

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: P332515-935

Luminaire Tested: **SA4XXDIP-C350D810U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332515-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C350D810U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

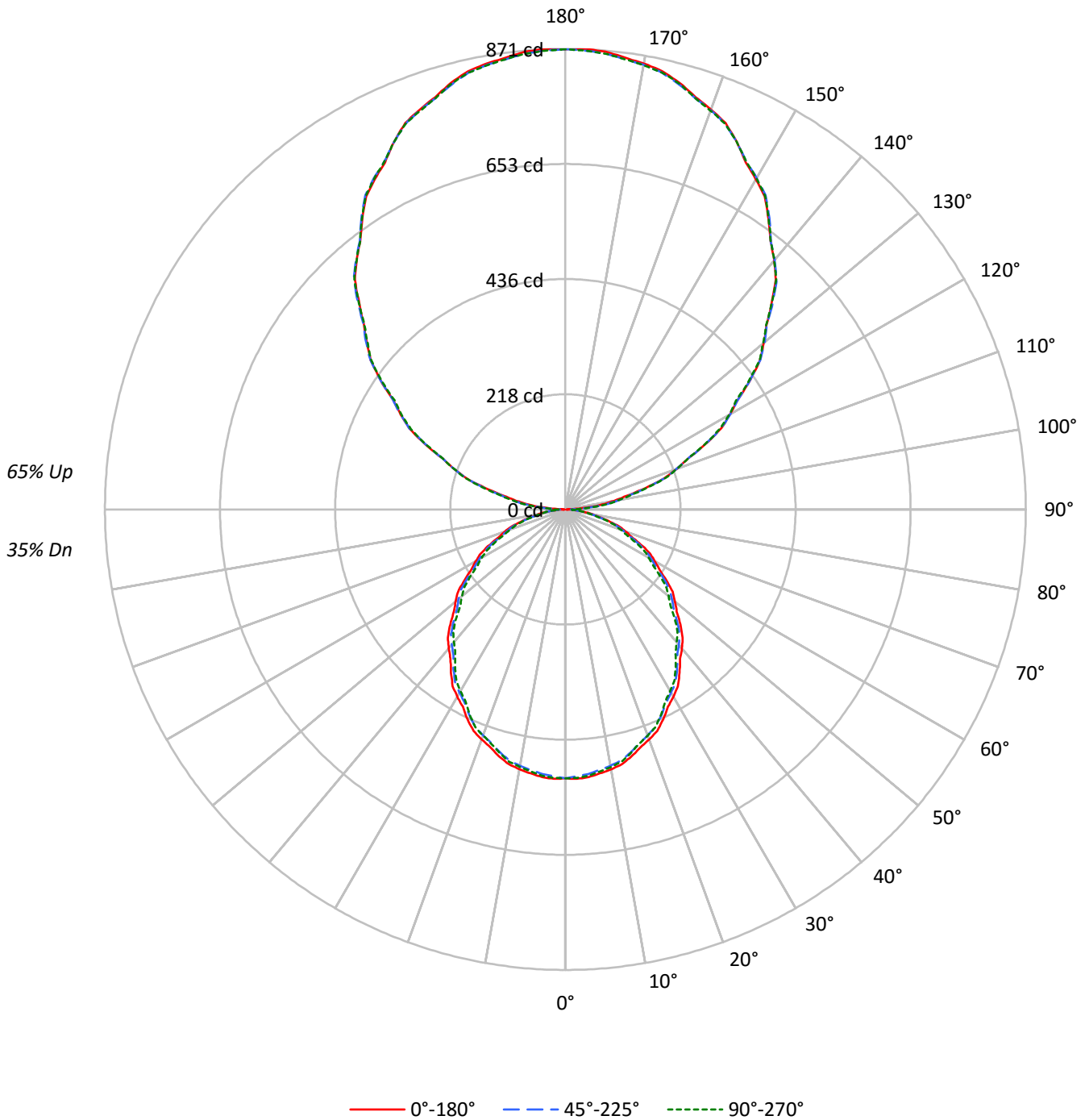
Lumens per Lamp: N/A
Luminaire Lumens: 3722.5 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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	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	90	86	83	85	82	78	76	66	63	61	51	50	48	37	37	36	29				
2	86	79	73	68	77	71	66	62	57	54	51	45	42	40	33	31	30	25				
3	78	69	62	56	71	63	57	52	51	46	43	40	36	34	29	27	26	21				
4	72	61	53	47	64	56	49	44	45	40	36	35	32	29	26	24	22	18				
5	66	54	46	41	59	49	43	37	40	35	31	32	28	25	23	21	19	16				
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	14				
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	19	17	15	12				
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11				
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10				
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4106	4106	4106
5°	4118	4068	4099
10°	4092	4036	4055
15°	4043	3978	3989
20°	3978	3907	3911
25°	3902	3827	3815
30°	3811	3731	3697
35°	3714	3631	3582
40°	3616	3518	3453
45°	3513	3406	3342
50°	3399	3307	3204
55°	3275	3178	3074
60°	3152	3034	2942
65°	3012	2896	2779
70°	2858	2712	2608
75°	2617	2492	2427
80°	2329	2236	2176
85°	2038	1964	1927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.9	1.3
10°-20°	135.0	3.6
20°-30°	198.6	5.3
30°-40°	230.9	6.2
40°-50°	230.9	6.2
50°-60°	202.0	5.4
60°-70°	150.0	4.0
70°-80°	85.2	2.3
80°-90°	27.2	0.7
90°-100°	57.4	1.5
100°-110°	170.1	4.6
110°-120°	288.6	7.8
120°-130°	380.6	10.2
130°-140°	427.4	11.5
140°-150°	420.0	11.3
150°-160°	353.3	9.5
160°-170°	235.0	6.3
170°-180°	82.3	2.2
0°-30°	381.5	10.2
0°-40°	612.4	16.5
0°-60°	1045.3	28.1
0°-90°	1307.8	35.1
90°-120°	516.1	13.9
90°-150°	1744.1	46.9
90°-180°	2415.0	64.9
0°-180°	3722.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	508	506	502	506	506	48
15°	484	482	476	478	477	136
25°	438	435	430	430	428	201
35°	377	374	368	366	364	236
45°	308	305	298	294	293	237
55°	233	231	226	221	218	208
65°	158	156	152	148	146	156
75°	84	82	80	78	78	89
85°	22	22	21	21	21	24
90°	2	9	15	19	20	4
95°	40	46	51	53	53	45
105°	157	158	160	162	164	166
115°	294	293	292	291	291	289
125°	427	427	427	425	424	381
135°	551	555	555	554	552	426
145°	670	672	673	672	670	419
155°	767	767	767	769	767	353
165°	835	833	832	836	833	235
175°	869	866	865	869	865	82
180°	870	870	870	870	870	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6
2.5°	509.9	509.7	509.5	509.3	509.0	508.5	507.7	507.0	506.2	505.3	506.1
5°	508.2	507.8	507.5	507.1	506.8	506.1	505.1	504.1	503.1	502.0	503.1
7.5°	503.5	503.1	502.7	502.4	502.0	501.3	500.2	499.1	498.0	496.9	497.7
10°	499.2	498.9	498.5	498.2	497.8	497.1	495.8	494.6	493.5	492.3	493.0
12.5°	493.7	493.4	493.0	492.6	492.2	491.5	490.2	489.0	487.7	486.5	487.2
15°	483.7	483.4	483.0	482.7	482.3	481.5	480.1	478.7	477.3	476.0	476.6
17.5°	471.7	471.3	470.9	470.5	469.9	469.1	467.8	466.5	465.2	463.9	464.3
20°	463.0	462.5	462.1	461.6	461.2	460.3	458.9	457.5	456.2	454.8	455.1
22.5°	453.5	452.9	452.3	451.7	451.1	450.1	448.8	447.5	446.1	444.7	445.2
25°	438.1	437.5	436.9	436.2	435.6	434.6	433.3	432.0	430.8	429.6	429.6
27.5°	420.5	419.8	419.2	418.5	417.9	417.0	415.8	414.7	413.5	412.2	412.1
30°	408.8	408.0	407.3	406.6	405.9	404.9	403.7	402.5	401.4	400.2	399.8
32.5°	396.4	395.7	395.0	394.4	393.7	392.8	391.6	390.3	389.1	387.8	387.4
35°	376.9	376.3	375.7	375.1	374.4	373.5	372.2	370.9	369.7	368.4	367.8
37.5°	356.5	355.9	355.3	354.8	354.2	353.3	351.9	350.5	349.1	347.8	347.1
40°	343.1	342.4	341.7	341.0	340.3	339.2	337.9	336.5	335.1	333.8	332.9
42.5°	328.8	328.4	328.0	327.5	327.1	326.1	324.6	323.0	321.6	320.1	319.0
45°	307.7	307.0	306.4	305.8	305.1	304.1	302.6	301.2	299.8	298.3	297.3
47.5°	285.6	285.2	284.7	284.3	283.9	283.0	281.6	280.3	279.0	277.6	276.5
50°	270.6	270.3	269.9	269.5	269.1	268.4	267.1	265.8	264.5	263.3	262.0
52.5°	256.0	255.5	255.0	254.6	254.2	253.3	251.9	250.6	249.3	248.0	246.8
55°	232.7	232.5	232.1	231.9	231.6	230.8	229.5	228.3	227.0	225.8	224.7
57.5°	210.5	210.3	209.9	209.7	209.3	208.5	207.2	206.0	204.7	203.5	202.5
60°	195.2	194.8	194.3	193.8	193.4	192.6	191.4	190.2	189.1	187.9	187.1
62.5°	180.2	179.9	179.4	179.1	178.7	177.9	176.6	175.4	174.1	172.9	172.1
65°	157.7	157.3	156.8	156.4	155.9	155.2	154.3	153.4	152.5	151.6	150.7
67.5°	135.1	134.7	134.2	133.8	133.4	132.8	131.9	131.0	130.2	129.2	128.4
70°	121.1	120.4	119.8	119.2	118.5	117.8	117.1	116.4	115.6	114.9	114.2
72.5°	106.1	105.4	104.8	104.2	103.5	102.9	102.3	101.8	101.2	100.6	100.0
75°	83.9	83.5	83.1	82.6	82.1	81.7	81.3	80.8	80.3	79.9	79.6
77.5°	62.9	62.7	62.4	62.3	62.1	61.7	61.4	61.0	60.5	60.2	60.0
80°	50.1	49.9	49.6	49.3	49.1	48.8	48.6	48.5	48.3	48.1	47.9
82.5°	37.7	37.6	37.5	37.4	37.2	37.1	37.1	37.1	37.0	37.0	36.9
85°	22.0	22.0	22.0	22.0	22.0	22.0	21.7	21.5	21.4	21.2	21.2
87.5°	8.9	9.1	9.4	9.6	9.9	10.2	10.2	10.4	10.6	10.8	10.9
90°	2.0	3.7	5.3	7.0	8.6	10.0	11.2	12.4	13.6	14.8	15.7
92.5°	14.4	16.3	18.2	20.1	22.0	23.3	24.1	25.0	25.8	26.7	27.2
95°	40.4	41.8	43.0	44.4	45.8	47.0	48.0	49.1	50.1	51.1	51.6
97.5°	70.5	71.6	72.7	73.8	74.8	76.0	77.2	78.4	79.6	80.9	81.5
100°	94.3	94.8	95.4	96.0	96.6	97.6	98.9	100.3	101.6	103.0	103.3
102.5°	119.0	119.2	119.5	119.8	119.9	120.7	121.9	123.1	124.4	125.6	126.1
105°	156.9	157.0	157.1	157.3	157.5	157.8	158.4	159.0	159.6	160.2	160.7
107.5°	196.6	196.7	196.9	197.1	197.3	197.4	197.5	197.6	197.7	197.8	198.2
110°	223.5	223.8	224.0	224.4	224.6	224.7	224.6	224.5	224.3	224.1	223.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	251.5	251.5	251.6	251.7	251.8	251.6	251.3	251.1	250.8	250.6	250.5
115°	293.5	293.5	293.5	293.5	293.5	293.3	293.0	292.7	292.4	292.1	292.0
117.5°	333.0	333.2	333.3	333.4	333.6	333.5	333.3	333.0	332.9	332.7	332.2
120°	359.5	360.1	360.7	361.3	361.9	361.9	361.4	361.0	360.6	360.2	359.4
122.5°	386.9	387.1	387.4	387.6	387.9	387.9	387.7	387.4	387.3	387.0	386.5
125°	427.4	427.4	427.4	427.4	427.4	427.3	427.2	427.1	426.9	426.8	426.5
127.5°	464.2	464.6	465.1	465.5	466.0	466.1	465.8	465.6	465.4	465.1	464.9
130°	490.0	490.5	490.9	491.4	491.8	492.1	492.1	492.1	492.1	492.1	491.7
132.5°	516.4	516.8	517.1	517.4	517.7	517.8	517.7	517.6	517.5	517.4	517.0
135°	551.3	552.2	553.1	554.0	554.9	555.3	555.3	555.3	555.3	555.3	555.0
137.5°	589.3	589.7	590.0	590.5	590.9	591.2	591.5	591.8	591.9	592.2	591.9
140°	614.6	614.8	615.2	615.4	615.8	615.9	615.9	615.9	615.9	615.9	615.8
142.5°	637.7	638.0	638.3	638.6	638.9	639.0	638.9	638.8	638.6	638.5	638.5
145°	669.8	670.4	671.0	671.6	672.2	672.5	672.7	672.8	673.0	673.1	673.0
147.5°	701.5	702.2	702.9	703.7	704.4	704.7	704.6	704.5	704.3	704.2	704.1
150°	720.9	721.5	722.1	722.7	723.3	723.6	723.6	723.6	723.6	723.6	723.6
152.5°	739.3	739.6	739.9	740.3	740.6	740.9	741.0	741.1	741.2	741.4	741.8
155°	767.3	767.3	767.3	767.3	767.3	767.2	767.2	767.0	766.8	766.7	767.2
157.5°	791.1	790.7	790.5	790.2	790.0	789.8	789.8	789.8	789.7	789.7	790.1
160°	805.0	804.9	804.8	804.6	804.4	804.3	804.2	804.0	803.8	803.7	804.2
162.5°	817.9	817.6	817.2	816.8	816.4	816.1	816.0	815.9	815.7	815.5	816.4
165°	835.3	834.9	834.5	834.0	833.5	833.2	832.8	832.6	832.2	832.0	832.8
167.5°	848.7	848.0	847.4	846.8	846.2	845.8	845.8	845.9	845.9	845.9	846.9
170°	856.2	855.5	854.7	853.9	853.3	852.9	853.1	853.3	853.3	853.5	854.4
172.5°	861.6	861.0	860.3	859.7	859.1	858.8	858.8	858.8	858.8	858.9	859.9
175°	869.0	868.2	867.5	866.8	866.0	865.6	865.4	865.2	865.1	865.0	866.0
177.5°	871.4	870.8	870.2	869.6	869.0	868.7	868.7	868.7	868.7	868.7	869.5
180°	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6
2.5°	506.8	507.6	508.2	508.6	508.5	508.4	508.3	508.2
5°	504.1	505.1	506.1	506.4	506.3	506.1	505.9	505.8
7.5°	498.4	499.3	500.1	500.4	500.3	500.2	500.1	500.0
10°	493.8	494.5	495.2	495.5	495.3	495.1	494.9	494.7
12.5°	488.0	488.8	489.7	489.9	489.7	489.4	489.1	488.9
15°	477.1	477.6	478.2	478.3	478.0	477.8	477.5	477.3
17.5°	464.6	464.9	465.3	465.4	465.2	465.0	464.9	464.7
20°	455.4	455.6	455.9	456.0	455.7	455.6	455.4	455.2
22.5°	445.7	446.2	446.7	446.8	446.4	446.1	445.7	445.5
25°	429.7	429.8	429.9	429.8	429.4	429.0	428.7	428.3
27.5°	411.8	411.6	411.4	411.0	410.6	410.2	409.7	409.2
30°	399.5	399.2	398.7	398.4	397.9	397.4	397.0	396.6
32.5°	386.9	386.5	386.1	385.6	385.2	384.7	384.3	383.8
35°	367.1	366.5	365.8	365.3	364.9	364.5	363.9	363.5
37.5°	346.4	345.7	345.0	344.4	343.8	343.2	342.6	342.0
40°	332.0	331.1	330.2	329.5	329.0	328.6	328.1	327.7
42.5°	318.0	316.9	315.9	315.2	314.9	314.6	314.3	314.0
45°	296.4	295.3	294.4	293.7	293.4	293.2	292.9	292.7
47.5°	275.3	274.2	273.1	272.2	271.6	270.9	270.2	269.5
50°	260.7	259.5	258.2	257.3	256.8	256.2	255.6	255.1
52.5°	245.7	244.6	243.5	242.5	241.9	241.2	240.5	239.8
55°	223.6	222.5	221.4	220.6	220.1	219.6	219.0	218.4
57.5°	201.5	200.4	199.4	198.6	198.1	197.6	197.1	196.5
60°	186.2	185.5	184.6	184.0	183.6	183.0	182.6	182.2
62.5°	171.4	170.7	169.9	169.3	168.8	168.4	168.0	167.5
65°	149.8	148.9	148.0	147.3	146.9	146.4	145.9	145.5
67.5°	127.5	126.7	125.8	125.3	125.2	125.0	124.9	124.8
70°	113.5	112.8	112.0	111.5	111.2	111.0	110.7	110.5
72.5°	99.4	98.8	98.2	97.8	97.6	97.3	97.0	96.8
75°	79.1	78.8	78.4	78.2	78.1	78.0	77.9	77.8
77.5°	59.9	59.8	59.8	59.6	59.3	59.1	58.8	58.6
80°	47.7	47.5	47.4	47.3	47.1	47.0	46.9	46.8
82.5°	36.8	36.7	36.6	36.5	36.4	36.2	36.2	36.1
85°	21.2	21.2	21.2	21.2	21.1	21.0	20.8	20.8
87.5°	11.1	11.4	11.5	11.6	11.7	11.7	11.8	11.9
90°	16.6	17.5	18.4	19.0	19.3	19.6	19.9	20.2
92.5°	27.7	28.2	28.8	29.2	29.4	29.5	29.7	29.9
95°	52.1	52.5	53.0	53.2	53.2	53.2	53.2	53.2
97.5°	82.0	82.5	83.1	83.3	83.3	83.3	83.3	83.3
100°	103.6	103.9	104.2	104.4	104.4	104.4	104.4	104.4
102.5°	126.5	126.8	127.3	127.5	127.7	127.8	127.9	128.0
105°	161.1	161.5	162.0	162.5	162.9	163.3	163.8	164.3
107.5°	198.6	199.0	199.4	199.7	199.6	199.6	199.6	199.5
110°	223.5	223.3	222.9	223.0	223.5	223.9	224.4	224.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	250.4	250.4	250.3	250.3	250.4	250.5	250.6	250.6
115°	291.8	291.7	291.5	291.4	291.3	291.1	290.9	290.8
117.5°	331.7	331.1	330.6	330.2	329.9	329.6	329.3	329.0
120°	358.6	357.8	357.1	356.9	357.2	357.5	357.8	358.1
122.5°	386.0	385.6	385.0	384.5	383.9	383.4	382.9	382.4
125°	426.2	425.9	425.6	425.2	425.0	424.6	424.4	424.0
127.5°	464.5	464.3	463.9	463.6	463.4	463.2	463.0	462.7
130°	491.5	491.1	490.9	490.4	489.8	489.2	488.6	488.0
132.5°	516.8	516.4	516.2	515.9	515.7	515.4	515.1	515.0
135°	554.7	554.4	554.1	553.7	553.3	552.8	552.4	552.0
137.5°	591.4	591.1	590.6	590.5	590.6	590.6	590.7	590.9
140°	615.6	615.4	615.3	615.2	615.0	614.8	614.7	614.6
142.5°	638.4	638.4	638.4	638.3	638.3	638.3	638.3	638.3
145°	672.8	672.7	672.5	672.2	671.8	671.3	670.9	670.5
147.5°	704.0	703.9	703.7	703.6	703.4	703.3	703.2	703.0
150°	723.6	723.6	723.6	723.5	723.4	723.2	723.1	722.9
152.5°	742.1	742.4	742.8	742.8	742.4	742.0	741.7	741.2
155°	767.8	768.4	769.0	769.0	768.4	767.8	767.2	766.7
157.5°	790.6	791.1	791.5	791.4	791.0	790.5	790.0	789.5
160°	804.6	805.0	805.5	805.4	804.6	803.8	803.1	802.4
162.5°	817.2	817.9	818.8	818.8	818.0	817.3	816.6	815.8
165°	833.8	834.7	835.6	835.7	835.1	834.5	833.9	833.4
167.5°	847.7	848.7	849.5	849.5	848.6	847.7	846.8	845.8
170°	855.3	856.2	857.1	857.0	856.0	855.0	853.9	852.8
172.5°	860.9	861.9	863.0	863.0	861.9	860.8	859.8	858.8
175°	867.0	868.1	869.2	869.2	868.1	867.0	866.0	865.0
177.5°	870.4	871.2	872.1	872.0	871.1	870.1	869.2	868.1
180°	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3

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