

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: P332392-927

Luminaire Tested: **S123RDIW-S340D460U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332392-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIW-S340D460U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 460 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2490.4 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

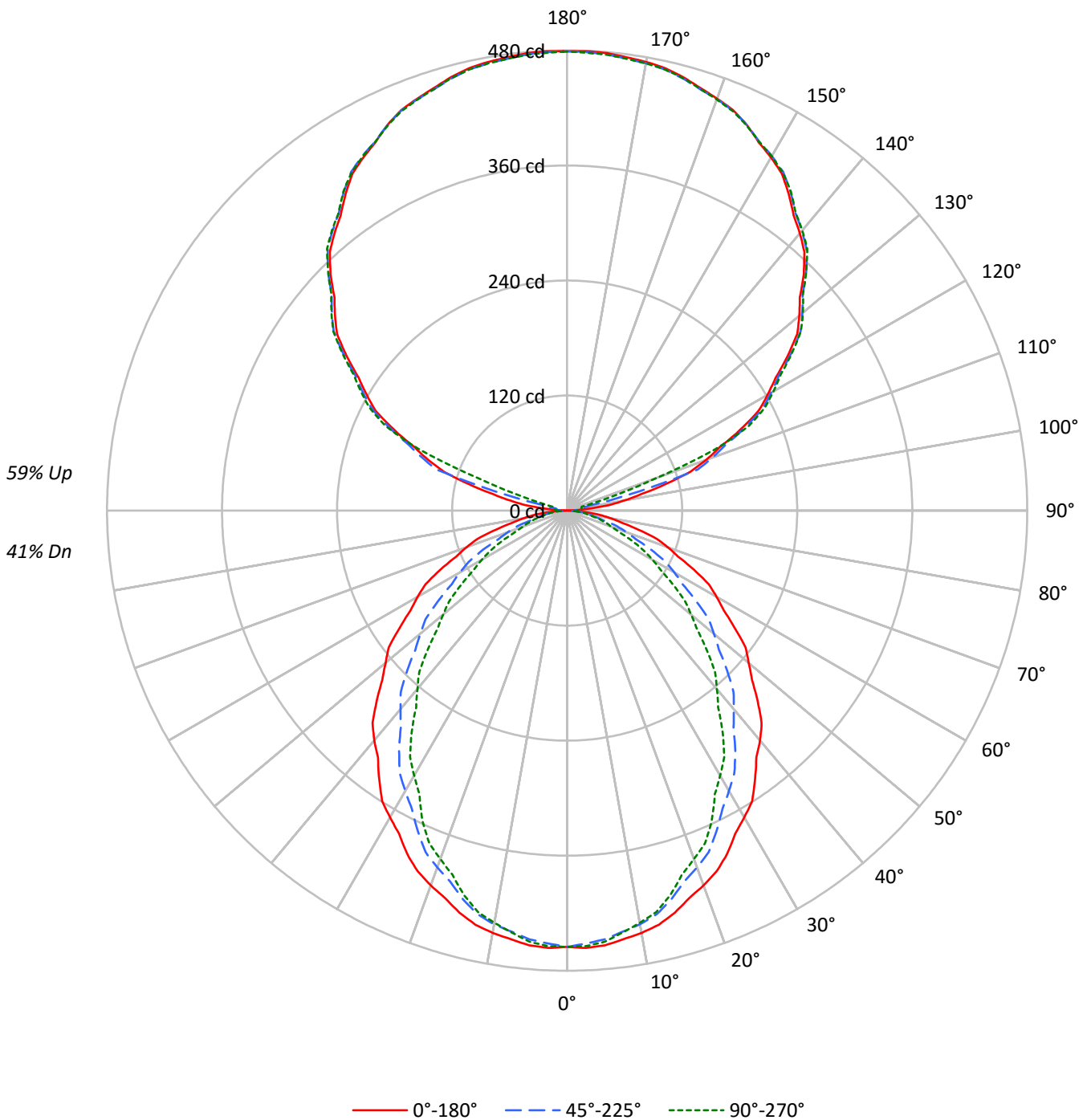
Input Watts (W): 23
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	35
2	88	81	75	70	80	74	69	64	61	57	54	49	47	44	38	37	35	30
3	80	71	64	58	73	65	59	54	54	49	46	44	40	38	34	32	30	26
4	73	63	55	49	67	58	51	46	48	43	39	39	35	33	31	28	26	22
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20
6	62	50	43	37	57	46	39	34	39	34	30	32	28	25	25	22	20	17
7	57	46	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	29	49	38	31	27	32	27	23	26	23	20	21	18	16	14
9	50	38	30	25	45	35	28	24	29	24	21	24	21	18	20	17	15	13
10	46	35	28	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4899	4899	4899
5°	4917	4850	4878
10°	4889	4790	4773
15°	4837	4677	4628
20°	4765	4537	4431
25°	4691	4380	4240
30°	4593	4197	3967
35°	4491	4016	3720
40°	4398	3801	3413
45°	4276	3589	3136
50°	4141	3349	2825
55°	4003	3076	2535
60°	3877	2781	2217
65°	3713	2463	1897
70°	3509	2068	1533
75°	3211	1626	1443
80°	2858	1444	1327
85°	2421	1272	1186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	1.7
10°-20°	118.9	4.8
20°-30°	171.2	6.9
30°-40°	192.9	7.7
40°-50°	184.5	7.4
50°-60°	151.1	6.1
60°-70°	101.9	4.1
70°-80°	51.3	2.1
80°-90°	14.9	0.6
90°-100°	17.4	0.7
100°-110°	83.0	3.3
110°-120°	199.4	8.0
120°-130°	253.9	10.2
130°-140°	271.3	10.9
140°-150°	253.7	10.2
150°-160°	204.6	8.2
160°-170°	132.1	5.3
170°-180°	45.5	1.8
0°-30°	332.9	13.4
0°-40°	525.7	21.1
0°-60°	861.4	34.6
0°-90°	1029.5	41.3
90°-120°	299.8	12.0
90°-150°	1078.7	43.3
90°-180°	1461.0	58.7
0°-180°	2490.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	455	453	449	452	452	43
15°	434	430	420	418	415	122
25°	395	385	369	361	357	182
35°	342	328	306	290	283	214
45°	281	264	236	215	206	217
55°	213	195	164	143	135	191
65°	146	125	97	79	74	144
75°	77	59	39	36	35	82
85°	20	12	10	10	10	22
90°	0	4	9	10	11	2
95°	22	8	11	13	14	27
105°	106	108	78	18	16	112
115°	199	201	204	208	209	196
125°	280	283	285	285	286	250
135°	349	351	353	354	353	269
145°	403	405	406	407	407	252
155°	444	443	444	445	443	204
165°	468	467	467	469	467	132
175°	479	477	478	480	477	46
180°	479	479	479	479	479	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	456.6	456.3	456.1	455.8	455.6	455.0	454.2	453.4	452.7	451.9	452.6
5°	455.1	454.7	454.3	453.9	453.4	452.8	451.8	450.8	449.8	448.9	449.6
7.5°	450.9	450.4	450.0	449.6	449.2	448.3	447.0	445.8	444.4	443.1	443.5
10°	447.3	446.8	446.2	445.7	445.0	444.0	442.6	441.1	439.6	438.2	438.2
12.5°	442.4	441.7	441.1	440.5	439.8	438.6	436.7	435.0	433.2	431.3	431.3
15°	434.1	433.2	432.3	431.3	430.5	428.9	426.6	424.3	422.0	419.7	419.3
17.5°	423.7	422.6	421.6	420.5	419.5	417.5	414.5	411.6	408.8	405.8	405.0
20°	416.0	414.7	413.4	412.1	410.7	408.5	405.4	402.3	399.2	396.1	395.0
22.5°	407.4	405.9	404.4	402.9	401.4	399.0	395.7	392.4	389.0	385.7	384.4
25°	395.0	392.9	390.9	388.8	386.7	383.8	380.1	376.3	372.5	368.8	367.0
27.5°	379.9	377.6	375.3	373.0	370.7	367.6	363.4	359.1	354.9	350.7	348.3
30°	369.5	367.0	364.6	362.1	359.7	356.1	351.5	346.9	342.3	337.7	334.9
32.5°	359.2	356.3	353.6	350.8	348.0	344.2	339.3	334.5	329.6	324.7	321.7
35°	341.8	338.8	335.9	333.0	330.0	326.0	320.9	315.8	310.7	305.6	302.1
37.5°	324.2	320.9	317.7	314.4	311.1	306.7	301.3	295.9	290.5	285.0	281.1
40°	313.0	309.4	305.8	302.2	298.6	293.8	288.0	282.2	276.4	270.5	266.3
42.5°	300.3	296.7	293.1	289.5	285.9	281.1	275.0	269.0	263.0	257.0	252.3
45°	280.9	277.2	273.5	269.8	266.1	261.1	254.8	248.5	242.2	235.8	231.2
47.5°	261.5	257.5	253.3	249.3	245.3	240.1	233.8	227.4	221.2	214.8	209.8
50°	247.3	243.4	239.6	235.8	231.9	226.6	220.0	213.3	206.7	200.0	195.0
52.5°	234.6	230.4	226.2	222.0	217.9	212.5	205.9	199.3	192.7	186.2	180.9
55°	213.3	209.3	205.3	201.3	197.3	191.8	184.8	177.8	170.9	163.9	159.1
57.5°	193.7	189.3	185.0	180.5	176.2	170.5	163.5	156.5	149.5	142.5	138.0
60°	180.1	175.6	171.1	166.6	162.1	156.5	149.6	142.8	136.0	129.2	124.8
62.5°	166.5	162.0	157.5	153.0	148.5	142.8	136.0	129.2	122.4	115.6	111.5
65°	145.8	141.3	136.8	132.3	127.8	122.3	115.9	109.5	103.1	96.7	92.7
67.5°	125.1	120.5	115.9	111.4	106.8	101.5	95.3	89.2	83.0	76.9	73.9
70°	111.5	107.0	102.6	98.2	93.8	88.6	82.9	77.2	71.5	65.7	62.8
72.5°	97.9	93.6	89.2	84.8	80.4	75.7	70.4	65.2	60.0	54.7	52.4
75°	77.2	73.2	69.2	65.4	61.4	57.2	52.7	48.2	43.6	39.1	38.3
77.5°	58.2	54.7	51.1	47.5	44.0	40.8	37.9	34.9	32.1	29.2	28.8
80°	46.1	42.8	39.5	36.0	32.7	30.2	28.4	26.7	25.0	23.3	23.0
82.5°	34.6	31.7	28.8	25.9	23.0	21.2	20.4	19.6	18.8	17.9	17.7
85°	19.6	17.7	15.9	14.2	12.4	11.3	11.1	10.9	10.6	10.3	10.1
87.5°	7.1	6.6	6.0	5.5	4.9	4.8	4.9	5.1	5.3	5.5	5.5
90°	0.3	1.1	1.9	2.7	3.5	4.4	5.5	6.5	7.5	8.6	8.9
92.5°	6.7	6.4	6.2	5.9	5.7	6.0	6.8	7.5	8.3	9.1	9.6
95°	21.7	18.5	15.2	12.0	8.7	7.5	8.4	9.3	10.1	11.0	11.6
97.5°	43.6	42.1	40.7	39.3	37.8	34.2	28.5	22.8	17.2	11.5	12.1
100°	60.1	61.7	63.3	64.9	66.5	61.1	48.8	36.4	24.1	11.7	12.4
102.5°	78.9	80.1	81.2	82.4	83.5	77.3	63.8	50.4	36.9	23.4	21.5
105°	106.1	106.9	107.8	108.7	109.6	106.4	99.3	92.2	85.1	78.0	63.9
107.5°	134.7	135.4	136.1	136.7	137.4	138.4	139.5	140.6	141.7	142.8	132.6
110°	153.8	154.4	155.0	155.7	156.3	157.0	157.9	158.8	159.6	160.5	157.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.0	172.5	173.1	173.6	174.3	175.0	175.9	176.7	177.6	178.5	178.5
115°	198.9	199.4	199.9	200.3	200.8	201.5	202.2	202.9	203.6	204.3	205.1
117.5°	225.1	225.7	226.2	226.8	227.4	227.9	228.2	228.6	229.0	229.3	230.0
120°	241.3	242.0	242.7	243.4	244.2	244.6	244.9	245.1	245.3	245.6	246.2
122.5°	257.9	258.4	259.0	259.6	260.2	260.6	260.9	261.2	261.5	261.8	262.2
125°	280.4	281.1	281.7	282.3	283.0	283.4	283.8	284.1	284.4	284.7	284.9
127.5°	302.4	303.0	303.6	304.3	304.9	305.4	305.8	306.2	306.6	307.0	307.2
130°	316.1	316.7	317.3	318.0	318.6	319.1	319.4	319.7	320.0	320.3	320.6
132.5°	329.2	329.8	330.4	331.1	331.7	332.1	332.4	332.6	332.9	333.1	333.4
135°	349.1	349.6	350.1	350.5	351.0	351.4	351.7	352.0	352.4	352.7	352.9
137.5°	366.2	366.9	367.4	368.0	368.6	369.0	369.2	369.4	369.6	369.7	370.1
140°	377.6	378.1	378.6	379.1	379.5	379.9	380.1	380.3	380.6	380.8	381.1
142.5°	388.2	388.6	389.1	389.6	390.1	390.4	390.6	390.9	391.1	391.3	391.6
145°	402.9	403.5	404.0	404.6	405.1	405.4	405.6	405.8	405.9	406.1	406.2
147.5°	416.8	417.2	417.5	417.9	418.2	418.5	418.7	418.8	419.0	419.1	419.3
150°	425.3	425.6	425.8	426.0	426.3	426.4	426.6	426.7	426.9	427.1	427.2
152.5°	433.0	433.1	433.2	433.3	433.5	433.6	433.6	433.7	433.8	434.0	434.2
155°	443.8	443.6	443.5	443.4	443.2	443.1	443.2	443.3	443.4	443.5	443.9
157.5°	452.3	452.2	452.2	452.2	452.2	452.1	452.0	451.9	451.9	451.8	452.3
160°	457.3	457.2	457.2	457.1	457.0	456.9	456.9	456.8	456.7	456.6	457.1
162.5°	462.2	462.0	461.8	461.6	461.4	461.2	461.1	461.1	461.0	460.9	461.4
165°	468.0	467.8	467.5	467.3	467.1	466.9	466.8	466.8	466.7	466.6	467.2
167.5°	472.6	472.3	472.0	471.7	471.3	471.2	471.2	471.2	471.2	471.2	471.8
170°	475.2	474.8	474.5	474.2	473.9	473.7	473.7	473.7	473.7	473.7	474.4
172.5°	476.8	476.5	476.1	475.7	475.3	475.2	475.2	475.3	475.4	475.4	476.0
175°	479.0	478.6	478.2	477.8	477.4	477.3	477.4	477.4	477.5	477.6	478.2
177.5°	479.6	479.3	479.0	478.6	478.3	478.2	478.3	478.3	478.4	478.5	479.0
180°	479.0	479.0	479.0	479.0	479.0	479.0	479.0	479.0	479.0	479.0	479.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	453.3	454.0	454.8	455.0	455.0	454.8	454.6	454.6
5°	450.4	451.1	451.8	452.1	451.9	451.8	451.6	451.5
7.5°	444.0	444.4	444.8	444.9	444.6	444.3	444.0	443.8
10°	438.3	438.4	438.5	438.3	437.9	437.5	437.0	436.7
12.5°	431.3	431.2	431.2	430.9	430.4	429.9	429.4	429.0
15°	418.8	418.4	418.0	417.6	417.0	416.4	415.8	415.3
17.5°	404.1	403.2	402.3	401.5	400.6	399.7	398.9	398.1
20°	394.0	392.8	391.8	390.8	389.8	388.8	387.9	386.8
22.5°	383.1	381.8	380.4	379.3	378.3	377.5	376.5	375.7
25°	365.3	363.6	361.9	360.5	359.7	358.8	357.8	357.0
27.5°	345.9	343.6	341.2	339.3	337.9	336.5	335.2	333.7
30°	332.2	329.4	326.6	324.6	323.2	321.9	320.6	319.2
32.5°	318.6	315.6	312.5	310.3	309.0	307.6	306.2	304.8
35°	298.6	295.0	291.5	289.0	287.6	286.1	284.6	283.1
37.5°	277.0	273.0	269.0	266.1	264.3	262.4	260.6	258.8
40°	262.1	257.8	253.5	250.4	248.5	246.7	244.8	242.9
42.5°	247.6	243.0	238.4	235.2	233.5	231.8	230.1	228.4
45°	226.5	221.8	217.1	213.8	211.9	209.9	207.9	206.0
47.5°	204.6	199.6	194.5	191.1	189.3	187.6	185.8	184.0
50°	189.9	184.8	179.7	176.3	174.4	172.5	170.6	168.7
52.5°	175.6	170.3	165.1	161.6	159.9	158.2	156.5	154.8
55°	154.4	149.6	144.9	141.6	140.1	138.4	136.7	135.1
57.5°	133.5	129.0	124.5	121.5	120.2	118.7	117.4	116.0
60°	120.3	115.9	111.5	108.5	107.2	105.8	104.4	103.0
62.5°	107.3	103.1	98.9	96.1	94.7	93.2	91.7	90.3
65°	88.6	84.7	80.6	78.2	77.2	76.4	75.5	74.5
67.5°	70.9	67.9	64.9	62.9	61.9	61.0	60.0	59.1
70°	60.0	57.1	54.2	52.4	51.4	50.5	49.6	48.7
72.5°	50.1	47.8	45.4	44.0	43.6	43.3	42.9	42.5
75°	37.5	36.7	35.8	35.3	35.2	35.0	34.9	34.7
77.5°	28.3	27.8	27.4	27.1	26.9	26.8	26.6	26.5
80°	22.7	22.5	22.3	22.1	21.9	21.7	21.5	21.4
82.5°	17.4	17.2	17.0	16.8	16.8	16.7	16.7	16.7
85°	10.0	9.8	9.7	9.6	9.6	9.6	9.6	9.6
87.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.4	5.4
90°	9.2	9.5	9.8	10.1	10.2	10.4	10.5	10.7
92.5°	10.1	10.6	11.2	11.4	11.6	11.6	11.7	11.8
95°	12.1	12.7	13.2	13.5	13.5	13.5	13.5	13.5
97.5°	12.8	13.4	14.0	14.3	14.4	14.5	14.6	14.7
100°	13.0	13.6	14.3	14.7	14.7	14.8	14.9	15.0
102.5°	19.5	17.5	15.6	14.7	14.8	15.0	15.1	15.2
105°	49.9	36.0	21.9	15.1	15.2	15.4	15.5	15.7
107.5°	122.3	112.1	101.8	91.4	80.8	70.3	59.7	49.2
110°	155.3	152.7	150.0	143.1	131.8	120.5	109.2	97.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	178.6	178.6	178.6	177.4	175.1	172.7	170.3	167.9
115°	205.9	206.7	207.5	208.0	208.3	208.7	209.0	209.3
117.5°	230.6	231.2	231.9	232.2	232.3	232.3	232.4	232.5
120°	246.8	247.5	248.1	248.4	248.4	248.4	248.4	248.4
122.5°	262.7	263.2	263.6	263.8	263.9	264.0	264.0	264.1
125°	285.0	285.2	285.3	285.5	285.7	285.8	286.0	286.1
127.5°	307.4	307.7	307.9	308.0	307.8	307.7	307.5	307.4
130°	320.9	321.2	321.5	321.6	321.5	321.3	321.2	321.0
132.5°	333.7	334.1	334.4	334.5	334.2	334.0	333.7	333.6
135°	353.2	353.4	353.6	353.6	353.4	353.2	352.9	352.7
137.5°	370.5	370.8	371.2	371.4	371.2	371.1	370.9	370.7
140°	381.4	381.8	382.1	382.1	382.0	381.8	381.7	381.5
142.5°	391.9	392.1	392.4	392.4	392.1	392.0	391.7	391.5
145°	406.4	406.5	406.7	406.8	406.8	406.8	406.8	406.8
147.5°	419.5	419.6	419.8	419.6	419.3	418.9	418.6	418.2
150°	427.4	427.5	427.7	427.7	427.5	427.2	427.0	426.7
152.5°	434.5	434.7	435.1	435.0	434.7	434.3	434.0	433.6
155°	444.3	444.7	445.0	445.0	444.5	444.0	443.5	443.1
157.5°	452.7	453.2	453.7	453.6	453.0	452.4	451.8	451.1
160°	457.6	458.0	458.5	458.5	458.0	457.4	456.9	456.3
162.5°	462.0	462.6	463.0	463.1	462.6	462.1	461.6	461.1
165°	467.9	468.5	469.1	469.1	468.6	468.1	467.5	467.0
167.5°	472.5	473.0	473.6	473.6	473.0	472.5	471.8	471.2
170°	475.0	475.6	476.3	476.3	475.6	475.0	474.4	473.7
172.5°	476.7	477.3	477.9	477.9	477.2	476.5	475.9	475.2
175°	478.7	479.3	479.8	479.8	479.2	478.6	477.9	477.3
177.5°	479.5	480.0	480.5	480.5	479.8	479.2	478.6	477.9
180°	479.0	479.0	479.0	479.0	479.0	479.0	479.0	479.0

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