

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: P331252-927

Luminaire Tested: **S122DIP-S290D530U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331252-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S290D530U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2623.1 lumens  
Efficiency: N/A  
Efficacy: 102.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

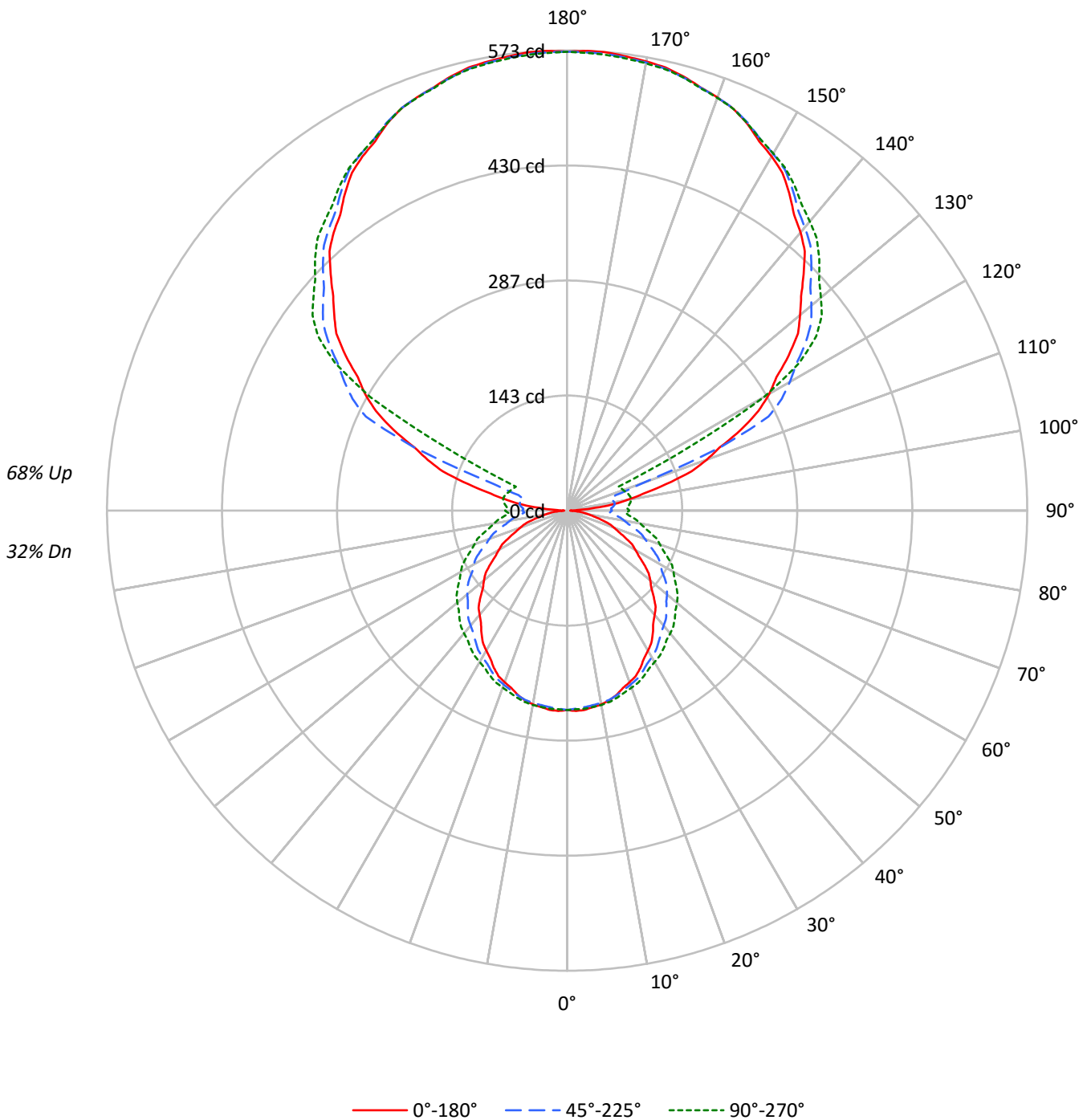
Input Watts (W): 25.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331252-927

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### Luminous Intensity Polar Plot





TEST NUMBER: P331252-927

CATALOG NUMBER: S122DIP-S290D530U927-4F0-1E-UDD-D

**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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32				32
1	93	88	84	80	83	79	76	73	63	60	58	48	46	44	34	33	32	25				25
2	84	76	70	65	75	69	63	59	54	51	47	41	39	36	29	27	26	20				20
3	76	67	59	53	68	60	54	49	48	43	39	36	33	30	25	23	22	17				17
4	70	59	51	45	62	53	46	41	42	37	33	32	28	26	22	20	18	14				14
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	20	18	16	12				12
6	59	47	38	33	52	42	35	30	34	28	24	26	22	19	18	16	14	10				10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	17	16	14	12	9				9
8	50	38	30	25	45	34	27	23	27	22	19	21	17	15	15	13	11	8				8
9	46	34	27	22	42	31	25	20	25	20	17	19	16	13	14	11	10	7				7
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	9	7				7

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

	0°	45°	90°
0°	4009	4009	4009
5°	4030	3859	3845
10°	4004	3746	3703
15°	3948	3624	3554
20°	3878	3495	3410
25°	3809	3371	3279
30°	3712	3242	3150
35°	3615	3118	3059
40°	3511	3013	2965
45°	3413	2919	2886
50°	3309	2833	2810
55°	3196	2741	2731
60°	3061	2646	2648
65°	2922	2534	2548
70°	2764	2415	2440
75°	2564	2299	2342
80°	2245	2177	2240
85°	1945	2073	2163



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.5	0.9
10°-20°	67.5	2.6
20°-30°	102.2	3.9
30°-40°	124.5	4.7
40°-50°	134.0	5.1
50°-60°	130.1	5.0
60°-70°	113.6	4.3
70°-80°	87.5	3.3
80°-90°	60.1	2.3
90°-100°	59.5	2.3
100°-110°	99.4	3.8
110°-120°	206.3	7.9
120°-130°	319.3	12.2
130°-140°	332.5	12.7
140°-150°	305.6	11.7
150°-160°	245.1	9.3
160°-170°	157.9	6.0
170°-180°	54.4	2.1
0°-30°	193.2	7.4
0°-40°	317.8	12.1
0°-60°	581.9	22.2
0°-90°	843.0	32.1
90°-120°	365.2	13.9
90°-150°	1322.7	50.4
90°-180°	1780.0	67.9
0°-180°	2623.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	249	248	246	248	248	24
15°	238	238	238	241	241	67
25°	216	218	222	226	227	99
35°	186	192	199	207	210	116
45°	153	162	175	186	190	118
55°	117	130	149	161	166	105
65°	80	98	119	133	138	79
75°	44	65	88	102	108	47
85°	13	35	58	73	78	14
90°	4	29	56	72	77	4
95°	30	34	58	73	77	35
105°	128	144	56	73	79	136
115°	239	251	277	105	70	235
125°	337	343	362	374	379	300
135°	416	423	430	441	444	322
145°	482	482	489	494	494	302
155°	531	528	532	535	532	245
165°	560	558	558	561	558	158
175°	573	570	570	573	569	54
180°	571	571	571	571	571	



TEST NUMBER: P331252-927

CATALOG NUMBER: S122DIP-S290D530U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	249.8	249.5	249.4	249.1	249.0	248.7	248.2	247.8	247.3	246.8	247.2
5°	249.1	248.8	248.6	248.3	248.0	247.7	247.2	246.8	246.3	245.8	246.3
7.5°	246.8	246.6	246.4	246.3	246.1	245.9	245.5	245.2	244.8	244.4	245.0
10°	245.1	244.9	244.8	244.6	244.5	244.2	244.0	243.8	243.5	243.3	243.9
12.5°	242.2	242.2	242.2	242.3	242.3	242.2	242.1	241.9	241.7	241.5	242.2
15°	237.5	237.7	237.8	238.0	238.1	238.2	238.2	238.2	238.2	238.2	238.9
17.5°	231.5	231.8	232.1	232.5	232.8	233.1	233.4	233.6	233.9	234.2	234.9
20°	227.4	227.8	228.2	228.6	229.0	229.4	229.7	230.0	230.4	230.7	231.6
22.5°	223.2	223.6	224.0	224.5	225.0	225.5	225.9	226.3	226.8	227.2	228.1
25°	215.9	216.5	217.1	217.6	218.2	218.8	219.5	220.2	220.9	221.7	222.6
27.5°	207.3	208.2	209.1	210.0	211.0	211.8	212.6	213.5	214.4	215.2	216.4
30°	201.5	202.6	203.6	204.6	205.7	206.8	207.8	208.8	209.8	210.9	212.1
32.5°	195.2	196.4	197.5	198.7	199.9	201.1	202.3	203.5	204.8	206.0	207.5
35°	186.1	187.4	188.8	190.1	191.5	192.9	194.5	196.0	197.5	199.0	200.7
37.5°	176.1	177.7	179.3	180.9	182.4	184.2	186.2	188.1	190.0	192.0	194.0
40°	169.5	171.3	173.0	174.8	176.5	178.5	180.6	182.8	185.0	187.1	189.2
42.5°	163.2	164.9	166.7	168.4	170.2	172.3	174.8	177.3	179.7	182.2	184.5
45°	152.6	154.7	156.9	159.1	161.2	163.7	166.5	169.3	172.1	174.9	177.4
47.5°	142.1	144.5	146.9	149.2	151.5	154.4	157.6	160.9	164.2	167.5	170.1
50°	135.0	137.4	139.9	142.4	144.9	147.9	151.5	155.1	158.7	162.3	165.0
52.5°	128.0	130.6	133.2	135.9	138.5	141.6	145.4	149.2	153.0	156.9	159.6
55°	116.9	119.9	122.7	125.6	128.5	132.0	136.2	140.3	144.5	148.6	151.5
57.5°	106.0	109.2	112.5	115.7	119.0	122.7	127.0	131.2	135.5	139.7	142.8
60°	98.2	101.7	105.1	108.5	112.0	116.0	120.6	125.1	129.7	134.2	137.3
62.5°	91.3	94.9	98.5	102.0	105.6	109.6	114.2	118.7	123.3	127.9	131.1
65°	79.9	83.8	87.7	91.7	95.5	99.9	104.6	109.3	114.1	118.7	122.1
67.5°	69.4	73.5	77.6	81.7	85.8	90.2	95.1	99.9	104.7	109.6	112.9
70°	61.9	66.1	70.2	74.4	78.5	83.1	88.0	93.0	98.0	102.9	106.4
72.5°	55.0	59.3	63.5	67.8	72.2	76.8	81.8	86.8	91.9	96.9	100.3
75°	44.3	48.7	53.2	57.7	62.2	66.9	72.1	77.2	82.3	87.5	90.9
77.5°	33.9	38.6	43.3	47.9	52.7	57.6	62.8	68.0	73.2	78.3	81.8
80°	27.0	31.8	36.8	41.6	46.5	51.6	56.7	61.9	67.1	72.3	75.7
82.5°	21.2	26.1	30.9	35.6	40.5	45.6	50.8	56.1	61.3	66.5	69.9
85°	13.0	17.9	22.9	27.8	32.8	37.8	42.9	48.1	53.2	58.3	61.6
87.5°	7.1	12.1	17.1	22.0	27.0	32.2	37.4	42.6	47.9	53.2	56.6
90°	4.0	9.7	15.3	21.0	26.6	32.3	38.2	44.0	49.9	55.8	59.4
92.5°	11.6	15.9	20.1	24.3	28.6	33.4	38.7	43.9	49.2	54.5	57.9
95°	29.8	30.5	31.2	31.9	32.6	35.7	41.2	46.7	52.0	57.5	61.0
97.5°	55.8	50.6	45.5	40.2	35.0	35.5	41.6	47.7	53.8	59.9	63.2
100°	75.7	66.1	56.4	46.8	37.2	35.4	41.4	47.5	53.5	59.6	63.2
102.5°	97.2	97.3	97.3	97.4	97.4	93.1	84.4	75.7	66.9	58.2	62.0
105°	127.5	132.5	137.6	142.7	147.7	139.8	118.9	98.0	77.1	56.2	60.0
107.5°	162.4	166.4	170.6	174.6	178.7	167.7	141.6	115.5	89.4	63.3	65.0
110°	184.6	188.1	191.6	195.2	198.7	189.2	166.5	143.9	121.3	98.6	92.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	205.7	208.8	211.8	214.9	217.9	218.1	215.2	212.4	209.5	206.8	175.8
115°	239.2	241.6	244.1	246.4	248.9	253.1	259.0	264.9	270.8	276.7	236.5
117.5°	268.6	270.9	273.3	275.6	277.9	281.5	286.5	291.4	296.3	301.2	293.3
120°	290.5	292.2	293.9	295.6	297.2	300.6	305.4	310.2	315.1	320.0	323.3
122.5°	309.0	310.5	312.1	313.7	315.3	318.5	323.3	328.1	333.0	337.7	340.6
125°	336.8	338.0	339.2	340.4	341.6	344.4	348.6	353.0	357.3	361.6	364.4
127.5°	362.3	363.6	364.9	366.1	367.3	369.6	373.0	376.4	379.8	383.1	386.0
130°	378.6	380.0	381.4	382.8	384.1	386.2	388.9	391.6	394.3	397.0	399.9
132.5°	395.1	396.2	397.4	398.6	399.8	401.6	403.9	406.2	408.4	410.7	413.4
135°	416.3	417.7	419.2	420.6	422.2	423.7	425.3	426.9	428.6	430.2	432.8
137.5°	438.0	439.0	440.1	441.0	442.0	443.2	444.5	445.8	447.1	448.4	450.8
140°	452.3	452.9	453.5	454.2	454.9	455.7	456.9	458.1	459.2	460.4	462.6
142.5°	464.1	464.7	465.3	465.9	466.4	467.3	468.5	469.7	470.9	472.1	473.9
145°	482.4	482.4	482.3	482.2	482.1	482.8	484.4	485.9	487.5	489.1	490.2
147.5°	498.8	498.4	498.0	497.7	497.3	498.0	499.5	501.1	502.6	504.1	504.7
150°	509.3	508.7	508.0	507.4	506.8	507.2	508.7	510.1	511.6	513.0	513.6
152.5°	518.2	517.5	516.8	516.1	515.4	515.7	517.1	518.6	519.9	521.3	521.9
155°	531.2	530.4	529.6	528.8	527.9	528.1	529.2	530.3	531.4	532.5	533.1
157.5°	541.4	540.7	540.0	539.3	538.6	538.7	539.4	540.2	541.0	541.8	542.3
160°	547.4	546.8	546.3	545.7	545.2	545.2	545.7	546.3	546.8	547.4	548.0
162.5°	552.6	552.1	551.5	551.0	550.5	550.4	550.9	551.4	551.8	552.3	552.9
165°	559.8	559.2	558.6	558.1	557.5	557.5	557.7	557.9	558.3	558.5	559.2
167.5°	565.1	564.5	564.0	563.4	562.8	562.7	562.9	563.2	563.5	563.7	564.4
170°	568.0	567.5	567.0	566.4	565.9	565.6	565.9	566.0	566.2	566.4	567.0
172.5°	570.1	569.5	568.9	568.4	567.8	567.6	567.8	568.0	568.2	568.4	569.0
175°	572.6	572.0	571.3	570.7	570.0	569.8	570.0	570.1	570.3	570.5	571.2
177.5°	573.0	572.5	572.0	571.5	570.9	570.7	570.8	570.8	570.9	571.0	571.6
180°	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	247.5	247.8	248.1	248.3	248.1	248.0	247.9	247.7
5°	246.8	247.2	247.7	247.9	247.8	247.7	247.6	247.6
7.5°	245.6	246.1	246.8	247.0	246.9	246.8	246.8	246.7
10°	244.5	245.2	245.8	246.1	246.1	246.0	245.9	245.8
12.5°	242.8	243.4	244.1	244.4	244.3	244.2	244.2	244.1
15°	239.6	240.4	241.1	241.5	241.4	241.3	241.2	241.1
17.5°	235.7	236.4	237.1	237.5	237.5	237.5	237.5	237.5
20°	232.4	233.3	234.2	234.6	234.6	234.6	234.6	234.6
22.5°	229.0	229.9	230.8	231.2	231.4	231.5	231.6	231.8
25°	223.6	224.6	225.5	226.1	226.3	226.6	226.8	227.0
27.5°	217.6	218.9	220.1	220.8	220.9	221.1	221.3	221.5
30°	213.4	214.8	216.0	216.7	217.0	217.2	217.5	217.7
32.5°	208.9	210.4	211.9	212.9	213.3	213.7	214.1	214.5
35°	202.6	204.3	206.0	207.2	207.8	208.3	208.9	209.5
37.5°	195.9	197.9	199.9	201.1	201.7	202.3	202.9	203.4
40°	191.3	193.4	195.4	196.9	197.6	198.3	199.0	199.7
42.5°	186.8	189.0	191.3	192.8	193.5	194.2	195.0	195.7
45°	179.8	182.4	184.8	186.5	187.3	188.1	188.9	189.6
47.5°	172.7	175.2	177.8	179.6	180.5	181.3	182.2	183.1
50°	167.7	170.5	173.2	175.0	175.9	176.7	177.6	178.5
52.5°	162.4	165.2	167.9	169.8	170.8	171.7	172.7	173.6
55°	154.4	157.2	160.2	162.1	163.1	164.2	165.2	166.3
57.5°	145.9	149.0	152.1	154.2	155.3	156.3	157.3	158.4
60°	140.3	143.4	146.4	148.5	149.6	150.7	151.9	153.0
62.5°	134.4	137.6	140.9	143.0	144.0	145.0	146.2	147.2
65°	125.3	128.6	131.9	134.0	135.1	136.1	137.1	138.2
67.5°	116.1	119.5	122.8	125.0	126.0	127.1	128.3	129.4
70°	109.8	113.2	116.7	118.9	119.9	120.8	121.8	122.7
72.5°	103.6	107.0	110.4	112.6	113.8	114.9	116.1	117.2
75°	94.3	97.8	101.2	103.5	104.5	105.5	106.5	107.6
77.5°	85.2	88.6	92.1	94.3	95.5	96.6	97.7	98.8
80°	79.1	82.4	85.8	88.0	89.1	90.2	91.3	92.4
82.5°	73.3	76.7	80.0	82.2	83.3	84.4	85.4	86.4
85°	65.0	68.4	71.8	74.0	75.1	76.2	77.3	78.4
87.5°	59.9	63.2	66.6	68.8	69.9	70.9	72.0	73.0
90°	63.1	66.8	70.4	72.8	73.9	75.1	76.2	77.4
92.5°	61.2	64.6	68.0	70.2	71.3	72.3	73.4	74.5
95°	64.5	68.0	71.5	73.7	74.5	75.4	76.3	77.2
97.5°	66.5	69.9	73.2	75.3	76.4	77.5	78.5	79.6
100°	66.9	70.7	74.3	76.7	77.8	78.8	79.9	81.0
102.5°	65.9	69.7	73.6	76.1	77.2	78.3	79.5	80.6
105°	63.8	67.6	71.4	73.9	75.2	76.4	77.7	78.9
107.5°	66.6	68.3	69.9	71.4	72.6	73.9	75.1	76.4
110°	85.4	78.7	72.1	69.4	70.7	71.9	73.1	74.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	144.8	113.8	82.9	68.0	69.2	70.3	71.5	72.7
115°	196.4	156.3	116.1	93.2	87.5	81.8	76.0	70.3
117.5°	285.3	277.4	269.5	255.1	234.2	213.3	192.3	171.3
120°	326.6	329.9	333.4	329.2	317.7	306.2	294.7	283.1
122.5°	343.4	346.3	349.1	349.7	348.0	346.3	344.7	343.0
125°	367.2	369.9	372.8	374.7	375.7	376.7	377.6	378.7
127.5°	389.0	391.9	394.8	396.6	397.4	398.2	398.9	399.7
130°	402.8	405.8	408.7	410.4	411.0	411.5	412.0	412.6
132.5°	416.2	418.9	421.6	423.3	423.8	424.4	424.9	425.5
135°	435.4	438.0	440.6	442.1	442.6	443.0	443.5	443.9
137.5°	453.1	455.5	457.9	459.1	459.4	459.6	459.9	460.1
140°	464.6	466.8	468.9	469.9	469.9	470.0	470.0	470.0
142.5°	475.6	477.4	479.2	480.1	480.1	480.0	479.9	479.9
145°	491.3	492.4	493.5	494.1	494.0	494.0	493.9	493.8
147.5°	505.2	505.7	506.3	506.4	506.3	506.0	505.9	505.6
150°	514.1	514.7	515.2	515.3	514.8	514.4	513.9	513.5
152.5°	522.4	523.0	523.6	523.5	522.9	522.3	521.7	521.1
155°	533.6	534.2	534.7	534.6	533.9	533.1	532.4	531.6
157.5°	543.0	543.6	544.2	544.2	543.4	542.7	542.0	541.3
160°	548.4	549.0	549.5	549.5	548.9	548.3	547.6	546.9
162.5°	553.6	554.2	554.8	554.8	554.0	553.2	552.4	551.6
165°	559.8	560.5	561.1	561.1	560.5	559.8	559.2	558.5
167.5°	565.0	565.7	566.3	566.3	565.4	564.6	563.7	562.9
170°	567.7	568.3	568.9	568.9	568.0	567.2	566.4	565.5
172.5°	569.7	570.3	570.9	570.8	570.1	569.2	568.4	567.5
175°	571.8	572.4	573.1	573.0	572.0	571.1	570.2	569.3
177.5°	572.0	572.6	573.1	573.0	572.4	571.6	571.0	570.4
180°	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3

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