

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: P332496-927

Luminaire Tested: **SA4XXDIP-C350D365U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332496-927  
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: SA4XXDIP-C350D365U927-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

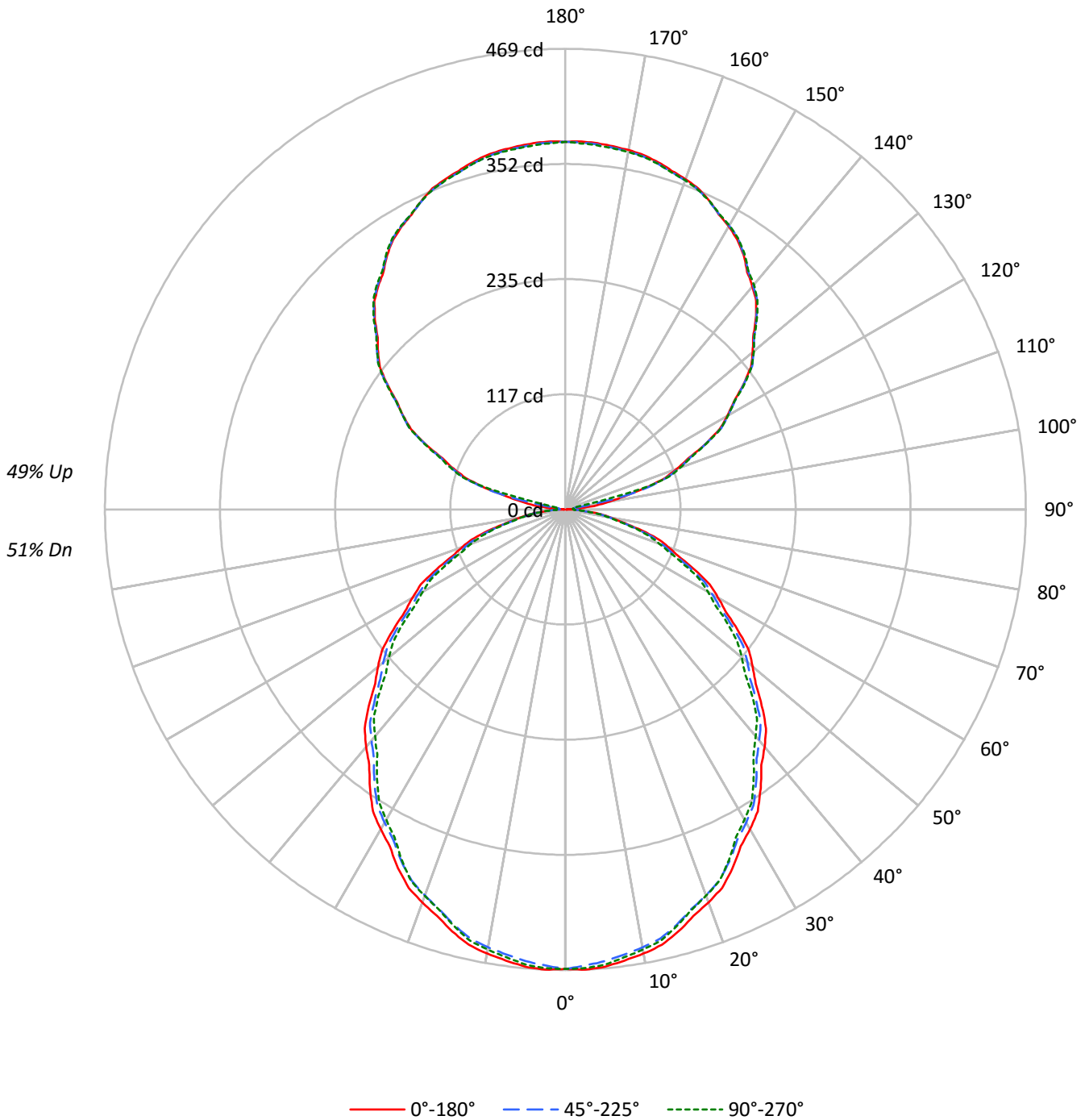
Lumens per Lamp: N/A  
Luminaire Lumens: 2359.8 lumens  
Efficiency: N/A  
Efficacy: 116.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 20.3  
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	20			
1	98	94	90	86	90	87	83	80	73	71	69	61	60	58	50	49	48	43	43	43	0			
2	89	82	76	70	82	76	70	66	64	60	57	54	51	48	44	42	40	36	36	36	0			
3	81	72	64	59	75	67	60	55	57	52	48	48	44	41	39	37	34	30	30	30	0			
4	74	64	56	50	68	59	52	47	50	45	41	42	38	35	35	32	30	26	26	26	0			
5	68	57	48	42	63	53	45	40	45	39	35	38	34	30	32	28	26	23	23	23	0			
6	63	51	43	37	58	47	40	35	41	35	31	34	30	27	29	25	23	20	20	20	0			
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18	18	18	0			
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	16	16	0			
9	50	38	31	25	46	36	29	24	31	25	22	26	22	19	22	19	16	14	14	14	0			
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13	13	13	0			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3777	3777	3777
5°	3789	3743	3771
10°	3765	3713	3731
15°	3719	3661	3670
20°	3660	3594	3598
25°	3591	3520	3510
30°	3506	3432	3402
35°	3418	3341	3297
40°	3327	3236	3177
45°	3232	3134	3075
50°	3127	3042	2948
55°	3013	2923	2829
60°	2900	2792	2706
65°	2772	2665	2558
70°	2629	2497	2398
75°	2408	2293	2233
80°	2143	2060	2004
85°	1880	1806	1769



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.1	1.9
10°-20°	124.2	5.3
20°-30°	182.8	7.7
30°-40°	212.5	9.0
40°-50°	212.5	9.0
50°-60°	185.9	7.9
60°-70°	138.0	5.8
70°-80°	78.4	3.3
80°-90°	23.7	1.0
90°-100°	12.8	0.5
100°-110°	81.6	3.5
110°-120°	156.1	6.6
120°-130°	198.2	8.4
130°-140°	212.1	9.0
140°-150°	198.3	8.4
150°-160°	159.9	6.8
160°-170°	103.2	4.4
170°-180°	35.6	1.5
0°-30°	351.0	14.9
0°-40°	563.5	23.9
0°-60°	961.8	40.8
0°-90°	1201.9	50.9
90°-120°	250.6	10.6
90°-150°	859.2	36.4
90°-180°	1158.0	49.1
0°-180°	2359.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	468	466	462	466	465	44
15°	445	443	438	440	439	125
25°	403	400	395	396	394	185
35°	347	344	339	336	334	217
45°	283	280	274	270	269	218
55°	214	213	208	203	201	192
65°	145	143	140	136	134	144
75°	77	75	74	72	72	82
85°	20	20	20	20	19	22
90°	1	4	6	8	8	2
95°	15	6	6	8	8	20
105°	84	86	87	89	80	88
115°	157	158	158	158	158	155
125°	221	222	222	222	223	197
135°	274	274	275	276	276	211
145°	316	317	317	317	318	198
155°	347	347	346	347	347	160
165°	366	365	364	366	364	103
175°	374	373	373	375	372	36
180°	374	374	374	374	374	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9
2.5°	469.1	469.0	468.7	468.6	468.3	467.9	467.1	466.4	465.7	464.9	465.6
5°	467.5	467.2	466.9	466.6	466.3	465.6	464.7	463.8	462.9	461.9	462.9
7.5°	463.3	462.9	462.6	462.2	461.9	461.2	460.2	459.2	458.2	457.2	457.9
10°	459.3	459.0	458.7	458.4	458.0	457.3	456.2	455.1	454.1	453.0	453.6
12.5°	454.2	453.9	453.6	453.2	452.9	452.2	451.0	449.9	448.7	447.6	448.3
15°	445.0	444.7	444.4	444.1	443.8	443.0	441.7	440.5	439.2	438.0	438.5
17.5°	434.0	433.6	433.2	432.8	432.4	431.6	430.4	429.2	428.0	426.8	427.1
20°	426.0	425.6	425.2	424.7	424.3	423.5	422.2	421.0	419.7	418.4	418.7
22.5°	417.2	416.7	416.1	415.6	415.0	414.2	412.9	411.7	410.4	409.2	409.6
25°	403.1	402.5	402.0	401.3	400.8	399.9	398.7	397.5	396.4	395.2	395.3
27.5°	386.9	386.3	385.7	385.1	384.5	383.7	382.5	381.5	380.4	379.3	379.1
30°	376.1	375.4	374.8	374.1	373.4	372.6	371.5	370.3	369.3	368.2	367.9
32.5°	364.7	364.1	363.5	362.9	362.3	361.4	360.3	359.1	358.0	356.8	356.4
35°	346.8	346.3	345.7	345.1	344.5	343.6	342.5	341.3	340.2	339.0	338.4
37.5°	328.0	327.5	326.9	326.5	325.9	325.0	323.8	322.5	321.2	320.0	319.3
40°	315.7	315.1	314.4	313.7	313.1	312.1	310.9	309.6	308.3	307.1	306.3
42.5°	302.5	302.1	301.7	301.3	301.0	300.0	298.7	297.2	295.9	294.5	293.5
45°	283.1	282.5	281.9	281.4	280.7	279.8	278.5	277.1	275.8	274.5	273.5
47.5°	262.8	262.4	262.0	261.6	261.2	260.4	259.1	257.9	256.7	255.4	254.4
50°	249.0	248.7	248.3	248.0	247.6	246.9	245.7	244.5	243.4	242.2	241.1
52.5°	235.5	235.0	234.6	234.2	233.9	233.1	231.8	230.6	229.3	228.1	227.1
55°	214.1	213.9	213.6	213.3	213.1	212.4	211.2	210.1	208.9	207.7	206.8
57.5°	193.7	193.5	193.1	192.9	192.6	191.9	190.7	189.6	188.4	187.3	186.3
60°	179.6	179.2	178.8	178.3	177.9	177.2	176.1	175.0	174.0	172.9	172.1
62.5°	165.8	165.5	165.1	164.8	164.4	163.7	162.5	161.4	160.2	159.1	158.4
65°	145.1	144.7	144.3	143.9	143.5	142.8	142.0	141.2	140.3	139.5	138.6
67.5°	124.3	123.9	123.5	123.1	122.7	122.2	121.4	120.6	119.8	118.9	118.1
70°	111.4	110.7	110.2	109.6	109.0	108.4	107.7	107.1	106.4	105.8	105.0
72.5°	97.6	97.0	96.4	95.9	95.2	94.7	94.1	93.6	93.1	92.5	92.0
75°	77.2	76.8	76.4	76.0	75.6	75.2	74.8	74.3	73.9	73.5	73.2
77.5°	57.8	57.7	57.4	57.3	57.1	56.8	56.5	56.1	55.7	55.4	55.2
80°	46.1	45.9	45.6	45.4	45.2	44.9	44.8	44.6	44.4	44.3	44.0
82.5°	34.7	34.6	34.5	34.4	34.2	34.1	34.1	34.1	34.1	34.1	34.0
85°	20.3	20.3	20.3	20.3	20.3	20.2	20.0	19.8	19.6	19.5	19.5
87.5°	8.0	8.0	8.1	8.2	8.2	8.3	8.3	8.4	8.4	8.4	8.5
90°	0.9	1.5	2.2	2.9	3.6	4.2	4.7	5.1	5.6	6.2	6.5
92.5°	3.6	3.6	3.6	3.6	3.6	4.0	4.4	4.9	5.5	5.9	6.3
95°	15.4	13.3	11.2	9.0	7.0	5.9	5.9	6.0	6.1	6.2	6.5
97.5°	32.7	34.0	35.3	36.7	37.9	35.2	28.2	21.3	14.3	7.4	7.4
100°	45.9	47.1	48.2	49.3	50.4	46.7	38.1	29.5	20.9	12.4	11.2
102.5°	60.7	61.6	62.3	63.1	64.0	63.8	62.7	61.6	60.4	59.3	47.9
105°	84.3	84.6	85.0	85.4	85.8	86.1	86.4	86.7	87.1	87.4	87.9
107.5°	106.2	106.3	106.5	106.7	106.9	107.2	107.7	108.1	108.4	108.9	109.2
110°	121.0	121.1	121.3	121.5	121.7	122.0	122.3	122.7	123.1	123.5	123.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	135.3	135.6	135.9	136.3	136.7	136.9	137.0	137.2	137.4	137.6	137.5
115°	157.3	157.6	157.7	157.9	158.1	158.1	158.1	158.0	158.0	157.9	158.0
117.5°	177.2	177.4	177.7	178.0	178.2	178.4	178.6	178.7	178.8	179.0	179.0
120°	190.7	190.9	191.2	191.4	191.6	191.7	191.7	191.6	191.5	191.5	191.6
122.5°	203.2	203.4	203.5	203.7	203.8	203.9	204.0	204.1	204.1	204.3	204.3
125°	221.2	221.4	221.7	221.9	222.2	222.2	222.1	222.0	221.9	221.7	221.9
127.5°	238.2	238.3	238.3	238.4	238.4	238.6	238.9	239.2	239.5	239.8	239.7
130°	249.1	249.2	249.3	249.4	249.5	249.5	249.7	249.9	250.1	250.3	250.3
132.5°	259.3	259.4	259.4	259.6	259.7	259.8	260.1	260.3	260.5	260.8	260.9
135°	274.3	274.3	274.3	274.2	274.1	274.2	274.5	274.7	275.0	275.2	275.4
137.5°	287.7	287.8	287.8	287.8	287.9	288.0	288.3	288.5	288.8	289.1	289.2
140°	296.5	296.6	296.8	296.8	297.0	297.1	297.2	297.4	297.5	297.6	297.8
142.5°	304.4	304.5	304.8	305.0	305.2	305.4	305.5	305.5	305.6	305.7	305.8
145°	316.4	316.6	316.7	317.0	317.1	317.2	317.2	317.2	317.2	317.2	317.3
147.5°	325.9	326.3	326.6	327.0	327.3	327.5	327.4	327.3	327.3	327.3	327.3
150°	332.9	333.1	333.4	333.7	333.9	334.0	333.9	333.8	333.7	333.7	333.7
152.5°	338.7	338.9	339.1	339.3	339.5	339.5	339.5	339.3	339.2	339.1	339.2
155°	346.9	347.0	347.0	347.1	347.1	347.1	346.9	346.7	346.5	346.3	346.6
157.5°	353.8	353.7	353.7	353.6	353.6	353.5	353.3	353.1	352.8	352.7	353.0
160°	357.8	357.6	357.4	357.3	357.0	357.0	356.9	356.8	356.7	356.6	357.0
162.5°	361.4	361.2	360.9	360.7	360.4	360.3	360.2	360.1	360.1	360.0	360.4
165°	365.9	365.6	365.3	365.0	364.6	364.5	364.5	364.5	364.5	364.5	365.0
167.5°	369.5	369.2	368.8	368.5	368.2	368.0	368.0	368.0	367.9	367.9	368.4
170°	371.5	371.1	370.7	370.4	370.0	369.9	369.9	370.0	370.0	370.1	370.6
172.5°	372.9	372.5	372.1	371.8	371.4	371.2	371.3	371.4	371.4	371.5	371.9
175°	374.3	373.9	373.6	373.2	372.8	372.6	372.7	372.8	372.9	372.9	373.5
177.5°	375.0	374.6	374.3	373.9	373.6	373.4	373.6	373.7	373.8	373.8	374.3
180°	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9
2.5°	466.3	467.0	467.6	467.9	467.9	467.8	467.7	467.6
5°	463.8	464.7	465.6	466.0	465.8	465.6	465.5	465.3
7.5°	458.6	459.4	460.1	460.4	460.3	460.2	460.1	460.0
10°	454.3	455.0	455.7	455.9	455.7	455.5	455.3	455.2
12.5°	449.0	449.7	450.5	450.8	450.5	450.3	450.0	449.8
15°	438.9	439.4	440.0	440.1	439.8	439.6	439.3	439.1
17.5°	427.5	427.8	428.1	428.2	428.0	427.9	427.7	427.5
20°	419.0	419.2	419.5	419.5	419.3	419.1	419.0	418.8
22.5°	410.0	410.5	411.0	411.1	410.7	410.4	410.1	409.9
25°	395.4	395.5	395.5	395.5	395.1	394.7	394.4	394.1
27.5°	378.9	378.7	378.5	378.2	377.8	377.4	376.9	376.5
30°	367.6	367.3	366.9	366.5	366.1	365.7	365.3	364.9
32.5°	356.0	355.6	355.2	354.8	354.4	353.9	353.6	353.2
35°	337.8	337.2	336.6	336.1	335.7	335.3	334.9	334.5
37.5°	318.7	318.1	317.4	316.9	316.3	315.8	315.2	314.7
40°	305.5	304.6	303.8	303.2	302.7	302.3	301.9	301.5
42.5°	292.6	291.6	290.7	290.0	289.7	289.5	289.1	288.9
45°	272.7	271.7	270.8	270.2	270.0	269.7	269.5	269.3
47.5°	253.3	252.3	251.3	250.5	249.9	249.2	248.6	248.0
50°	239.9	238.8	237.6	236.7	236.2	235.8	235.2	234.7
52.5°	226.1	225.1	224.0	223.2	222.5	221.9	221.3	220.6
55°	205.7	204.7	203.7	203.0	202.5	202.0	201.5	201.0
57.5°	185.4	184.4	183.5	182.8	182.3	181.8	181.3	180.8
60°	171.3	170.6	169.8	169.3	168.9	168.4	168.0	167.6
62.5°	157.7	157.0	156.3	155.7	155.3	155.0	154.6	154.1
65°	137.8	137.0	136.2	135.5	135.1	134.7	134.3	133.9
67.5°	117.3	116.5	115.7	115.3	115.2	115.0	114.9	114.8
70°	104.4	103.8	103.1	102.6	102.3	102.1	101.9	101.6
72.5°	91.5	90.9	90.4	90.0	89.8	89.5	89.3	89.0
75°	72.8	72.5	72.2	71.9	71.9	71.8	71.7	71.6
77.5°	55.1	55.1	55.0	54.8	54.6	54.3	54.1	53.9
80°	43.9	43.7	43.6	43.5	43.3	43.3	43.2	43.1
82.5°	33.8	33.7	33.7	33.6	33.5	33.4	33.3	33.2
85°	19.5	19.5	19.5	19.5	19.4	19.3	19.2	19.1
87.5°	8.6	8.6	8.7	8.8	8.8	8.8	8.9	8.9
90°	6.9	7.3	7.7	7.9	8.0	8.2	8.2	8.4
92.5°	6.7	7.1	7.4	7.6	7.7	7.7	7.7	7.8
95°	6.9	7.3	7.7	7.8	7.9	8.0	8.1	8.1
97.5°	7.4	7.5	7.5	7.6	7.7	7.7	7.8	7.8
100°	10.2	9.1	8.1	7.6	7.7	7.7	7.8	7.8
102.5°	36.5	25.1	13.7	8.0	8.0	8.0	8.1	8.1
105°	88.5	89.0	89.6	88.7	86.5	84.3	82.0	79.8
107.5°	109.5	109.7	110.0	110.3	110.5	110.7	111.0	111.2
110°	123.7	123.8	124.0	124.1	124.3	124.5	124.7	124.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	137.5	137.5	137.4	137.6	137.8	138.1	138.3	138.6
115°	158.1	158.3	158.4	158.4	158.4	158.4	158.4	158.4
117.5°	178.9	178.9	178.9	178.8	178.8	178.8	178.8	178.7
120°	191.7	191.9	192.0	192.0	191.9	191.7	191.6	191.5
122.5°	204.4	204.5	204.5	204.5	204.4	204.3	204.1	204.1
125°	222.1	222.3	222.4	222.6	222.7	222.8	222.8	222.8
127.5°	239.7	239.6	239.6	239.6	239.6	239.5	239.4	239.4
130°	250.4	250.5	250.6	250.6	250.6	250.6	250.6	250.6
132.5°	260.9	261.0	261.1	261.1	261.0	260.9	260.9	260.9
135°	275.4	275.6	275.7	275.8	275.9	276.1	276.2	276.3
137.5°	289.4	289.5	289.6	289.7	289.6	289.6	289.5	289.5
140°	297.9	298.2	298.3	298.5	298.6	298.6	298.7	298.7
142.5°	305.9	306.1	306.2	306.3	306.3	306.3	306.3	306.3
145°	317.3	317.4	317.4	317.5	317.7	317.8	317.9	318.1
147.5°	327.3	327.4	327.4	327.5	327.6	327.6	327.6	327.7
150°	333.7	333.7	333.7	333.7	333.8	333.9	333.9	334.0
152.5°	339.3	339.4	339.5	339.5	339.5	339.5	339.5	339.4
155°	346.8	347.1	347.3	347.4	347.1	347.0	346.8	346.6
157.5°	353.3	353.6	353.9	353.9	353.6	353.3	353.0	352.7
160°	357.4	357.8	358.1	358.1	357.8	357.4	357.0	356.6
162.5°	360.8	361.2	361.6	361.5	361.1	360.7	360.2	359.8
165°	365.5	366.0	366.5	366.5	365.9	365.4	364.8	364.2
167.5°	369.0	369.6	370.0	370.0	369.4	368.8	368.1	367.6
170°	371.1	371.6	372.1	372.0	371.5	370.8	370.2	369.6
172.5°	372.5	373.0	373.4	373.4	372.7	372.0	371.4	370.7
175°	374.1	374.6	375.2	375.1	374.3	373.6	372.8	372.1
177.5°	374.7	375.1	375.5	375.3	374.8	374.1	373.6	373.0
180°	374.3	374.3	374.3	374.3	374.3	374.3	374.3	374.3

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