

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: P880542

Luminaire Tested: **LD4C10D010 EU4109027 4LBDWNH**

Issue Date: 10/4/2024

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: P880542  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/4/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C10D010 EU4109027 4LBDWNH  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBDWN TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

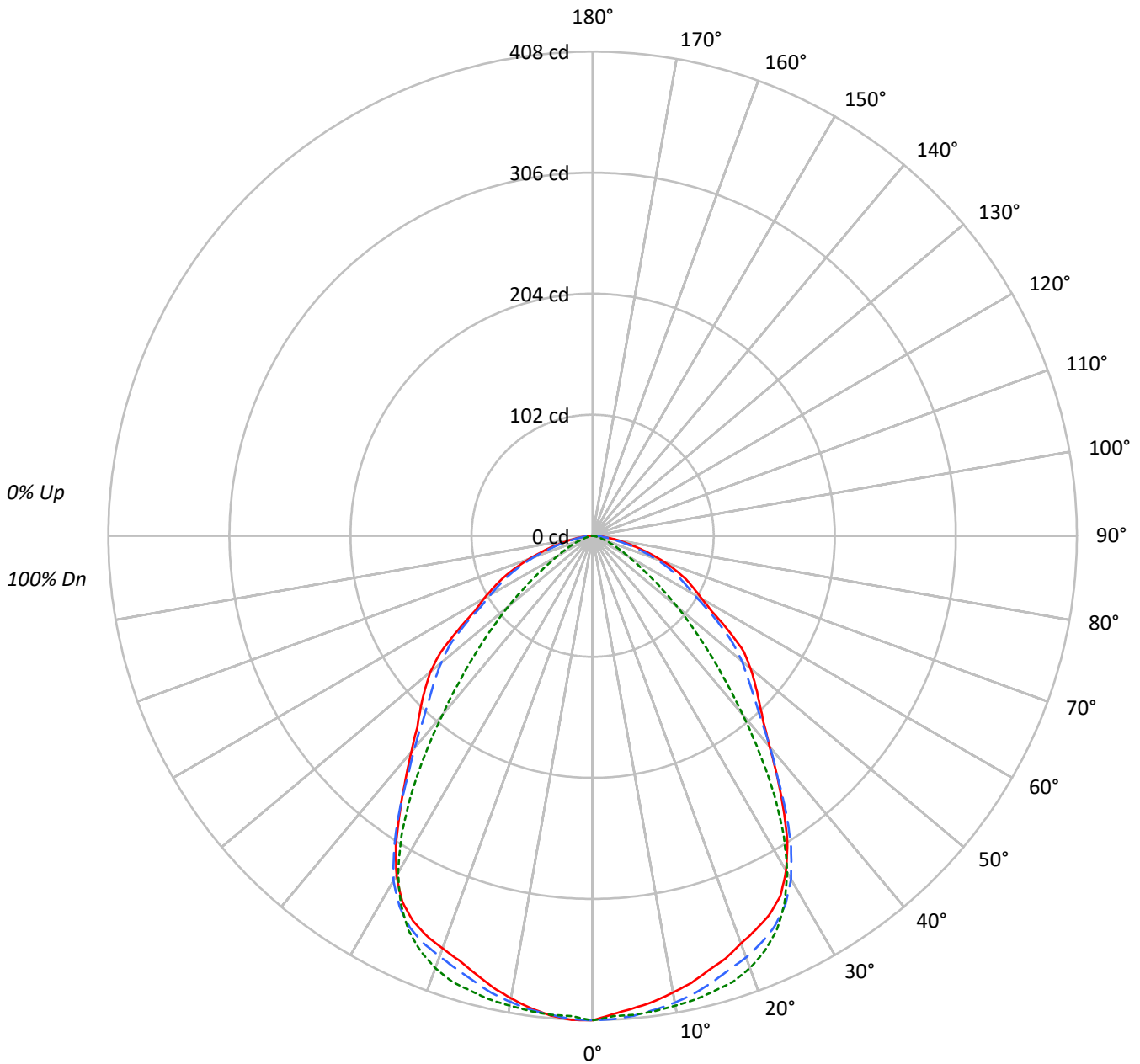
Lumens per Lamp: N/A  
Luminaire Lumens: 831.0 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.75  
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									
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	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66																			
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58																			
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51																			
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41																			
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37																			
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

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

	0°	90°	180°
0°	50161	50161	50161
5°	49267	49970	50044
10°	48739	50161	49376
15°	48179	50493	48573
20°	47798	50674	48373
25°	47769	49735	48542
30°	46246	46516	46870
35°	42023	40044	42398
40°	37175	31529	38073
45°	34488	24011	35582
50°	33141	17775	34097
55°	30008	12252	29601
60°	26094	8329	25922
65°	25203	6017	23924
70°	22773	4059	20295
75°	18797	2658	16091
80°	15140	1769	12027
85°	12404	846	7894



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.5	4.6
10°-20°	110.2	13.3
20°-30°	166.5	20.0
30°-40°	174.3	21.0
40°-50°	141.1	17.0
50°-60°	102.6	12.4
60°-70°	63.3	7.6
70°-80°	28.6	3.4
80°-90°	5.8	0.7
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°	315.3	37.9
0°-40°	489.5	58.9
0°-60°	733.3	88.2
0°-90°	831.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	831.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	408	408	408	408	408	
5°	400	406	405	405	406	38
15°	379	390	397	388	382	107
25°	352	363	367	364	358	161
35°	280	284	267	284	283	175
45°	198	192	138	195	205	154
55°	140	131	57	133	138	125
65°	87	78	21	77	82	85
75°	40	34	6	30	34	43
85°	9	7	1	5	6	10
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°	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3
2.5°	403.3	403.3	407.1	411.4	407.7	403.9	406.4	405.2	409.6	409.6	407.7
5°	399.5	400.8	403.9	407.7	404.6	400.8	403.9	402.7	407.1	407.1	405.8
7.5°	395.8	396.4	400.2	404.6	401.4	397.7	400.2	399.5	403.3	403.9	402.7
10°	390.7	391.4	395.1	399.5	396.4	393.2	395.8	395.1	400.2	400.2	399.5
12.5°	385.7	386.3	390.1	393.9	390.7	387.6	390.1	390.1	395.1	395.8	395.1
15°	378.8	380.0	383.2	386.9	385.1	381.3	383.8	383.8	388.2	389.5	389.5
17.5°	373.2	373.8	376.9	380.7	378.2	375.0	377.5	377.5	381.9	383.2	383.2
20°	365.6	366.9	370.0	373.8	371.9	369.4	371.3	371.3	376.3	377.5	378.2
22.5°	359.3	360.6	363.1	368.1	365.0	363.1	365.6	365.0	370.6	371.3	371.3
25°	352.4	353.7	356.8	359.9	358.1	356.2	358.1	358.1	362.5	363.1	363.1
27.5°	342.4	343.0	346.1	349.3	347.4	344.9	347.4	346.8	351.1	351.8	351.1
30°	326.0	327.3	328.5	332.9	331.0	329.2	331.7	330.4	334.8	334.8	334.2
32.5°	305.3	305.3	307.8	311.0	308.4	307.2	309.1	309.7	312.9	312.9	311.0
35°	280.2	281.4	283.3	285.2	283.3	282.1	284.0	283.3	287.1	285.8	284.0
37.5°	255.1	255.7	257.6	260.1	257.6	255.7	256.3	255.7	258.8	258.8	255.7
40°	231.8	233.1	234.3	236.8	234.3	233.1	233.7	231.8	235.6	234.3	232.4
42.5°	212.9	213.6	215.5	216.7	214.2	213.6	214.2	212.9	214.8	213.6	209.8
45°	198.5	198.5	199.2	201.0	198.5	197.9	197.9	196.6	198.5	196.0	192.2
47.5°	185.9	186.6	187.2	188.5	186.6	184.7	185.3	182.8	184.0	182.2	177.1
50°	173.4	174.6	175.3	176.5	174.6	173.4	174.0	171.5	171.5	168.4	164.0
52.5°	160.8	161.4	160.8	162.1	160.8	158.9	159.6	157.0	157.0	153.3	148.9
55°	140.1	140.7	141.4	142.6	141.4	139.5	140.7	138.8	138.8	136.3	131.3
57.5°	119.3	120.0	120.6	121.2	121.2	120.0	120.6	119.3	118.7	116.8	113.1
60°	106.2	106.2	106.2	106.8	106.2	105.5	105.5	104.3	104.3	101.8	98.0
62.5°	96.1	96.7	96.7	97.4	96.7	96.1	95.5	94.2	93.6	91.1	87.9
65°	86.7	86.7	86.1	87.3	86.7	86.1	86.1	84.8	83.6	81.1	77.9
67.5°	75.4	76.0	75.4	76.0	76.0	75.4	74.8	73.5	72.9	71.0	67.2
70°	63.4	63.4	63.4	64.1	63.4	63.4	64.1	62.2	61.6	59.0	55.9
72.5°	51.5	52.2	52.2	51.5	52.2	50.9	50.9	50.9	50.3	47.8	44.6
75°	39.6	40.2	40.2	40.8	40.2	39.6	39.6	38.9	38.3	36.4	33.9
77.5°	29.5	29.5	30.1	30.1	30.1	29.5	29.5	28.3	28.3	27.0	24.5
80°	21.4	21.4	20.7	21.4	21.4	20.7	20.7	20.1	20.1	18.9	17.0
82.5°	13.8	14.4	14.4	14.4	14.4	13.8	13.8	13.8	13.2	12.6	11.3
85°	8.8	8.8	8.8	8.8	9.4	8.8	9.4	8.8	8.8	7.5	6.9
87.5°	3.8	3.8	3.8	4.4	4.4	3.8	3.8	3.8	3.8	3.8	3.1
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°	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3
2.5°	407.7	408.3	406.4	408.9	407.1	407.7	408.3	407.7	405.2	405.2	412.1
5°	405.2	406.4	404.6	407.7	406.4	406.4	407.7	407.1	404.6	405.2	411.4
7.5°	402.7	404.6	403.3	406.4	404.6	404.6	405.8	405.8	403.3	403.9	409.6
10°	398.9	401.4	400.8	403.9	402.1	402.1	403.9	403.9	401.4	402.1	407.7
12.5°	395.8	398.3	397.7	400.8	399.5	400.2	400.8	402.1	398.9	400.2	405.2
15°	390.7	393.2	393.2	396.4	395.1	396.4	397.7	399.5	397.0	397.0	402.1
17.5°	385.1	388.2	388.2	390.7	390.7	391.4	393.9	395.8	393.2	393.9	398.3
20°	378.8	382.6	382.6	385.7	385.1	386.3	388.2	390.1	387.6	387.6	392.6
22.5°	372.5	375.7	376.3	378.2	378.2	378.8	380.7	381.9	378.8	378.8	383.8
25°	363.7	366.9	367.5	368.8	367.5	367.5	368.8	370.0	366.9	366.9	371.3
27.5°	351.8	354.9	354.9	354.3	353.0	353.7	353.0	353.7	350.5	349.9	354.3
30°	334.2	336.1	336.1	335.5	333.6	333.6	331.7	332.3	327.9	327.9	331.7
32.5°	310.3	312.2	311.0	309.7	307.2	305.9	304.7	304.0	299.6	299.6	304.0
35°	282.1	283.3	281.4	278.9	275.8	273.9	272.0	269.5	266.3	267.0	269.5
37.5°	253.2	253.2	250.7	245.6	243.1	240.0	236.8	236.8	231.8	231.2	233.1
40°	228.7	226.2	221.8	214.8	210.4	207.3	202.9	200.4	196.6	196.6	199.8
42.5°	206.7	201.7	196.0	186.6	182.2	178.4	172.8	170.3	165.9	165.2	167.1
45°	187.2	182.2	174.0	164.0	158.3	153.9	145.7	142.6	138.8	138.2	139.5
47.5°	171.5	165.9	155.8	142.6	137.0	131.3	123.1	118.7	115.6	113.7	115.6
50°	157.7	150.1	139.5	125.6	118.1	113.1	103.0	98.6	94.2	93.0	93.6
52.5°	142.6	135.1	123.7	109.3	102.4	94.8	85.4	79.2	75.4	73.5	75.4
55°	126.3	118.7	107.4	93.0	85.4	78.5	68.5	63.4	59.0	57.2	59.0
57.5°	108.7	101.8	91.7	77.3	70.4	64.1	54.7	49.6	45.2	44.0	45.2
60°	93.6	87.9	77.9	64.1	58.4	51.5	43.3	38.3	34.5	33.9	34.5
62.5°	83.6	77.3	67.8	54.7	49.0	43.3	35.8	30.8	27.6	27.0	27.6
65°	73.5	66.6	57.8	46.5	40.8	36.4	28.9	24.5	21.4	20.7	21.4
67.5°	62.2	55.9	48.4	38.3	33.9	29.5	23.3	18.9	16.3	15.7	16.3
70°	51.5	45.9	38.3	30.8	26.4	23.3	17.6	14.4	11.9	11.3	11.9
72.5°	40.8	35.8	29.5	23.3	20.7	17.6	13.8	10.7	8.8	8.2	8.8
75°	31.4	27.6	22.6	17.0	15.1	13.2	9.4	7.5	6.3	5.6	6.3
77.5°	22.0	19.5	15.7	12.6	10.7	9.4	6.9	5.0	4.4	3.8	4.4
80°	15.1	13.2	10.7	8.2	6.9	5.6	4.4	3.1	2.5	2.5	2.5
82.5°	10.0	8.2	6.3	5.0	4.4	3.8	2.5	1.9	1.9	1.3	1.3
85°	5.6	5.0	3.8	3.1	2.5	1.9	1.3	1.3	0.6	0.6	0.6
87.5°	2.5	1.9	1.3	1.3	0.6	0.6	0.6	0.6	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°	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3
2.5°	410.2	408.3	410.8	408.3	407.1	408.3	407.1	410.8	407.7	405.2	407.7
5°	409.6	407.1	409.6	407.7	405.8	406.4	405.2	408.9	405.2	403.3	404.6
7.5°	408.3	406.4	407.7	405.8	403.9	404.6	403.3	406.4	402.7	400.8	402.1
10°	406.4	404.6	405.2	403.9	402.1	402.1	400.8	403.3	398.9	396.4	397.7
12.5°	403.9	401.4	402.7	400.8	398.3	398.3	397.0	398.9	394.5	392.0	392.6
15°	400.8	398.3	398.3	396.4	393.9	393.9	391.4	393.2	388.2	385.7	385.7
17.5°	397.0	393.9	393.9	392.0	388.8	388.2	386.3	388.2	382.6	380.0	380.0
20°	391.4	388.8	388.2	386.9	383.8	383.2	380.7	381.3	376.9	375.0	374.4
22.5°	383.8	381.3	381.9	380.0	377.5	376.9	374.4	376.3	371.9	370.0	370.6
25°	370.6	369.4	370.6	370.0	368.1	368.1	366.9	368.1	364.3	363.1	363.7
27.5°	355.5	354.9	355.5	355.5	354.3	354.3	354.3	356.2	352.4	351.8	351.8
30°	333.6	333.6	334.2	334.8	334.8	336.1	335.5	338.0	335.5	334.2	335.5
32.5°	304.7	307.2	309.1	309.1	309.1	310.3	311.6	313.5	311.0	311.6	311.6
35°	272.0	273.9	275.1	278.3	276.4	280.8	282.1	284.6	284.0	285.2	284.6
37.5°	235.6	238.1	240.6	245.0	244.4	249.4	251.9	256.9	255.7	258.2	259.4
40°	201.7	205.4	209.2	212.3	214.8	219.9	224.9	231.2	233.1	234.9	235.6
42.5°	169.0	172.8	179.0	183.4	187.2	195.4	202.3	209.8	211.7	215.5	216.7
45°	142.6	145.7	153.3	158.9	162.1	174.0	182.2	191.6	194.7	199.2	201.0
47.5°	118.1	123.7	131.3	138.2	142.6	155.2	165.9	175.9	180.3	185.3	187.8
50°	96.7	103.0	113.1	119.3	125.6	139.5	151.4	162.1	166.5	172.1	174.6
52.5°	79.2	86.1	95.5	102.4	109.3	123.7	136.3	146.4	152.0	155.8	159.6
55°	62.2	69.7	79.2	86.7	92.3	108.1	118.7	128.8	132.6	135.7	137.6
57.5°	48.4	54.0	63.4	69.7	76.6	90.4	101.1	108.7	111.8	115.6	116.8
60°	37.7	43.3	52.2	58.4	64.7	77.9	88.6	96.1	99.2	102.4	104.3
62.5°	30.1	35.8	44.0	49.6	55.3	67.2	76.6	84.2	87.9	91.1	93.0
65°	23.9	28.9	35.8	41.5	45.9	56.5	65.9	72.9	76.6	79.8	81.7
67.5°	18.9	23.3	29.5	33.3	37.7	46.5	54.7	60.9	64.1	67.8	69.7
70°	14.4	17.6	23.3	26.4	29.5	37.0	43.3	49.6	52.8	55.3	56.5
72.5°	10.7	13.2	17.6	20.1	22.0	28.3	33.3	37.7	40.2	42.7	44.0
75°	7.5	9.4	12.6	14.4	15.7	20.1	24.5	27.6	29.5	31.4	33.3
77.5°	5.0	6.3	8.2	9.4	10.7	13.8	16.3	18.9	20.7	22.6	23.3
80°	3.1	4.4	5.6	6.3	6.9	8.8	11.3	12.6	13.8	15.1	15.7
82.5°	1.9	2.5	3.1	3.8	4.4	5.6	6.9	8.2	8.8	10.0	10.7
85°	0.6	1.3	1.3	1.9	1.9	3.1	3.8	4.4	5.0	5.6	6.3
87.5°	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.3	1.3	1.3
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°	408.3	408.3	408.3	408.3	408.3	408.3	408.3	408.3
2.5°	410.2	408.3	407.1	406.4	410.8	405.2	407.7	408.3
5°	407.7	405.8	404.6	403.9	407.7	402.7	404.6	405.8
7.5°	403.9	402.7	400.8	400.2	403.9	398.3	400.8	401.4
10°	399.5	397.7	396.4	395.8	398.9	393.2	395.8	395.8
12.5°	393.9	392.6	390.1	390.1	392.6	387.6	389.5	389.5
15°	386.3	385.1	382.6	382.6	385.1	380.0	381.9	381.9
17.5°	380.0	378.8	376.9	376.3	378.8	373.8	375.7	375.0
20°	375.0	373.8	371.3	371.3	373.2	368.1	370.0	370.0
22.5°	370.6	370.0	367.5	367.5	370.0	365.0	366.2	365.0
25°	363.7	363.1	360.6	361.2	362.5	357.4	359.3	358.1
27.5°	352.4	352.4	349.9	349.3	351.1	346.8	348.0	347.4
30°	334.8	335.5	332.3	332.3	332.9	329.2	331.0	330.4
32.5°	311.0	311.6	309.1	308.4	310.3	307.2	308.4	308.4
35°	284.6	285.2	283.3	283.3	285.2	283.3	283.3	282.7
37.5°	258.2	259.4	258.2	258.8	260.1	258.2	259.4	258.8
40°	236.8	238.1	236.2	237.4	238.7	236.8	238.7	237.4
42.5°	217.4	219.2	218.0	219.2	220.5	219.2	220.5	218.6
45°	202.9	204.2	203.5	204.2	205.4	204.8	205.4	204.8
47.5°	189.1	191.6	190.3	191.6	193.5	192.2	193.5	191.6
50°	176.5	178.4	177.8	179.0	179.6	179.0	180.3	178.4
52.5°	160.2	162.1	161.4	161.4	162.7	161.4	162.7	161.4
55°	138.8	139.5	139.5	140.1	139.5	138.8	139.5	138.2
57.5°	118.1	119.3	117.5	119.3	118.7	118.1	118.1	116.8
60°	104.9	106.8	105.5	106.8	106.2	106.2	106.2	105.5
62.5°	94.2	95.5	94.2	94.8	94.8	94.8	94.2	93.6
65°	82.3	84.2	82.9	83.6	82.9	82.3	82.9	82.3
67.5°	70.4	71.0	71.0	70.4	70.4	70.4	70.4	69.1
70°	57.2	57.8	57.2	58.4	57.8	57.2	57.8	56.5
72.5°	44.6	45.2	44.6	45.2	44.6	44.6	44.6	44.6
75°	33.3	33.9	33.9	33.9	33.9	33.9	32.7	33.9
77.5°	23.9	23.9	23.9	24.5	23.9	23.9	23.9	23.9
80°	16.3	16.3	16.3	17.0	16.3	17.0	16.3	17.0
82.5°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
85°	5.6	6.3	6.3	5.6	5.6	5.6	5.6	5.6
87.5°	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)