

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: P331334-930

Luminaire Tested: **SA2XXDIP-C675D330U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331334-930
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-C675D330U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 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: 3146.7 lumens
Efficiency: N/A
Efficacy: 89.9 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

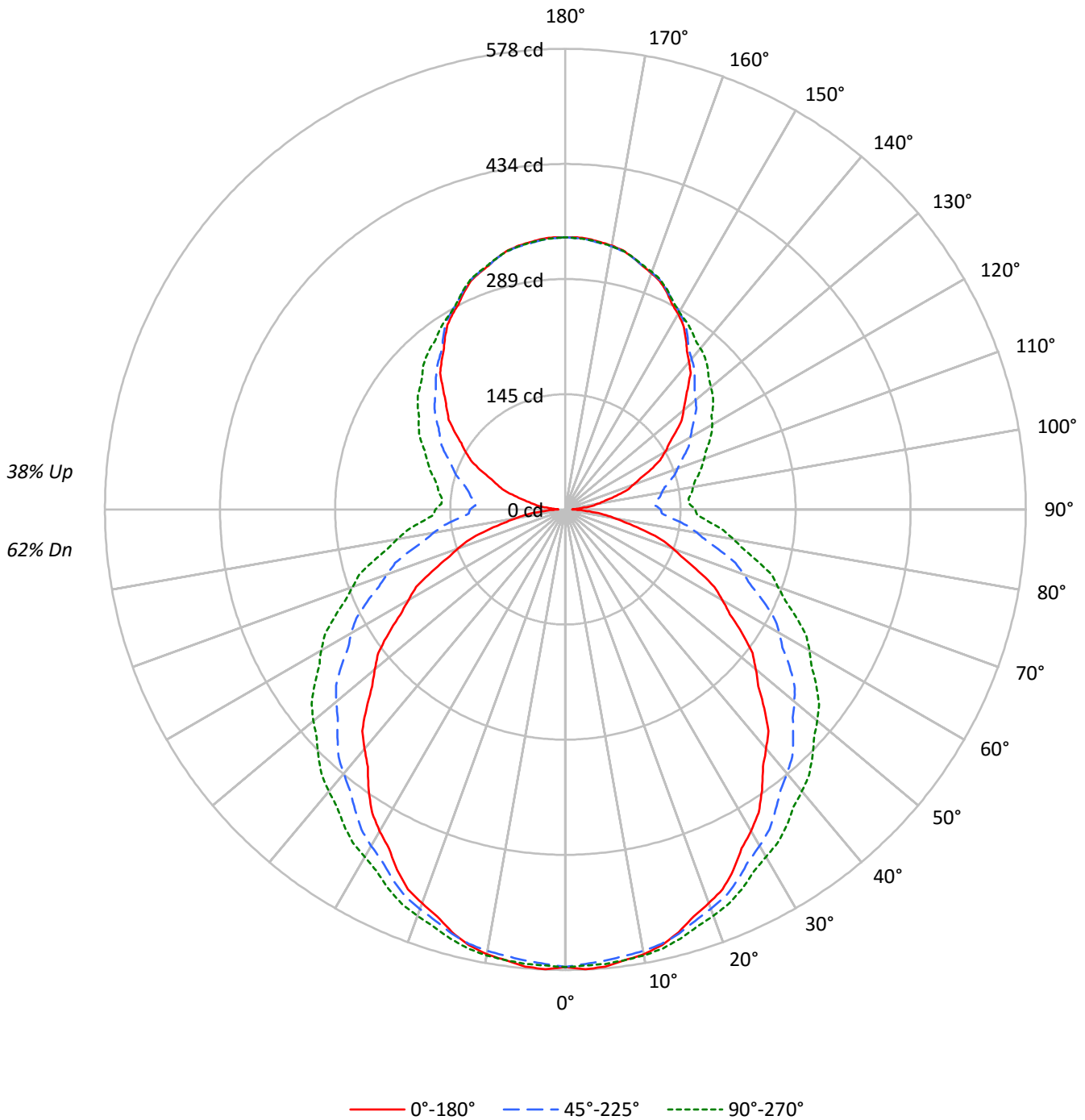
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	93	89	84	92	87	83	80	76	73	70	66	63	61	56	55	53	48
2	89	81	73	68	83	75	69	64	66	61	57	57	53	50	49	46	43	39
3	81	70	62	55	75	66	58	52	57	52	47	50	45	41	42	39	36	32
4	74	62	53	46	68	58	50	44	51	44	39	44	39	35	38	34	30	27
5	67	55	46	39	63	51	44	38	45	39	34	39	34	30	34	30	26	23
6	62	49	40	34	58	46	38	32	41	34	29	35	30	26	30	26	23	20
7	57	44	36	30	53	42	34	28	37	30	26	32	27	23	28	23	20	18
8	53	40	32	26	50	38	30	25	33	27	23	29	24	20	25	21	18	16
9	50	37	29	23	46	35	27	22	31	25	20	27	22	18	23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	22	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.7
10°-20°	156.0	5.0
20°-30°	236.5	7.5
30°-40°	288.0	9.2
40°-50°	309.9	9.8
50°-60°	300.9	9.6
60°-70°	262.7	8.3
70°-80°	202.3	6.4
80°-90°	137.1	4.4
90°-100°	115.1	3.7
100°-110°	135.5	4.3
110°-120°	159.9	5.1
120°-130°	176.2	5.6
130°-140°	180.0	5.7
140°-150°	168.0	5.3
150°-160°	139.4	4.4
160°-170°	92.4	2.9
170°-180°	32.3	1.0
0°-30°	446.9	14.2
0°-40°	734.9	23.4
0°-60°	1345.7	42.8
0°-90°	1947.8	61.9
90°-120°	410.5	13.0
90°-150°	934.8	29.7
90°-180°	1199.0	38.1
0°-180°	3146.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	61	120	151	163	6
95°	22	64	114	145	155	22
105°	66	92	135	164	174	70
115°	118	131	166	190	199	117
125°	169	173	198	218	226	152
135°	218	221	230	246	253	168
145°	263	265	267	272	275	165
155°	301	302	303	304	303	138
165°	328	327	327	329	328	92
175°	341	340	339	341	340	32
180°	341	341	341	341	341	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.4	27.6	38.7	49.9	61.1	72.7	84.9	96.9	109.1	121.2	128.7
90°	8.6	20.1	31.6	43.1	54.6	66.9	80.2	93.4	106.7	119.9	127.2
92.5°	12.8	23.3	33.9	44.4	55.0	66.1	77.9	89.6	101.3	113.0	120.3
95°	21.6	31.0	40.3	49.7	58.9	69.2	80.5	91.7	102.9	114.1	121.2
97.5°	33.2	41.5	49.8	58.0	66.4	76.0	86.8	97.8	108.7	119.5	126.4
100°	42.4	49.7	57.2	64.5	71.8	80.8	91.3	101.9	112.4	122.9	129.8
102.5°	51.4	58.0	64.7	71.4	78.1	86.6	96.9	107.1	117.5	127.8	134.5
105°	66.1	71.7	77.2	82.8	88.3	96.0	105.7	115.4	125.2	134.9	141.5
107.5°	81.7	86.3	90.8	95.4	100.0	106.9	116.1	125.3	134.5	143.7	150.0
110°	91.2	95.2	99.4	103.5	107.5	114.1	123.2	132.2	141.3	150.3	156.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	102.2	105.7	109.3	112.8	116.2	122.2	130.8	139.3	148.0	156.5	162.2
115°	118.5	121.0	123.4	125.8	128.2	133.5	141.7	149.9	158.1	166.3	171.8
117.5°	134.0	135.8	137.6	139.5	141.4	145.9	153.3	160.6	168.0	175.3	180.6
120°	144.8	146.0	147.3	148.5	149.8	153.8	160.8	167.6	174.6	181.4	186.6
122.5°	154.7	155.6	156.5	157.4	158.3	162.1	168.7	175.3	181.9	188.5	193.4
125°	169.3	169.9	170.5	171.0	171.6	174.8	180.5	186.2	191.9	197.6	202.4
127.5°	184.3	184.9	185.4	186.0	186.5	189.1	193.6	198.1	202.7	207.2	211.6
130°	193.8	194.4	195.1	195.8	196.4	198.6	202.4	206.1	209.9	213.6	217.9
132.5°	204.4	204.9	205.4	205.9	206.4	208.1	211.2	214.2	217.2	220.2	224.2
135°	217.8	218.4	219.2	219.8	220.5	221.9	223.9	225.8	227.8	229.8	233.6
137.5°	232.7	233.2	233.7	234.2	234.8	235.5	236.5	237.5	238.5	239.5	242.9
140°	241.7	242.1	242.4	242.8	243.2	243.8	244.4	245.2	245.8	246.5	249.5
142.5°	250.9	251.3	251.6	252.0	252.4	252.7	253.1	253.3	253.6	254.0	256.3
145°	263.3	263.7	264.2	264.6	265.1	265.5	265.9	266.3	266.6	267.0	268.2
147.5°	275.1	275.7	276.1	276.7	277.2	277.6	277.9	278.2	278.4	278.7	278.9
150°	283.2	283.6	283.9	284.3	284.7	285.0	285.3	285.5	285.8	286.0	286.3
152.5°	290.3	290.7	291.1	291.5	291.8	292.2	292.4	292.8	293.1	293.4	293.7
155°	301.0	301.2	301.4	301.6	301.7	302.0	302.1	302.3	302.6	302.7	303.0
157.5°	310.1	310.3	310.4	310.5	310.7	310.8	311.0	311.0	311.1	311.3	311.7
160°	315.7	315.8	315.9	316.1	316.2	316.3	316.3	316.4	316.5	316.6	316.9
162.5°	320.7	320.8	320.8	320.8	320.9	320.9	321.0	321.1	321.1	321.1	321.6
165°	327.5	327.4	327.3	327.3	327.3	327.2	327.2	327.2	327.2	327.2	327.7
167.5°	333.1	333.0	332.8	332.6	332.4	332.3	332.2	332.2	332.2	332.2	332.6
170°	336.1	336.0	335.7	335.6	335.4	335.3	335.2	335.1	335.1	335.0	335.4
172.5°	338.2	338.0	337.9	337.6	337.5	337.3	337.3	337.2	337.1	337.0	337.5
175°	340.8	340.6	340.4	340.1	340.0	339.8	339.7	339.6	339.4	339.3	339.7
177.5°	341.8	341.6	341.4	341.4	341.2	341.0	341.0	340.9	340.7	340.6	341.0
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	136.2	143.7	151.3	156.2	158.6	161.0	163.4	165.8
90°	134.5	141.8	149.0	153.8	156.0	158.3	160.6	162.9
92.5°	127.6	134.9	142.1	146.9	149.1	151.3	153.6	155.8
95°	128.2	135.3	142.3	146.8	148.9	151.0	153.1	155.2
97.5°	133.2	140.1	146.9	151.4	153.6	155.8	157.9	160.1
100°	136.6	143.5	150.3	154.7	156.7	158.7	160.7	162.7
102.5°	141.3	148.0	154.7	159.1	161.1	163.1	165.0	167.0
105°	148.1	154.7	161.3	165.7	167.7	169.7	171.8	173.8
107.5°	156.3	162.6	168.8	172.8	174.6	176.3	178.1	179.8
110°	162.2	168.1	174.0	177.9	179.8	181.6	183.4	185.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	168.0	173.8	179.5	183.4	185.3	187.2	189.1	190.9
115°	177.2	182.8	188.3	191.9	193.7	195.6	197.5	199.3
117.5°	185.9	191.3	196.6	200.1	201.8	203.4	205.1	206.8
120°	191.8	197.0	202.1	205.6	207.5	209.3	211.2	213.0
122.5°	198.2	203.1	208.0	211.2	212.8	214.4	216.1	217.6
125°	207.2	212.1	216.9	220.0	221.7	223.3	224.9	226.5
127.5°	216.0	220.3	224.7	227.6	228.9	230.4	231.8	233.3
130°	222.3	226.6	230.8	233.6	234.8	236.0	237.3	238.5
132.5°	228.2	232.3	236.3	238.9	240.2	241.4	242.7	244.0
135°	237.4	241.2	245.1	247.6	248.9	250.2	251.5	252.7
137.5°	246.2	249.6	252.9	255.1	256.1	257.1	258.0	259.1
140°	252.4	255.4	258.4	260.2	261.1	262.0	262.8	263.7
142.5°	258.8	261.2	263.6	265.1	265.9	266.6	267.3	268.0
145°	269.4	270.5	271.7	272.6	273.3	273.9	274.7	275.3
147.5°	279.2	279.5	279.8	280.1	280.2	280.5	280.6	280.9
150°	286.4	286.6	286.8	286.8	286.6	286.4	286.3	286.0
152.5°	293.9	294.2	294.4	294.4	294.2	293.9	293.7	293.4
155°	303.4	303.7	304.0	304.1	303.9	303.7	303.5	303.3
157.5°	312.1	312.6	313.0	313.1	312.7	312.4	312.2	311.9
160°	317.3	317.7	318.1	318.1	317.9	317.6	317.4	317.2
162.5°	322.0	322.5	322.9	322.9	322.7	322.4	322.0	321.7
165°	328.1	328.6	329.0	329.1	328.7	328.4	328.1	327.8
167.5°	333.1	333.5	334.0	334.1	333.8	333.4	333.0	332.7
170°	335.9	336.3	336.8	336.8	336.5	336.1	335.7	335.3
172.5°	337.9	338.4	338.8	338.9	338.5	338.1	337.8	337.4
175°	340.2	340.6	341.1	341.1	340.8	340.4	340.0	339.6
177.5°	341.3	341.5	341.9	341.9	341.5	341.3	341.0	340.6
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4

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