

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: P331345-830

Luminaire Tested: **SA2XXDIP-C675D530U830-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331345-830  
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-C675D530U830-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

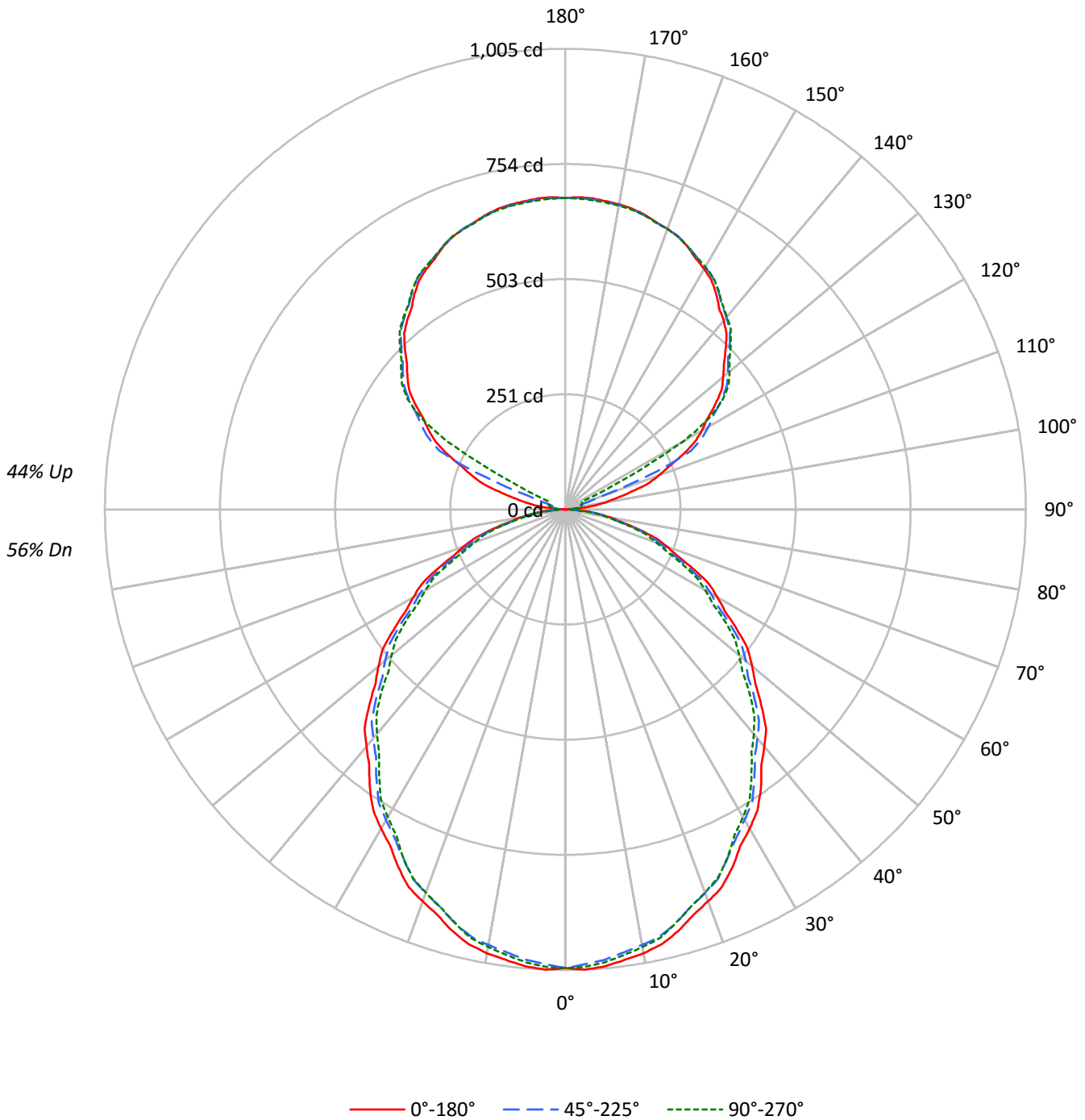
Lumens per Lamp: N/A  
Luminaire Lumens: 4539.7 lumens  
Efficiency: N/A  
Efficacy: 112.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 40.3  
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	0
RCR																		
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	99	95	91	87	92	88	85	82	76	74	71	65	63	61	55	53	52	47
2	90	83	77	71	84	77	72	67	67	63	59	57	54	51	48	46	44	40
3	82	73	65	59	76	68	61	56	59	54	50	50	47	43	43	40	37	34
4	75	64	56	50	70	60	53	48	52	47	42	45	41	37	38	35	32	29
5	69	57	49	43	64	54	46	41	47	41	37	40	36	32	34	31	28	25
6	64	52	43	38	59	48	41	36	42	36	32	37	32	28	31	28	25	22
7	59	47	39	33	55	44	36	31	38	32	28	33	29	25	28	25	22	19
8	55	42	35	29	51	40	33	28	35	29	25	30	26	22	26	22	20	17
9	51	39	31	26	47	36	30	25	32	26	22	28	23	20	24	21	18	16
10	48	36	28	23	44	34	27	22	30	24	20	26	21	18	22	19	16	14

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

	0°	45°	90°
0°	16157	16157	16157
5°	16219	15985	16078
10°	16123	15823	15901
15°	15921	15616	15600
20°	15639	15309	15292
25°	15358	14931	14931
30°	14997	14585	14458
35°	14661	14168	13957
40°	14235	13748	13487
45°	13819	13337	13006
50°	13366	12906	12446
55°	12892	12405	11944
60°	12368	11806	11370
65°	11801	11213	10697
70°	11084	10494	9994
75°	10081	9669	9426
80°	8945	8675	8229
85°	7317	6947	6224



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.1	2.1
10°-20°	264.8	5.8
20°-30°	389.2	8.6
30°-40°	452.1	10.0
40°-50°	451.6	9.9
50°-60°	393.8	8.7
60°-70°	291.2	6.4
70°-80°	164.9	3.6
80°-90°	46.0	1.0
90°-100°	22.7	0.5
100°-110°	83.2	1.8
110°-120°	222.3	4.9
120°-130°	366.9	8.1
130°-140°	390.2	8.6
140°-150°	362.7	8.0
150°-160°	291.6	6.4
160°-170°	187.9	4.1
170°-180°	64.7	1.4
0°-30°	748.0	16.5
0°-40°	1200.1	26.4
0°-60°	2045.4	45.1
0°-90°	2547.6	56.1
90°-120°	328.1	7.2
90°-150°	1447.9	31.9
90°-180°	1992.0	43.9
0°-180°	4539.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	1001	996	986	993	992	95
15°	952	946	934	938	933	268
25°	862	854	838	840	838	396
35°	744	734	719	713	708	464
45°	605	598	584	574	570	467
55°	458	452	441	430	424	409
65°	309	303	294	285	280	305
75°	162	160	155	150	151	173
85°	40	38	38	35	34	45
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°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1005.3	1004.5	1003.6	1002.8	1001.9	1000.5	998.6	996.7	994.9	993.0	994.7
5°	1000.7	999.8	999.0	998.2	997.3	995.7	993.3	991.0	988.6	986.3	988.0
7.5°	991.8	990.5	989.2	987.9	986.6	984.7	982.3	979.9	977.5	975.1	976.8
10°	983.4	981.8	980.3	978.8	977.4	975.3	972.8	970.3	967.6	965.1	966.8
12.5°	971.9	970.5	969.1	967.8	966.5	964.6	962.0	959.4	956.9	954.3	955.5
15°	952.5	951.3	950.0	948.8	947.4	945.4	942.6	939.8	937.1	934.2	935.2
17.5°	927.9	926.6	925.4	924.1	922.8	920.8	917.9	915.1	912.3	909.5	910.5
20°	910.2	909.0	907.7	906.3	905.1	903.0	899.9	897.0	894.0	891.0	891.6
22.5°	892.5	890.7	888.9	887.1	885.3	883.1	880.2	877.4	874.6	871.8	871.9
25°	862.1	860.4	858.8	857.0	855.3	852.6	848.9	845.4	841.7	838.1	838.5
27.5°	827.5	826.0	824.4	822.8	821.3	819.2	816.2	813.4	810.5	807.7	807.0
30°	804.4	802.7	801.0	799.3	797.6	795.1	791.9	788.7	785.5	782.3	781.7
32.5°	779.8	778.4	777.0	775.6	774.3	771.9	768.5	765.2	761.8	758.4	757.2
35°	743.8	741.7	739.5	737.4	735.2	732.4	729.1	725.6	722.2	718.8	717.5
37.5°	703.1	701.3	699.4	697.5	695.7	693.0	689.6	686.2	682.8	679.3	677.7
40°	675.4	673.7	672.0	670.3	668.6	666.1	662.6	659.2	655.8	652.3	650.4
42.5°	648.6	646.8	645.1	643.4	641.7	639.1	635.7	632.3	628.9	625.5	623.3
45°	605.2	603.7	602.2	600.8	599.3	596.9	593.7	590.5	587.3	584.1	581.7
47.5°	562.1	560.7	559.3	557.9	556.5	554.1	550.7	547.4	544.1	540.7	538.3
50°	532.1	531.0	530.0	528.9	527.8	525.8	522.8	519.8	516.8	513.8	510.9
52.5°	502.8	501.4	500.0	498.6	497.2	495.1	492.3	489.5	486.6	483.8	481.4
55°	458.0	456.8	455.4	454.1	452.9	450.9	448.4	445.8	443.3	440.7	438.1
57.5°	412.9	412.0	410.9	409.9	408.9	407.0	404.2	401.3	398.5	395.7	393.1
60°	383.0	382.1	381.3	380.4	379.6	377.6	374.7	371.6	368.6	365.6	363.3
62.5°	353.7	352.3	351.0	349.6	348.3	346.4	344.1	341.8	339.5	337.1	335.0
65°	308.9	307.6	306.3	305.0	303.7	302.0	299.9	297.7	295.6	293.5	291.5
67.5°	263.3	262.2	261.2	260.1	259.1	257.7	255.7	253.8	251.9	250.0	248.5
70°	234.8	233.9	233.1	232.2	231.4	230.0	228.0	226.1	224.2	222.3	220.7
72.5°	205.6	204.6	203.8	202.9	202.1	201.0	199.8	198.6	197.4	196.0	194.6
75°	161.6	161.2	160.8	160.3	159.9	159.2	158.2	157.0	156.0	155.0	153.6
77.5°	122.4	121.7	120.9	120.2	119.5	118.9	118.5	118.0	117.6	117.2	116.6
80°	96.2	96.0	95.8	95.6	95.4	95.0	94.6	94.2	93.8	93.3	92.7
82.5°	71.6	71.5	71.5	71.4	71.4	71.3	71.0	70.8	70.5	70.2	69.5
85°	39.5	39.2	39.0	38.8	38.5	38.4	38.2	38.0	37.7	37.5	36.9
87.5°	13.9	13.9	13.8	13.7	13.6	13.4	13.3	13.1	12.9	12.7	12.3
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°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	996.4	998.2	999.8	1000.5	1000.1	999.8	999.5	999.2
5°	989.7	991.4	993.1	993.7	993.3	992.9	992.5	992.0
7.5°	978.5	980.2	981.9	982.5	982.0	981.7	981.2	980.7
10°	968.5	970.3	971.9	972.4	971.9	971.2	970.5	969.9
12.5°	956.7	957.9	959.1	959.4	958.9	958.6	958.1	957.6
15°	936.0	936.9	937.7	937.6	936.5	935.5	934.4	933.3
17.5°	911.4	912.4	913.4	913.4	912.4	911.3	910.3	909.3
20°	892.3	893.0	893.5	893.4	892.6	891.7	890.9	890.0
22.5°	872.0	872.1	872.2	872.0	871.6	871.0	870.5	870.1
25°	839.0	839.3	839.8	839.8	839.3	839.0	838.5	838.1
27.5°	806.3	805.8	805.1	804.3	803.2	802.2	801.2	800.1
30°	781.0	780.3	779.7	778.9	778.1	777.2	776.4	775.5
32.5°	756.1	755.0	753.8	752.8	752.0	751.1	750.2	749.3
35°	716.2	714.9	713.6	712.5	711.4	710.3	709.3	708.1
37.5°	676.2	674.6	673.0	671.7	670.6	669.6	668.6	667.6
40°	648.6	646.6	644.7	643.3	642.4	641.6	640.7	639.9
42.5°	621.2	619.2	617.1	615.4	614.2	613.0	611.8	610.6
45°	579.4	577.0	574.7	573.1	572.2	571.4	570.5	569.6
47.5°	535.8	533.3	530.8	529.0	527.7	526.5	525.3	524.1
50°	507.8	504.8	501.8	499.8	498.7	497.7	496.6	495.5
52.5°	478.8	476.4	473.9	471.9	470.5	469.1	467.7	466.3
55°	435.5	433.0	430.5	428.6	427.5	426.5	425.4	424.3
57.5°	390.6	388.0	385.6	383.9	383.0	382.3	381.4	380.6
60°	360.9	358.5	356.2	354.8	354.1	353.5	352.8	352.1
62.5°	332.8	330.6	328.5	327.0	326.1	325.3	324.5	323.7
65°	289.6	287.7	285.8	284.3	283.2	282.1	281.1	280.0
67.5°	246.9	245.5	244.0	242.8	242.0	241.1	240.3	239.4
70°	219.2	217.8	216.3	215.1	214.2	213.4	212.5	211.7
72.5°	193.1	191.6	190.1	189.0	188.3	187.7	187.0	186.2
75°	152.3	151.1	149.8	149.4	149.8	150.2	150.6	151.1
77.5°	115.9	115.3	114.6	114.0	113.4	112.8	112.3	111.6
80°	92.1	91.4	90.8	90.2	89.8	89.4	89.0	88.5
82.5°	68.6	67.8	67.0	66.5	66.4	66.4	66.3	66.2
85°	36.3	35.6	35.0	34.5	34.3	34.1	33.9	33.6
87.5°	12.0	11.5	11.1	10.8	10.7	10.7	10.5	10.4
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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