

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: P331272-940

Luminaire Tested: **SA2XXDIP-C290D925U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

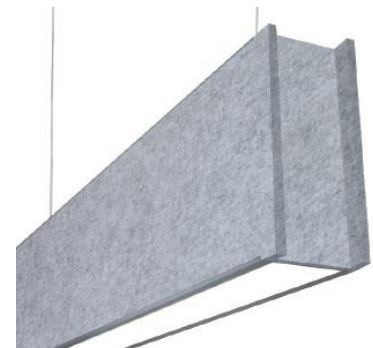
Test Information

Test Method: LM-79-08
Report Number: P331272-940
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-C290D925U940-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4290.8 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

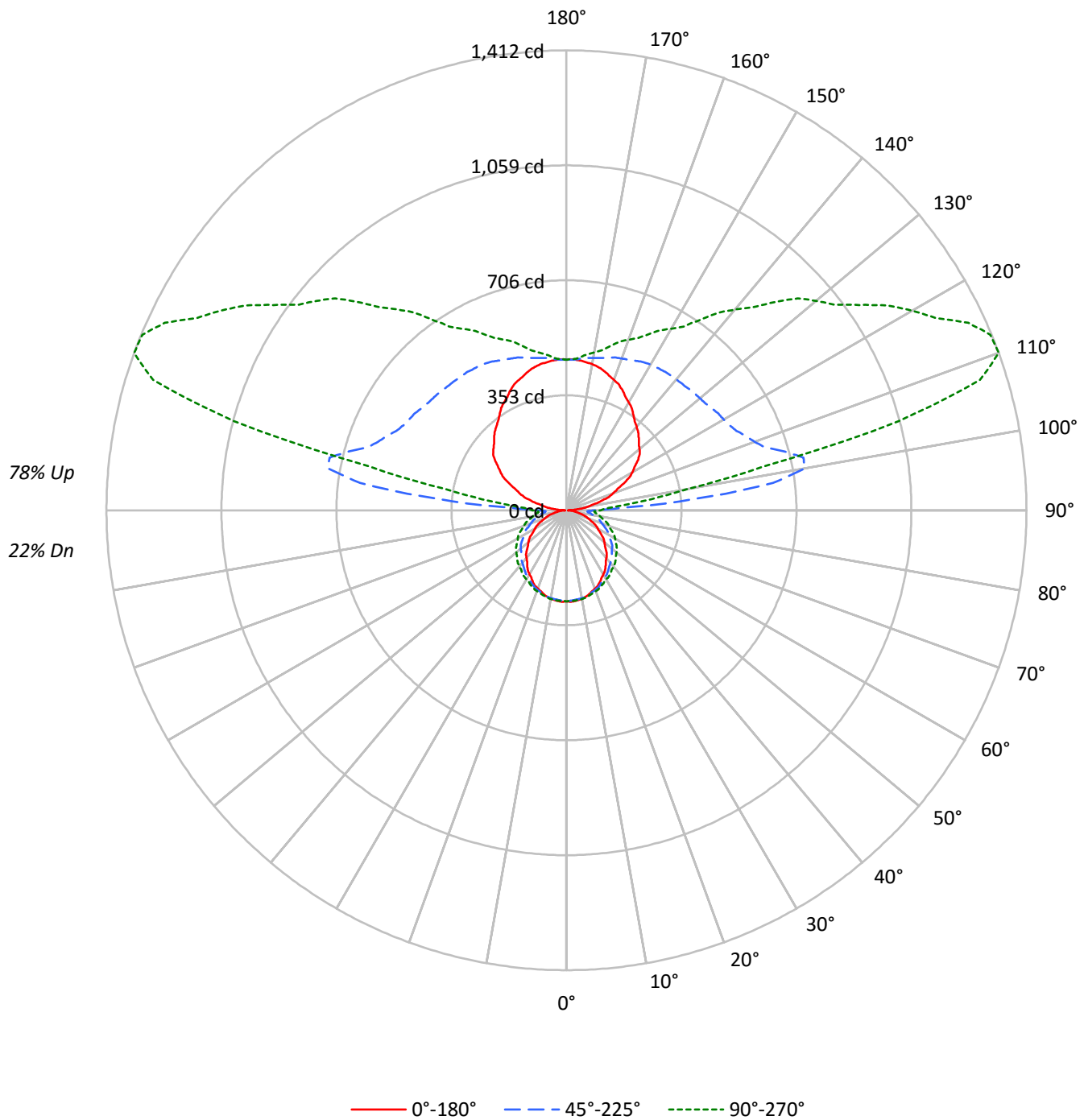
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	101	101	101	101	89	89	89	89	68	68	68	48	48	48	31	31	31
1	91	86	82	79	80	77	73	70	58	56	54	41	40	39	26	25	24
2	82	75	69	64	73	67	61	57	51	47	44	36	34	32	22	21	20
3	75	66	58	53	66	58	52	47	44	40	37	32	29	27	20	18	17
4	68	58	50	44	60	51	45	40	39	35	31	28	25	22	17	16	14
5	63	51	43	37	55	46	39	34	35	30	26	25	22	19	16	14	12
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11
7	53	41	33	28	47	37	30	25	28	23	20	20	17	15	13	11	9
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	12	10	8
9	45	34	26	21	40	30	24	19	23	19	15	17	14	11	11	9	7
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4514	4514	4514
5°	4536	4345	4328
10°	4507	4215	4169
15°	4443	4079	4001
20°	4366	3935	3839
25°	4289	3793	3693
30°	4180	3650	3544
35°	4070	3510	3442
40°	3952	3391	3338
45°	3841	3286	3250
50°	3723	3189	3162
55°	3597	3086	3074
60°	3447	2979	2980
65°	3288	2854	2867
70°	3108	2717	2746
75°	2883	2585	2636
80°	2528	2450	2524
85°	2185	2333	2436

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.5	0.6
10°-20°	75.9	1.8
20°-30°	115.1	2.7
30°-40°	140.2	3.3
40°-50°	150.8	3.5
50°-60°	146.5	3.4
60°-70°	127.9	3.0
70°-80°	98.4	2.3
80°-90°	70.2	1.6
90°-100°	230.6	5.4
100°-110°	661.1	15.4
110°-120°	689.0	16.1
120°-130°	561.4	13.1
130°-140°	446.1	10.4
140°-150°	334.1	7.8
150°-160°	234.2	5.5
160°-170°	137.9	3.2
170°-180°	44.9	1.0
0°-30°	217.5	5.1
0°-40°	357.7	8.3
0°-60°	654.9	15.3
0°-90°	951.5	22.2
90°-120°	1580.7	36.8
90°-150°	2922.4	68.1
90°-180°	3339.0	77.8
0°-180°	4290.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	280	280	280	280	280	
5°	280	279	277	279	279	27
15°	267	268	268	272	271	75
25°	243	246	250	254	256	112
35°	210	216	224	233	236	131
45°	172	183	197	209	214	133
55°	132	147	167	181	187	118
65°	90	110	134	150	156	89
75°	50	73	98	115	121	53
85°	15	40	66	82	88	16
90°	5	40	84	98	104	4
95°	34	99	396	193	168	36
105°	111	178	694	1227	1056	118
115°	193	248	576	1175	1361	191
125°	268	317	544	947	1099	238
135°	314	374	529	788	904	242
145°	358	411	522	650	713	225
155°	407	439	506	573	595	187
165°	443	457	485	514	522	125
175°	462	462	466	472	471	44
180°	463	463	463	463	463	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	281.2	280.9	280.7	280.4	280.3	279.9	279.4	278.9	278.4	277.9	278.2
5°	280.4	280.1	279.8	279.6	279.2	278.8	278.3	277.8	277.2	276.7	277.2
7.5°	277.8	277.6	277.4	277.2	277.1	276.8	276.3	276.0	275.5	275.1	275.8
10°	275.9	275.7	275.5	275.4	275.2	274.9	274.6	274.4	274.1	273.8	274.6
12.5°	272.6	272.7	272.7	272.8	272.8	272.7	272.5	272.3	272.1	271.9	272.6
15°	267.3	267.5	267.7	267.9	268.0	268.1	268.1	268.1	268.1	268.1	268.9
17.5°	260.6	260.9	261.3	261.7	262.1	262.4	262.7	263.0	263.2	263.6	264.4
20°	256.0	256.5	256.9	257.3	257.8	258.2	258.6	259.0	259.3	259.7	260.6
22.5°	251.2	251.6	252.2	252.7	253.2	253.8	254.2	254.8	255.3	255.7	256.7
25°	243.1	243.7	244.3	245.0	245.6	246.3	247.1	247.9	248.7	249.5	250.6
27.5°	233.4	234.3	235.4	236.4	237.5	238.4	239.3	240.3	241.3	242.3	243.6
30°	226.9	228.0	229.2	230.3	231.5	232.7	233.9	235.1	236.2	237.4	238.8
32.5°	219.7	221.1	222.3	223.6	225.0	226.3	227.7	229.1	230.5	231.8	233.5
35°	209.5	211.0	212.5	214.0	215.5	217.1	218.9	220.6	222.3	224.0	226.0
37.5°	198.2	200.0	201.8	203.6	205.3	207.3	209.6	211.7	213.9	216.2	218.4
40°	190.8	192.8	194.7	196.7	198.7	200.9	203.3	205.8	208.2	210.6	212.9
42.5°	183.7	185.7	187.6	189.6	191.6	193.9	196.8	199.6	202.3	205.1	207.7
45°	171.7	174.2	176.6	179.1	181.5	184.2	187.4	190.6	193.7	196.9	199.7
47.5°	160.0	162.6	165.3	167.9	170.6	173.8	177.5	181.1	184.9	188.5	191.5
50°	151.9	154.7	157.5	160.2	163.1	166.5	170.6	174.6	178.6	182.7	185.7
52.5°	144.1	147.0	150.0	152.9	155.9	159.4	163.7	168.0	172.3	176.6	179.7
55°	131.6	134.9	138.1	141.3	144.6	148.6	153.3	157.9	162.6	167.3	170.6
57.5°	119.3	123.0	126.6	130.3	133.9	138.1	142.9	147.7	152.5	157.3	160.8
60°	110.6	114.5	118.3	122.2	126.1	130.5	135.7	140.8	146.0	151.1	154.5
62.5°	102.8	106.8	110.8	114.9	118.9	123.4	128.6	133.7	138.8	144.0	147.6
65°	89.9	94.3	98.7	103.2	107.5	112.4	117.7	123.1	128.4	133.7	137.4
67.5°	78.1	82.8	87.3	91.9	96.6	101.6	107.0	112.4	117.9	123.3	127.1
70°	69.6	74.4	79.0	83.7	88.4	93.5	99.1	104.7	110.3	115.8	119.8
72.5°	61.9	66.7	71.5	76.3	81.2	86.4	92.1	97.7	103.4	109.1	112.9
75°	49.8	54.8	59.9	64.9	70.0	75.3	81.1	86.9	92.6	98.4	102.3
77.5°	38.2	43.4	48.7	53.9	59.3	64.8	70.7	76.5	82.4	88.2	92.1
80°	30.4	35.8	41.4	46.8	52.3	58.1	63.8	69.7	75.5	81.4	85.2
82.5°	23.9	29.3	34.8	40.1	45.6	51.3	57.2	63.1	69.0	74.9	78.7
85°	14.6	20.2	25.8	31.3	36.9	42.5	48.3	54.1	59.8	65.6	69.4
87.5°	8.1	14.0	20.1	25.8	31.6	37.6	44.3	51.3	58.1	64.0	67.6
90°	4.9	12.8	21.6	28.6	35.6	43.8	53.9	66.0	77.0	83.7	86.4
92.5°	14.6	24.3	35.5	44.3	55.2	68.8	94.4	128.3	159.1	166.2	151.8
95°	34.4	42.2	55.3	67.6	86.1	112.2	158.5	241.4	350.0	395.5	355.3
97.5°	53.6	62.2	75.3	91.2	111.4	140.0	196.6	309.7	486.4	638.6	671.2
100°	71.3	77.4	88.7	106.3	127.4	156.5	208.7	322.4	519.6	743.6	875.0
102.5°	87.4	92.4	103.4	120.7	142.3	171.2	219.7	321.1	503.9	744.8	949.6
105°	110.6	116.8	125.6	141.6	163.7	192.3	238.8	322.7	474.2	694.3	934.2
107.5°	136.2	141.1	149.2	163.6	185.1	213.5	258.5	332.1	458.0	640.4	852.6
110°	152.9	158.3	165.4	178.8	199.3	228.2	271.8	340.3	453.3	614.3	801.4

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.5	173.6	181.2	193.6	213.0	242.5	284.4	349.1	451.9	596.4	764.9
115°	193.0	198.4	204.7	216.4	235.2	261.7	304.1	362.4	452.8	576.0	719.4
117.5°	217.8	222.0	228.0	238.1	255.8	282.9	322.1	376.7	456.2	564.4	689.3
120°	233.4	237.4	243.1	251.5	269.7	296.6	334.8	386.5	458.6	557.5	673.0
122.5°	248.4	251.5	256.9	265.8	283.7	311.1	347.1	394.9	461.9	552.7	658.9
125°	267.8	270.5	275.8	286.5	304.3	330.6	365.6	408.5	466.5	544.2	638.3
127.5°	283.5	287.0	294.4	305.9	323.0	349.7	383.2	421.4	471.8	538.2	619.1
130°	292.7	296.2	305.0	317.4	335.1	360.9	394.0	429.6	476.0	534.8	606.5
132.5°	301.2	305.4	315.0	328.1	346.4	372.1	403.2	437.8	480.2	532.2	595.9
135°	313.7	317.3	327.9	341.3	361.8	387.1	416.4	448.5	485.0	528.6	581.2
137.5°	325.7	330.0	340.7	354.9	375.1	398.5	427.0	456.5	489.2	526.1	570.3
140°	335.0	338.5	349.1	363.2	382.7	405.9	432.7	460.6	491.0	524.1	563.8
142.5°	344.3	347.1	357.0	371.0	389.9	411.5	437.6	464.5	492.6	523.4	557.9
145°	357.8	361.3	370.2	383.6	401.4	421.0	445.0	469.9	494.8	521.5	550.5
147.5°	372.7	375.4	383.9	396.2	411.0	428.5	451.0	473.0	495.5	518.4	543.3
150°	382.7	385.3	392.4	404.0	417.4	433.4	453.9	474.3	494.8	516.2	537.5
152.5°	392.6	393.9	401.0	411.2	423.8	438.4	456.7	475.0	493.4	512.6	532.5
155°	406.7	407.6	413.0	422.8	432.5	445.9	461.0	476.1	491.2	506.4	523.3
157.5°	418.5	419.4	423.7	432.1	440.0	451.2	464.0	476.1	487.1	500.0	514.6
160°	426.3	427.2	430.7	437.8	445.0	454.8	465.5	476.1	485.0	495.7	508.2
162.5°	434.1	433.5	437.1	442.8	449.2	456.9	466.2	475.4	482.9	492.1	502.5
165°	443.2	442.3	444.1	449.4	453.9	459.2	467.3	473.5	478.8	485.0	493.0
167.5°	450.7	449.6	451.2	454.6	457.8	461.2	467.1	472.3	474.7	478.8	483.8
170°	455.7	453.9	454.8	457.4	459.2	461.9	466.4	470.8	472.6	475.2	478.8
172.5°	458.5	457.4	456.9	459.6	460.7	462.6	465.7	468.7	469.8	471.0	473.9
175°	461.9	461.0	460.1	461.9	461.9	462.8	464.6	466.4	465.5	466.4	467.3
177.5°	463.5	462.1	461.4	462.8	462.8	462.8	463.5	464.9	463.5	462.8	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	278.6	278.9	279.3	279.5	279.3	279.1	279.0	278.8
5°	277.8	278.3	278.8	279.0	278.9	278.8	278.7	278.7
7.5°	276.4	277.1	277.8	278.0	277.9	277.9	277.8	277.7
10°	275.3	276.0	276.7	277.1	277.0	276.9	276.8	276.7
12.5°	273.3	274.0	274.7	275.1	275.0	274.9	274.8	274.7
15°	269.7	270.6	271.4	271.8	271.7	271.6	271.5	271.4
17.5°	265.3	266.1	266.9	267.3	267.3	267.3	267.3	267.3
20°	261.6	262.6	263.6	264.1	264.1	264.1	264.1	264.1
22.5°	257.8	258.8	259.8	260.3	260.5	260.6	260.7	260.9
25°	251.7	252.8	253.9	254.5	254.8	255.0	255.3	255.6
27.5°	245.0	246.4	247.7	248.5	248.7	248.9	249.1	249.3
30°	240.2	241.7	243.2	244.0	244.2	244.5	244.8	245.0
32.5°	235.1	236.8	238.5	239.6	240.0	240.6	241.0	241.5
35°	228.0	230.0	231.9	233.3	233.9	234.5	235.1	235.8
37.5°	220.5	222.7	225.0	226.4	227.0	227.7	228.4	229.0
40°	215.3	217.7	220.0	221.6	222.4	223.2	224.0	224.8
42.5°	210.3	212.8	215.3	217.0	217.8	218.6	219.5	220.3
45°	202.4	205.3	208.0	209.9	210.8	211.7	212.6	213.5
47.5°	194.4	197.2	200.2	202.2	203.1	204.1	205.1	206.1
50°	188.8	191.9	194.9	197.0	198.0	198.9	199.9	200.9
52.5°	182.8	185.9	189.0	191.2	192.3	193.3	194.4	195.4
55°	173.8	177.0	180.3	182.4	183.6	184.9	186.0	187.2
57.5°	164.3	167.7	171.2	173.5	174.8	175.9	177.1	178.3
60°	157.9	161.4	164.8	167.1	168.4	169.6	170.9	172.2
62.5°	151.2	154.9	158.5	161.0	162.1	163.3	164.5	165.7
65°	141.1	144.7	148.5	150.9	152.0	153.2	154.4	155.5
67.5°	130.7	134.5	138.2	140.7	141.9	143.1	144.4	145.6
70°	123.6	127.4	131.3	133.8	134.9	136.0	137.1	138.1
72.5°	116.6	120.5	124.2	126.8	128.0	129.4	130.7	132.0
75°	106.2	110.0	114.0	116.5	117.6	118.8	119.9	121.1
77.5°	95.9	99.8	103.6	106.2	107.5	108.7	109.9	111.2
80°	89.0	92.7	96.6	99.1	100.3	101.6	102.8	104.1
82.5°	82.5	86.3	90.1	92.6	93.7	95.0	96.1	97.3
85°	73.2	77.0	80.8	83.3	84.5	85.8	87.0	88.3
87.5°	71.1	74.4	78.4	81.0	82.1	83.3	84.4	85.6
90°	89.2	91.0	96.4	99.6	100.7	101.7	102.8	103.9
92.5°	135.2	127.7	123.8	120.6	120.9	119.1	120.9	120.6
95°	286.6	235.8	201.8	184.4	174.0	167.9	166.3	168.3
97.5°	593.9	498.3	405.3	343.2	301.8	280.9	269.0	262.6
100°	859.7	752.7	634.1	528.5	455.7	418.4	393.6	378.5
102.5°	1033.1	1011.5	925.6	813.6	734.3	669.9	638.7	618.0
105°	1122.4	1226.1	1240.9	1213.5	1159.4	1105.2	1067.9	1056.4
107.5°	1052.0	1206.4	1302.0	1347.1	1355.0	1353.0	1346.3	1330.8
110°	992.0	1154.2	1271.0	1345.9	1385.2	1403.1	1412.1	1412.2

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	937.1	1092.9	1217.5	1303.1	1357.3	1386.6	1402.7	1408.5
115°	869.0	1008.7	1127.9	1221.5	1285.7	1327.6	1351.7	1360.8
117.5°	816.8	939.8	1048.1	1136.0	1201.2	1245.5	1270.7	1278.4
120°	790.3	903.2	1000.1	1082.8	1146.1	1188.9	1215.7	1225.6
122.5°	769.0	872.5	964.4	1039.2	1095.9	1137.8	1161.6	1170.0
125°	737.7	831.8	912.6	980.9	1033.3	1068.0	1091.0	1098.9
127.5°	706.8	792.0	868.1	931.2	977.0	1009.5	1029.5	1036.0
130°	686.9	765.6	838.1	898.3	942.6	973.6	992.1	1000.0
132.5°	667.7	740.7	807.4	864.0	907.6	938.5	955.6	962.8
135°	641.0	701.6	762.2	813.4	852.4	882.4	899.2	903.5
137.5°	619.1	669.9	718.2	762.8	798.3	824.1	838.8	844.8
140°	605.3	649.4	691.9	732.0	761.0	784.7	798.5	804.4
142.5°	594.1	631.6	668.0	701.5	729.1	750.6	762.9	764.5
145°	578.6	608.6	636.7	663.0	684.8	700.3	709.7	712.8
147.5°	566.9	590.0	611.7	630.7	648.5	660.8	667.1	669.0
150°	558.9	578.5	597.2	613.1	626.5	637.2	642.6	643.5
152.5°	551.1	569.2	585.1	599.0	609.4	618.7	622.6	622.8
155°	540.2	554.5	567.8	577.6	587.4	593.6	597.2	595.4
157.5°	527.5	539.5	550.7	558.4	565.3	570.4	572.0	572.0
160°	519.7	529.5	539.3	545.5	551.8	556.2	557.1	557.1
162.5°	511.9	520.2	528.6	533.4	539.7	542.7	543.6	542.9
165°	500.2	506.4	512.6	516.2	519.7	523.3	523.3	522.4
167.5°	488.9	493.7	498.0	501.2	502.8	504.8	504.6	503.5
170°	483.2	485.9	489.5	491.2	492.1	494.8	493.9	492.1
172.5°	476.8	478.8	481.6	482.7	483.6	484.8	483.9	482.9
175°	469.9	470.8	471.7	472.6	472.6	473.5	472.6	470.8
177.5°	464.9	464.9	465.7	465.7	465.7	465.7	464.9	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

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