

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: NEO-RAY

Report Number: P332548-930

Luminaire Tested: **S124DIP-S575D590U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332548-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D590U930-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3601.2 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

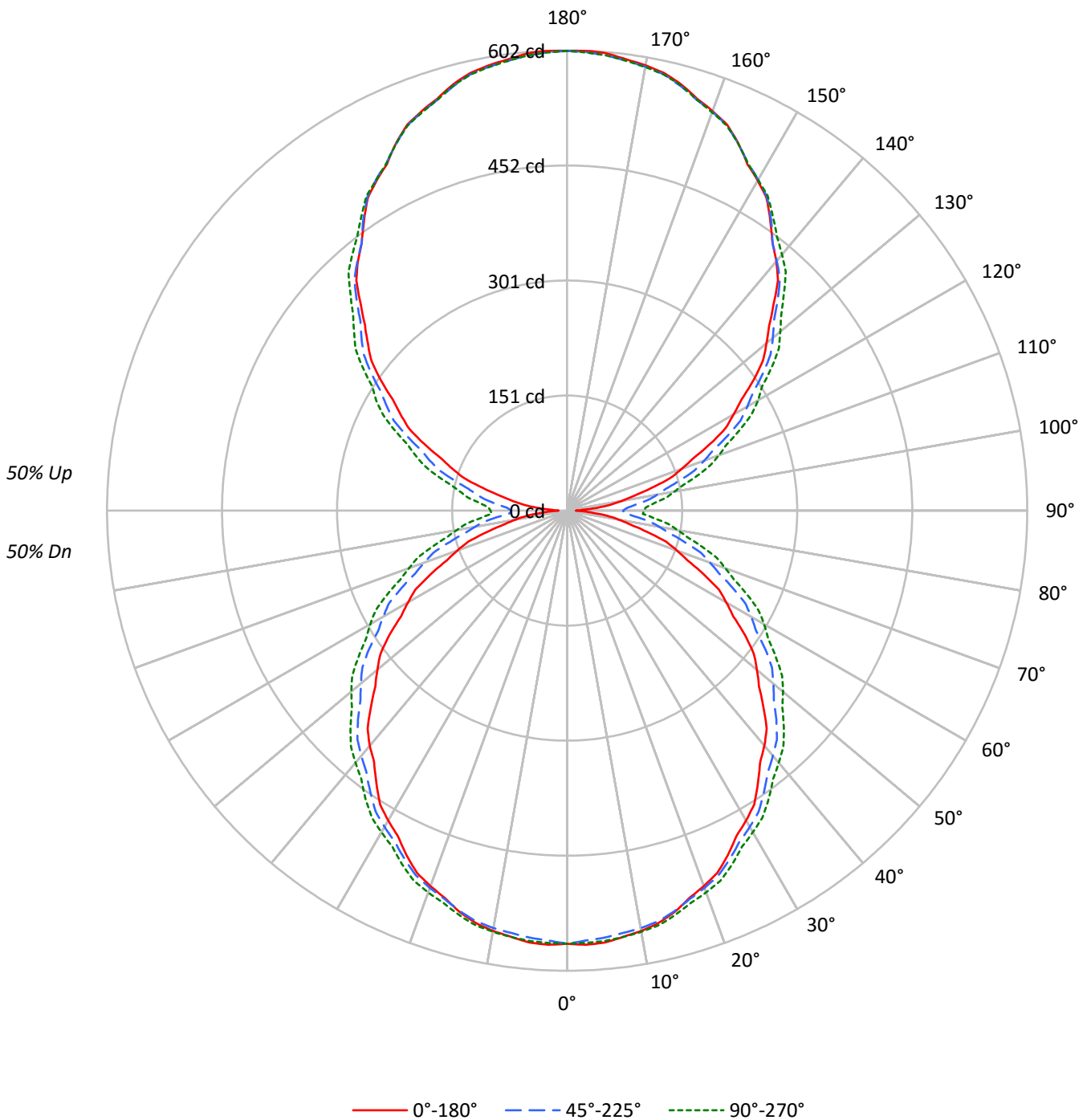
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																				
0	107	107	107	107	99	99	99	99	83	83	83		69	69	69		56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66		59	57	55		48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54		51	48	45		41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45		45	41	38		36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38		40	36	32		32	29	27	23
5	67	55	46	40	61	50	43	37	43	37	32		36	31	28		29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28		32	28	24		26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25		29	25	21		24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22		27	22	19		22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19		24	20	17		20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17		23	18	15		19	15	13	11

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

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.6	1.5
10°-20°	153.7	4.3
20°-30°	232.4	6.5
30°-40°	281.2	7.8
40°-50°	297.3	8.3
50°-60°	279.8	7.8
60°-70°	232.1	6.4
70°-80°	163.1	4.5
80°-90°	94.0	2.6
90°-100°	94.4	2.6
100°-110°	158.0	4.4
110°-120°	226.6	6.3
120°-130°	278.3	7.7
130°-140°	301.9	8.4
140°-150°	291.5	8.1
150°-160°	244.0	6.8
160°-170°	162.4	4.5
170°-180°	56.9	1.6
0°-30°	439.8	12.2
0°-40°	721.0	20.0
0°-60°	1298.1	36.0
0°-90°	1787.3	49.6
90°-120°	479.0	13.3
90°-150°	1350.7	37.5
90°-180°	1814.0	50.4
0°-180°	3601.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	12	42	73	93	100	8
95°	36	62	90	108	115	38
105°	114	128	152	169	176	121
115°	206	213	232	245	249	204
125°	298	298	313	323	327	265
135°	382	385	389	398	401	296
145°	463	464	465	468	469	290
155°	530	530	530	531	530	244
165°	577	576	575	577	576	163
175°	600	598	598	600	598	57
180°	601	601	601	601	601	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	19.1	25.0	31.0	37.0	43.0	49.2	55.4	61.8	68.2	74.5	78.7
90°	11.6	18.3	25.1	31.9	38.6	45.5	52.3	59.3	66.1	73.1	77.8
92.5°	19.6	26.0	32.4	38.7	45.1	51.6	58.3	64.9	71.5	78.2	82.5
95°	36.1	41.7	47.3	52.9	58.5	64.5	71.0	77.5	84.1	90.5	94.7
97.5°	56.3	61.0	65.7	70.4	75.2	80.9	87.5	94.0	100.6	107.1	111.2
100°	72.1	76.1	80.2	84.3	88.4	93.7	100.0	106.5	112.9	119.4	123.4
102.5°	89.2	92.5	96.0	99.3	102.7	107.5	113.7	120.0	126.2	132.5	136.4
105°	114.1	117.0	119.9	122.9	125.7	130.0	135.7	141.3	146.9	152.5	156.4
107.5°	141.4	143.8	146.3	148.7	151.1	154.8	159.8	164.9	169.8	174.8	178.6
110°	159.5	161.7	163.8	166.0	168.2	171.7	176.5	181.3	186.2	191.0	194.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	178.3	180.1	181.9	183.7	185.5	188.6	193.1	197.6	202.2	206.7	209.8
115°	206.5	207.8	209.1	210.3	211.7	214.4	218.7	223.0	227.3	231.6	234.6
117.5°	233.7	234.6	235.5	236.3	237.2	239.6	243.6	247.7	251.8	255.8	258.4
120°	251.5	252.3	253.2	254.0	254.9	257.1	260.9	264.7	268.5	272.2	274.6
122.5°	270.4	270.7	270.9	271.2	271.5	273.5	277.1	280.9	284.6	288.3	290.8
125°	297.8	297.7	297.5	297.4	297.3	298.9	302.3	305.7	309.2	312.6	315.0
127.5°	323.1	323.3	323.4	323.6	323.8	325.1	327.7	330.2	332.7	335.3	337.6
130°	340.4	340.6	340.8	341.0	341.1	342.3	344.5	346.8	349.1	351.3	353.7
132.5°	358.7	358.7	358.8	358.9	359.0	359.9	361.7	363.4	365.1	366.8	369.0
135°	382.1	382.7	383.4	384.0	384.6	385.4	386.4	387.3	388.3	389.3	391.4
137.5°	408.3	408.5	408.6	408.8	409.0	409.4	409.9	410.6	411.2	411.9	413.7
140°	425.8	425.9	425.9	426.0	426.1	426.2	426.3	426.5	426.6	426.7	428.4
142.5°	441.3	441.5	441.6	441.8	442.1	442.1	441.9	441.7	441.6	441.3	443.0
145°	463.3	463.6	463.8	464.1	464.4	464.6	464.7	464.8	464.9	465.0	465.8
147.5°	485.3	485.6	486.0	486.3	486.7	486.8	486.7	486.7	486.6	486.5	486.5
150°	498.6	499.0	499.2	499.5	499.8	499.9	499.9	499.9	499.9	499.9	499.9
152.5°	510.8	511.0	511.3	511.4	511.7	511.8	511.9	512.0	512.1	512.2	512.4
155°	530.1	530.1	530.1	530.1	530.1	530.0	529.9	529.9	529.8	529.6	530.0
157.5°	546.5	546.3	546.1	545.9	545.8	545.6	545.6	545.6	545.6	545.5	545.8
160°	556.1	556.0	556.0	555.9	555.7	555.6	555.5	555.5	555.3	555.2	555.5
162.5°	565.1	564.8	564.5	564.3	564.0	563.8	563.7	563.6	563.5	563.4	563.9
165°	577.1	576.7	576.4	576.2	575.8	575.6	575.4	575.2	574.9	574.8	575.4
167.5°	586.3	585.9	585.4	585.0	584.6	584.3	584.3	584.4	584.4	584.4	585.1
170°	591.5	591.0	590.4	590.0	589.4	589.2	589.3	589.4	589.5	589.6	590.3
172.5°	595.2	594.8	594.4	593.9	593.5	593.3	593.3	593.3	593.3	593.4	594.0
175°	600.3	599.8	599.3	598.8	598.3	597.9	597.9	597.8	597.6	597.5	598.3
177.5°	602.0	601.6	601.2	600.8	600.3	600.1	600.1	600.1	600.1	600.1	600.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	82.9	87.2	91.3	94.1	95.4	96.7	97.9	99.2
90°	82.4	87.2	91.9	94.9	96.2	97.6	98.9	100.2
92.5°	86.9	91.2	95.6	98.4	99.6	100.9	102.2	103.4
95°	98.7	102.9	107.0	109.7	111.0	112.3	113.5	114.8
97.5°	115.3	119.4	123.4	126.0	127.3	128.5	129.7	130.9
100°	127.3	131.4	135.4	137.9	138.9	139.9	140.9	141.9
102.5°	140.4	144.4	148.4	151.0	152.1	153.4	154.5	155.7
105°	160.2	164.0	167.9	170.5	171.9	173.4	174.8	176.3
107.5°	182.3	186.1	189.8	192.2	193.2	194.2	195.2	196.2
110°	197.1	200.2	203.2	205.4	206.8	208.2	209.7	211.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	212.9	216.0	219.1	221.2	222.4	223.6	224.8	225.9
115°	237.7	240.6	243.6	245.6	246.5	247.4	248.2	249.1
117.5°	261.0	263.6	266.1	267.9	268.8	269.7	270.7	271.6
120°	276.9	279.2	281.4	283.3	284.6	285.9	287.3	288.6
122.5°	293.3	295.7	298.2	299.7	300.4	301.0	301.7	302.3
125°	317.6	320.0	322.5	324.0	324.7	325.3	326.0	326.6
127.5°	339.9	342.3	344.6	346.2	347.0	347.7	348.5	349.4
130°	356.0	358.3	360.7	362.1	362.5	362.9	363.4	363.8
132.5°	371.2	373.4	375.7	377.1	377.8	378.5	379.2	379.8
135°	393.5	395.5	397.5	398.8	399.3	399.9	400.5	401.0
137.5°	415.5	417.3	419.1	420.4	421.1	421.8	422.7	423.4
140°	430.2	431.9	433.7	434.8	435.5	436.0	436.7	437.2
142.5°	444.5	446.1	447.7	448.8	449.4	450.0	450.5	451.1
145°	466.5	467.2	468.0	468.5	468.7	469.0	469.2	469.4
147.5°	486.6	486.6	486.6	486.8	487.1	487.5	487.9	488.2
150°	499.9	499.9	499.9	499.9	499.7	499.6	499.5	499.5
152.5°	512.7	512.9	513.1	513.1	512.9	512.6	512.3	512.1
155°	530.4	530.8	531.3	531.3	530.8	530.4	530.0	529.6
157.5°	546.2	546.5	546.8	546.7	546.4	546.1	545.7	545.4
160°	555.9	556.1	556.4	556.4	555.9	555.3	554.8	554.3
162.5°	564.5	565.1	565.7	565.7	565.2	564.6	564.1	563.6
165°	576.0	576.6	577.2	577.3	576.9	576.5	576.1	575.7
167.5°	585.6	586.3	586.9	586.9	586.3	585.6	585.0	584.3
170°	590.8	591.5	592.1	592.1	591.3	590.6	589.9	589.1
172.5°	594.8	595.5	596.1	596.1	595.4	594.7	593.9	593.3
175°	599.0	599.7	600.4	600.4	599.7	599.0	598.3	597.5
177.5°	601.3	601.9	602.4	602.4	601.8	601.1	600.4	599.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3

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