

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: P331299

Luminaire Tested: **SA2XXDIP-C485D530U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331299
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D530U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4032.2 lumens
Efficiency: N/A
Efficacy: 122.9 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

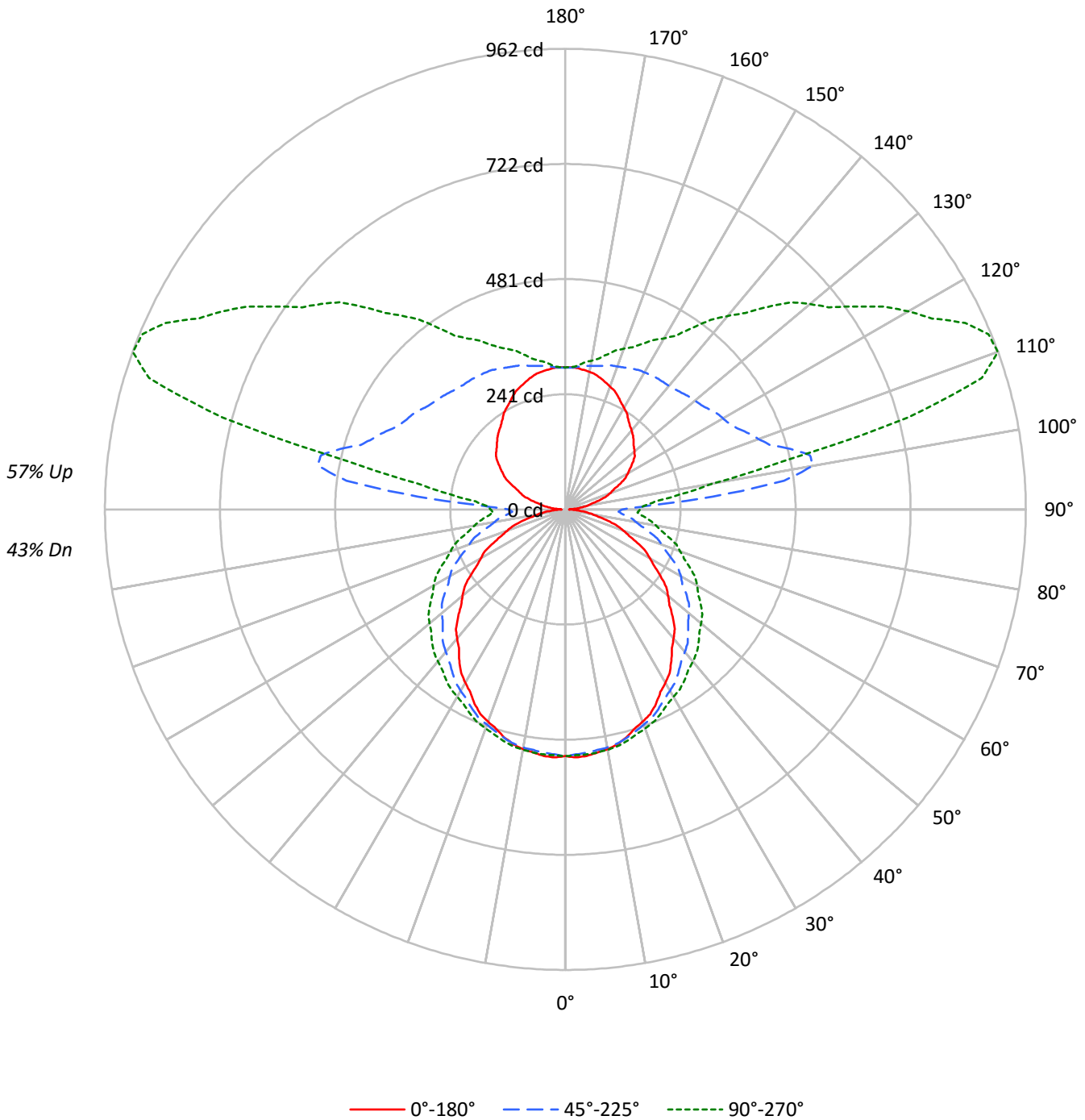
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	95	90	86	82	87	82	79	75	68	65	63	54	53	51	42	41	40	34
2	86	78	71	66	78	71	66	61	59	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	23
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	20	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	18	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8320	8320	8320
5°	8361	8009	7978
10°	8308	7773	7685
15°	8193	7522	7376
20°	8049	7253	7078
25°	7906	6994	6809
30°	7704	6728	6536
35°	7501	6472	6346
40°	7287	6254	6154
45°	7084	6058	5992
50°	6865	5879	5830
55°	6634	5689	5666
60°	6355	5493	5493
65°	6063	5262	5287
70°	5738	5012	5065
75°	5319	4768	4860
80°	4657	4519	4652
85°	4025	4303	4491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	1.2
10°-20°	140.0	3.5
20°-30°	212.2	5.3
30°-40°	258.4	6.4
40°-50°	278.0	6.9
50°-60°	270.0	6.7
60°-70°	235.8	5.8
70°-80°	181.5	4.5
80°-90°	124.5	3.1
90°-100°	202.5	5.0
100°-110°	463.6	11.5
110°-120°	467.9	11.6
120°-130°	374.5	9.3
130°-140°	292.1	7.2
140°-150°	215.2	5.3
150°-160°	150.1	3.7
160°-170°	88.3	2.2
170°-180°	28.8	0.7
0°-30°	401.0	9.9
0°-40°	659.5	16.4
0°-60°	1207.5	29.9
0°-90°	1749.3	43.4
90°-120°	1134.1	28.1
90°-150°	2015.8	50.0
90°-180°	2283.0	56.6
0°-180°	4032.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	517	514	510	514	514	49
15°	493	494	494	501	500	139
25°	448	453	460	469	471	206
35°	386	399	413	429	435	241
45°	317	337	363	385	394	244
55°	243	270	308	334	345	217
65°	166	203	246	276	287	165
75°	92	134	182	212	223	97
85°	27	73	121	151	163	29
90°	8	59	118	146	156	6
95°	26	91	309	198	188	26
105°	73	131	487	845	741	78
115°	126	167	398	796	921	124
125°	173	205	365	636	738	153
135°	202	241	344	520	598	156
145°	229	263	334	419	462	144
155°	261	281	324	367	382	120
165°	284	293	311	330	335	80
175°	296	296	299	303	302	28
180°	296	296	296	296	296	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	518.3	517.9	517.5	517.1	516.7	516.0	515.1	514.2	513.3	512.3	513.0
5°	516.8	516.3	515.8	515.3	514.8	514.1	513.1	512.1	511.1	510.1	511.1
7.5°	512.2	511.8	511.5	511.2	510.9	510.3	509.5	508.8	508.0	507.2	508.4
10°	508.6	508.3	507.9	507.6	507.3	506.9	506.4	505.9	505.4	504.9	506.2
12.5°	502.6	502.7	502.8	502.8	502.9	502.7	502.4	502.0	501.6	501.3	502.6
15°	492.9	493.2	493.6	493.9	494.2	494.4	494.4	494.4	494.4	494.4	495.9
17.5°	480.4	481.1	481.8	482.5	483.2	483.8	484.3	484.8	485.4	485.9	487.4
20°	472.0	472.8	473.7	474.5	475.3	476.1	476.7	477.4	478.1	478.7	480.5
22.5°	463.0	464.0	465.0	465.9	466.9	467.8	468.8	469.7	470.6	471.6	473.4
25°	448.1	449.3	450.4	451.6	452.7	454.1	455.6	457.1	458.6	460.0	462.0
27.5°	430.2	432.1	434.0	435.9	437.7	439.6	441.3	443.1	444.8	446.6	449.1
30°	418.2	420.4	422.5	424.7	426.9	429.0	431.2	433.3	435.5	437.6	440.3
32.5°	405.1	407.5	409.9	412.4	414.8	417.3	419.8	422.4	424.9	427.5	430.5
35°	386.1	388.9	391.8	394.6	397.4	400.4	403.5	406.7	409.8	413.0	416.6
37.5°	365.5	368.8	372.0	375.3	378.5	382.2	386.3	390.3	394.4	398.5	402.6
40°	351.8	355.4	359.1	362.7	366.4	370.4	374.9	379.4	383.9	388.4	392.7
42.5°	338.6	342.3	345.9	349.6	353.2	357.6	362.8	367.9	373.1	378.2	382.9
45°	316.7	321.1	325.6	330.1	334.6	339.7	345.5	351.3	357.2	363.0	368.1
47.5°	295.0	299.9	304.8	309.6	314.5	320.4	327.2	334.0	340.8	347.6	353.0
50°	280.1	285.2	290.4	295.5	300.6	306.9	314.4	321.9	329.4	336.8	342.5
52.5°	265.7	271.1	276.5	282.0	287.4	294.0	301.9	309.7	317.6	325.5	331.2
55°	242.7	248.7	254.7	260.6	266.6	273.9	282.6	291.2	299.8	308.4	314.4
57.5°	220.0	226.8	233.5	240.2	247.0	254.7	263.5	272.3	281.1	289.9	296.4
60°	203.9	211.0	218.2	225.3	232.4	240.7	250.2	259.6	269.1	278.6	284.9
62.5°	189.5	196.9	204.4	211.8	219.2	227.6	237.0	246.5	256.0	265.4	272.1
65°	165.8	173.9	182.1	190.2	198.3	207.3	217.1	226.9	236.7	246.5	253.3
67.5°	144.0	152.5	161.0	169.5	178.0	187.2	197.3	207.3	217.3	227.3	234.2
70°	128.5	137.1	145.7	154.3	163.0	172.4	182.7	193.0	203.3	213.6	220.7
72.5°	114.1	123.0	131.9	140.8	149.7	159.4	169.8	180.2	190.6	201.0	208.1
75°	91.9	101.2	110.4	119.7	129.0	139.0	149.6	160.2	170.9	181.5	188.6
77.5°	70.4	80.1	89.8	99.5	109.3	119.5	130.3	141.1	151.9	162.7	169.8
80°	56.0	66.1	76.3	86.4	96.5	107.0	117.8	128.5	139.3	150.1	157.1
82.5°	44.1	54.1	64.0	74.0	84.0	94.5	105.4	116.3	127.2	138.2	145.1
85°	26.9	37.2	47.5	57.8	68.0	78.5	89.1	99.7	110.4	121.0	128.0
87.5°	14.8	25.0	35.3	45.5	55.6	66.2	77.4	88.8	100.1	110.8	117.5
90°	8.0	19.4	31.3	42.0	52.8	64.6	78.1	92.7	106.8	118.0	124.0
92.5°	13.8	25.9	38.9	50.4	63.2	78.2	101.3	129.7	156.1	167.3	162.3
95°	25.9	36.0	49.5	62.5	79.4	101.9	138.1	197.7	273.8	309.4	287.8
97.5°	37.7	47.8	60.7	75.4	92.9	116.6	159.1	237.8	357.3	461.1	485.9
100°	49.1	57.0	68.3	83.5	101.1	124.8	164.3	243.1	375.6	525.2	613.5
102.5°	59.0	65.9	76.6	91.4	108.8	132.1	169.1	240.0	363.0	523.3	658.4
105°	73.3	80.4	89.2	102.6	119.9	142.6	178.1	237.4	340.2	486.8	644.3
107.5°	89.6	95.3	103.0	114.7	131.0	153.1	187.4	239.9	326.0	448.3	587.9
110°	99.9	105.5	112.3	123.0	138.3	160.6	193.8	243.0	320.7	429.2	552.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	110.0	115.0	121.7	131.5	145.8	168.0	199.9	246.4	317.4	415.0	526.5
115°	125.6	130.3	135.5	144.2	157.4	177.5	209.5	251.7	314.5	398.4	493.5
117.5°	141.0	144.5	149.1	156.4	168.5	188.5	218.1	257.7	313.0	386.9	470.2
120°	151.1	154.0	158.1	163.9	176.0	195.6	224.5	261.9	312.5	380.1	457.2
122.5°	160.7	162.8	166.4	172.3	184.0	203.6	230.8	265.5	312.5	374.7	445.7
125°	172.6	174.3	177.7	184.6	196.0	214.6	240.4	271.4	312.1	365.3	428.5
127.5°	182.6	184.7	189.4	196.7	207.5	226.0	250.2	277.5	312.6	358.0	412.5
130°	188.5	190.7	196.2	204.0	215.3	232.9	256.3	281.5	313.5	353.5	401.9
132.5°	194.0	196.6	202.6	210.9	222.6	239.8	261.5	285.4	314.3	349.4	392.7
135°	201.5	203.8	210.6	219.2	232.3	249.1	269.0	290.6	315.1	344.1	380.1
137.5°	209.2	211.9	218.8	227.8	240.8	256.0	274.7	294.1	315.6	339.7	370.0
140°	215.2	217.3	224.0	232.9	245.3	260.2	277.7	295.7	315.4	336.8	364.0
142.5°	221.1	222.8	229.0	237.9	249.9	263.7	280.5	297.7	315.8	335.6	359.1
145°	229.3	231.5	237.2	245.8	257.2	269.7	285.1	301.1	317.1	334.2	353.4
147.5°	238.8	240.5	246.0	253.9	263.4	274.5	289.0	303.1	317.5	332.1	348.2
150°	245.2	246.9	251.5	258.9	267.5	277.7	290.8	304.0	317.1	330.8	344.5
152.5°	251.6	252.4	257.0	263.5	271.6	280.9	292.7	304.4	316.2	328.5	341.3
155°	260.6	261.2	264.6	270.9	277.2	285.7	295.4	305.1	314.8	324.5	335.3
157.5°	268.1	268.7	271.5	276.9	282.0	289.1	297.3	305.1	312.2	320.4	329.7
160°	273.2	273.7	276.0	280.6	285.1	291.4	298.3	305.1	310.8	317.7	325.6
162.5°	278.2	277.8	280.1	283.8	287.9	292.8	298.7	304.6	309.4	315.4	322.0
165°	284.0	283.4	284.6	288.0	290.8	294.3	299.4	303.4	306.8	310.8	315.9
167.5°	288.8	288.1	289.1	291.3	293.4	295.5	299.3	302.6	304.2	306.8	310.0
170°	292.0	290.8	291.4	293.1	294.3	296.0	298.8	301.7	302.8	304.5	306.8
172.5°	293.8	293.1	292.8	294.5	295.2	296.4	298.4	300.3	301.0	301.8	303.6
175°	296.0	295.4	294.8	296.0	296.0	296.5	297.7	298.8	298.3	298.8	299.4
177.5°	297.0	296.1	295.6	296.5	296.5	296.5	297.0	297.9	297.0	296.5	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.7	514.3	515.0	515.2	514.9	514.7	514.4	514.1
5°	512.1	513.1	514.1	514.5	514.3	514.2	514.0	513.8
7.5°	509.6	510.8	512.0	512.5	512.4	512.2	512.0	511.9
10°	507.5	508.8	510.2	510.8	510.6	510.4	510.3	510.1
12.5°	503.9	505.3	506.6	507.2	507.0	506.8	506.7	506.5
15°	497.4	498.9	500.4	501.0	500.9	500.7	500.5	500.4
17.5°	489.0	490.6	492.1	492.9	492.9	492.9	492.9	492.9
20°	482.4	484.2	486.0	486.9	486.9	486.9	486.9	486.9
22.5°	475.2	477.0	478.9	479.9	480.2	480.4	480.7	481.0
25°	464.0	466.0	468.0	469.3	469.8	470.3	470.8	471.3
27.5°	451.7	454.2	456.7	458.1	458.5	458.9	459.2	459.6
30°	443.0	445.6	448.3	449.8	450.3	450.8	451.3	451.8
32.5°	433.6	436.6	439.7	441.7	442.6	443.5	444.4	445.3
35°	420.3	424.0	427.6	430.0	431.2	432.3	433.5	434.7
37.5°	406.6	410.7	414.7	417.3	418.6	419.8	421.0	422.3
40°	397.0	401.3	405.6	408.5	410.0	411.5	413.0	414.5
42.5°	387.6	392.3	397.0	400.2	401.6	403.1	404.6	406.1
45°	373.3	378.4	383.5	386.9	388.6	390.3	391.9	393.6
47.5°	358.3	363.7	369.1	372.7	374.5	376.3	378.2	380.0
50°	348.1	353.7	359.4	363.1	365.0	366.8	368.6	370.4
52.5°	337.0	342.8	348.6	352.4	354.4	356.4	358.3	360.3
55°	320.4	326.4	332.3	336.4	338.6	340.7	342.9	345.0
57.5°	302.8	309.2	315.7	320.0	322.2	324.4	326.6	328.8
60°	291.2	297.5	303.8	308.1	310.4	312.8	315.1	317.4
62.5°	278.8	285.5	292.2	296.7	298.9	301.1	303.3	305.5
65°	260.1	266.9	273.7	278.2	280.3	282.5	284.6	286.8
67.5°	241.1	247.9	254.8	259.4	261.6	263.9	266.2	268.4
70°	227.9	235.0	242.1	246.7	248.7	250.7	252.7	254.7
72.5°	215.1	222.1	229.1	233.8	236.1	238.5	240.9	243.3
75°	195.8	202.9	210.0	214.7	216.8	219.0	221.1	223.3
77.5°	176.9	184.0	191.1	195.8	198.1	200.4	202.8	205.1
80°	164.1	171.0	178.0	182.6	185.0	187.3	189.6	191.9
82.5°	152.1	159.1	166.0	170.6	172.8	175.0	177.2	179.4
85°	134.9	141.9	148.9	153.5	155.8	158.2	160.5	162.8
87.5°	124.1	130.7	137.7	142.2	144.4	146.5	148.6	150.7
90°	130.1	135.6	143.4	148.3	150.3	152.3	154.2	156.2
92.5°	155.9	155.4	157.1	157.8	159.3	159.5	162.0	163.0
95°	247.9	219.4	201.8	193.4	188.0	185.4	185.7	188.2
97.5°	440.4	383.1	327.6	290.5	265.2	253.1	246.7	243.9
100°	607.6	543.1	471.1	406.1	360.5	337.8	323.1	314.7
102.5°	715.9	705.9	654.8	585.6	536.0	495.9	477.1	465.0
105°	768.7	839.0	852.2	837.2	803.7	770.2	747.5	741.3
107.5°	719.3	821.9	886.8	918.1	924.4	924.3	921.2	912.4
110°	678.2	785.6	863.9	914.2	940.6	953.2	960.2	961.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	640.3	743.5	826.9	884.0	920.0	939.9	951.5	956.4
115°	592.5	685.4	765.0	827.2	869.5	897.6	914.2	921.2
117.5°	555.0	637.1	709.7	768.1	811.1	840.5	857.8	863.8
120°	535.4	610.8	675.9	731.0	772.8	801.4	819.7	827.3
122.5°	519.2	588.5	650.3	700.2	737.6	765.5	781.8	788.1
125°	495.1	558.4	613.0	658.8	693.4	716.5	732.3	738.3
127.5°	471.4	528.6	580.1	622.3	652.6	674.4	688.2	693.3
130°	456.1	509.1	558.2	598.5	627.7	648.5	661.2	667.1
132.5°	441.3	490.5	535.8	573.7	602.6	623.3	635.1	640.5
135°	420.7	461.8	502.9	537.3	563.1	583.2	594.8	598.5
137.5°	403.3	437.8	470.7	500.7	524.1	541.5	551.6	556.2
140°	392.3	422.3	451.2	478.2	497.4	513.2	522.8	527.2
142.5°	383.7	409.1	433.8	456.3	474.5	488.8	497.3	498.8
145°	372.1	391.9	410.6	428.0	442.6	453.1	459.6	462.2
147.5°	363.4	378.4	392.3	404.7	416.4	424.5	428.8	430.2
150°	358.1	370.7	382.7	392.9	401.5	408.3	411.7	412.3
152.5°	353.1	364.8	374.9	383.8	390.5	396.5	399.0	399.1
155°	346.2	355.3	363.8	370.1	376.4	380.4	382.7	381.5
157.5°	338.1	345.7	352.9	357.8	362.2	365.6	366.6	366.6
160°	333.0	339.3	345.6	349.6	353.6	356.4	357.0	357.0
162.5°	328.0	333.4	338.8	341.8	345.8	347.8	348.3	347.9
165°	320.5	324.5	328.5	330.8	333.0	335.3	335.3	334.8
167.5°	313.3	316.4	319.1	321.2	322.2	323.5	323.4	322.7
170°	309.7	311.4	313.7	314.8	315.4	317.1	316.5	315.4
172.5°	305.6	306.8	308.6	309.3	309.9	310.7	310.1	309.4
175°	301.1	301.7	302.3	302.8	302.8	303.4	302.8	301.7
177.5°	297.9	297.9	298.4	298.4	298.4	298.4	297.9	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5

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