.0	541.6	539.9	539.0
22.5°	535.6	533.1	532.2	529.7
25°	527.1	525.4	525.4	522.0
27.5°	517.8	515.2	515.2	511.8
30°	501.6	500.8	500.8	498.2
32.5°	480.4	477.8	479.5	475.3
35°	451.5	449.8	452.3	448.9
37.5°	420.0	419.2	420.9	418.3
40°	386.8	386.8	389.4	385.1
42.5°	357.9	357.9	360.5	356.2
45°	326.5	329.0	331.6	328.2
47.5°	299.3	301.0	304.4	301.0
50°	272.1	273.8	276.3	272.9
52.5°	242.3	244.0	246.6	244.0
55°	208.3	210.0	212.6	210.9
57.5°	167.5	165.8	170.0	166.6
60°	121.6	118.2	119.0	119.0
62.5°	80.8	79.1	80.8	78.2
65°	53.6	52.7	52.7	52.7
67.5°	35.7	34.9	35.7	34.9
70°	23.0	23.0	23.0	23.0
72.5°	14.5	14.5	14.5	14.5
75°	9.4	9.4	9.4	9.4
77.5°	6.0	6.0	6.0	6.0
80°	4.3	4.3	4.3	4.3
82.5°	2.6	2.6	2.6	2.6
85°	1.7	1.7	1.7	1.7
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)