

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: P331289-830

Luminaire Tested: **SA2XXDIP-C485D330U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331289-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C485D330U830-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2958.0 lumens  
Efficiency: N/A  
Efficacy: 107.6 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

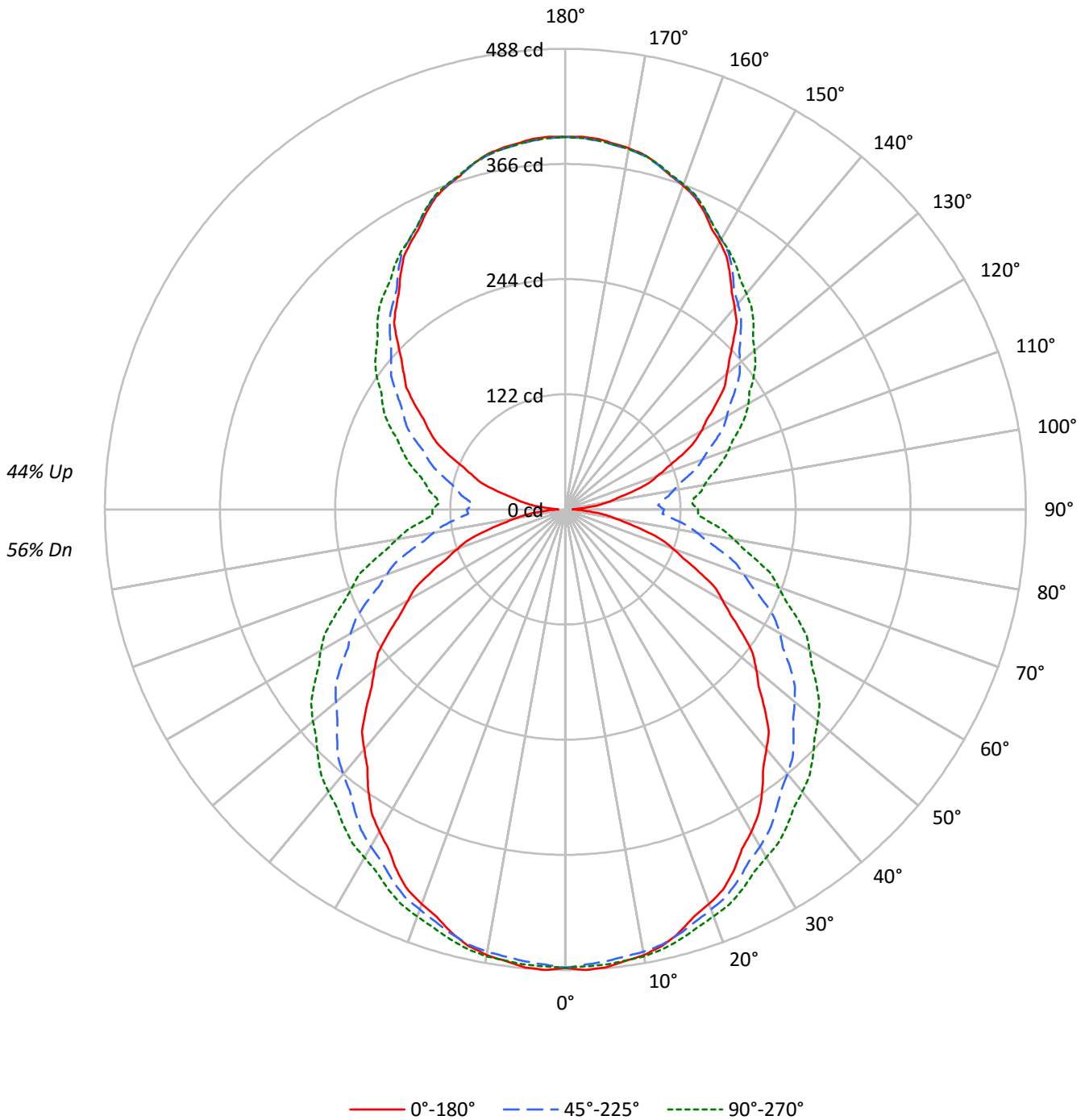
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	109	109	109	109	101	101	101	101	87	87	87	73	73	73	61	61	61	56
1	97	92	88	84	90	86	82	78	73	70	68	62	60	58	52	50	48	43
2	88	80	73	67	81	74	68	63	63	59	55	54	50	47	44	42	40	35
3	80	69	61	55	74	65	57	52	55	50	45	47	43	39	39	36	33	29
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24
5	67	54	46	39	62	51	43	37	43	37	33	37	32	28	31	27	24	21
6	61	49	40	34	57	45	38	32	39	33	28	33	28	25	28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	19	16
8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	24	19	25	21	17	21	18	15	13
10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11

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

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	1.6
10°-20°	132.0	4.5
20°-30°	200.0	6.8
30°-40°	243.6	8.2
40°-50°	262.1	8.9
50°-60°	254.5	8.6
60°-70°	222.2	7.5
70°-80°	171.1	5.8
80°-90°	116.4	3.9
90°-100°	104.1	3.5
100°-110°	135.4	4.6
110°-120°	170.9	5.8
120°-130°	195.9	6.6
130°-140°	204.9	6.9
140°-150°	193.7	6.5
150°-160°	161.1	5.4
160°-170°	106.9	3.6
170°-180°	37.4	1.3
0°-30°	378.0	12.8
0°-40°	621.6	21.0
0°-60°	1138.1	38.5
0°-90°	1647.8	55.7
90°-120°	410.4	13.9
90°-150°	1004.8	34.0
90°-180°	1310.0	44.3
0°-180°	2958.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	7	53	104	131	141	6
95°	23	60	102	128	137	24
105°	75	97	134	158	167	80
115°	136	147	177	197	204	134
125°	195	199	220	237	244	175
135°	252	255	263	277	282	194
145°	304	307	309	313	316	190
155°	348	349	350	352	351	160
165°	379	378	378	380	379	107
175°	394	393	392	394	393	37
180°	395	395	395	395	395	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	13.9	23.4	32.9	42.3	51.8	61.8	72.1	82.5	92.8	103.1	109.5
90°	7.4	17.3	27.3	37.2	47.2	58.1	69.7	81.2	92.9	104.5	110.7
92.5°	12.4	21.5	30.6	39.7	48.8	58.3	68.3	78.4	88.4	98.4	104.6
95°	22.9	31.0	39.1	47.2	55.3	64.1	73.7	83.2	92.7	102.3	108.2
97.5°	36.6	43.7	50.9	58.2	65.3	73.5	82.8	92.2	101.4	110.7	116.5
100°	47.2	53.6	59.9	66.4	72.8	80.4	89.4	98.4	107.4	116.3	122.2
102.5°	57.9	63.6	69.4	75.1	80.9	88.1	97.0	105.8	114.5	123.3	129.0
105°	75.1	79.8	84.6	89.4	94.2	100.7	109.0	117.3	125.5	133.8	139.4
107.5°	93.2	97.2	101.1	105.1	109.1	114.9	122.7	130.4	138.3	146.1	151.4
110°	104.3	107.9	111.5	115.1	118.7	124.3	132.0	139.6	147.3	155.0	159.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	117.2	120.3	123.3	126.4	129.4	134.6	141.9	149.1	156.3	163.5	168.3
115°	136.0	138.2	140.3	142.5	144.7	149.2	156.1	163.0	169.8	176.7	181.3
117.5°	154.1	155.8	157.5	159.3	161.0	164.9	171.0	177.1	183.1	189.3	193.7
120°	166.6	167.9	169.1	170.2	171.4	174.9	180.6	186.2	191.9	197.6	202.0
122.5°	178.0	179.0	180.0	181.0	181.9	185.1	190.6	196.0	201.5	207.0	211.0
125°	195.2	195.9	196.5	197.2	197.8	200.6	205.4	210.2	215.0	219.7	223.8
127.5°	212.6	213.3	214.0	214.6	215.4	217.5	221.3	225.1	228.8	232.6	236.3
130°	223.5	224.3	225.2	225.9	226.8	228.8	231.9	235.0	238.1	241.3	244.9
132.5°	235.7	236.4	237.0	237.6	238.3	239.9	242.4	245.0	247.6	250.2	253.4
135°	251.5	252.2	253.1	253.9	254.7	256.0	257.7	259.4	261.1	262.8	266.1
137.5°	268.7	269.4	269.9	270.6	271.3	272.0	272.9	273.7	274.7	275.5	278.3
140°	279.1	279.6	280.1	280.6	281.2	281.7	282.4	283.1	283.8	284.5	287.0
142.5°	289.7	290.3	290.8	291.2	291.8	292.2	292.5	292.8	293.1	293.4	295.5
145°	304.3	304.9	305.4	305.9	306.4	306.9	307.4	307.8	308.2	308.7	309.7
147.5°	318.0	318.7	319.2	319.9	320.5	320.9	321.2	321.6	321.9	322.2	322.4
150°	327.3	327.8	328.2	328.7	329.1	329.5	329.8	330.1	330.4	330.6	330.9
152.5°	335.6	336.0	336.5	337.0	337.3	337.8	338.1	338.5	338.8	339.2	339.5
155°	348.0	348.2	348.5	348.6	348.8	349.1	349.3	349.5	349.8	350.0	350.3
157.5°	358.5	358.7	358.8	359.0	359.2	359.3	359.5	359.6	359.7	359.9	360.3
160°	365.0	365.1	365.2	365.4	365.5	365.7	365.7	365.8	365.9	366.0	366.4
162.5°	370.8	370.9	370.9	370.9	371.0	371.0	371.1	371.2	371.3	371.3	371.8
165°	378.6	378.5	378.4	378.4	378.3	378.2	378.2	378.2	378.2	378.2	378.8
167.5°	385.1	384.9	384.7	384.5	384.3	384.2	384.1	384.1	384.1	384.1	384.6
170°	388.6	388.4	388.1	388.0	387.8	387.6	387.5	387.4	387.4	387.3	387.8
172.5°	391.0	390.8	390.6	390.3	390.1	389.9	389.9	389.8	389.7	389.6	390.2
175°	394.0	393.7	393.5	393.2	393.0	392.9	392.8	392.6	392.4	392.3	392.8
177.5°	395.1	394.9	394.7	394.6	394.5	394.3	394.2	394.1	393.9	393.8	394.2
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	115.8	122.2	128.6	132.7	134.8	136.8	138.7	140.8
90°	116.8	122.9	129.0	133.0	135.0	137.0	138.9	140.8
92.5°	110.7	117.0	123.1	127.1	129.0	130.9	132.8	134.7
95°	114.1	120.1	126.0	129.9	131.6	133.4	135.1	136.8
97.5°	122.3	128.1	133.8	137.7	139.5	141.4	143.2	145.1
100°	127.9	133.7	139.5	143.2	144.9	146.5	148.2	149.8
102.5°	134.8	140.5	146.2	149.9	151.6	153.2	154.9	156.5
105°	145.1	150.7	156.3	159.9	161.6	163.4	165.1	166.8
107.5°	156.7	162.0	167.3	170.7	172.1	173.4	174.8	176.2
110°	164.9	169.9	174.9	178.2	179.7	181.3	182.8	184.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	173.1	178.0	182.9	186.1	187.6	189.2	190.7	192.3
115°	186.0	190.6	195.2	198.3	199.8	201.3	202.8	204.3
117.5°	198.1	202.6	207.1	210.0	211.3	212.7	214.1	215.5
120°	206.3	210.8	215.1	218.0	219.5	221.0	222.5	224.0
122.5°	215.2	219.2	223.3	226.0	227.3	228.6	229.9	231.2
125°	227.7	231.8	235.7	238.4	239.8	241.1	242.4	243.7
127.5°	239.9	243.5	247.1	249.5	250.6	251.8	252.9	254.0
130°	248.5	252.0	255.7	258.0	258.9	259.9	260.8	261.7
132.5°	256.7	260.0	263.3	265.5	266.6	267.5	268.5	269.6
135°	269.3	272.5	275.7	277.8	278.8	279.8	280.9	281.9
137.5°	281.2	284.0	286.8	288.6	289.4	290.1	290.9	291.6
140°	289.5	292.0	294.5	296.1	296.7	297.4	297.9	298.6
142.5°	297.6	299.6	301.7	303.0	303.5	304.1	304.5	305.1
145°	310.8	311.7	312.7	313.5	314.0	314.4	314.9	315.5
147.5°	322.7	323.0	323.3	323.5	323.6	323.7	323.8	323.9
150°	331.1	331.3	331.6	331.6	331.3	331.1	330.9	330.6
152.5°	339.8	340.1	340.4	340.4	340.1	339.8	339.5	339.2
155°	350.7	351.1	351.5	351.6	351.3	351.1	350.9	350.6
157.5°	360.8	361.4	361.8	361.9	361.6	361.2	360.9	360.5
160°	366.8	367.3	367.8	367.8	367.5	367.2	366.9	366.6
162.5°	372.3	372.8	373.3	373.3	373.1	372.7	372.3	371.9
165°	379.3	379.8	380.3	380.4	380.0	379.7	379.3	379.0
167.5°	385.1	385.6	386.2	386.3	385.9	385.4	385.0	384.7
170°	388.3	388.8	389.4	389.4	389.0	388.5	388.0	387.6
172.5°	390.7	391.2	391.7	391.8	391.3	390.9	390.5	390.0
175°	393.3	393.8	394.4	394.4	394.0	393.5	393.0	392.6
177.5°	394.5	394.8	395.2	395.2	394.8	394.5	394.2	393.8
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6

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