

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: P331379-830

Luminaire Tested: **SA2XXDIP-C865D330U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331379-830
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-C865D330U830-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4397.3 lumens
Efficiency: N/A
Efficacy: 101.1 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-Direct

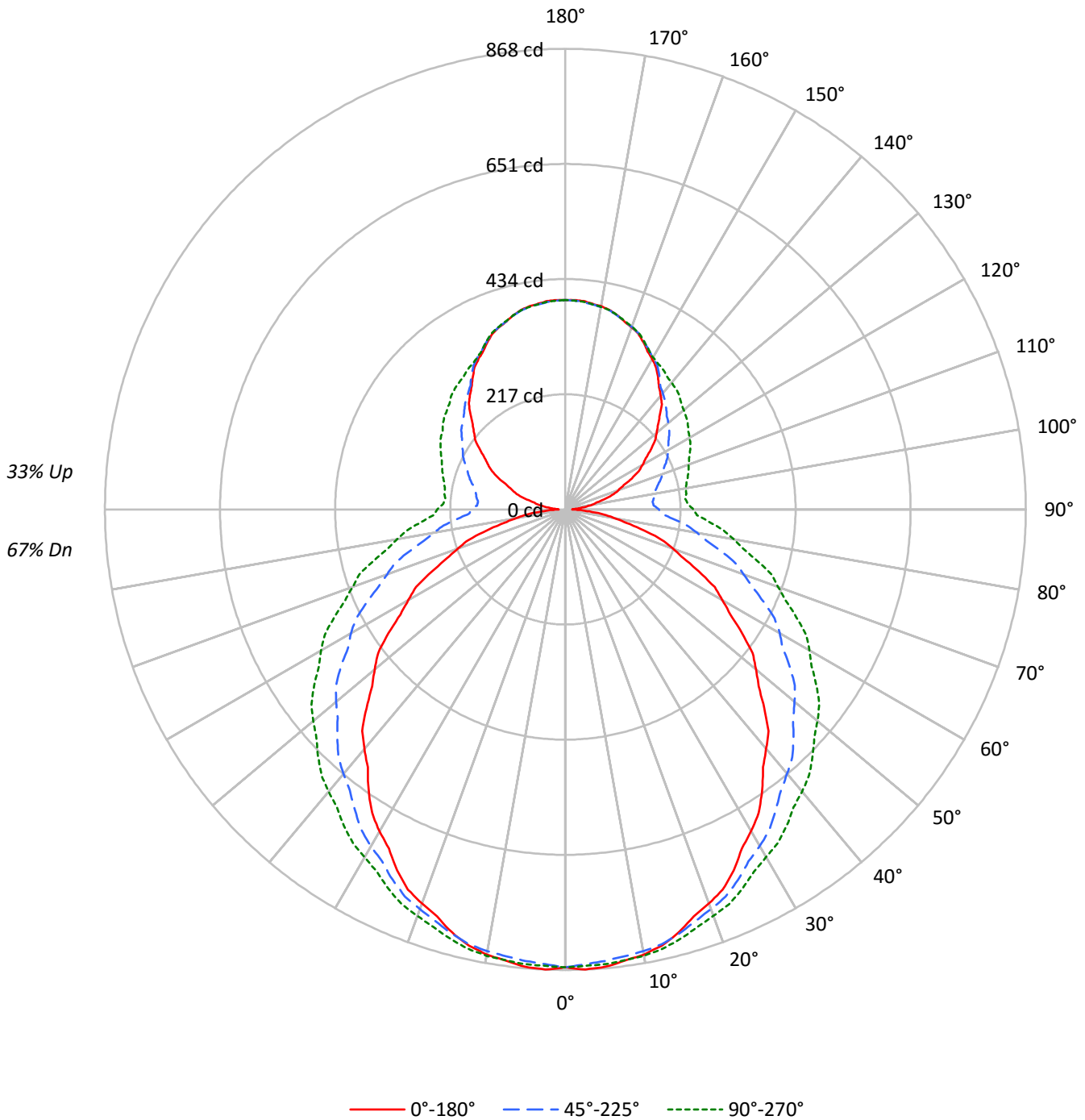
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	81	81	81	71	71	71	67
1	99	94	89	85	93	89	84	81	78	75	72	69	66	64	60	58	56	52
2	90	81	74	68	84	76	70	65	67	62	58	59	55	52	52	49	46	42
3	81	71	62	56	76	67	59	53	59	53	48	52	47	43	45	41	38	35
4	74	62	53	47	69	59	51	45	52	45	40	46	41	36	40	36	32	29
5	68	55	46	40	64	52	44	38	46	40	35	41	35	31	36	31	28	25
6	63	49	41	34	59	47	39	33	42	35	30	37	31	27	32	28	24	22
7	58	45	36	30	54	42	34	29	38	31	26	33	28	24	29	25	21	19
8	54	41	32	26	50	38	31	25	34	28	23	31	25	21	27	23	19	17
9	50	37	29	24	47	35	28	23	31	25	21	28	23	19	25	20	17	15
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16	14

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	1.9
10°-20°	234.5	5.3
20°-30°	355.3	8.1
30°-40°	432.8	9.8
40°-50°	465.6	10.6
50°-60°	452.2	10.3
60°-70°	394.8	9.0
70°-80°	304.0	6.9
80°-90°	205.6	4.7
90°-100°	165.5	3.8
100°-110°	180.3	4.1
110°-120°	200.5	4.6
120°-130°	212.4	4.8
130°-140°	211.8	4.8
140°-150°	194.9	4.4
150°-160°	161.1	3.7
160°-170°	106.9	2.4
170°-180°	37.4	0.8
0°-30°	671.6	15.3
0°-40°	1104.4	25.1
0°-60°	2022.2	46.0
0°-90°	2926.5	66.6
90°-120°	546.3	12.4
90°-150°	1165.4	26.5
90°-180°	1471.0	33.5
0°-180°	4397.3	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	90	177	224	242	9
95°	27	90	165	211	227	28
105°	78	117	181	224	239	83
115°	138	156	210	245	260	136
125°	196	201	238	270	282	176
135°	252	256	269	294	304	195
145°	304	307	309	316	321	190
155°	348	349	350	352	351	160
165°	379	378	378	380	379	107
175°	394	393	392	394	393	37
180°	395	395	395	395	395	



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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°	24.6	41.3	58.1	74.8	91.5	109.0	127.1	145.2	163.3	181.4	192.7
90°	12.8	29.9	46.8	63.9	80.9	99.1	118.5	137.9	157.3	176.7	187.8
92.5°	17.4	33.1	48.7	64.4	80.1	96.6	114.1	131.7	149.2	166.6	177.6
95°	27.3	41.1	55.0	68.7	82.6	97.8	114.7	131.5	148.4	165.1	175.7
97.5°	40.4	52.7	64.9	77.2	89.4	103.8	120.1	136.3	152.6	168.9	179.2
100°	51.1	61.9	72.8	83.7	94.5	107.9	123.7	139.5	155.2	171.1	181.3
102.5°	61.3	71.1	81.0	90.9	100.7	113.3	128.8	144.1	159.6	174.9	185.0
105°	77.9	86.1	94.4	102.7	110.9	122.4	137.0	151.7	166.3	180.8	190.7
107.5°	95.9	102.6	109.4	116.1	122.9	133.3	147.1	160.9	174.7	188.6	198.0
110°	106.6	112.5	118.6	124.6	130.5	140.3	154.0	167.6	181.3	194.8	203.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	119.3	124.5	129.6	134.7	139.8	148.8	161.7	174.6	187.5	200.4	209.1
115°	138.2	141.7	145.2	148.7	152.2	160.1	172.5	184.8	197.2	209.6	217.8
117.5°	155.7	158.3	160.9	163.5	166.1	173.0	184.1	195.3	206.4	217.5	225.6
120°	168.2	169.9	171.6	173.3	175.0	181.2	191.7	202.3	212.7	223.3	231.1
122.5°	179.7	180.9	182.0	183.1	184.4	189.9	200.0	210.0	220.0	230.1	237.4
125°	196.3	197.0	197.7	198.3	199.0	203.7	212.4	221.0	229.7	238.4	245.6
127.5°	213.7	214.2	214.8	215.4	215.9	219.7	226.6	233.5	240.4	247.3	253.9
130°	224.6	225.3	226.0	226.7	227.3	230.5	236.2	242.0	247.6	253.3	259.9
132.5°	236.9	237.3	237.9	238.4	238.9	241.4	245.9	250.4	255.1	259.6	265.7
135°	252.0	252.8	253.6	254.5	255.2	257.1	260.0	263.0	265.9	268.8	274.6
137.5°	269.3	269.8	270.5	271.1	271.7	272.7	274.1	275.5	276.9	278.3	283.4
140°	279.7	280.0	280.4	280.8	281.2	281.8	282.8	283.7	284.6	285.6	290.0
142.5°	290.3	290.7	291.1	291.4	291.8	292.2	292.6	292.9	293.3	293.7	297.3
145°	304.3	304.9	305.4	305.9	306.4	306.9	307.4	307.8	308.2	308.7	310.5
147.5°	318.0	318.7	319.2	319.9	320.5	320.9	321.2	321.6	321.9	322.2	322.5
150°	327.3	327.8	328.2	328.7	329.1	329.5	329.8	330.1	330.4	330.6	330.9
152.5°	335.6	336.0	336.5	337.0	337.3	337.8	338.1	338.5	338.8	339.2	339.5
155°	348.0	348.2	348.5	348.6	348.8	349.1	349.3	349.5	349.8	350.0	350.3
157.5°	358.5	358.7	358.8	359.0	359.2	359.3	359.5	359.6	359.7	359.9	360.3
160°	365.0	365.1	365.2	365.4	365.5	365.7	365.7	365.8	365.9	366.0	366.4
162.5°	370.8	370.9	370.9	370.9	371.0	371.0	371.1	371.2	371.3	371.3	371.8
165°	378.6	378.5	378.4	378.4	378.3	378.2	378.2	378.2	378.2	378.2	378.8
167.5°	385.1	384.9	384.7	384.5	384.3	384.2	384.1	384.1	384.1	384.1	384.6
170°	388.6	388.4	388.1	388.0	387.8	387.6	387.5	387.4	387.4	387.3	387.8
172.5°	391.0	390.8	390.6	390.3	390.1	389.9	389.9	389.8	389.7	389.6	390.2
175°	394.0	393.7	393.5	393.2	393.0	392.9	392.8	392.6	392.4	392.3	392.8
177.5°	395.1	394.9	394.7	394.6	394.5	394.3	394.2	394.1	393.9	393.8	394.2
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



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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°	204.1	215.4	226.7	234.1	237.7	241.3	244.9	248.4
90°	198.7	209.6	220.6	227.8	231.2	234.6	238.1	241.5
92.5°	188.5	199.4	210.4	217.5	220.8	224.2	227.5	230.9
95°	186.2	196.8	207.4	214.2	217.4	220.6	223.9	227.1
97.5°	189.5	199.7	210.0	216.8	220.1	223.4	226.6	229.9
100°	191.6	201.9	212.2	218.8	221.8	224.8	227.7	230.7
102.5°	195.2	205.3	215.5	222.0	225.0	227.9	230.9	233.9
105°	200.6	210.5	220.4	226.8	229.9	232.9	235.9	239.0
107.5°	207.5	216.8	226.2	232.2	235.0	237.7	240.4	243.2
110°	212.6	221.6	230.5	236.3	239.1	242.0	244.8	247.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	217.8	226.5	235.3	241.0	243.9	246.9	249.8	252.6
115°	226.1	234.4	242.6	248.2	251.0	253.8	256.7	259.5
117.5°	233.7	241.7	249.8	255.1	257.7	260.3	263.0	265.5
120°	238.8	246.7	254.4	259.8	262.6	265.4	268.2	271.1
122.5°	244.9	252.2	259.6	264.5	266.9	269.4	271.8	274.3
125°	252.9	260.1	267.5	272.3	274.8	277.2	279.6	282.0
127.5°	260.5	267.2	273.8	278.2	280.4	282.7	284.8	287.1
130°	266.4	272.9	279.4	283.6	285.5	287.5	289.4	291.3
132.5°	271.8	277.9	284.0	288.0	290.1	292.1	294.1	296.1
135°	280.4	286.2	291.9	295.8	297.7	299.7	301.8	303.8
137.5°	288.5	293.5	298.6	301.9	303.5	305.1	306.7	308.3
140°	294.5	298.9	303.3	306.2	307.6	309.0	310.4	311.7
142.5°	301.0	304.5	308.1	310.6	311.7	312.8	314.0	315.1
145°	312.2	314.0	315.7	317.1	318.2	319.2	320.4	321.4
147.5°	322.9	323.3	323.7	324.0	324.4	324.8	325.3	325.6
150°	331.1	331.3	331.6	331.6	331.3	331.1	330.9	330.6
152.5°	339.8	340.1	340.4	340.4	340.1	339.8	339.5	339.2
155°	350.7	351.1	351.5	351.6	351.3	351.1	350.9	350.6
157.5°	360.8	361.4	361.8	361.9	361.6	361.2	360.9	360.5
160°	366.8	367.3	367.8	367.8	367.5	367.2	366.9	366.6
162.5°	372.3	372.8	373.3	373.3	373.1	372.7	372.3	371.9
165°	379.3	379.8	380.3	380.4	380.0	379.7	379.3	379.0
167.5°	385.1	385.6	386.2	386.3	385.9	385.4	385.0	384.7
170°	388.3	388.8	389.4	389.4	389.0	388.5	388.0	387.6
172.5°	390.7	391.2	391.7	391.8	391.3	390.9	390.5	390.0
175°	393.3	393.8	394.4	394.4	394.0	393.5	393.0	392.6
177.5°	394.5	394.8	395.2	395.2	394.8	394.5	394.2	393.8
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6

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