

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: P331292-840

Luminaire Tested: **SA2XXDIP-C485D330U840-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331292-840  
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-C485D330U840-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH 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: 3179.4 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

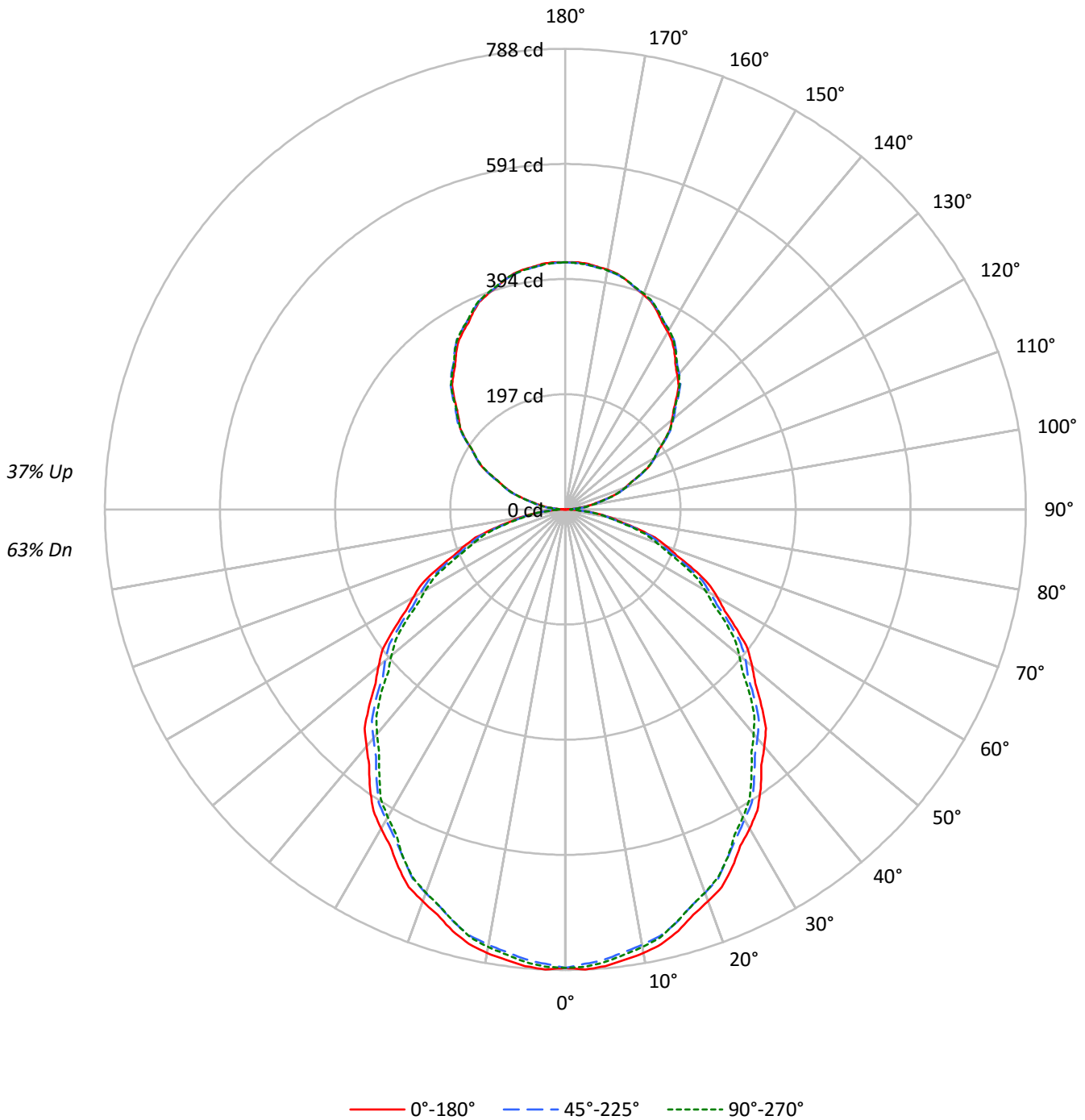
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	79	79	79	68	68	68	63
1	101	96	92	89	94	90	87	84	79	77	74	69	67	66	60	59	57	53
2	92	84	78	72	86	79	73	69	70	65	62	61	58	55	53	50	48	44
3	84	74	66	60	78	70	63	58	61	56	52	54	50	46	47	44	41	38
4	77	66	57	51	71	62	54	49	55	49	44	48	43	40	42	38	35	32
5	70	58	50	44	66	55	48	42	49	43	38	43	38	35	38	34	31	28
6	65	53	44	38	61	50	42	37	44	38	33	39	34	30	34	30	27	25
7	60	48	39	34	56	45	38	32	40	34	30	36	31	27	31	27	24	22
8	56	43	35	30	52	41	34	29	37	31	26	33	28	24	29	25	22	20
9	52	40	32	27	49	38	30	26	34	28	24	30	25	22	27	23	20	18
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	25	21	18	16

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

	0°	45°	90°
0°	12665	12665	12665
5°	12713	12530	12603
10°	12637	12403	12463
15°	12481	12242	12227
20°	12259	12000	11986
25°	12039	11703	11703
30°	11757	11432	11332
35°	11491	11105	10941
40°	11160	10779	10570
45°	10832	10453	10195
50°	10477	10115	9756
55°	10106	9723	9362
60°	9691	9255	8913
65°	9249	8787	8382
70°	8686	8224	7832
75°	7904	7573	7392
80°	7011	6797	6453
85°	5724	5446	4891



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.8	2.3
10°-20°	207.5	6.5
20°-30°	305.0	9.6
30°-40°	354.3	11.1
40°-50°	354.0	11.1
50°-60°	308.7	9.7
60°-70°	228.2	7.2
70°-80°	129.3	4.1
80°-90°	36.4	1.1
90°-100°	26.8	0.8
100°-110°	83.2	2.6
110°-120°	142.2	4.5
120°-130°	187.0	5.9
130°-140°	209.9	6.6
140°-150°	205.8	6.5
150°-160°	172.7	5.4
160°-170°	114.5	3.6
170°-180°	40.0	1.3
0°-30°	586.3	18.4
0°-40°	940.7	29.6
0°-60°	1603.3	50.4
0°-90°	1997.2	62.8
90°-120°	252.2	7.9
90°-150°	855.0	26.9
90°-180°	1182.0	37.2
0°-180°	3179.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	784	781	773	779	778	74
15°	747	742	732	735	732	210
25°	676	669	657	658	657	311
35°	583	575	563	559	555	364
45°	474	469	458	450	446	366
55°	359	354	345	337	333	321
65°	242	237	230	223	219	239
75°	127	125	121	117	118	135
85°	31	30	29	27	26	35
90°	0	5	12	12	12	2
95°	19	22	23	23	22	21
105°	77	78	78	79	79	81
115°	143	145	144	144	143	141
125°	208	211	210	209	208	185
135°	269	272	273	273	272	207
145°	326	329	331	331	330	204
155°	373	374	375	377	376	172
165°	406	405	405	408	406	114
175°	422	421	420	422	421	40
180°	423	423	423	423	423	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4
2.5°	788.0	787.3	786.7	786.0	785.3	784.3	782.7	781.3	779.8	778.3	779.7
5°	784.4	783.7	783.0	782.3	781.7	780.4	778.6	776.8	774.9	773.1	774.4
7.5°	777.4	776.4	775.4	774.3	773.3	771.8	769.9	768.1	766.2	764.3	765.7
10°	770.8	769.6	768.4	767.3	766.1	764.5	762.4	760.5	758.5	756.5	757.8
12.5°	761.7	760.7	759.6	758.6	757.6	756.1	754.1	752.0	750.0	748.0	748.9
15°	746.7	745.7	744.7	743.7	742.7	741.0	738.8	736.7	734.5	732.4	733.0
17.5°	727.3	726.4	725.4	724.4	723.4	721.8	719.5	717.3	715.1	712.9	713.7
20°	713.5	712.5	711.4	710.4	709.4	707.8	705.4	703.1	700.7	698.4	698.9
22.5°	699.6	698.2	696.8	695.4	694.0	692.2	689.9	687.7	685.5	683.3	683.4
25°	675.8	674.4	673.1	671.8	670.4	668.3	665.5	662.6	659.7	656.9	657.2
27.5°	648.6	647.4	646.2	645.0	643.8	642.1	639.9	637.5	635.3	633.1	632.6
30°	630.6	629.1	627.8	626.5	625.1	623.2	620.7	618.2	615.7	613.2	612.7
32.5°	611.2	610.2	609.0	607.9	606.9	605.0	602.4	599.8	597.1	594.5	593.6
35°	583.0	581.3	579.7	577.9	576.3	574.1	571.5	568.8	566.0	563.4	562.4
37.5°	551.2	549.7	548.3	546.7	545.2	543.2	540.5	537.9	535.1	532.5	531.2
40°	529.5	528.1	526.7	525.4	524.1	522.1	519.4	516.7	514.0	511.4	509.9
42.5°	508.4	507.0	505.6	504.3	503.0	501.0	498.3	495.6	492.9	490.2	488.6
45°	474.4	473.2	472.0	470.9	469.7	467.9	465.3	462.8	460.3	457.8	456.0
47.5°	440.6	439.5	438.4	437.3	436.2	434.3	431.7	429.1	426.5	423.8	421.9
50°	417.1	416.3	415.4	414.5	413.7	412.1	409.8	407.5	405.1	402.7	400.4
52.5°	394.2	393.0	391.9	390.8	389.7	388.1	385.9	383.6	381.4	379.2	377.3
55°	359.0	358.0	357.0	356.0	355.0	353.5	351.4	349.4	347.4	345.4	343.5
57.5°	323.7	322.9	322.0	321.3	320.5	319.0	316.8	314.6	312.4	310.1	308.1
60°	300.1	299.5	298.8	298.1	297.5	296.0	293.7	291.2	288.9	286.6	284.8
62.5°	277.2	276.2	275.1	274.0	273.0	271.6	269.7	267.9	266.1	264.3	262.6
65°	242.1	241.1	240.0	239.0	238.1	236.7	235.1	233.4	231.7	230.0	228.5
67.5°	206.3	205.5	204.7	203.9	203.1	202.0	200.5	198.9	197.4	195.9	194.8
70°	184.0	183.4	182.7	182.0	181.4	180.3	178.7	177.2	175.7	174.2	173.1
72.5°	161.1	160.5	159.8	159.1	158.4	157.6	156.6	155.6	154.7	153.7	152.5
75°	126.7	126.3	126.0	125.7	125.3	124.8	123.9	123.1	122.3	121.4	120.4
77.5°	95.9	95.3	94.8	94.2	93.6	93.2	92.9	92.5	92.2	91.9	91.4
80°	75.4	75.2	75.1	74.9	74.7	74.5	74.1	73.8	73.5	73.1	72.6
82.5°	56.1	56.0	56.0	56.0	55.9	55.8	55.6	55.4	55.2	55.0	54.4
85°	30.9	30.8	30.6	30.4	30.3	30.1	29.9	29.8	29.6	29.4	28.9
87.5°	10.9	10.8	10.8	10.7	10.6	10.6	10.7	10.8	10.9	10.9	10.5
90°	0.4	1.3	2.2	3.2	4.1	5.6	7.3	9.0	10.7	12.5	12.3
92.5°	6.4	7.1	7.8	8.5	9.2	9.7	10.1	10.5	10.9	11.3	11.4
95°	18.6	19.4	20.1	20.9	21.7	22.2	22.3	22.5	22.7	22.8	22.8
97.5°	33.9	34.6	35.2	36.0	36.7	37.2	37.5	37.8	38.1	38.4	38.4
100°	45.3	45.9	46.6	47.3	47.9	48.3	48.5	48.8	49.0	49.3	49.3
102.5°	57.3	57.8	58.3	58.8	59.3	59.8	60.0	60.3	60.6	60.9	61.0
105°	76.7	77.0	77.2	77.5	77.7	77.9	78.1	78.2	78.4	78.5	78.7
107.5°	96.2	96.6	96.9	97.4	97.7	97.9	97.9	97.9	97.9	97.9	97.9
110°	108.9	109.3	109.8	110.3	110.7	111.0	111.0	111.0	111.0	111.0	111.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	122.5	123.0	123.5	123.9	124.4	124.6	124.5	124.5	124.4	124.4	124.2
115°	142.7	143.2	143.7	144.1	144.6	144.8	144.6	144.4	144.3	144.1	144.1
117.5°	162.8	163.5	164.1	164.7	165.4	165.5	165.0	164.6	164.1	163.7	163.5
120°	176.2	176.9	177.5	178.1	178.7	178.7	178.1	177.5	176.9	176.2	176.2
122.5°	188.5	189.2	190.1	190.8	191.6	191.8	191.3	190.9	190.4	190.0	189.8
125°	207.6	208.3	209.0	209.7	210.5	210.8	210.5	210.3	210.1	209.7	209.5
127.5°	226.3	227.2	228.1	228.9	229.8	230.1	229.9	229.6	229.3	229.0	228.7
130°	238.0	239.0	240.0	241.1	242.1	242.6	242.4	242.3	242.1	241.9	241.8
132.5°	251.2	252.0	252.8	253.6	254.5	254.9	254.9	255.0	255.0	255.0	254.7
135°	268.6	269.5	270.4	271.2	272.2	272.7	272.9	273.0	273.2	273.3	273.2
137.5°	287.1	287.8	288.5	289.3	290.0	290.4	290.6	290.8	291.0	291.2	291.2
140°	298.3	299.0	299.7	300.4	301.1	301.6	302.1	302.5	302.9	303.3	303.3
142.5°	309.7	310.4	311.1	311.8	312.6	313.1	313.3	313.6	313.9	314.1	314.2
145°	326.1	326.7	327.2	327.8	328.3	328.8	329.3	329.8	330.2	330.7	330.8
147.5°	340.7	341.4	342.0	342.7	343.4	343.9	344.2	344.6	344.9	345.2	345.4
150°	350.7	351.2	351.6	352.1	352.6	353.0	353.4	353.7	354.0	354.3	354.6
152.5°	359.6	360.0	360.5	361.0	361.4	361.9	362.2	362.6	363.0	363.5	363.8
155°	372.8	373.0	373.3	373.5	373.8	374.1	374.3	374.5	374.8	375.0	375.4
157.5°	384.2	384.4	384.5	384.7	384.9	385.0	385.2	385.3	385.4	385.6	386.1
160°	391.0	391.2	391.3	391.5	391.6	391.8	391.8	391.9	392.0	392.1	392.5
162.5°	397.3	397.4	397.4	397.4	397.5	397.5	397.6	397.7	397.8	397.8	398.4
165°	405.7	405.6	405.5	405.5	405.4	405.3	405.3	405.3	405.3	405.3	405.9
167.5°	412.6	412.4	412.2	411.9	411.7	411.6	411.5	411.5	411.5	411.5	412.0
170°	416.4	416.2	415.9	415.7	415.5	415.3	415.2	415.1	415.1	415.0	415.5
172.5°	418.9	418.7	418.5	418.2	418.0	417.8	417.8	417.7	417.6	417.5	418.1
175°	422.1	421.8	421.6	421.3	421.1	420.9	420.8	420.6	420.4	420.3	420.8
177.5°	423.3	423.1	422.9	422.8	422.6	422.4	422.3	422.2	422.0	421.9	422.3
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	784.4	784.4	784.4	784.4	784.4	784.4	784.4	784.4
2.5°	781.0	782.3	783.7	784.3	784.0	783.7	783.5	783.2
5°	775.8	777.1	778.4	778.9	778.6	778.2	777.9	777.6
7.5°	767.0	768.3	769.7	770.1	769.8	769.4	769.0	768.7
10°	759.1	760.5	761.8	762.2	761.7	761.2	760.7	760.2
12.5°	749.9	750.8	751.7	752.0	751.6	751.3	750.9	750.5
15°	733.7	734.4	735.0	734.9	734.1	733.3	732.5	731.5
17.5°	714.4	715.2	716.0	715.9	715.1	714.4	713.6	712.8
20°	699.4	699.9	700.4	700.3	699.6	698.9	698.3	697.6
22.5°	683.5	683.6	683.7	683.6	683.2	682.8	682.4	682.0
25°	657.6	657.9	658.2	658.2	657.9	657.6	657.2	656.9
27.5°	632.1	631.6	631.1	630.5	629.7	628.8	628.0	627.2
30°	612.2	611.7	611.2	610.6	609.9	609.3	608.5	607.8
32.5°	592.7	591.8	590.9	590.1	589.4	588.8	588.0	587.3
35°	561.4	560.4	559.4	558.5	557.6	556.7	555.9	555.1
37.5°	530.0	528.8	527.6	526.4	525.6	524.8	524.0	523.3
40°	508.4	506.9	505.3	504.2	503.5	502.9	502.2	501.5
42.5°	487.0	485.3	483.6	482.4	481.4	480.5	479.6	478.6
45°	454.1	452.3	450.4	449.2	448.5	447.9	447.2	446.5
47.5°	420.0	418.0	416.1	414.7	413.6	412.7	411.7	410.7
50°	398.1	395.7	393.3	391.7	390.9	390.1	389.2	388.4
52.5°	375.4	373.3	371.4	369.9	368.8	367.7	366.6	365.5
55°	341.4	339.4	337.4	336.0	335.1	334.3	333.5	332.6
57.5°	306.2	304.2	302.3	300.9	300.2	299.6	299.0	298.3
60°	282.9	281.0	279.2	278.0	277.5	277.0	276.5	276.0
62.5°	260.8	259.1	257.4	256.3	255.6	255.0	254.4	253.7
65°	227.0	225.5	224.0	222.8	222.0	221.2	220.4	219.4
67.5°	193.6	192.4	191.3	190.4	189.7	188.9	188.3	187.6
70°	171.9	170.7	169.6	168.6	167.9	167.2	166.6	165.9
72.5°	151.4	150.2	149.1	148.1	147.6	147.0	146.5	146.0
75°	119.4	118.5	117.4	117.0	117.4	117.8	118.1	118.5
77.5°	90.9	90.4	89.9	89.4	88.9	88.5	88.0	87.5
80°	72.1	71.6	71.2	70.7	70.4	70.1	69.7	69.4
82.5°	53.8	53.1	52.5	52.1	52.1	52.0	51.9	51.9
85°	28.4	27.9	27.4	27.1	26.9	26.8	26.6	26.4
87.5°	10.1	9.6	9.2	8.9	8.8	8.7	8.6	8.5
90°	12.2	12.0	11.8	11.8	11.9	12.0	12.0	12.1
92.5°	11.4	11.4	11.5	11.5	11.5	11.5	11.5	11.5
95°	22.8	22.8	22.8	22.7	22.6	22.4	22.3	22.1
97.5°	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.3
100°	49.3	49.3	49.3	49.2	49.1	49.1	49.0	48.9
102.5°	61.1	61.1	61.2	61.2	61.1	61.0	61.0	60.9
105°	78.8	79.0	79.2	79.2	79.2	79.2	79.2	79.2
107.5°	98.0	98.1	98.1	98.0	97.6	97.3	96.8	96.4
110°	111.0	111.0	111.0	110.9	110.6	110.4	110.2	109.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	124.0	123.8	123.6	123.4	123.3	123.1	122.9	122.7
115°	144.0	143.9	143.8	143.7	143.4	143.2	143.0	142.7
117.5°	163.3	163.1	162.9	162.7	162.5	162.3	162.0	161.8
120°	176.2	176.2	176.2	176.1	175.9	175.6	175.4	175.2
122.5°	189.6	189.3	189.1	189.0	188.8	188.6	188.4	188.3
125°	209.3	209.0	208.8	208.6	208.6	208.5	208.4	208.3
127.5°	228.5	228.2	227.9	227.6	227.4	227.1	226.9	226.6
130°	241.6	241.5	241.3	241.1	240.8	240.3	240.0	239.7
132.5°	254.3	254.0	253.7	253.4	253.1	252.9	252.6	252.4
135°	273.2	273.1	273.0	272.9	272.6	272.4	272.2	271.9
137.5°	291.1	291.0	291.0	290.8	290.5	290.2	289.9	289.5
140°	303.3	303.3	303.3	303.1	302.8	302.5	302.2	301.8
142.5°	314.3	314.3	314.4	314.3	314.0	313.6	313.3	313.0
145°	330.9	330.9	331.0	330.9	330.6	330.3	330.0	329.6
147.5°	345.5	345.7	345.9	345.8	345.5	345.2	344.9	344.6
150°	354.8	355.0	355.3	355.3	355.0	354.8	354.6	354.3
152.5°	364.1	364.4	364.7	364.7	364.4	364.1	363.8	363.5
155°	375.8	376.2	376.6	376.7	376.4	376.2	376.0	375.7
157.5°	386.6	387.2	387.7	387.8	387.4	387.0	386.7	386.3
160°	393.0	393.5	394.0	394.0	393.7	393.4	393.1	392.8
162.5°	398.9	399.4	400.0	400.0	399.7	399.3	398.9	398.5
165°	406.4	407.0	407.5	407.6	407.2	406.8	406.4	406.1
167.5°	412.6	413.1	413.7	413.8	413.4	412.9	412.5	412.1
170°	416.1	416.6	417.2	417.2	416.8	416.3	415.8	415.3
172.5°	418.6	419.2	419.7	419.8	419.3	418.8	418.4	417.9
175°	421.4	421.9	422.5	422.5	422.1	421.6	421.1	420.6
177.5°	422.7	423.0	423.4	423.4	423.0	422.7	422.3	421.9
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8

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