

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: P331288-935

Luminaire Tested: **S122DIP-S485D330U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331288-935  
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-S485D330U935-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2821.1 lumens  
Efficiency: N/A  
Efficacy: 102.6 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: General Diffuse

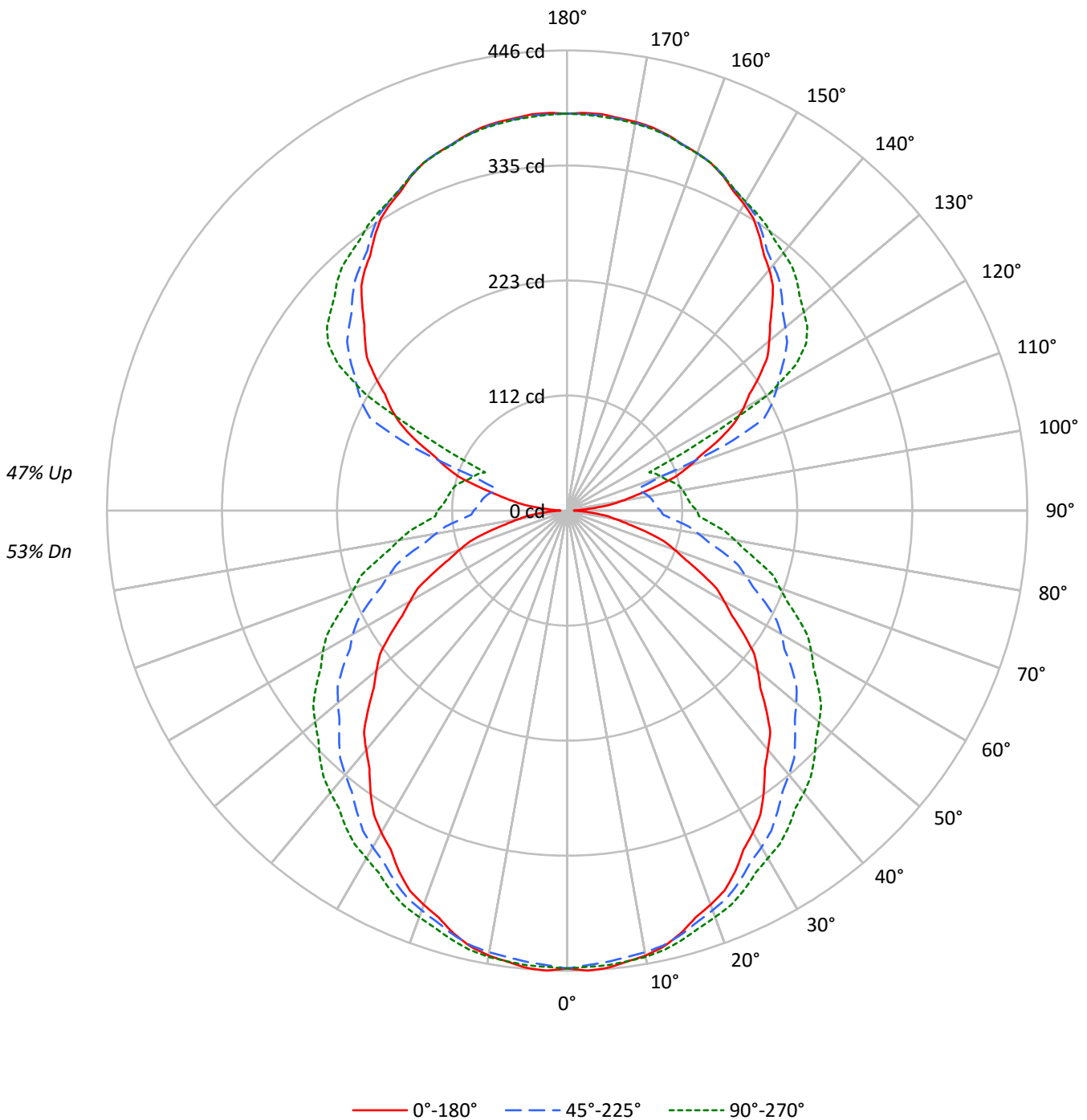
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331288-935

CATALOG NUMBER: S122DIP-S485D330U935-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331288-935

CATALOG NUMBER: S122DIP-S485D330U935-4F0-1E-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	0
RCR																		
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53
1	97	92	87	83	89	85	81	78	72	69	67	61	58	56	50	48	47	42
2	88	79	72	67	81	73	67	62	62	58	54	52	49	46	43	40	38	34
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	37	34	32	28
4	73	61	52	46	67	57	49	43	48	42	38	40	36	32	33	30	27	23
5	66	54	45	39	61	50	42	37	43	37	32	36	31	28	30	26	23	20
6	61	48	40	34	56	45	37	32	39	32	28	32	28	24	27	23	20	17
7	56	44	35	29	52	41	33	28	35	29	24	29	25	21	24	21	18	15
8	52	39	31	26	48	37	29	24	32	26	22	27	22	19	22	19	16	14
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12
10	45	33	25	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11

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

	0°	45°	90°
0°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.0	1.5
10°-20°	120.6	4.3
20°-30°	182.7	6.5
30°-40°	222.5	7.9
40°-50°	239.4	8.5
50°-60°	232.5	8.2
60°-70°	203.0	7.2
70°-80°	156.3	5.5
80°-90°	105.8	3.8
90°-100°	85.1	3.0
100°-110°	99.8	3.5
110°-120°	160.6	5.7
120°-130°	227.1	8.1
130°-140°	229.0	8.1
140°-150°	206.7	7.3
150°-160°	165.0	5.8
160°-170°	106.3	3.8
170°-180°	36.6	1.3
0°-30°	345.3	12.2
0°-40°	567.8	20.1
0°-60°	1039.7	36.9
0°-90°	1504.8	53.3
90°-120°	345.6	12.2
90°-150°	1008.4	35.7
90°-180°	1316.0	46.6
0°-180°	2821.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	47	90	116	126	5
95°	23	45	85	110	118	26
105°	88	111	72	97	106	94
115°	163	176	210	106	88	160
125°	228	232	257	276	283	203
135°	281	285	294	310	315	217
145°	325	325	329	335	337	203
155°	358	356	358	360	358	165
165°	377	375	376	378	376	106
175°	386	384	384	386	383	37
180°	385	385	385	385	385	



TEST NUMBER: P331288-935

CATALOG NUMBER: S122DIP-S485D330U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.7	21.4	30.0	38.7	47.3	56.2	65.4	74.7	83.9	93.2	99.1
90°	6.7	15.7	24.6	33.6	42.6	51.9	61.6	71.2	80.8	90.4	96.4
92.5°	11.5	19.2	26.9	34.5	42.2	50.5	59.6	68.6	77.7	86.7	92.5
95°	23.2	27.9	32.5	37.3	41.9	48.8	57.8	66.8	75.8	84.8	90.6
97.5°	40.4	40.6	40.8	41.1	41.3	46.0	55.3	64.5	73.7	82.9	88.5
100°	53.8	50.6	47.4	44.2	41.0	44.0	53.0	62.1	71.1	80.2	85.9
102.5°	67.9	71.0	74.0	77.1	80.1	81.1	80.1	79.0	78.0	77.0	82.8
105°	87.8	93.8	99.9	105.8	111.8	110.1	100.7	91.2	81.7	72.3	77.9
107.5°	111.2	116.1	120.9	125.7	130.5	126.4	113.2	100.0	87.0	73.8	77.9
110°	125.9	130.1	134.2	138.4	142.5	139.1	128.3	117.4	106.5	95.7	94.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	140.2	143.7	147.2	150.8	154.4	157.2	159.5	161.7	164.0	166.3	148.3
115°	162.6	165.2	167.9	170.5	173.1	178.4	186.4	194.4	202.3	210.3	186.0
117.5°	182.1	184.3	186.5	188.7	190.9	195.5	202.5	209.6	216.5	223.5	220.8
120°	196.8	198.3	199.8	201.3	202.8	207.0	213.8	220.6	227.5	234.3	239.0
122.5°	209.3	210.5	211.7	212.9	214.1	218.0	224.5	231.2	237.7	244.4	248.7
125°	227.6	228.4	229.2	230.1	230.8	234.1	239.9	245.6	251.3	257.1	261.4
127.5°	244.8	245.6	246.3	247.0	247.8	250.5	255.0	259.6	264.2	268.7	272.9
130°	255.7	256.6	257.4	258.3	259.2	261.4	265.1	268.7	272.4	276.1	280.3
132.5°	266.8	267.6	268.3	269.0	269.7	271.5	274.5	277.5	280.5	283.5	287.4
135°	280.7	281.7	282.7	283.7	284.6	286.1	288.1	290.2	292.1	294.1	297.7
137.5°	295.3	296.0	296.7	297.3	298.0	298.9	300.2	301.5	302.7	304.0	307.2
140°	304.9	305.3	305.7	306.0	306.3	306.9	308.0	308.9	309.9	310.8	313.7
142.5°	313.0	313.2	313.6	313.8	314.2	314.7	315.6	316.4	317.2	318.1	320.4
145°	324.9	324.9	324.8	324.7	324.6	325.1	326.1	327.3	328.3	329.3	330.6
147.5°	335.9	335.6	335.4	335.1	334.9	335.3	336.3	337.4	338.5	339.5	339.9
150°	342.9	342.5	342.1	341.6	341.2	341.6	342.5	343.5	344.5	345.5	345.9
152.5°	349.0	348.5	348.0	347.5	347.1	347.2	348.2	349.1	350.1	351.0	351.4
155°	357.7	357.1	356.6	356.0	355.5	355.6	356.4	357.1	357.8	358.5	359.0
157.5°	364.5	364.1	363.6	363.2	362.7	362.7	363.3	363.8	364.3	364.8	365.2
160°	368.6	368.2	367.8	367.5	367.1	367.1	367.5	367.8	368.2	368.6	368.9
162.5°	372.1	371.8	371.4	371.0	370.7	370.7	370.9	371.3	371.6	372.0	372.4
165°	376.9	376.6	376.2	375.8	375.5	375.4	375.6	375.7	375.9	376.1	376.5
167.5°	380.5	380.1	379.8	379.4	379.0	378.9	379.1	379.3	379.4	379.6	380.0
170°	382.5	382.1	381.8	381.4	381.0	380.9	381.0	381.2	381.3	381.4	381.9
172.5°	383.8	383.5	383.1	382.7	382.4	382.2	382.4	382.5	382.6	382.7	383.1
175°	385.6	385.1	384.7	384.3	383.8	383.7	383.8	383.9	384.1	384.2	384.6
177.5°	385.8	385.5	385.1	384.8	384.4	384.4	384.4	384.4	384.4	384.5	384.9
180°	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	105.0	110.9	116.8	120.6	122.5	124.3	126.2	128.0
90°	102.5	108.5	114.5	118.5	120.3	122.2	124.0	125.8
92.5°	98.2	104.0	109.8	113.6	115.3	117.1	118.9	120.7
95°	96.3	102.0	107.8	111.5	113.1	114.8	116.4	118.0
97.5°	94.0	99.5	105.1	108.7	110.5	112.3	114.0	115.8
100°	91.7	97.6	103.3	107.0	108.7	110.5	112.1	113.8
102.5°	88.7	94.5	100.3	104.1	105.8	107.5	109.3	111.1
105°	83.6	89.3	95.0	98.8	100.6	102.4	104.2	106.1
107.5°	82.1	86.1	90.2	93.2	95.1	96.9	98.7	100.5
110°	92.5	90.8	89.2	89.3	91.1	92.9	94.8	96.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	130.3	112.3	94.3	86.1	87.9	89.6	91.4	93.2
115°	161.6	137.2	113.0	99.3	96.4	93.5	90.7	87.7
117.5°	218.2	215.4	212.8	204.8	191.7	178.5	165.3	152.1
120°	243.7	248.5	253.2	252.3	245.5	238.7	231.9	225.2
122.5°	253.0	257.4	261.7	263.7	263.4	263.1	262.9	262.6
125°	265.7	270.0	274.2	277.2	278.6	280.1	281.5	283.0
127.5°	277.1	281.3	285.4	288.2	289.5	290.8	292.1	293.3
130°	284.3	288.4	292.6	295.2	296.2	297.3	298.4	299.5
132.5°	291.3	295.2	299.1	301.5	302.6	303.8	304.8	305.9
135°	301.4	305.0	308.6	310.9	311.9	312.9	313.9	315.0
137.5°	310.5	313.7	316.9	318.9	319.7	320.5	321.2	322.0
140°	316.5	319.3	322.2	323.9	324.4	325.0	325.5	326.1
142.5°	322.7	325.1	327.4	328.8	329.2	329.7	330.1	330.5
145°	331.9	333.2	334.5	335.4	335.7	336.1	336.6	337.0
147.5°	340.4	340.8	341.2	341.5	341.6	341.6	341.7	341.8
150°	346.2	346.6	347.0	347.0	346.7	346.4	346.0	345.8
152.5°	351.8	352.1	352.5	352.5	352.1	351.7	351.3	350.9
155°	359.3	359.6	360.1	360.0	359.5	359.0	358.5	358.0
157.5°	365.7	366.1	366.4	366.4	365.9	365.5	365.0	364.5
160°	369.4	369.7	370.1	370.1	369.6	369.2	368.8	368.3
162.5°	372.7	373.2	373.6	373.6	373.0	372.5	372.0	371.4
165°	376.9	377.4	377.8	377.8	377.4	376.9	376.5	376.1
167.5°	380.5	380.9	381.3	381.3	380.7	380.1	379.6	379.0
170°	382.3	382.7	383.1	383.1	382.5	381.9	381.4	380.8
172.5°	383.6	384.0	384.4	384.4	383.8	383.3	382.7	382.2
175°	385.0	385.5	385.9	385.8	385.2	384.6	383.9	383.3
177.5°	385.2	385.6	385.9	385.8	385.4	385.0	384.5	384.1
180°	384.7	384.7	384.7	384.7	384.7	384.7	384.7	384.7

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