

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P879358

Luminaire Tested: **LD4C10D010 EU4109027 4LBDWWH**

Issue Date: 10/1/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P879358  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/1/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C10D010 EU4109027 4LBLDWWH  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

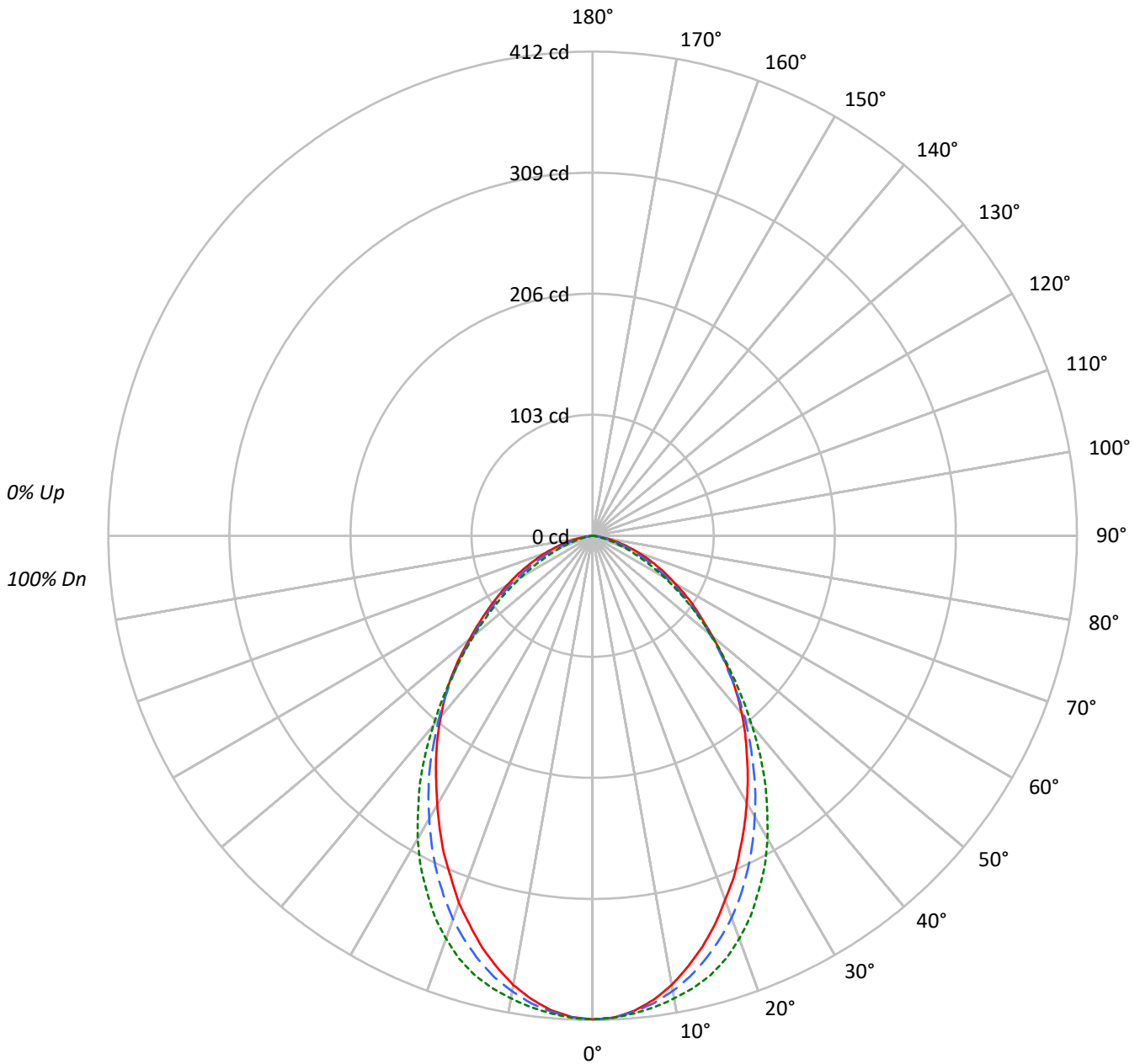
Lumens per Lamp: N/A  
Luminaire Lumens: 736.0 lumens  
Efficiency: N/A  
Efficacy: 75.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.75  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				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				100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77				77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67				67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59				59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	50554	50554	50554
5°	50032	50316	49983
10°	48415	49875	48427
15°	45991	49247	46144
20°	43104	47693	43470
25°	40151	45248	40517
30°	37195	42203	37465
35°	34315	38364	34840
40°	31658	33807	32235
45°	28667	29293	29536
50°	25420	25095	26050
55°	22661	21140	23175
60°	19829	17150	20566
65°	17355	13256	17965
70°	14584	9698	15374
75°	11392	6313	12057
80°	7499	3325	8207
85°	2537	1551	3383



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.4	5.2
10°-20°	105.0	14.3
20°-30°	144.3	19.6
30°-40°	150.6	20.5
40°-50°	128.8	17.5
50°-60°	92.2	12.5
60°-70°	53.5	7.3
70°-80°	20.6	2.8
80°-90°	2.6	0.4
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°	287.7	39.1
0°-40°	438.3	59.6
0°-60°	659.3	89.6
0°-90°	736.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	736.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	412	412	412	412	412	
5°	406	406	408	406	405	38
15°	362	372	387	374	363	101
25°	296	312	334	314	299	136
35°	229	238	256	242	232	143
45°	165	164	169	168	170	127
55°	106	100	99	103	108	95
65°	60	53	46	55	62	59
75°	24	18	13	19	25	26
85°	2	1	1	2	2	4
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°	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5
2.5°	410.4	410.1	410.3	410.3	410.3	410.1	410.4	410.4	410.3	410.3	410.3
5°	405.7	405.4	405.6	405.7	405.7	405.7	405.9	406.0	406.2	406.3	406.5
7.5°	398.2	397.7	398.2	398.8	398.8	398.9	399.1	399.2	399.7	400.5	400.9
10°	388.1	388.1	388.2	388.7	389.4	389.3	389.7	390.5	391.4	392.4	393.2
12.5°	375.2	375.5	376.0	376.4	377.2	377.6	378.4	379.3	380.8	382.3	384.0
15°	361.6	361.8	361.9	363.0	363.7	364.8	365.4	367.2	368.6	370.7	372.5
17.5°	346.4	346.2	346.7	347.6	349.4	349.8	350.6	352.5	354.5	357.4	359.8
20°	329.7	330.6	331.2	332.5	333.5	334.7	335.3	337.7	340.0	342.7	345.9
22.5°	314.0	313.3	314.3	315.7	316.6	317.5	318.5	321.1	323.5	326.9	330.0
25°	296.2	296.6	297.4	298.5	299.7	300.9	302.1	304.8	306.2	309.6	312.5
27.5°	279.3	280.0	280.3	281.7	282.7	283.6	284.2	287.4	288.6	291.7	294.5
30°	262.2	262.9	262.9	264.5	265.2	266.1	267.6	269.7	271.6	273.7	275.8
32.5°	245.7	245.7	246.3	247.7	248.4	249.5	249.9	251.5	253.3	255.4	257.7
35°	228.8	229.2	229.8	229.8	231.2	231.8	232.4	233.9	235.1	236.0	237.9
37.5°	213.2	213.2	212.8	213.5	214.4	214.3	215.2	215.9	216.7	217.8	219.3
40°	197.4	197.4	196.8	197.2	197.8	197.7	197.4	198.1	198.7	199.5	201.0
42.5°	181.2	180.9	180.7	180.7	181.0	180.7	181.0	181.2	181.2	181.2	182.1
45°	165.0	165.8	164.9	164.6	164.1	163.7	163.5	163.7	164.3	163.5	163.7
47.5°	149.1	149.5	148.8	148.4	147.9	147.6	147.9	147.0	147.3	147.5	146.9
50°	133.0	132.4	132.4	131.9	132.1	131.9	131.6	131.3	131.3	130.6	130.1
52.5°	118.0	118.3	118.6	117.6	117.7	117.0	117.1	116.4	116.4	115.5	115.8
55°	105.8	105.3	105.3	104.9	104.7	104.0	103.8	103.4	102.3	101.7	100.5
57.5°	93.1	92.9	92.3	92.5	91.6	91.4	91.1	90.4	89.6	88.9	87.5
60°	80.7	80.8	80.8	80.5	80.1	79.3	79.5	78.4	77.4	76.0	74.8
62.5°	70.4	70.0	69.8	69.5	68.6	68.6	67.9	67.1	66.0	64.7	63.6
65°	59.7	59.8	59.4	58.9	58.0	57.9	57.3	56.7	55.6	54.3	52.7
67.5°	50.0	49.7	49.6	49.1	48.2	48.1	47.6	46.2	45.3	44.0	42.8
70°	40.6	40.3	40.5	39.7	38.8	38.4	38.2	37.2	35.8	34.8	33.5
72.5°	31.9	31.9	31.7	31.0	30.5	30.2	29.6	28.4	27.7	26.4	25.5
75°	24.0	23.9	23.6	23.1	22.5	22.2	21.9	21.2	20.1	18.7	18.0
77.5°	16.6	16.8	16.5	16.3	15.6	15.1	15.0	14.5	13.6	12.7	11.9
80°	10.6	10.4	10.3	10.0	9.8	9.7	9.2	8.9	8.0	7.6	7.1
82.5°	5.7	5.4	5.4	5.3	5.0	4.8	4.7	4.4	4.2	3.9	3.6
85°	1.8	2.0	1.8	1.8	1.8	1.7	1.7	1.7	1.5	1.5	1.4
87.5°	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3
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°	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5
2.5°	410.3	410.4	410.4	410.6	410.6	410.6	410.6	410.6	410.6	410.6	410.6
5°	407.0	407.0	407.3	407.6	407.6	407.6	407.7	408.0	408.0	408.0	407.9
7.5°	401.5	402.1	402.7	403.3	403.5	403.6	403.9	404.5	404.5	404.5	404.5
10°	394.4	395.8	396.5	397.4	397.9	398.2	399.1	399.2	399.7	399.8	399.7
12.5°	385.3	387.2	388.8	390.3	390.9	391.5	392.4	393.4	393.8	394.3	394.1
15°	375.2	377.2	379.8	381.4	382.6	383.5	384.9	386.1	386.9	387.2	387.2
17.5°	363.0	365.4	368.1	370.8	371.6	373.1	374.6	376.3	377.2	377.3	377.2
20°	349.4	352.1	354.4	357.1	358.7	359.5	361.6	363.7	364.6	364.8	364.6
22.5°	333.2	335.8	338.8	341.7	343.0	344.4	346.7	348.8	350.0	350.9	350.0
25°	315.2	318.9	321.7	324.1	326.1	327.5	330.3	332.0	334.0	333.8	334.0
27.5°	297.5	300.6	303.7	306.6	307.8	309.3	311.6	314.3	316.0	317.0	316.9
30°	279.4	281.8	284.5	287.1	289.1	290.3	293.6	294.8	296.9	297.5	297.1
32.5°	260.2	261.9	264.6	268.1	268.8	270.0	272.2	275.2	275.9	276.2	276.4
35°	239.8	243.0	245.3	247.4	248.0	249.0	251.5	253.7	254.5	255.8	255.2
37.5°	220.9	222.7	223.8	225.9	227.7	228.6	229.8	231.4	232.9	233.5	233.3
40°	202.0	202.9	203.9	206.1	206.3	206.3	208.1	210.2	210.2	210.8	210.8
42.5°	182.7	182.8	184.1	185.3	185.6	185.9	187.7	188.0	188.9	189.3	190.0
45°	164.0	164.9	165.6	165.8	166.5	166.7	167.1	167.6	168.9	168.6	168.9
47.5°	146.9	147.3	147.8	147.8	148.2	148.1	148.8	148.4	149.3	149.6	150.1
50°	130.1	130.9	130.4	130.7	130.6	131.0	130.7	130.7	130.7	131.3	131.8
52.5°	114.7	114.8	114.4	114.5	114.5	114.2	114.5	114.4	114.2	114.2	114.4
55°	100.5	99.9	99.6	99.0	98.2	99.1	98.7	98.4	99.0	98.7	99.0
57.5°	86.7	86.0	85.4	85.1	84.0	84.6	84.0	83.7	83.7	83.7	84.5
60°	73.7	73.0	72.2	71.3	71.2	70.9	70.6	69.8	70.0	69.8	70.1
62.5°	62.4	60.9	59.8	59.1	58.9	58.5	58.0	57.3	57.4	57.4	57.6
65°	52.0	50.3	48.8	47.8	47.8	47.0	46.2	46.2	45.3	45.6	45.8
67.5°	41.6	40.2	38.7	37.9	37.5	36.9	36.4	36.1	35.7	35.7	36.0
70°	32.2	30.8	30.1	28.9	28.7	28.3	27.7	27.2	27.0	27.0	26.9
72.5°	24.3	23.1	22.2	21.5	21.0	20.6	19.9	19.8	19.5	19.5	19.8
75°	16.9	16.2	15.4	14.7	14.4	14.2	13.8	13.4	13.4	13.3	13.4
77.5°	11.3	10.6	9.8	9.5	9.2	8.9	8.8	8.6	8.2	8.2	8.2
80°	6.5	6.2	5.9	5.4	5.4	5.3	5.0	4.8	4.7	4.7	4.7
82.5°	3.3	3.2	2.9	2.7	2.7	2.7	2.6	2.6	2.4	2.4	2.4
85°	1.4	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.2
87.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5
2.5°	410.6	410.4	410.4	410.4	410.4	410.4	410.3	410.3	410.1	410.1	410.1
5°	408.0	407.9	407.7	407.6	407.4	407.3	407.1	407.0	406.5	406.3	406.0
7.5°	404.4	404.1	403.6	403.5	403.2	402.7	402.1	401.8	401.2	400.5	400.2
10°	399.5	398.9	398.5	397.7	397.6	397.0	395.5	394.7	393.7	392.7	391.7
12.5°	393.7	393.0	392.0	390.9	390.3	389.0	387.6	386.4	385.0	383.1	381.6
15°	386.4	385.5	383.4	383.1	382.2	380.1	378.2	376.0	373.9	371.7	369.9
17.5°	376.7	374.8	373.7	372.3	371.3	368.6	366.6	364.0	361.2	358.7	356.2
20°	364.0	361.9	360.1	359.4	358.0	355.6	353.2	350.0	347.1	344.1	341.8
22.5°	348.9	347.6	344.8	343.9	342.3	339.9	337.0	334.0	331.2	327.9	324.9
25°	332.8	330.8	328.7	326.9	325.7	323.4	319.8	317.5	314.5	310.8	308.6
27.5°	315.5	313.3	310.2	309.0	308.0	304.9	301.9	299.1	296.6	293.5	291.5
30°	295.6	293.9	292.0	290.4	288.9	286.5	283.8	280.5	277.9	276.4	273.7
32.5°	275.3	274.0	271.4	270.6	269.0	267.0	265.1	262.6	259.9	257.7	255.5
35°	253.7	252.4	250.5	249.2	248.6	247.2	245.1	243.0	241.6	239.1	238.0
37.5°	232.1	231.7	229.8	228.5	228.0	226.4	225.3	223.8	221.8	221.2	220.0
40°	209.9	209.6	208.5	208.4	207.5	207.0	205.5	204.3	203.4	202.9	202.2
42.5°	189.5	189.2	188.3	188.4	187.5	187.2	187.1	186.0	185.3	184.4	184.5
45°	169.4	169.1	168.5	168.2	168.6	168.5	168.2	167.7	167.7	167.9	167.4
47.5°	150.1	150.4	149.8	150.1	150.1	149.6	149.6	150.2	150.4	150.7	151.0
50°	131.8	132.7	132.4	132.8	133.0	133.1	132.7	133.4	133.3	134.6	134.3
52.5°	115.1	115.3	115.9	116.1	116.2	116.4	117.1	117.7	117.9	118.5	119.5
55°	99.1	99.3	100.5	100.5	101.2	101.4	102.5	102.8	103.2	104.9	105.2
57.5°	84.0	84.9	85.5	85.8	86.3	87.0	87.6	89.0	89.8	90.8	91.9
60°	70.4	71.5	72.2	72.5	73.1	74.0	74.8	76.3	77.7	78.9	79.6
62.5°	57.9	58.8	59.4	60.4	60.4	61.2	63.0	63.9	65.4	66.5	67.9
65°	46.7	47.3	48.4	48.4	49.0	50.2	51.7	53.0	54.6	56.1	57.4
67.5°	36.6	37.0	37.6	38.2	38.5	40.0	41.3	43.2	44.6	45.6	47.3
70°	27.7	28.0	28.7	29.3	29.8	30.8	32.2	33.5	34.9	36.1	37.8
72.5°	19.8	20.4	21.2	21.6	21.9	22.7	24.0	25.4	26.6	27.8	28.7
75°	13.6	14.1	14.4	14.8	15.3	15.9	16.8	17.7	19.0	20.2	21.3
77.5°	8.5	8.9	9.4	9.5	9.7	10.3	10.9	11.8	12.7	13.6	14.4
80°	5.0	5.1	5.3	5.4	5.7	6.2	6.5	7.1	7.7	8.3	9.1
82.5°	2.6	2.7	2.9	2.9	2.9	3.0	3.5	3.8	3.9	4.2	4.7
85°	1.1	1.1	1.1	1.2	1.2	1.4	1.4	1.5	1.5	1.7	1.8
87.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°
0°	411.5	411.5	411.5	411.5	411.5	411.5	411.5	411.5
2.5°	410.0	410.0	410.0	409.8	410.0	410.0	410.0	409.8
5°	406.0	405.7	405.7	405.6	405.4	405.4	405.6	405.3
7.5°	399.5	399.1	398.8	398.8	398.6	398.5	398.5	397.7
10°	391.1	390.2	390.2	389.9	388.7	388.5	388.2	388.2
12.5°	380.5	379.4	378.8	378.1	377.3	376.7	376.6	376.0
15°	368.0	366.6	365.5	365.2	364.0	363.1	363.1	362.8
17.5°	354.4	352.2	351.5	350.7	349.1	348.9	348.6	347.3
20°	338.9	337.0	335.9	335.2	334.1	332.6	332.3	332.5
22.5°	322.8	320.1	319.2	318.4	317.3	316.0	316.0	314.9
25°	306.0	303.6	302.7	301.8	300.1	299.5	298.8	298.9
27.5°	288.9	286.7	285.9	284.2	283.2	282.4	281.7	281.7
30°	271.1	269.9	268.7	268.5	266.4	265.5	264.8	264.1
32.5°	253.9	252.4	251.8	251.2	250.1	248.9	248.7	247.7
35°	236.9	235.4	234.7	234.1	232.9	232.4	232.0	232.3
37.5°	219.1	218.8	218.4	217.6	216.8	216.7	216.1	216.8
40°	201.6	201.4	200.8	201.0	201.0	200.7	201.0	201.0
42.5°	184.7	184.7	184.1	184.4	184.5	184.8	185.3	185.6
45°	168.2	168.0	168.2	168.5	168.2	168.9	169.6	170.0
47.5°	151.3	151.4	152.0	152.2	152.5	153.5	153.5	153.5
50°	135.1	135.9	135.5	136.5	136.3	136.9	136.3	136.3
52.5°	119.7	120.4	120.6	120.7	121.6	121.8	121.8	121.6
55°	105.9	107.0	106.5	107.3	107.7	108.0	108.5	108.2
57.5°	93.2	93.7	94.1	94.3	94.9	95.2	95.5	95.2
60°	80.7	81.6	82.4	82.5	82.8	83.1	83.3	83.7
62.5°	68.9	70.4	70.7	70.9	71.6	72.1	72.4	72.7
65°	58.5	59.5	60.3	60.7	61.4	61.4	61.8	61.8
67.5°	48.4	49.4	49.9	50.2	51.1	51.2	52.0	52.0
70°	39.1	39.9	40.2	40.6	41.6	42.2	42.5	42.8
72.5°	30.2	31.1	31.6	32.2	32.8	33.2	33.4	33.8
75°	22.1	23.4	23.6	24.2	24.6	25.2	25.5	25.4
77.5°	15.4	15.9	16.5	16.8	17.2	17.7	18.1	18.1
80°	9.5	10.1	10.3	10.4	11.0	11.3	11.6	11.6
82.5°	5.0	5.3	5.6	5.7	6.0	6.0	6.2	6.3
85°	2.0	2.1	2.1	2.1	2.3	2.4	2.4	2.4
87.5°	0.3	0.5	0.3	0.3	0.5	0.5	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)