

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: P879367

Luminaire Tested: **LD4C10D010 EU4109050 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: P879367  
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 EU4109050 4LBLDWWLI  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

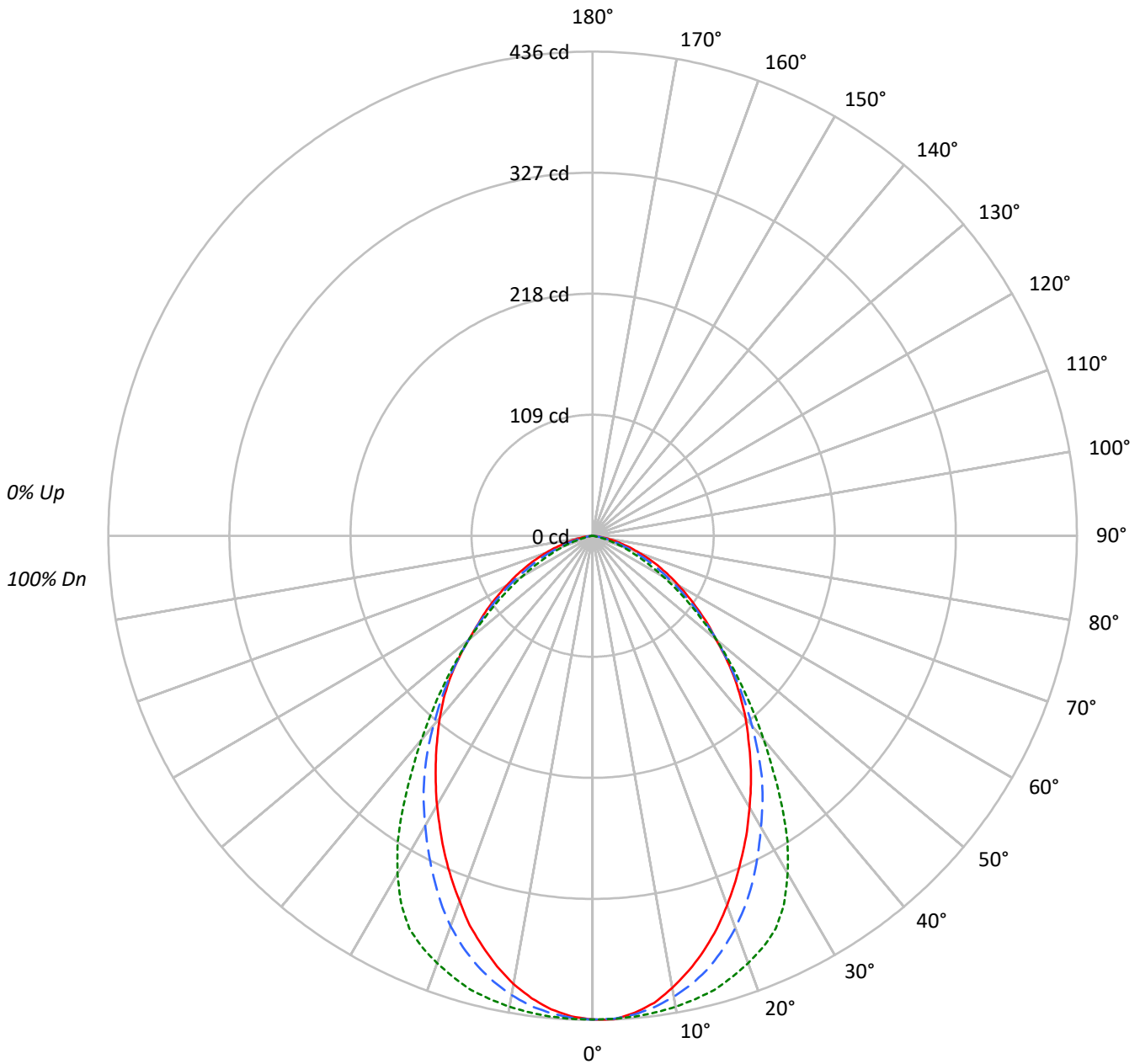
Lumens per Lamp: N/A  
Luminaire Lumens: 800.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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°	53515	53515	53515
5°	53201	53596	52794
10°	51571	53729	51134
15°	49209	53851	48675
20°	46294	53537	45784
25°	43120	52907	42767
30°	40075	49821	39749
35°	37164	44558	36894
40°	34352	38426	34336
45°	31308	32802	31551
50°	27656	27732	27809
55°	24782	22683	24867
60°	21892	18010	21942
65°	19273	13721	19070
70°	15984	9842	15984
75°	12436	5649	11962
80°	8065	1415	7712
85°	2960	423	2255



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.9	5.1
10°-20°	113.1	14.1
20°-30°	158.1	19.8
30°-40°	166.8	20.9
40°-50°	141.9	17.7
50°-60°	100.1	12.5
60°-70°	56.8	7.1
70°-80°	20.3	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°	312.2	39.0
0°-40°	479.0	59.9
0°-60°	721.0	90.1
0°-90°	800.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	800.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	436	436	436	436	436	
5°	431	433	435	432	428	41
15°	387	403	423	401	383	108
25°	318	342	390	339	316	146
35°	248	266	297	264	246	155
45°	180	183	189	184	182	139
55°	116	112	106	112	116	104
65°	66	57	47	57	66	66
75°	26	18	12	18	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°	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6
2.5°	435.9	435.1	435.1	435.1	435.1	435.1	435.1	435.1	435.1	435.3	435.3
5°	431.4	431.0	430.9	430.9	430.9	430.9	431.0	431.7	432.0	432.5	432.8
7.5°	424.2	423.5	423.9	423.9	424.2	424.5	425.0	425.7	426.6	427.3	428.1
10°	413.4	412.8	413.6	413.9	414.9	415.4	416.2	417.2	419.1	420.1	421.4
12.5°	400.9	400.6	400.9	402.2	403.2	403.8	404.8	406.9	408.9	411.0	413.3
15°	386.9	386.1	386.6	388.2	389.8	391.0	391.8	394.5	397.2	400.4	403.2
17.5°	371.2	370.1	371.4	372.7	374.8	375.8	377.0	380.0	383.6	387.2	390.3
20°	354.1	353.8	354.6	356.4	358.5	359.8	360.8	364.2	367.3	372.2	375.8
22.5°	336.4	336.7	337.4	339.3	340.8	342.6	344.0	347.1	350.7	355.3	359.8
25°	318.1	318.6	319.8	321.1	323.5	324.5	326.3	329.5	332.6	336.9	341.9
27.5°	300.6	300.7	302.0	302.7	304.9	307.1	307.9	311.3	314.9	318.1	322.5
30°	282.5	283.0	283.8	285.6	287.8	288.7	289.6	292.7	295.5	299.6	303.0
32.5°	265.2	264.9	265.9	266.8	269.4	270.9	271.4	275.0	277.4	281.5	284.7
35°	247.8	247.0	248.4	249.4	251.7	253.0	253.6	256.4	258.7	262.1	265.7
37.5°	230.3	231.0	231.6	232.5	233.6	233.9	235.9	236.5	239.5	242.1	244.0
40°	214.2	213.9	213.6	214.4	215.8	216.5	216.7	218.4	219.1	221.7	223.2
42.5°	196.9	197.1	196.9	197.1	197.9	197.9	198.4	199.6	200.0	200.9	202.6
45°	180.2	180.2	179.7	179.8	180.0	179.8	180.0	180.5	181.5	181.5	182.8
47.5°	162.7	162.4	163.1	162.6	162.2	162.1	162.6	162.1	163.1	163.1	163.4
50°	144.7	144.7	145.5	145.3	145.6	145.0	145.1	145.1	145.3	145.1	145.8
52.5°	130.6	130.3	130.0	129.2	129.5	128.9	128.9	129.0	128.5	128.4	127.6
55°	115.7	116.0	115.5	115.2	115.2	114.5	114.4	113.4	112.7	112.2	111.7
57.5°	102.1	102.5	102.3	101.5	100.5	100.7	100.3	99.4	97.9	96.9	96.1
60°	89.1	89.4	89.1	88.3	88.0	87.3	87.2	85.8	84.7	83.4	82.4
62.5°	77.4	77.4	77.2	76.1	75.3	75.4	74.6	73.6	72.2	70.4	68.9
65°	66.3	66.1	65.3	64.8	64.2	63.4	62.9	61.4	60.3	58.8	56.9
67.5°	55.2	54.7	54.4	53.9	52.5	52.3	51.6	50.3	48.7	47.6	45.9
70°	44.5	44.3	43.7	43.7	42.5	42.0	41.1	39.9	38.4	36.8	35.5
72.5°	35.2	34.9	34.2	33.6	32.6	32.3	31.4	30.3	29.0	27.4	25.7
75°	26.2	25.9	25.7	24.9	24.1	23.3	23.0	21.8	20.5	19.4	17.9
77.5°	18.4	18.1	17.6	17.1	16.6	16.1	15.6	14.7	13.5	12.5	11.2
80°	11.4	11.1	10.8	10.6	10.1	9.9	9.3	8.8	7.8	7.2	6.4
82.5°	5.9	5.9	5.5	5.4	5.0	4.9	4.7	4.2	3.7	3.3	2.8
85°	2.1	2.1	2.0	1.8	1.8	1.6	1.6	1.5	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°	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6
2.5°	435.4	435.3	435.4	435.4	435.6	435.6	435.6	435.4	435.6	435.4	435.4
5°	432.8	433.3	433.6	434.0	434.1	434.3	434.3	434.5	434.6	434.6	434.5
7.5°	428.8	429.7	430.7	431.4	431.7	432.0	432.5	432.8	433.2	433.0	432.8
10°	423.4	425.0	426.3	427.6	428.3	428.8	429.6	430.2	430.5	430.7	430.2
12.5°	415.7	418.0	420.1	422.2	423.2	423.9	425.5	426.6	427.3	427.3	426.8
15°	406.1	409.4	412.5	415.2	416.9	417.8	420.3	421.9	422.9	423.4	422.6
17.5°	394.5	398.3	402.0	405.6	407.3	408.7	412.1	414.4	416.5	416.9	415.9
20°	379.7	384.4	388.7	393.1	394.9	397.2	401.1	404.8	408.1	409.5	406.8
22.5°	363.1	368.3	372.2	377.6	380.0	382.5	387.5	392.3	398.0	401.1	396.2
25°	345.8	350.2	355.0	360.2	363.6	366.2	372.1	378.1	385.7	390.3	383.5
27.5°	327.3	331.2	336.9	342.6	345.2	348.4	355.4	362.0	369.3	373.4	368.3
30°	308.0	312.9	318.3	323.5	327.3	330.4	336.1	341.6	347.8	351.2	347.5
32.5°	289.0	293.7	298.3	304.0	306.1	308.9	313.9	318.6	323.4	326.5	322.1
35°	268.9	273.2	277.4	281.3	282.3	285.6	289.6	292.4	294.7	297.1	294.2
37.5°	247.1	250.4	252.5	256.7	258.4	258.8	262.1	264.1	266.5	267.0	266.8
40°	225.0	227.9	229.7	232.3	233.6	233.6	235.9	237.7	239.5	239.6	239.5
42.5°	204.3	205.7	207.2	208.8	208.5	210.5	211.4	212.3	213.6	213.6	213.9
45°	183.4	184.6	185.9	186.2	187.5	187.5	188.3	188.6	189.3	188.8	188.1
47.5°	164.0	164.5	164.7	166.2	166.5	165.3	166.3	166.5	166.3	166.3	166.0
50°	145.6	146.0	145.8	145.3	145.5	146.0	145.5	144.8	145.1	145.1	145.5
52.5°	127.7	127.1	126.7	126.7	126.1	126.1	125.3	124.9	124.8	124.1	124.9
55°	111.3	110.3	108.8	108.5	108.0	107.8	106.9	106.0	105.7	105.9	105.7
57.5°	95.5	94.0	93.0	92.7	92.2	91.2	90.1	89.3	89.1	88.8	88.8
60°	81.1	79.5	78.0	76.6	76.7	76.1	74.9	74.4	74.0	73.3	73.8
62.5°	68.1	66.3	64.7	63.2	62.2	61.7	60.9	60.1	59.6	59.1	59.8
65°	55.2	53.8	52.0	50.5	50.0	49.5	48.7	47.4	47.2	47.2	47.6
67.5°	43.7	42.0	40.4	39.4	38.8	38.1	37.8	37.1	36.7	36.3	36.5
70°	33.6	31.9	30.6	29.6	29.2	29.0	27.9	27.7	27.5	27.4	27.2
72.5°	24.4	23.1	22.0	21.3	20.7	20.2	19.9	19.4	19.2	19.2	19.2
75°	16.8	15.8	14.5	13.7	13.4	12.9	12.4	12.1	11.7	11.9	11.9
77.5°	10.1	9.1	8.3	7.7	7.5	7.0	6.5	6.2	5.7	5.7	5.9
80°	5.5	4.7	4.1	3.6	3.3	3.1	2.6	2.4	2.1	2.0	2.0
82.5°	2.4	2.0	1.6	1.5	1.3	1.1	1.0	0.8	0.8	0.7	0.8
85°	0.8	0.7	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°	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6
2.5°	435.3	435.3	435.1	435.1	435.1	434.8	434.8	434.6	434.5	434.3	434.0
5°	434.1	434.0	433.6	433.5	433.3	432.8	432.3	432.0	431.5	430.9	430.5
7.5°	432.5	432.0	431.4	431.0	430.5	429.4	428.6	427.8	427.0	425.8	424.5
10°	429.7	428.8	427.8	427.1	426.3	424.8	423.2	421.9	420.1	418.5	416.7
12.5°	425.8	424.7	422.7	421.7	420.8	418.7	416.5	413.8	411.3	409.0	406.9
15°	420.9	418.8	416.5	415.2	413.8	410.3	407.1	404.2	400.9	398.1	394.7
17.5°	413.8	410.7	407.4	405.9	404.0	400.1	396.2	392.1	388.4	384.9	380.7
20°	403.0	399.6	395.4	393.1	391.4	386.2	382.5	377.9	374.0	369.8	365.1
22.5°	390.5	385.7	381.0	377.8	376.0	370.8	365.7	361.6	357.4	352.5	349.1
25°	376.3	370.4	364.7	361.5	358.7	353.2	348.3	344.0	338.8	334.6	331.2
27.5°	360.3	353.7	347.0	343.7	341.1	335.1	329.9	325.5	320.4	316.7	313.1
30°	341.3	335.2	328.9	326.3	323.2	317.0	311.0	307.1	301.5	297.6	293.7
32.5°	317.5	313.6	308.5	304.9	303.3	297.6	292.6	287.8	283.1	280.0	276.1
35°	291.4	288.0	283.8	281.8	279.7	276.1	272.0	268.0	264.2	261.3	257.7
37.5°	265.0	261.6	259.0	256.9	255.6	252.3	249.9	246.8	244.2	241.4	239.5
40°	237.7	236.7	233.9	232.9	232.6	229.0	226.9	224.5	222.8	221.2	220.1
42.5°	213.4	211.8	209.7	209.8	208.8	206.9	205.4	203.8	202.6	201.8	200.7
45°	189.5	188.1	187.2	188.0	186.4	185.7	184.6	184.4	183.6	182.1	181.6
47.5°	166.6	166.5	166.6	166.2	165.8	165.5	165.7	164.9	164.0	163.6	162.9
50°	145.8	146.0	146.3	146.8	145.6	146.1	146.0	145.8	145.8	145.3	145.6
52.5°	125.6	125.8	126.1	126.6	126.7	126.7	127.2	127.6	128.2	129.0	129.0
55°	106.5	107.7	108.3	109.1	108.7	109.6	110.1	111.6	112.1	112.1	112.7
57.5°	89.6	90.7	91.2	92.2	92.5	93.3	94.6	95.5	96.6	97.6	98.6
60°	74.1	74.6	75.9	77.4	77.1	79.0	80.0	81.3	82.8	83.4	84.7
62.5°	60.3	60.9	61.9	62.4	63.5	64.5	66.8	68.1	69.4	71.0	72.3
65°	47.9	48.5	49.5	50.5	51.0	52.5	53.6	55.9	57.0	58.8	60.3
67.5°	36.7	37.6	38.4	39.1	39.4	40.9	42.7	43.7	45.8	47.6	48.7
70°	27.4	28.2	29.2	29.0	29.6	30.8	32.1	33.6	35.2	36.8	38.1
72.5°	19.1	19.9	20.5	20.7	21.3	22.2	23.1	24.3	25.6	27.2	29.0
75°	12.1	12.2	12.9	13.2	13.5	14.5	15.3	16.5	17.6	18.9	20.0
77.5°	6.0	6.5	6.8	7.2	7.3	8.1	9.0	9.9	10.9	12.2	13.4
80°	2.3	2.4	2.9	3.1	3.4	3.9	4.6	5.0	5.9	6.8	7.5
82.5°	0.8	1.0	1.1	1.1	1.3	1.6	1.8	2.3	2.8	3.1	3.4
85°	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.7	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°	435.6	435.6	435.6	435.6	435.6	435.6	435.6	435.6
2.5°	433.8	433.8	433.6	433.5	433.5	433.5	433.3	433.3
5°	429.9	429.4	429.2	428.9	428.8	428.6	428.1	428.1
7.5°	423.5	422.9	422.4	421.9	421.3	420.8	420.8	420.1
10°	415.1	413.8	413.1	412.5	411.6	410.7	410.3	409.9
12.5°	404.8	402.2	401.5	400.4	399.1	398.5	397.3	397.3
15°	392.1	389.3	387.9	387.2	385.6	384.4	384.0	382.7
17.5°	377.3	375.2	372.9	371.9	370.1	368.6	368.0	367.8
20°	362.3	358.9	357.4	355.9	353.8	352.5	351.5	350.2
22.5°	345.0	341.9	339.8	338.8	337.0	334.8	333.1	333.1
25°	326.8	324.0	322.9	320.8	318.6	317.8	315.9	315.5
27.5°	309.3	306.6	304.3	303.2	300.7	299.6	297.9	297.3
30°	291.3	288.0	286.4	286.2	283.3	282.1	280.8	280.2
32.5°	273.2	270.4	268.8	267.8	266.5	264.5	263.4	262.8
35°	255.3	253.5	252.0	250.9	248.7	247.8	246.8	246.0
37.5°	236.5	234.9	234.3	233.3	232.3	230.5	230.2	229.5
40°	218.4	216.3	216.3	215.7	214.7	214.5	214.1	214.1
42.5°	199.6	198.6	198.4	198.6	197.9	197.6	197.1	198.2
45°	180.8	181.3	180.5	180.7	180.3	181.0	181.0	181.6
47.5°	163.6	162.9	163.2	163.6	164.0	164.0	163.9	163.7
50°	145.1	145.8	146.4	145.6	146.0	146.1	145.3	145.5
52.5°	129.3	129.5	130.0	129.5	130.0	129.8	130.2	129.5
55°	114.0	114.0	114.7	114.8	115.0	115.5	115.7	116.1
57.5°	99.2	100.0	100.8	100.7	101.3	102.0	101.5	102.0
60°	86.3	87.0	87.8	88.1	88.6	88.9	88.9	89.3
62.5°	73.3	74.6	75.3	75.9	75.9	76.6	77.2	77.4
65°	61.6	63.0	63.5	64.0	64.3	65.0	65.8	65.6
67.5°	50.5	51.5	52.1	52.5	53.4	53.8	54.4	55.1
70°	39.6	40.9	41.4	42.0	42.8	43.5	44.1	44.5
72.5°	30.3	31.3	31.6	32.3	33.1	33.7	34.0	34.5
75°	21.2	22.8	23.0	23.5	24.1	24.9	25.4	25.2
77.5°	14.0	15.1	15.3	16.0	16.6	17.3	17.4	17.6
80°	8.3	9.0	9.1	9.4	9.9	10.3	10.6	10.9
82.5°	3.9	4.2	4.6	4.6	4.9	5.2	5.2	5.4
85°	1.3	1.3	1.5	1.5	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)