

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: P332256-940

Luminaire Tested: **S123RDIP-S340D805U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332256-940
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: S123RDIP-S340D805U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3618.9 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

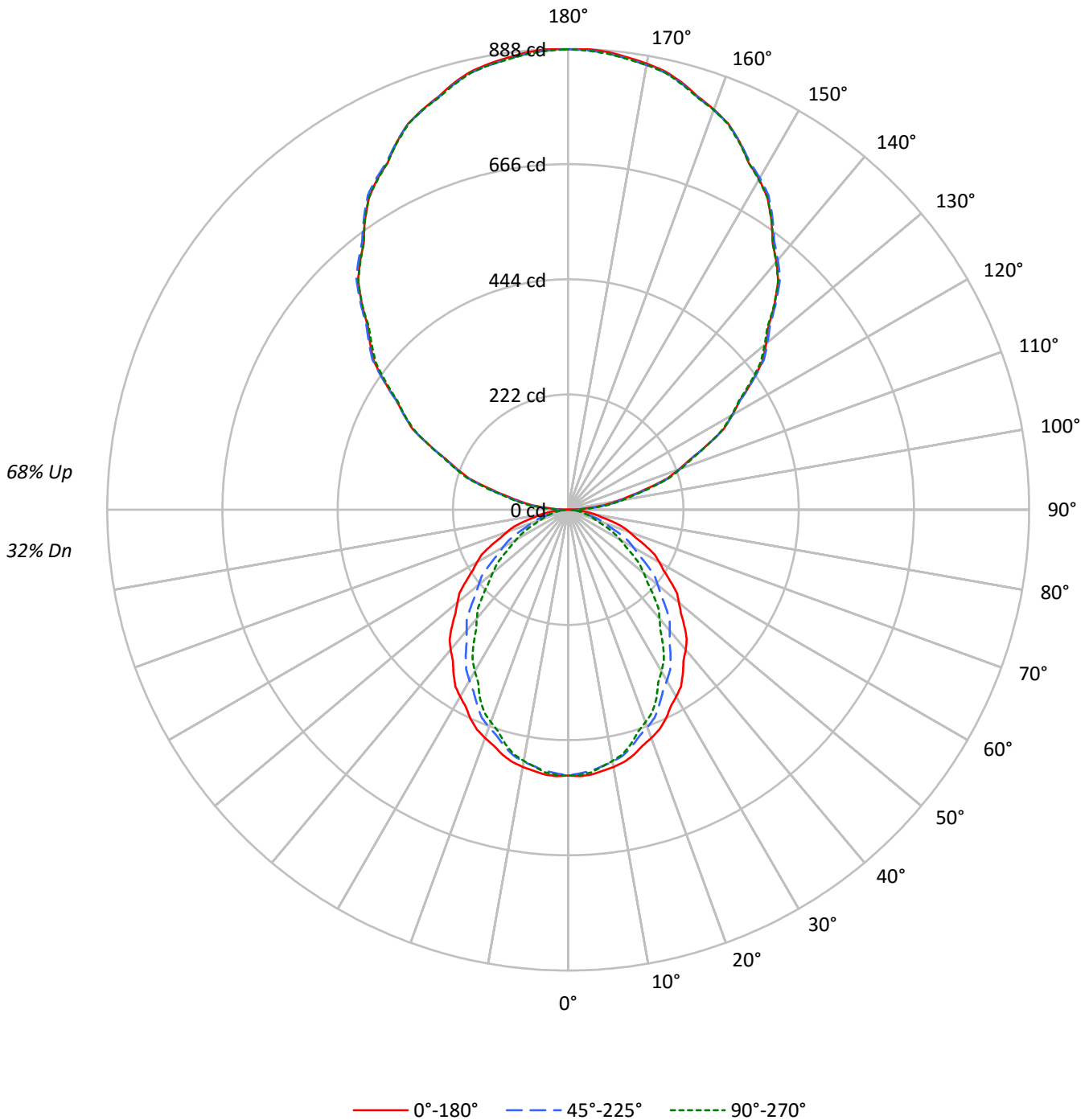
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	35	34	27
2	86	79	73	68	77	71	66	62	57	53	50	44	41	39	31	30	29	23
3	78	69	62	57	70	63	57	52	50	46	42	39	36	33	28	26	25	20
4	72	61	54	48	64	56	49	44	45	40	36	34	31	29	25	23	21	17
5	66	55	47	41	59	49	43	38	40	35	31	31	28	25	23	20	19	15
6	60	49	41	36	54	44	38	33	36	31	27	28	25	22	21	18	17	13
7	56	44	36	31	50	40	33	29	33	28	24	25	22	19	19	16	15	12
8	52	40	33	27	47	36	30	25	30	25	21	23	20	17	17	15	13	11
9	48	36	29	24	43	33	27	23	27	22	19	21	18	15	16	14	12	10
10	45	33	26	22	40	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5514	5514	5514
5°	5535	5459	5491
10°	5503	5391	5372
15°	5446	5264	5209
20°	5363	5108	4987
25°	5280	4930	4772
30°	5169	4724	4467
35°	5056	4520	4188
40°	4950	4279	3842
45°	4813	4042	3529
50°	4662	3771	3178
55°	4506	3462	2852
60°	4366	3130	2495
65°	4182	2774	2137
70°	3950	2326	1725
75°	3614	1834	1626
80°	3217	1624	1494
85°	2717	1433	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	1.3
10°-20°	133.9	3.7
20°-30°	192.7	5.3
30°-40°	217.1	6.0
40°-50°	207.7	5.7
50°-60°	170.1	4.7
60°-70°	114.8	3.2
70°-80°	57.7	1.6
80°-90°	17.9	0.5
90°-100°	57.8	1.6
100°-110°	173.1	4.8
110°-120°	294.3	8.1
120°-130°	387.1	10.7
130°-140°	435.1	12.0
140°-150°	427.7	11.8
150°-160°	360.1	10.0
160°-170°	239.7	6.6
170°-180°	83.9	2.3
0°-30°	374.7	10.4
0°-40°	591.8	16.4
0°-60°	969.6	26.8
0°-90°	1160.0	32.1
90°-120°	525.2	14.5
90°-150°	1775.2	49.1
90°-180°	2459.0	67.9
0°-180°	3618.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	512	510	505	509	508	49
15°	489	484	472	470	467	138
25°	445	434	415	407	402	204
35°	385	369	344	327	319	241
45°	316	297	266	243	232	244
55°	240	219	184	161	152	215
65°	164	141	109	89	84	162
75°	87	67	44	40	39	93
85°	22	13	12	11	11	25
90°	1	8	17	19	21	4
95°	41	46	52	54	54	46
105°	157	159	164	165	166	168
115°	296	298	297	298	297	293
125°	434	436	434	432	429	387
135°	563	567	566	563	562	433
145°	682	684	686	685	682	426
155°	782	782	782	785	780	360
165°	851	849	849	853	848	240
175°	885	883	883	886	882	84
180°	888	888	888	888	888	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3
2.5°	514.0	513.6	513.4	513.1	512.8	512.2	511.3	510.4	509.5	508.6	509.4
5°	512.3	511.8	511.4	511.0	510.4	509.7	508.5	507.5	506.3	505.2	506.0
7.5°	507.6	507.0	506.6	506.0	505.6	504.6	503.2	501.8	500.2	498.8	499.3
10°	503.5	502.9	502.3	501.7	501.0	499.8	498.2	496.5	494.8	493.2	493.3
12.5°	497.9	497.2	496.5	495.8	495.1	493.7	491.6	489.6	487.6	485.5	485.4
15°	488.7	487.6	486.6	485.5	484.6	482.8	480.2	477.6	475.0	472.4	472.0
17.5°	476.9	475.7	474.6	473.3	472.2	469.9	466.6	463.3	460.1	456.8	455.8
20°	468.2	466.8	465.3	463.9	462.4	459.9	456.4	452.8	449.3	445.9	444.6
22.5°	458.6	456.9	455.2	453.5	451.8	449.2	445.4	441.7	437.9	434.2	432.7
25°	444.6	442.3	440.0	437.7	435.3	432.0	427.8	423.6	419.3	415.1	413.1
27.5°	427.6	425.0	422.4	419.9	417.3	413.8	409.0	404.2	399.5	394.8	392.1
30°	415.9	413.1	410.4	407.6	404.8	400.8	395.7	390.5	385.3	380.1	377.0
32.5°	404.3	401.1	398.0	394.8	391.7	387.4	381.9	376.5	371.0	365.5	362.1
35°	384.8	381.4	378.1	374.8	371.5	366.9	361.2	355.4	349.7	344.0	340.1
37.5°	365.0	361.2	357.6	353.9	350.2	345.3	339.2	333.1	327.0	320.8	316.4
40°	352.3	348.3	344.2	340.2	336.1	330.7	324.2	317.6	311.1	304.5	299.8
42.5°	338.0	333.9	329.9	325.8	321.8	316.4	309.6	302.8	296.0	289.3	284.0
45°	316.2	312.0	307.9	303.7	299.5	293.9	286.9	279.7	272.6	265.5	260.2
47.5°	294.4	289.8	285.2	280.6	276.1	270.3	263.1	256.0	249.0	241.8	236.1
50°	278.4	274.0	269.7	265.4	261.0	255.1	247.6	240.1	232.6	225.2	219.5
52.5°	264.1	259.4	254.7	249.9	245.2	239.2	231.8	224.4	217.0	209.6	203.7
55°	240.1	235.6	231.1	226.6	222.0	215.9	208.0	200.2	192.3	184.5	179.1
57.5°	218.0	213.1	208.2	203.2	198.3	191.9	184.0	176.1	168.3	160.4	155.3
60°	202.8	197.7	192.6	187.5	182.4	176.1	168.4	160.8	153.1	145.4	140.4
62.5°	187.4	182.4	177.3	172.3	167.2	160.8	153.1	145.4	137.8	130.1	125.5
65°	164.2	159.1	154.0	148.9	143.8	137.7	130.5	123.2	116.1	108.9	104.3
67.5°	140.8	135.6	130.5	125.4	120.2	114.2	107.3	100.4	93.5	86.6	83.2
70°	125.5	120.5	115.5	110.5	105.6	99.8	93.4	86.9	80.4	73.9	70.7
72.5°	110.2	105.3	100.4	95.4	90.5	85.2	79.3	73.4	67.5	61.6	59.0
75°	86.9	82.4	77.9	73.6	69.1	64.4	59.3	54.2	49.1	44.1	43.2
77.5°	65.5	61.5	57.5	53.5	49.6	45.9	42.6	39.3	36.1	32.8	32.4
80°	51.9	48.2	44.4	40.6	36.8	34.0	32.0	30.1	28.1	26.2	25.9
82.5°	39.0	35.7	32.5	29.2	25.9	23.8	22.9	22.0	21.1	20.2	19.9
85°	22.0	20.0	17.9	16.0	13.9	12.8	12.5	12.2	11.9	11.6	11.4
87.5°	8.1	7.6	7.1	6.6	6.1	6.1	6.4	6.9	7.2	7.7	7.8
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	16.9	17.9	19.0	20.1	21.0	22.2	23.4	24.5	25.6	26.8	27.3
95°	41.1	42.2	43.3	44.4	45.5	46.6	47.9	49.1	50.4	51.6	52.3
97.5°	73.0	73.8	74.6	75.4	76.3	77.1	78.0	78.9	79.8	80.7	81.4
100°	94.8	95.8	96.7	97.6	98.5	99.4	100.1	100.9	101.7	102.5	103.0
102.5°	119.9	120.5	121.0	121.6	122.2	123.0	123.9	125.0	126.0	127.1	127.5
105°	156.9	157.2	157.5	157.8	158.1	159.0	160.3	161.8	163.2	164.5	164.5
107.5°	199.8	200.0	200.2	200.4	200.5	200.9	201.5	202.1	202.6	203.1	203.7
110°	226.6	226.9	227.2	227.5	227.8	228.1	228.5	228.7	229.1	229.3	230.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.5	254.7	254.9	255.0	255.2	255.3	255.4	255.5	255.6	255.6	256.4
115°	296.3	296.8	297.2	297.7	298.2	298.3	297.9	297.7	297.3	297.0	297.1
117.5°	338.4	338.8	339.0	339.3	339.7	339.6	339.2	338.8	338.4	338.0	338.0
120°	364.6	365.5	366.5	367.4	368.4	368.5	367.7	366.8	366.1	365.3	365.2
122.5°	392.0	392.6	393.3	394.0	394.7	394.8	394.4	394.0	393.6	393.2	392.8
125°	433.6	434.1	434.5	435.1	435.5	435.6	435.2	435.0	434.6	434.4	433.7
127.5°	472.2	473.1	474.1	475.1	476.1	476.4	476.1	475.7	475.4	475.0	474.2
130°	497.8	499.0	500.2	501.5	502.7	503.1	502.7	502.2	501.8	501.2	500.6
132.5°	523.4	524.7	525.9	527.2	528.4	528.9	528.5	528.2	527.8	527.4	526.7
135°	562.6	563.6	564.5	565.4	566.3	566.8	566.6	566.4	566.2	566.1	565.5
137.5°	598.9	599.7	600.4	601.2	602.0	602.5	603.0	603.3	603.8	604.1	603.5
140°	623.9	624.7	625.5	626.3	627.1	627.5	627.7	627.9	628.0	628.1	628.0
142.5°	646.8	647.6	648.4	649.2	650.0	650.5	650.8	651.0	651.3	651.6	651.4
145°	682.5	682.9	683.1	683.5	683.8	684.1	684.7	685.1	685.5	686.0	685.9
147.5°	713.8	714.3	714.9	715.4	716.0	716.5	716.9	717.4	717.8	718.3	718.3
150°	735.5	735.8	736.1	736.5	736.7	737.1	737.4	737.7	738.0	738.3	738.3
152.5°	753.4	753.8	754.2	754.7	755.1	755.5	755.6	755.8	756.0	756.2	756.4
155°	781.5	781.5	781.5	781.5	781.5	781.6	781.8	781.9	782.1	782.2	782.8
157.5°	805.5	805.3	805.1	804.9	804.8	804.8	804.9	805.0	805.1	805.2	805.9
160°	820.6	820.3	819.9	819.7	819.3	819.2	819.2	819.2	819.2	819.2	819.9
162.5°	833.9	833.6	833.1	832.7	832.2	832.1	832.2	832.3	832.4	832.6	833.3
165°	851.2	850.8	850.3	849.9	849.4	849.2	849.2	849.2	849.2	849.2	850.1
167.5°	865.0	864.4	863.8	863.2	862.6	862.4	862.5	862.6	862.7	862.8	863.8
170°	872.9	872.3	871.6	871.0	870.4	870.0	870.0	870.0	870.0	870.0	871.2
172.5°	879.0	878.4	877.8	877.2	876.6	876.2	876.2	876.2	876.2	876.2	877.2
175°	885.4	884.8	884.2	883.6	883.0	882.6	882.6	882.6	882.6	882.6	883.6
177.5°	888.1	887.6	887.1	886.5	886.1	885.8	885.8	885.8	885.8	885.8	886.5
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	512.3	512.3	512.3	512.3	512.3	512.3	512.3	512.3
2.5°	510.2	511.0	511.9	512.2	512.1	511.9	511.8	511.7
5°	506.9	507.7	508.5	508.9	508.7	508.5	508.4	508.2
7.5°	499.8	500.2	500.7	500.8	500.4	500.2	499.8	499.5
10°	493.4	493.5	493.6	493.4	492.9	492.5	492.0	491.5
12.5°	485.4	485.4	485.4	485.0	484.5	483.9	483.4	482.9
15°	471.4	471.0	470.6	470.0	469.4	468.7	468.1	467.4
17.5°	454.9	453.9	452.9	451.9	450.9	450.0	449.1	448.1
20°	443.4	442.2	441.0	439.9	438.7	437.7	436.6	435.4
22.5°	431.2	429.7	428.2	427.0	425.9	424.9	423.8	422.8
25°	411.2	409.3	407.3	405.8	404.8	403.9	402.8	401.8
27.5°	389.4	386.7	384.1	381.9	380.3	378.8	377.3	375.7
30°	373.9	370.8	367.7	365.3	363.8	362.4	360.9	359.4
32.5°	358.6	355.3	351.8	349.3	347.8	346.3	344.6	343.1
35°	336.1	332.1	328.1	325.3	323.7	322.0	320.3	318.7
37.5°	311.8	307.3	302.8	299.5	297.5	295.4	293.4	291.3
40°	295.0	290.2	285.3	281.9	279.7	277.7	275.5	273.4
42.5°	278.7	273.6	268.3	264.7	262.8	260.9	259.0	257.1
45°	254.9	249.7	244.4	240.7	238.5	236.3	234.1	231.8
47.5°	230.3	224.6	218.9	215.1	213.1	211.2	209.1	207.1
50°	213.7	208.0	202.3	198.4	196.3	194.1	192.0	189.8
52.5°	197.7	191.7	185.8	181.9	179.9	178.1	176.2	174.2
55°	173.8	168.4	163.1	159.4	157.7	155.8	153.9	152.0
57.5°	150.3	145.2	140.2	136.8	135.3	133.7	132.2	130.5
60°	135.5	130.5	125.5	122.2	120.6	119.0	117.5	115.9
62.5°	120.7	116.1	111.4	108.2	106.6	105.0	103.3	101.7
65°	99.8	95.3	90.8	88.0	86.9	86.0	85.0	83.9
67.5°	79.8	76.4	73.0	70.8	69.7	68.7	67.6	66.5
70°	67.5	64.3	61.0	58.9	57.9	56.9	55.8	54.8
72.5°	56.4	53.8	51.1	49.6	49.1	48.7	48.3	47.9
75°	42.2	41.3	40.3	39.8	39.6	39.4	39.2	39.1
77.5°	31.8	31.3	30.9	30.5	30.3	30.1	30.0	29.8
80°	25.6	25.3	25.1	24.9	24.6	24.4	24.3	24.1
82.5°	19.6	19.4	19.1	18.9	18.9	18.8	18.8	18.8
85°	11.2	11.1	10.9	10.8	10.8	10.8	10.8	10.8
87.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	27.7	28.3	28.7	28.9	28.7	28.5	28.4	28.2
95°	52.8	53.4	54.0	54.4	54.4	54.4	54.4	54.4
97.5°	82.1	82.8	83.6	83.9	83.8	83.8	83.7	83.6
100°	103.4	103.9	104.3	104.8	105.0	105.3	105.7	105.9
102.5°	128.0	128.4	128.9	129.1	129.0	128.9	128.9	128.9
105°	164.5	164.5	164.5	164.7	165.0	165.3	165.6	165.9
107.5°	204.1	204.6	205.2	205.3	205.1	204.9	204.7	204.6
110°	230.6	231.2	231.8	232.0	231.7	231.4	231.0	230.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.1	257.8	258.6	258.9	258.9	258.8	258.7	258.7
115°	297.3	297.5	297.7	297.7	297.5	297.3	297.1	297.0
117.5°	338.0	337.9	337.9	337.6	337.2	336.8	336.4	335.9
120°	365.0	364.9	364.7	364.4	364.2	363.8	363.6	363.2
122.5°	392.4	392.0	391.6	391.2	390.7	390.3	389.9	389.4
125°	433.1	432.5	431.9	431.2	430.6	430.0	429.4	428.7
127.5°	473.3	472.4	471.6	470.8	470.1	469.4	468.7	468.0
130°	500.1	499.4	498.8	497.9	496.9	495.8	494.7	493.6
132.5°	526.0	525.2	524.5	523.7	522.9	522.0	521.2	520.4
135°	564.9	564.3	563.7	563.2	562.8	562.6	562.2	562.0
137.5°	602.9	602.3	601.5	600.9	600.4	599.8	599.2	598.6
140°	627.9	627.7	627.5	627.0	625.8	624.7	623.7	622.6
142.5°	651.3	651.1	650.9	650.5	649.6	648.8	647.9	647.1
145°	685.7	685.5	685.4	685.0	684.4	683.8	683.1	682.5
147.5°	718.3	718.3	718.3	717.7	716.8	715.9	715.0	714.1
150°	738.3	738.3	738.3	737.9	736.9	736.0	735.0	734.1
152.5°	756.6	756.9	757.2	756.9	756.1	755.3	754.5	753.7
155°	783.5	784.1	784.7	784.4	783.4	782.3	781.2	780.2
157.5°	806.6	807.2	807.8	807.7	806.9	806.0	805.1	804.2
160°	820.7	821.5	822.2	822.3	821.7	821.1	820.5	819.8
162.5°	834.1	834.9	835.7	835.5	834.6	833.6	832.6	831.6
165°	851.0	851.9	852.9	852.8	851.8	850.6	849.5	848.5
167.5°	864.8	865.7	866.7	866.7	865.7	864.8	863.8	862.8
170°	872.3	873.3	874.4	874.4	873.3	872.3	871.2	870.0
172.5°	878.2	879.1	880.0	880.0	878.9	877.8	876.7	875.7
175°	884.5	885.4	886.4	886.3	885.2	884.1	883.0	881.9
177.5°	887.3	888.1	888.8	888.8	887.9	887.0	886.2	885.3
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5

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