

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: P879320

Luminaire Tested: **LD4C02D010 EU4029030 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: P879320  
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: LD4C02D010 EU4029030 4LBDWWH  
Description: 4 INCH 250 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND 4LBDWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

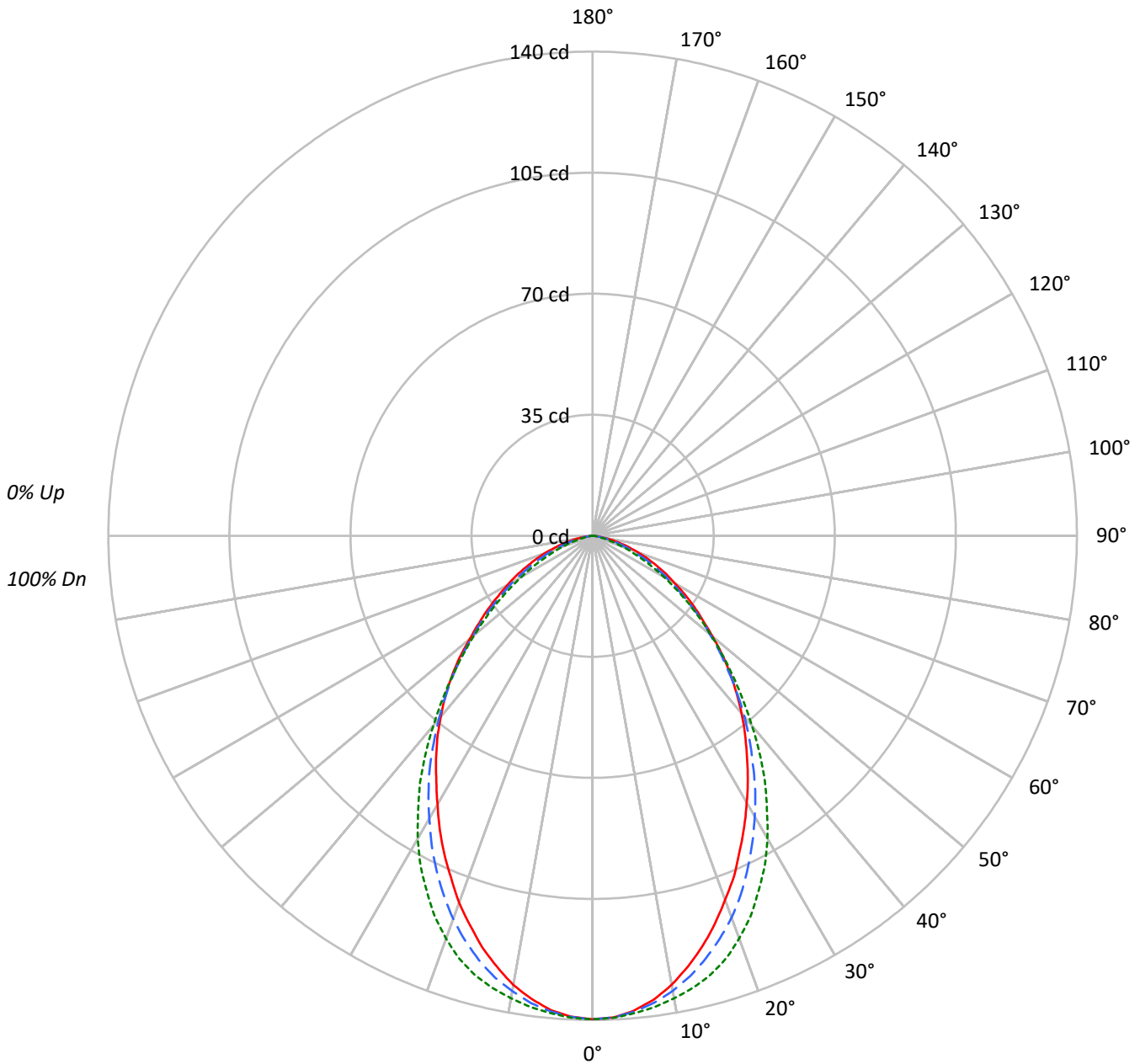
Lumens per Lamp: N/A  
Luminaire Lumens: 250.0 lumens  
Efficiency: N/A  
Efficacy: 71.4 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 3.5  
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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	17175	17175	17175
5°	16994	17093	16982
10°	16442	16941	16454
15°	15619	16725	15669
20°	14643	16198	14760
25°	13637	15372	13759
30°	12640	14342	12725
35°	11653	13033	11833
40°	10745	11483	10954
45°	9747	9955	10025
50°	8639	8524	8849
55°	7689	7175	7882
60°	6732	5823	6978
65°	5901	4506	6105
70°	4957	3305	5208
75°	3892	2136	4082
80°	2547	1132	2830
85°	846	564	1128



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	13.0	5.2
10°-20°	35.7	14.3
20°-30°	49.0	19.6
30°-40°	51.2	20.5
40°-50°	43.8	17.5
50°-60°	31.3	12.5
60°-70°	18.2	7.3
70°-80°	7.0	2.8
80°-90°	0.9	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°	97.7	39.1
0°-40°	148.9	59.6
0°-60°	223.9	89.6
0°-90°	250.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	250.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	140	140	140	140	140	
5°	138	138	139	138	138	13
15°	123	126	132	127	123	34
25°	101	106	113	107	102	46
35°	78	81	87	82	79	49
45°	56	56	57	57	58	43
55°	36	34	34	35	37	32
65°	20	18	16	18	21	20
75°	8	6	4	6	9	9
85°	1	0	0	0	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°	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8
2.5°	139.4	139.3	139.4	139.4	139.4	139.3	139.4	139.4	139.4	139.4	139.4
5°	137.8	137.7	137.8	137.8	137.8	137.8	137.9	137.9	138.0	138.0	138.1
7.5°	135.3	135.1	135.3	135.5	135.5	135.5	135.6	135.6	135.8	136.0	136.2
10°	131.8	131.8	131.9	132.0	132.3	132.2	132.4	132.6	132.9	133.3	133.6
12.5°	127.5	127.6	127.7	127.9	128.1	128.3	128.5	128.8	129.4	129.9	130.4
15°	122.8	122.9	122.9	123.3	123.6	123.9	124.1	124.7	125.2	125.9	126.5
17.5°	117.6	117.6	117.8	118.1	118.7	118.8	119.1	119.8	120.4	121.4	122.2
20°	112.0	112.3	112.5	112.9	113.3	113.7	113.9	114.7	115.5	116.4	117.5
22.5°	106.7	106.4	106.8	107.2	107.5	107.8	108.2	109.1	109.9	111.0	112.1
25°	100.6	100.8	101.0	101.4	101.8	102.2	102.6	103.5	104.0	105.2	106.1
27.5°	94.9	95.1	95.2	95.7	96.0	96.3	96.6	97.6	98.0	99.1	100.0
30°	89.1	89.3	89.3	89.8	90.1	90.4	90.9	91.6	92.2	93.0	93.7
32.5°	83.5	83.5	83.7	84.1	84.4	84.7	84.9	85.4	86.0	86.7	87.5
35°	77.7	77.9	78.1	78.1	78.5	78.7	78.9	79.5	79.9	80.2	80.8
37.5°	72.4	72.4	72.3	72.5	72.8	72.8	73.1	73.4	73.6	74.0	74.5
40°	67.0	67.0	66.8	67.0	67.2	67.1	67.0	67.3	67.5	67.8	68.3
42.5°	61.5	61.4	61.4	61.4	61.5	61.4	61.5	61.5	61.5	61.5	61.9
45°	56.1	56.3	56.0	55.9	55.7	55.6	55.5	55.6	55.8	55.5	55.6
47.5°	50.7	50.8	50.6	50.4	50.3	50.1	50.3	49.9	50.0	50.1	49.9
50°	45.2	45.0	45.0	44.8	44.9	44.8	44.7	44.6	44.6	44.3	44.2
52.5°	40.1	40.2	40.3	39.9	40.0	39.7	39.8	39.5	39.5	39.2	39.3
55°	35.9	35.8	35.8	35.6	35.6	35.3	35.3	35.1	34.8	34.5	34.1
57.5°	31.6	31.6	31.4	31.4	31.1	31.1	31.0	30.7	30.4	30.2	29.7
60°	27.4	27.5	27.5	27.4	27.2	26.9	27.0	26.6	26.3	25.8	25.4
62.5°	23.9	23.8	23.7	23.6	23.3	23.3	23.0	22.8	22.4	22.0	21.6
65°	20.3	20.3	20.2	20.0	19.7	19.7	19.5	19.2	18.9	18.4	17.9
67.5°	17.0	16.9	16.8	16.7	16.4	16.3	16.2	15.7	15.4	14.9	14.5
70°	13.8	13.7	13.8	13.5	13.2	13.0	13.0	12.6	12.2	11.8	11.4
72.5°	10.8	10.8	10.8	10.5	10.4	10.3	10.1	9.6	9.4	9.0	8.7
75°	8.2	8.1	8.0	7.9	7.6	7.5	7.4	7.2	6.8	6.4	6.1
77.5°	5.6	5.7	5.6	5.5	5.3	5.1	5.1	4.9	4.6	4.3	4.1
80°	3.6	3.5	3.5	3.4	3.3	3.3	3.1	3.0	2.7	2.6	2.4
82.5°	2.0	1.8	1.8	1.8	1.7	1.6	1.6	1.5	1.4	1.3	1.2
85°	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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°	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8
2.5°	139.4	139.4	139.4	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5
5°	138.2	138.2	138.3	138.4	138.4	138.4	138.5	138.6	138.6	138.6	138.5
7.5°	136.4	136.6	136.8	137.0	137.1	137.1	137.2	137.4	137.4	137.4	137.4
10°	134.0	134.4	134.7	135.0	135.2	135.3	135.6	135.6	135.8	135.8	135.8
12.5°	130.9	131.5	132.1	132.6	132.8	133.0	133.3	133.6	133.8	133.9	133.9
15°	127.5	128.1	129.0	129.6	130.0	130.3	130.7	131.1	131.4	131.5	131.5
17.5°	123.3	124.1	125.0	126.0	126.2	126.7	127.2	127.8	128.1	128.2	128.1
20°	118.7	119.6	120.4	121.3	121.9	122.1	122.8	123.6	123.9	123.9	123.9
22.5°	113.2	114.1	115.1	116.1	116.5	117.0	117.8	118.5	118.9	119.2	118.9
25°	107.1	108.3	109.3	110.1	110.8	111.2	112.2	112.8	113.4	113.4	113.4
27.5°	101.1	102.1	103.2	104.1	104.6	105.1	105.8	106.8	107.3	107.7	107.6
30°	94.9	95.7	96.7	97.5	98.2	98.6	99.7	100.1	100.9	101.1	100.9
32.5°	88.4	89.0	89.9	91.1	91.3	91.7	92.4	93.5	93.7	93.8	93.9
35°	81.5	82.5	83.3	84.0	84.2	84.6	85.4	86.2	86.4	86.9	86.7
37.5°	75.0	75.7	76.0	76.7	77.4	77.7	78.1	78.6	79.1	79.3	79.3
40°	68.6	68.9	69.2	70.0	70.1	70.1	70.7	71.4	71.4	71.6	71.6
42.5°	62.1	62.1	62.5	62.9	63.0	63.1	63.8	63.9	64.2	64.3	64.5
45°	55.7	56.0	56.3	56.3	56.6	56.6	56.8	56.9	57.4	57.3	57.4
47.5°	49.9	50.0	50.2	50.2	50.4	50.3	50.6	50.4	50.7	50.8	51.0
50°	44.2	44.5	44.3	44.4	44.3	44.5	44.4	44.4	44.4	44.6	44.8
52.5°	39.0	39.0	38.9	38.9	38.9	38.8	38.9	38.9	38.8	38.8	38.9
55°	34.1	33.9	33.8	33.6	33.4	33.7	33.5	33.4	33.6	33.5	33.6
57.5°	29.5	29.2	29.0	28.9	28.5	28.7	28.5	28.4	28.4	28.4	28.7
60°	25.0	24.8	24.5	24.2	24.2	24.1	24.0	23.7	23.8	23.7	23.8
62.5°	21.2	20.7	20.3	20.1	20.0	19.9	19.7	19.5	19.5	19.5	19.6
65°	17.7	17.1	16.6	16.2	16.2	16.0	15.7	15.7	15.4	15.5	15.6
67.5°	14.1	13.7	13.1	12.9	12.7	12.5	12.4	12.3	12.1	12.1	12.2
70°	10.9	10.5	10.2	9.8	9.8	9.6	9.4	9.2	9.2	9.2	9.1
72.5°	8.3	7.9	7.5	7.3	7.1	7.0	6.8	6.7	6.6	6.6	6.7
75°	5.7	5.5	5.2	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.6
77.5°	3.8	3.6	3.3	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.8
80°	2.2	2.1	2.0	1.8	1.8	1.8	1.7	1.6	1.6	1.6	1.6
82.5°	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8
85°	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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°	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8
2.5°	139.5	139.4	139.4	139.4	139.4	139.4	139.4	139.4	139.3	139.3	139.3
5°	138.6	138.5	138.5	138.4	138.4	138.3	138.3	138.2	138.1	138.0	137.9
7.5°	137.4	137.3	137.1	137.1	136.9	136.8	136.6	136.5	136.3	136.0	135.9
10°	135.7	135.5	135.4	135.1	135.0	134.8	134.3	134.1	133.7	133.4	133.0
12.5°	133.7	133.5	133.1	132.8	132.6	132.1	131.7	131.2	130.8	130.1	129.6
15°	131.2	130.9	130.2	130.1	129.8	129.1	128.5	127.7	127.0	126.3	125.7
17.5°	128.0	127.3	126.9	126.5	126.1	125.2	124.5	123.7	122.7	121.9	121.0
20°	123.7	122.9	122.3	122.1	121.6	120.8	120.0	118.9	117.9	116.9	116.1
22.5°	118.5	118.1	117.1	116.8	116.3	115.4	114.5	113.4	112.5	111.4	110.4
25°	113.0	112.4	111.6	111.0	110.6	109.8	108.6	107.8	106.8	105.6	104.8
27.5°	107.2	106.4	105.4	105.0	104.6	103.6	102.6	101.6	100.8	99.7	99.0
30°	100.4	99.8	99.2	98.7	98.1	97.3	96.4	95.3	94.4	93.9	93.0
32.5°	93.5	93.1	92.2	91.9	91.4	90.7	90.0	89.2	88.3	87.5	86.8
35°	86.2	85.7	85.1	84.6	84.4	84.0	83.3	82.5	82.1	81.2	80.8
37.5°	78.8	78.7	78.1	77.6	77.5	76.9	76.5	76.0	75.4	75.1	74.7
40°	71.3	71.2	70.8	70.8	70.5	70.3	69.8	69.4	69.1	68.9	68.7
42.5°	64.4	64.3	64.0	64.0	63.7	63.6	63.5	63.2	62.9	62.6	62.7
45°	57.5	57.4	57.2	57.1	57.3	57.2	57.1	57.0	57.0	57.0	56.9
47.5°	51.0	51.1	50.9	51.0	51.0	50.8	50.8	51.0	51.1	51.2	51.3
50°	44.8	45.1	45.0	45.1	45.2	45.2	45.1	45.3	45.3	45.7	45.6
52.5°	39.1	39.2	39.4	39.4	39.5	39.5	39.8	40.0	40.0	40.2	40.6
55°	33.7	33.7	34.1	34.1	34.4	34.4	34.8	34.9	35.1	35.6	35.7
57.5°	28.5	28.8	29.1	29.2	29.3	29.6	29.8	30.2	30.5	30.8	31.2
60°	23.9	24.3	24.5	24.6	24.8	25.2	25.4	25.9	26.4	26.8	27.1
62.5°	19.7	20.0	20.2	20.5	20.5	20.8	21.4	21.7	22.2	22.6	23.0
65°	15.9	16.1	16.4	16.4	16.6	17.0	17.6	18.0	18.5	19.0	19.5
67.5°	12.4	12.6	12.8	13.0	13.1	13.6	14.0	14.7	15.1	15.5	16.1
70°	9.4	9.5	9.8	10.0	10.1	10.5	10.9	11.4	11.9	12.3	12.8
72.5°	6.7	6.9	7.2	7.3	7.4	7.7	8.2	8.6	9.0	9.4	9.8
75°	4.6	4.8	4.9	5.0	5.2	5.4	5.7	6.0	6.5	6.9	7.2
77.5°	2.9	3.0	3.2	3.2	3.3	3.5	3.7	4.0	4.3	4.6	4.9
80°	1.7	1.7	1.8	1.8	2.0	2.1	2.2	2.4	2.6	2.8	3.1
82.5°	0.9	0.9	1.0	1.0	1.0	1.0	1.2	1.3	1.3	1.4	1.6
85°	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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°	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8
2.5°	139.3	139.3	139.3	139.2	139.3	139.3	139.3	139.2
5°	137.9	137.8	137.8	137.8	137.7	137.7	137.8	137.7
7.5°	135.7	135.6	135.5	135.5	135.4	135.4	135.4	135.1
10°	132.8	132.5	132.5	132.4	132.0	132.0	131.9	131.9
12.5°	129.2	128.9	128.7	128.4	128.2	128.0	127.9	127.7
15°	125.0	124.5	124.2	124.1	123.7	123.3	123.3	123.2
17.5°	120.4	119.6	119.4	119.1	118.6	118.5	118.4	118.0
20°	115.1	114.5	114.1	113.8	113.5	113.0	112.9	112.9
22.5°	109.6	108.7	108.4	108.2	107.8	107.3	107.3	107.0
25°	103.9	103.1	102.8	102.5	101.9	101.7	101.5	101.5
27.5°	98.1	97.4	97.1	96.6	96.2	95.9	95.7	95.7
30°	92.1	91.7	91.3	91.2	90.5	90.2	89.9	89.7
32.5°	86.2	85.7	85.5	85.3	85.0	84.5	84.5	84.1
35°	80.5	80.0	79.7	79.5	79.1	78.9	78.8	78.9
37.5°	74.4	74.3	74.2	73.9	73.7	73.6	73.4	73.7
40°	68.5	68.4	68.2	68.3	68.3	68.2	68.3	68.3
42.5°	62.7	62.7	62.5	62.6	62.7	62.8	62.9	63.0
45°	57.1	57.1	57.1	57.2	57.1	57.4	57.6	57.7
47.5°	51.4	51.4	51.6	51.7	51.8	52.2	52.2	52.2
50°	45.9	46.1	46.0	46.4	46.3	46.5	46.3	46.3
52.5°	40.7	40.9	41.0	41.0	41.3	41.4	41.4	41.3
55°	36.0	36.3	36.2	36.4	36.6	36.7	36.9	36.8
57.5°	31.7	31.8	32.0	32.0	32.2	32.3	32.4	32.3
60°	27.4	27.7	28.0	28.0	28.1	28.2	28.3	28.4
62.5°	23.4	23.9	24.0	24.1	24.3	24.5	24.6	24.7
65°	19.9	20.2	20.5	20.6	20.8	20.8	21.0	21.0
67.5°	16.4	16.8	16.9	17.0	17.3	17.4	17.7	17.7
70°	13.3	13.6	13.7	13.8	14.1	14.3	14.4	14.5
72.5°	10.3	10.6	10.7	10.9	11.1	11.3	11.3	11.5
75°	7.5	8.0	8.0	8.2	8.4	8.6	8.7	8.6
77.5°	5.2	5.4	5.6	5.7	5.9	6.0	6.2	6.2
80°	3.2	3.4	3.5	3.5	3.7	3.8	4.0	4.0
82.5°	1.7	1.8	1.9	2.0	2.1	2.1	2.1	2.2
85°	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
87.5°	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2
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)