

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: P879363

Luminaire Tested: **LD4C10D010 EU4109035 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: P879363  
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 EU4109035 4LBLDWWLI  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

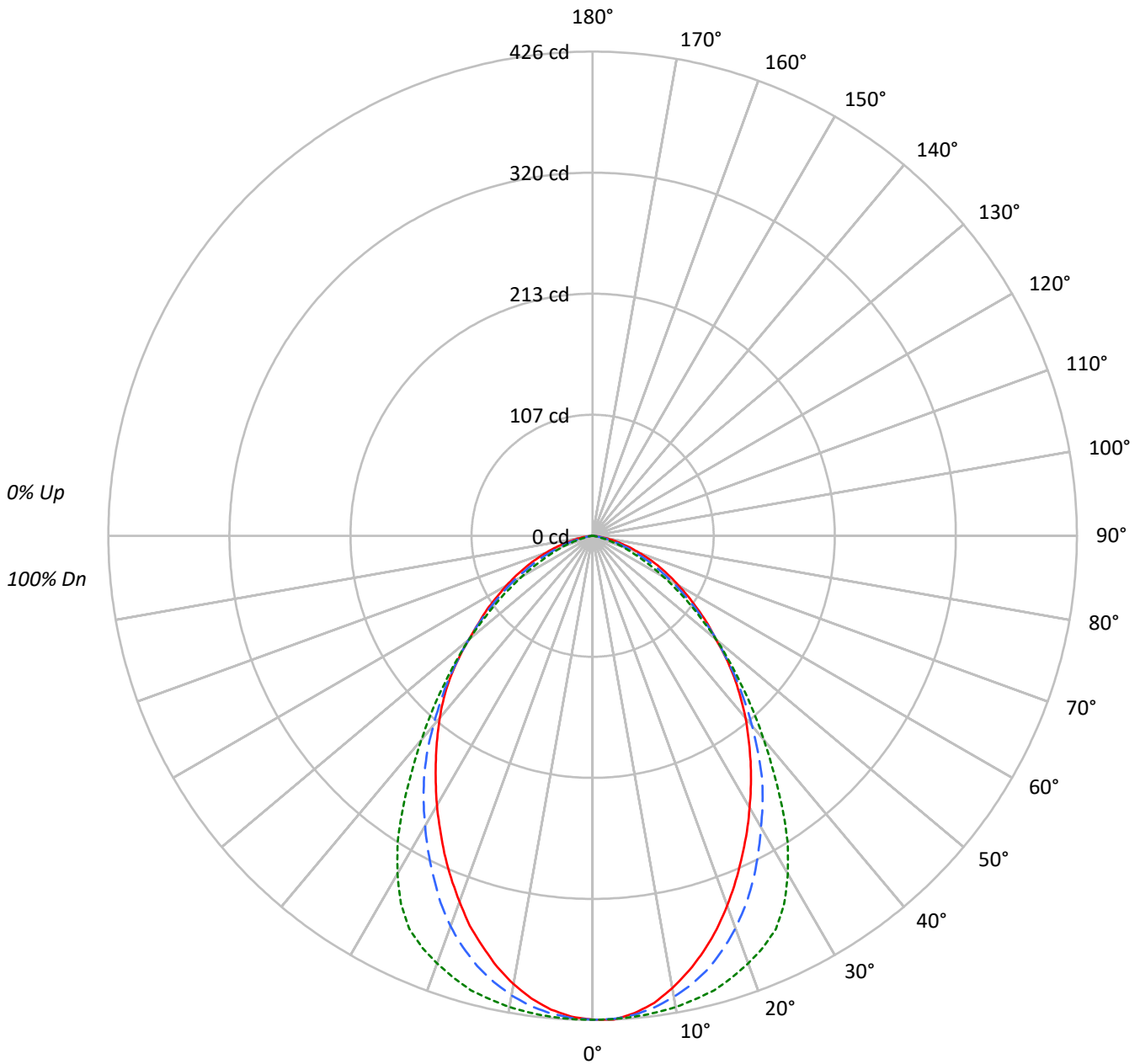
Lumens per Lamp: N/A  
Luminaire Lumens: 782.0 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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									
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	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77																			
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
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	45	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°	52311	52311	52311
5°	52005	52388	51611
10°	50411	52519	49974
15°	48102	52643	47568
20°	45261	52334	44765
25°	42157	51714	41805
30°	39167	48700	38855
35°	36324	43553	36054
40°	33582	37560	33550
45°	30596	32073	30839
50°	27025	27121	27178
55°	24225	22169	24310
60°	21401	17617	21450
65°	18837	13430	18663
70°	15625	9627	15625
75°	12152	5506	11724
80°	7853	1344	7570
85°	2960	423	2255



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.0	5.1
10°-20°	110.6	14.1
20°-30°	154.6	19.8
30°-40°	163.1	20.9
40°-50°	138.7	17.7
50°-60°	97.9	12.5
60°-70°	55.5	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°	305.1	39.0
0°-40°	468.2	59.9
0°-60°	704.8	90.1
0°-90°	782.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	782.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	426	426	426	426	426	
5°	422	423	425	422	418	40
15°	378	394	414	392	374	106
25°	311	334	382	331	308	143
35°	242	260	290	258	240	151
45°	176	179	185	180	178	135
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°	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8
2.5°	426.1	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.5	425.5
5°	421.7	421.3	421.2	421.2	421.2	421.2	421.3	422.0	422.3	422.8	423.1
7.5°	414.6	414.0	414.3	414.3	414.6	415.0	415.4	416.1	417.0	417.7	418.5
10°	404.1	403.5	404.3	404.6	405.6	406.0	406.8	407.8	409.7	410.7	411.9
12.5°	391.9	391.6	391.9	393.2	394.1	394.7	395.7	397.8	399.7	401.7	404.0
15°	378.2	377.4	377.9	379.5	381.0	382.2	383.0	385.7	388.2	391.4	394.1
17.5°	362.9	361.8	363.1	364.3	366.4	367.4	368.5	371.5	375.0	378.5	381.5
20°	346.2	345.9	346.7	348.4	350.5	351.8	352.7	356.0	359.1	363.9	367.4
22.5°	328.8	329.1	329.8	331.7	333.1	334.9	336.3	339.3	342.8	347.3	351.8
25°	311.0	311.5	312.6	313.9	316.2	317.2	318.9	322.1	325.2	329.3	334.2
27.5°	293.8	293.9	295.2	295.9	298.1	300.2	301.0	304.3	307.8	311.0	315.3
30°	276.1	276.6	277.4	279.1	281.4	282.2	283.1	286.1	288.9	292.8	296.2
32.5°	259.2	258.9	259.9	260.8	263.4	264.8	265.3	268.8	271.2	275.2	278.3
35°	242.2	241.4	242.8	243.8	246.0	247.3	247.9	250.6	252.9	256.2	259.7
37.5°	225.2	225.8	226.4	227.2	228.3	228.7	230.6	231.2	234.1	236.6	238.5
40°	209.4	209.1	208.8	209.6	211.0	211.6	211.8	213.5	214.2	216.7	218.2
42.5°	192.5	192.7	192.5	192.7	193.5	193.5	193.9	195.1	195.5	196.3	198.1
45°	176.1	176.1	175.6	175.8	176.0	175.8	176.0	176.4	177.4	177.4	178.7
47.5°	159.1	158.8	159.4	158.9	158.6	158.4	158.9	158.4	159.4	159.4	159.7
50°	141.4	141.4	142.2	142.0	142.4	141.7	141.9	141.9	142.0	141.9	142.5
52.5°	127.7	127.4	127.1	126.3	126.6	126.0	126.0	126.1	125.6	125.5	124.7
55°	113.1	113.4	112.9	112.6	112.6	111.9	111.8	110.8	110.2	109.7	109.2
57.5°	99.8	100.2	100.0	99.2	98.2	98.4	98.1	97.1	95.7	94.7	93.9
60°	87.1	87.4	87.1	86.3	86.0	85.3	85.2	83.9	82.8	81.5	80.6
62.5°	75.6	75.6	75.5	74.4	73.6	73.7	72.9	72.0	70.5	68.8	67.4
65°	64.8	64.6	63.9	63.4	62.7	61.9	61.5	60.0	58.9	57.5	55.6
67.5°	54.0	53.5	53.2	52.7	51.3	51.1	50.5	49.2	47.6	46.5	44.9
70°	43.5	43.3	42.7	42.7	41.6	41.1	40.1	39.0	37.6	36.0	34.7
72.5°	34.4	34.1	33.4	32.8	31.8	31.5	30.7	29.6	28.3	26.8	25.2
75°	25.6	25.3	25.2	24.4	23.6	22.8	22.5	21.3	20.1	18.9	17.5
77.5°	18.0	17.7	17.2	16.7	16.2	15.8	15.3	14.3	13.2	12.3	11.0
80°	11.1	10.8	10.5	10.4	9.9	9.7	9.1	8.6	7.6	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°	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8
2.5°	425.6	425.5	425.6	425.6	425.8	425.8	425.8	425.6	425.8	425.6	425.6
5°	423.1	423.6	423.9	424.2	424.4	424.5	424.5	424.7	424.8	424.8	424.7
7.5°	419.1	420.1	421.0	421.7	422.0	422.3	422.8	423.1	423.4	423.2	423.1
10°	413.9	415.4	416.7	418.0	418.6	419.1	419.9	420.5	420.9	421.0	420.5
12.5°	406.4	408.6	410.7	412.7	413.7	414.3	415.9	417.0	417.7	417.7	417.2
15°	397.0	400.2	403.2	405.9	407.5	408.4	410.8	412.4	413.4	413.9	413.1
17.5°	385.7	389.3	393.0	396.5	398.1	399.5	402.9	405.1	407.2	407.5	406.5
20°	371.2	375.8	379.9	384.2	386.0	388.2	392.0	395.7	398.9	400.3	397.6
22.5°	354.9	360.0	363.9	369.1	371.5	373.9	378.8	383.4	389.0	392.0	387.3
25°	338.1	342.4	347.0	352.1	355.4	358.0	363.7	369.6	377.1	381.5	374.8
27.5°	319.9	323.7	329.3	334.9	337.4	340.6	347.5	353.8	361.0	365.0	360.0
30°	301.1	305.9	311.1	316.2	319.9	322.9	328.5	333.9	340.0	343.3	339.6
32.5°	282.5	287.1	291.6	297.1	299.2	301.9	306.8	311.5	316.1	319.1	314.8
35°	262.9	267.0	271.2	275.0	276.0	279.1	283.1	285.8	288.1	290.4	287.6
37.5°	241.6	244.7	246.8	251.0	252.5	253.0	256.2	258.1	260.5	261.0	260.8
40°	219.9	222.8	224.5	227.1	228.3	228.3	230.6	232.3	234.1	234.2	234.1
42.5°	199.7	201.1	202.5	204.1	203.8	205.7	206.7	207.5	208.8	208.8	209.1
45°	179.3	180.4	181.7	182.0	183.3	183.3	184.1	184.4	185.0	184.6	183.9
47.5°	160.3	160.8	161.0	162.4	162.7	161.6	162.6	162.7	162.6	162.6	162.3
50°	142.4	142.7	142.5	142.0	142.2	142.7	142.2	141.6	141.9	141.9	142.2
52.5°	124.8	124.2	123.9	123.9	123.2	123.2	122.5	122.1	122.0	121.3	122.1
55°	108.8	107.8	106.4	106.1	105.6	105.4	104.5	103.7	103.3	103.5	103.3
57.5°	93.3	91.9	90.9	90.6	90.1	89.2	88.1	87.3	87.1	86.8	86.8
60°	79.3	77.7	76.3	74.8	75.0	74.4	73.2	72.8	72.3	71.7	72.1
62.5°	66.6	64.8	63.2	61.8	60.8	60.4	59.6	58.8	58.3	57.8	58.4
65°	54.0	52.5	50.8	49.4	48.9	48.4	47.6	46.3	46.2	46.2	46.5
67.5°	42.7	41.1	39.5	38.5	37.9	37.3	36.9	36.3	35.8	35.5	35.7
70°	32.8	31.2	29.9	29.0	28.5	28.3	27.2	27.1	26.9	26.8	26.6
72.5°	23.9	22.6	21.5	20.9	20.2	19.7	19.4	18.9	18.8	18.8	18.8
75°	16.4	15.4	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	6.8	6.4	6.1	5.6	5.6	5.7
80°	5.4	4.6	4.0	3.5	3.2	3.0	2.5	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°	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8
2.5°	425.5	425.5	425.3	425.3	425.3	425.0	425.0	424.8	424.7	424.5	424.2
5°	424.4	424.2	423.9	423.7	423.6	423.1	422.6	422.3	421.8	421.2	420.9
7.5°	422.8	422.3	421.7	421.3	420.9	419.7	418.9	418.2	417.4	416.2	415.0
10°	420.1	419.1	418.2	417.5	416.7	415.3	413.7	412.4	410.7	409.1	407.3
12.5°	416.2	415.1	413.2	412.3	411.3	409.2	407.2	404.5	402.1	399.8	397.8
15°	411.5	409.4	407.2	405.9	404.5	401.1	397.9	395.1	391.9	389.2	385.8
17.5°	404.5	401.4	398.2	396.8	394.9	391.1	387.3	383.3	379.6	376.3	372.1
20°	393.9	390.6	386.5	384.2	382.6	377.5	373.9	369.4	365.6	361.5	356.8
22.5°	381.7	377.1	372.5	369.3	367.5	362.4	357.5	353.5	349.4	344.6	341.2
25°	367.8	362.1	356.5	353.3	350.6	345.2	340.4	336.3	331.2	327.1	323.7
27.5°	352.2	345.7	339.2	336.0	333.4	327.5	322.5	318.2	313.2	309.6	306.0
30°	333.6	327.7	321.5	318.9	315.9	309.9	304.0	300.2	294.7	290.9	287.1
32.5°	310.3	306.5	301.6	298.1	296.5	290.9	286.0	281.4	276.8	273.7	269.9
35°	284.9	281.5	277.4	275.5	273.4	269.9	265.9	261.9	258.3	255.4	251.9
37.5°	259.1	255.7	253.2	251.1	249.8	246.7	244.3	241.2	238.7	236.0	234.1
40°	232.3	231.4	228.7	227.7	227.4	223.9	221.8	219.4	217.8	216.2	215.1
42.5°	208.6	207.0	204.9	205.1	204.1	202.2	200.8	199.2	198.1	197.3	196.2
45°	185.2	183.9	183.0	183.8	182.2	181.5	180.4	180.3	179.5	178.0	177.5
47.5°	162.9	162.7	162.9	162.4	162.1	161.8	161.9	161.1	160.3	159.9	159.2
50°	142.5	142.7	143.0	143.5	142.4	142.8	142.7	142.5	142.5	142.0	142.4
52.5°	122.8	122.9	123.2	123.7	123.9	123.9	124.4	124.7	125.3	126.1	126.1
55°	104.1	105.3	105.9	106.7	106.2	107.2	107.6	109.1	109.6	109.6	110.2
57.5°	87.6	88.7	89.2	90.1	90.4	91.2	92.5	93.3	94.4	95.4	96.3
60°	72.5	72.9	74.2	75.6	75.3	77.2	78.2	79.5	80.9	81.5	82.8
62.5°	58.9	59.6	60.5	61.0	62.1	63.1	65.3	66.6	67.8	69.4	70.7
65°	46.8	47.5	48.4	49.4	49.8	51.3	52.4	54.6	55.7	57.5	58.9
67.5°	35.8	36.8	37.6	38.2	38.5	40.0	41.7	42.7	44.7	46.5	47.6
70°	26.8	27.5	28.5	28.3	29.0	30.1	31.4	32.8	34.4	36.0	37.3
72.5°	18.6	19.4	20.1	20.2	20.9	21.7	22.6	23.7	25.0	26.6	28.3
75°	11.8	11.9	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	11.9	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°	425.8	425.8	425.8	425.8	425.8	425.8	425.8	425.8
2.5°	424.0	424.0	423.9	423.7	423.7	423.7	423.6	423.6
5°	420.2	419.7	419.6	419.3	419.1	418.9	418.5	418.5
7.5°	414.0	413.4	412.9	412.4	411.8	411.3	411.3	410.7
10°	405.7	404.5	403.8	403.2	402.4	401.4	401.1	400.6
12.5°	395.7	393.2	392.5	391.4	390.1	389.5	388.4	388.4
15°	383.3	380.6	379.1	378.5	376.9	375.8	375.3	374.0
17.5°	368.8	366.7	364.5	363.5	361.8	360.3	359.7	359.6
20°	354.1	350.8	349.4	347.9	345.9	344.6	343.6	342.4
22.5°	337.3	334.2	332.2	331.2	329.5	327.2	325.6	325.6
25°	319.4	316.7	315.6	313.5	311.5	310.7	308.8	308.4
27.5°	302.4	299.7	297.5	296.3	293.9	292.8	291.2	290.6
30°	284.7	281.5	279.9	279.8	276.9	275.8	274.5	273.9
32.5°	267.0	264.3	262.7	261.8	260.5	258.6	257.5	256.8
35°	249.5	247.8	246.3	245.2	243.2	242.2	241.2	240.4
37.5°	231.2	229.6	229.0	228.0	227.1	225.3	225.0	224.4
40°	213.5	211.5	211.5	210.8	209.9	209.7	209.2	209.2
42.5°	195.1	194.1	193.9	194.1	193.5	193.2	192.7	193.8
45°	176.8	177.2	176.4	176.6	176.3	176.9	176.9	177.5
47.5°	159.9	159.2	159.6	159.9	160.3	160.3	160.2	160.0
50°	141.9	142.5	143.2	142.4	142.7	142.8	142.0	142.2
52.5°	126.4	126.6	127.1	126.6	127.1	126.9	127.2	126.6
55°	111.5	111.5	112.1	112.3	112.4	112.9	113.1	113.5
57.5°	97.0	97.8	98.6	98.4	99.0	99.7	99.2	99.7
60°	84.4	85.0	85.8	86.1	86.6	86.9	86.9	87.3
62.5°	71.7	72.9	73.6	74.2	74.2	74.8	75.5	75.6
65°	60.2	61.6	62.1	62.6	62.9	63.5	64.3	64.2
67.5°	49.4	50.3	51.0	51.3	52.2	52.5	53.2	53.8
70°	38.7	40.0	40.4	41.1	41.9	42.5	43.2	43.5
72.5°	29.6	30.6	30.9	31.5	32.3	33.0	33.3	33.8
75°	20.7	22.3	22.5	22.9	23.6	24.4	24.8	24.7
77.5°	13.7	14.8	15.0	15.6	16.2	16.9	17.0	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)