

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: P331497-935

Luminaire Tested: **S122DIW-S485D435U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331497-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D435U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3184.4 lumens
Efficiency: N/A
Efficacy: 105.4 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

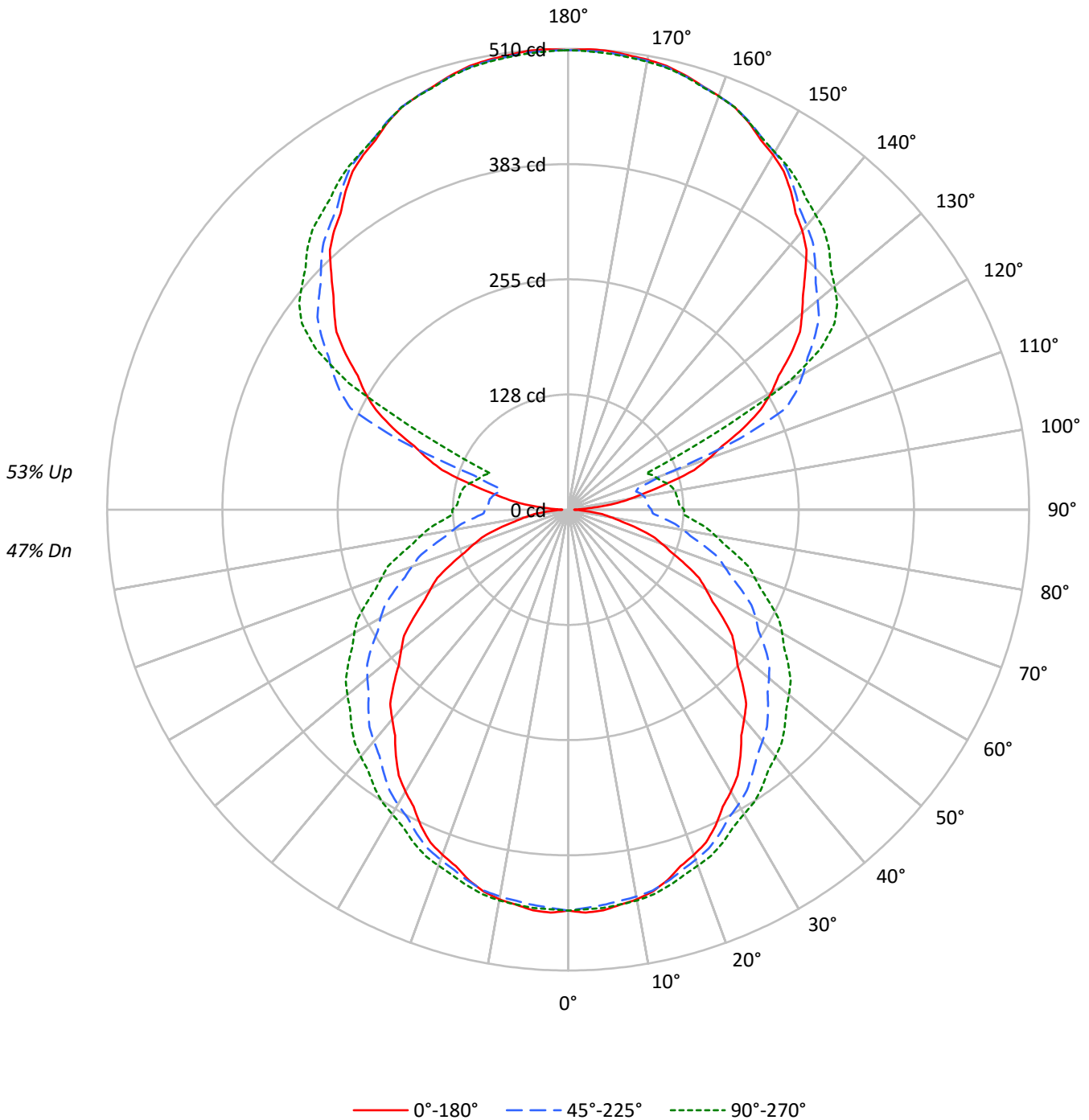
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331497-935

CATALOG NUMBER: S122DIW-S485D435U935-4F0-1E-UDD-D

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	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	86	82	88	83	80	76	70	67	64	57	55	53	45	44	42	37
2	87	78	72	66	79	72	66	61	60	56	52	49	46	43	39	37	35	30
3	79	69	61	54	72	63	56	51	53	47	43	43	39	36	34	31	29	25
4	72	60	52	46	65	56	48	42	46	41	36	38	34	30	30	27	24	21
5	66	54	45	39	60	49	42	36	41	35	31	34	29	26	27	24	21	18
6	60	48	39	33	55	44	37	31	37	31	27	31	26	23	24	21	18	15
7	56	43	35	29	51	40	32	27	34	28	23	28	23	20	22	19	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	21	28	22	18	23	19	16	19	15	13	11
10	45	33	25	20	41	30	23	19	26	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	1.3
10°-20°	120.6	3.8
20°-30°	182.7	5.7
30°-40°	222.5	7.0
40°-50°	239.4	7.5
50°-60°	232.5	7.3
60°-70°	203.0	6.4
70°-80°	156.3	4.9
80°-90°	106.1	3.3
90°-100°	89.2	2.8
100°-110°	115.0	3.6
110°-120°	201.1	6.3
120°-130°	294.0	9.2
130°-140°	300.1	9.4
140°-150°	272.8	8.6
150°-160°	218.2	6.9
160°-170°	140.6	4.4
170°-180°	48.4	1.5
0°-30°	345.3	10.8
0°-40°	567.8	17.8
0°-60°	1039.7	32.6
0°-90°	1505.1	47.3
90°-120°	405.3	12.7
90°-150°	1272.2	40.0
90°-180°	1679.0	52.7
0°-180°	3184.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	48	92	119	128	5
95°	29	48	88	114	122	33
105°	115	139	78	103	113	123
115°	214	229	266	122	95	211
125°	300	306	333	352	360	268
135°	371	377	386	403	408	287
145°	430	429	435	442	443	269
155°	473	470	474	476	473	218
165°	498	496	497	500	497	141
175°	510	507	508	510	507	48
180°	509	509	509	509	509	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.7	21.4	30.0	38.7	47.4	56.5	65.7	75.0	84.3	93.6	99.4
90°	6.8	16.0	25.1	34.4	43.6	53.0	62.9	72.7	82.4	92.2	98.3
92.5°	13.3	21.0	28.6	36.2	43.9	52.3	61.4	70.5	79.6	88.8	94.6
95°	29.1	33.1	37.1	41.2	45.1	51.7	60.9	70.0	79.1	88.3	94.1
97.5°	52.0	50.4	48.7	47.1	45.5	49.4	59.0	68.5	78.1	87.6	93.2
100°	69.7	63.7	57.8	51.9	46.0	47.7	57.1	66.5	75.9	85.2	91.2
102.5°	88.6	91.0	93.5	95.9	98.4	97.7	93.8	90.0	86.1	82.2	88.3
105°	115.1	121.7	128.3	134.9	141.5	137.3	122.4	107.5	92.6	77.7	83.7
107.5°	146.1	151.4	156.7	162.0	167.3	160.1	140.4	120.8	101.1	81.5	85.3
110°	165.6	170.1	174.8	179.3	183.9	177.9	161.3	144.6	127.9	111.3	107.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.4	188.4	192.3	196.2	200.1	202.5	203.3	204.1	204.9	205.8	180.6
115°	214.2	217.1	220.1	223.1	226.0	231.8	240.2	248.7	257.2	265.6	232.0
117.5°	240.1	242.7	245.3	247.9	250.5	255.4	262.8	270.1	277.4	284.8	279.9
120°	259.5	261.3	263.1	264.9	266.7	271.2	278.4	285.6	292.7	300.0	305.0
122.5°	276.0	277.5	279.1	280.6	282.1	286.4	293.3	300.3	307.3	314.3	318.7
125°	300.5	301.5	302.6	303.7	304.7	308.3	314.4	320.6	326.7	332.9	337.3
127.5°	323.2	324.3	325.3	326.3	327.4	330.3	335.2	340.0	344.8	349.7	354.0
130°	337.7	338.8	340.0	341.1	342.3	344.8	348.7	352.7	356.5	360.4	364.8
132.5°	352.3	353.4	354.3	355.2	356.3	358.3	361.5	364.7	368.0	371.2	375.3
135°	370.8	372.1	373.5	374.8	376.1	377.8	380.0	382.2	384.4	386.5	390.3
137.5°	390.2	391.1	392.0	392.9	393.7	394.9	396.4	397.9	399.3	400.8	404.2
140°	402.9	403.4	403.9	404.4	404.9	405.8	407.0	408.1	409.3	410.5	413.5
142.5°	413.5	413.9	414.4	414.8	415.3	416.0	417.1	418.2	419.3	420.3	422.8
145°	429.5	429.4	429.3	429.2	429.1	429.8	431.2	432.6	433.9	435.3	436.8
147.5°	443.9	443.7	443.3	443.1	442.7	443.2	444.6	446.0	447.4	448.8	449.3
150°	453.4	452.8	452.2	451.7	451.1	451.4	452.8	454.1	455.4	456.7	457.2
152.5°	461.3	460.7	460.0	459.4	458.7	459.1	460.3	461.6	462.8	464.1	464.5
155°	472.9	472.2	471.4	470.7	469.9	470.1	471.1	472.0	473.0	474.0	474.5
157.5°	481.9	481.3	480.7	480.1	479.5	479.5	480.2	480.9	481.6	482.2	482.8
160°	487.2	486.7	486.3	485.8	485.3	485.3	485.8	486.3	486.7	487.2	487.8
162.5°	492.0	491.5	490.9	490.5	490.0	490.0	490.3	490.8	491.2	491.6	492.2
165°	498.3	497.8	497.3	496.8	496.3	496.2	496.5	496.7	497.0	497.1	497.7
167.5°	503.0	502.5	502.0	501.5	501.0	500.9	501.1	501.4	501.6	501.8	502.4
170°	505.7	505.1	504.6	504.2	503.7	503.5	503.7	503.9	504.0	504.2	504.7
172.5°	507.4	507.0	506.4	505.9	505.4	505.3	505.4	505.6	505.8	505.9	506.5
175°	509.7	509.1	508.5	508.0	507.4	507.2	507.4	507.6	507.6	507.8	508.4
177.5°	510.1	509.6	509.1	508.7	508.2	508.0	508.1	508.2	508.2	508.2	508.8
180°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	105.4	111.3	117.2	121.1	123.0	124.8	126.7	128.5
90°	104.5	110.6	116.8	120.7	122.6	124.5	126.4	128.3
92.5°	100.4	106.2	112.0	115.9	117.7	119.5	121.3	123.1
95°	100.0	105.8	111.7	115.4	117.0	118.6	120.3	121.9
97.5°	98.8	104.4	110.1	113.8	115.5	117.4	119.2	120.9
100°	97.1	103.1	109.0	112.9	114.6	116.3	118.1	119.9
102.5°	94.3	100.3	106.3	110.3	112.1	113.9	115.6	117.4
105°	89.5	95.5	101.3	105.2	107.1	109.1	111.0	112.9
107.5°	89.2	93.1	97.0	99.9	101.8	103.7	105.6	107.5
110°	104.1	100.6	96.9	96.1	98.0	99.9	101.8	103.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	155.2	130.0	104.7	93.0	94.9	96.7	98.5	100.4
115°	198.5	164.9	131.3	112.4	108.1	103.8	99.4	95.1
117.5°	274.9	270.0	265.1	253.7	235.7	217.9	200.0	182.1
120°	310.0	315.0	319.9	317.6	308.2	298.7	289.2	279.8
122.5°	323.2	327.7	332.2	334.0	333.2	332.4	331.6	330.8
125°	341.7	346.1	350.5	353.5	355.1	356.6	358.1	359.6
127.5°	358.4	362.8	367.2	370.1	371.3	372.6	373.9	375.3
130°	369.1	373.4	377.7	380.5	381.5	382.5	383.7	384.7
132.5°	379.4	383.4	387.5	390.1	391.2	392.2	393.3	394.3
135°	394.2	398.0	401.7	404.2	405.1	406.1	407.1	408.1
137.5°	407.7	411.0	414.5	416.6	417.2	417.9	418.6	419.3
140°	416.6	419.6	422.6	424.3	424.8	425.2	425.7	426.1
142.5°	425.3	427.8	430.3	431.8	432.1	432.5	432.8	433.1
145°	438.2	439.6	441.1	442.0	442.2	442.6	442.8	443.2
147.5°	449.8	450.4	450.9	451.2	451.2	451.2	451.2	451.2
150°	457.7	458.1	458.7	458.7	458.3	457.9	457.4	457.1
152.5°	465.0	465.5	466.1	466.0	465.5	464.9	464.3	463.8
155°	475.0	475.4	476.0	475.9	475.2	474.6	473.9	473.3
157.5°	483.4	483.9	484.5	484.4	483.8	483.1	482.5	481.9
160°	488.2	488.7	489.2	489.1	488.6	488.0	487.4	486.9
162.5°	492.8	493.4	493.9	493.8	493.1	492.4	491.7	491.0
165°	498.3	498.9	499.5	499.5	498.9	498.3	497.7	497.1
167.5°	503.0	503.5	504.1	504.0	503.3	502.6	501.8	501.1
170°	505.3	505.9	506.4	506.4	505.7	504.9	504.2	503.4
172.5°	507.0	507.6	508.2	508.2	507.4	506.7	505.9	505.2
175°	509.0	509.5	510.1	510.1	509.2	508.4	507.6	506.8
177.5°	509.2	509.6	510.1	510.1	509.5	508.9	508.2	507.7
180°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6

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