

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: P332494-935

Luminaire Tested: **SA4XXDIP-C350D365U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332494-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C350D365U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2333.2 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

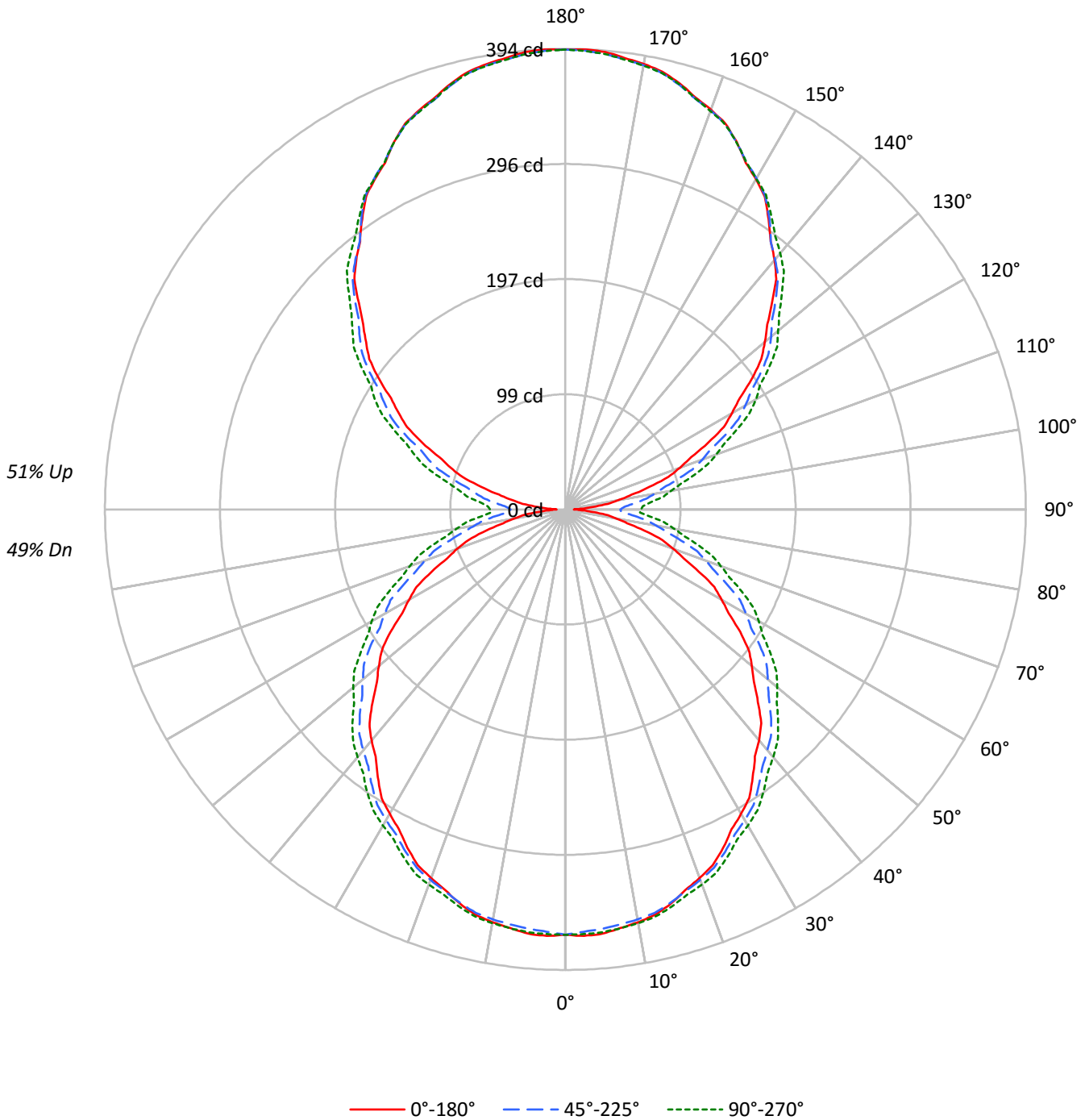
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49				
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39				
2	88	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32				
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27				
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	23				
5	67	55	46	40	61	50	43	37	43	37	32	35	31	28	29	25	23	19				
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	23	20	17				
7	57	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	18	15				
8	52	40	32	26	48	37	30	25	32	26	22	26	22	19	22	18	16	13				
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12				
10	46	33	26	21	42	31	24	20	27	21	17	22	18	15	18	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2938	2938	2938
5°	2948	2871	2880
10°	2929	2825	2823
15°	2902	2770	2755
20°	2863	2710	2690
25°	2819	2643	2617
30°	2770	2576	2543
35°	2716	2507	2478
40°	2672	2442	2410
45°	2607	2382	2352
50°	2553	2313	2291
55°	2496	2248	2220
60°	2408	2164	2153
65°	2309	2076	2073
70°	2192	1973	1979
75°	2029	1861	1894
80°	1846	1754	1809
85°	1616	1659	1762



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	1.5
10°-20°	98.7	4.2
20°-30°	149.3	6.4
30°-40°	180.7	7.7
40°-50°	191.0	8.2
50°-60°	179.7	7.7
60°-70°	149.1	6.4
70°-80°	104.7	4.5
80°-90°	60.4	2.6
90°-100°	61.1	2.6
100°-110°	102.9	4.4
110°-120°	147.9	6.3
120°-130°	181.9	7.8
130°-140°	197.5	8.5
140°-150°	190.7	8.2
150°-160°	159.7	6.8
160°-170°	106.2	4.6
170°-180°	37.2	1.6
0°-30°	282.5	12.1
0°-40°	463.2	19.9
0°-60°	833.9	35.7
0°-90°	1148.1	49.2
90°-120°	311.9	13.4
90°-150°	882.0	37.8
90°-180°	1185.0	50.8
0°-180°	2333.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	364	363	360	363	363	35
15°	349	350	348	352	352	98
25°	320	322	323	327	328	147
35°	280	284	288	294	296	175
45°	233	241	249	255	258	180
55°	183	191	203	211	214	163
65°	126	139	153	163	167	125
75°	70	85	102	113	117	75
85°	22	39	57	69	73	23
90°	7	27	47	60	65	5
95°	24	40	58	70	74	25
105°	75	83	99	110	115	79
115°	135	139	151	160	162	133
125°	195	195	204	211	213	174
135°	250	252	255	260	262	193
145°	303	304	304	306	307	190
155°	347	347	347	348	347	160
165°	378	377	376	378	377	106
175°	393	391	391	393	391	37
180°	393	393	393	393	393	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	365.2	365.0	364.8	364.5	364.4	363.9	363.4	362.8	362.2	361.6	362.1
5°	364.4	364.0	363.8	363.5	363.3	362.8	362.1	361.5	360.9	360.2	361.0
7.5°	361.3	361.1	360.9	360.8	360.6	360.2	359.7	359.2	358.7	358.2	359.0
10°	358.6	358.5	358.4	358.3	358.3	358.0	357.6	357.1	356.6	356.2	357.0
12.5°	355.1	355.0	355.0	355.0	355.0	354.8	354.5	354.2	353.9	353.6	354.3
15°	349.2	349.4	349.5	349.6	349.7	349.6	349.2	349.0	348.7	348.4	349.2
17.5°	341.4	341.6	341.9	342.2	342.4	342.6	342.5	342.4	342.4	342.3	343.2
20°	335.8	336.0	336.4	336.7	336.9	337.1	337.2	337.3	337.3	337.4	338.4
22.5°	329.6	329.9	330.3	330.6	331.0	331.2	331.4	331.6	331.7	331.9	332.8
25°	319.5	320.0	320.6	321.2	321.7	322.1	322.4	322.6	322.9	323.2	324.2
27.5°	308.2	309.1	309.9	310.6	311.4	312.0	312.5	312.9	313.3	313.7	314.6
30°	300.7	301.5	302.2	302.9	303.7	304.4	305.0	305.6	306.3	306.9	307.9
32.5°	292.7	293.5	294.4	295.2	296.1	296.9	297.6	298.3	299.0	299.7	300.8
35°	279.6	280.7	281.7	282.8	284.0	284.9	285.9	286.7	287.7	288.5	289.8
37.5°	266.5	267.7	269.0	270.2	271.5	272.6	273.8	274.9	276.0	277.2	278.4
40°	258.0	259.2	260.4	261.5	262.7	263.9	265.2	266.5	267.7	269.0	270.4
42.5°	248.2	249.5	250.8	252.2	253.5	254.9	256.4	257.9	259.3	260.8	262.3
45°	233.1	234.8	236.5	238.2	240.0	241.7	243.4	245.1	246.8	248.6	250.1
47.5°	218.7	220.5	222.2	224.0	225.8	227.6	229.6	231.7	233.7	235.7	237.2
50°	208.3	210.3	212.2	214.2	216.2	218.2	220.2	222.2	224.2	226.2	228.0
52.5°	197.9	199.8	201.8	203.8	205.8	207.9	210.2	212.5	214.7	217.1	218.9
55°	182.6	184.5	186.4	188.3	190.2	192.5	195.2	197.9	200.6	203.4	205.2
57.5°	165.6	167.9	170.2	172.6	175.0	177.5	180.2	182.9	185.5	188.3	190.5
60°	154.5	156.8	159.2	161.5	163.8	166.5	169.5	172.5	175.5	178.5	180.6
62.5°	143.7	146.3	148.9	151.4	153.9	156.8	159.7	162.7	165.7	168.8	170.8
65°	126.3	129.2	132.2	135.0	137.9	140.9	144.0	147.1	150.2	153.3	155.5
67.5°	109.6	112.7	115.8	118.9	121.9	125.1	128.5	131.7	135.0	138.3	140.6
70°	98.2	101.3	104.4	107.5	110.6	113.8	117.3	120.7	124.2	127.6	130.0
72.5°	87.1	90.3	93.4	96.6	99.7	103.1	106.8	110.5	114.1	117.8	120.1
75°	70.1	73.4	76.8	80.2	83.5	87.0	90.9	94.7	98.5	102.3	104.9
77.5°	54.2	57.8	61.3	64.8	68.4	72.2	76.1	80.2	84.1	88.1	90.7
80°	44.4	48.0	51.7	55.3	58.9	62.7	66.7	70.7	74.6	78.7	81.4
82.5°	34.6	38.4	42.2	46.0	49.7	53.6	57.6	61.6	65.5	69.6	72.3
85°	21.6	25.4	29.2	33.0	36.9	40.7	44.9	48.9	53.0	57.1	59.8
87.5°	12.2	16.1	20.0	23.8	27.6	31.6	35.6	39.7	43.8	47.9	50.6
90°	7.4	11.8	16.2	20.5	24.9	29.3	33.8	38.1	42.6	47.0	50.1
92.5°	12.7	16.8	20.9	25.1	29.2	33.3	37.6	41.9	46.1	50.5	53.2
95°	23.6	27.1	30.7	34.4	38.0	41.8	46.0	50.2	54.4	58.5	61.2
97.5°	36.7	39.8	42.8	45.9	48.9	52.6	56.8	61.0	65.3	69.5	72.2
100°	47.1	49.7	52.3	54.9	57.6	61.0	65.1	69.2	73.4	77.5	80.1
102.5°	58.3	60.4	62.6	64.8	67.0	70.1	74.0	78.1	82.1	86.1	88.7
105°	74.6	76.5	78.4	80.2	82.1	84.8	88.4	92.0	95.7	99.3	101.8
107.5°	92.4	94.0	95.6	97.1	98.7	101.1	104.3	107.5	110.7	113.9	116.3
110°	104.3	105.6	107.1	108.5	109.9	112.1	115.2	118.3	121.4	124.6	126.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	116.6	117.8	118.9	120.0	121.2	123.2	126.1	129.1	131.9	134.8	136.8
115°	135.1	136.0	136.7	137.5	138.4	140.2	142.9	145.7	148.4	151.2	153.1
117.5°	152.9	153.4	154.0	154.5	155.1	156.6	159.3	161.9	164.5	167.0	168.8
120°	164.5	165.1	165.6	166.2	166.7	168.2	170.6	173.0	175.4	177.9	179.3
122.5°	176.9	177.1	177.3	177.4	177.5	178.8	181.2	183.7	186.0	188.4	189.9
125°	194.8	194.8	194.7	194.6	194.5	195.5	197.7	199.9	202.1	204.3	205.9
127.5°	211.4	211.5	211.5	211.7	211.8	212.7	214.3	215.9	217.6	219.2	220.7
130°	222.7	222.8	222.9	223.1	223.2	223.9	225.4	226.9	228.3	229.7	231.3
132.5°	234.6	234.7	234.8	234.8	234.9	235.5	236.6	237.6	238.8	239.9	241.3
135°	250.0	250.4	250.8	251.2	251.6	252.1	252.8	253.4	254.1	254.7	256.0
137.5°	267.2	267.3	267.3	267.4	267.5	267.8	268.2	268.6	269.1	269.5	270.6
140°	278.6	278.6	278.7	278.7	278.8	278.9	279.0	279.1	279.1	279.2	280.3
142.5°	288.7	288.9	289.0	289.1	289.2	289.2	289.1	289.0	288.9	288.8	289.8
145°	303.2	303.3	303.5	303.7	303.8	304.0	304.0	304.1	304.2	304.3	304.7
147.5°	317.5	317.7	318.0	318.2	318.4	318.5	318.5	318.4	318.4	318.3	318.3
150°	326.2	326.4	326.6	326.8	327.0	327.1	327.1	327.1	327.1	327.1	327.1
152.5°	334.2	334.3	334.5	334.7	334.8	334.8	334.9	335.0	335.0	335.1	335.3
155°	346.8	346.8	346.8	346.8	346.8	346.8	346.7	346.6	346.6	346.6	346.8
157.5°	357.6	357.4	357.3	357.2	357.1	357.0	357.0	357.0	357.0	357.0	357.1
160°	363.9	363.8	363.8	363.7	363.6	363.5	363.5	363.4	363.3	363.3	363.5
162.5°	369.7	369.5	369.4	369.2	369.0	368.9	368.9	368.8	368.7	368.6	369.0
165°	377.5	377.4	377.2	376.9	376.8	376.6	376.4	376.3	376.2	376.1	376.4
167.5°	383.6	383.3	383.1	382.7	382.5	382.3	382.4	382.4	382.4	382.4	382.8
170°	387.0	386.7	386.3	386.0	385.6	385.6	385.6	385.6	385.7	385.8	386.2
172.5°	389.4	389.2	388.8	388.6	388.3	388.1	388.1	388.2	388.2	388.2	388.7
175°	392.8	392.4	392.1	391.8	391.4	391.2	391.2	391.1	391.1	391.0	391.4
177.5°	393.9	393.6	393.3	393.0	392.8	392.7	392.7	392.7	392.7	392.7	393.0
180°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	362.7	363.2	363.7	363.9	363.9	363.8	363.7	363.6
5°	361.7	362.4	363.2	363.5	363.4	363.3	363.2	363.1
7.5°	359.8	360.6	361.4	361.8	361.7	361.6	361.5	361.4
10°	357.8	358.6	359.5	359.8	359.7	359.6	359.6	359.5
12.5°	355.1	355.9	356.5	356.9	356.9	356.9	356.9	356.8
15°	350.1	350.9	351.7	352.1	352.0	351.9	351.8	351.7
17.5°	344.0	344.8	345.7	346.0	345.9	345.9	345.9	345.8
20°	339.2	340.2	341.0	341.6	341.6	341.6	341.6	341.6
22.5°	333.7	334.6	335.5	336.0	336.2	336.3	336.5	336.7
25°	325.2	326.1	327.2	327.7	327.8	327.9	328.0	328.0
27.5°	315.6	316.5	317.5	318.0	318.1	318.1	318.2	318.4
30°	308.8	309.9	310.8	311.4	311.6	311.9	312.0	312.2
32.5°	302.0	303.2	304.3	305.0	305.1	305.3	305.5	305.7
35°	291.1	292.3	293.6	294.4	294.6	294.9	295.2	295.5
37.5°	279.7	280.9	282.2	283.1	283.4	283.6	284.0	284.2
40°	271.7	273.0	274.4	275.3	275.6	276.0	276.4	276.7
42.5°	263.8	265.4	266.8	267.8	268.0	268.3	268.6	268.9
45°	251.7	253.2	254.8	255.7	256.2	256.7	257.1	257.5
47.5°	238.8	240.4	242.0	243.1	243.7	244.2	244.7	245.3
50°	229.8	231.6	233.4	234.6	235.1	235.7	236.3	236.8
52.5°	220.7	222.5	224.3	225.5	226.0	226.5	227.1	227.6
55°	207.0	208.8	210.6	211.8	212.3	212.8	213.4	214.0
57.5°	192.6	194.8	196.9	198.2	198.7	199.2	199.8	200.3
60°	182.7	184.8	186.8	188.2	189.0	189.7	190.5	191.1
62.5°	172.9	175.0	177.0	178.5	179.2	179.9	180.6	181.3
65°	157.7	160.1	162.3	163.8	164.5	165.2	166.0	166.7
67.5°	142.9	145.3	147.5	149.0	149.7	150.4	151.1	151.9
70°	132.4	134.9	137.3	138.9	139.5	140.2	140.8	141.4
72.5°	122.5	124.9	127.3	128.8	129.5	130.2	131.0	131.6
75°	107.4	109.9	112.4	114.1	114.9	115.7	116.6	117.4
77.5°	93.2	95.8	98.4	100.1	101.0	101.9	102.7	103.6
80°	84.1	86.8	89.5	91.3	92.0	92.7	93.4	94.1
82.5°	75.1	77.9	80.7	82.5	83.3	84.0	84.9	85.7
85°	62.5	65.2	67.9	69.7	70.6	71.5	72.4	73.4
87.5°	53.3	56.0	58.7	60.4	61.3	62.2	62.9	63.8
90°	53.1	56.1	59.2	61.1	62.0	62.9	63.7	64.6
92.5°	56.1	58.8	61.6	63.5	64.2	65.0	65.9	66.6
95°	63.9	66.6	69.1	70.9	71.7	72.5	73.4	74.1
97.5°	74.7	77.3	80.0	81.6	82.5	83.3	84.0	84.8
100°	82.7	85.2	87.8	89.5	90.1	90.7	91.4	92.0
102.5°	91.3	93.8	96.3	98.1	98.8	99.5	100.3	101.1
105°	104.3	106.7	109.2	110.9	111.8	112.7	113.7	114.6
107.5°	118.7	121.1	123.6	125.1	125.8	126.4	127.0	127.7
110°	128.5	130.4	132.3	133.8	134.7	135.6	136.6	137.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	138.8	140.8	142.8	144.1	144.9	145.7	146.5	147.2
115°	155.1	157.0	158.9	160.1	160.7	161.3	161.9	162.4
117.5°	170.4	172.0	173.7	174.8	175.4	176.0	176.6	177.2
120°	180.8	182.3	183.7	184.9	185.8	186.7	187.5	188.4
122.5°	191.6	193.1	194.8	195.7	196.1	196.6	196.9	197.3
125°	207.5	209.1	210.7	211.6	212.1	212.5	212.8	213.3
127.5°	222.2	223.7	225.2	226.2	226.7	227.2	227.7	228.3
130°	232.7	234.2	235.7	236.6	236.9	237.1	237.5	237.7
132.5°	242.7	244.2	245.6	246.5	246.9	247.4	247.8	248.2
135°	257.3	258.6	259.9	260.8	261.1	261.4	261.7	262.1
137.5°	271.7	272.9	274.1	274.9	275.3	275.9	276.4	276.8
140°	281.5	282.5	283.6	284.4	284.7	285.2	285.5	285.9
142.5°	290.8	291.8	292.8	293.5	293.9	294.3	294.6	295.0
145°	305.2	305.7	306.2	306.4	306.6	306.8	306.9	307.1
147.5°	318.3	318.4	318.4	318.5	318.7	318.9	319.2	319.3
150°	327.1	327.1	327.1	327.0	327.0	326.9	326.8	326.7
152.5°	335.4	335.6	335.8	335.7	335.5	335.4	335.2	335.0
155°	347.1	347.3	347.6	347.6	347.3	347.1	346.8	346.6
157.5°	357.3	357.6	357.7	357.7	357.5	357.3	357.1	356.8
160°	363.7	363.9	364.1	364.0	363.7	363.3	363.0	362.7
162.5°	369.4	369.7	370.1	370.1	369.8	369.5	369.1	368.8
165°	376.9	377.3	377.6	377.7	377.5	377.2	376.9	376.7
167.5°	383.2	383.6	384.0	384.0	383.6	383.1	382.7	382.3
170°	386.6	387.0	387.4	387.4	386.9	386.4	386.0	385.5
172.5°	389.2	389.6	390.0	390.0	389.6	389.1	388.7	388.1
175°	391.9	392.4	392.9	392.9	392.4	391.9	391.4	391.0
177.5°	393.4	393.8	394.2	394.2	393.7	393.3	392.9	392.4
180°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4

(END OF REPORT)