

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

Luminaire Tested: **S122DIW-S485D710U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331504
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-S485D710U835-4F0-1E-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: 4428.3 lumens
Efficiency: N/A
Efficacy: 117.8 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

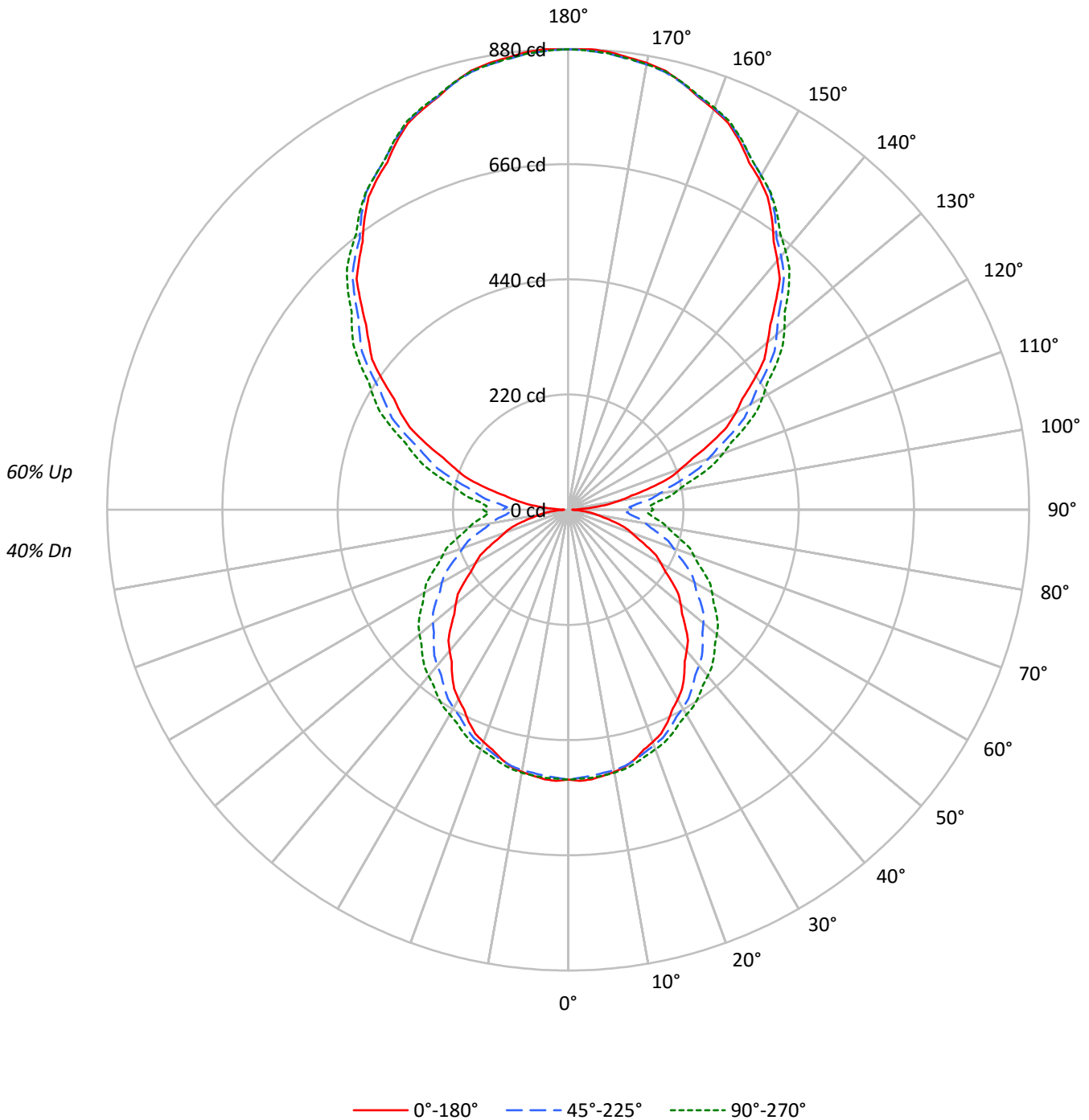
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	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	1.1
10°-20°	140.0	3.2
20°-30°	212.2	4.8
30°-40°	258.4	5.8
40°-50°	278.0	6.3
50°-60°	270.0	6.1
60°-70°	235.8	5.3
70°-80°	181.5	4.1
80°-90°	125.3	2.8
90°-100°	139.6	3.2
100°-110°	234.3	5.3
110°-120°	336.3	7.6
120°-130°	411.6	9.3
130°-140°	446.1	10.1
140°-150°	429.8	9.7
150°-160°	359.1	8.1
160°-170°	238.2	5.4
170°-180°	83.2	1.9
0°-30°	401.0	9.1
0°-40°	659.5	14.9
0°-60°	1207.5	27.3
0°-90°	1750.1	39.5
90°-120°	710.2	16.0
90°-150°	1997.7	45.1
90°-180°	2678.0	60.5
0°-180°	4428.3	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	61	125	152	163	7
95°	45	87	133	161	169	49
105°	163	188	228	254	263	173
115°	300	314	345	365	372	296
125°	433	441	462	479	486	387
135°	560	568	577	591	595	432
145°	678	683	688	693	694	424
155°	775	778	780	783	781	357
165°	844	843	843	848	844	238
175°	878	876	874	879	875	83
180°	879	879	879	879	879	



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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	25.1	35.4	45.6	55.9	66.8	78.1	89.4	100.8	112.1	118.8
90°	8.2	19.8	31.4	43.0	54.6	67.6	81.8	96.1	110.3	124.6	130.9
92.5°	20.1	30.5	40.9	51.3	61.7	72.5	83.6	94.6	105.7	116.8	123.4
95°	44.6	54.0	63.5	72.9	82.4	92.2	102.5	112.8	123.1	133.4	139.7
97.5°	75.7	84.1	92.5	100.9	109.3	118.6	128.7	138.9	149.1	159.3	165.4
100°	99.5	106.9	114.4	121.8	129.3	137.9	147.7	157.5	167.3	177.1	183.2
102.5°	123.8	130.5	137.1	143.8	150.5	158.6	168.3	177.9	187.6	197.2	203.4
105°	163.3	168.6	173.9	179.2	184.5	191.6	200.6	209.6	218.5	227.5	233.6
107.5°	203.8	208.4	212.9	217.5	222.1	228.5	236.8	245.0	253.3	261.6	267.3
110°	229.3	233.6	237.9	242.2	246.5	252.8	260.9	269.0	277.2	285.3	290.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	257.8	261.6	265.4	269.1	272.9	278.6	286.2	293.8	301.4	309.0	313.9
115°	299.8	302.6	305.4	308.3	311.1	316.0	323.2	330.3	337.5	344.6	349.4
117.5°	340.9	343.4	345.9	348.5	351.0	355.2	361.2	367.2	373.2	379.1	383.7
120°	368.8	370.8	372.8	374.8	376.7	380.4	385.7	391.0	396.4	401.7	406.3
122.5°	394.3	396.2	398.0	399.9	401.7	405.3	410.6	416.0	421.3	426.6	430.7
125°	433.4	434.9	436.3	437.8	439.3	442.5	447.3	452.1	456.9	461.7	465.7
127.5°	472.1	473.8	475.5	477.2	479.0	481.7	485.3	489.0	492.7	496.4	499.9
130°	496.4	498.4	500.4	502.4	504.4	506.9	510.1	513.2	516.4	519.5	523.2
132.5°	523.7	525.3	526.9	528.5	530.1	532.2	535.0	537.8	540.5	543.3	546.4
135°	559.5	561.3	563.1	565.0	566.8	568.7	570.7	572.6	574.6	576.6	579.9
137.5°	597.9	599.4	600.9	602.3	603.8	605.1	606.2	607.4	608.5	609.7	612.6
140°	621.1	622.4	623.7	625.1	626.4	627.6	628.8	629.9	631.1	632.2	634.9
142.5°	644.8	646.2	647.5	648.8	650.1	651.1	651.7	652.3	653.0	653.6	655.9
145°	678.2	679.4	680.5	681.7	682.9	683.9	684.9	685.9	686.9	687.9	689.0
147.5°	708.7	710.0	711.4	712.8	714.2	715.2	715.9	716.5	717.2	717.9	718.4
150°	729.4	730.4	731.4	732.4	733.4	734.2	734.9	735.5	736.2	736.9	737.4
152.5°	747.8	748.8	749.8	750.8	751.8	752.7	753.5	754.3	755.1	755.9	756.5
155°	775.4	775.9	776.4	776.9	777.4	777.9	778.4	778.9	779.4	779.9	780.7
157.5°	799.0	799.4	799.7	800.0	800.4	800.7	801.0	801.3	801.6	801.9	803.0
160°	813.3	813.6	813.9	814.3	814.6	814.9	815.0	815.2	815.3	815.5	816.5
162.5°	826.3	826.4	826.5	826.5	826.6	826.7	826.9	827.1	827.2	827.4	828.5
165°	843.7	843.5	843.4	843.2	843.1	843.0	843.0	843.0	843.0	843.0	844.1
167.5°	858.3	857.8	857.3	856.8	856.3	856.0	856.0	855.9	855.9	855.9	857.0
170°	866.0	865.5	865.0	864.5	864.0	863.7	863.5	863.3	863.2	863.0	864.2
172.5°	871.3	870.8	870.3	869.8	869.3	869.0	868.8	868.7	868.5	868.3	869.5
175°	877.8	877.4	876.9	876.4	875.9	875.5	875.1	874.8	874.5	874.1	875.3
177.5°	880.5	880.1	879.7	879.3	878.9	878.6	878.3	878.1	877.8	877.5	878.3
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3



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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°	125.6	132.3	139.0	143.4	145.6	147.7	149.9	152.0
90°	137.2	143.5	149.8	154.0	156.2	158.3	160.5	162.6
92.5°	129.9	136.5	143.1	147.4	149.4	151.4	153.5	155.5
95°	146.0	152.3	158.6	162.6	164.2	165.9	167.6	169.2
97.5°	171.6	177.7	183.9	187.9	189.8	191.8	193.7	195.6
100°	189.4	195.5	201.6	205.5	207.2	208.9	210.5	212.2
102.5°	209.5	215.7	221.8	225.7	227.4	229.0	230.7	232.3
105°	239.8	245.9	252.0	256.0	257.8	259.7	261.5	263.3
107.5°	273.0	278.7	284.4	287.8	288.9	289.9	291.0	292.1
110°	295.9	301.2	306.5	309.9	311.2	312.5	313.9	315.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	318.8	323.8	328.7	331.9	333.3	334.8	336.3	337.7
115°	354.2	359.0	363.9	366.9	368.3	369.6	370.9	372.3
117.5°	388.2	392.7	397.2	400.1	401.3	402.5	403.7	404.9
120°	411.0	415.6	420.3	423.3	424.6	425.9	427.2	428.6
122.5°	434.8	438.9	443.1	445.7	446.9	448.1	449.3	450.5
125°	469.7	473.7	477.7	480.3	481.6	483.0	484.3	485.6
127.5°	503.5	507.0	510.5	512.7	513.7	514.6	515.5	516.5
130°	526.8	530.5	534.2	536.3	537.0	537.7	538.3	539.0
132.5°	549.5	552.6	555.8	557.7	558.5	559.3	560.1	560.9
135°	583.3	586.6	589.9	592.0	592.8	593.6	594.5	595.3
137.5°	615.5	618.5	621.4	623.1	623.5	624.0	624.5	625.0
140°	637.5	640.2	642.9	644.4	644.7	645.0	645.4	645.7
142.5°	658.1	660.4	662.6	663.9	664.1	664.3	664.5	664.7
145°	690.2	691.4	692.5	693.2	693.4	693.5	693.7	693.9
147.5°	718.9	719.3	719.8	720.0	719.7	719.5	719.3	719.1
150°	737.8	738.3	738.8	738.8	738.3	737.8	737.4	736.9
152.5°	757.1	757.7	758.4	758.4	757.7	757.1	756.5	755.9
155°	781.5	782.4	783.2	783.4	782.9	782.4	781.9	781.4
157.5°	804.1	805.2	806.3	806.5	805.7	804.9	804.1	803.3
160°	817.5	818.5	819.5	819.6	819.0	818.3	817.7	817.0
162.5°	829.6	830.8	831.9	832.0	831.2	830.5	829.7	828.9
165°	845.3	846.4	847.6	847.8	846.9	846.1	845.3	844.5
167.5°	858.2	859.3	860.5	860.6	859.8	858.9	858.1	857.2
170°	865.3	866.5	867.6	867.7	866.7	865.7	864.7	863.7
172.5°	870.7	871.8	873.0	873.0	872.1	871.1	870.1	869.1
175°	876.4	877.6	878.8	878.8	877.8	876.9	875.9	874.9
177.5°	879.1	879.9	880.7	880.7	879.9	879.1	878.3	877.5
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3

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