

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: P331337

Luminaire Tested: **SA2XXDIP-C675D330U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331337
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D330U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

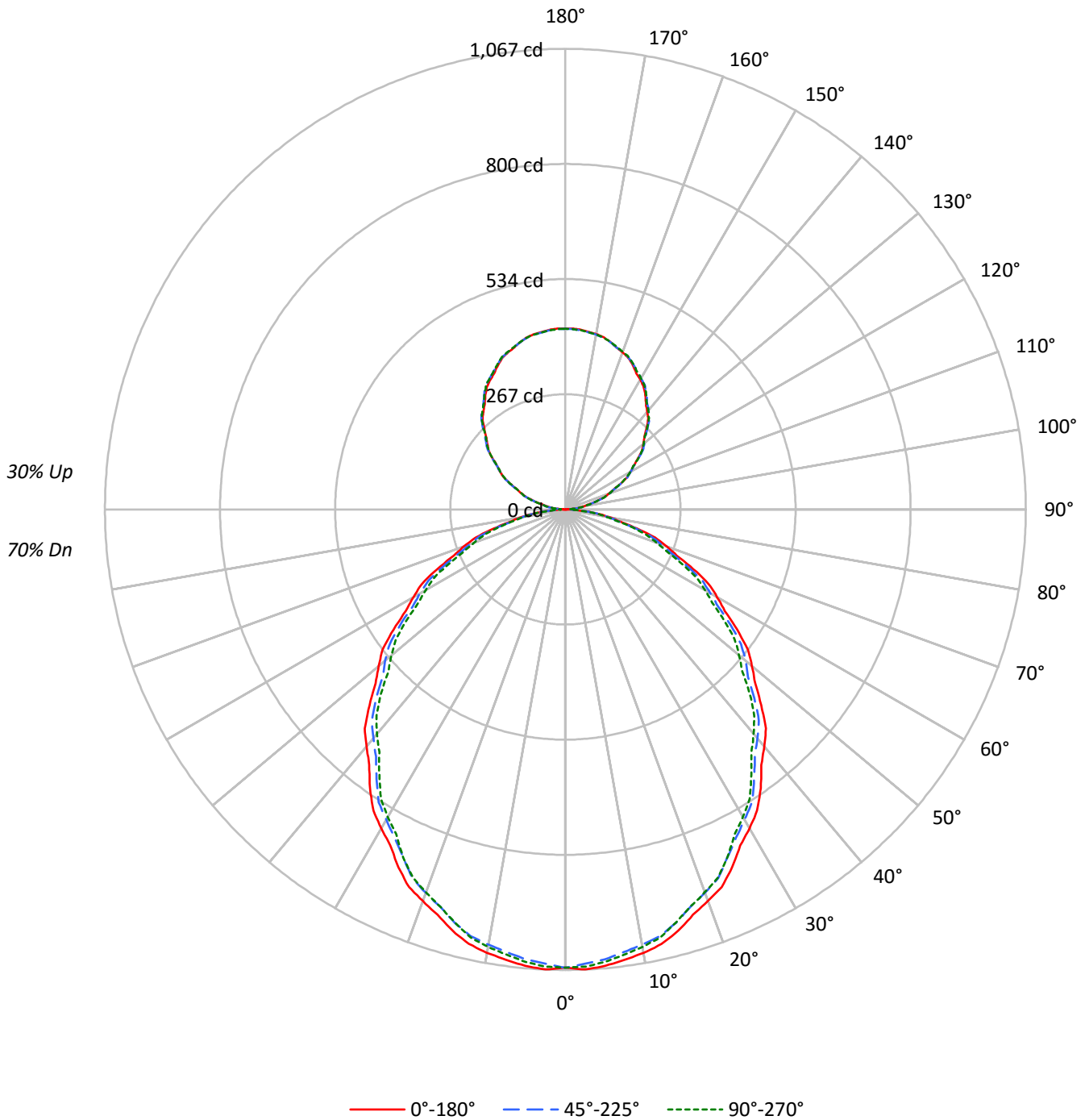
Lumens per Lamp: N/A
Luminaire Lumens: 3873.4 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	102	98	94	90	96	93	89	86	83	80	78	74	72	70	66	64	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	61	58	58	55	53	49
3	85	75	68	61	80	71	64	59	64	59	54	57	53	50	51	48	45	42
4	78	67	58	52	73	63	56	50	57	51	46	51	46	43	46	42	39	36
5	72	59	51	45	67	57	49	43	51	45	40	46	41	37	41	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	36	32	38	33	30	27
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	31	54	42	35	30	38	32	28	35	30	26	32	27	24	22
9	53	40	33	27	50	39	31	27	35	29	25	32	27	23	29	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17142	17142	17142
5°	17208	16960	17058
10°	17105	16787	16870
15°	16893	16568	16552
20°	16593	16242	16225
25°	16295	15841	15841
30°	15910	15474	15340
35°	15554	15031	14808
40°	15104	14587	14309
45°	14661	14150	13798
50°	14179	13692	13205
55°	13678	13163	12673
60°	13120	12526	12064
65°	12520	11897	11351
70°	11759	11131	10603
75°	10699	10256	10000
80°	9493	9205	8731
85°	7762	7373	6614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	2.6
10°-20°	280.9	7.3
20°-30°	412.9	10.7
30°-40°	479.6	12.4
40°-50°	479.1	12.4
50°-60°	417.8	10.8
60°-70°	308.9	8.0
70°-80°	175.0	4.5
80°-90°	48.7	1.3
90°-100°	26.5	0.7
100°-110°	82.4	2.1
110°-120°	140.8	3.6
120°-130°	185.2	4.8
130°-140°	207.9	5.4
140°-150°	203.8	5.3
150°-160°	171.0	4.4
160°-170°	113.4	2.9
170°-180°	39.6	1.0
0°-30°	793.6	20.5
0°-40°	1273.2	32.9
0°-60°	2170.1	56.0
0°-90°	2702.8	69.8
90°-120°	249.8	6.4
90°-150°	846.7	21.9
90°-180°	1171.0	30.2
0°-180°	3873.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1062	1057	1046	1054	1052	101
15°	1011	1004	991	995	990	284
25°	915	906	889	891	889	421
35°	789	779	763	756	751	492
45°	642	635	620	609	604	495
55°	486	479	468	456	450	434
65°	328	321	311	302	297	324
75°	172	169	164	159	160	183
85°	42	41	40	37	36	48
90°	0	5	12	12	12	3
95°	18	22	23	23	22	21
105°	76	77	78	78	78	80
115°	141	143	143	142	141	140
125°	206	209	208	207	206	184
135°	266	270	271	270	269	205
145°	323	325	328	328	326	202
155°	369	370	371	373	372	170
165°	402	401	401	404	402	113
175°	418	417	416	418	416	40
180°	419	419	419	419	419	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1066.6	1065.7	1064.8	1063.9	1063.0	1061.5	1059.5	1057.5	1055.5	1053.5	1055.3
5°	1061.7	1060.8	1059.9	1059.0	1058.1	1056.4	1053.9	1051.4	1048.9	1046.4	1048.2
7.5°	1052.3	1050.9	1049.5	1048.1	1046.7	1044.7	1042.2	1039.6	1037.1	1034.5	1036.3
10°	1043.3	1041.7	1040.1	1038.5	1037.0	1034.8	1032.1	1029.4	1026.6	1023.9	1025.7
12.5°	1031.1	1029.7	1028.2	1026.8	1025.4	1023.4	1020.6	1017.9	1015.2	1012.5	1013.8
15°	1010.6	1009.3	1007.9	1006.6	1005.2	1003.0	1000.1	997.1	994.2	991.2	992.2
17.5°	984.5	983.1	981.8	980.4	979.1	976.9	973.9	970.9	967.9	964.9	966.0
20°	965.7	964.4	963.0	961.6	960.3	958.0	954.8	951.7	948.5	945.3	946.0
22.5°	946.9	945.0	943.1	941.2	939.3	936.9	933.9	930.9	927.9	924.9	925.0
25°	914.7	912.9	911.1	909.2	907.4	904.6	900.7	896.9	893.0	889.2	889.6
27.5°	877.9	876.3	874.7	873.0	871.4	869.1	866.0	863.0	859.9	856.9	856.2
30°	853.4	851.6	849.8	848.0	846.2	843.6	840.2	836.8	833.4	830.0	829.3
32.5°	827.3	825.8	824.4	822.9	821.5	819.0	815.4	811.8	808.2	804.6	803.4
35°	789.1	786.9	784.6	782.3	780.0	777.1	773.5	769.8	766.2	762.6	761.2
37.5°	746.0	744.0	742.0	740.0	738.1	735.2	731.6	728.0	724.4	720.7	719.0
40°	716.6	714.8	713.0	711.2	709.4	706.7	703.0	699.4	695.8	692.1	690.1
42.5°	688.1	686.2	684.4	682.6	680.8	678.1	674.4	670.8	667.2	663.6	661.3
45°	642.1	640.5	638.9	637.4	635.8	633.3	629.9	626.5	623.1	619.7	617.2
47.5°	596.4	594.9	593.4	591.9	590.4	587.9	584.3	580.8	577.3	573.7	571.1
50°	564.5	563.4	562.3	561.1	560.0	557.8	554.7	551.5	548.3	545.1	542.0
52.5°	533.5	532.0	530.5	529.0	527.5	525.3	522.3	519.3	516.3	513.3	510.7
55°	485.9	484.6	483.2	481.8	480.5	478.4	475.7	473.0	470.3	467.6	464.8
57.5°	438.1	437.1	436.0	434.9	433.8	431.8	428.8	425.8	422.8	419.8	417.1
60°	406.3	405.4	404.5	403.6	402.7	400.6	397.5	394.3	391.1	387.9	385.4
62.5°	375.3	373.8	372.4	370.9	369.5	367.5	365.1	362.6	360.2	357.7	355.4
65°	327.7	326.3	325.0	323.6	322.2	320.4	318.2	315.9	313.6	311.4	309.3
67.5°	279.3	278.2	277.1	276.0	274.9	273.4	271.3	269.3	267.3	265.2	263.6
70°	249.1	248.2	247.3	246.4	245.5	244.0	241.9	239.9	237.9	235.8	234.2
72.5°	218.1	217.1	216.2	215.3	214.4	213.3	212.0	210.7	209.4	208.0	206.5
75°	171.5	171.0	170.6	170.1	169.7	168.9	167.8	166.6	165.5	164.4	163.0
77.5°	129.9	129.1	128.3	127.5	126.8	126.2	125.7	125.2	124.8	124.3	123.7
80°	102.1	101.9	101.6	101.4	101.2	100.8	100.4	99.9	99.5	99.0	98.3
82.5°	76.0	75.9	75.9	75.8	75.8	75.6	75.3	75.1	74.8	74.5	73.7
85°	41.9	41.6	41.4	41.2	40.9	40.7	40.5	40.3	40.0	39.8	39.1
87.5°	14.8	14.6	14.4	14.2	14.1	14.0	14.0	13.9	13.9	13.9	13.3
90°	0.4	1.3	2.2	3.2	4.1	5.5	7.2	8.9	10.6	12.4	12.2
92.5°	6.3	7.0	7.7	8.4	9.1	9.6	10.0	10.4	10.8	11.2	11.3
95°	18.4	19.2	19.9	20.7	21.5	22.0	22.1	22.3	22.5	22.6	22.6
97.5°	33.6	34.3	34.9	35.6	36.3	36.8	37.1	37.4	37.7	38.0	38.0
100°	44.9	45.5	46.1	46.8	47.4	47.8	48.0	48.3	48.5	48.8	48.8
102.5°	56.7	57.2	57.7	58.2	58.7	59.2	59.4	59.7	60.0	60.3	60.4
105°	76.0	76.2	76.4	76.7	76.9	77.1	77.3	77.4	77.6	77.7	77.9
107.5°	95.3	95.7	96.0	96.4	96.7	96.9	96.9	96.9	96.9	96.9	96.9
110°	107.8	108.2	108.7	109.2	109.6	109.9	109.9	109.9	109.9	109.9	109.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	121.3	121.8	122.3	122.7	123.2	123.4	123.3	123.3	123.2	123.2	123.0
115°	141.3	141.8	142.3	142.7	143.2	143.4	143.2	143.0	142.9	142.7	142.7
117.5°	161.2	161.9	162.5	163.1	163.8	163.9	163.4	163.0	162.5	162.1	161.9
120°	174.5	175.2	175.8	176.4	177.0	177.0	176.4	175.8	175.2	174.5	174.5
122.5°	186.7	187.4	188.2	188.9	189.7	189.9	189.4	189.0	188.5	188.1	187.9
125°	205.6	206.3	207.0	207.7	208.4	208.7	208.4	208.2	208.0	207.7	207.5
127.5°	224.1	225.0	225.9	226.7	227.6	227.9	227.7	227.4	227.1	226.8	226.5
130°	235.7	236.7	237.7	238.7	239.7	240.2	240.0	239.9	239.7	239.5	239.4
132.5°	248.7	249.5	250.3	251.1	252.0	252.4	252.4	252.5	252.5	252.5	252.2
135°	266.0	266.9	267.8	268.6	269.5	270.0	270.2	270.3	270.5	270.6	270.5
137.5°	284.3	285.0	285.7	286.5	287.2	287.6	287.8	288.0	288.2	288.4	288.4
140°	295.4	296.1	296.8	297.5	298.2	298.7	299.1	299.5	299.9	300.3	300.3
142.5°	306.7	307.4	308.1	308.8	309.5	310.0	310.2	310.5	310.8	311.0	311.1
145°	322.9	323.5	324.0	324.6	325.1	325.6	326.1	326.6	327.0	327.5	327.6
147.5°	337.4	338.1	338.7	339.4	340.0	340.5	340.8	341.2	341.5	341.8	342.0
150°	347.3	347.8	348.2	348.7	349.2	349.6	349.9	350.2	350.5	350.8	351.1
152.5°	356.1	356.5	357.0	357.5	357.9	358.4	358.7	359.1	359.5	359.9	360.2
155°	369.2	369.4	369.7	369.9	370.1	370.4	370.6	370.8	371.1	371.3	371.7
157.5°	380.4	380.6	380.7	380.9	381.1	381.2	381.4	381.5	381.6	381.8	382.3
160°	387.2	387.4	387.5	387.7	387.8	388.0	388.0	388.1	388.2	388.3	388.7
162.5°	393.4	393.5	393.5	393.5	393.6	393.6	393.7	393.8	393.9	393.9	394.5
165°	401.7	401.6	401.5	401.5	401.4	401.3	401.3	401.3	401.3	401.3	401.9
167.5°	408.6	408.4	408.2	407.9	407.7	407.6	407.5	407.5	407.5	407.5	408.0
170°	412.3	412.1	411.8	411.6	411.4	411.2	411.1	411.0	411.0	410.9	411.4
172.5°	414.8	414.6	414.4	414.1	413.9	413.7	413.7	413.6	413.5	413.4	414.0
175°	418.0	417.7	417.5	417.2	417.0	416.8	416.7	416.5	416.3	416.2	416.7
177.5°	419.2	419.0	418.8	418.7	418.5	418.3	418.2	418.1	417.9	417.8	418.2
180°	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1057.1	1059.0	1060.8	1061.5	1061.1	1060.8	1060.4	1060.1
5°	1050.0	1051.8	1053.6	1054.3	1053.9	1053.4	1053.0	1052.5
7.5°	1038.2	1040.0	1041.8	1042.4	1041.9	1041.5	1041.0	1040.5
10°	1027.5	1029.4	1031.2	1031.7	1031.1	1030.4	1029.7	1029.0
12.5°	1015.0	1016.3	1017.6	1017.9	1017.4	1017.0	1016.5	1016.0
15°	993.1	994.0	994.9	994.8	993.6	992.5	991.4	990.2
17.5°	967.0	968.0	969.1	969.1	968.0	966.9	965.8	964.7
20°	946.7	947.4	948.0	947.9	947.0	946.1	945.2	944.3
22.5°	925.2	925.3	925.4	925.2	924.7	924.1	923.6	923.1
25°	890.1	890.5	891.0	891.0	890.5	890.1	889.6	889.2
27.5°	855.5	854.9	854.2	853.3	852.2	851.1	850.0	848.9
30°	828.6	827.9	827.2	826.4	825.5	824.6	823.7	822.8
32.5°	802.2	801.0	799.7	798.7	797.8	796.9	795.9	795.0
35°	759.9	758.5	757.1	755.9	754.8	753.6	752.5	751.3
37.5°	717.4	715.7	714.0	712.6	711.5	710.4	709.4	708.3
40°	688.1	686.0	684.0	682.5	681.6	680.7	679.8	678.9
42.5°	659.1	656.9	654.7	652.9	651.6	650.4	649.1	647.8
45°	614.7	612.2	609.7	608.0	607.1	606.2	605.3	604.3
47.5°	568.5	565.8	563.2	561.2	559.9	558.6	557.3	556.0
50°	538.8	535.6	532.4	530.3	529.1	528.0	526.9	525.7
52.5°	508.0	505.4	502.8	500.7	499.2	497.7	496.2	494.7
55°	462.1	459.4	456.7	454.7	453.6	452.5	451.3	450.2
57.5°	414.4	411.7	409.1	407.3	406.4	405.6	404.7	403.8
60°	382.9	380.4	377.9	376.4	375.7	375.0	374.3	373.6
62.5°	353.1	350.8	348.5	346.9	346.0	345.1	344.3	343.4
65°	307.3	305.2	303.2	301.6	300.5	299.3	298.2	297.1
67.5°	262.0	260.5	258.9	257.6	256.7	255.8	254.9	254.0
70°	232.6	231.1	229.5	228.2	227.3	226.4	225.5	224.6
72.5°	204.9	203.3	201.7	200.5	199.8	199.1	198.4	197.6
75°	161.6	160.3	158.9	158.5	158.9	159.4	159.8	160.3
77.5°	123.0	122.3	121.6	121.0	120.3	119.7	119.1	118.4
80°	97.7	97.0	96.3	95.7	95.3	94.8	94.4	93.9
82.5°	72.8	71.9	71.1	70.6	70.5	70.4	70.3	70.2
85°	38.5	37.8	37.1	36.6	36.4	36.2	36.0	35.7
87.5°	12.8	12.2	11.6	11.2	11.1	10.9	10.7	10.6
90°	12.1	11.9	11.7	11.7	11.8	11.9	11.9	12.0
92.5°	11.3	11.3	11.4	11.4	11.4	11.4	11.4	11.4
95°	22.6	22.6	22.6	22.5	22.4	22.2	22.1	21.9
97.5°	38.0	38.0	38.0	38.0	38.0	38.0	38.0	37.9
100°	48.8	48.8	48.8	48.7	48.6	48.6	48.5	48.4
102.5°	60.5	60.5	60.6	60.6	60.5	60.4	60.4	60.3
105°	78.0	78.2	78.4	78.4	78.4	78.4	78.4	78.4
107.5°	97.0	97.1	97.1	97.0	96.6	96.3	95.9	95.5
110°	109.9	109.9	109.9	109.8	109.5	109.3	109.1	108.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	122.8	122.6	122.4	122.2	122.1	121.9	121.7	121.5
115°	142.6	142.5	142.4	142.3	142.0	141.8	141.6	141.3
117.5°	161.7	161.5	161.3	161.1	160.9	160.7	160.4	160.2
120°	174.5	174.5	174.5	174.4	174.2	173.9	173.7	173.5
122.5°	187.7	187.5	187.3	187.2	187.0	186.8	186.6	186.5
125°	207.3	207.0	206.8	206.6	206.6	206.5	206.4	206.3
127.5°	226.3	226.0	225.7	225.4	225.2	224.9	224.7	224.4
130°	239.2	239.1	238.9	238.7	238.4	238.0	237.7	237.4
132.5°	251.8	251.5	251.2	250.9	250.6	250.4	250.1	249.9
135°	270.5	270.4	270.3	270.2	269.9	269.7	269.5	269.2
137.5°	288.3	288.2	288.2	288.0	287.7	287.4	287.1	286.7
140°	300.3	300.3	300.3	300.1	299.8	299.5	299.2	298.9
142.5°	311.2	311.2	311.3	311.2	310.9	310.5	310.2	309.9
145°	327.7	327.7	327.8	327.7	327.4	327.1	326.8	326.4
147.5°	342.1	342.3	342.5	342.4	342.1	341.8	341.5	341.2
150°	351.3	351.5	351.8	351.8	351.5	351.3	351.1	350.8
152.5°	360.5	360.8	361.1	361.1	360.8	360.5	360.2	359.9
155°	372.1	372.5	372.9	373.0	372.7	372.5	372.3	372.0
157.5°	382.8	383.4	383.9	384.0	383.6	383.2	382.9	382.5
160°	389.2	389.7	390.2	390.2	389.9	389.6	389.3	389.0
162.5°	395.0	395.5	396.1	396.1	395.8	395.4	395.0	394.6
165°	402.4	403.0	403.5	403.6	403.2	402.8	402.4	402.1
167.5°	408.6	409.1	409.7	409.8	409.4	408.9	408.5	408.1
170°	412.0	412.5	413.1	413.1	412.7	412.2	411.7	411.2
172.5°	414.5	415.1	415.6	415.7	415.2	414.7	414.3	413.8
175°	417.3	417.8	418.4	418.4	418.0	417.5	417.0	416.5
177.5°	418.6	418.9	419.3	419.3	418.9	418.6	418.2	417.8
180°	418.7	418.7	418.7	418.7	418.7	418.7	418.7	418.7

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