

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: P879326

Luminaire Tested: **LD4C02D010 EU4029050 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: P879326
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 EU4029050 4LBDWWH
Description: 4 INCH 250 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND 4LBDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

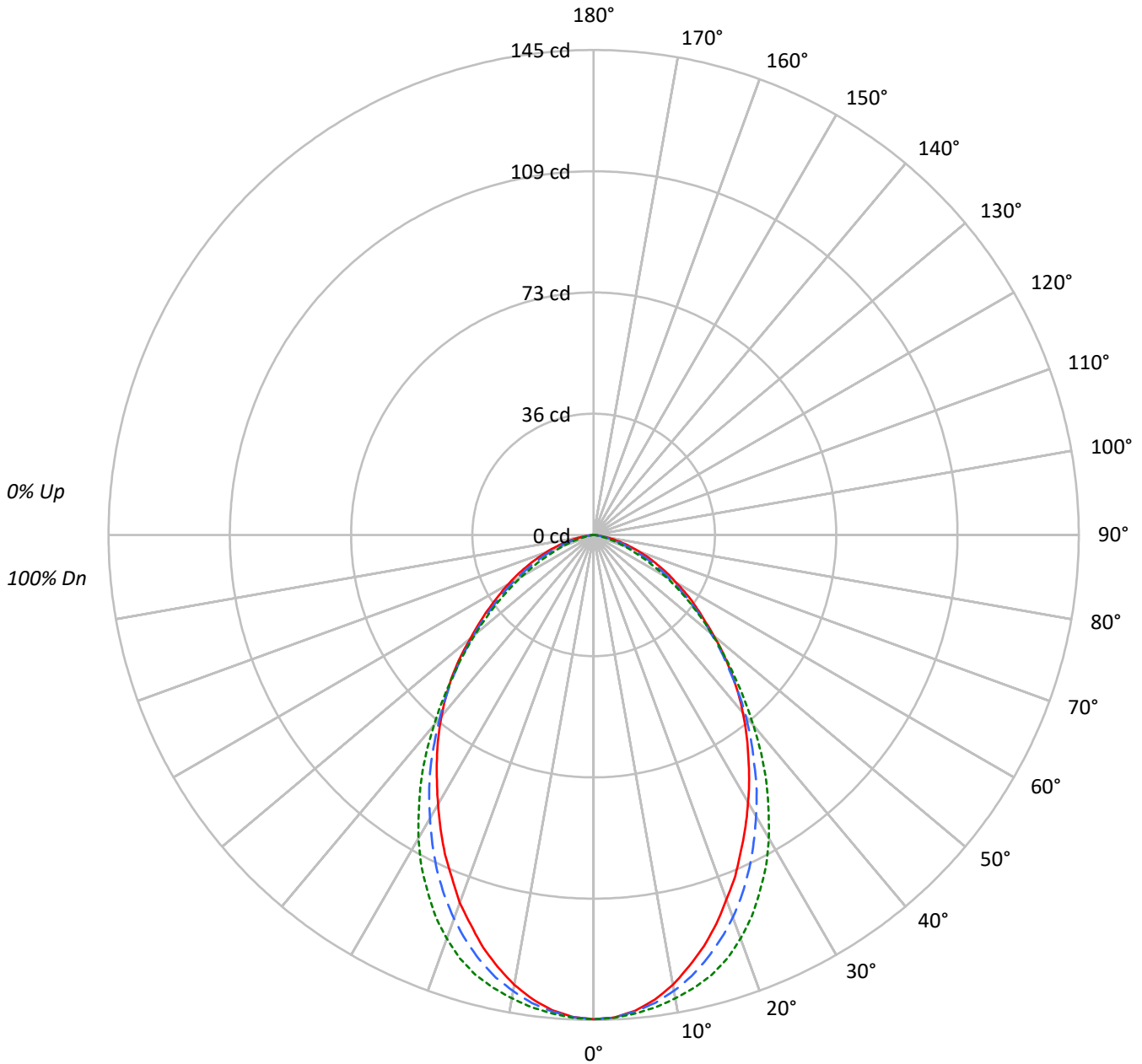
Lumens per Lamp: N/A
Luminaire Lumens: 259.0 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 3.5
Input Voltage (V): NR
Input Current (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				
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	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47	47	47	47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35	35	35	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17789	17789	17789
5°	17610	17709	17586
10°	17041	17552	17041
15°	16191	17323	16242
20°	15166	16787	15296
25°	14125	15928	14260
30°	13094	14853	13193
35°	12073	13498	12253
40°	11130	11900	11338
45°	10094	10303	10390
50°	8945	8830	9174
55°	7968	7432	8161
60°	6978	6044	7248
65°	6105	4680	6308
70°	5137	3412	5388
75°	4035	2231	4225
80°	2618	1132	2901
85°	846	564	1269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.5	5.2
10°-20°	36.9	14.3
20°-30°	50.8	19.6
30°-40°	53.0	20.5
40°-50°	45.3	17.5
50°-60°	32.4	12.5
60°-70°	18.8	7.3
70°-80°	7.3	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°	101.2	39.1
0°-40°	154.2	59.6
0°-60°	232.0	89.6
0°-90°	259.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	259.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	145	145	145	145	145	
5°	143	143	144	143	143	13
15°	127	131	136	132	128	36
25°	104	110	118	111	105	48
35°	80	84	90	85	82	50
45°	58	58	59	59	60	45
55°	37	35	35	36	38	33
65°	21	19	16	19	22	21
75°	8	6	5	7	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°	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8
2.5°	144.4	144.3	144.4	144.4	144.4	144.3	144.4	144.4	144.4	144.4	144.4
5°	142.8	142.7	142.7	142.8	142.8	142.8	142.8	142.9	142.9	143.0	143.0
7.5°	140.1	140.0	140.1	140.3	140.3	140.4	140.4	140.5	140.7	140.9	141.1
10°	136.6	136.6	136.6	136.8	137.0	137.0	137.1	137.4	137.7	138.1	138.4
12.5°	132.0	132.1	132.3	132.5	132.7	132.9	133.2	133.5	134.0	134.5	135.1
15°	127.3	127.3	127.4	127.7	128.0	128.4	128.6	129.2	129.7	130.4	131.1
17.5°	121.9	121.8	122.0	122.3	122.9	123.1	123.4	124.1	124.8	125.8	126.6
20°	116.0	116.4	116.6	117.0	117.4	117.8	118.0	118.9	119.6	120.6	121.7
22.5°	110.5	110.2	110.6	111.1	111.4	111.7	112.1	113.0	113.9	115.0	116.1
25°	104.2	104.4	104.7	105.0	105.5	105.9	106.3	107.3	107.7	109.0	110.0
27.5°	98.3	98.5	98.6	99.1	99.5	99.8	100.0	101.1	101.6	102.6	103.6
30°	92.3	92.5	92.5	93.1	93.3	93.6	94.2	94.9	95.6	96.3	97.0
32.5°	86.5	86.5	86.7	87.2	87.4	87.8	88.0	88.5	89.1	89.9	90.7
35°	80.5	80.7	80.9	80.9	81.4	81.6	81.8	82.3	82.7	83.1	83.7
37.5°	75.0	75.0	74.9	75.1	75.5	75.4	75.7	76.0	76.3	76.6	77.2
40°	69.4	69.4	69.2	69.4	69.6	69.6	69.4	69.7	69.9	70.2	70.7
42.5°	63.8	63.7	63.6	63.6	63.7	63.6	63.7	63.8	63.8	63.8	64.1
45°	58.1	58.3	58.0	57.9	57.8	57.6	57.5	57.6	57.8	57.5	57.6
47.5°	52.5	52.6	52.4	52.2	52.1	52.0	52.1	51.7	51.8	51.9	51.7
50°	46.8	46.6	46.6	46.4	46.5	46.4	46.3	46.2	46.2	45.9	45.8
52.5°	41.5	41.6	41.7	41.4	41.4	41.2	41.2	40.9	40.9	40.6	40.7
55°	37.2	37.1	37.1	36.9	36.9	36.6	36.5	36.4	36.0	35.8	35.4
57.5°	32.8	32.7	32.5	32.5	32.2	32.2	32.1	31.8	31.5	31.3	30.8
60°	28.4	28.4	28.4	28.3	28.2	27.9	28.0	27.6	27.2	26.7	26.3
62.5°	24.8	24.6	24.6	24.5	24.1	24.1	23.9	23.6	23.2	22.8	22.4
65°	21.0	21.1	20.9	20.7	20.4	20.4	20.2	19.9	19.6	19.1	18.6
67.5°	17.6	17.5	17.4	17.3	17.0	16.9	16.8	16.3	16.0	15.5	15.0
70°	14.3	14.2	14.3	14.0	13.7	13.5	13.5	13.1	12.6	12.2	11.8
72.5°	11.2	11.2	11.2	10.9	10.7	10.6	10.4	10.0	9.7	9.3	9.0
75°	8.5	8.4	8.3	8.1	7.9	7.8	7.7	7.4	7.1	6.6	6.3
77.5°	5.8	5.9	5.8	5.7	5.5	5.3	5.3	5.1	4.8	4.5	4.2
80°	3.7	3.7	3.6	3.5	3.5	3.4	3.2	3.1	2.8	2.7	2.5
82.5°	2.0	1.9	1.9	1.9	1.8	1.7	1.6	1.5	1.5	1.4	1.3
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°	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8
2.5°	144.4	144.4	144.4	144.5	144.5	144.5	144.5	144.5	144.5	144.5	144.5
5°	143.2	143.2	143.3	143.4	143.4	143.4	143.5	143.6	143.6	143.6	143.5
7.5°	141.3	141.5	141.7	141.9	142.0	142.0	142.1	142.4	142.4	142.4	142.4
10°	138.8	139.3	139.5	139.9	140.0	140.1	140.4	140.5	140.7	140.7	140.7
12.5°	135.6	136.2	136.8	137.4	137.6	137.8	138.1	138.4	138.6	138.7	138.7
15°	132.0	132.7	133.6	134.2	134.6	135.0	135.4	135.9	136.1	136.2	136.2
17.5°	127.7	128.6	129.5	130.5	130.8	131.3	131.8	132.4	132.7	132.8	132.7
20°	122.9	123.9	124.7	125.7	126.2	126.5	127.3	128.0	128.3	128.4	128.3
22.5°	117.3	118.2	119.2	120.2	120.7	121.2	122.0	122.7	123.2	123.5	123.2
25°	110.9	112.2	113.2	114.1	114.8	115.2	116.2	116.8	117.5	117.5	117.5
27.5°	104.7	105.8	106.9	107.9	108.3	108.9	109.7	110.6	111.2	111.6	111.5
30°	98.3	99.2	100.1	101.0	101.7	102.2	103.3	103.7	104.5	104.7	104.5
32.5°	91.6	92.2	93.1	94.3	94.6	95.0	95.8	96.8	97.1	97.2	97.3
35°	84.4	85.5	86.3	87.1	87.3	87.6	88.5	89.3	89.6	90.0	89.8
37.5°	77.7	78.4	78.8	79.5	80.1	80.5	80.9	81.4	81.9	82.2	82.1
40°	71.1	71.4	71.7	72.5	72.6	72.6	73.2	74.0	74.0	74.2	74.2
42.5°	64.3	64.3	64.8	65.2	65.3	65.4	66.0	66.2	66.5	66.6	66.8
45°	57.7	58.0	58.3	58.3	58.6	58.7	58.8	59.0	59.5	59.3	59.5
47.5°	51.7	51.8	52.0	52.0	52.2	52.1	52.4	52.2	52.5	52.6	52.8
50°	45.8	46.1	45.9	46.0	45.9	46.1	46.0	46.0	46.0	46.2	46.4
52.5°	40.4	40.4	40.3	40.3	40.3	40.2	40.3	40.3	40.2	40.2	40.3
55°	35.4	35.2	35.0	34.8	34.6	34.9	34.7	34.6	34.8	34.7	34.8
57.5°	30.5	30.3	30.0	29.9	29.6	29.8	29.6	29.5	29.5	29.5	29.7
60°	26.0	25.7	25.4	25.1	25.0	24.9	24.8	24.6	24.6	24.6	24.7
62.5°	22.0	21.4	21.1	20.8	20.7	20.6	20.4	20.2	20.2	20.2	20.3
65°	18.3	17.7	17.2	16.8	16.8	16.5	16.3	16.3	16.0	16.1	16.1
67.5°	14.6	14.1	13.6	13.3	13.2	13.0	12.8	12.7	12.5	12.5	12.7
70°	11.3	10.8	10.6	10.2	10.1	9.9	9.7	9.6	9.5	9.5	9.5
72.5°	8.6	8.1	7.8	7.6	7.4	7.2	7.0	7.0	6.9	6.9	7.0
75°	6.0	5.7	5.4	5.2	5.1	5.0	4.8	4.7	4.7	4.7	4.7
77.5°	4.0	3.7	3.5	3.4	3.2	3.1	3.1	3.0	2.9	2.9	2.9
80°	2.3	2.2	2.1	1.9	1.9	1.9	1.8	1.7	1.6	1.6	1.6
82.5°	1.2	1.1	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
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°	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8
2.5°	144.5	144.4	144.4	144.4	144.4	144.4	144.4	144.4	144.3	144.3	144.3
5°	143.6	143.5	143.5	143.4	143.4	143.3	143.3	143.2	143.0	143.0	142.9
7.5°	142.3	142.2	142.0	142.0	141.9	141.7	141.5	141.4	141.2	140.9	140.8
10°	140.6	140.4	140.2	140.0	139.9	139.7	139.2	138.9	138.5	138.2	137.8
12.5°	138.5	138.3	137.9	137.6	137.4	136.9	136.4	136.0	135.5	134.8	134.3
15°	136.0	135.7	134.9	134.8	134.5	133.7	133.1	132.3	131.6	130.8	130.2
17.5°	132.6	131.9	131.5	131.0	130.7	129.7	129.0	128.1	127.1	126.2	125.3
20°	128.1	127.4	126.7	126.5	126.0	125.1	124.3	123.2	122.1	121.1	120.3
22.5°	122.8	122.3	121.4	121.0	120.4	119.6	118.6	117.5	116.6	115.4	114.3
25°	117.1	116.4	115.7	115.0	114.6	113.8	112.5	111.7	110.7	109.4	108.6
27.5°	111.0	110.2	109.2	108.7	108.4	107.3	106.2	105.2	104.4	103.3	102.6
30°	104.0	103.4	102.7	102.2	101.7	100.8	99.9	98.7	97.8	97.3	96.3
32.5°	96.9	96.4	95.5	95.2	94.7	94.0	93.3	92.4	91.5	90.7	89.9
35°	89.3	88.8	88.2	87.7	87.5	87.0	86.3	85.5	85.0	84.1	83.8
37.5°	81.7	81.5	80.9	80.4	80.2	79.7	79.3	78.8	78.1	77.9	77.4
40°	73.9	73.8	73.4	73.3	73.0	72.9	72.3	71.9	71.6	71.4	71.2
42.5°	66.7	66.6	66.3	66.3	66.0	65.9	65.8	65.5	65.2	64.9	64.9
45°	59.6	59.5	59.3	59.2	59.3	59.3	59.2	59.0	59.0	59.1	58.9
47.5°	52.8	52.9	52.7	52.8	52.8	52.6	52.6	52.9	52.9	53.0	53.1
50°	46.4	46.7	46.6	46.7	46.8	46.8	46.7	47.0	46.9	47.4	47.3
52.5°	40.5	40.6	40.8	40.8	40.9	40.9	41.2	41.4	41.5	41.7	42.1
55°	34.9	34.9	35.4	35.4	35.6	35.7	36.1	36.2	36.3	36.9	37.0
57.5°	29.6	29.9	30.1	30.2	30.4	30.6	30.8	31.3	31.6	32.0	32.3
60°	24.8	25.2	25.4	25.5	25.7	26.1	26.3	26.9	27.3	27.8	28.0
62.5°	20.4	20.7	20.9	21.3	21.3	21.5	22.2	22.5	23.0	23.4	23.9
65°	16.4	16.6	17.0	17.0	17.2	17.7	18.2	18.7	19.2	19.7	20.2
67.5°	12.9	13.0	13.2	13.5	13.6	14.1	14.5	15.2	15.7	16.1	16.6
70°	9.7	9.8	10.1	10.3	10.5	10.8	11.3	11.8	12.3	12.7	13.3
72.5°	7.0	7.2	7.4	7.6	7.7	8.0	8.5	8.9	9.4	9.8	10.1
75°	4.8	4.9	5.1	5.2	5.4	5.6	5.9	6.2	6.7	7.1	7.5
77.5°	3.0	3.1	3.3	3.4	3.4	3.6	3.8	4.1	4.5	4.8	5.1
80°	1.8	1.8	1.9	1.9	2.0	2.2	2.3	2.5	2.7	2.9	3.2
82.5°	0.9	1.0	1.0	1.0	1.0	1.1	1.2	1.3	1.4	1.5	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°	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8
2.5°	144.3	144.3	144.3	144.2	144.3	144.3	144.3	144.2
5°	142.9	142.8	142.8	142.7	142.7	142.7	142.7	142.6
7.5°	140.6	140.4	140.3	140.3	140.3	140.2	140.2	140.0
10°	137.6	137.3	137.3	137.2	136.8	136.7	136.6	136.6
12.5°	133.9	133.5	133.3	133.1	132.8	132.6	132.5	132.3
15°	129.5	129.0	128.6	128.5	128.1	127.8	127.8	127.7
17.5°	124.7	124.0	123.7	123.4	122.8	122.8	122.7	122.2
20°	119.3	118.6	118.2	117.9	117.6	117.0	116.9	117.0
22.5°	113.6	112.6	112.3	112.0	111.7	111.2	111.2	110.8
25°	107.7	106.8	106.5	106.2	105.6	105.4	105.1	105.2
27.5°	101.7	100.9	100.6	100.0	99.7	99.4	99.1	99.1
30°	95.4	95.0	94.5	94.5	93.8	93.4	93.2	93.0
32.5°	89.3	88.8	88.6	88.4	88.0	87.6	87.5	87.2
35°	83.4	82.9	82.6	82.4	81.9	81.8	81.6	81.7
37.5°	77.1	77.0	76.8	76.6	76.3	76.3	76.0	76.3
40°	70.9	70.9	70.7	70.7	70.7	70.6	70.7	70.7
42.5°	65.0	65.0	64.8	64.9	64.9	65.0	65.2	65.3
45°	59.2	59.1	59.2	59.3	59.2	59.5	59.7	59.8
47.5°	53.2	53.3	53.5	53.5	53.7	54.0	54.0	54.0
50°	47.5	47.8	47.7	48.0	48.0	48.2	48.0	48.0
52.5°	42.1	42.4	42.4	42.5	42.8	42.9	42.9	42.8
55°	37.3	37.6	37.5	37.8	37.9	38.0	38.2	38.1
57.5°	32.8	33.0	33.1	33.2	33.4	33.5	33.6	33.5
60°	28.4	28.7	29.0	29.0	29.1	29.2	29.3	29.5
62.5°	24.2	24.8	24.9	24.9	25.2	25.4	25.5	25.6
65°	20.6	21.0	21.2	21.4	21.6	21.6	21.7	21.7
67.5°	17.0	17.4	17.5	17.7	18.0	18.0	18.3	18.3
70°	13.8	14.0	14.1	14.3	14.6	14.8	14.9	15.0
72.5°	10.6	11.0	11.1	11.3	11.5	11.7	11.8	11.9
75°	7.8	8.2	8.3	8.5	8.7	8.9	9.0	8.9
77.5°	5.4	5.6	5.8	5.9	6.1	6.2	6.4	6.4
80°	3.4	3.6	3.6	3.7	3.9	4.0	4.1	4.1
82.5°	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.2
85°	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.9
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)