

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: P331504-830

Luminaire Tested: **S122DIW-S485D710U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331504-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D710U830-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4173.8 lumens
Efficiency: N/A
Efficacy: 111.0 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: Semi-Indirect

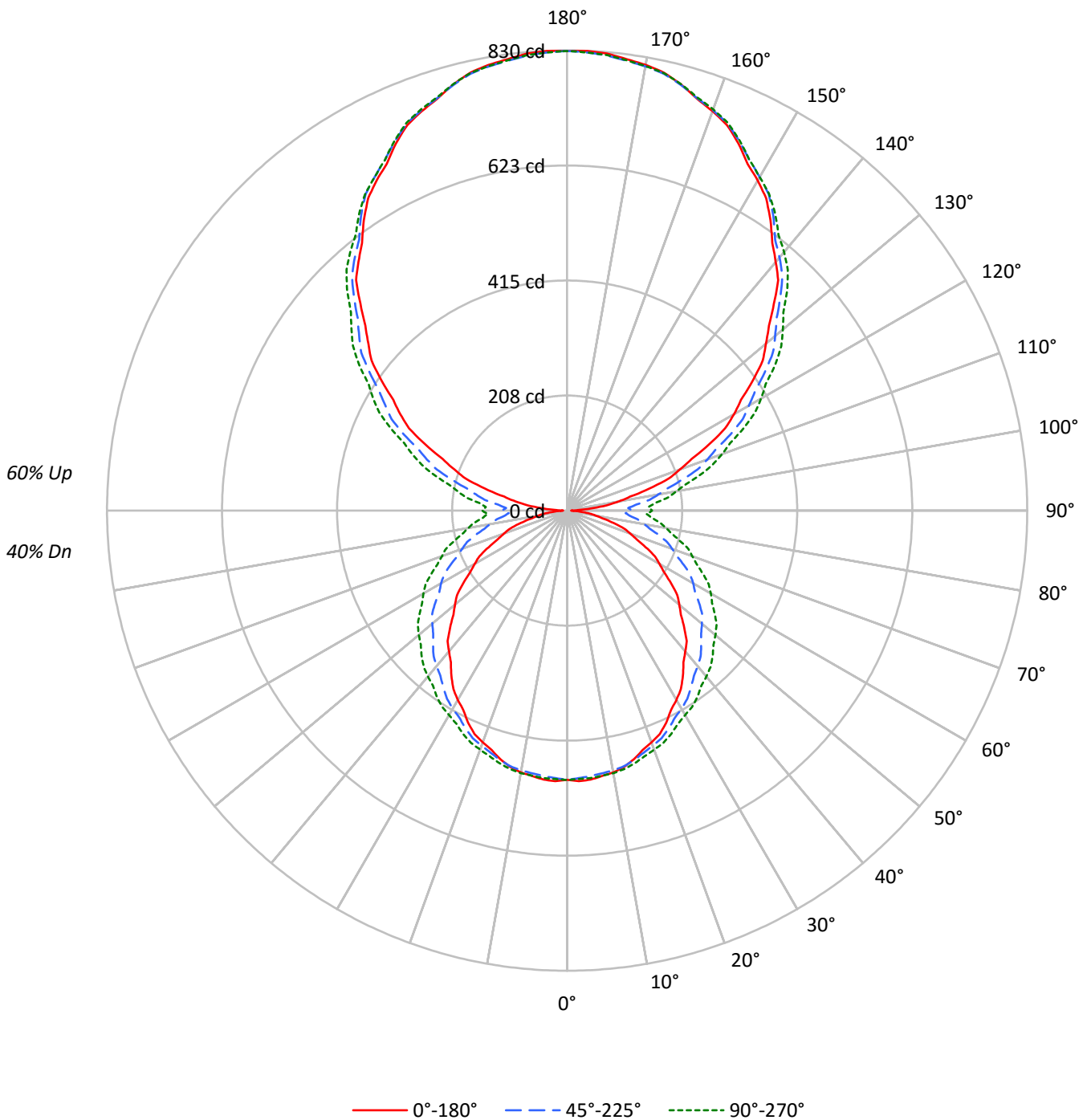
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	95	95	95	95	78	78	78	61	61	61	46	46	46	40
1	94	89	85	81	85	81	78	74	66	63	61	52	50	49	39	38	37	31
2	85	77	71	65	77	70	65	60	57	53	50	45	42	40	34	32	30	25
3	77	68	60	54	70	62	55	50	50	45	41	39	36	33	30	27	25	21
4	71	60	51	45	64	54	47	42	44	39	35	35	31	28	26	23	21	17
5	65	53	44	38	58	48	41	35	39	34	30	31	27	24	23	21	18	15
6	59	47	39	33	54	43	36	30	35	30	26	28	24	21	21	18	16	13
7	55	42	34	29	50	39	32	27	32	26	22	25	21	18	19	16	14	11
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	18	24	19	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.1
10°-20°	132.0	3.2
20°-30°	200.0	4.8
30°-40°	243.6	5.8
40°-50°	262.1	6.3
50°-60°	254.5	6.1
60°-70°	222.2	5.3
70°-80°	171.1	4.1
80°-90°	118.1	2.8
90°-100°	131.6	3.2
100°-110°	220.9	5.3
110°-120°	317.0	7.6
120°-130°	387.9	9.3
130°-140°	420.4	10.1
140°-150°	405.1	9.7
150°-160°	338.4	8.1
160°-170°	224.5	5.4
170°-180°	78.5	1.9
0°-30°	378.0	9.1
0°-40°	621.6	14.9
0°-60°	1138.1	27.3
0°-90°	1649.6	39.5
90°-120°	669.4	16.0
90°-150°	1882.9	45.1
90°-180°	2524.0	60.5
0°-180°	4173.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	8	58	117	143	153	7
95°	42	82	126	151	160	46
105°	154	177	214	239	248	163
115°	283	296	325	344	351	279
125°	408	416	435	452	458	365
135°	527	535	544	557	561	407
145°	639	644	648	653	654	399
155°	731	733	735	738	736	336
165°	795	795	795	799	796	224
175°	827	825	824	828	825	79
180°	829	829	829	829	829	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	13.9	23.7	33.4	43.0	52.7	63.0	73.6	84.3	95.0	105.7	112.0
90°	7.7	18.7	29.6	40.5	51.5	63.7	77.1	90.6	104.0	117.4	123.4
92.5°	18.9	28.7	38.5	48.4	58.2	68.3	78.8	89.2	99.6	110.1	116.3
95°	42.0	50.9	59.9	68.7	77.7	86.9	96.6	106.3	116.0	125.7	131.7
97.5°	71.4	79.3	87.2	95.1	103.0	111.8	121.3	130.9	140.5	150.1	155.9
100°	93.8	100.8	107.8	114.8	121.9	130.0	139.2	148.5	157.7	166.9	172.7
102.5°	116.7	123.0	129.2	135.5	141.9	149.5	158.6	167.7	176.8	185.9	191.7
105°	153.9	158.9	163.9	168.9	173.9	180.6	189.1	197.6	205.9	214.4	220.2
107.5°	192.1	196.4	200.7	205.0	209.3	215.4	223.2	230.9	238.7	246.6	251.9
110°	216.1	220.2	224.2	228.3	232.3	238.3	245.9	253.5	261.3	268.9	273.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	243.0	246.6	250.2	253.6	257.2	262.6	269.8	276.9	284.1	291.2	295.9
115°	282.6	285.2	287.9	290.6	293.2	297.8	304.6	311.3	318.1	324.8	329.3
117.5°	321.3	323.7	326.0	328.5	330.8	334.8	340.4	346.1	351.8	357.3	361.7
120°	347.6	349.5	351.4	353.3	355.1	358.5	363.5	368.5	373.6	378.6	383.0
122.5°	371.6	373.4	375.1	376.9	378.6	382.0	387.0	392.1	397.1	402.1	406.0
125°	408.5	409.9	411.2	412.6	414.1	417.1	421.6	426.1	430.6	435.2	438.9
127.5°	445.0	446.6	448.2	449.8	451.5	454.0	457.4	460.9	464.4	467.9	471.2
130°	467.9	469.8	471.6	473.5	475.4	477.8	480.8	483.7	486.7	489.7	493.1
132.5°	493.6	495.1	496.6	498.1	499.6	501.6	504.3	506.9	509.4	512.1	515.0
135°	527.4	529.0	530.7	532.5	534.2	536.0	537.9	539.7	541.6	543.5	546.6
137.5°	563.5	565.0	566.4	567.7	569.1	570.3	571.4	572.5	573.5	574.7	577.4
140°	585.4	586.6	587.9	589.2	590.4	591.5	592.7	593.7	594.8	595.9	598.4
142.5°	607.8	609.1	610.3	611.5	612.7	613.7	614.3	614.8	615.5	616.0	618.2
145°	639.2	640.4	641.4	642.5	643.7	644.6	645.5	646.5	647.4	648.4	649.4
147.5°	668.0	669.2	670.5	671.8	673.2	674.1	674.8	675.3	676.0	676.7	677.1
150°	687.5	688.4	689.4	690.3	691.3	692.0	692.7	693.2	693.9	694.6	695.0
152.5°	704.8	705.8	706.7	707.7	708.6	709.5	710.2	711.0	711.7	712.5	713.0
155°	730.8	731.3	731.8	732.3	732.7	733.2	733.7	734.1	734.6	735.1	735.8
157.5°	753.1	753.5	753.8	754.0	754.4	754.7	755.0	755.3	755.5	755.8	756.9
160°	766.6	766.9	767.1	767.5	767.8	768.1	768.2	768.4	768.5	768.6	769.6
162.5°	778.8	778.9	779.0	779.0	779.1	779.2	779.4	779.6	779.7	779.9	780.9
165°	795.2	795.0	794.9	794.8	794.7	794.6	794.6	794.6	794.6	794.6	795.6
167.5°	809.0	808.5	808.0	807.6	807.1	806.8	806.8	806.7	806.7	806.7	807.8
170°	816.2	815.8	815.3	814.8	814.4	814.1	813.9	813.7	813.6	813.4	814.5
172.5°	821.2	820.8	820.3	819.8	819.4	819.1	818.9	818.8	818.6	818.4	819.5
175°	827.4	827.0	826.5	826.0	825.6	825.2	824.8	824.5	824.3	823.9	825.0
177.5°	829.9	829.5	829.2	828.8	828.4	828.1	827.8	827.6	827.4	827.1	827.8
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	118.4	124.7	131.0	135.2	137.2	139.2	141.3	143.3
90°	129.3	135.3	141.2	145.2	147.2	149.2	151.3	153.3
92.5°	122.4	128.7	134.9	138.9	140.8	142.7	144.7	146.6
95°	137.6	143.5	149.5	153.3	154.8	156.4	158.0	159.5
97.5°	161.7	167.5	173.3	177.1	178.9	180.8	182.6	184.4
100°	178.5	184.3	190.0	193.7	195.3	196.9	198.4	200.0
102.5°	197.5	203.3	209.1	212.7	214.3	215.8	217.4	219.0
105°	226.0	231.8	237.5	241.3	243.0	244.8	246.5	248.2
107.5°	257.3	262.7	268.1	271.3	272.3	273.2	274.3	275.3
110°	278.9	283.9	288.9	292.1	293.3	294.5	295.9	297.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	300.5	305.2	309.8	312.8	314.1	315.6	317.0	318.3
115°	333.8	338.4	343.0	345.8	347.1	348.4	349.6	350.9
117.5°	365.9	370.1	374.4	377.1	378.2	379.4	380.5	381.6
120°	387.4	391.7	396.2	399.0	400.2	401.4	402.7	404.0
122.5°	409.8	413.7	417.6	420.1	421.2	422.4	423.5	424.6
125°	442.7	446.5	450.3	452.7	453.9	455.2	456.5	457.7
127.5°	474.6	477.9	481.2	483.2	484.2	485.0	485.9	486.8
130°	496.5	500.0	503.5	505.5	506.1	506.8	507.4	508.0
132.5°	517.9	520.8	523.9	525.7	526.4	527.2	527.9	528.7
135°	549.8	552.9	556.0	558.0	558.7	559.5	560.3	561.1
137.5°	580.1	583.0	585.7	587.3	587.7	588.1	588.6	589.1
140°	600.9	603.4	606.0	607.4	607.7	607.9	608.3	608.6
142.5°	620.3	622.5	624.5	625.8	625.9	626.1	626.3	626.5
145°	650.5	651.7	652.7	653.4	653.6	653.7	653.8	654.0
147.5°	677.6	678.0	678.4	678.6	678.3	678.2	678.0	677.8
150°	695.4	695.9	696.4	696.4	695.9	695.4	695.0	694.6
152.5°	713.6	714.2	714.8	714.8	714.2	713.6	713.0	712.5
155°	736.6	737.4	738.2	738.4	737.9	737.4	737.0	736.5
157.5°	757.9	758.9	760.0	760.2	759.4	758.7	757.9	757.1
160°	770.5	771.5	772.4	772.5	771.9	771.3	770.7	770.1
162.5°	781.9	783.1	784.1	784.2	783.4	782.8	782.0	781.3
165°	796.7	797.8	798.9	799.1	798.2	797.5	796.7	796.0
167.5°	808.9	809.9	811.1	811.2	810.4	809.5	808.8	807.9
170°	815.6	816.7	817.7	817.8	816.9	816.0	815.0	814.1
172.5°	820.7	821.7	822.8	822.8	822.0	821.0	820.1	819.2
175°	826.0	827.2	828.3	828.3	827.4	826.5	825.6	824.6
177.5°	828.6	829.3	830.1	830.1	829.3	828.6	827.8	827.1
180°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8

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