

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: P331325-930

Luminaire Tested: **SA2XXDIP-C485D1080U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331325-930
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-C485D1080U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4745.3 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

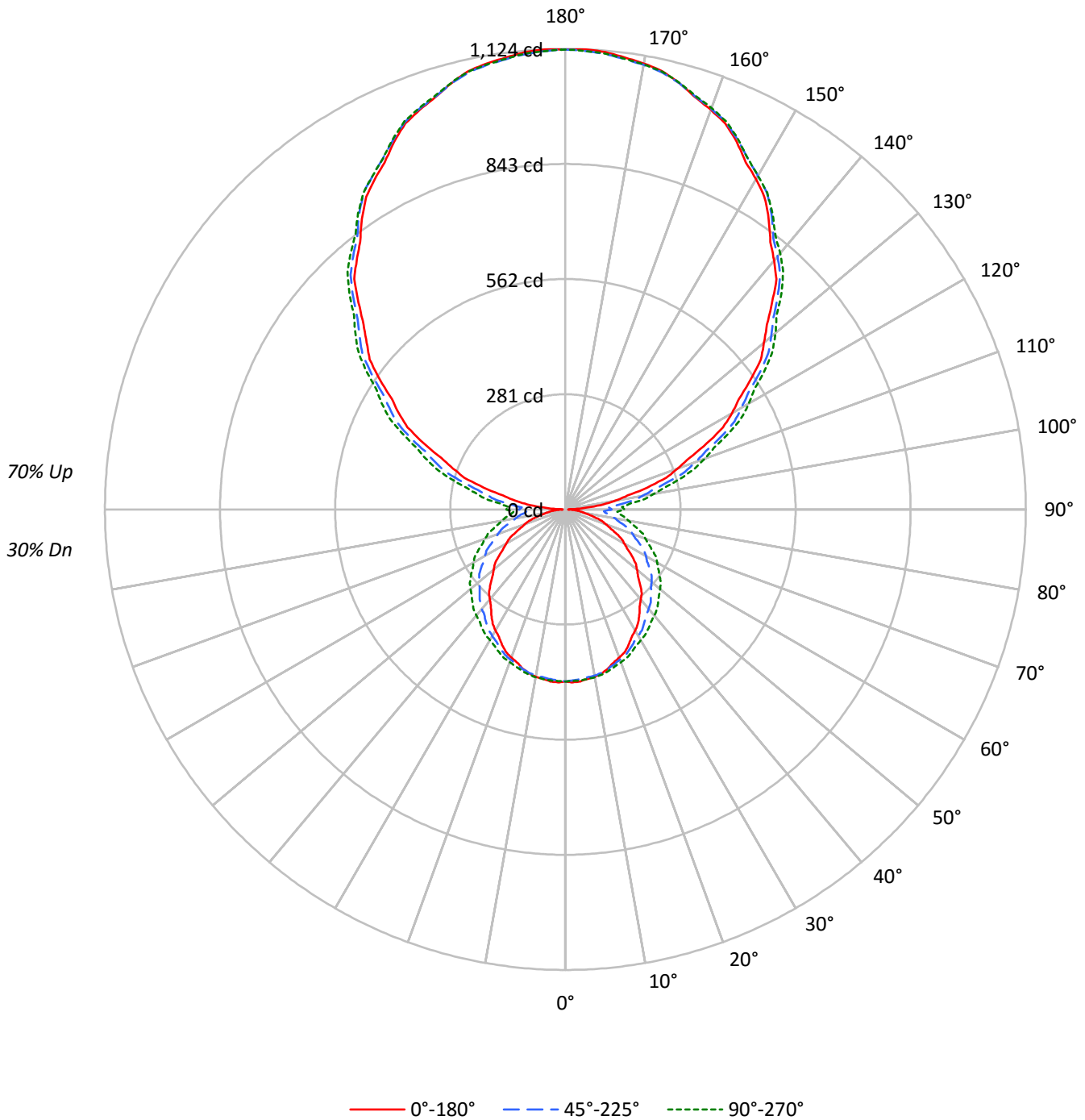
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30				
1	92	88	84	80	83	79	75	72	62	59	57	46	45	43	32	31	30	23				
2	84	76	70	65	75	68	63	58	54	50	47	40	38	35	28	26	25	19				
3	76	67	59	53	68	60	53	48	47	42	39	35	32	29	24	22	21	16				
4	69	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13				
5	64	52	44	38	57	47	40	34	37	32	28	28	24	21	19	17	15	11				
6	58	46	38	33	52	42	35	30	33	28	24	25	21	18	17	15	13	10				
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	13	11	9				
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	8				
9	46	34	27	22	41	31	24	20	25	20	16	19	15	13	13	11	9	7				
10	43	31	24	19	39	28	22	18	23	18	15	17	14	11	12	10	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6783	6783	6783
5°	6816	6530	6505
10°	6774	6337	6266
15°	6681	6133	6014
20°	6562	5913	5771
25°	6445	5701	5552
30°	6282	5486	5330
35°	6116	5276	5174
40°	5941	5099	5017
45°	5775	4940	4885
50°	5598	4794	4753
55°	5410	4638	4620
60°	5180	4477	4479
65°	4944	4290	4310
70°	4679	4085	4131
75°	4335	3888	3964
80°	3800	3685	3794
85°	3277	3510	3661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	0.8
10°-20°	114.2	2.4
20°-30°	173.0	3.6
30°-40°	210.7	4.4
40°-50°	226.7	4.8
50°-60°	220.1	4.6
60°-70°	192.2	4.1
70°-80°	148.0	3.1
80°-90°	103.8	2.2
90°-100°	139.5	2.9
100°-110°	270.8	5.7
110°-120°	410.5	8.7
120°-130°	514.9	10.9
130°-140°	564.9	11.9
140°-150°	547.7	11.5
150°-160°	458.3	9.7
160°-170°	304.0	6.4
170°-180°	106.2	2.2
0°-30°	327.0	6.9
0°-40°	537.7	11.3
0°-60°	984.5	20.7
0°-90°	1428.5	30.1
90°-120°	820.9	17.3
90°-150°	2448.4	51.6
90°-180°	3317.0	69.9
0°-180°	4745.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	421	419	416	419	419	40
15°	402	403	403	408	408	113
25°	365	370	375	382	384	168
35°	315	325	337	350	354	197
45°	258	275	296	314	321	199
55°	198	220	251	273	281	177
65°	135	165	201	225	234	134
75°	75	109	148	173	182	79
85°	22	60	99	123	133	24
90°	7	54	114	135	144	7
95°	54	92	131	153	159	60
105°	207	228	261	283	291	219
115°	381	394	419	436	440	377
125°	552	561	578	591	596	494
135°	714	724	732	743	746	551
145°	866	872	878	882	882	541
155°	990	992	995	1000	997	455
165°	1077	1076	1076	1082	1078	304
175°	1120	1118	1116	1122	1117	106
180°	1122	1122	1122	1122	1122	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	422.6	422.2	421.9	421.6	421.3	420.7	420.0	419.2	418.5	417.7	418.2
5°	421.3	420.9	420.5	420.1	419.7	419.1	418.3	417.5	416.7	415.9	416.7
7.5°	417.6	417.3	417.0	416.8	416.5	416.0	415.4	414.8	414.2	413.5	414.5
10°	414.7	414.4	414.1	413.8	413.6	413.3	412.9	412.5	412.1	411.6	412.7
12.5°	409.8	409.9	409.9	409.9	410.0	409.9	409.6	409.3	409.0	408.7	409.8
15°	401.9	402.1	402.4	402.7	402.9	403.1	403.1	403.1	403.1	403.1	404.3
17.5°	391.7	392.2	392.8	393.4	394.0	394.4	394.8	395.3	395.7	396.2	397.4
20°	384.8	385.5	386.2	386.9	387.5	388.2	388.7	389.2	389.8	390.3	391.8
22.5°	377.5	378.3	379.1	379.8	380.7	381.4	382.2	382.9	383.7	384.5	386.0
25°	365.3	366.3	367.2	368.2	369.1	370.2	371.5	372.7	373.9	375.0	376.7
27.5°	350.7	352.3	353.8	355.4	356.9	358.4	359.8	361.3	362.6	364.1	366.2
30°	341.0	342.8	344.5	346.3	348.1	349.8	351.6	353.3	355.1	356.8	359.0
32.5°	330.3	332.2	334.2	336.2	338.2	340.2	342.3	344.4	346.4	348.5	351.0
35°	314.8	317.1	319.4	321.7	324.0	326.4	329.0	331.6	334.1	336.7	339.7
37.5°	298.0	300.7	303.3	306.0	308.6	311.6	315.0	318.2	321.6	324.9	328.2
40°	286.8	289.8	292.8	295.7	298.7	302.0	305.7	309.3	313.0	316.7	320.2
42.5°	276.1	279.1	282.0	285.0	288.0	291.6	295.8	299.9	304.2	308.3	312.2
45°	258.2	261.8	265.5	269.1	272.8	277.0	281.7	286.4	291.2	296.0	300.1
47.5°	240.5	244.5	248.5	252.4	256.4	261.2	266.8	272.3	277.9	283.4	287.8
50°	228.4	232.5	236.8	240.9	245.1	250.2	256.3	262.4	268.6	274.6	279.2
52.5°	216.6	221.0	225.4	229.9	234.3	239.7	246.1	252.5	258.9	265.4	270.0
55°	197.9	202.8	207.7	212.5	217.4	223.3	230.4	237.4	244.4	251.4	256.3
57.5°	179.4	184.9	190.4	195.8	201.4	207.7	214.8	222.0	229.2	236.4	241.7
60°	166.2	172.0	177.9	183.7	189.5	196.2	204.0	211.7	219.4	227.1	232.3
62.5°	154.5	160.5	166.6	172.7	178.7	185.6	193.2	201.0	208.7	216.4	221.8
65°	135.2	141.8	148.5	155.1	161.7	169.0	177.0	185.0	193.0	201.0	206.5
67.5°	117.4	124.3	131.3	138.2	145.1	152.6	160.9	169.0	177.2	185.3	190.9
70°	104.8	111.8	118.8	125.8	132.9	140.6	149.0	157.4	165.8	174.1	179.9
72.5°	93.0	100.3	107.5	114.8	122.1	130.0	138.4	146.9	155.4	163.9	169.7
75°	74.9	82.5	90.0	97.6	105.2	113.3	122.0	130.6	139.3	148.0	153.8
77.5°	57.4	65.3	73.2	81.1	89.1	97.4	106.2	115.0	123.8	132.6	138.4
80°	45.7	53.9	62.2	70.4	78.7	87.2	96.0	104.8	113.6	122.4	128.1
82.5°	36.0	44.1	52.2	60.3	68.5	77.0	85.9	94.8	103.7	112.7	118.3
85°	21.9	30.3	38.7	47.1	55.4	64.0	72.6	81.3	90.0	98.7	104.4
87.5°	12.1	20.7	29.3	37.8	46.4	55.4	65.1	74.7	84.2	93.8	99.2
90°	7.0	17.4	27.8	38.2	48.5	60.3	73.6	86.9	100.2	113.5	118.5
92.5°	22.4	31.6	40.8	49.9	59.1	68.4	77.8	87.2	96.7	106.1	111.5
95°	54.1	62.6	71.0	79.5	88.0	96.4	105.0	113.6	122.1	130.6	135.7
97.5°	94.2	101.7	109.3	116.8	124.3	132.3	140.9	149.5	158.1	166.6	171.7
100°	124.5	131.3	137.9	144.6	151.3	158.7	167.0	175.1	183.4	191.6	196.6
102.5°	155.9	161.8	167.7	173.7	179.5	186.6	194.8	202.9	211.1	219.2	224.3
105°	206.7	211.2	215.7	220.3	224.9	230.9	238.3	245.8	253.2	260.7	265.9
107.5°	258.4	262.5	266.6	270.6	274.7	280.1	286.8	293.6	300.3	307.0	311.8
110°	291.3	295.2	299.2	303.2	307.1	312.4	319.1	325.7	332.3	339.0	343.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	327.7	331.2	334.7	338.3	341.8	346.7	352.8	358.9	365.0	371.2	375.0
115°	381.2	384.0	386.8	389.5	392.2	396.5	402.1	407.8	413.4	419.1	423.0
117.5°	434.1	436.7	439.4	442.1	444.7	448.3	452.7	457.1	461.6	466.0	469.5
120°	469.7	471.9	474.1	476.3	478.6	481.5	485.3	489.0	492.8	496.4	500.3
122.5°	502.2	504.5	506.7	509.0	511.2	514.3	518.2	522.1	525.9	529.9	533.0
125°	552.4	554.3	556.2	558.1	559.9	562.8	566.5	570.1	573.9	577.6	580.6
127.5°	601.9	604.1	606.3	608.6	610.9	613.3	616.1	618.8	621.6	624.4	626.9
130°	632.9	635.5	638.1	640.7	643.3	645.8	648.2	650.6	653.1	655.5	658.4
132.5°	667.7	669.8	672.0	674.0	676.1	678.3	680.6	682.9	685.2	687.4	689.7
135°	713.7	716.1	718.4	720.6	723.0	725.0	726.8	728.6	730.3	732.1	734.7
137.5°	762.8	764.7	766.5	768.4	770.2	771.8	772.9	774.0	775.2	776.3	778.6
140°	792.3	794.1	795.8	797.6	799.4	800.9	802.3	803.6	804.9	806.2	808.4
142.5°	822.6	824.4	826.1	827.9	829.6	831.0	831.7	832.5	833.2	834.1	835.9
145°	865.6	867.1	868.5	870.0	871.5	872.9	874.1	875.4	876.6	877.9	878.9
147.5°	904.4	906.2	907.9	909.7	911.5	912.8	913.6	914.5	915.3	916.2	916.7
150°	930.9	932.2	933.4	934.7	936.0	937.0	937.9	938.7	939.6	940.4	941.0
152.5°	954.4	955.7	956.9	958.2	959.4	960.6	961.6	962.6	963.7	964.7	965.5
155°	989.7	990.3	990.9	991.6	992.2	992.8	993.4	994.1	994.7	995.3	996.4
157.5°	1019.8	1020.2	1020.6	1021.0	1021.5	1021.8	1022.2	1022.6	1023.0	1023.4	1024.8
160°	1038.0	1038.4	1038.8	1039.2	1039.7	1039.9	1040.2	1040.4	1040.6	1040.8	1042.0
162.5°	1054.6	1054.7	1054.8	1054.8	1055.0	1055.1	1055.3	1055.5	1055.7	1056.0	1057.4
165°	1076.8	1076.6	1076.4	1076.1	1076.0	1075.9	1075.9	1075.9	1075.9	1075.9	1077.3
167.5°	1095.4	1094.7	1094.1	1093.5	1092.8	1092.5	1092.4	1092.4	1092.3	1092.3	1093.8
170°	1105.2	1104.6	1103.9	1103.3	1102.7	1102.3	1102.0	1101.8	1101.6	1101.4	1102.9
172.5°	1112.0	1111.4	1110.8	1110.1	1109.5	1109.1	1108.9	1108.6	1108.4	1108.2	1109.7
175°	1120.4	1119.7	1119.1	1118.4	1117.9	1117.3	1116.9	1116.5	1116.1	1115.6	1117.1
177.5°	1123.7	1123.2	1122.7	1122.3	1121.8	1121.3	1121.0	1120.6	1120.3	1120.0	1121.0
180°	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	418.8	419.3	419.9	420.0	419.8	419.6	419.4	419.1
5°	417.5	418.3	419.1	419.5	419.3	419.2	419.1	418.9
7.5°	415.5	416.5	417.4	417.8	417.8	417.6	417.4	417.4
10°	413.8	414.8	416.0	416.5	416.3	416.1	416.0	415.9
12.5°	410.8	412.0	413.0	413.5	413.4	413.2	413.1	412.9
15°	405.5	406.8	408.0	408.5	408.4	408.2	408.1	408.0
17.5°	398.7	400.0	401.2	401.9	401.9	401.9	401.9	401.9
20°	393.3	394.8	396.2	397.0	397.0	397.0	397.0	397.0
22.5°	387.4	388.9	390.4	391.3	391.5	391.7	391.9	392.2
25°	378.3	379.9	381.6	382.6	383.0	383.4	383.8	384.3
27.5°	368.3	370.3	372.3	373.5	373.8	374.1	374.4	374.7
30°	361.2	363.3	365.5	366.7	367.1	367.5	367.9	368.4
32.5°	353.5	356.0	358.5	360.1	360.9	361.6	362.3	363.1
35°	342.7	345.7	348.6	350.6	351.6	352.5	353.4	354.4
37.5°	331.5	334.8	338.1	340.2	341.3	342.3	343.2	344.3
40°	323.7	327.2	330.7	333.0	334.3	335.5	336.7	337.9
42.5°	316.0	319.8	323.7	326.3	327.4	328.6	329.9	331.1
45°	304.4	308.5	312.7	315.4	316.8	318.2	319.5	320.9
47.5°	292.1	296.5	300.9	303.9	305.3	306.8	308.3	309.8
50°	283.8	288.4	293.0	296.0	297.6	299.1	300.5	302.0
52.5°	274.8	279.5	284.2	287.3	288.9	290.6	292.1	293.8
55°	261.2	266.1	270.9	274.3	276.1	277.8	279.6	281.3
57.5°	246.9	252.1	257.4	260.9	262.7	264.5	266.3	268.1
60°	237.4	242.6	247.7	251.2	253.1	255.0	256.9	258.8
62.5°	227.3	232.8	238.2	241.9	243.7	245.5	247.3	249.1
65°	212.1	217.6	223.1	226.8	228.5	230.3	232.0	233.8
67.5°	196.6	202.1	207.7	211.5	213.3	215.2	217.0	218.8
70°	185.8	191.6	197.4	201.1	202.8	204.4	206.0	207.7
72.5°	175.4	181.1	186.8	190.6	192.5	194.4	196.4	198.4
75°	159.6	165.4	171.2	175.0	176.8	178.6	180.3	182.1
77.5°	144.2	150.0	155.8	159.6	161.5	163.4	165.3	167.2
80°	133.8	139.4	145.1	148.9	150.8	152.7	154.6	156.5
82.5°	124.0	129.7	135.3	139.1	140.9	142.7	144.5	146.3
85°	110.0	115.7	121.4	125.1	127.0	129.0	130.9	132.7
87.5°	104.7	110.1	115.5	119.2	120.9	122.7	124.5	126.3
90°	123.5	128.5	133.5	136.9	138.8	140.6	142.4	144.2
92.5°	116.9	122.3	127.7	131.2	132.8	134.5	136.2	137.9
95°	140.9	146.0	151.2	154.3	155.6	156.8	158.0	159.1
97.5°	176.7	181.7	186.7	190.0	191.5	193.1	194.7	196.2
100°	201.6	206.6	211.6	214.7	216.1	217.3	218.6	219.9
102.5°	229.3	234.4	239.5	242.6	243.9	245.2	246.5	247.8
105°	271.0	276.2	281.4	284.7	286.2	287.6	289.1	290.7
107.5°	316.5	321.2	325.9	328.6	329.1	329.5	330.1	330.6
110°	347.6	352.0	356.3	358.9	359.7	360.6	361.4	362.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	378.8	382.6	386.5	388.9	390.0	390.9	392.0	393.0
115°	426.8	430.7	434.6	436.9	437.7	438.6	439.4	440.3
117.5°	473.0	476.5	480.0	482.2	482.9	483.6	484.5	485.2
120°	504.0	507.8	511.6	514.0	514.8	515.7	516.5	517.4
122.5°	536.2	539.4	542.6	544.6	545.4	546.2	547.0	547.8
125°	583.6	586.6	589.6	591.7	592.6	593.7	594.7	595.7
127.5°	629.5	632.1	634.7	636.3	636.7	637.3	637.8	638.3
130°	661.1	664.0	666.8	668.3	668.5	668.8	669.0	669.3
132.5°	691.9	694.1	696.3	697.6	698.0	698.4	698.8	699.2
135°	737.4	740.0	742.7	744.2	744.6	745.1	745.5	746.0
137.5°	781.0	783.3	785.6	786.8	786.9	787.0	787.0	787.1
140°	810.6	812.7	814.9	816.0	815.9	815.9	815.9	815.8
142.5°	837.8	839.7	841.6	842.5	842.4	842.2	842.1	842.0
145°	880.0	880.9	882.0	882.4	882.2	882.1	881.9	881.7
147.5°	917.3	917.9	918.4	918.5	918.0	917.5	917.0	916.6
150°	941.7	942.3	943.0	943.0	942.3	941.7	941.0	940.4
152.5°	966.3	967.0	967.8	967.8	967.0	966.3	965.5	964.7
155°	997.4	998.5	999.6	999.7	999.1	998.5	997.8	997.2
157.5°	1026.2	1027.7	1029.1	1029.3	1028.3	1027.3	1026.3	1025.2
160°	1043.3	1044.6	1045.9	1046.0	1045.2	1044.4	1043.5	1042.7
162.5°	1058.8	1060.2	1061.7	1061.8	1060.9	1059.9	1058.8	1057.9
165°	1078.8	1080.3	1081.7	1081.9	1080.9	1079.9	1078.8	1077.7
167.5°	1095.3	1096.7	1098.2	1098.4	1097.3	1096.2	1095.1	1094.1
170°	1104.3	1105.8	1107.3	1107.4	1106.1	1104.9	1103.6	1102.4
172.5°	1111.2	1112.6	1114.1	1114.2	1113.0	1111.7	1110.4	1109.1
175°	1118.6	1120.1	1121.5	1121.6	1120.4	1119.1	1117.9	1116.6
177.5°	1122.0	1123.0	1124.0	1124.0	1123.0	1122.0	1121.0	1120.0
180°	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3

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