

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: P331300-830

Luminaire Tested: **SA2XXDIP-C485D530U830-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331300-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C485D530U830-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

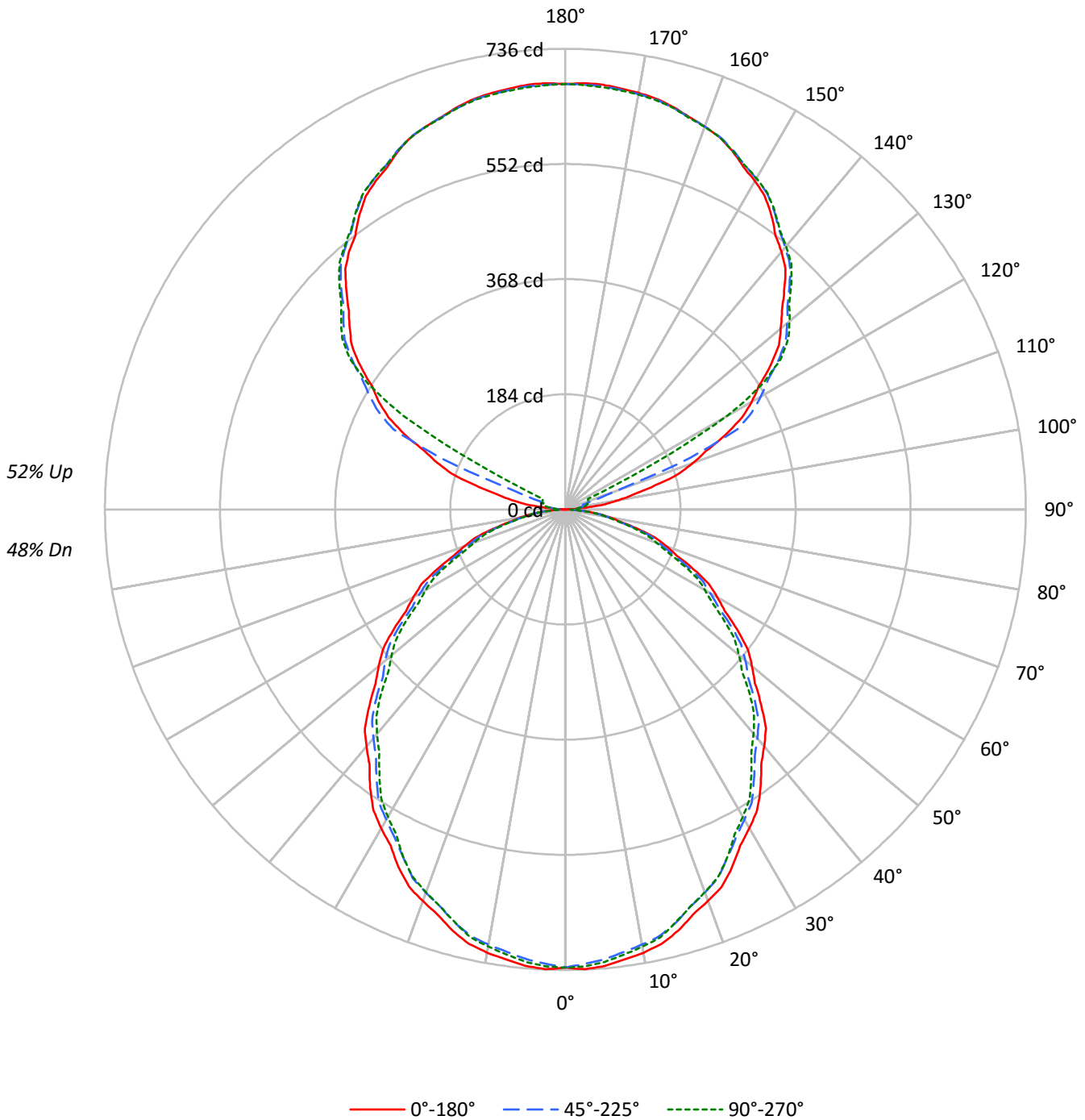
Lumens per Lamp: N/A  
Luminaire Lumens: 3856.3 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 32.8  
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	98	98	98	98	82	82	82	68	68	68	55	55	55	48				48
1	97	93	89	86	90	86	82	79	72	70	68	60	58	57	48	47	46				41	
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	41	39				34	
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33				29	
4	74	63	55	49	68	59	52	46	50	44	40	41	37	34	34	31	28				25	
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25				22	
6	63	51	42	37	57	47	40	34	40	34	30	34	29	26	27	24	22				19	
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19				17	
8	54	41	34	28	49	39	32	27	33	28	24	28	24	20	23	20	17				15	
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16				14	
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14				12	

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

	0°	45°	90°
0°	11820	11820	11820
5°	11866	11694	11763
10°	11795	11576	11632
15°	11649	11425	11413
20°	11442	11201	11187
25°	11236	10922	10922
30°	10972	10670	10577
35°	10724	10364	10212
40°	10416	10060	9866
45°	10111	9757	9515
50°	9779	9442	9105
55°	9433	9073	8740
60°	9045	8638	8318
65°	8630	8202	7824
70°	8105	7676	7312
75°	7380	7068	6900
80°	6546	6341	6025
85°	5335	5076	4557



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.8	1.8
10°-20°	193.7	5.0
20°-30°	284.7	7.4
30°-40°	330.7	8.6
40°-50°	330.4	8.6
50°-60°	288.1	7.5
60°-70°	213.0	5.5
70°-80°	120.7	3.1
80°-90°	34.1	0.9
90°-100°	22.7	0.6
100°-110°	83.2	2.2
110°-120°	222.3	5.8
120°-130°	366.9	9.5
130°-140°	390.2	10.1
140°-150°	362.7	9.4
150°-160°	291.6	7.6
160°-170°	187.9	4.9
170°-180°	64.7	1.7
0°-30°	547.2	14.2
0°-40°	878.0	22.8
0°-60°	1496.4	38.8
0°-90°	1864.2	48.3
90°-120°	328.1	8.5
90°-150°	1447.9	37.5
90°-180°	1992.0	51.7
0°-180°	3856.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	732	729	722	727	726	69
15°	697	692	684	686	683	196
25°	631	625	613	614	613	290
35°	544	537	526	522	518	340
45°	443	438	427	420	417	342
55°	335	331	322	314	310	299
65°	226	222	215	208	205	223
75°	118	117	113	109	111	126
85°	29	28	27	25	25	33
90°	0	6	10	12	13	3
95°	32	17	19	22	21	39
105°	150	156	30	35	37	160
115°	283	291	304	86	40	278
125°	400	406	416	419	421	356
135°	495	502	507	512	511	382
145°	574	574	582	585	583	359
155°	632	628	634	636	632	291
165°	666	663	664	668	664	188
175°	681	678	679	682	677	65
180°	680	680	680	680	680	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	735.5	734.8	734.2	733.6	732.9	732.0	730.6	729.2	727.8	726.4	727.7
5°	732.1	731.4	730.8	730.2	729.6	728.4	726.7	725.0	723.2	721.5	722.7
7.5°	725.6	724.6	723.7	722.6	721.7	720.4	718.6	716.9	715.1	713.3	714.6
10°	719.4	718.3	717.2	716.1	715.0	713.5	711.6	709.8	707.9	706.1	707.3
12.5°	711.0	710.0	709.0	708.0	707.1	705.7	703.8	701.9	700.0	698.1	699.0
15°	696.9	696.0	695.0	694.1	693.1	691.6	689.6	687.6	685.5	683.5	684.1
17.5°	678.8	678.0	677.0	676.1	675.1	673.6	671.6	669.5	667.4	665.3	666.1
20°	665.9	665.0	664.0	663.1	662.1	660.6	658.4	656.2	654.0	651.9	652.3
22.5°	653.0	651.7	650.4	649.0	647.7	646.0	643.9	641.9	639.8	637.7	637.8
25°	630.7	629.4	628.2	627.0	625.8	623.8	621.1	618.4	615.8	613.1	613.4
27.5°	605.4	604.3	603.1	602.0	600.9	599.3	597.2	595.0	593.0	590.9	590.4
30°	588.5	587.2	586.0	584.8	583.4	581.6	579.3	577.0	574.7	572.3	571.8
32.5°	570.4	569.5	568.4	567.4	566.5	564.7	562.2	559.8	557.3	554.9	554.0
35°	544.1	542.5	541.0	539.4	537.9	535.8	533.4	530.8	528.3	525.8	524.9
37.5°	514.4	513.0	511.7	510.3	508.9	507.0	504.4	502.0	499.5	497.0	495.8
40°	494.2	492.9	491.6	490.4	489.2	487.3	484.7	482.3	479.8	477.3	475.9
42.5°	474.5	473.2	471.9	470.7	469.5	467.6	465.1	462.6	460.1	457.5	456.0
45°	442.8	441.7	440.5	439.5	438.4	436.7	434.3	432.0	429.6	427.3	425.6
47.5°	411.2	410.2	409.2	408.1	407.1	405.4	402.9	400.5	398.0	395.6	393.8
50°	389.3	388.5	387.7	386.9	386.2	384.7	382.5	380.3	378.1	375.9	373.7
52.5°	367.9	366.8	365.8	364.8	363.7	362.2	360.1	358.1	356.0	353.9	352.1
55°	335.1	334.1	333.2	332.2	331.3	329.9	328.0	326.1	324.2	322.3	320.6
57.5°	302.1	301.3	300.6	299.9	299.2	297.7	295.7	293.6	291.5	289.5	287.6
60°	280.1	279.6	278.9	278.2	277.7	276.3	274.1	271.8	269.7	267.5	265.8
62.5°	258.7	257.8	256.7	255.7	254.8	253.4	251.8	250.1	248.4	246.7	245.1
65°	225.9	225.0	224.0	223.1	222.3	220.9	219.4	217.8	216.2	214.7	213.3
67.5°	192.6	191.8	191.1	190.3	189.5	188.5	187.1	185.7	184.3	182.9	181.8
70°	171.7	171.2	170.5	169.8	169.3	168.2	166.8	165.4	164.0	162.6	161.6
72.5°	150.3	149.8	149.1	148.5	147.9	147.1	146.2	145.2	144.4	143.5	142.3
75°	118.3	117.9	117.6	117.3	117.0	116.5	115.6	114.9	114.1	113.3	112.4
77.5°	89.5	89.0	88.5	87.9	87.4	87.0	86.7	86.3	86.1	85.8	85.3
80°	70.4	70.2	70.1	69.9	69.7	69.6	69.2	68.9	68.6	68.2	67.8
82.5°	52.4	52.3	52.3	52.3	52.2	52.1	51.9	51.7	51.6	51.4	50.8
85°	28.8	28.7	28.6	28.4	28.3	28.1	27.9	27.8	27.6	27.4	27.0
87.5°	10.3	10.2	10.2	10.2	10.2	10.2	10.1	10.0	9.9	9.9	9.6
90°	0.5	1.7	2.9	4.1	5.3	6.3	7.3	8.1	9.0	9.8	10.4
92.5°	9.9	9.8	9.7	9.6	9.5	9.7	10.1	10.6	10.9	11.4	11.7
95°	32.0	28.4	24.8	21.1	17.5	16.1	16.9	17.6	18.4	19.2	19.7
97.5°	63.4	53.3	43.2	33.0	22.8	18.6	20.4	22.1	23.9	25.6	26.1
100°	87.1	72.1	57.1	42.1	27.1	20.6	22.4	24.3	26.2	28.0	28.9
102.5°	113.0	109.9	106.7	103.5	100.4	91.0	75.5	59.9	44.4	28.8	30.0
105°	149.5	152.8	156.1	159.4	162.7	149.4	119.5	89.7	59.9	30.0	31.2
107.5°	191.1	193.8	196.4	199.1	201.7	185.1	149.4	113.6	77.8	42.0	40.8
110°	217.9	220.2	222.5	224.8	227.1	212.4	180.9	149.3	117.6	86.1	75.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	243.1	245.2	247.1	249.2	251.2	248.4	240.5	232.7	224.9	217.2	177.2
115°	282.9	284.6	286.5	288.4	290.3	292.6	295.3	298.0	300.8	303.5	252.9
117.5°	318.4	320.5	322.5	324.6	326.7	328.7	330.5	332.4	334.3	336.1	324.0
120°	344.3	345.9	347.6	349.2	350.9	352.7	354.7	356.7	358.5	360.5	361.8
122.5°	366.4	368.1	369.9	371.6	373.2	375.2	377.3	379.5	381.6	383.8	384.6
125°	399.9	401.3	402.7	404.2	405.6	407.4	409.4	411.5	413.6	415.7	416.4
127.5°	430.3	431.9	433.5	435.0	436.6	438.2	439.7	441.3	442.8	444.4	445.4
130°	449.6	451.3	453.1	454.9	456.6	458.1	459.3	460.4	461.7	462.9	464.1
132.5°	469.3	470.7	472.2	473.7	475.2	476.5	477.8	479.0	480.1	481.4	482.4
135°	494.8	496.6	498.3	500.1	501.8	503.2	504.2	505.2	506.1	507.1	508.2
137.5°	520.8	521.9	523.1	524.3	525.6	526.8	527.9	529.0	530.1	531.2	532.3
140°	537.6	538.5	539.4	540.3	541.1	542.2	543.4	544.6	545.7	547.0	548.0
142.5°	551.8	552.6	553.4	554.1	555.0	556.0	557.4	558.7	560.2	561.6	562.4
145°	574.0	573.9	573.8	573.7	573.6	574.5	576.4	578.2	580.0	581.9	582.7
147.5°	593.4	593.0	592.6	592.2	591.7	592.5	594.3	596.2	597.9	599.8	600.4
150°	606.0	605.2	604.5	603.7	602.9	603.4	605.2	606.9	608.7	610.4	611.1
152.5°	616.6	615.8	614.9	614.1	613.2	613.6	615.3	617.0	618.6	620.3	620.9
155°	632.1	631.1	630.1	629.1	628.1	628.3	629.6	630.9	632.3	633.6	634.2
157.5°	644.1	643.4	642.5	641.7	640.8	640.9	641.8	642.7	643.7	644.6	645.3
160°	651.3	650.6	650.0	649.3	648.7	648.7	649.3	650.0	650.6	651.3	652.0
162.5°	657.5	656.9	656.2	655.5	655.0	654.9	655.4	656.0	656.6	657.1	657.9
165°	666.0	665.3	664.7	664.0	663.4	663.3	663.5	663.8	664.2	664.5	665.3
167.5°	672.3	671.7	671.0	670.3	669.7	669.5	669.8	670.1	670.4	670.7	671.5
170°	675.8	675.2	674.6	673.9	673.3	673.0	673.3	673.4	673.6	673.9	674.7
172.5°	678.3	677.6	676.9	676.3	675.6	675.3	675.6	675.8	676.0	676.3	677.0
175°	681.3	680.5	679.8	679.0	678.2	678.0	678.2	678.3	678.5	678.8	679.6
177.5°	681.7	681.2	680.5	680.0	679.3	679.0	679.1	679.2	679.3	679.4	680.0
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	729.0	730.2	731.4	732.0	731.7	731.4	731.2	730.9
5°	724.1	725.3	726.5	727.0	726.7	726.3	726.0	725.8
7.5°	715.9	717.1	718.4	718.8	718.5	718.1	717.7	717.5
10°	708.5	709.8	711.1	711.4	711.0	710.5	710.0	709.5
12.5°	699.9	700.8	701.6	701.9	701.5	701.3	700.9	700.5
15°	684.8	685.4	686.0	685.9	685.1	684.4	683.6	682.8
17.5°	666.8	667.5	668.3	668.2	667.4	666.8	666.0	665.2
20°	652.8	653.3	653.7	653.7	653.0	652.3	651.8	651.1
22.5°	637.9	638.0	638.1	638.0	637.6	637.3	636.9	636.5
25°	613.8	614.1	614.3	614.3	614.1	613.8	613.4	613.1
27.5°	589.9	589.5	589.0	588.4	587.7	586.9	586.2	585.4
30°	571.4	570.9	570.4	569.9	569.2	568.6	568.0	567.3
32.5°	553.2	552.3	551.5	550.7	550.1	549.5	548.8	548.2
35°	524.0	523.0	522.1	521.2	520.5	519.6	518.9	518.1
37.5°	494.6	493.5	492.4	491.3	490.6	489.8	489.1	488.4
40°	474.5	473.1	471.6	470.6	470.0	469.4	468.7	468.1
42.5°	454.5	453.0	451.4	450.3	449.3	448.5	447.6	446.7
45°	423.9	422.2	420.4	419.2	418.6	418.0	417.4	416.7
47.5°	392.0	390.1	388.3	387.0	386.1	385.2	384.3	383.3
50°	371.6	369.3	367.1	365.6	364.9	364.1	363.3	362.5
52.5°	350.3	348.5	346.7	345.3	344.2	343.2	342.1	341.1
55°	318.7	316.8	314.9	313.6	312.7	312.0	311.2	310.5
57.5°	285.8	283.9	282.1	280.9	280.2	279.7	279.1	278.4
60°	264.0	262.3	260.6	259.5	259.0	258.5	258.1	257.6
62.5°	243.5	241.9	240.3	239.2	238.6	238.0	237.4	236.8
65°	211.9	210.5	209.1	207.9	207.2	206.4	205.7	204.8
67.5°	180.7	179.6	178.5	177.7	177.0	176.3	175.8	175.1
70°	160.4	159.3	158.3	157.4	156.7	156.1	155.5	154.9
72.5°	141.3	140.2	139.1	138.3	137.8	137.2	136.8	136.3
75°	111.4	110.6	109.6	109.2	109.6	109.9	110.2	110.6
77.5°	84.8	84.4	83.9	83.4	82.9	82.6	82.1	81.6
80°	67.3	66.8	66.4	66.0	65.7	65.4	65.0	64.8
82.5°	50.2	49.6	49.0	48.6	48.6	48.5	48.4	48.4
85°	26.5	26.0	25.5	25.3	25.1	25.0	24.8	24.6
87.5°	9.3	9.0	8.8	8.6	8.6	8.5	8.4	8.3
90°	10.9	11.5	12.1	12.4	12.6	12.8	13.1	13.3
92.5°	12.0	12.3	12.5	12.7	12.9	13.0	13.2	13.3
95°	20.3	20.8	21.4	21.6	21.5	21.4	21.3	21.1
97.5°	26.6	27.0	27.4	27.7	27.8	28.0	28.1	28.3
100°	29.8	30.6	31.6	32.0	32.3	32.5	32.7	33.0
102.5°	31.1	32.2	33.4	34.1	34.4	34.7	35.0	35.3
105°	32.4	33.6	34.8	35.6	36.1	36.5	36.9	37.4
107.5°	39.6	38.4	37.1	36.8	37.1	37.6	38.0	38.5
110°	64.2	53.3	42.3	37.1	37.5	38.0	38.5	38.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	137.3	97.5	57.6	37.9	38.2	38.5	38.9	39.2
115°	202.3	151.7	101.0	71.8	63.9	56.1	48.2	40.3
117.5°	311.7	299.4	287.2	268.2	242.2	216.4	190.6	164.7
120°	363.2	364.5	365.8	359.1	344.3	329.6	314.8	300.0
122.5°	385.3	386.2	386.9	385.9	383.0	380.1	377.3	374.4
125°	417.2	417.9	418.7	419.2	419.6	419.9	420.3	420.6
127.5°	446.6	447.7	448.8	449.4	449.5	449.6	449.6	449.7
130°	465.2	466.5	467.7	468.3	468.1	468.0	467.9	467.8
132.5°	483.4	484.5	485.5	485.9	485.8	485.7	485.6	485.5
135°	509.3	510.4	511.5	512.0	511.7	511.5	511.3	511.0
137.5°	533.4	534.4	535.6	535.8	535.5	535.1	534.8	534.4
140°	548.9	549.9	550.9	551.1	550.5	550.1	549.5	548.9
142.5°	563.4	564.2	565.1	565.3	564.8	564.2	563.6	563.1
145°	583.4	584.2	584.9	585.0	584.6	584.0	583.4	582.9
147.5°	601.0	601.5	602.1	602.1	601.7	601.2	600.8	600.3
150°	611.7	612.4	613.0	613.1	612.6	612.0	611.4	611.0
152.5°	621.6	622.3	622.9	622.8	622.2	621.4	620.7	620.0
155°	634.9	635.6	636.2	636.0	635.2	634.3	633.5	632.5
157.5°	646.0	646.8	647.5	647.5	646.6	645.7	644.9	644.0
160°	652.5	653.2	653.8	653.8	653.1	652.3	651.5	650.7
162.5°	658.6	659.4	660.2	660.1	659.1	658.2	657.2	656.3
165°	666.1	666.8	667.6	667.6	666.8	666.1	665.3	664.5
167.5°	672.2	673.1	673.8	673.7	672.7	671.8	670.7	669.8
170°	675.4	676.2	676.9	676.8	675.8	674.9	673.9	672.9
172.5°	677.8	678.5	679.3	679.2	678.3	677.2	676.3	675.2
175°	680.3	681.1	681.8	681.7	680.6	679.5	678.4	677.3
177.5°	680.6	681.3	681.8	681.7	681.0	680.1	679.4	678.6
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8

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