

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: P331878-830

Luminaire Tested: **S123DIP-S340D585U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331878-830
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-S340D585U830-4F0-1E-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: 3253.1 lumens
Efficiency: N/A
Efficacy: 127.1 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

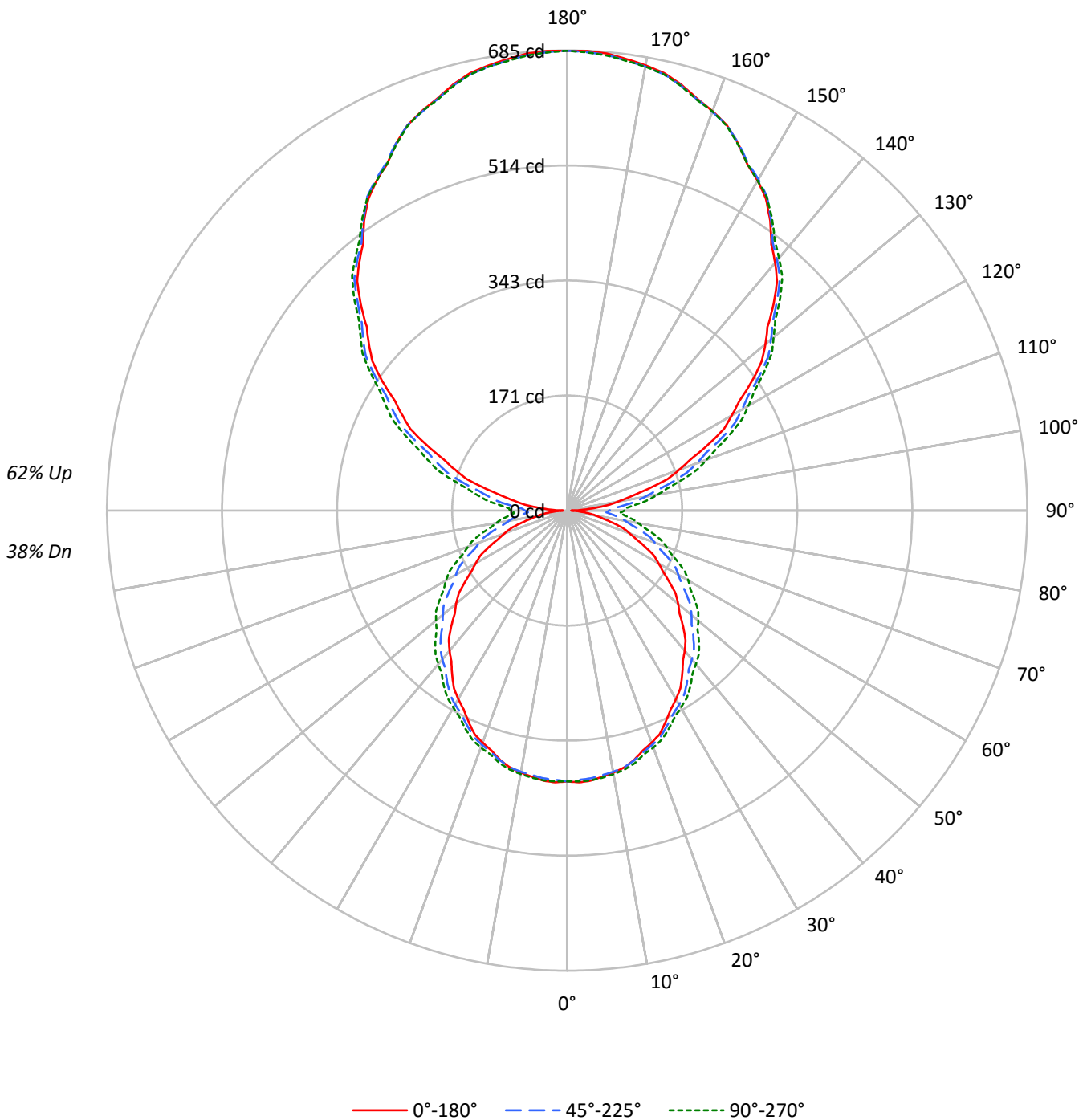
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4339	4339	4339
5°	4353	4230	4232
10°	4315	4133	4112
15°	4259	4022	3980
20°	4179	3896	3836
25°	4080	3751	3684
30°	3980	3620	3529
35°	3867	3481	3406
40°	3760	3356	3274
45°	3641	3235	3169
50°	3525	3116	3054
55°	3393	2993	2948
60°	3266	2869	2842
65°	3138	2736	2714
70°	2941	2586	2582
75°	2693	2416	2450
80°	2412	2249	2299
85°	2145	2133	2211



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	1.2
10°-20°	108.9	3.3
20°-30°	163.0	5.0
30°-40°	194.6	6.0
40°-50°	203.6	6.3
50°-60°	191.1	5.9
60°-70°	159.6	4.9
70°-80°	114.2	3.5
80°-90°	70.1	2.2
90°-100°	87.3	2.7
100°-110°	164.8	5.1
110°-120°	247.9	7.6
120°-130°	310.5	9.5
130°-140°	340.9	10.5
140°-150°	331.0	10.2
150°-160°	277.7	8.5
160°-170°	184.8	5.7
170°-180°	64.7	2.0
0°-30°	310.1	9.5
0°-40°	504.7	15.5
0°-60°	899.4	27.6
0°-90°	1243.2	38.2
90°-120°	500.1	15.4
90°-150°	1482.6	45.6
90°-180°	2010.0	61.8
0°-180°	3253.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	403	403	403	403	403	
5°	404	403	400	403	403	38
15°	384	386	385	389	389	108
25°	347	351	353	358	358	160
35°	299	306	311	318	320	187
45°	244	255	266	274	278	188
55°	186	201	216	228	232	167
65°	129	146	165	178	183	127
75°	70	91	112	126	132	75
85°	22	44	67	81	86	23
90°	6	33	62	79	85	6
95°	37	58	83	98	103	39
105°	124	137	160	172	177	133
115°	231	238	252	263	266	228
125°	336	338	349	356	357	299
135°	435	438	442	447	449	335
145°	527	527	529	532	532	329
155°	603	603	603	605	602	277
165°	656	655	655	658	654	185
175°	683	681	681	683	680	65
180°	684	684	684	684	684	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	404.9	404.7	404.4	404.3	404.0	403.6	402.9	402.3	401.7	401.1	401.7
5°	403.6	403.4	403.2	403.0	402.8	402.5	401.8	401.2	400.7	400.1	400.9
7.5°	399.6	399.7	399.7	399.7	399.8	399.5	399.0	398.4	397.8	397.3	398.2
10°	396.2	396.3	396.5	396.7	396.9	396.8	396.2	395.8	395.3	394.8	395.8
12.5°	391.9	392.2	392.5	392.8	393.0	392.9	392.7	392.3	392.0	391.6	392.6
15°	384.3	384.6	384.8	385.1	385.4	385.6	385.4	385.3	385.2	385.1	386.2
17.5°	374.7	375.2	375.8	376.4	376.9	377.2	377.2	377.1	377.1	377.1	378.0
20°	367.6	368.2	368.7	369.4	369.9	370.3	370.5	370.7	370.9	371.1	372.0
22.5°	360.2	360.8	361.4	361.9	362.6	363.0	363.3	363.5	363.8	364.1	365.2
25°	346.9	347.9	348.9	349.9	350.8	351.5	351.8	352.0	352.3	352.7	353.9
27.5°	333.6	334.7	335.8	337.0	338.1	338.9	339.5	340.2	340.8	341.4	342.5
30°	324.1	325.4	326.7	327.9	329.2	330.2	331.0	331.8	332.5	333.4	334.5
32.5°	313.6	315.0	316.4	317.8	319.2	320.5	321.5	322.5	323.6	324.5	325.8
35°	298.6	300.2	301.8	303.3	304.9	306.3	307.6	308.9	310.1	311.4	312.8
37.5°	282.9	284.6	286.3	288.1	289.8	291.5	293.0	294.6	296.2	297.7	299.4
40°	272.3	274.1	275.8	277.6	279.3	281.2	283.1	285.1	287.0	289.0	290.7
42.5°	260.7	262.9	264.9	267.1	269.3	271.4	273.4	275.4	277.5	279.5	281.3
45°	244.2	246.6	248.8	251.2	253.5	255.9	258.4	260.8	263.3	265.7	267.6
47.5°	226.9	229.5	232.1	234.9	237.5	240.3	243.0	245.8	248.5	251.4	253.4
50°	215.7	218.4	221.1	223.9	226.6	229.4	232.4	235.5	238.6	241.6	243.8
52.5°	203.7	206.6	209.4	212.4	215.3	218.4	221.7	225.1	228.4	231.7	234.0
55°	186.2	189.5	192.7	195.9	199.1	202.5	205.9	209.5	213.0	216.5	219.1
57.5°	169.2	172.5	175.9	179.3	182.6	186.2	190.0	193.9	197.7	201.6	204.2
60°	157.2	160.7	164.3	167.8	171.3	175.0	179.1	183.0	187.0	191.1	193.8
62.5°	146.0	149.6	153.2	156.7	160.3	164.3	168.5	172.8	177.0	181.3	183.9
65°	128.7	132.5	136.3	140.1	143.9	148.0	152.2	156.6	160.8	165.1	168.1
67.5°	111.1	115.2	119.2	123.2	127.2	131.5	135.8	140.3	144.6	149.0	152.1
70°	98.8	103.0	107.2	111.4	115.6	120.1	124.7	129.4	134.1	138.7	141.9
72.5°	87.6	91.8	96.0	100.2	104.3	108.9	113.7	118.6	123.4	128.3	131.5
75°	69.8	74.5	79.0	83.6	88.2	92.9	97.8	102.6	107.5	112.4	115.6
77.5°	54.4	59.0	63.6	68.2	72.9	77.7	82.6	87.5	92.4	97.4	100.8
80°	43.5	48.3	53.1	57.9	62.6	67.6	72.6	77.7	82.8	87.8	91.1
82.5°	34.0	38.8	43.7	48.5	53.4	58.4	63.6	68.7	73.9	79.1	82.4
85°	21.5	26.4	31.3	36.2	41.0	46.1	51.3	56.4	61.5	66.7	70.0
87.5°	11.8	16.9	22.0	27.1	32.1	37.4	42.7	48.0	53.3	58.5	61.9
90°	6.2	12.3	18.2	24.2	30.2	36.4	43.0	49.5	56.0	62.5	66.4
92.5°	18.4	23.5	28.7	33.7	38.8	44.3	50.1	55.9	61.6	67.5	71.1
95°	36.6	41.2	45.8	50.5	55.1	60.3	66.1	71.8	77.6	83.2	86.8
97.5°	60.6	64.7	68.8	72.9	76.9	81.5	86.8	92.1	97.3	102.5	106.0
100°	77.1	80.9	84.7	88.6	92.5	96.9	102.0	107.1	112.2	117.3	120.5
102.5°	96.0	99.3	102.5	105.8	109.1	113.3	118.5	123.7	128.8	134.0	137.1
105°	124.5	127.1	129.6	132.2	134.8	138.7	144.0	149.3	154.6	159.9	162.6
107.5°	157.0	159.2	161.4	163.4	165.6	168.9	173.3	177.7	182.1	186.5	189.5
110°	177.4	179.4	181.3	183.3	185.3	188.4	192.6	196.7	200.9	205.0	208.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	198.9	200.5	202.1	203.6	205.2	207.9	211.7	215.5	219.3	223.1	226.1
115°	230.6	232.2	233.8	235.3	236.8	239.2	242.5	245.7	249.0	252.3	254.8
117.5°	263.1	264.0	264.9	266.0	266.9	268.9	271.8	274.8	277.9	280.9	283.1
120°	283.0	284.2	285.3	286.5	287.8	289.6	292.3	294.9	297.6	300.2	302.3
122.5°	304.0	304.8	305.6	306.3	307.1	308.9	311.6	314.4	317.2	319.9	321.8
125°	335.7	336.1	336.4	336.8	337.1	338.7	341.2	343.8	346.4	349.0	350.5
127.5°	365.4	366.1	366.7	367.4	368.1	369.5	371.6	373.6	375.7	377.8	379.0
130°	385.2	386.1	386.9	387.8	388.6	389.8	391.4	393.0	394.6	396.2	397.6
132.5°	404.6	405.6	406.5	407.5	408.3	409.4	410.8	412.1	413.4	414.6	415.8
135°	434.7	435.4	436.0	436.6	437.2	438.0	438.9	439.9	440.8	441.8	443.1
137.5°	462.6	463.2	463.6	464.2	464.7	465.4	466.3	467.2	468.2	469.1	470.1
140°	481.6	482.2	482.8	483.4	484.0	484.5	484.9	485.3	485.7	486.2	487.5
142.5°	499.3	499.7	500.3	500.8	501.3	501.7	502.0	502.3	502.6	502.8	504.0
145°	526.8	526.9	527.1	527.2	527.4	527.5	527.9	528.3	528.7	529.0	529.7
147.5°	550.4	550.8	551.3	551.7	552.1	552.5	552.9	553.2	553.6	553.8	554.1
150°	567.2	567.4	567.7	567.9	568.2	568.4	568.6	568.8	569.1	569.3	569.3
152.5°	581.0	581.3	581.6	581.9	582.3	582.5	582.7	582.8	583.0	583.1	583.2
155°	602.7	602.7	602.7	602.7	602.7	602.8	602.9	602.9	603.1	603.2	603.7
157.5°	621.1	621.0	620.9	620.8	620.6	620.6	620.7	620.8	620.9	620.9	621.4
160°	632.7	632.5	632.3	632.1	631.8	631.7	631.7	631.7	631.7	631.7	632.3
162.5°	643.1	642.7	642.4	642.1	641.8	641.7	641.8	641.9	642.0	642.1	642.6
165°	656.4	656.1	655.7	655.3	655.0	654.8	654.8	654.8	654.8	654.8	655.5
167.5°	667.0	666.6	666.1	665.6	665.2	665.0	665.1	665.2	665.2	665.3	666.1
170°	673.1	672.6	672.1	671.7	671.2	670.9	670.9	670.9	670.9	670.9	671.8
172.5°	677.8	677.3	676.8	676.4	675.9	675.7	675.7	675.7	675.7	675.7	676.5
175°	682.8	682.3	681.8	681.4	680.9	680.6	680.6	680.6	680.6	680.6	681.4
177.5°	684.9	684.5	684.1	683.6	683.2	683.1	683.1	683.1	683.1	683.1	683.6
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	402.3	402.9	403.6	403.8	403.8	403.7	403.6	403.5
5°	401.6	402.5	403.2	403.6	403.5	403.3	403.2	403.1
7.5°	399.3	400.2	401.1	401.6	401.5	401.3	401.2	401.1
10°	396.8	397.8	398.7	399.1	398.9	398.7	398.5	398.3
12.5°	393.4	394.4	395.2	395.6	395.4	395.2	395.0	394.8
15°	387.1	388.0	389.1	389.5	389.4	389.3	389.2	389.1
17.5°	378.8	379.8	380.6	381.0	380.8	380.7	380.6	380.4
20°	372.9	373.7	374.7	375.1	375.2	375.3	375.4	375.5
22.5°	366.3	367.4	368.5	369.1	369.0	368.9	368.9	368.8
25°	355.2	356.5	357.7	358.4	358.4	358.4	358.4	358.4
27.5°	343.6	344.7	345.8	346.4	346.5	346.6	346.6	346.7
30°	335.6	336.9	338.0	338.6	338.6	338.6	338.6	338.6
32.5°	327.1	328.3	329.5	330.3	330.5	330.7	331.0	331.2
35°	314.3	315.8	317.3	318.2	318.6	319.0	319.3	319.7
37.5°	301.0	302.7	304.4	305.4	305.7	306.0	306.3	306.6
40°	292.3	294.0	295.6	296.6	297.0	297.5	297.8	298.2
42.5°	283.1	284.9	286.7	287.9	288.5	289.0	289.5	290.1
45°	269.4	271.3	273.1	274.5	275.2	276.0	276.8	277.6
47.5°	255.5	257.7	259.8	261.1	261.6	262.3	262.9	263.5
50°	246.0	248.3	250.5	252.0	252.7	253.4	254.0	254.8
52.5°	236.4	238.7	241.0	242.6	243.5	244.3	245.1	245.9
55°	221.8	224.4	227.1	228.8	229.5	230.4	231.1	231.9
57.5°	206.9	209.5	212.2	214.0	214.9	215.8	216.8	217.6
60°	196.5	199.3	202.0	203.9	204.9	206.0	207.1	208.2
62.5°	186.6	189.4	192.1	194.0	195.0	196.0	197.0	198.0
65°	171.0	173.9	176.8	178.8	179.7	180.8	181.7	182.7
67.5°	155.3	158.5	161.7	163.8	164.6	165.4	166.3	167.0
70°	145.1	148.2	151.3	153.4	154.3	155.2	156.3	157.2
72.5°	134.6	137.8	141.0	143.2	144.1	145.1	146.1	147.0
75°	118.9	122.1	125.4	127.5	128.7	129.9	131.0	132.2
77.5°	104.2	107.5	110.9	113.0	114.0	114.9	115.7	116.7
80°	94.4	97.8	101.1	103.2	104.2	105.2	106.2	107.2
82.5°	85.7	89.0	92.4	94.4	95.5	96.4	97.4	98.4
85°	73.4	76.7	80.0	82.2	83.1	84.2	85.1	86.1
87.5°	65.3	68.8	72.2	74.4	75.4	76.4	77.5	78.5
90°	70.1	73.9	77.8	80.2	81.4	82.7	83.9	85.1
92.5°	74.7	78.3	81.9	84.2	84.9	85.7	86.4	87.2
95°	90.3	93.8	97.3	99.5	100.5	101.5	102.5	103.4
97.5°	109.5	112.9	116.4	118.6	119.5	120.5	121.4	122.3
100°	123.7	126.8	130.0	132.2	133.4	134.6	135.8	137.0
102.5°	140.3	143.4	146.5	148.5	149.5	150.3	151.3	152.2
105°	165.3	168.1	170.8	172.7	173.8	174.9	176.1	177.1
107.5°	192.6	195.5	198.5	200.4	201.0	201.8	202.6	203.2
110°	211.0	214.1	217.1	218.9	219.3	219.9	220.5	221.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	229.1	232.1	235.3	237.1	238.0	238.7	239.6	240.3
115°	257.2	259.7	262.1	263.7	264.4	265.0	265.7	266.4
117.5°	285.4	287.8	290.0	291.4	291.8	292.3	292.7	293.1
120°	304.4	306.5	308.7	309.9	310.4	310.9	311.3	311.7
122.5°	323.6	325.5	327.3	328.5	328.8	329.1	329.5	329.8
125°	352.1	353.7	355.2	356.2	356.4	356.6	356.8	356.9
127.5°	380.3	381.5	382.8	383.5	383.6	383.7	383.8	384.0
130°	399.0	400.3	401.7	402.3	402.0	401.8	401.5	401.2
132.5°	417.1	418.3	419.4	420.1	420.1	420.1	420.2	420.2
135°	444.4	445.6	447.0	447.7	448.0	448.2	448.5	448.7
137.5°	471.2	472.2	473.3	473.7	473.8	473.8	473.8	473.9
140°	488.8	490.2	491.5	492.0	491.7	491.3	491.0	490.6
142.5°	505.2	506.3	507.6	508.0	507.9	507.7	507.6	507.5
145°	530.4	531.0	531.7	532.0	531.9	531.8	531.7	531.6
147.5°	554.3	554.6	554.8	554.7	554.4	554.0	553.6	553.3
150°	569.3	569.3	569.3	569.1	568.5	568.1	567.5	567.0
152.5°	583.5	583.7	583.9	583.6	583.1	582.5	581.9	581.4
155°	604.2	604.6	605.1	604.9	604.1	603.2	602.5	601.6
157.5°	622.0	622.5	622.9	622.8	622.2	621.5	620.9	620.2
160°	632.9	633.5	634.0	634.1	633.7	633.2	632.7	632.3
162.5°	643.2	643.9	644.4	644.3	643.6	642.8	642.1	641.3
165°	656.3	657.0	657.7	657.6	656.8	655.9	655.2	654.3
167.5°	666.8	667.6	668.4	668.4	667.6	666.8	666.1	665.3
170°	672.6	673.4	674.3	674.3	673.4	672.6	671.8	670.9
172.5°	677.1	677.9	678.6	678.6	677.8	676.9	676.1	675.2
175°	682.0	682.8	683.5	683.4	682.6	681.7	680.9	680.0
177.5°	684.3	684.9	685.4	685.3	684.7	684.0	683.3	682.7
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4

(END OF REPORT)