

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: P331877-927

Luminaire Tested: **S123DIP-S340D585U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331877-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D585U927-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2995.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

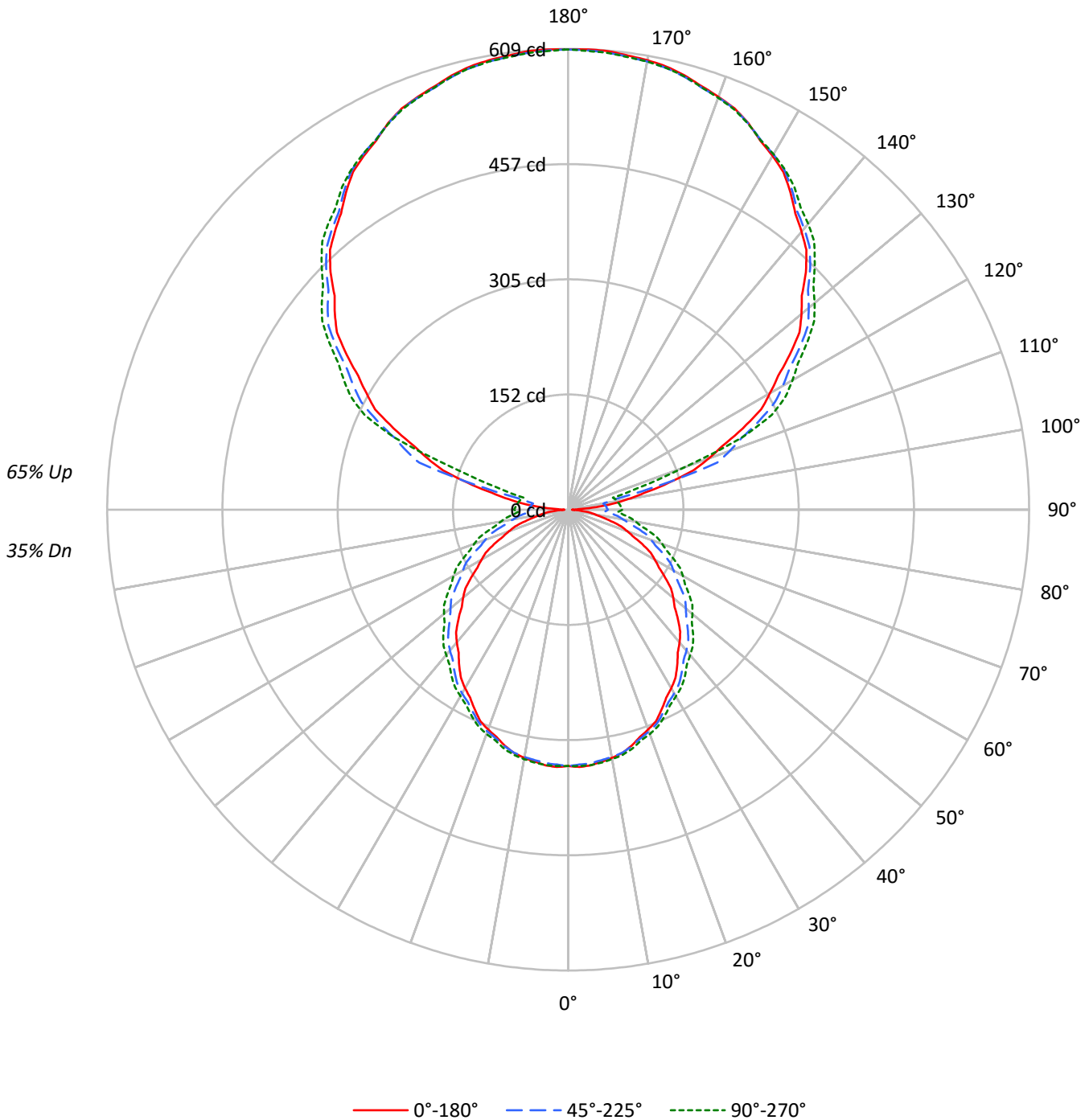
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331877-927

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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	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28
2	85	77	71	66	76	70	65	60	56	52	49	43	41	38	31	30	28	23
3	77	68	60	54	69	61	55	50	49	45	41	38	35	32	28	25	24	19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	36	31	35	29	26	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	25	21	18	18	15	13	11
8	51	39	31	26	46	35	28	24	29	23	20	22	19	16	17	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3647	3647	3647
5°	3658	3556	3557
10°	3626	3473	3456
15°	3579	3380	3345
20°	3513	3274	3224
25°	3430	3152	3096
30°	3345	3043	2966
35°	3251	2926	2863
40°	3161	2820	2752
45°	3061	2718	2664
50°	2962	2618	2566
55°	2852	2516	2478
60°	2745	2411	2388
65°	2636	2300	2280
70°	2471	2174	2170
75°	2265	2031	2059
80°	2023	1890	1932
85°	1805	1794	1856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	1.1
10°-20°	91.6	3.1
20°-30°	137.0	4.6
30°-40°	163.6	5.5
40°-50°	171.1	5.7
50°-60°	160.6	5.4
60°-70°	134.1	4.5
70°-80°	96.0	3.2
80°-90°	58.9	2.0
90°-100°	58.0	1.9
100°-110°	131.8	4.4
110°-120°	270.7	9.0
120°-130°	332.4	11.1
130°-140°	348.9	11.7
140°-150°	323.0	10.8
150°-160°	259.8	8.7
160°-170°	167.7	5.6
170°-180°	57.8	1.9
0°-30°	260.6	8.7
0°-40°	424.2	14.2
0°-60°	755.9	25.2
0°-90°	1044.9	34.9
90°-120°	460.5	15.4
90°-150°	1464.8	48.9
90°-180°	1950.0	65.1
0°-180°	2995.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	339	338	336	339	339	32
15°	323	324	324	327	327	91
25°	292	295	296	301	301	134
35°	251	257	262	267	269	157
45°	205	214	223	230	233	158
55°	156	169	182	192	195	140
65°	108	123	139	149	154	107
75°	59	76	94	106	111	63
85°	18	37	56	68	72	19
90°	5	28	52	66	72	5
95°	32	29	50	65	69	37
105°	138	149	127	61	61	146
115°	254	262	279	292	297	251
125°	357	361	373	382	385	319
135°	444	446	452	460	461	342
145°	512	515	516	519	521	320
155°	563	563	563	565	562	259
165°	594	593	592	596	593	168
175°	608	606	606	609	606	58
180°	608	608	608	608	608	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	340.3	340.2	339.9	339.8	339.5	339.2	338.7	338.1	337.6	337.1	337.6
5°	339.2	339.1	338.9	338.7	338.6	338.3	337.7	337.2	336.8	336.3	336.9
7.5°	335.9	336.0	336.0	336.0	336.0	335.8	335.3	334.9	334.4	333.9	334.7
10°	333.0	333.1	333.3	333.4	333.6	333.5	333.0	332.6	332.2	331.8	332.6
12.5°	329.4	329.6	329.9	330.1	330.3	330.3	330.0	329.7	329.5	329.2	329.9
15°	323.0	323.2	323.4	323.7	323.9	324.1	323.9	323.8	323.8	323.7	324.6
17.5°	314.9	315.4	315.8	316.3	316.8	317.0	317.0	317.0	317.0	317.0	317.7
20°	309.0	309.4	309.9	310.5	310.9	311.2	311.4	311.6	311.7	311.9	312.7
22.5°	302.8	303.2	303.7	304.2	304.8	305.1	305.3	305.5	305.8	306.0	307.0
25°	291.6	292.4	293.3	294.1	294.9	295.4	295.6	295.9	296.1	296.4	297.5
27.5°	280.4	281.3	282.3	283.2	284.2	284.9	285.3	285.9	286.5	286.9	287.9
30°	272.4	273.5	274.6	275.6	276.7	277.5	278.2	278.8	279.5	280.2	281.1
32.5°	263.6	264.7	265.9	267.1	268.3	269.3	270.2	271.1	272.0	272.7	273.9
35°	251.0	252.3	253.7	254.9	256.3	257.5	258.5	259.6	260.6	261.7	262.9
37.5°	237.7	239.2	240.7	242.2	243.6	245.0	246.3	247.6	249.0	250.3	251.7
40°	228.9	230.4	231.8	233.3	234.7	236.3	238.0	239.6	241.2	242.9	244.3
42.5°	219.1	220.9	222.7	224.5	226.3	228.1	229.8	231.5	233.2	234.9	236.5
45°	205.3	207.2	209.1	211.1	213.1	215.1	217.1	219.2	221.3	223.3	224.9
47.5°	190.7	192.9	195.1	197.4	199.6	201.9	204.2	206.6	208.9	211.3	213.0
50°	181.3	183.5	185.8	188.1	190.4	192.8	195.4	198.0	200.5	203.0	204.9
52.5°	171.2	173.6	176.0	178.5	180.9	183.5	186.3	189.2	191.9	194.7	196.7
55°	156.5	159.2	161.9	164.6	167.3	170.2	173.1	176.1	179.0	182.0	184.2
57.5°	142.2	145.0	147.8	150.7	153.4	156.5	159.7	163.0	166.2	169.4	171.7
60°	132.1	135.1	138.1	141.0	143.9	147.1	150.5	153.8	157.2	160.6	162.9
62.5°	122.7	125.7	128.7	131.7	134.8	138.1	141.6	145.2	148.8	152.3	154.6
65°	108.1	111.4	114.5	117.7	121.0	124.4	127.9	131.6	135.1	138.8	141.2
67.5°	93.4	96.8	100.2	103.5	106.9	110.5	114.2	117.9	121.5	125.2	127.9
70°	83.0	86.6	90.1	93.6	97.1	100.9	104.8	108.8	112.7	116.6	119.3
72.5°	73.6	77.2	80.6	84.2	87.7	91.5	95.5	99.7	103.7	107.8	110.5
75°	58.7	62.6	66.4	70.3	74.1	78.1	82.2	86.3	90.4	94.5	97.2
77.5°	45.7	49.6	53.5	57.4	61.2	65.3	69.4	73.5	77.6	81.8	84.7
80°	36.5	40.6	44.6	48.6	52.6	56.8	61.0	65.3	69.6	73.8	76.6
82.5°	28.6	32.6	36.8	40.8	44.9	49.1	53.5	57.8	62.1	66.5	69.2
85°	18.1	22.2	26.3	30.4	34.5	38.7	43.1	47.4	51.7	56.1	58.9
87.5°	9.9	14.2	18.5	22.7	27.0	31.4	35.9	40.3	44.8	49.2	52.0
90°	5.2	10.3	15.3	20.4	25.3	30.6	36.1	41.6	47.1	52.5	55.8
92.5°	12.9	16.2	19.6	23.0	26.3	30.5	35.6	40.7	45.8	50.9	54.3
95°	31.6	30.7	29.8	28.8	28.0	30.0	35.2	40.3	45.4	50.5	53.8
97.5°	59.0	60.0	61.1	62.1	63.1	62.0	58.6	55.2	51.8	48.4	51.7
100°	79.7	84.3	89.0	93.6	98.2	94.6	82.7	70.8	58.9	47.1	50.2
102.5°	103.2	107.0	110.8	114.6	118.5	113.7	100.3	86.9	73.4	60.0	59.9
105°	137.6	140.7	143.8	146.8	149.9	148.7	143.1	137.7	132.1	126.7	111.1
107.5°	173.5	176.0	178.6	181.2	183.7	187.4	192.2	196.9	201.7	206.4	195.6
110°	197.4	199.7	201.9	204.2	206.5	209.8	214.2	218.6	223.0	227.4	226.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.5	222.4	224.4	226.3	228.3	231.4	235.6	239.9	244.2	248.4	250.5
115°	254.4	256.0	257.6	259.2	260.8	263.5	267.4	271.2	275.0	278.9	281.9
117.5°	287.5	288.8	290.2	291.5	292.9	295.2	298.4	301.7	304.9	308.2	310.9
120°	307.8	309.1	310.5	311.7	313.1	315.2	318.2	321.2	324.2	327.3	329.9
122.5°	328.8	329.7	330.7	331.7	332.6	334.5	337.5	340.5	343.4	346.4	348.8
125°	357.1	358.0	358.8	359.6	360.4	362.2	365.0	367.7	370.5	373.3	375.2
127.5°	385.0	385.7	386.4	387.1	387.9	389.4	391.9	394.3	396.8	399.3	401.2
130°	402.3	403.1	403.8	404.5	405.2	406.6	408.6	410.7	412.7	414.8	416.7
132.5°	418.7	419.5	420.3	421.0	421.8	423.0	424.7	426.3	427.9	429.5	431.4
135°	444.0	444.5	445.0	445.5	446.1	446.9	448.3	449.6	450.9	452.2	454.0
137.5°	465.6	466.3	467.0	467.7	468.4	469.1	469.8	470.6	471.3	472.0	473.8
140°	479.7	480.4	480.9	481.6	482.2	482.8	483.3	483.9	484.4	484.9	486.6
142.5°	493.1	493.7	494.2	494.7	495.3	495.7	496.1	496.5	496.8	497.1	498.5
145°	511.8	512.5	513.1	513.7	514.3	514.8	514.9	515.2	515.3	515.6	516.4
147.5°	529.1	529.6	530.0	530.4	530.9	531.2	531.5	531.6	531.9	532.1	532.5
150°	540.0	540.3	540.5	540.8	541.1	541.4	541.6	541.8	542.0	542.2	542.4
152.5°	549.7	549.9	549.9	550.1	550.2	550.4	550.5	550.6	550.7	550.9	551.2
155°	563.4	563.2	563.0	562.8	562.6	562.6	562.7	562.8	562.8	563.0	563.5
157.5°	574.1	574.1	574.0	574.0	574.0	573.9	573.9	573.8	573.6	573.5	574.2
160°	580.6	580.5	580.4	580.3	580.2	580.1	580.0	579.9	579.8	579.7	580.3
162.5°	586.8	586.5	586.2	586.0	585.7	585.5	585.4	585.3	585.2	585.1	585.8
165°	594.1	593.8	593.6	593.3	592.9	592.7	592.6	592.6	592.5	592.3	593.2
167.5°	599.9	599.5	599.1	598.7	598.3	598.1	598.1	598.1	598.1	598.1	599.0
170°	603.2	602.8	602.4	602.0	601.6	601.3	601.3	601.3	601.3	601.3	602.2
172.5°	605.4	604.9	604.4	603.9	603.4	603.2	603.3	603.4	603.5	603.6	604.4
175°	608.2	607.7	607.1	606.7	606.2	605.9	606.0	606.2	606.3	606.3	607.0
177.5°	608.9	608.5	608.1	607.7	607.3	607.1	607.2	607.3	607.4	607.4	608.1
180°	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	338.1	338.7	339.2	339.4	339.4	339.3	339.2	339.1
5°	337.5	338.3	338.9	339.2	339.1	339.0	338.9	338.8
7.5°	335.6	336.4	337.2	337.5	337.5	337.3	337.2	337.2
10°	333.5	334.3	335.1	335.4	335.3	335.1	334.9	334.8
12.5°	330.7	331.4	332.2	332.5	332.3	332.2	332.0	331.8
15°	325.3	326.1	327.0	327.3	327.3	327.2	327.1	327.0
17.5°	318.4	319.2	319.9	320.2	320.0	320.0	319.9	319.7
20°	313.4	314.1	314.9	315.3	315.4	315.4	315.5	315.6
22.5°	307.8	308.8	309.7	310.2	310.1	310.1	310.1	310.0
25°	298.5	299.6	300.6	301.2	301.2	301.2	301.2	301.2
27.5°	288.8	289.7	290.7	291.1	291.2	291.3	291.3	291.4
30°	282.1	283.1	284.1	284.6	284.6	284.6	284.6	284.6
32.5°	274.9	275.9	276.9	277.6	277.8	278.0	278.2	278.4
35°	264.2	265.4	266.6	267.4	267.8	268.1	268.4	268.7
37.5°	253.0	254.4	255.9	256.7	256.9	257.2	257.5	257.7
40°	245.7	247.1	248.4	249.3	249.6	250.0	250.3	250.6
42.5°	238.0	239.5	241.0	242.0	242.5	242.9	243.4	243.8
45°	226.4	228.0	229.6	230.7	231.3	232.0	232.7	233.3
47.5°	214.8	216.6	218.3	219.4	219.9	220.5	220.9	221.5
50°	206.8	208.7	210.6	211.8	212.4	212.9	213.5	214.1
52.5°	198.7	200.6	202.6	203.9	204.6	205.3	206.0	206.7
55°	186.4	188.6	190.8	192.3	192.9	193.6	194.2	194.9
57.5°	173.9	176.1	178.3	179.8	180.6	181.4	182.2	182.9
60°	165.2	167.5	169.8	171.3	172.2	173.2	174.0	175.0
62.5°	156.9	159.1	161.4	163.0	163.9	164.7	165.6	166.4
65°	143.7	146.2	148.6	150.3	151.1	151.9	152.7	153.5
67.5°	130.6	133.2	135.9	137.7	138.3	139.0	139.7	140.4
70°	121.9	124.5	127.1	128.9	129.7	130.5	131.3	132.1
72.5°	113.1	115.8	118.5	120.3	121.1	121.9	122.8	123.6
75°	99.9	102.6	105.4	107.2	108.1	109.2	110.1	111.1
77.5°	87.5	90.4	93.2	95.0	95.8	96.6	97.3	98.1
80°	79.4	82.2	85.0	86.7	87.6	88.4	89.3	90.1
82.5°	72.0	74.8	77.6	79.4	80.2	81.0	81.8	82.7
85°	61.7	64.5	67.3	69.1	69.9	70.7	71.5	72.3
87.5°	54.9	57.8	60.7	62.5	63.4	64.2	65.1	66.0
90°	58.9	62.1	65.4	67.4	68.4	69.5	70.5	71.5
92.5°	57.7	61.0	64.4	66.5	67.3	68.3	69.2	70.0
95°	57.0	60.3	63.5	65.6	66.4	67.2	68.0	68.8
97.5°	54.9	58.1	61.4	63.5	64.4	65.4	66.3	67.2
100°	53.4	56.6	59.7	61.8	62.7	63.6	64.6	65.5
102.5°	59.7	59.6	59.3	59.8	60.8	61.8	62.7	63.8
105°	95.7	80.2	64.7	57.4	58.4	59.3	60.3	61.2
107.5°	184.8	174.0	163.1	151.4	138.7	126.0	113.4	100.7
110°	225.1	223.9	222.7	215.2	201.5	187.8	174.1	160.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	252.6	254.8	256.9	256.8	254.5	252.2	249.9	247.6
115°	284.9	287.8	290.8	292.8	293.9	294.9	296.0	297.1
117.5°	313.6	316.4	319.2	320.9	321.6	322.3	323.1	323.8
120°	332.6	335.3	338.0	339.7	340.2	340.8	341.4	342.0
122.5°	351.2	353.6	355.9	357.4	358.1	358.8	359.4	360.0
125°	377.2	379.1	381.0	382.3	383.1	383.9	384.6	385.4
127.5°	403.1	405.1	407.0	408.2	408.5	408.9	409.2	409.6
130°	418.7	420.6	422.6	423.7	424.1	424.3	424.6	424.9
132.5°	433.3	435.2	437.1	438.2	438.5	438.8	439.0	439.3
135°	455.7	457.5	459.3	460.3	460.3	460.5	460.6	460.7
137.5°	475.5	477.4	479.1	480.1	480.3	480.5	480.8	480.9
140°	488.2	489.8	491.5	492.3	492.6	492.8	493.0	493.2
142.5°	499.9	501.4	502.8	503.6	503.7	503.8	504.0	504.1
145°	517.2	518.1	519.0	519.6	519.9	520.2	520.5	520.9
147.5°	532.9	533.3	533.7	533.8	533.6	533.5	533.3	533.1
150°	542.6	542.8	543.0	543.0	542.9	542.7	542.6	542.5
152.5°	551.6	551.9	552.3	552.3	551.8	551.4	551.0	550.6
155°	564.0	564.5	565.0	564.9	564.4	563.7	563.2	562.5
157.5°	574.7	575.4	576.0	575.8	575.0	574.3	573.5	572.7
160°	580.9	581.5	582.1	582.0	581.4	580.7	580.0	579.2
162.5°	586.5	587.2	587.9	587.9	587.2	586.6	586.0	585.4
165°	594.0	594.8	595.6	595.6	594.9	594.2	593.5	592.8
167.5°	599.8	600.6	601.3	601.3	600.6	599.8	599.0	598.1
170°	603.0	603.8	604.6	604.6	603.8	603.0	602.2	601.3
172.5°	605.1	605.9	606.7	606.7	605.9	605.0	604.0	603.2
175°	607.8	608.5	609.2	609.1	608.3	607.5	606.7	605.9
177.5°	608.7	609.3	610.0	609.9	609.1	608.3	607.5	606.7
180°	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2

(END OF REPORT)