

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: P331397-830

Luminaire Tested: **SA2XXDIP-C865D725U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331397-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D725U830-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5737.0 lumens
Efficiency: N/A
Efficacy: 105.5 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

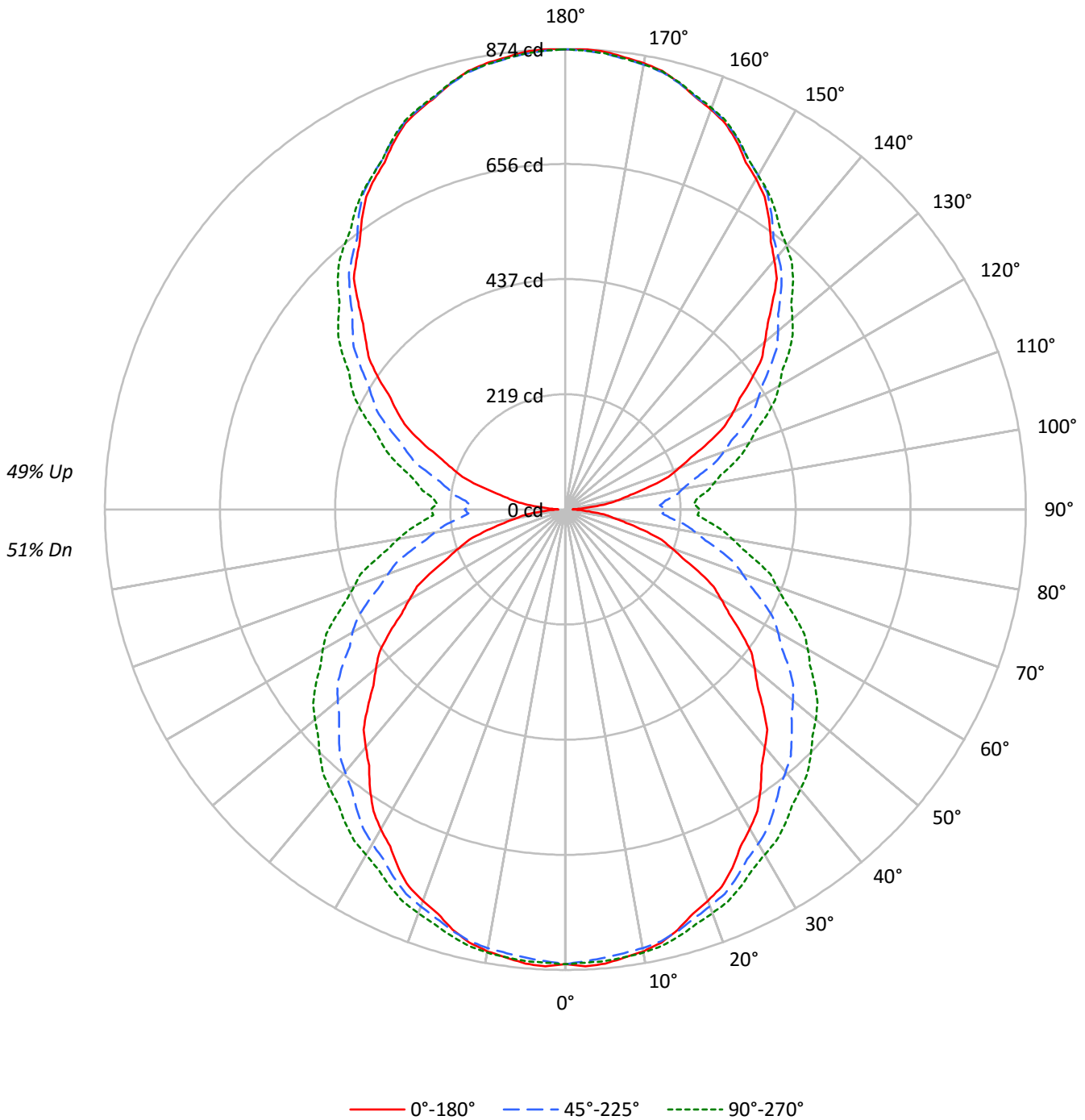
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	96	91	87	83	89	84	81	77	71	68	66	59	57	55	48	47	45	40
2	87	79	72	67	80	73	67	62	62	57	53	51	48	45	41	39	37	32
3	79	69	61	55	73	64	57	51	54	48	44	45	41	37	36	33	31	27
4	72	61	52	46	66	56	49	43	47	42	37	39	35	31	32	29	26	22
5	66	54	45	39	61	50	42	36	42	36	32	35	31	27	29	25	22	19
6	61	48	40	34	56	45	37	31	38	32	27	32	27	23	26	22	20	17
7	56	43	35	29	52	40	33	27	34	28	24	29	24	21	24	20	17	15
8	52	39	31	26	48	37	29	24	31	25	21	26	22	18	22	18	15	13
9	48	36	28	23	45	33	26	22	29	23	19	24	20	16	20	16	14	12
10	45	33	25	20	42	31	24	19	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13934	13934	13934
5°	14000	13412	13361
10°	13914	13017	12870
15°	13722	12596	12353
20°	13478	12147	11855
25°	13241	11713	11401
30°	12903	11268	10947
35°	12562	10837	10627
40°	12203	10472	10307
45°	11862	10143	10033
50°	11495	9847	9765
55°	11112	9528	9489
60°	10644	9199	9199
65°	10156	8809	8853
70°	9605	8393	8482
75°	8902	7984	8141
80°	7800	7568	7791
85°	6748	7205	7523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	1.4
10°-20°	234.5	4.1
20°-30°	355.3	6.2
30°-40°	432.8	7.5
40°-50°	465.6	8.1
50°-60°	452.2	7.9
60°-70°	394.8	6.9
70°-80°	304.0	5.3
80°-90°	207.5	3.6
90°-100°	195.8	3.4
100°-110°	274.4	4.8
110°-120°	361.5	6.3
120°-130°	424.0	7.4
130°-140°	449.3	7.8
140°-150°	427.8	7.5
150°-160°	356.5	6.2
160°-170°	236.5	4.1
170°-180°	82.6	1.4
0°-30°	671.6	11.7
0°-40°	1104.4	19.3
0°-60°	2022.2	35.2
0°-90°	2928.4	51.0
90°-120°	831.8	14.5
90°-150°	2132.9	37.2
90°-180°	2809.0	49.0
0°-180°	5737.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	865	862	854	861	860	82
15°	826	828	828	839	838	232
25°	750	759	770	785	789	345
35°	647	668	692	718	728	404
45°	530	565	608	645	659	409
55°	406	453	516	560	578	363
65°	278	340	413	462	480	276
75°	154	224	304	356	374	163
85°	45	123	203	253	273	48
90°	13	95	191	238	255	10
95°	48	115	191	237	252	52
105°	165	205	270	313	329	174
115°	300	320	373	408	421	296
125°	431	440	476	506	518	386
135°	556	564	578	603	611	430
145°	673	678	683	691	694	421
155°	770	772	774	778	776	354
165°	838	837	837	842	838	236
175°	872	869	868	872	869	83
180°	873	873	873	873	873	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	867.3	866.7	866.0	865.3	864.2	862.6	861.1	859.5	858.0	859.1
5°	865.4	864.7	863.8	863.0	862.1	860.9	859.2	857.5	855.9	854.2	855.9
7.5°	857.7	857.1	856.6	856.1	855.5	854.6	853.3	852.1	850.7	849.5	851.5
10°	851.8	851.2	850.6	850.1	849.5	848.9	848.0	847.2	846.3	845.5	847.7
12.5°	841.7	841.9	842.0	842.1	842.2	841.9	841.3	840.7	840.1	839.4	841.7
15°	825.5	826.0	826.6	827.2	827.6	827.9	827.9	827.9	827.9	827.9	830.5
17.5°	804.5	805.6	806.8	807.9	809.1	810.1	811.1	811.9	812.8	813.7	816.3
20°	790.4	791.8	793.2	794.7	796.0	797.3	798.3	799.5	800.6	801.7	804.7
22.5°	775.4	777.0	778.6	780.2	781.8	783.4	785.0	786.6	788.2	789.7	792.8
25°	750.5	752.3	754.3	756.3	758.2	760.4	762.9	765.4	767.9	770.4	773.7
27.5°	720.4	723.6	726.7	729.9	733.1	736.1	739.0	742.1	745.0	747.9	752.1
30°	700.4	704.0	707.7	711.2	714.8	718.5	722.1	725.7	729.3	732.9	737.4
32.5°	678.3	682.4	686.5	690.6	694.7	698.8	703.0	707.4	711.6	715.9	721.0
35°	646.6	651.3	656.1	660.8	665.5	670.5	675.8	681.1	686.4	691.6	697.8
37.5°	612.1	617.6	623.0	628.4	633.9	640.0	646.9	653.7	660.5	667.4	674.2
40°	589.1	595.2	601.3	607.5	613.5	620.4	627.8	635.4	642.9	650.4	657.6
42.5°	567.0	573.2	579.3	585.4	591.5	598.9	607.5	616.1	624.7	633.4	641.2
45°	530.3	537.8	545.3	552.8	560.3	568.9	578.6	588.4	598.1	607.8	616.4
47.5°	494.0	502.2	510.4	518.6	526.7	536.5	547.9	559.3	570.7	582.1	591.1
50°	469.0	477.6	486.3	494.8	503.5	514.1	526.5	539.0	551.6	564.1	573.5
52.5°	445.0	454.0	463.2	472.2	481.3	492.4	505.6	518.7	531.9	545.1	554.7
55°	406.5	416.5	426.5	436.5	446.5	458.7	473.2	487.7	502.1	516.5	526.5
57.5°	368.4	379.8	391.1	402.3	413.6	426.6	441.3	456.1	470.8	485.5	496.3
60°	341.5	353.4	365.3	377.3	389.3	403.1	419.0	434.8	450.6	466.6	477.1
62.5°	317.4	329.8	342.2	354.6	367.0	381.2	397.0	412.8	428.7	444.5	455.7
65°	277.7	291.2	304.9	318.5	332.2	347.1	363.5	379.9	396.3	412.7	424.1
67.5°	241.1	255.3	269.6	283.8	298.0	313.6	330.4	347.1	363.9	380.7	392.2
70°	215.1	229.6	244.0	258.4	273.0	288.8	306.0	323.2	340.4	357.7	369.7
72.5°	191.1	206.0	220.9	235.8	250.7	266.8	284.4	301.8	319.2	336.7	348.5
75°	153.8	169.4	184.9	200.6	216.1	232.8	250.5	268.3	286.2	303.9	315.8
77.5°	117.8	134.1	150.4	166.6	182.9	200.1	218.2	236.3	254.3	272.4	284.3
80°	93.8	110.7	127.7	144.7	161.6	179.1	197.2	215.3	233.3	251.4	263.1
82.5°	73.8	90.5	107.3	123.9	140.7	158.3	176.5	194.8	213.1	231.4	243.1
85°	45.1	62.3	79.5	96.7	114.0	131.5	149.2	167.0	184.8	202.6	214.3
87.5°	24.7	41.7	58.5	75.5	92.5	110.2	128.8	147.2	165.8	184.3	195.6
90°	13.3	31.3	49.4	67.5	85.6	105.3	126.7	148.1	169.5	190.9	201.7
92.5°	24.6	41.1	57.5	74.0	90.4	107.6	125.6	143.5	161.6	179.6	190.5
95°	48.4	63.1	77.8	92.4	107.1	123.0	140.0	156.9	174.0	191.0	201.5
97.5°	78.7	91.8	104.9	117.9	131.0	145.8	162.5	179.1	195.7	212.4	222.6
100°	102.4	114.0	125.5	137.1	148.7	162.5	178.6	194.6	210.7	226.8	237.0
102.5°	126.1	136.5	146.9	157.4	167.9	181.0	196.7	212.4	228.2	243.9	254.1
105°	164.7	173.2	181.7	190.3	198.9	210.6	225.3	240.1	254.9	269.7	279.7
107.5°	204.8	212.0	219.1	226.3	233.5	243.9	257.8	271.6	285.5	299.4	308.8
110°	229.7	236.2	242.8	249.3	255.9	266.0	279.6	293.2	306.8	320.5	329.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	258.0	263.6	269.3	274.9	280.6	289.8	302.7	315.5	328.3	341.1	349.6
115°	299.7	303.8	307.7	311.8	315.8	324.0	336.1	348.4	360.5	372.7	380.9
117.5°	340.0	343.3	346.6	350.0	353.3	360.2	370.9	381.5	392.2	402.8	410.7
120°	367.7	370.1	372.6	374.9	377.4	383.5	393.3	403.1	412.9	422.7	430.6
122.5°	393.0	395.0	397.1	399.1	401.1	406.9	416.4	425.9	435.5	445.0	452.1
125°	431.3	432.7	434.2	435.7	437.2	442.1	450.5	458.9	467.3	475.7	482.8
127.5°	469.8	471.4	472.9	474.5	476.1	480.1	486.7	493.3	499.9	506.5	512.8
130°	493.9	495.8	497.6	499.5	501.3	505.0	510.5	516.0	521.5	527.0	533.4
132.5°	521.0	522.5	524.0	525.4	526.9	529.9	534.4	538.9	543.6	548.1	553.8
135°	556.0	557.8	559.6	561.4	563.2	565.6	568.7	571.8	575.0	578.1	583.8
137.5°	594.2	595.6	597.0	598.4	599.8	601.3	603.0	604.6	606.3	607.9	612.9
140°	617.2	618.3	619.5	620.8	622.0	623.2	624.6	625.9	627.4	628.7	633.2
142.5°	640.7	642.0	643.1	644.3	645.5	646.5	647.1	647.8	648.5	649.1	652.8
145°	673.4	674.5	675.7	676.8	678.0	679.0	680.0	681.0	681.9	683.0	684.8
147.5°	703.6	704.9	706.3	707.7	709.1	710.1	710.8	711.4	712.1	712.8	713.3
150°	724.2	725.2	726.1	727.2	728.1	729.0	729.6	730.3	730.9	731.6	732.1
152.5°	742.4	743.5	744.4	745.5	746.4	747.2	748.1	748.9	749.6	750.5	751.0
155°	769.9	770.3	770.9	771.4	771.8	772.3	772.8	773.4	773.8	774.3	775.1
157.5°	793.3	793.6	794.0	794.3	794.7	794.9	795.2	795.5	795.8	796.1	797.2
160°	807.5	807.8	808.1	808.4	808.8	809.0	809.2	809.4	809.5	809.6	810.7
162.5°	820.4	820.5	820.6	820.6	820.7	820.8	821.0	821.1	821.3	821.4	822.6
165°	837.6	837.5	837.4	837.2	837.0	836.9	836.9	836.9	836.9	836.9	838.1
167.5°	852.1	851.6	851.1	850.6	850.2	849.9	849.9	849.8	849.8	849.7	850.9
170°	859.8	859.3	858.8	858.3	857.8	857.4	857.3	857.1	857.0	856.8	858.0
172.5°	865.1	864.6	864.1	863.6	863.1	862.8	862.6	862.4	862.3	862.1	863.3
175°	871.6	871.1	870.5	870.1	869.6	869.2	868.8	868.6	868.2	867.9	869.0
177.5°	874.2	873.8	873.5	873.0	872.6	872.3	872.0	871.8	871.5	871.3	872.0
180°	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	860.2	861.3	862.4	862.8	862.3	861.9	861.4	861.0
5°	857.5	859.2	860.9	861.6	861.3	861.0	860.7	860.4
7.5°	853.5	855.5	857.5	858.4	858.1	857.8	857.5	857.2
10°	849.9	852.2	854.4	855.4	855.1	854.8	854.5	854.2
12.5°	844.0	846.1	848.4	849.3	849.0	848.8	848.5	848.2
15°	832.9	835.5	838.0	839.1	838.8	838.5	838.2	838.0
17.5°	819.0	821.5	824.2	825.5	825.5	825.5	825.5	825.5
20°	807.9	810.9	813.9	815.5	815.5	815.5	815.5	815.5
22.5°	795.8	798.9	801.9	803.7	804.1	804.6	805.0	805.5
25°	777.1	780.4	783.8	785.9	786.6	787.5	788.3	789.2
27.5°	756.4	760.6	764.8	767.2	767.9	768.5	769.1	769.7
30°	741.8	746.2	750.7	753.4	754.1	755.0	755.8	756.7
32.5°	726.1	731.2	736.3	739.7	741.1	742.6	744.1	745.6
35°	703.9	710.0	716.1	720.1	722.1	724.1	725.9	727.9
37.5°	680.9	687.7	694.5	698.9	701.0	703.0	705.1	707.2
40°	664.8	672.0	679.3	684.1	686.6	689.1	691.6	694.2
42.5°	649.1	657.0	665.0	670.1	672.6	675.1	677.6	680.1
45°	625.1	633.7	642.3	648.0	650.8	653.6	656.4	659.1
47.5°	600.1	609.1	618.1	624.2	627.2	630.3	633.3	636.4
50°	583.0	592.4	601.9	608.1	611.1	614.3	617.3	620.4
52.5°	564.4	574.1	583.7	590.2	593.5	596.8	600.0	603.3
55°	536.6	546.6	556.6	563.4	566.9	570.6	574.2	577.8
57.5°	507.1	517.8	528.7	535.9	539.5	543.2	546.9	550.5
60°	487.7	498.2	508.8	515.9	519.9	523.8	527.6	531.6
62.5°	466.9	478.2	489.4	496.9	500.5	504.2	507.8	511.5
65°	435.5	447.0	458.4	465.8	469.4	473.1	476.6	480.2
67.5°	403.7	415.2	426.8	434.4	438.2	442.0	445.7	449.5
70°	381.6	393.5	405.5	413.1	416.5	419.8	423.2	426.5
72.5°	360.1	371.8	383.6	391.4	395.5	399.4	403.5	407.5
75°	327.8	339.8	351.8	359.5	363.2	366.7	370.3	374.0
77.5°	296.2	308.1	320.0	327.9	331.8	335.6	339.6	343.5
80°	274.8	286.4	298.1	305.9	309.7	313.7	317.5	321.4
82.5°	254.8	266.4	278.1	285.8	289.5	293.0	296.7	300.4
85°	225.9	237.6	249.3	257.1	261.0	264.9	268.7	272.7
87.5°	206.8	218.1	229.3	236.8	240.3	243.9	247.5	251.2
90°	212.4	223.3	234.0	241.2	244.7	248.2	251.7	255.1
92.5°	201.4	212.4	223.4	230.5	233.8	237.2	240.6	244.0
95°	212.1	222.6	233.2	240.0	243.0	246.0	249.0	252.0
97.5°	232.9	243.2	253.4	260.2	263.5	266.7	269.9	273.2
100°	247.3	257.6	267.9	274.5	277.4	280.2	283.1	286.1
102.5°	264.3	274.5	284.6	291.2	294.1	297.0	299.9	302.7
105°	289.7	299.8	309.9	316.4	319.5	322.5	325.6	328.7
107.5°	318.3	327.7	337.2	343.1	345.3	347.7	350.0	352.3
110°	338.2	347.1	356.0	361.7	364.3	366.8	369.4	372.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	358.2	366.6	375.1	380.7	383.4	386.2	388.8	391.5
115°	389.0	397.2	405.4	410.8	413.3	415.8	418.5	421.0
117.5°	418.5	426.3	434.1	439.2	441.6	443.9	446.3	448.6
120°	438.3	446.1	453.8	459.0	461.6	464.2	466.7	469.3
122.5°	459.4	466.6	473.7	478.4	480.6	482.9	485.1	487.4
125°	489.7	496.7	503.8	508.4	510.8	513.1	515.5	517.8
127.5°	519.2	525.4	531.7	535.8	537.7	539.7	541.6	543.5
130°	539.7	546.0	552.4	556.4	557.9	559.5	561.1	562.6
132.5°	559.6	565.3	571.0	574.8	576.5	578.2	579.9	581.5
135°	589.5	595.1	600.8	604.5	606.2	607.9	609.7	611.4
137.5°	617.9	622.9	627.9	631.0	632.3	633.5	634.7	635.9
140°	637.6	642.1	646.5	649.2	650.3	651.3	652.2	653.3
142.5°	656.5	660.2	663.8	666.1	666.9	667.7	668.5	669.3
145°	686.6	688.4	690.3	691.5	692.3	693.1	693.8	694.5
147.5°	713.9	714.4	715.0	715.4	715.4	715.5	715.5	715.6
150°	732.5	733.0	733.6	733.6	733.0	732.5	732.1	731.6
152.5°	751.7	752.3	752.9	752.9	752.3	751.7	751.0	750.5
155°	775.9	776.7	777.6	777.8	777.2	776.7	776.3	775.8
157.5°	798.3	799.5	800.6	800.7	799.9	799.2	798.3	797.6
160°	811.6	812.7	813.6	813.8	813.1	812.5	811.8	811.2
162.5°	823.7	824.8	826.0	826.0	825.3	824.5	823.7	822.9
165°	839.2	840.4	841.5	841.7	840.8	840.0	839.2	838.4
167.5°	852.1	853.2	854.3	854.5	853.7	852.8	852.0	851.1
170°	859.1	860.3	861.4	861.5	860.5	859.5	858.6	857.5
172.5°	864.4	865.5	866.7	866.8	865.8	864.8	863.8	862.9
175°	870.2	871.3	872.4	872.5	871.6	870.5	869.6	868.6
177.5°	872.8	873.6	874.4	874.4	873.6	872.8	872.0	871.3
180°	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0

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