

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: P331895-930

Luminaire Tested: **S123DIP-S340D1025U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331895-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1025U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4515.3 lumens
Efficiency: N/A
Efficacy: 121.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

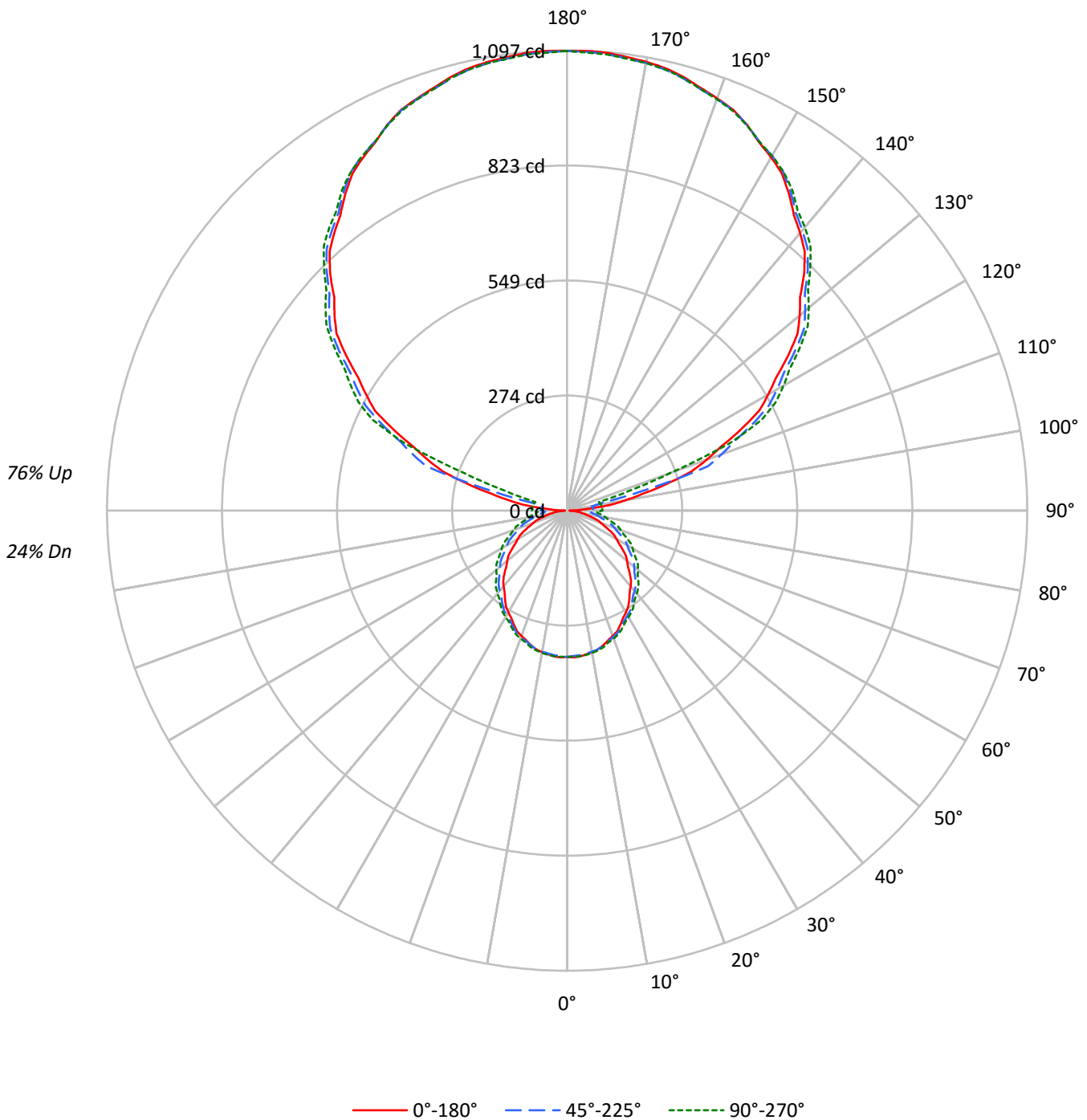
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19
2	83	76	70	64	73	67	62	58	52	48	45	37	35	33	24	23	21	16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	24	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8
7	53	42	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	14	13	11	9	6
9	46	34	27	22	41	31	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3753	3753	3753
5°	3765	3659	3661
10°	3732	3575	3556
15°	3684	3479	3443
20°	3615	3370	3318
25°	3530	3245	3186
30°	3444	3132	3053
35°	3345	3012	2946
40°	3252	2903	2833
45°	3149	2798	2741
50°	3047	2695	2641
55°	2936	2589	2550
60°	2826	2482	2458
65°	2714	2366	2347
70°	2542	2237	2234
75°	2331	2092	2120
80°	2084	1946	1988
85°	1855	1845	1910



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.1	0.7
10°-20°	94.2	2.1
20°-30°	141.0	3.1
30°-40°	168.3	3.7
40°-50°	176.1	3.9
50°-60°	165.3	3.7
60°-70°	138.0	3.1
70°-80°	98.8	2.2
80°-90°	62.0	1.4
90°-100°	76.8	1.7
100°-110°	217.0	4.8
110°-120°	474.0	10.5
120°-130°	590.9	13.1
130°-140°	624.9	13.8
140°-150°	581.0	12.9
150°-160°	467.9	10.4
160°-170°	302.0	6.7
170°-180°	104.1	2.3
0°-30°	268.3	5.9
0°-40°	436.6	9.7
0°-60°	778.0	17.2
0°-90°	1076.7	23.8
90°-120°	767.8	17.0
90°-150°	2564.7	56.8
90°-180°	3439.0	76.2
0°-180°	4515.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	349	349	349	349	349	
5°	349	348	346	349	349	33
15°	332	333	333	337	337	94
25°	300	304	305	310	310	138
35°	258	264	269	275	276	162
45°	211	220	230	237	240	163
55°	161	174	187	197	201	144
65°	111	126	143	154	158	110
75°	60	78	97	109	114	64
85°	19	38	58	70	74	20
90°	6	33	62	78	84	6
95°	54	38	63	80	84	65
105°	246	259	207	81	78	260
115°	457	467	487	504	511	451
125°	642	649	663	672	677	574
135°	799	804	811	820	820	615
145°	922	927	928	933	935	577
155°	1015	1013	1014	1018	1013	467
165°	1070	1068	1067	1073	1068	302
175°	1095	1092	1092	1097	1091	104
180°	1095	1095	1095	1095	1095	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	350.3	350.1	349.8	349.7	349.4	349.1	348.5	348.0	347.5	346.9	347.5
5°	349.1	348.9	348.8	348.6	348.5	348.1	347.6	347.1	346.6	346.1	346.7
7.5°	345.7	345.8	345.8	345.8	345.8	345.6	345.1	344.6	344.1	343.6	344.5
10°	342.7	342.8	343.0	343.2	343.3	343.2	342.8	342.3	341.9	341.5	342.3
12.5°	339.0	339.2	339.5	339.7	340.0	339.9	339.7	339.3	339.1	338.8	339.6
15°	332.4	332.6	332.9	333.1	333.4	333.5	333.4	333.3	333.2	333.1	334.0
17.5°	324.1	324.6	325.1	325.5	326.0	326.3	326.3	326.2	326.2	326.2	326.9
20°	318.0	318.5	318.9	319.5	320.0	320.3	320.5	320.7	320.8	321.0	321.8
22.5°	311.6	312.1	312.6	313.1	313.6	314.0	314.2	314.5	314.7	315.0	315.9
25°	300.1	300.9	301.8	302.6	303.5	304.0	304.3	304.5	304.8	305.1	306.1
27.5°	288.5	289.5	290.5	291.5	292.4	293.2	293.7	294.2	294.8	295.3	296.3
30°	280.4	281.4	282.6	283.6	284.8	285.6	286.3	287.0	287.6	288.4	289.3
32.5°	271.3	272.5	273.7	274.9	276.1	277.2	278.1	279.0	279.9	280.7	281.8
35°	258.3	259.7	261.1	262.4	263.7	265.0	266.0	267.2	268.2	269.4	270.6
37.5°	244.7	246.1	247.7	249.2	250.7	252.2	253.5	254.9	256.2	257.6	259.0
40°	235.5	237.1	238.6	240.1	241.6	243.2	244.9	246.6	248.3	250.0	251.4
42.5°	225.5	227.4	229.2	231.1	232.9	234.7	236.5	238.2	240.0	241.7	243.4
45°	211.2	213.3	215.2	217.3	219.3	221.4	223.5	225.6	227.7	229.8	231.5
47.5°	196.2	198.5	200.8	203.2	205.5	207.8	210.2	212.6	215.0	217.4	219.2
50°	186.5	188.9	191.3	193.6	196.0	198.4	201.1	203.7	206.4	209.0	210.9
52.5°	176.2	178.7	181.2	183.7	186.2	188.9	191.8	194.7	197.5	200.4	202.4
55°	161.1	163.9	166.6	169.4	172.2	175.1	178.1	181.2	184.3	187.3	189.6
57.5°	146.3	149.2	152.1	155.1	157.9	161.1	164.4	167.7	171.0	174.4	176.7
60°	136.0	139.0	142.1	145.1	148.1	151.4	154.9	158.3	161.8	165.3	167.6
62.5°	126.3	129.4	132.5	135.6	138.7	142.1	145.8	149.4	153.1	156.8	159.1
65°	111.3	114.6	117.9	121.2	124.5	128.0	131.7	135.4	139.1	142.8	145.4
67.5°	96.1	99.6	103.1	106.6	110.1	113.7	117.5	121.3	125.1	128.9	131.6
70°	85.4	89.1	92.7	96.4	100.0	103.9	107.9	111.9	116.0	120.0	122.8
72.5°	75.7	79.4	83.0	86.7	90.3	94.2	98.3	102.6	106.7	111.0	113.7
75°	60.4	64.4	68.3	72.3	76.3	80.4	84.6	88.8	93.0	97.3	100.0
77.5°	47.0	51.0	55.0	59.0	63.0	67.2	71.4	75.7	79.9	84.2	87.2
80°	37.6	41.7	45.9	50.1	54.1	58.5	62.8	67.2	71.6	76.0	78.8
82.5°	29.4	33.6	37.8	42.0	46.2	50.5	55.0	59.4	63.9	68.4	71.3
85°	18.6	22.8	27.1	31.3	35.5	39.9	44.4	48.8	53.2	57.7	60.6
87.5°	10.3	14.8	19.4	24.0	28.5	33.2	38.0	42.7	47.5	52.3	55.4
90°	5.8	11.7	17.6	23.6	29.5	35.9	42.5	49.2	55.8	62.5	66.0
92.5°	19.8	23.0	26.3	29.4	32.7	37.3	43.3	49.3	55.4	61.3	65.3
95°	53.8	49.7	45.6	41.4	37.3	38.3	44.4	50.5	56.7	62.9	66.7
97.5°	103.5	103.1	102.8	102.4	102.1	97.3	88.3	79.2	70.1	61.1	65.1
100°	141.0	147.2	153.6	159.9	166.2	157.2	132.9	108.6	84.2	59.9	63.8
102.5°	183.6	188.7	193.7	198.7	203.7	192.7	165.8	138.8	111.8	84.8	82.7
105°	245.6	249.6	253.6	257.6	261.6	257.3	244.7	232.0	219.4	206.7	177.1
107.5°	310.5	313.8	317.2	320.5	323.8	328.4	334.4	340.5	346.5	352.5	331.3
110°	353.8	356.8	359.8	362.7	365.7	369.9	375.2	380.6	386.0	391.3	387.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	395.5	398.0	400.6	403.2	405.7	409.6	414.8	420.0	425.3	430.6	432.8
115°	456.8	458.9	461.0	463.1	465.2	468.6	473.3	477.9	482.6	487.2	491.1
117.5°	516.5	518.4	520.4	522.4	524.3	527.2	530.8	534.5	538.2	541.8	545.4
120°	553.3	555.3	557.3	559.4	561.5	564.2	567.4	570.8	574.1	577.5	580.8
122.5°	591.0	592.6	594.1	595.7	597.3	599.7	603.1	606.4	609.7	613.0	616.0
125°	642.4	643.8	645.3	646.8	648.2	650.5	653.7	656.8	660.0	663.2	665.3
127.5°	692.5	693.9	695.3	696.6	698.0	700.1	703.0	705.9	708.8	711.7	714.0
130°	723.8	725.1	726.5	727.9	729.2	731.2	733.5	736.0	738.3	740.8	743.1
132.5°	753.4	754.9	756.3	757.7	759.1	760.8	762.8	764.7	766.6	768.6	770.8
135°	799.1	800.1	801.1	802.1	803.1	804.4	806.1	807.7	809.3	811.1	813.1
137.5°	838.0	839.4	840.7	842.0	843.3	844.4	845.3	846.3	847.2	848.1	850.3
140°	863.8	864.9	866.0	867.1	868.1	869.1	869.9	870.7	871.5	872.3	874.2
142.5°	887.9	888.9	889.9	891.0	891.9	892.8	893.4	894.0	894.5	895.1	896.8
145°	921.6	922.8	924.0	925.1	926.3	927.1	927.5	927.8	928.1	928.5	929.6
147.5°	952.9	953.8	954.6	955.4	956.3	956.8	957.2	957.6	958.0	958.3	958.9
150°	972.5	973.1	973.5	974.1	974.6	975.1	975.4	975.8	976.2	976.6	976.9
152.5°	990.0	990.3	990.6	990.8	991.1	991.3	991.5	991.7	992.0	992.1	992.8
155°	1014.8	1014.4	1014.1	1013.7	1013.3	1013.3	1013.4	1013.6	1013.8	1014.0	1014.9
157.5°	1034.0	1034.0	1034.0	1033.9	1033.9	1033.7	1033.6	1033.4	1033.2	1033.0	1034.1
160°	1045.7	1045.5	1045.4	1045.2	1045.0	1044.8	1044.6	1044.5	1044.2	1044.1	1045.2
162.5°	1056.8	1056.3	1055.8	1055.4	1054.9	1054.6	1054.4	1054.2	1054.0	1053.9	1055.1
165°	1070.2	1069.6	1069.0	1068.5	1068.0	1067.6	1067.4	1067.2	1067.1	1066.9	1068.3
167.5°	1080.5	1079.9	1079.1	1078.4	1077.7	1077.3	1077.3	1077.3	1077.3	1077.3	1078.7
170°	1086.4	1085.7	1085.0	1084.3	1083.5	1083.1	1083.1	1083.1	1083.1	1083.1	1084.6
172.5°	1090.3	1089.5	1088.6	1087.7	1086.9	1086.5	1086.6	1086.8	1086.9	1087.0	1088.5
175°	1095.4	1094.5	1093.6	1092.7	1091.8	1091.4	1091.5	1091.8	1091.9	1092.1	1093.4
177.5°	1096.7	1095.9	1095.2	1094.5	1093.8	1093.5	1093.6	1093.8	1093.9	1094.1	1095.2
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	348.0	348.5	349.1	349.3	349.3	349.2	349.1	349.0
5°	347.4	348.1	348.8	349.1	349.0	348.9	348.8	348.7
7.5°	345.4	346.2	347.0	347.4	347.3	347.2	347.1	347.0
10°	343.2	344.1	344.9	345.2	345.0	344.9	344.7	344.5
12.5°	340.3	341.1	341.9	342.2	342.0	341.9	341.7	341.5
15°	334.8	335.7	336.6	336.9	336.8	336.7	336.6	336.6
17.5°	327.7	328.5	329.2	329.5	329.4	329.3	329.2	329.1
20°	322.5	323.3	324.1	324.5	324.6	324.7	324.7	324.8
22.5°	316.8	317.8	318.8	319.3	319.2	319.1	319.1	319.0
25°	307.2	308.3	309.4	310.0	310.0	310.0	310.0	310.0
27.5°	297.2	298.2	299.1	299.6	299.7	299.8	299.8	299.9
30°	290.3	291.4	292.4	292.9	292.9	292.9	292.9	292.9
32.5°	282.9	284.0	285.0	285.7	285.9	286.1	286.3	286.5
35°	271.9	273.1	274.4	275.2	275.6	275.9	276.2	276.5
37.5°	260.4	261.9	263.3	264.2	264.4	264.7	265.0	265.2
40°	252.8	254.3	255.7	256.6	256.9	257.3	257.6	258.0
42.5°	244.9	246.5	248.0	249.1	249.6	250.0	250.5	250.9
45°	233.0	234.6	236.3	237.4	238.1	238.7	239.5	240.1
47.5°	221.0	222.9	224.7	225.8	226.3	226.9	227.4	228.0
50°	212.8	214.7	216.7	218.0	218.6	219.2	219.7	220.4
52.5°	204.5	206.4	208.5	209.9	210.6	211.3	212.0	212.7
55°	191.8	194.1	196.4	197.9	198.5	199.3	199.9	200.6
57.5°	179.0	181.2	183.5	185.1	185.9	186.7	187.5	188.3
60°	170.0	172.4	174.7	176.3	177.2	178.2	179.1	180.1
62.5°	161.4	163.8	166.2	167.8	168.7	169.5	170.4	171.3
65°	147.9	150.4	153.0	154.7	155.5	156.4	157.2	158.0
67.5°	134.4	137.1	139.9	141.7	142.4	143.1	143.8	144.5
70°	125.5	128.2	130.9	132.6	133.5	134.3	135.2	136.0
72.5°	116.4	119.2	122.0	123.8	124.7	125.5	126.4	127.2
75°	102.8	105.6	108.4	110.3	111.3	112.3	113.3	114.4
77.5°	90.1	93.0	96.0	97.8	98.6	99.4	100.1	100.9
80°	81.7	84.6	87.5	89.3	90.2	91.0	91.9	92.7
82.5°	74.1	77.0	79.9	81.7	82.6	83.4	84.2	85.1
85°	63.5	66.4	69.2	71.1	71.9	72.8	73.6	74.4
87.5°	58.3	61.3	64.3	66.4	67.3	68.2	69.1	70.0
90°	69.6	73.2	76.8	79.2	80.5	81.6	82.8	84.1
92.5°	69.2	73.2	77.2	79.7	80.6	81.6	82.6	83.6
95°	70.6	74.5	78.4	80.7	81.6	82.4	83.2	84.1
97.5°	69.0	73.0	77.0	79.4	80.5	81.4	82.5	83.5
100°	67.7	71.6	75.5	77.9	79.0	80.0	81.0	82.0
102.5°	80.6	78.4	76.4	75.9	77.0	78.3	79.4	80.6
105°	147.4	117.8	88.1	73.9	75.0	76.1	77.2	78.4
107.5°	310.1	288.9	267.7	245.3	222.0	198.6	175.2	151.8
110°	383.8	380.0	376.3	361.7	336.6	311.4	286.2	261.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	435.0	437.2	439.4	438.2	433.5	428.8	424.0	419.4
115°	494.9	498.7	502.6	505.2	506.6	508.0	509.4	510.8
117.5°	548.8	552.3	555.7	557.8	558.6	559.5	560.3	561.0
120°	584.2	587.7	591.0	593.0	593.6	594.2	594.8	595.4
122.5°	618.8	621.7	624.6	626.4	627.1	627.9	628.6	629.3
125°	667.5	669.6	671.7	673.3	674.3	675.1	676.1	677.1
127.5°	716.2	718.4	720.7	721.9	722.1	722.4	722.5	722.8
130°	745.4	747.7	750.1	751.3	751.5	751.6	751.8	751.9
132.5°	773.1	775.3	777.6	778.8	778.8	778.9	778.9	779.0
135°	815.1	817.2	819.3	820.3	820.1	820.0	819.9	819.8
137.5°	852.5	854.7	856.9	858.0	858.1	858.2	858.2	858.3
140°	876.3	878.2	880.2	881.3	881.3	881.3	881.4	881.5
142.5°	898.5	900.3	902.0	902.8	902.7	902.6	902.5	902.5
145°	930.6	931.6	932.7	933.4	933.7	934.0	934.4	934.7
147.5°	959.4	960.0	960.6	960.6	960.1	959.5	959.0	958.5
150°	977.3	977.6	978.0	978.0	977.6	977.2	976.9	976.5
152.5°	993.4	994.1	994.7	994.7	993.9	993.1	992.3	991.5
155°	1015.8	1016.7	1017.6	1017.5	1016.4	1015.4	1014.2	1013.2
157.5°	1035.2	1036.2	1037.4	1037.2	1035.8	1034.4	1033.0	1031.6
160°	1046.3	1047.3	1048.4	1048.3	1047.1	1045.8	1044.6	1043.3
162.5°	1056.3	1057.5	1058.7	1058.8	1057.7	1056.5	1055.5	1054.3
165°	1069.8	1071.2	1072.7	1072.8	1071.5	1070.2	1068.9	1067.7
167.5°	1080.2	1081.7	1083.0	1083.0	1081.7	1080.2	1078.7	1077.3
170°	1086.1	1087.5	1088.9	1088.9	1087.5	1086.1	1084.6	1083.1
172.5°	1090.0	1091.4	1092.8	1092.7	1091.2	1089.6	1088.0	1086.4
175°	1094.6	1095.9	1097.1	1097.1	1095.6	1094.2	1092.7	1091.3
177.5°	1096.3	1097.6	1098.7	1098.5	1097.1	1095.7	1094.2	1092.7
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4

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