

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: P331593-930

Luminaire Tested: **S122DIW-S1005D710U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331593-930
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-S1005D710U930-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 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: 5602.6 lumens
Efficiency: N/A
Efficacy: 93.7 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

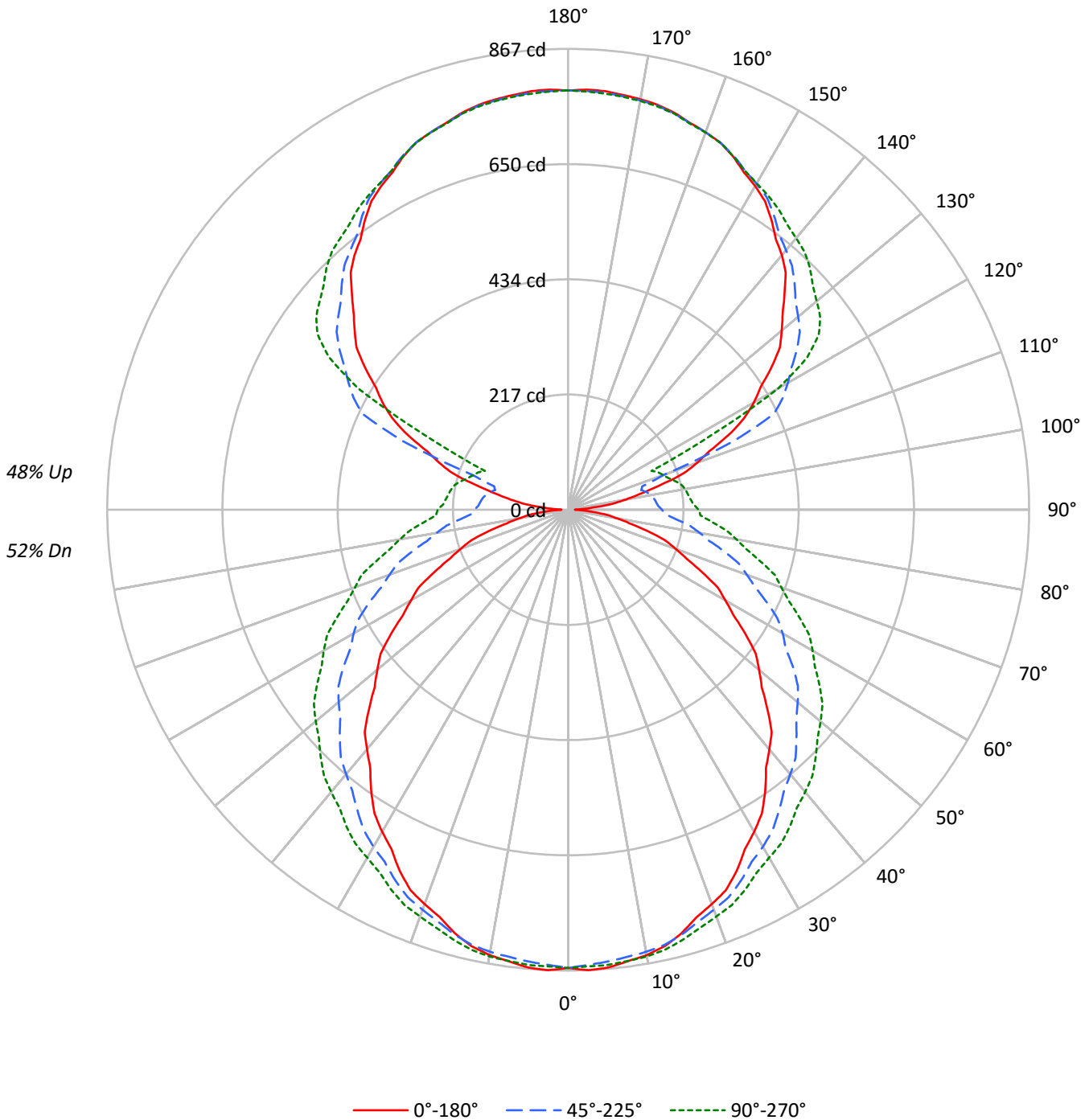
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331593-930

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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	97	92	87	83	89	85	81	77	72	69	66	60	58	56	49	47	46	41
2	87	79	72	67	80	73	67	62	62	57	54	52	48	45	42	40	38	33
3	79	69	61	55	73	64	57	51	54	49	44	45	41	38	37	34	31	27
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	33	29	26	23
5	66	54	45	39	61	50	42	37	43	37	32	36	31	27	29	26	23	20
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17
7	56	43	35	29	52	40	33	28	35	29	24	29	24	21	24	20	18	15
8	52	39	31	26	48	37	29	24	31	26	21	27	22	18	22	18	16	13
9	49	36	28	23	45	33	26	22	29	23	19	24	20	17	20	17	14	12
10	45	33	25	20	42	31	24	19	26	21	17	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13919	13919	13919
5°	13988	13400	13350
10°	13899	13004	12858
15°	13709	12584	12339
20°	13467	12136	11842
25°	13227	11701	11390
30°	12890	11257	10936
35°	12550	10828	10617
40°	12191	10461	10297
45°	11850	10133	10022
50°	11485	9837	9754
55°	11101	9519	9479
60°	10631	9187	9189
65°	10145	8801	8846
70°	9596	8384	8474
75°	8897	7976	8132
80°	7792	7559	7784
85°	6733	7197	7515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	1.5
10°-20°	234.3	4.2
20°-30°	355.0	6.3
30°-40°	432.4	7.7
40°-50°	465.2	8.3
50°-60°	451.7	8.1
60°-70°	394.4	7.0
70°-80°	303.7	5.4
80°-90°	205.7	3.7
90°-100°	166.7	3.0
100°-110°	199.0	3.6
110°-120°	325.6	5.8
120°-130°	463.5	8.3
130°-140°	468.6	8.4
140°-150°	423.6	7.6
150°-160°	338.4	6.0
160°-170°	218.0	3.9
170°-180°	75.1	1.3
0°-30°	670.9	12.0
0°-40°	1103.3	19.7
0°-60°	2020.2	36.1
0°-90°	2924.0	52.2
90°-120°	691.4	12.3
90°-150°	2047.1	36.5
90°-180°	2679.0	47.8
0°-180°	5602.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	865	861	853	860	860	82
15°	825	827	827	838	837	232
25°	750	759	770	784	788	345
35°	646	667	691	717	727	404
45°	530	564	607	644	658	409
55°	406	452	516	559	577	363
65°	277	339	412	462	480	275
75°	154	224	304	355	374	163
85°	45	123	202	253	272	48
90°	13	92	176	227	245	10
95°	47	89	166	214	231	53
105°	180	225	142	190	208	193
115°	333	359	427	211	173	328
125°	466	476	525	561	575	416
135°	575	585	602	633	643	445
145°	666	666	675	686	690	417
155°	733	729	735	738	734	338
165°	773	770	771	775	771	218
175°	790	787	788	791	786	75
180°	789	789	789	789	789	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	867.2	866.5	865.8	865.1	864.5	863.3	861.8	860.2	858.7	857.1	858.3
5°	864.6	863.8	863.0	862.1	861.3	860.1	858.4	856.7	855.1	853.4	855.1
7.5°	856.9	856.3	855.7	855.2	854.7	853.8	852.5	851.2	849.9	848.6	850.6
10°	850.9	850.4	849.8	849.2	848.6	848.0	847.2	846.3	845.5	844.7	846.9
12.5°	840.9	841.0	841.1	841.2	841.3	841.1	840.5	839.8	839.3	838.6	840.9
15°	824.7	825.2	825.7	826.3	826.9	827.1	827.1	827.1	827.1	827.1	829.6
17.5°	803.6	804.9	806.0	807.1	808.3	809.3	810.2	811.1	812.0	812.9	815.5
20°	789.7	791.1	792.5	793.9	795.2	796.5	797.6	798.7	799.8	801.0	804.0
22.5°	774.7	776.2	777.9	779.5	781.1	782.7	784.2	785.8	787.3	788.9	792.0
25°	749.7	751.6	753.6	755.5	757.5	759.7	762.1	764.7	767.2	769.6	773.0
27.5°	719.7	722.8	726.0	729.2	732.4	735.4	738.3	741.3	744.2	747.2	751.4
30°	699.7	703.3	706.9	710.5	714.1	717.8	721.4	725.0	728.6	732.2	736.6
32.5°	677.7	681.8	685.8	689.9	693.9	698.1	702.4	706.6	710.9	715.2	720.3
35°	646.0	650.7	655.4	660.1	664.9	669.8	675.1	680.4	685.7	691.0	697.1
37.5°	611.5	616.9	622.4	627.8	633.2	639.4	646.2	653.1	659.9	666.8	673.5
40°	588.5	594.6	600.7	606.8	612.9	619.7	627.2	634.7	642.2	649.7	657.0
42.5°	566.6	572.6	578.7	584.8	590.9	598.3	606.9	615.6	624.1	632.8	640.6
45°	529.8	537.3	544.8	552.3	559.8	568.3	578.1	587.8	597.5	607.2	615.9
47.5°	493.6	501.7	509.9	518.0	526.2	536.0	547.4	558.7	570.1	581.5	590.5
50°	468.6	477.2	485.8	494.4	503.0	513.6	526.0	538.5	551.0	563.5	573.0
52.5°	444.6	453.6	462.7	471.7	480.8	491.9	505.0	518.2	531.3	544.5	554.2
55°	406.1	416.0	426.1	436.1	446.1	458.3	472.7	487.1	501.6	516.0	526.0
57.5°	368.1	379.4	390.6	401.9	413.2	426.2	440.9	455.6	470.3	485.0	495.8
60°	341.1	353.0	365.0	376.9	388.9	402.8	418.6	434.4	450.2	466.0	476.6
62.5°	317.2	329.5	341.9	354.2	366.6	380.7	396.6	412.4	428.3	444.1	455.3
65°	277.4	291.0	304.6	318.2	331.8	346.8	363.2	379.5	395.9	412.3	423.7
67.5°	240.9	255.1	269.3	283.6	297.7	313.2	330.0	346.8	363.5	380.3	391.8
70°	214.9	229.3	243.8	258.2	272.6	288.5	305.7	322.9	340.1	357.3	369.2
72.5°	190.9	205.8	220.7	235.5	250.5	266.6	284.1	301.5	318.9	336.4	348.1
75°	153.7	169.3	184.7	200.3	215.9	232.5	250.3	268.1	285.8	303.6	315.5
77.5°	117.7	134.0	150.3	166.5	182.8	199.9	218.0	236.0	254.0	272.1	284.1
80°	93.7	110.6	127.6	144.6	161.4	179.0	197.0	215.1	233.1	251.1	262.8
82.5°	73.7	90.4	107.1	123.8	140.6	158.1	176.3	194.6	212.9	231.1	242.8
85°	45.0	62.2	79.4	96.6	113.8	131.3	149.1	166.9	184.7	202.4	214.1
87.5°	24.6	41.4	58.3	75.1	91.9	109.3	127.3	145.3	163.2	181.2	192.7
90°	13.0	30.6	48.1	65.6	83.1	101.2	120.0	138.8	157.6	176.3	188.1
92.5°	23.0	37.9	52.7	67.6	82.5	98.7	116.3	134.0	151.6	169.2	180.4
95°	47.1	55.9	64.8	73.7	82.6	95.8	113.3	130.9	148.4	165.9	177.2
97.5°	82.3	82.2	82.0	81.8	81.6	90.6	108.6	126.6	144.7	162.7	173.5
100°	109.7	102.6	95.6	88.5	81.4	86.7	104.4	122.1	139.7	157.5	168.8
102.5°	138.9	144.6	150.3	156.0	161.8	163.1	160.2	157.3	154.3	151.4	162.7
105°	179.8	191.6	203.5	215.3	227.2	223.0	202.8	182.6	162.5	142.3	153.4
107.5°	227.8	237.3	246.8	256.3	265.9	256.7	229.0	201.4	173.7	145.9	153.8
110°	257.9	266.0	274.3	282.5	290.7	283.3	260.2	237.2	214.2	191.1	187.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	287.1	294.1	301.1	308.1	315.2	320.6	324.5	328.4	332.2	336.1	298.7
115°	333.2	338.4	343.6	348.8	354.0	364.4	380.1	395.8	411.5	427.1	376.7
117.5°	373.2	377.6	382.0	386.4	390.8	399.8	413.6	427.3	441.1	454.8	448.8
120°	403.2	406.3	409.3	412.3	415.3	423.5	436.9	450.3	463.7	477.1	486.4
122.5°	428.8	431.3	433.7	436.2	438.6	446.3	459.3	472.1	485.1	498.1	506.5
125°	466.5	468.1	469.9	471.5	473.1	479.6	490.9	502.1	513.5	524.8	533.1
127.5°	501.8	503.4	504.9	506.5	508.0	513.2	522.2	531.2	540.1	549.1	557.3
130°	524.2	525.9	527.7	529.5	531.2	535.7	542.9	550.1	557.3	564.6	572.7
132.5°	547.0	548.5	549.9	551.3	552.8	556.4	562.3	568.3	574.1	580.0	587.7
135°	575.4	577.5	579.5	581.6	583.5	586.5	590.4	594.4	598.3	602.2	609.3
137.5°	605.4	606.8	608.2	609.5	610.9	612.9	615.4	617.9	620.4	622.9	629.2
140°	625.1	625.8	626.6	627.3	628.0	629.4	631.3	633.2	635.2	637.2	642.8
142.5°	641.6	642.1	642.8	643.4	644.1	645.2	646.9	648.7	650.4	652.1	656.6
145°	666.1	665.9	665.9	665.7	665.5	666.6	668.7	670.9	673.0	675.2	677.8
147.5°	688.5	688.1	687.6	687.1	686.6	687.5	689.6	691.7	693.8	695.9	696.8
150°	703.2	702.3	701.4	700.5	699.6	700.2	702.2	704.3	706.3	708.3	709.1
152.5°	715.5	714.5	713.5	712.5	711.5	712.0	714.0	715.8	717.8	719.7	720.5
155°	733.4	732.3	731.2	730.0	728.9	729.0	730.6	732.1	733.6	735.2	735.9
157.5°	747.5	746.5	745.5	744.5	743.6	743.6	744.7	745.8	746.8	747.9	748.8
160°	755.7	754.9	754.2	753.4	752.6	752.6	753.4	754.2	754.9	755.7	756.4
162.5°	763.0	762.2	761.5	760.7	759.9	759.9	760.5	761.2	761.9	762.5	763.4
165°	772.8	772.0	771.3	770.5	769.7	769.6	770.0	770.3	770.7	771.1	772.0
167.5°	780.1	779.3	778.6	777.8	777.1	776.9	777.2	777.6	778.0	778.3	779.2
170°	784.2	783.4	782.7	782.0	781.1	780.9	781.1	781.5	781.7	782.0	782.9
172.5°	786.9	786.2	785.5	784.6	783.9	783.7	783.9	784.2	784.4	784.6	785.5
175°	790.5	789.6	788.7	787.8	786.9	786.6	786.8	787.2	787.4	787.7	788.6
177.5°	791.1	790.4	789.6	789.0	788.2	787.9	788.0	788.1	788.2	788.3	789.0
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	859.3	860.5	861.6	861.9	861.4	861.0	860.5	860.1
5°	856.7	858.4	860.1	860.7	860.5	860.2	859.9	859.7
7.5°	852.6	854.7	856.6	857.5	857.2	857.0	856.6	856.4
10°	849.1	851.3	853.5	854.5	854.2	853.9	853.7	853.4
12.5°	843.1	845.3	847.5	848.5	848.2	847.9	847.7	847.4
15°	832.2	834.6	837.1	838.3	838.0	837.7	837.4	837.1
17.5°	818.2	820.8	823.4	824.7	824.7	824.7	824.7	824.7
20°	807.0	810.1	813.1	814.6	814.6	814.6	814.6	814.6
22.5°	795.0	798.1	801.1	802.9	803.3	803.8	804.2	804.7
25°	776.3	779.7	783.0	785.1	785.9	786.8	787.6	788.4
27.5°	755.6	759.9	764.1	766.5	767.1	767.7	768.3	768.9
30°	741.1	745.5	750.0	752.6	753.4	754.2	755.1	755.9
32.5°	725.5	730.5	735.6	738.9	740.5	741.9	743.5	744.9
35°	703.2	709.3	715.4	719.4	721.4	723.3	725.3	727.2
37.5°	680.3	687.1	693.8	698.2	700.3	702.4	704.4	706.5
40°	664.1	671.4	678.6	683.5	686.0	688.4	691.0	693.5
42.5°	648.5	656.4	664.3	669.4	672.0	674.5	676.9	679.5
45°	624.4	633.1	641.6	647.3	650.1	652.9	655.7	658.4
47.5°	599.5	608.5	617.5	623.5	626.6	629.7	632.7	635.8
50°	582.4	591.8	601.3	607.6	610.6	613.6	616.7	619.7
52.5°	563.9	573.5	583.2	589.6	592.9	596.2	599.5	602.8
55°	536.1	546.0	556.0	562.8	566.4	570.1	573.6	577.2
57.5°	506.6	517.4	528.2	535.3	539.0	542.7	546.3	550.0
60°	487.1	497.7	508.3	515.5	519.3	523.3	527.2	531.0
62.5°	466.5	477.7	488.9	496.4	500.0	503.7	507.4	511.0
65°	435.1	446.5	457.9	465.4	469.0	472.5	476.2	479.8
67.5°	403.3	414.8	426.3	434.0	437.7	441.5	445.3	449.1
70°	381.2	393.1	405.1	412.7	416.0	419.4	422.7	426.1
72.5°	359.8	371.5	383.2	391.1	395.1	399.1	403.1	407.1
75°	327.5	339.4	351.4	359.1	362.7	366.4	370.0	373.6
77.5°	295.9	307.8	319.7	327.6	331.4	335.3	339.2	343.1
80°	274.4	286.2	297.8	305.6	309.5	313.3	317.2	321.1
82.5°	254.5	266.1	277.8	285.4	289.1	292.8	296.4	300.1
85°	225.8	237.4	249.1	256.8	260.7	264.6	268.5	272.4
87.5°	204.2	215.6	227.1	234.6	238.1	241.7	245.4	249.0
90°	199.8	211.6	223.3	231.0	234.6	238.1	241.7	245.3
92.5°	191.6	202.8	214.0	221.4	224.9	228.4	231.9	235.3
95°	188.3	199.5	210.7	217.8	221.1	224.3	227.5	230.7
97.5°	184.3	195.1	205.9	213.0	216.4	219.8	223.2	226.7
100°	180.0	191.4	202.6	209.9	213.2	216.5	219.9	223.1
102.5°	174.1	185.5	196.9	204.2	207.7	211.1	214.5	217.9
105°	164.5	175.6	186.7	194.0	197.6	201.2	204.7	208.3
107.5°	161.8	169.7	177.6	183.4	186.9	190.5	194.0	197.5
110°	183.5	179.7	175.9	175.8	179.4	182.9	186.5	190.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	261.4	224.0	186.6	169.7	173.1	176.6	180.0	183.5
115°	326.4	276.0	225.5	197.3	191.3	185.2	179.0	173.0
117.5°	442.8	436.8	430.8	414.3	387.1	359.9	332.7	305.6
120°	495.7	505.0	514.3	511.9	497.8	483.7	469.7	455.6
122.5°	514.9	523.4	531.9	535.7	535.1	534.3	533.6	532.9
125°	541.5	549.9	558.3	563.9	566.8	569.7	572.6	575.4
127.5°	565.5	573.6	581.8	587.2	589.7	592.2	594.8	597.3
130°	580.7	588.7	596.8	601.9	604.0	606.1	608.1	610.3
132.5°	595.3	602.9	610.6	615.5	617.5	619.6	621.7	623.8
135°	616.4	623.5	630.6	635.1	637.1	639.0	641.0	643.0
137.5°	635.6	642.0	648.3	652.2	653.7	655.2	656.6	658.0
140°	648.3	654.0	659.5	662.8	663.8	664.9	665.9	666.9
142.5°	661.3	665.9	670.4	673.1	673.9	674.7	675.6	676.4
145°	680.3	682.9	685.4	687.1	687.8	688.6	689.3	690.1
147.5°	697.7	698.6	699.5	700.0	700.2	700.3	700.4	700.5
150°	709.8	710.6	711.3	711.4	710.8	710.1	709.5	708.9
152.5°	721.2	722.0	722.8	722.8	721.9	721.1	720.2	719.3
155°	736.6	737.4	738.2	738.0	737.0	736.1	735.0	734.0
157.5°	749.7	750.5	751.4	751.3	750.3	749.3	748.4	747.3
160°	757.2	758.0	758.7	758.6	757.7	756.8	756.0	755.1
162.5°	764.3	765.1	766.0	765.9	764.8	763.7	762.5	761.5
165°	772.9	773.7	774.6	774.6	773.7	772.9	772.0	771.1
167.5°	780.1	781.0	781.8	781.7	780.6	779.4	778.3	777.1
170°	783.7	784.6	785.5	785.4	784.2	783.1	782.0	780.8
172.5°	786.4	787.3	788.2	788.1	786.9	785.8	784.6	783.5
175°	789.5	790.3	791.2	791.0	789.7	788.5	787.2	785.9
177.5°	789.8	790.4	791.2	791.1	790.2	789.2	788.3	787.4
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8

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