

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: P332880-927

Luminaire Tested: **SA4XXRDIP-C350D810U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332880-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C350D810U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3695.5 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

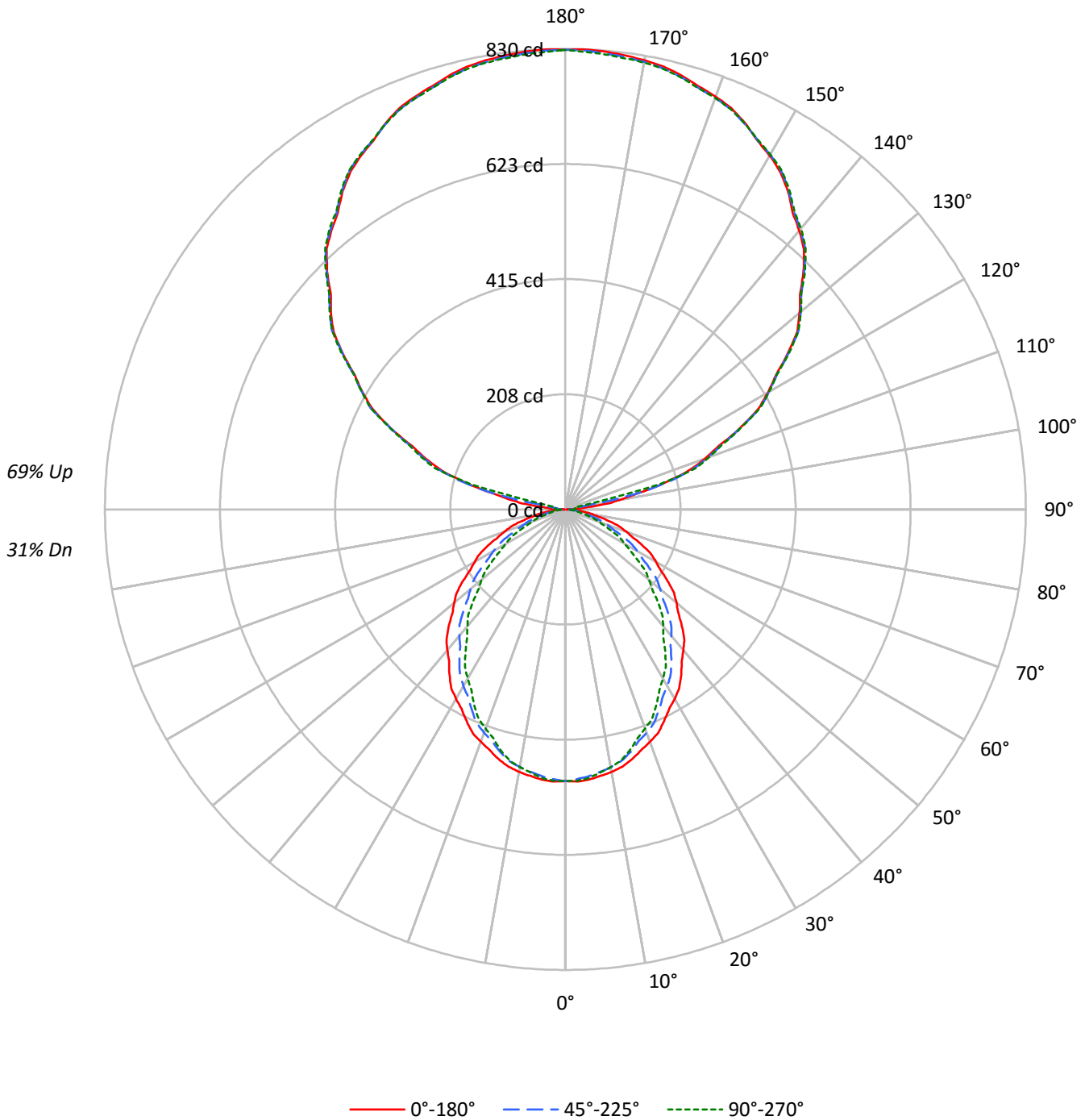
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	38	38	38	31
1	94	89	86	82	84	81	77	75	64	62	60	48	47	46	34	33	33	26
2	85	78	72	68	76	71	66	61	56	53	50	43	40	38	30	29	28	22
3	78	69	62	56	70	62	56	51	49	45	42	38	35	33	27	25	24	19
4	71	61	53	48	64	55	49	44	44	39	36	34	31	28	24	22	21	16
5	65	54	46	41	58	49	42	37	39	34	31	30	27	24	22	20	18	14
6	60	49	41	35	54	44	37	32	35	30	27	27	24	21	20	18	16	13
7	56	44	36	31	50	40	33	28	32	27	24	25	21	19	18	16	14	11
8	51	40	32	27	46	36	30	25	29	24	21	23	19	17	17	14	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9
10	45	33	26	21	40	30	24	20	24	20	17	19	16	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3953	3953	3953
5°	3962	3914	3938
10°	3937	3867	3867
15°	3892	3786	3758
20°	3830	3679	3611
25°	3751	3553	3463
30°	3674	3422	3278
35°	3588	3286	3094
40°	3485	3130	2893
45°	3391	2975	2689
50°	3282	2798	2473
55°	3167	2612	2238
60°	3039	2409	1997
65°	2923	2157	1761
70°	2752	1876	1496
75°	2539	1556	1216
80°	2213	1186	1116
85°	1880	1074	1010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.2
10°-20°	128.3	3.5
20°-30°	185.2	5.0
30°-40°	210.0	5.7
40°-50°	202.8	5.5
50°-60°	168.6	4.6
60°-70°	116.4	3.2
70°-80°	59.0	1.6
80°-90°	17.5	0.5
90°-100°	28.3	0.8
100°-110°	180.6	4.9
110°-120°	345.5	9.3
120°-130°	438.6	11.9
130°-140°	469.2	12.7
140°-150°	438.8	11.9
150°-160°	353.8	9.6
160°-170°	228.2	6.2
170°-180°	78.7	2.1
0°-30°	359.5	9.7
0°-40°	569.5	15.4
0°-60°	940.8	25.5
0°-90°	1133.8	30.7
90°-120°	554.4	15.0
90°-150°	1901.0	51.4
90°-180°	2562.0	69.3
0°-180°	3695.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	490	490	490	490	490	
5°	489	487	483	486	486	46
15°	466	462	453	452	450	131
25°	421	414	399	393	389	194
35°	364	352	333	321	314	227
45°	297	283	261	243	236	229
55°	225	209	186	167	159	201
65°	153	136	113	97	92	151
75°	81	67	50	42	39	86
85°	20	13	12	11	11	23
90°	2	9	14	17	19	3
95°	34	14	14	17	18	44
105°	186	190	193	197	176	195
115°	348	350	349	351	351	342
125°	489	492	491	492	493	437
135°	607	607	609	610	611	467
145°	700	702	702	702	704	437
155°	768	768	766	768	767	354
165°	810	807	806	811	806	229
175°	828	825	825	830	823	79
180°	828	828	828	828	828	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	490.9	490.6	490.4	490.1	489.8	489.3	488.6	487.9	487.1	486.4	487.1
5°	488.9	488.6	488.3	488.0	487.6	487.0	485.9	485.0	483.9	483.0	483.8
7.5°	484.5	484.2	483.9	483.5	483.2	482.3	481.0	479.7	478.4	477.1	477.6
10°	480.3	479.9	479.5	479.1	478.6	477.7	476.2	474.7	473.2	471.7	472.1
12.5°	474.9	474.4	474.0	473.5	473.0	471.9	470.1	468.3	466.6	464.8	465.0
15°	465.7	464.9	464.2	463.4	462.7	461.3	459.2	457.1	455.0	453.0	452.8
17.5°	454.6	453.4	452.3	451.3	450.2	448.4	445.9	443.4	440.9	438.4	437.9
20°	445.8	444.7	443.7	442.6	441.5	439.6	436.7	433.9	431.0	428.2	427.5
22.5°	436.3	435.0	433.8	432.6	431.3	429.2	426.2	423.2	420.2	417.1	416.1
25°	421.1	419.6	418.1	416.6	415.1	412.6	409.2	405.8	402.3	398.9	397.5
27.5°	405.2	403.3	401.4	399.6	397.7	394.9	391.3	387.6	384.0	380.3	378.5
30°	394.1	392.0	389.9	387.9	385.8	382.8	378.8	374.9	371.0	367.1	365.0
32.5°	382.4	380.0	377.7	375.3	373.0	369.8	365.8	361.7	357.7	353.6	351.2
35°	364.1	361.4	358.8	356.1	353.4	350.0	345.9	341.7	337.5	333.4	330.5
37.5°	344.5	341.7	339.1	336.3	333.5	329.9	325.2	320.6	316.0	311.4	308.2
40°	330.7	328.0	325.2	322.5	319.7	316.0	311.2	306.5	301.7	297.0	293.5
42.5°	317.5	314.7	311.7	308.9	306.0	302.1	297.1	292.2	287.2	282.3	278.7
45°	297.0	293.9	290.8	287.7	284.6	280.6	275.6	270.6	265.6	260.6	256.5
47.5°	275.8	272.6	269.4	266.2	263.0	258.8	253.7	248.4	243.2	238.1	233.8
50°	261.3	258.1	254.8	251.6	248.3	244.1	238.8	233.4	228.1	222.8	218.6
52.5°	246.7	243.4	240.3	237.1	233.9	229.6	224.1	218.6	213.2	207.7	203.5
55°	225.0	221.7	218.3	215.0	211.7	207.2	201.8	196.5	191.0	185.6	181.3
57.5°	203.5	200.0	196.6	193.1	189.6	185.3	179.9	174.6	169.3	163.9	159.5
60°	188.2	184.9	181.6	178.2	174.9	170.6	165.2	159.9	154.6	149.2	144.9
62.5°	174.4	171.0	167.5	164.1	160.6	156.1	150.7	145.2	139.7	134.3	130.2
65°	153.0	149.4	145.8	142.3	138.6	134.2	128.9	123.5	118.2	112.9	109.3
67.5°	130.7	127.3	123.8	120.4	117.0	112.8	107.8	102.9	97.9	93.0	89.9
70°	116.6	113.1	109.6	106.2	102.6	98.5	93.7	89.0	84.2	79.5	76.8
72.5°	101.6	98.5	95.3	92.1	89.0	85.2	80.6	76.1	71.7	67.2	64.9
75°	81.4	78.3	75.2	72.1	69.0	65.5	61.6	57.7	53.8	49.9	47.9
77.5°	60.8	58.2	55.6	53.0	50.4	47.5	44.3	41.1	37.9	34.8	33.7
80°	47.6	45.2	42.8	40.4	37.9	35.5	33.0	30.5	28.0	25.5	25.3
82.5°	36.2	34.0	31.8	29.5	27.3	25.5	24.1	22.7	21.2	19.8	19.6
85°	20.3	18.6	17.0	15.2	13.5	12.6	12.4	12.1	11.9	11.6	11.5
87.5°	7.3	7.1	6.8	6.6	6.3	6.3	6.5	6.7	6.7	6.9	7.1
90°	1.8	3.4	4.9	6.4	7.9	9.2	10.3	11.4	12.5	13.6	14.4
92.5°	7.8	7.9	8.0	8.1	8.2	8.7	9.8	10.9	12.0	13.2	13.9
95°	34.1	29.4	24.7	20.0	15.4	13.1	13.2	13.4	13.5	13.6	14.4
97.5°	72.3	75.3	78.2	81.1	84.1	77.8	62.4	47.1	31.7	16.3	16.4
100°	101.6	104.1	106.5	109.0	111.5	103.2	84.2	65.3	46.3	27.3	24.9
102.5°	134.3	136.1	137.9	139.7	141.6	141.2	138.7	136.3	133.8	131.3	106.1
105°	186.4	187.3	188.1	188.9	189.7	190.5	191.2	191.9	192.6	193.2	194.5
107.5°	234.9	235.3	235.7	236.1	236.5	237.2	238.1	239.1	240.0	241.0	241.5
110°	267.6	268.0	268.4	268.8	269.3	269.8	270.7	271.5	272.4	273.1	273.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	299.3	300.0	300.8	301.5	302.3	302.9	303.2	303.6	304.0	304.4	304.4
115°	348.1	348.5	349.0	349.4	349.7	349.9	349.7	349.6	349.5	349.4	349.6
117.5°	392.1	392.6	393.2	393.7	394.3	394.7	395.0	395.3	395.6	395.9	395.9
120°	421.8	422.4	422.9	423.5	424.0	424.2	424.1	424.0	423.8	423.7	424.0
122.5°	449.6	449.9	450.2	450.5	450.9	451.1	451.3	451.5	451.7	451.9	452.1
125°	489.3	489.9	490.4	491.0	491.5	491.6	491.4	491.2	490.8	490.6	491.0
127.5°	527.0	527.1	527.3	527.4	527.5	527.9	528.5	529.2	529.8	530.4	530.4
130°	551.3	551.4	551.5	551.7	551.8	552.1	552.5	552.9	553.3	553.7	553.9
132.5°	573.5	573.8	574.1	574.3	574.6	575.0	575.4	576.0	576.5	577.0	577.2
135°	607.0	606.9	606.7	606.6	606.5	606.7	607.2	607.8	608.3	608.9	609.1
137.5°	636.6	636.7	636.8	636.8	636.8	637.2	637.8	638.4	639.0	639.6	639.9
140°	655.9	656.2	656.5	656.8	657.0	657.4	657.6	657.9	658.1	658.4	658.9
142.5°	673.3	673.8	674.3	674.8	675.3	675.6	675.7	676.0	676.1	676.3	676.6
145°	699.9	700.4	700.8	701.2	701.6	701.8	701.8	701.8	701.8	701.8	702.0
147.5°	721.1	721.9	722.6	723.4	724.2	724.5	724.4	724.2	724.1	724.0	724.1
150°	736.5	737.0	737.6	738.2	738.6	738.9	738.7	738.6	738.5	738.3	738.3
152.5°	749.3	749.8	750.2	750.7	751.1	751.2	751.0	750.8	750.4	750.2	750.4
155°	767.5	767.5	767.7	767.9	768.0	767.9	767.5	767.0	766.6	766.2	766.8
157.5°	782.7	782.6	782.5	782.4	782.4	782.0	781.6	781.2	780.7	780.2	780.9
160°	791.6	791.2	790.8	790.4	790.0	789.6	789.6	789.4	789.3	789.1	790.0
162.5°	799.5	799.0	798.4	798.0	797.4	797.1	796.9	796.9	796.7	796.5	797.4
165°	809.5	808.9	808.2	807.5	806.8	806.4	806.4	806.4	806.4	806.4	807.6
167.5°	817.5	816.7	816.0	815.3	814.6	814.2	814.1	814.0	814.0	813.9	815.1
170°	822.0	821.1	820.3	819.4	818.6	818.3	818.4	818.6	818.7	818.9	819.9
172.5°	824.9	824.1	823.2	822.4	821.7	821.3	821.4	821.6	821.7	821.8	822.9
175°	828.1	827.3	826.5	825.7	824.8	824.5	824.7	824.7	824.9	825.1	826.2
177.5°	829.7	828.9	828.1	827.3	826.6	826.2	826.5	826.7	827.0	827.1	828.0
180°	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	489.7	489.7	489.7	489.7	489.7	489.7	489.7	489.7
2.5°	487.9	488.6	489.3	489.6	489.6	489.6	489.5	489.4
5°	484.7	485.4	486.3	486.6	486.5	486.3	486.1	485.9
7.5°	478.2	478.7	479.3	479.3	479.1	478.9	478.6	478.3
10°	472.4	472.7	473.0	473.0	472.7	472.4	472.1	471.7
12.5°	465.2	465.4	465.6	465.5	465.0	464.5	464.1	463.6
15°	452.7	452.5	452.3	451.9	451.3	450.8	450.2	449.6
17.5°	437.4	437.0	436.6	435.9	435.0	434.1	433.2	432.4
20°	426.9	426.2	425.6	424.7	423.6	422.5	421.4	420.3
22.5°	415.1	414.1	413.1	412.2	411.3	410.4	409.6	408.6
25°	396.1	394.7	393.3	392.2	391.3	390.5	389.7	388.8
27.5°	376.8	375.0	373.3	371.9	370.6	369.4	368.2	367.0
30°	362.9	360.8	358.8	357.0	355.7	354.4	353.1	351.7
32.5°	348.8	346.3	344.0	342.1	340.8	339.5	338.3	337.0
35°	327.6	324.9	322.0	319.9	318.4	316.9	315.4	313.9
37.5°	305.1	301.9	298.7	296.4	294.9	293.3	291.8	290.3
40°	289.9	286.5	283.0	280.5	279.0	277.5	276.0	274.5
42.5°	275.1	271.6	268.0	265.5	263.9	262.3	260.7	259.2
45°	252.5	248.3	244.2	241.5	240.0	238.4	236.9	235.5
47.5°	229.6	225.3	221.1	218.2	216.5	214.8	213.2	211.6
50°	214.4	210.2	206.0	203.2	201.6	200.0	198.4	196.9
52.5°	199.2	195.0	190.8	187.8	186.2	184.6	182.9	181.3
55°	177.0	172.6	168.3	165.3	163.7	162.2	160.6	159.0
57.5°	155.1	150.8	146.3	143.5	142.4	141.2	139.9	138.7
60°	140.5	136.3	131.9	129.0	127.7	126.4	125.1	123.7
62.5°	126.3	122.2	118.3	115.7	114.6	113.6	112.5	111.5
65°	105.7	102.1	98.5	96.3	95.2	94.3	93.2	92.2
67.5°	86.8	83.7	80.6	78.6	77.5	76.4	75.3	74.1
70°	74.0	71.2	68.5	66.7	65.8	65.0	64.2	63.4
72.5°	62.5	60.1	57.8	56.2	55.5	54.7	53.9	53.2
75°	46.0	44.1	42.2	41.0	40.5	40.0	39.5	39.0
77.5°	32.6	31.4	30.3	29.7	29.5	29.4	29.2	29.1
80°	25.0	24.7	24.5	24.3	24.2	24.2	24.1	24.0
82.5°	19.4	19.3	19.1	18.9	18.9	18.8	18.7	18.6
85°	11.3	11.1	10.9	10.9	10.9	10.9	10.9	10.9
87.5°	7.1	7.2	7.3	7.4	7.5	7.7	7.8	7.9
90°	15.3	16.1	17.0	17.5	17.7	18.1	18.3	18.6
92.5°	14.8	15.6	16.4	16.9	17.0	17.0	17.0	17.1
95°	15.3	16.1	17.0	17.4	17.6	17.7	17.8	18.0
97.5°	16.6	16.6	16.7	16.8	17.0	17.0	17.2	17.3
100°	22.6	20.2	17.9	16.8	17.0	17.0	17.2	17.3
102.5°	80.8	55.6	30.3	17.7	17.7	17.7	17.8	17.8
105°	195.7	196.9	198.2	196.4	191.4	186.4	181.5	176.5
107.5°	242.2	242.7	243.4	243.9	244.5	244.9	245.5	246.1
110°	273.7	274.0	274.3	274.6	275.0	275.4	275.8	276.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	304.3	304.2	304.1	304.4	304.9	305.5	305.9	306.5
115°	349.9	350.1	350.5	350.6	350.6	350.6	350.6	350.6
117.5°	395.8	395.8	395.7	395.6	395.6	395.5	395.5	395.5
120°	424.2	424.5	424.8	424.8	424.5	424.2	424.0	423.7
122.5°	452.3	452.4	452.6	452.5	452.3	451.9	451.7	451.4
125°	491.4	491.8	492.2	492.5	492.7	492.7	492.9	493.1
127.5°	530.3	530.2	530.1	530.0	529.9	529.8	529.7	529.6
130°	554.1	554.1	554.3	554.4	554.4	554.4	554.4	554.4
132.5°	577.3	577.4	577.6	577.6	577.5	577.3	577.3	577.2
135°	609.4	609.7	610.0	610.2	610.5	610.8	611.1	611.3
137.5°	640.2	640.5	640.8	640.9	640.8	640.7	640.6	640.6
140°	659.3	659.7	660.0	660.4	660.5	660.6	660.8	660.9
142.5°	676.8	677.2	677.5	677.6	677.6	677.7	677.7	677.7
145°	702.0	702.2	702.3	702.5	702.8	703.1	703.4	703.6
147.5°	724.2	724.3	724.4	724.5	724.7	724.8	724.9	725.1
150°	738.3	738.3	738.3	738.4	738.6	738.6	738.8	738.9
152.5°	750.7	750.9	751.1	751.1	751.1	751.0	750.9	750.8
155°	767.3	767.9	768.4	768.5	768.0	767.6	767.2	766.8
157.5°	781.6	782.4	783.1	783.1	782.4	781.6	780.9	780.2
160°	790.8	791.6	792.4	792.4	791.6	790.8	790.0	789.1
162.5°	798.2	799.0	799.9	799.8	798.8	797.9	797.0	796.1
165°	808.7	809.8	810.9	810.8	809.5	808.3	807.1	805.8
167.5°	816.3	817.5	818.7	818.6	817.3	815.9	814.5	813.2
170°	821.0	822.1	823.2	823.1	821.7	820.4	819.0	817.6
172.5°	824.0	825.1	826.2	826.0	824.6	823.1	821.6	820.1
175°	827.5	828.8	830.0	829.8	828.1	826.5	824.8	823.2
177.5°	828.9	829.8	830.7	830.4	829.1	827.8	826.5	825.1
180°	828.1	828.1	828.1	828.1	828.1	828.1	828.1	828.1

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