

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: P879383

Luminaire Tested: **LD4C20D010 EU4209035 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: P879383  
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: LD4C20D010 EU4209035 4LBLDWWLI  
Description: 4 INCH 2000 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**

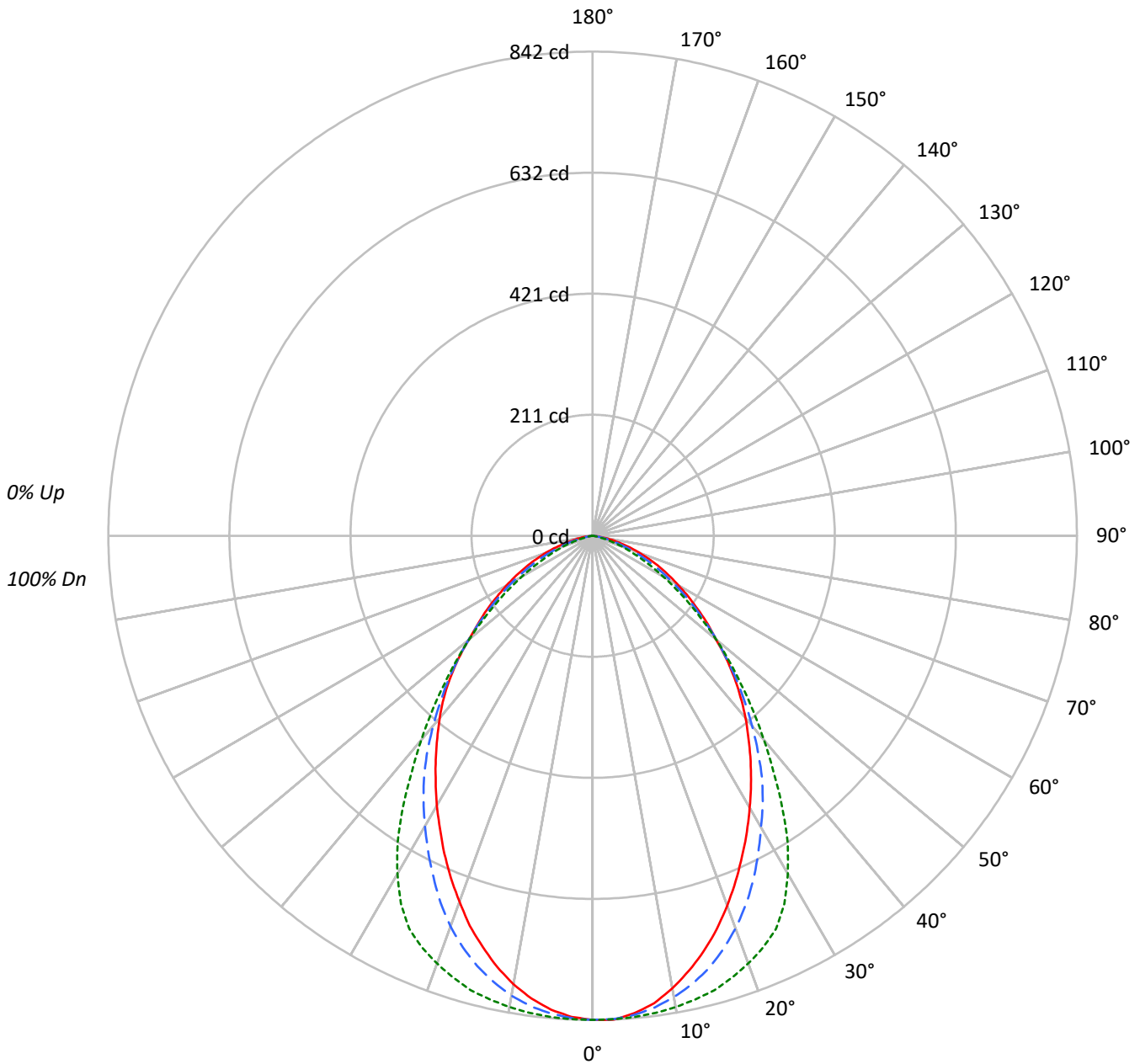
Lumens per Lamp: N/A  
Luminaire Lumens: 1546.0 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.8  
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
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°	103418	103418	103418
5°	102802	103579	102025
10°	99674	103828	98801
15°	95098	104065	94055
20°	89477	103466	88483
25°	83338	102248	82661
30°	77441	96280	76817
35°	71809	86116	71299
40°	66395	74269	66347
45°	60497	63398	60983
50°	53420	53611	53726
55°	47871	43823	48085
60°	42311	34817	42384
65°	37238	26541	36889
70°	30855	19002	30855
75°	24066	10917	23164
80°	15565	2688	14928
85°	5779	846	4370



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.0	5.1
10°-20°	218.6	14.1
20°-30°	305.6	19.8
30°-40°	322.4	20.9
40°-50°	274.3	17.7
50°-60°	193.5	12.5
60°-70°	109.7	7.1
70°-80°	39.1	2.5
80°-90°	3.7	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°	603.3	39.0
0°-40°	925.6	59.9
0°-60°	1393.4	90.1
0°-90°	1546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1546.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	842	842	842	842	842	
5°	834	836	840	834	827	78
15°	748	779	818	775	740	210
25°	615	661	754	655	610	283
35°	479	513	574	511	475	299
45°	348	353	365	355	351	268
55°	224	216	205	217	224	201
65°	128	110	91	110	127	127
75°	51	35	23	34	49	55
85°	4	2	1	2	3	7
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°	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8
2.5°	842.4	840.8	840.8	840.8	840.8	840.8	840.8	840.8	840.8	841.2	841.2
5°	833.6	833.0	832.7	832.7	832.7	832.7	833.0	834.2	834.9	835.8	836.4
7.5°	819.8	818.5	819.1	819.1	819.8	820.4	821.3	822.6	824.5	825.7	827.3
10°	799.0	797.7	799.3	799.9	801.8	802.8	804.3	806.2	810.0	811.9	814.4
12.5°	774.7	774.1	774.7	777.3	779.1	780.4	782.3	786.4	790.2	794.3	798.7
15°	747.7	746.1	747.0	750.2	753.3	755.5	757.1	762.5	767.5	773.8	779.1
17.5°	717.4	715.2	717.8	720.3	724.4	726.3	728.5	734.4	741.4	748.3	754.3
20°	684.4	683.8	685.3	688.8	692.9	695.4	697.3	703.9	709.9	719.3	726.3
22.5°	650.1	650.7	652.0	655.7	658.6	662.0	664.9	670.8	677.8	686.6	695.4
25°	614.8	615.8	618.0	620.5	625.2	627.1	630.6	636.8	642.8	651.0	660.8
27.5°	580.8	581.1	583.6	584.9	589.3	593.4	595.0	601.6	608.5	614.8	623.3
30°	545.9	546.8	548.4	551.9	556.3	557.8	559.7	565.7	571.1	578.9	585.5
32.5°	512.5	511.9	513.8	515.7	520.7	523.5	524.5	531.4	536.1	544.0	550.3
35°	478.8	477.2	480.1	482.0	486.4	488.9	490.2	495.5	499.9	506.5	513.4
37.5°	445.1	446.4	447.7	449.2	451.4	452.1	455.8	457.1	462.8	467.8	471.6
40°	414.0	413.3	412.7	414.3	417.1	418.4	418.7	422.2	423.4	428.4	431.3
42.5°	380.6	380.9	380.6	380.9	382.5	382.5	383.4	385.6	386.6	388.2	391.6
45°	348.2	348.2	347.2	347.5	347.9	347.5	347.9	348.8	350.7	350.7	353.2
47.5°	314.5	313.9	315.1	314.2	313.5	313.2	314.2	313.2	315.1	315.1	315.7
50°	279.5	279.5	281.1	280.8	281.4	280.2	280.5	280.5	280.8	280.5	281.8
52.5°	252.5	251.8	251.2	249.6	250.3	249.0	249.0	249.3	248.4	248.1	246.5
55°	223.5	224.1	223.2	222.6	222.6	221.3	221.0	219.1	217.8	216.9	216.0
57.5°	197.4	198.0	197.7	196.1	194.2	194.5	193.9	192.0	189.2	187.3	185.7
60°	172.2	172.8	172.2	170.6	170.0	168.7	168.4	165.9	163.7	161.2	159.3
62.5°	149.5	149.5	149.2	147.0	145.4	145.8	144.2	142.3	139.5	136.0	133.2
65°	128.1	127.8	126.2	125.3	124.0	122.5	121.5	118.7	116.5	113.6	109.9
67.5°	106.7	105.8	105.1	104.2	101.4	101.1	99.8	97.3	94.1	91.9	88.8
70°	85.9	85.6	84.4	84.4	82.2	81.2	79.3	77.1	74.3	71.1	68.6
72.5°	68.0	67.4	66.1	64.8	63.0	62.3	60.8	58.6	56.0	52.9	49.7
75°	50.7	50.1	49.7	48.2	46.6	45.0	44.4	42.2	39.7	37.5	34.6
77.5°	35.6	34.9	34.0	33.1	32.1	31.2	30.2	28.3	26.1	24.2	21.7
80°	22.0	21.4	20.8	20.5	19.5	19.2	17.9	17.0	15.1	13.9	12.3
82.5°	11.3	11.3	10.7	10.4	9.8	9.4	9.1	8.2	7.2	6.3	5.4
85°	4.1	4.1	3.8	3.5	3.5	3.1	3.1	2.8	2.2	2.2	1.6
87.5°	0.3	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	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°	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8
2.5°	841.5	841.2	841.5	841.5	841.8	841.8	841.8	841.5	841.8	841.5	841.5
5°	836.4	837.4	838.0	838.6	839.0	839.3	839.3	839.6	839.9	839.9	839.6
7.5°	828.6	830.5	832.3	833.6	834.2	834.9	835.8	836.4	837.1	836.8	836.4
10°	818.2	821.3	823.8	826.4	827.6	828.6	830.1	831.4	832.0	832.3	831.4
12.5°	803.4	807.8	811.9	816.0	817.9	819.1	822.3	824.5	825.7	825.7	824.8
15°	784.8	791.1	797.1	802.4	805.6	807.5	812.2	815.3	817.2	818.2	816.6
17.5°	762.5	769.7	776.9	783.9	787.0	789.8	796.5	800.9	805.0	805.6	803.7
20°	733.8	742.9	751.1	759.6	763.1	767.5	775.0	782.3	788.6	791.4	786.1
22.5°	701.7	711.8	719.3	729.7	734.4	739.2	748.9	758.0	769.1	775.0	765.6
25°	668.3	676.8	686.0	696.0	702.6	707.7	719.0	730.7	745.5	754.3	741.1
27.5°	632.4	640.0	651.0	662.0	667.1	673.4	686.9	699.5	713.7	721.5	711.8
30°	595.3	604.7	615.1	625.2	632.4	638.4	649.4	660.1	672.1	678.7	671.5
32.5°	558.5	567.6	576.4	587.4	591.5	596.9	606.6	615.8	624.9	630.9	622.4
35°	519.7	527.9	536.1	543.7	545.6	551.9	559.7	565.1	569.5	574.2	568.5
37.5°	477.6	483.9	487.9	496.1	499.3	500.2	506.5	510.3	515.0	516.0	515.7
40°	434.7	440.4	443.9	448.9	451.4	451.4	455.8	459.3	462.8	463.1	462.8
42.5°	394.8	397.6	400.4	403.6	403.0	406.7	408.6	410.2	412.7	412.7	413.3
45°	354.5	356.7	359.2	359.8	362.3	362.3	363.9	364.5	365.8	364.9	363.6
47.5°	317.0	318.0	318.3	321.1	321.7	319.5	321.4	321.7	321.4	321.4	320.8
50°	281.4	282.1	281.8	280.8	281.1	282.1	281.1	279.9	280.5	280.5	281.1
52.5°	246.8	245.5	244.9	244.9	243.7	243.7	242.1	241.5	241.1	239.9	241.5
55°	215.0	213.1	210.3	209.7	208.7	208.4	206.5	204.9	204.3	204.6	204.3
57.5°	184.5	181.6	179.8	179.1	178.2	176.3	174.1	172.5	172.2	171.6	171.6
60°	156.8	153.6	150.8	148.0	148.3	147.0	144.8	143.9	142.9	141.7	142.6
62.5°	131.6	128.1	125.0	122.1	120.3	119.3	117.7	116.2	115.2	114.3	115.5
65°	106.7	103.9	100.4	97.6	96.6	95.7	94.1	91.6	91.3	91.3	91.9
67.5°	84.4	81.2	78.1	76.2	74.9	73.7	73.0	71.8	70.8	70.2	70.5
70°	64.8	61.7	59.2	57.3	56.4	56.0	53.8	53.5	53.2	52.9	52.6
72.5°	47.2	44.7	42.5	41.2	40.0	39.0	38.4	37.5	37.1	37.1	37.1
75°	32.4	30.5	28.0	26.4	25.8	24.9	23.9	23.3	22.7	23.0	23.0
77.5°	19.5	17.6	16.1	14.8	14.5	13.5	12.6	12.0	11.0	11.0	11.3
80°	10.7	9.1	7.9	6.9	6.3	6.0	5.0	4.7	4.1	3.8	3.8
82.5°	4.7	3.8	3.1	2.8	2.5	2.2	1.9	1.6	1.6	1.3	1.6
85°	1.6	1.3	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.3	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°	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8
2.5°	841.2	841.2	840.8	840.8	840.8	840.2	840.2	839.9	839.6	839.3	838.6
5°	839.0	838.6	838.0	837.7	837.4	836.4	835.5	834.9	833.9	832.7	832.0
7.5°	835.8	834.9	833.6	833.0	832.0	829.8	828.3	826.7	825.1	822.9	820.4
10°	830.5	828.6	826.7	825.4	823.8	821.0	817.9	815.3	811.9	808.7	805.3
12.5°	822.9	820.7	816.9	815.0	813.1	809.0	805.0	799.6	794.9	790.5	786.4
15°	813.5	809.4	805.0	802.4	799.6	793.0	786.7	781.0	774.7	769.4	762.8
17.5°	799.6	793.6	787.3	784.5	780.7	773.2	765.6	757.7	750.5	743.9	735.7
20°	778.8	772.2	764.0	759.6	756.5	746.4	739.2	730.3	722.8	714.6	705.5
22.5°	754.6	745.5	736.3	730.0	726.6	716.5	706.7	698.9	690.7	681.2	674.6
25°	727.2	715.9	704.8	698.6	693.2	682.5	673.1	664.9	654.8	646.6	640.0
27.5°	696.3	683.4	670.5	664.2	659.2	647.6	637.5	629.0	619.2	612.0	605.1
30°	659.5	647.9	635.6	630.6	624.6	612.6	601.0	593.4	582.7	575.1	567.6
32.5°	613.6	606.0	596.2	589.3	586.2	575.1	565.4	556.3	547.1	541.1	533.6
35°	563.2	556.6	548.4	544.6	540.5	533.6	525.7	517.9	510.6	504.9	498.0
37.5°	512.2	505.6	500.5	496.4	493.9	487.6	482.9	476.9	471.9	466.5	462.8
40°	459.3	457.4	452.1	450.2	449.5	442.6	438.5	433.8	430.7	427.5	425.3
42.5°	412.4	409.2	405.2	405.5	403.6	399.8	397.0	393.8	391.6	390.0	387.8
45°	366.1	363.6	361.7	363.3	360.1	358.9	356.7	356.4	354.8	352.0	351.0
47.5°	322.0	321.7	322.0	321.1	320.5	319.8	320.2	318.6	317.0	316.1	314.8
50°	281.8	282.1	282.7	283.6	281.4	282.4	282.1	281.8	281.8	280.8	281.4
52.5°	242.7	243.0	243.7	244.6	244.9	244.9	245.9	246.5	247.8	249.3	249.3
55°	205.9	208.1	209.3	210.9	210.0	211.9	212.8	215.6	216.6	216.6	217.8
57.5°	173.1	175.3	176.3	178.2	178.8	180.4	182.9	184.5	186.7	188.6	190.5
60°	143.2	144.2	146.7	149.5	148.9	152.7	154.6	157.1	159.9	161.2	163.7
62.5°	116.5	117.7	119.6	120.6	122.8	124.7	129.1	131.6	134.1	137.3	139.8
65°	92.6	93.8	95.7	97.6	98.5	101.4	103.6	108.0	110.2	113.6	116.5
67.5°	70.8	72.7	74.3	75.6	76.2	79.0	82.5	84.4	88.5	91.9	94.1
70°	52.9	54.5	56.4	56.0	57.3	59.5	62.0	64.8	68.0	71.1	73.7
72.5°	36.8	38.4	39.7	40.0	41.2	42.8	44.7	46.9	49.4	52.6	56.0
75°	23.3	23.6	24.9	25.5	26.1	28.0	29.6	31.8	34.0	36.5	38.7
77.5°	11.6	12.6	13.2	13.9	14.2	15.7	17.3	19.2	21.1	23.6	25.8
80°	4.4	4.7	5.7	6.0	6.6	7.6	8.8	9.8	11.3	13.2	14.5
82.5°	1.6	1.9	2.2	2.2	2.5	3.1	3.5	4.4	5.4	6.0	6.6
85°	0.6	0.6	0.6	0.6	0.6	0.9	0.9	1.3	1.6	1.9	1.9
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°	841.8	841.8	841.8	841.8	841.8	841.8	841.8	841.8
2.5°	838.3	838.3	838.0	837.7	837.7	837.7	837.4	837.4
5°	830.8	829.8	829.5	828.9	828.6	828.3	827.3	827.3
7.5°	818.5	817.2	816.3	815.3	814.1	813.1	813.1	811.9
10°	802.1	799.6	798.3	797.1	795.5	793.6	793.0	792.0
12.5°	782.3	777.3	776.0	773.8	771.3	770.0	767.8	767.8
15°	757.7	752.4	749.6	748.3	745.1	742.9	742.0	739.5
17.5°	729.1	725.0	720.6	718.7	715.2	712.4	711.1	710.8
20°	700.1	693.5	690.7	687.8	683.8	681.2	679.3	676.8
22.5°	666.8	660.8	656.7	654.8	651.3	646.9	643.8	643.8
25°	631.5	626.1	623.9	619.9	615.8	614.2	610.4	609.8
27.5°	597.8	592.5	588.1	585.9	581.1	578.9	575.8	574.5
30°	562.9	556.6	553.4	553.1	547.4	545.2	542.7	541.5
32.5°	527.9	522.6	519.4	517.5	515.0	511.2	509.0	507.8
35°	493.3	489.8	487.0	484.8	480.7	478.8	476.9	475.4
37.5°	457.1	453.9	452.7	450.8	448.9	445.4	444.8	443.6
40°	422.2	418.1	418.1	416.8	414.9	414.6	413.7	413.7
42.5°	385.6	383.7	383.4	383.7	382.5	381.9	380.9	383.1
45°	349.4	350.4	348.8	349.1	348.5	349.7	349.7	351.0
47.5°	316.1	314.8	315.4	316.1	317.0	317.0	316.7	316.4
50°	280.5	281.8	283.0	281.4	282.1	282.4	280.8	281.1
52.5°	250.0	250.3	251.2	250.3	251.2	250.9	251.5	250.3
55°	220.4	220.4	221.6	221.9	222.3	223.2	223.5	224.5
57.5°	191.7	193.3	194.9	194.5	195.8	197.1	196.1	197.1
60°	166.8	168.1	169.7	170.3	171.3	171.9	171.9	172.5
62.5°	141.7	144.2	145.4	146.7	146.7	148.0	149.2	149.5
65°	119.0	121.8	122.8	123.7	124.3	125.6	127.2	126.9
67.5°	97.6	99.5	100.7	101.4	103.3	103.9	105.1	106.4
70°	76.5	79.0	80.0	81.2	82.8	84.1	85.3	85.9
72.5°	58.6	60.4	61.1	62.3	63.9	65.2	65.8	66.7
75°	40.9	44.1	44.4	45.3	46.6	48.2	49.1	48.8
77.5°	27.1	29.3	29.6	30.9	32.1	33.4	33.7	34.0
80°	16.1	17.3	17.6	18.3	19.2	19.8	20.5	21.1
82.5°	7.6	8.2	8.8	8.8	9.4	10.1	10.1	10.4
85°	2.5	2.5	2.8	2.8	3.1	3.1	3.5	3.1
87.5°	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3
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)