

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: P331878-935

Luminaire Tested: **S123DIP-S340D585U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331878-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D585U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2971.6 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

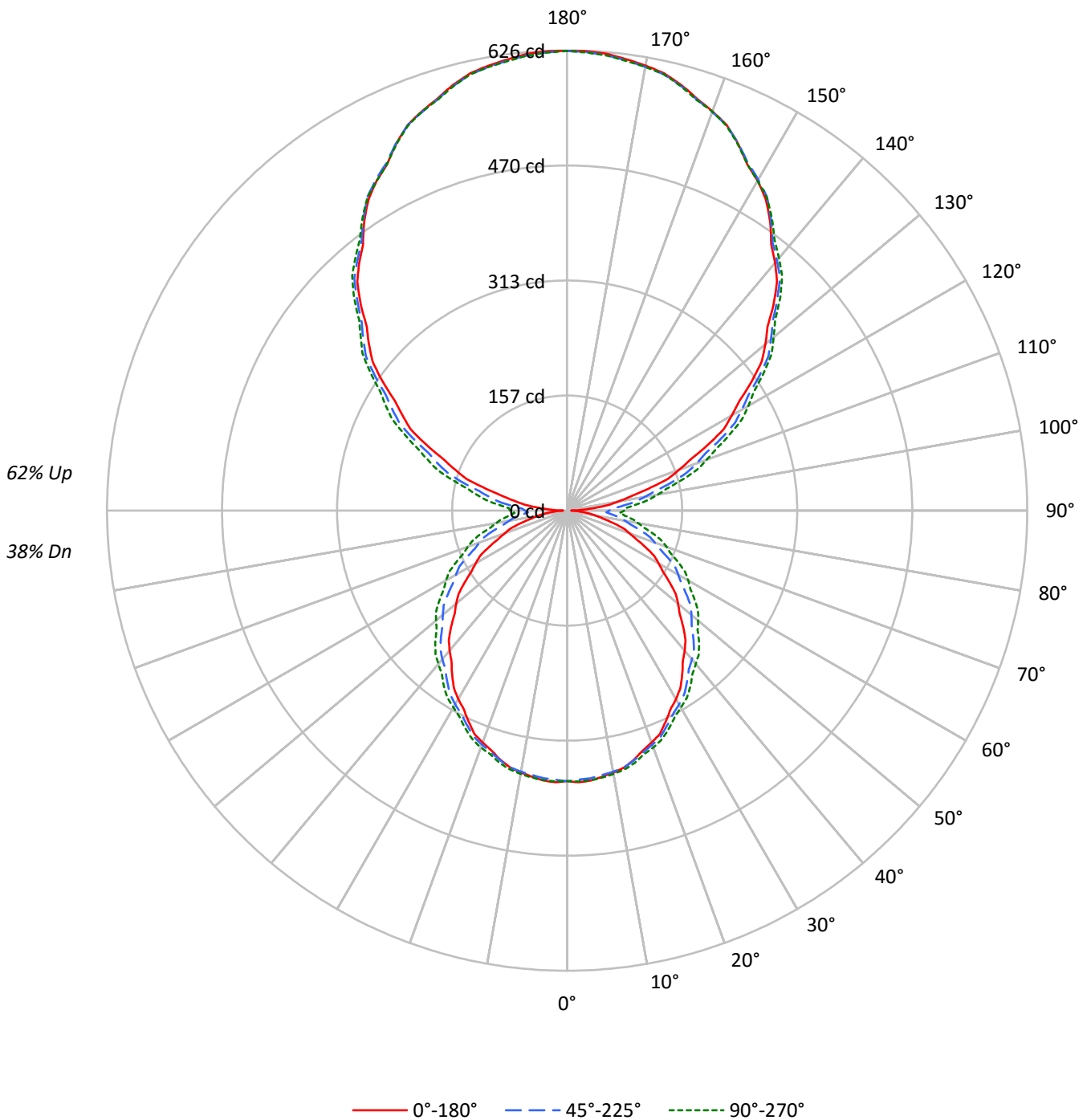
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	90	86	82	85	81	78	75	66	64	61	52	50	49	39	38	37	30
2	86	78	72	66	77	71	65	61	57	53	50	45	42	40	34	32	30	25
3	78	68	61	55	70	62	55	50	50	46	42	40	36	33	30	27	25	21
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	24	22	18
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	24	21	19	15
6	60	48	40	34	54	44	36	31	36	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	19	17	14	12
8	51	39	31	26	46	36	29	24	29	24	20	23	19	16	18	15	13	10
9	48	35	28	23	43	32	26	21	27	22	18	21	18	15	16	14	12	9
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3963	3963	3963
5°	3977	3865	3866
10°	3941	3776	3757
15°	3890	3674	3636
20°	3818	3559	3504
25°	3728	3427	3365
30°	3637	3307	3224
35°	3533	3181	3112
40°	3435	3065	2991
45°	3327	2955	2895
50°	3219	2846	2789
55°	3100	2734	2693
60°	2984	2620	2596
65°	2865	2499	2479
70°	2685	2362	2359
75°	2462	2208	2239
80°	2201	2054	2100
85°	1955	1950	2018



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	1.2
10°-20°	99.5	3.3
20°-30°	148.9	5.0
30°-40°	177.8	6.0
40°-50°	186.0	6.3
50°-60°	174.5	5.9
60°-70°	145.8	4.9
70°-80°	104.3	3.5
80°-90°	64.1	2.2
90°-100°	79.8	2.7
100°-110°	150.6	5.1
110°-120°	226.5	7.6
120°-130°	283.7	9.5
130°-140°	311.4	10.5
140°-150°	302.4	10.2
150°-160°	253.7	8.5
160°-170°	168.9	5.7
170°-180°	59.1	2.0
0°-30°	283.3	9.5
0°-40°	461.0	15.5
0°-60°	821.6	27.6
0°-90°	1135.7	38.2
90°-120°	456.8	15.4
90°-150°	1354.3	45.6
90°-180°	1836.0	61.8
0°-180°	2971.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	369	368	366	368	368	35
15°	351	352	352	356	355	99
25°	317	321	322	327	327	146
35°	273	279	284	290	292	171
45°	223	233	243	250	254	172
55°	170	183	198	208	212	152
65°	118	133	151	162	167	116
75°	64	83	103	116	121	68
85°	20	40	61	74	79	21
90°	6	30	57	72	78	5
95°	33	53	76	90	94	36
105°	114	125	146	157	162	122
115°	211	217	230	240	243	209
125°	307	309	319	325	326	274
135°	397	400	404	409	410	306
145°	481	482	483	486	486	300
155°	550	551	551	553	550	253
165°	600	598	598	601	598	169
175°	624	622	622	624	621	59
180°	625	625	625	625	625	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	369.9	369.7	369.5	369.3	369.0	368.7	368.1	367.5	367.0	366.4	367.0
5°	368.7	368.5	368.3	368.2	368.0	367.6	367.0	366.5	366.0	365.5	366.2
7.5°	365.1	365.2	365.2	365.2	365.2	365.0	364.5	363.9	363.4	362.9	363.8
10°	361.9	362.1	362.2	362.4	362.6	362.5	362.0	361.5	361.1	360.7	361.5
12.5°	358.0	358.3	358.5	358.8	359.0	359.0	358.7	358.3	358.1	357.7	358.6
15°	351.0	351.3	351.5	351.8	352.1	352.2	352.1	352.0	351.9	351.8	352.8
17.5°	342.2	342.8	343.3	343.8	344.3	344.6	344.6	344.5	344.5	344.5	345.3
20°	335.8	336.3	336.8	337.4	337.9	338.3	338.5	338.6	338.8	339.0	339.8
22.5°	329.1	329.6	330.1	330.6	331.2	331.6	331.8	332.1	332.3	332.6	333.6
25°	316.9	317.8	318.7	319.6	320.5	321.1	321.3	321.6	321.8	322.2	323.3
27.5°	304.7	305.7	306.8	307.8	308.8	309.6	310.1	310.7	311.3	311.9	312.9
30°	296.1	297.2	298.4	299.5	300.7	301.6	302.4	303.1	303.8	304.5	305.6
32.5°	286.5	287.7	289.0	290.3	291.6	292.7	293.7	294.6	295.6	296.4	297.6
35°	272.8	274.2	275.7	277.1	278.5	279.8	280.9	282.1	283.3	284.5	285.8
37.5°	258.4	259.9	261.6	263.2	264.8	266.3	267.7	269.1	270.6	272.0	273.5
40°	248.7	250.4	251.9	253.6	255.1	256.8	258.6	260.5	262.2	264.0	265.5
42.5°	238.2	240.1	242.0	244.0	246.0	247.9	249.8	251.6	253.5	255.3	257.0
45°	223.1	225.2	227.3	229.5	231.6	233.8	236.0	238.2	240.5	242.7	244.4
47.5°	207.2	209.7	212.1	214.6	217.0	219.5	222.0	224.5	227.0	229.6	231.5
50°	197.0	199.5	202.0	204.5	207.0	209.6	212.3	215.2	217.9	220.7	222.7
52.5°	186.1	188.7	191.3	194.0	196.7	199.5	202.5	205.6	208.6	211.6	213.8
55°	170.1	173.1	176.0	178.9	181.8	184.9	188.1	191.4	194.6	197.8	200.2
57.5°	154.5	157.6	160.7	163.8	166.8	170.1	173.6	177.1	180.6	184.2	186.6
60°	143.6	146.8	150.1	153.3	156.4	159.9	163.6	167.2	170.8	174.5	177.0
62.5°	133.4	136.6	139.9	143.2	146.5	150.1	153.9	157.8	161.7	165.6	168.0
65°	117.5	121.1	124.5	127.9	131.5	135.2	139.1	143.0	146.9	150.8	153.5
67.5°	101.5	105.2	108.9	112.5	116.2	120.1	124.1	128.1	132.1	136.1	139.0
70°	90.2	94.1	97.9	101.8	105.6	109.7	113.9	118.2	122.5	126.7	129.7
72.5°	80.0	83.9	87.6	91.5	95.3	99.4	103.8	108.3	112.7	117.2	120.1
75°	63.8	68.0	72.2	76.4	80.6	84.9	89.4	93.8	98.2	102.7	105.6
77.5°	49.7	53.9	58.1	62.3	66.6	70.9	75.4	79.9	84.4	88.9	92.0
80°	39.7	44.1	48.5	52.9	57.2	61.7	66.3	70.9	75.6	80.2	83.3
82.5°	31.1	35.5	40.0	44.3	48.8	53.4	58.1	62.8	67.5	72.2	75.3
85°	19.6	24.1	28.6	33.1	37.5	42.1	46.8	51.5	56.2	61.0	64.0
87.5°	10.8	15.4	20.1	24.7	29.4	34.2	39.0	43.8	48.6	53.5	56.6
90°	5.7	11.2	16.6	22.1	27.6	33.2	39.3	45.2	51.1	57.1	60.6
92.5°	16.8	21.4	26.2	30.8	35.5	40.5	45.8	51.1	56.3	61.6	64.9
95°	33.4	37.6	41.8	46.1	50.4	55.1	60.4	65.6	70.9	76.0	79.3
97.5°	55.4	59.1	62.9	66.6	70.3	74.5	79.3	84.1	88.9	93.7	96.9
100°	70.4	73.9	77.4	80.9	84.5	88.5	93.2	97.8	102.5	107.1	110.0
102.5°	87.7	90.7	93.7	96.6	99.6	103.5	108.2	113.0	117.7	122.4	125.3
105°	113.7	116.1	118.4	120.8	123.1	126.7	131.6	136.4	141.2	146.0	148.5
107.5°	143.4	145.4	147.4	149.3	151.3	154.3	158.3	162.3	166.3	170.4	173.1
110°	162.0	163.8	165.7	167.5	169.3	172.1	175.9	179.7	183.5	187.3	190.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	181.7	183.1	184.6	186.0	187.4	189.9	193.4	196.8	200.4	203.8	206.6
115°	210.7	212.2	213.5	214.9	216.3	218.5	221.5	224.5	227.5	230.5	232.7
117.5°	240.3	241.2	242.0	243.0	243.8	245.6	248.3	251.1	253.8	256.6	258.6
120°	258.5	259.6	260.6	261.7	262.9	264.6	267.0	269.4	271.8	274.2	276.1
122.5°	277.7	278.4	279.1	279.8	280.5	282.1	284.6	287.2	289.7	292.2	293.9
125°	306.7	307.0	307.3	307.6	308.0	309.4	311.7	314.1	316.4	318.8	320.2
127.5°	333.8	334.4	335.0	335.6	336.2	337.5	339.4	341.3	343.2	345.1	346.2
130°	351.9	352.7	353.4	354.2	355.0	356.1	357.6	359.0	360.5	362.0	363.2
132.5°	369.6	370.5	371.3	372.2	373.0	374.0	375.2	376.4	377.6	378.8	379.9
135°	397.1	397.7	398.3	398.8	399.4	400.1	401.0	401.8	402.7	403.6	404.8
137.5°	422.6	423.1	423.5	424.0	424.5	425.2	425.9	426.8	427.7	428.5	429.5
140°	440.0	440.5	441.0	441.6	442.1	442.6	443.0	443.3	443.7	444.1	445.3
142.5°	456.1	456.5	457.0	457.4	458.0	458.3	458.6	458.8	459.1	459.3	460.4
145°	481.2	481.3	481.5	481.6	481.7	481.9	482.2	482.6	482.9	483.3	483.9
147.5°	502.8	503.2	503.6	503.9	504.4	504.7	505.1	505.3	505.7	505.9	506.2
150°	518.1	518.3	518.6	518.8	519.0	519.2	519.4	519.6	519.9	520.0	520.0
152.5°	530.7	531.0	531.3	531.6	531.9	532.1	532.3	532.4	532.5	532.6	532.8
155°	550.5	550.5	550.5	550.5	550.5	550.6	550.7	550.8	551.0	551.0	551.5
157.5°	567.4	567.3	567.1	567.1	566.9	566.9	567.0	567.1	567.1	567.2	567.7
160°	578.0	577.8	577.6	577.4	577.1	577.0	577.0	577.0	577.0	577.0	577.6
162.5°	587.5	587.1	586.9	586.5	586.3	586.2	586.3	586.3	586.4	586.5	587.0
165°	599.6	599.3	599.0	598.7	598.3	598.1	598.1	598.1	598.1	598.1	598.8
167.5°	609.3	608.9	608.5	608.0	607.6	607.4	607.5	607.6	607.7	607.8	608.5
170°	614.8	614.4	614.0	613.5	613.1	612.9	612.9	612.9	612.9	612.9	613.6
172.5°	619.1	618.7	618.3	617.9	617.4	617.3	617.3	617.3	617.3	617.3	617.9
175°	623.7	623.3	622.8	622.4	622.0	621.7	621.7	621.7	621.7	621.7	622.4
177.5°	625.6	625.3	624.9	624.5	624.1	624.0	624.0	624.0	624.0	624.0	624.5
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	367.5	368.1	368.7	368.9	368.9	368.8	368.7	368.6
5°	366.9	367.6	368.3	368.7	368.6	368.4	368.3	368.2
7.5°	364.7	365.6	366.4	366.9	366.8	366.6	366.5	366.4
10°	362.5	363.3	364.2	364.5	364.4	364.2	364.0	363.9
12.5°	359.4	360.2	361.0	361.4	361.2	361.0	360.8	360.7
15°	353.6	354.5	355.4	355.8	355.7	355.6	355.5	355.4
17.5°	346.0	346.9	347.7	348.0	347.8	347.8	347.7	347.5
20°	340.6	341.4	342.2	342.7	342.8	342.9	342.9	343.0
22.5°	334.6	335.6	336.7	337.2	337.1	337.0	337.0	336.9
25°	324.4	325.6	326.7	327.4	327.4	327.4	327.4	327.4
27.5°	313.8	314.9	315.9	316.4	316.5	316.6	316.6	316.7
30°	306.6	307.7	308.8	309.3	309.3	309.3	309.3	309.3
32.5°	298.8	299.9	301.0	301.7	302.0	302.1	302.4	302.6
35°	287.1	288.4	289.8	290.7	291.0	291.4	291.7	292.1
37.5°	275.0	276.6	278.1	279.0	279.2	279.6	279.8	280.1
40°	267.0	268.5	270.0	271.0	271.3	271.7	272.1	272.4
42.5°	258.6	260.3	261.9	263.0	263.6	264.0	264.5	265.0
45°	246.1	247.8	249.5	250.7	251.4	252.1	252.9	253.6
47.5°	233.4	235.4	237.3	238.5	239.0	239.6	240.1	240.7
50°	224.7	226.8	228.9	230.2	230.8	231.4	232.0	232.7
52.5°	215.9	218.0	220.2	221.6	222.4	223.2	223.9	224.6
55°	202.6	205.0	207.4	209.0	209.7	210.4	211.1	211.8
57.5°	189.0	191.4	193.8	195.4	196.3	197.2	198.0	198.8
60°	179.5	182.0	184.5	186.2	187.2	188.2	189.2	190.2
62.5°	170.5	173.0	175.5	177.2	178.1	179.0	179.9	180.9
65°	156.2	158.9	161.5	163.3	164.2	165.1	166.0	166.9
67.5°	141.9	144.8	147.7	149.6	150.3	151.1	151.9	152.6
70°	132.5	135.3	138.2	140.1	140.9	141.8	142.8	143.6
72.5°	123.0	125.9	128.8	130.8	131.6	132.5	133.5	134.3
75°	108.6	111.5	114.5	116.5	117.5	118.6	119.7	120.8
77.5°	95.1	98.2	101.3	103.2	104.1	105.0	105.7	106.6
80°	86.3	89.4	92.4	94.3	95.2	96.1	97.0	97.9
82.5°	78.3	81.3	84.4	86.3	87.2	88.1	88.9	89.9
85°	67.1	70.1	73.1	75.1	75.9	76.9	77.7	78.6
87.5°	59.7	62.9	66.0	67.9	68.9	69.8	70.8	71.7
90°	64.1	67.5	71.0	73.3	74.4	75.5	76.6	77.7
92.5°	68.3	71.5	74.8	76.9	77.6	78.3	79.0	79.6
95°	82.5	85.7	88.9	90.9	91.8	92.7	93.6	94.5
97.5°	100.0	103.1	106.3	108.3	109.2	110.0	110.9	111.8
100°	113.0	115.8	118.7	120.8	121.8	123.0	124.1	125.2
102.5°	128.1	131.0	133.8	135.7	136.6	137.3	138.2	139.1
105°	151.0	153.5	156.0	157.7	158.8	159.8	160.8	161.8
107.5°	175.9	178.6	181.3	183.0	183.7	184.3	185.0	185.6
110°	192.8	195.5	198.3	199.9	200.4	200.9	201.4	201.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	209.3	212.1	214.9	216.6	217.4	218.1	218.9	219.6
115°	235.0	237.2	239.4	240.9	241.5	242.1	242.7	243.3
117.5°	260.7	262.9	264.9	266.2	266.6	267.0	267.3	267.8
120°	278.1	280.0	282.0	283.1	283.5	284.0	284.4	284.7
122.5°	295.6	297.3	299.0	300.1	300.3	300.7	301.0	301.3
125°	321.7	323.1	324.5	325.4	325.5	325.7	325.9	326.1
127.5°	347.4	348.5	349.7	350.3	350.4	350.5	350.6	350.8
130°	364.5	365.7	367.0	367.5	367.2	367.0	366.8	366.5
132.5°	381.0	382.1	383.1	383.7	383.7	383.7	383.8	383.8
135°	406.0	407.1	408.3	409.0	409.2	409.4	409.7	409.8
137.5°	430.4	431.4	432.3	432.7	432.8	432.8	432.8	432.9
140°	446.5	447.8	449.0	449.4	449.2	448.8	448.5	448.2
142.5°	461.5	462.5	463.6	464.1	464.0	463.8	463.6	463.6
145°	484.5	485.1	485.7	485.9	485.9	485.8	485.7	485.6
147.5°	506.4	506.6	506.8	506.7	506.4	506.1	505.8	505.4
150°	520.0	520.0	520.0	519.9	519.4	518.9	518.4	518.0
152.5°	533.0	533.2	533.4	533.1	532.6	532.1	531.6	531.1
155°	551.9	552.3	552.8	552.6	551.8	551.0	550.4	549.6
157.5°	568.2	568.6	569.0	568.9	568.3	567.7	567.1	566.5
160°	578.2	578.7	579.2	579.3	578.9	578.4	578.0	577.6
162.5°	587.5	588.1	588.7	588.6	587.9	587.2	586.5	585.8
165°	599.5	600.1	600.8	600.7	599.9	599.2	598.5	597.7
167.5°	609.2	609.8	610.5	610.5	609.8	609.2	608.5	607.8
170°	614.4	615.2	616.0	616.0	615.2	614.4	613.6	612.9
172.5°	618.5	619.2	619.9	619.9	619.1	618.4	617.6	616.8
175°	623.0	623.7	624.4	624.3	623.5	622.8	622.0	621.2
177.5°	625.1	625.6	626.1	626.0	625.4	624.8	624.2	623.6
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2

(END OF REPORT)