

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: P331563-935

Luminaire Tested: **S122DIW-S865D710U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331563-935
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-S865D710U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5450.7 lumens
Efficiency: N/A
Efficacy: 101.7 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

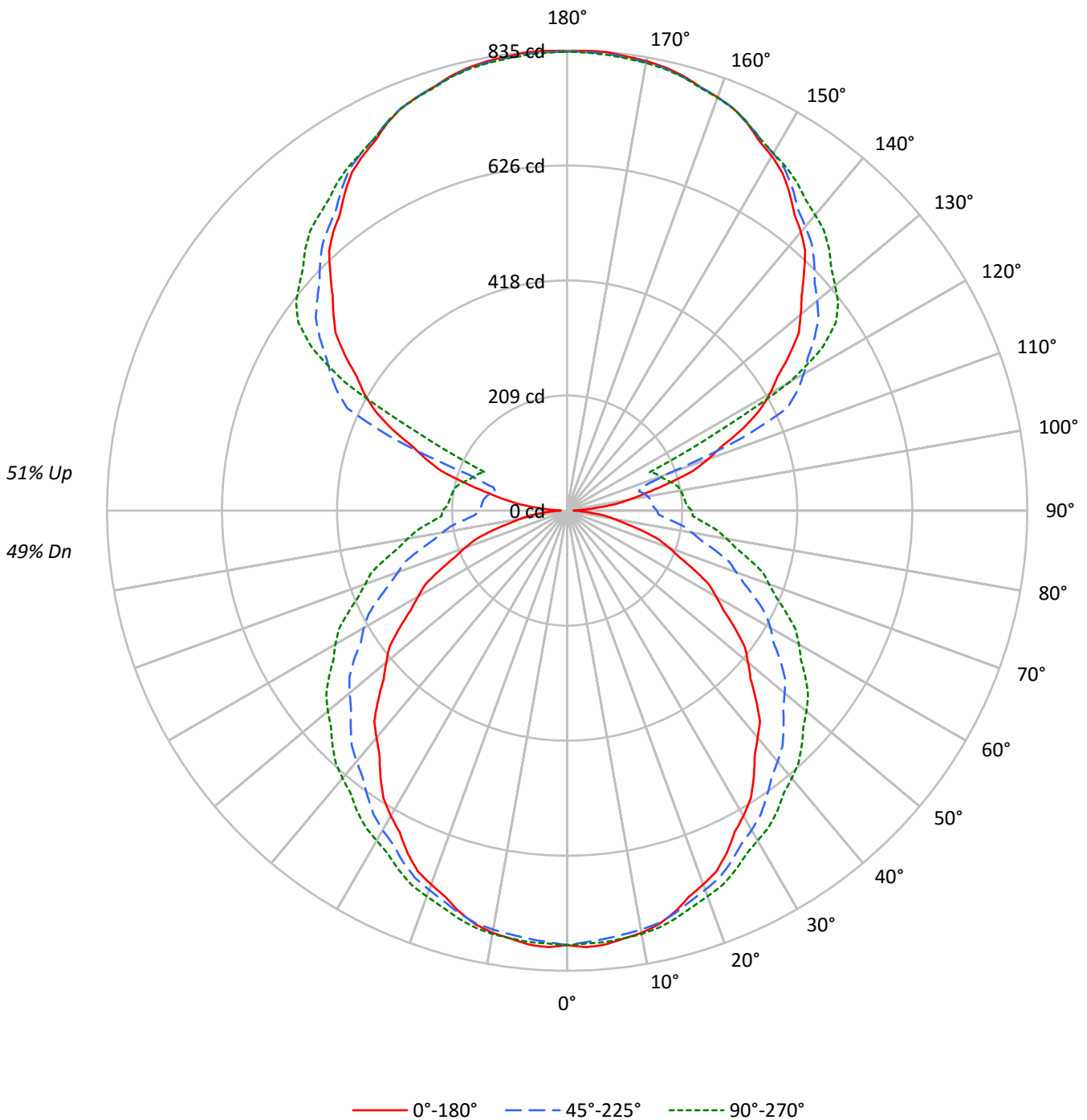
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55	49				
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	47	45	44	38				
2	87	79	72	66	80	73	67	62	61	56	53	50	47	44	40	38	36	31				
3	79	69	61	55	72	63	56	51	53	48	44	44	40	37	35	32	30	25				
4	72	60	52	46	66	56	48	43	47	41	37	39	34	31	31	28	25	21				
5	66	54	45	39	60	50	42	36	42	36	31	35	30	26	28	24	22	18				
6	61	48	40	33	55	44	37	31	38	32	27	31	26	23	25	22	19	16				
7	56	43	35	29	51	40	33	27	34	28	24	28	24	20	23	19	17	14				
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	17	15	12				
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11				
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	15	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12728	12728	12728
5°	12790	12252	12205
10°	12710	11890	11756
15°	12535	11506	11284
20°	12312	11097	10828
25°	12095	10701	10415
30°	11786	10293	10000
35°	11474	9900	9708
40°	11147	9566	9415
45°	10835	9267	9165
50°	10500	8995	8920
55°	10150	8703	8668
60°	9721	8403	8403
65°	9278	8047	8088
70°	8774	7666	7748
75°	8132	7293	7435
80°	7126	6912	7117
85°	6164	6582	6872



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.7	1.4
10°-20°	214.2	3.9
20°-30°	324.6	6.0
30°-40°	395.4	7.3
40°-50°	425.3	7.8
50°-60°	413.1	7.6
60°-70°	360.7	6.6
70°-80°	277.7	5.1
80°-90°	188.4	3.5
90°-100°	156.2	2.9
100°-110°	195.6	3.6
110°-120°	334.3	6.1
120°-130°	484.2	8.9
130°-140°	492.7	9.0
140°-150°	447.0	8.2
150°-160°	357.3	6.6
160°-170°	230.3	4.2
170°-180°	79.3	1.5
0°-30°	613.5	11.3
0°-40°	1008.9	18.5
0°-60°	1847.2	33.9
0°-90°	2674.0	49.1
90°-120°	686.1	12.6
90°-150°	2109.9	38.7
90°-180°	2777.0	50.9
0°-180°	5450.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	791	787	780	787	786	75
15°	754	756	756	766	766	212
25°	686	694	704	717	721	315
35°	591	610	632	656	665	369
45°	484	516	555	589	602	374
55°	371	413	472	512	528	332
65°	254	310	377	422	439	252
75°	140	205	278	325	342	149
85°	41	112	185	231	249	44
90°	12	85	163	210	226	9
95°	48	84	155	199	214	55
105°	189	232	135	180	197	202
115°	351	376	440	208	165	345
125°	492	502	548	582	595	439
135°	608	618	634	663	672	469
145°	703	703	713	724	727	440
155°	775	770	776	779	775	357
165°	816	813	814	818	814	230
175°	835	831	832	835	830	79
180°	833	833	833	833	833	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	792.9	792.3	791.7	791.1	790.5	789.5	788.0	786.6	785.1	783.8	784.8
5°	790.6	789.9	789.1	788.3	787.6	786.4	784.9	783.3	781.9	780.3	781.9
7.5°	783.5	783.0	782.5	782.0	781.5	780.7	779.5	778.3	777.1	776.0	777.8
10°	778.1	777.6	777.1	776.5	776.0	775.4	774.6	773.9	773.1	772.3	774.4
12.5°	768.9	769.0	769.1	769.2	769.3	769.0	768.5	767.9	767.4	766.8	768.9
15°	754.1	754.6	755.1	755.6	756.0	756.3	756.3	756.3	756.3	756.3	758.6
17.5°	734.9	735.9	737.0	738.0	739.1	740.0	740.9	741.7	742.5	743.3	745.7
20°	722.0	723.3	724.6	725.9	727.1	728.3	729.3	730.3	731.3	732.4	735.1
22.5°	708.3	709.8	711.3	712.7	714.2	715.7	717.1	718.5	720.0	721.3	724.2
25°	685.5	687.3	689.1	690.9	692.6	694.7	696.9	699.2	701.5	703.8	706.8
27.5°	658.1	661.0	663.8	666.8	669.7	672.4	675.1	677.9	680.5	683.2	687.1
30°	639.8	643.1	646.4	649.7	653.0	656.3	659.6	662.9	666.2	669.5	673.6
32.5°	619.7	623.4	627.1	630.9	634.6	638.3	642.2	646.2	650.1	653.9	658.7
35°	590.6	595.0	599.3	603.6	608.0	612.5	617.3	622.2	627.0	631.8	637.4
37.5°	559.1	564.1	569.1	574.0	579.0	584.6	590.9	597.2	603.4	609.7	615.9
40°	538.1	543.7	549.3	554.9	560.4	566.7	573.5	580.4	587.3	594.1	600.7
42.5°	518.0	523.6	529.2	534.8	540.4	547.1	554.9	562.8	570.7	578.6	585.7
45°	484.4	491.3	498.1	505.0	511.9	519.7	528.6	537.5	546.4	555.3	563.1
47.5°	451.3	458.7	466.2	473.7	481.1	490.1	500.5	510.9	521.3	531.8	539.9
50°	428.4	436.3	444.2	452.0	459.9	469.6	481.0	492.4	503.9	515.3	523.9
52.5°	406.5	414.7	423.1	431.4	439.6	449.8	461.8	473.8	485.9	497.9	506.7
55°	371.3	380.5	389.6	398.7	407.9	419.0	432.2	445.5	458.7	471.8	481.0
57.5°	336.6	346.9	357.2	367.5	377.8	389.7	403.1	416.6	430.1	443.5	453.4
60°	311.9	322.8	333.7	344.7	355.6	368.2	382.7	397.2	411.6	426.2	435.8
62.5°	290.0	301.3	312.6	323.9	335.3	348.2	362.7	377.1	391.6	406.0	416.3
65°	253.7	266.0	278.5	290.9	303.4	317.1	332.1	347.1	362.1	377.0	387.4
67.5°	220.2	233.2	246.2	259.2	272.2	286.5	301.8	317.1	332.4	347.8	358.3
70°	196.5	209.7	222.9	236.1	249.3	263.8	279.6	295.2	311.0	326.7	337.7
72.5°	174.6	188.2	201.8	215.4	229.0	243.7	259.8	275.7	291.6	307.5	318.3
75°	140.5	154.7	168.9	183.2	197.4	212.7	228.9	245.1	261.4	277.6	288.5
77.5°	107.6	122.5	137.4	152.2	167.1	182.8	199.3	215.9	232.3	248.8	259.7
80°	85.7	101.2	116.7	132.2	147.7	163.6	180.1	196.7	213.1	229.6	240.3
82.5°	67.4	82.7	98.0	113.2	128.5	144.6	161.3	178.0	194.7	211.4	222.1
85°	41.2	56.9	72.6	88.3	104.1	120.1	136.3	152.6	168.8	185.1	195.8
87.5°	22.5	38.0	53.4	68.8	84.2	100.1	116.7	133.1	149.6	166.0	176.5
90°	12.1	28.2	44.4	60.6	76.8	93.6	110.9	128.2	145.5	162.9	173.7
92.5°	22.6	36.2	49.9	63.5	77.0	91.9	108.1	124.2	140.4	156.5	166.9
95°	48.3	55.8	63.4	70.9	78.4	90.2	106.4	122.5	138.7	154.9	165.2
97.5°	85.8	83.9	82.1	80.2	78.4	85.8	102.6	119.4	136.2	153.0	163.0
100°	114.7	105.7	96.8	87.8	78.9	82.7	99.1	115.6	132.1	148.6	159.1
102.5°	145.6	150.3	155.0	159.7	164.4	164.1	158.9	153.6	148.4	143.2	153.8
105°	189.0	200.4	211.7	223.1	234.5	228.5	205.1	181.8	158.4	135.0	145.4
107.5°	239.7	248.8	258.0	267.1	276.2	265.2	234.0	202.8	171.6	140.3	147.4
110°	271.6	279.5	287.4	295.2	303.2	293.9	267.7	241.4	215.2	188.9	183.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	302.5	309.2	316.0	322.7	329.5	334.0	336.2	338.5	340.8	343.0	302.3
115°	351.1	356.2	361.3	366.4	371.4	381.3	396.1	410.9	425.7	440.4	386.1
117.5°	393.6	397.9	402.3	406.7	411.0	419.7	432.5	445.4	458.2	471.1	463.6
120°	425.3	428.3	431.4	434.5	437.5	445.2	457.8	470.4	482.9	495.5	504.2
122.5°	452.4	454.9	457.4	459.9	462.4	469.8	482.0	494.1	506.3	518.5	526.3
125°	492.3	494.0	495.8	497.6	499.3	505.5	516.2	526.8	537.5	548.2	555.9
127.5°	529.6	531.2	533.0	534.6	536.2	541.3	549.7	558.3	566.7	575.1	582.8
130°	553.2	555.1	557.0	558.9	560.8	565.1	571.9	578.7	585.5	592.3	599.9
132.5°	577.3	578.9	580.4	582.0	583.6	587.1	592.7	598.3	603.9	609.5	616.6
135°	607.5	609.7	611.8	613.9	616.0	619.1	622.8	626.5	630.3	634.0	640.7
137.5°	639.2	640.7	642.1	643.6	645.0	647.0	649.5	651.9	654.4	656.9	662.9
140°	660.0	660.7	661.6	662.4	663.2	664.6	666.6	668.6	670.5	672.5	677.8
142.5°	677.3	678.0	678.7	679.4	680.1	681.4	683.2	685.0	686.7	688.5	692.9
145°	703.4	703.3	703.2	703.0	702.8	704.0	706.2	708.5	710.8	713.1	715.5
147.5°	727.1	726.7	726.2	725.7	725.1	726.0	728.2	730.5	732.7	734.9	735.9
150°	742.6	741.7	740.7	739.8	738.8	739.4	741.6	743.7	745.9	748.0	748.8
152.5°	755.6	754.6	753.5	752.4	751.4	751.9	754.0	756.0	758.0	760.1	760.9
155°	774.6	773.4	772.1	770.9	769.7	769.9	771.5	773.1	774.7	776.4	777.1
157.5°	789.4	788.3	787.3	786.3	785.3	785.3	786.4	787.6	788.7	789.8	790.7
160°	798.1	797.2	796.4	795.7	794.8	794.8	795.7	796.4	797.2	798.1	798.8
162.5°	805.7	804.9	804.2	803.3	802.5	802.5	803.1	803.9	804.6	805.3	806.2
165°	816.1	815.3	814.5	813.7	812.9	812.7	813.1	813.5	813.9	814.3	815.3
167.5°	823.8	823.0	822.3	821.4	820.6	820.4	820.8	821.1	821.6	821.9	822.9
170°	828.2	827.3	826.6	825.8	824.9	824.7	824.9	825.3	825.5	825.8	826.7
172.5°	831.0	830.3	829.5	828.6	827.9	827.6	827.9	828.1	828.4	828.6	829.6
175°	834.8	833.9	832.9	832.0	831.0	830.7	831.0	831.3	831.6	831.8	832.8
177.5°	835.4	834.7	833.9	833.2	832.4	832.1	832.2	832.3	832.4	832.5	833.3
180°	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	785.7	786.8	787.8	788.2	787.7	787.3	786.9	786.5
5°	783.3	784.9	786.4	787.0	786.8	786.5	786.3	786.0
7.5°	779.6	781.4	783.3	784.1	783.9	783.6	783.3	783.1
10°	776.4	778.4	780.5	781.4	781.1	780.8	780.6	780.3
12.5°	770.9	772.9	775.0	775.8	775.6	775.3	775.1	774.8
15°	760.9	763.2	765.5	766.5	766.2	765.9	765.7	765.5
17.5°	748.1	750.4	752.9	754.1	754.1	754.1	754.1	754.1
20°	738.0	740.7	743.5	744.9	744.9	744.9	744.9	744.9
22.5°	726.9	729.8	732.5	734.2	734.5	734.9	735.4	735.8
25°	709.9	712.9	716.0	717.9	718.6	719.4	720.1	720.9
27.5°	691.0	694.8	698.6	700.9	701.5	702.0	702.6	703.1
30°	677.6	681.7	685.8	688.2	688.9	689.7	690.4	691.2
32.5°	663.3	668.0	672.6	675.7	677.0	678.4	679.8	681.1
35°	643.0	648.6	654.2	657.8	659.6	661.4	663.1	665.0
37.5°	622.0	628.2	634.4	638.4	640.3	642.2	644.1	646.0
40°	607.3	613.9	620.5	624.9	627.2	629.5	631.8	634.1
42.5°	593.0	600.2	607.4	612.2	614.4	616.7	619.0	621.3
45°	571.0	578.9	586.8	591.9	594.5	597.0	599.6	602.1
47.5°	548.2	556.4	564.6	570.2	572.9	575.8	578.5	581.3
50°	532.5	541.1	549.8	555.5	558.3	561.1	563.9	566.7
52.5°	515.6	524.4	533.2	539.2	542.2	545.2	548.1	551.1
55°	490.2	499.3	508.4	514.6	517.9	521.2	524.5	527.8
57.5°	463.2	473.0	482.9	489.6	492.8	496.2	499.6	502.9
60°	445.5	455.1	464.8	471.3	474.9	478.5	482.0	485.6
62.5°	426.5	436.8	447.0	453.9	457.2	460.5	463.9	467.3
65°	397.9	408.3	418.7	425.5	428.8	432.1	435.4	438.7
67.5°	368.8	379.3	389.9	396.8	400.3	403.7	407.2	410.6
70°	348.6	359.5	370.4	377.4	380.5	383.5	386.6	389.6
72.5°	329.0	339.7	350.4	357.6	361.3	364.9	368.6	372.2
75°	299.5	310.4	321.3	328.4	331.7	335.0	338.3	341.6
77.5°	270.6	281.5	292.3	299.5	303.1	306.6	310.2	313.7
80°	251.0	261.7	272.3	279.4	282.9	286.5	290.1	293.6
82.5°	232.7	243.3	254.0	261.1	264.4	267.7	271.0	274.4
85°	206.4	217.1	227.7	234.9	238.4	241.9	245.5	249.1
87.5°	187.0	197.5	208.0	214.9	218.2	221.5	224.8	228.1
90°	184.5	195.4	206.1	213.3	216.5	219.9	223.2	226.5
92.5°	177.2	187.4	197.8	204.5	207.8	210.9	214.1	217.3
95°	175.6	185.9	196.1	202.8	205.7	208.6	211.5	214.4
97.5°	172.9	182.8	192.8	199.3	202.4	205.6	208.8	211.9
100°	169.5	180.0	190.5	197.3	200.3	203.4	206.4	209.5
102.5°	164.4	175.0	185.5	192.3	195.5	198.7	201.9	205.1
105°	155.8	166.1	176.4	183.3	186.7	189.9	193.3	196.7
107.5°	154.5	161.4	168.5	173.7	177.0	180.3	183.7	187.0
110°	178.3	173.1	167.8	166.9	170.1	173.5	176.8	180.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	261.6	220.8	180.1	161.4	164.5	167.8	171.0	174.3
115°	331.7	277.2	222.8	192.3	185.4	178.5	171.7	164.8
117.5°	456.2	448.7	441.2	422.8	393.7	364.6	335.5	306.4
120°	513.0	521.7	530.4	527.1	511.8	496.5	481.2	465.9
122.5°	534.3	542.1	549.9	553.4	552.2	551.1	549.9	548.8
125°	563.8	571.5	579.4	584.5	587.3	590.0	592.6	595.3
127.5°	590.5	598.1	605.8	610.8	613.1	615.4	617.7	620.0
130°	607.4	615.0	622.6	627.3	629.2	631.1	633.0	634.9
132.5°	623.8	630.9	638.1	642.7	644.5	646.4	648.3	650.2
135°	647.3	654.0	660.6	664.9	666.7	668.4	670.2	671.9
137.5°	668.9	674.9	680.9	684.5	685.7	687.0	688.3	689.6
140°	683.0	688.4	693.6	696.6	697.5	698.4	699.2	700.1
142.5°	697.2	701.6	705.9	708.4	709.1	709.7	710.4	711.0
145°	718.0	720.4	722.9	724.4	725.0	725.7	726.3	726.9
147.5°	736.8	737.7	738.6	739.1	739.1	739.2	739.2	739.3
150°	749.6	750.4	751.2	751.3	750.6	749.9	749.2	748.6
152.5°	761.6	762.5	763.3	763.3	762.3	761.5	760.6	759.7
155°	777.9	778.8	779.5	779.4	778.3	777.3	776.2	775.2
157.5°	791.7	792.6	793.5	793.4	792.4	791.3	790.3	789.2
160°	799.6	800.5	801.2	801.2	800.2	799.3	798.4	797.5
162.5°	807.1	808.0	808.9	808.8	807.6	806.5	805.3	804.2
165°	816.2	817.1	818.0	818.0	817.1	816.2	815.3	814.3
167.5°	823.8	824.8	825.6	825.5	824.3	823.1	821.9	820.7
170°	827.7	828.5	829.5	829.4	828.2	827.0	825.8	824.6
172.5°	830.5	831.5	832.4	832.2	831.0	829.8	828.6	827.4
175°	833.7	834.6	835.5	835.3	834.0	832.7	831.3	830.0
177.5°	834.1	834.7	835.5	835.4	834.5	833.4	832.5	831.6
180°	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0

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