

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: P879365

Luminaire Tested: **LD4C10D010 EU4109040 4LBLDWWLI**

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: P879365  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/1/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C10D010 EU4109040 4LBLDWWLI  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

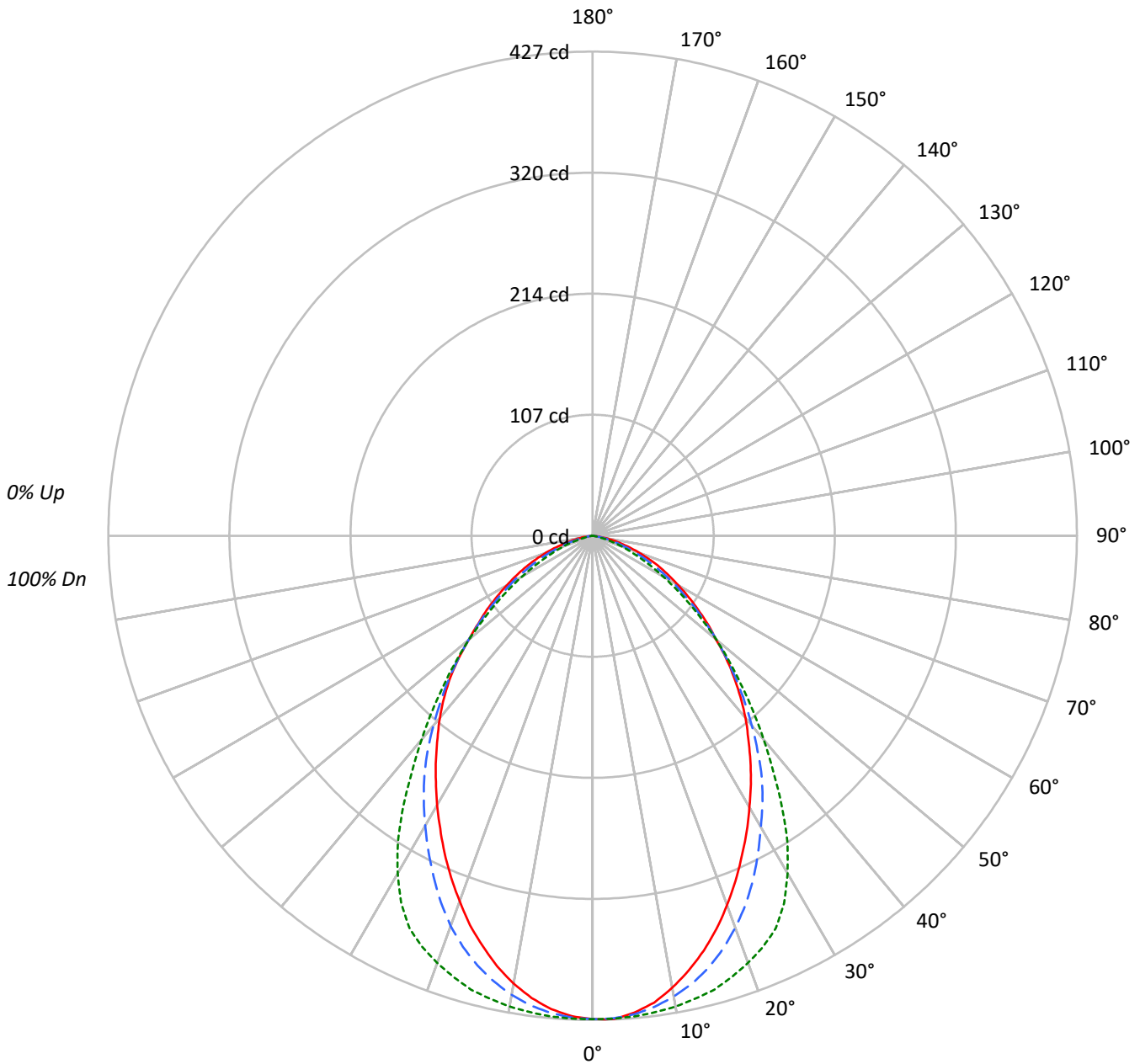
Lumens per Lamp: N/A  
Luminaire Lumens: 783.0 lumens  
Efficiency: N/A  
Efficacy: 80.3 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.75  
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				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	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77			77
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
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	45	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°	52372	52372	52372
5°	52067	52462	51672
10°	50486	52594	50037
15°	48166	52706	47632
20°	45314	52400	44817
25°	42211	51782	41859
30°	39224	48757	38898
35°	36369	43613	36114
40°	33630	37608	33598
45°	30631	32107	30891
50°	27063	27159	27216
55°	24246	22190	24353
60°	21426	17617	21475
65°	18866	13430	18692
70°	15625	9627	15625
75°	12199	5506	11724
80°	7924	1344	7570
85°	2960	423	2255



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.0	5.1
10°-20°	110.7	14.1
20°-30°	154.8	19.8
30°-40°	163.3	20.9
40°-50°	138.9	17.7
50°-60°	98.0	12.5
60°-70°	55.6	7.1
70°-80°	19.8	2.5
80°-90°	1.9	0.2
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°	305.5	39.0
0°-40°	468.8	59.9
0°-60°	705.7	90.1
0°-90°	783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	783.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	426	426	426	426	426	
5°	422	424	425	422	419	40
15°	379	395	414	392	374	106
25°	311	335	382	332	309	143
35°	242	260	291	259	241	152
45°	176	179	185	180	178	136
55°	113	109	104	110	114	102
65°	65	56	46	56	64	64
75°	26	18	12	17	25	28
85°	2	1	0	1	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°	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3
2.5°	426.7	425.9	425.9	425.9	425.9	425.9	425.9	425.9	425.9	426.0	426.0
5°	422.2	421.9	421.7	421.7	421.7	421.7	421.9	422.5	422.8	423.3	423.6
7.5°	415.2	414.5	414.9	414.9	415.2	415.5	416.0	416.6	417.6	418.2	419.0
10°	404.7	404.0	404.8	405.1	406.1	406.6	407.4	408.3	410.2	411.2	412.5
12.5°	392.4	392.1	392.4	393.7	394.6	395.2	396.2	398.3	400.2	402.3	404.5
15°	378.7	377.9	378.3	379.9	381.5	382.7	383.4	386.2	388.7	391.9	394.6
17.5°	363.4	362.2	363.5	364.8	366.9	367.8	368.9	372.0	375.5	379.0	382.0
20°	346.6	346.3	347.1	348.9	350.9	352.2	353.2	356.5	359.5	364.3	367.8
22.5°	329.2	329.6	330.2	332.1	333.5	335.3	336.7	339.8	343.3	347.7	352.2
25°	311.4	311.9	313.0	314.3	316.6	317.6	319.4	322.5	325.6	329.7	334.7
27.5°	294.2	294.3	295.6	296.2	298.5	300.5	301.3	304.7	308.2	311.4	315.7
30°	276.5	276.9	277.7	279.5	281.7	282.5	283.5	286.5	289.2	293.2	296.6
32.5°	259.6	259.2	260.2	261.2	263.7	265.1	265.6	269.1	271.5	275.5	278.7
35°	242.5	241.7	243.1	244.1	246.3	247.6	248.2	251.0	253.2	256.5	260.0
37.5°	225.4	226.1	226.7	227.5	228.6	229.0	230.9	231.5	234.4	236.9	238.8
40°	209.7	209.3	209.0	209.8	211.3	211.9	212.1	213.8	214.4	217.0	218.4
42.5°	192.8	192.9	192.8	192.9	193.7	193.7	194.2	195.3	195.8	196.6	198.3
45°	176.3	176.3	175.9	176.0	176.2	176.0	176.2	176.7	177.6	177.6	178.9
47.5°	159.3	159.0	159.6	159.1	158.8	158.6	159.1	158.6	159.6	159.6	159.9
50°	141.6	141.6	142.4	142.2	142.5	141.9	142.1	142.1	142.2	142.1	142.7
52.5°	127.9	127.6	127.2	126.4	126.8	126.1	126.1	126.3	125.8	125.6	124.8
55°	113.2	113.5	113.0	112.7	112.7	112.1	111.9	111.0	110.3	109.9	109.4
57.5°	100.0	100.3	100.1	99.3	98.4	98.5	98.2	97.3	95.8	94.9	94.1
60°	87.2	87.5	87.2	86.4	86.1	85.5	85.3	84.0	82.9	81.6	80.7
62.5°	75.7	75.7	75.6	74.5	73.7	73.8	73.0	72.1	70.6	68.9	67.4
65°	64.9	64.7	63.9	63.5	62.8	62.0	61.5	60.1	59.0	57.6	55.6
67.5°	54.0	53.6	53.3	52.8	51.3	51.2	50.5	49.3	47.7	46.6	45.0
70°	43.5	43.4	42.7	42.7	41.6	41.1	40.2	39.1	37.6	36.0	34.8
72.5°	34.4	34.1	33.5	32.8	31.9	31.6	30.8	29.7	28.4	26.8	25.2
75°	25.7	25.4	25.2	24.4	23.6	22.8	22.5	21.4	20.1	19.0	17.5
77.5°	18.0	17.7	17.2	16.7	16.3	15.8	15.3	14.3	13.2	12.3	11.0
80°	11.2	10.8	10.5	10.4	9.9	9.7	9.1	8.6	7.7	7.0	6.2
82.5°	5.7	5.7	5.4	5.3	4.9	4.8	4.6	4.1	3.7	3.2	2.7
85°	2.1	2.1	1.9	1.8	1.8	1.6	1.6	1.4	1.1	1.1	0.8
87.5°	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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°	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3
2.5°	426.2	426.0	426.2	426.2	426.3	426.3	426.3	426.2	426.3	426.2	426.2
5°	423.6	424.1	424.4	424.7	424.9	425.1	425.1	425.2	425.4	425.4	425.2
7.5°	419.6	420.6	421.6	422.2	422.5	422.8	423.3	423.6	423.9	423.8	423.6
10°	414.4	416.0	417.3	418.5	419.2	419.6	420.4	421.1	421.4	421.6	421.1
12.5°	406.9	409.1	411.2	413.3	414.2	414.9	416.5	417.6	418.2	418.2	417.7
15°	397.5	400.7	403.7	406.4	408.0	409.0	411.4	412.9	413.9	414.4	413.6
17.5°	386.2	389.8	393.5	397.0	398.6	400.0	403.4	405.6	407.7	408.0	407.0
20°	371.7	376.3	380.4	384.7	386.5	388.7	392.5	396.2	399.4	400.8	398.1
22.5°	355.4	360.5	364.3	369.6	372.0	374.4	379.3	383.9	389.5	392.5	387.8
25°	338.5	342.8	347.4	352.5	355.9	358.4	364.2	370.1	377.6	382.0	375.3
27.5°	320.3	324.1	329.7	335.3	337.9	341.0	347.9	354.3	361.4	365.4	360.5
30°	301.5	306.3	311.5	316.6	320.3	323.3	328.9	334.3	340.4	343.7	340.1
32.5°	282.8	287.5	291.9	297.5	299.6	302.3	307.2	311.9	316.5	319.5	315.2
35°	263.2	267.4	271.5	275.4	276.3	279.5	283.5	286.2	288.4	290.8	287.9
37.5°	241.9	245.1	247.1	251.3	252.9	253.3	256.5	258.4	260.8	261.3	261.2
40°	220.2	223.1	224.8	227.4	228.6	228.6	230.9	232.6	234.4	234.5	234.4
42.5°	199.9	201.4	202.8	204.4	204.1	206.0	207.0	207.7	209.0	209.0	209.3
45°	179.5	180.6	181.9	182.2	183.5	183.5	184.3	184.6	185.3	184.8	184.2
47.5°	160.6	161.0	161.2	162.6	162.9	161.8	162.8	162.9	162.8	162.8	162.5
50°	142.5	142.9	142.7	142.2	142.4	142.9	142.4	141.7	142.1	142.1	142.4
52.5°	125.0	124.4	124.0	124.0	123.4	123.4	122.6	122.3	122.1	121.5	122.3
55°	108.9	107.9	106.5	106.2	105.7	105.5	104.6	103.8	103.5	103.6	103.5
57.5°	93.4	92.0	91.0	90.7	90.2	89.3	88.2	87.4	87.2	86.9	86.9
60°	79.4	77.8	76.4	74.9	75.1	74.5	73.3	72.9	72.4	71.7	72.2
62.5°	66.6	64.9	63.3	61.9	60.9	60.4	59.6	58.8	58.4	57.9	58.5
65°	54.0	52.6	50.9	49.4	48.9	48.5	47.7	46.4	46.2	46.2	46.6
67.5°	42.7	41.1	39.5	38.6	37.9	37.3	37.0	36.4	35.9	35.6	35.7
70°	32.8	31.2	30.0	29.0	28.5	28.4	27.3	27.1	26.9	26.8	26.6
72.5°	23.9	22.6	21.5	20.9	20.2	19.8	19.5	19.0	18.8	18.8	18.8
75°	16.4	15.5	14.2	13.4	13.1	12.6	12.1	11.8	11.5	11.6	11.6
77.5°	9.9	8.9	8.1	7.5	7.3	6.9	6.4	6.1	5.6	5.6	5.7
80°	5.4	4.6	4.0	3.5	3.2	3.0	2.6	2.4	2.1	1.9	1.9
82.5°	2.4	1.9	1.6	1.4	1.3	1.1	1.0	0.8	0.8	0.6	0.8
85°	0.8	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
87.5°	0.2	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°	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3
2.5°	426.0	426.0	425.9	425.9	425.9	425.5	425.5	425.4	425.2	425.1	424.7
5°	424.9	424.7	424.4	424.3	424.1	423.6	423.2	422.8	422.4	421.7	421.4
7.5°	423.3	422.8	422.2	421.9	421.4	420.3	419.5	418.7	417.9	416.8	415.5
10°	420.6	419.6	418.7	418.0	417.3	415.8	414.2	412.9	411.2	409.6	407.8
12.5°	416.8	415.7	413.7	412.8	411.8	409.8	407.7	405.0	402.6	400.4	398.3
15°	412.0	409.9	407.7	406.4	405.0	401.6	398.4	395.6	392.4	389.7	386.3
17.5°	405.0	401.9	398.8	397.3	395.4	391.6	387.8	383.8	380.1	376.8	372.6
20°	394.5	391.1	387.0	384.7	383.1	378.0	374.4	369.9	366.1	361.9	357.3
22.5°	382.2	377.6	372.9	369.7	368.0	362.9	357.9	354.0	349.8	345.0	341.7
25°	368.3	362.6	357.0	353.8	351.1	345.7	340.9	336.7	331.6	327.5	324.1
27.5°	352.7	346.1	339.6	336.4	333.9	328.0	322.9	318.6	313.6	309.9	306.4
30°	334.0	328.1	321.9	319.4	316.3	310.3	304.4	300.5	295.1	291.3	287.5
32.5°	310.7	306.9	302.0	298.5	296.9	291.3	286.4	281.7	277.1	274.1	270.2
35°	285.2	281.9	277.7	275.8	273.8	270.2	266.3	262.3	258.6	255.7	252.2
37.5°	259.4	256.1	253.5	251.4	250.2	247.0	244.6	241.5	239.0	236.3	234.4
40°	232.6	231.7	229.0	228.0	227.7	224.2	222.1	219.7	218.1	216.5	215.4
42.5°	208.9	207.3	205.2	205.4	204.4	202.5	201.1	199.5	198.3	197.5	196.4
45°	185.4	184.2	183.2	184.0	182.4	181.8	180.6	180.5	179.7	178.3	177.8
47.5°	163.1	162.9	163.1	162.6	162.3	162.0	162.1	161.4	160.6	160.1	159.4
50°	142.7	142.9	143.2	143.7	142.5	143.0	142.9	142.7	142.7	142.2	142.5
52.5°	122.9	123.1	123.4	123.9	124.0	124.0	124.5	124.8	125.5	126.3	126.3
55°	104.3	105.4	106.0	106.8	106.3	107.3	107.8	109.2	109.7	109.7	110.3
57.5°	87.7	88.8	89.3	90.2	90.6	91.4	92.6	93.4	94.5	95.5	96.5
60°	72.5	73.0	74.3	75.7	75.4	77.3	78.3	79.6	81.0	81.6	82.9
62.5°	59.0	59.6	60.6	61.1	62.2	63.1	65.4	66.6	67.9	69.5	70.8
65°	46.9	47.5	48.5	49.4	49.9	51.3	52.5	54.7	55.8	57.6	59.0
67.5°	35.9	36.8	37.6	38.3	38.6	40.0	41.8	42.7	44.8	46.6	47.7
70°	26.8	27.6	28.5	28.4	29.0	30.1	31.4	32.8	34.4	36.0	37.3
72.5°	18.7	19.5	20.1	20.2	20.9	21.7	22.6	23.8	25.0	26.6	28.4
75°	11.8	12.0	12.6	12.9	13.2	14.2	15.0	16.1	17.2	18.5	19.6
77.5°	5.9	6.4	6.7	7.0	7.2	8.0	8.8	9.7	10.7	12.0	13.1
80°	2.2	2.4	2.9	3.0	3.3	3.8	4.5	4.9	5.7	6.7	7.3
82.5°	0.8	1.0	1.1	1.1	1.3	1.6	1.8	2.2	2.7	3.0	3.3
85°	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.6	0.8	1.0	1.0
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°
0°	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3
2.5°	424.6	424.6	424.4	424.3	424.3	424.3	424.1	424.1
5°	420.8	420.3	420.1	419.8	419.6	419.5	419.0	419.0
7.5°	414.5	413.9	413.4	412.9	412.3	411.8	411.8	411.2
10°	406.2	405.0	404.3	403.7	402.9	401.9	401.6	401.1
12.5°	396.2	393.7	393.0	391.9	390.6	390.0	388.9	388.9
15°	383.8	381.1	379.6	379.0	377.4	376.3	375.8	374.5
17.5°	369.3	367.2	365.0	364.0	362.2	360.8	360.2	360.0
20°	354.6	351.2	349.8	348.4	346.3	345.0	344.1	342.8
22.5°	337.7	334.7	332.6	331.6	329.9	327.6	326.1	326.1
25°	319.8	317.1	316.0	313.9	311.9	311.1	309.2	308.8
27.5°	302.8	300.1	297.8	296.7	294.3	293.2	291.6	291.0
30°	285.1	281.9	280.3	280.1	277.3	276.1	274.9	274.2
32.5°	267.4	264.7	263.1	262.1	260.8	258.9	257.8	257.2
35°	249.8	248.1	246.7	245.5	243.5	242.5	241.5	240.8
37.5°	231.5	229.9	229.3	228.3	227.4	225.6	225.3	224.6
40°	213.8	211.7	211.7	211.1	210.1	210.0	209.5	209.5
42.5°	195.3	194.4	194.2	194.4	193.7	193.4	192.9	194.0
45°	177.0	177.5	176.7	176.8	176.5	177.1	177.1	177.8
47.5°	160.1	159.4	159.8	160.1	160.6	160.6	160.4	160.2
50°	142.1	142.7	143.3	142.5	142.9	143.0	142.2	142.4
52.5°	126.6	126.8	127.2	126.8	127.2	127.1	127.4	126.8
55°	111.6	111.6	112.2	112.4	112.6	113.0	113.2	113.7
57.5°	97.1	97.9	98.7	98.5	99.2	99.8	99.3	99.8
60°	84.5	85.1	85.9	86.3	86.7	87.1	87.1	87.4
62.5°	71.7	73.0	73.7	74.3	74.3	74.9	75.6	75.7
65°	60.3	61.7	62.2	62.7	63.0	63.6	64.4	64.3
67.5°	49.4	50.4	51.0	51.3	52.3	52.6	53.3	53.9
70°	38.7	40.0	40.5	41.1	41.9	42.6	43.2	43.5
72.5°	29.7	30.6	30.9	31.6	32.4	33.0	33.3	33.8
75°	20.7	22.3	22.5	23.0	23.6	24.4	24.9	24.7
77.5°	13.7	14.8	15.0	15.6	16.3	16.9	17.1	17.2
80°	8.1	8.8	8.9	9.2	9.7	10.0	10.4	10.7
82.5°	3.8	4.1	4.5	4.5	4.8	5.1	5.1	5.3
85°	1.3	1.3	1.4	1.4	1.6	1.6	1.8	1.6
87.5°	0.2	0.2	0.0	0.2	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)