

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: P332530-930

Luminaire Tested: **S124DIP-S350D1205U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332530-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1205U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4576.4 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

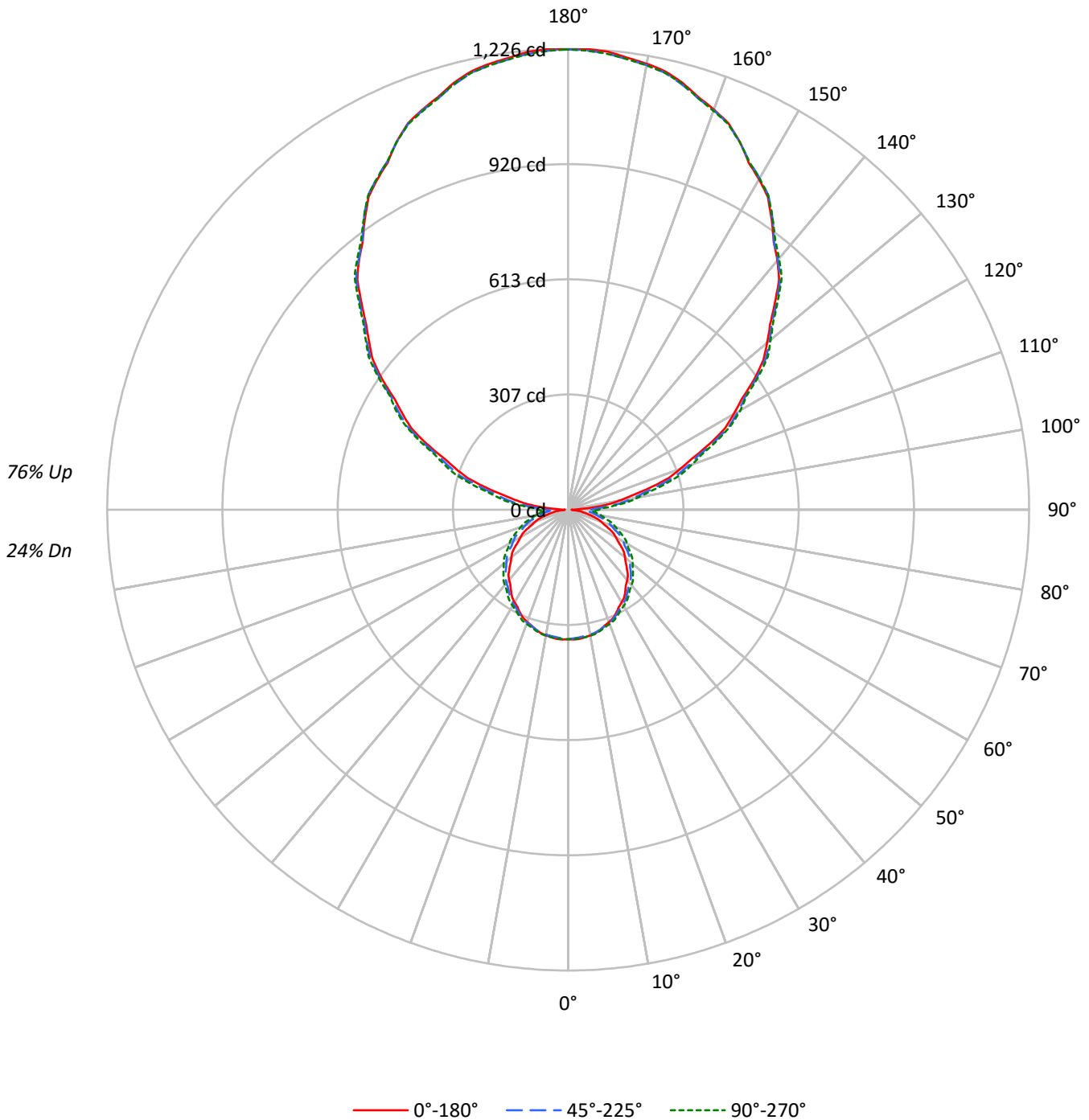
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	65	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	23	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	41	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	13	13	11	9	6
9	46	34	27	22	41	30	24	20	24	19	16	17	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°	2782	2782	2782
5°	2791	2719	2726
10°	2774	2675	2673
15°	2749	2623	2608
20°	2711	2566	2547
25°	2669	2503	2478
30°	2623	2439	2408
35°	2571	2374	2347
40°	2530	2313	2282
45°	2468	2256	2228
50°	2417	2190	2169
55°	2363	2129	2101
60°	2280	2049	2039
65°	2187	1965	1962
70°	2076	1868	1874
75°	1922	1763	1793
80°	1750	1660	1713
85°	1534	1571	1669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.6	0.7
10°-20°	93.5	2.0
20°-30°	141.4	3.1
30°-40°	171.1	3.7
40°-50°	180.8	4.0
50°-60°	170.2	3.7
60°-70°	141.2	3.1
70°-80°	99.2	2.2
80°-90°	59.7	1.3
90°-100°	114.1	2.5
100°-110°	264.0	5.8
110°-120°	422.7	9.2
120°-130°	544.9	11.9
130°-140°	605.5	13.2
140°-150°	591.9	12.9
150°-160°	497.1	10.9
160°-170°	330.7	7.2
170°-180°	115.8	2.5
0°-30°	267.5	5.8
0°-40°	438.6	9.6
0°-60°	789.6	17.3
0°-90°	1089.7	23.8
90°-120°	800.7	17.5
90°-150°	2543.0	55.6
90°-180°	3487.0	76.2
0°-180°	4576.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	345	345	345	345	345	
5°	345	344	341	344	344	33
15°	331	331	330	333	333	93
25°	303	305	306	310	311	139
35°	265	269	273	278	280	166
45°	221	228	235	242	244	171
55°	173	181	193	200	203	154
65°	120	132	145	154	158	119
75°	66	81	97	107	111	71
85°	20	37	54	65	70	22
90°	9	35	59	75	81	8
95°	62	83	106	118	122	67
105°	224	233	251	263	269	238
115°	415	419	429	436	438	410
125°	603	603	611	617	617	537
135°	777	782	785	789	789	601
145°	943	946	947	948	947	590
155°	1080	1080	1079	1082	1079	497
165°	1176	1173	1171	1176	1173	331
175°	1223	1218	1217	1223	1217	116
180°	1225	1225	1225	1225	1225	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	345.8	345.6	345.4	345.2	345.0	344.6	344.1	343.6	343.0	342.4	342.9
5°	345.0	344.7	344.5	344.2	344.0	343.6	342.9	342.3	341.8	341.1	341.9
7.5°	342.1	341.9	341.8	341.6	341.4	341.1	340.6	340.1	339.7	339.2	339.9
10°	339.6	339.5	339.4	339.3	339.2	339.0	338.6	338.1	337.7	337.3	338.0
12.5°	336.2	336.1	336.1	336.1	336.1	336.0	335.7	335.4	335.1	334.8	335.5
15°	330.7	330.8	330.9	331.0	331.1	331.0	330.7	330.4	330.2	330.0	330.7
17.5°	323.3	323.5	323.8	324.0	324.2	324.4	324.3	324.2	324.2	324.2	325.0
20°	318.0	318.2	318.5	318.8	319.0	319.2	319.3	319.4	319.4	319.5	320.4
22.5°	312.1	312.4	312.7	313.1	313.4	313.6	313.8	314.0	314.1	314.3	315.1
25°	302.6	303.0	303.6	304.1	304.6	305.0	305.2	305.5	305.7	306.1	307.0
27.5°	291.9	292.7	293.4	294.2	294.9	295.5	295.9	296.3	296.7	297.1	297.9
30°	284.8	285.5	286.2	286.8	287.6	288.2	288.8	289.3	290.0	290.6	291.6
32.5°	277.1	277.9	278.8	279.6	280.4	281.1	281.8	282.4	283.2	283.8	284.9
35°	264.7	265.8	266.8	267.8	268.9	269.8	270.7	271.5	272.4	273.2	274.4
37.5°	252.3	253.5	254.7	255.8	257.1	258.1	259.3	260.3	261.4	262.4	263.7
40°	244.3	245.4	246.5	247.6	248.7	249.9	251.1	252.3	253.5	254.7	256.0
42.5°	235.1	236.3	237.5	238.8	240.0	241.3	242.8	244.2	245.6	247.0	248.4
45°	220.7	222.3	224.0	225.6	227.2	228.9	230.5	232.1	233.7	235.4	236.8
47.5°	207.1	208.8	210.4	212.1	213.8	215.6	217.4	219.4	221.3	223.1	224.6
50°	197.2	199.1	201.0	202.8	204.7	206.6	208.6	210.4	212.3	214.2	215.9
52.5°	187.4	189.2	191.1	193.0	194.9	196.9	199.0	201.2	203.3	205.5	207.2
55°	172.9	174.7	176.5	178.3	180.1	182.3	184.8	187.4	190.0	192.6	194.3
57.5°	156.8	159.0	161.2	163.5	165.7	168.0	170.6	173.2	175.7	178.3	180.3
60°	146.3	148.5	150.7	153.0	155.2	157.7	160.5	163.4	166.2	169.0	171.0
62.5°	136.1	138.5	141.0	143.4	145.8	148.5	151.2	154.1	156.9	159.8	161.8
65°	119.6	122.4	125.1	127.8	130.6	133.5	136.3	139.3	142.2	145.1	147.2
67.5°	103.8	106.7	109.7	112.6	115.4	118.5	121.6	124.7	127.8	130.9	133.1
70°	93.0	95.9	98.8	101.7	104.7	107.8	111.0	114.3	117.6	120.8	123.1
72.5°	82.5	85.5	88.5	91.5	94.4	97.7	101.1	104.6	108.0	111.5	113.7
75°	66.4	69.5	72.7	75.9	79.1	82.4	86.1	89.7	93.3	96.9	99.3
77.5°	51.4	54.7	58.0	61.4	64.7	68.3	72.1	75.9	79.7	83.4	85.9
80°	42.1	45.5	48.9	52.3	55.8	59.4	63.2	66.9	70.7	74.5	77.0
82.5°	32.8	36.4	39.9	43.5	47.0	50.7	54.5	58.3	62.0	65.9	68.5
85°	20.5	24.1	27.6	31.2	34.9	38.6	42.5	46.3	50.1	54.1	56.6
87.5°	12.0	16.0	19.9	23.9	27.8	31.9	36.0	40.0	44.1	48.3	51.0
90°	9.0	14.8	20.5	26.3	32.0	37.6	43.0	48.3	53.6	59.0	62.8
92.5°	26.2	31.9	37.6	43.4	49.1	54.4	59.3	64.2	69.0	73.9	77.0
95°	61.9	66.6	71.3	76.0	80.7	85.6	90.6	95.6	100.6	105.6	108.5
97.5°	103.8	107.8	111.7	115.7	119.6	124.2	129.4	134.6	139.8	145.0	148.1
100°	136.9	139.9	143.0	146.1	149.1	153.3	158.6	163.8	169.0	174.2	177.0
102.5°	171.7	174.0	176.3	178.6	180.9	184.5	189.6	194.5	199.5	204.6	207.4
105°	224.2	226.1	228.0	229.9	231.9	234.8	238.9	242.9	246.9	250.9	253.7
107.5°	280.0	281.6	283.3	284.9	286.6	289.0	292.1	295.3	298.4	301.5	304.2
110°	317.6	319.2	320.8	322.5	324.1	326.3	329.1	331.8	334.6	337.5	339.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	356.7	357.8	359.0	360.1	361.3	363.1	365.6	368.0	370.6	373.0	374.8
115°	415.3	416.0	416.9	417.6	418.4	420.0	422.2	424.6	426.9	429.3	430.9
117.5°	470.9	471.6	472.2	472.8	473.4	474.9	477.1	479.4	481.7	484.0	485.0
120°	507.8	508.8	510.0	511.0	512.2	513.6	515.4	517.3	519.2	521.1	521.7
122.5°	546.4	546.7	547.1	547.6	548.0	549.2	551.2	553.3	555.3	557.4	558.4
125°	603.0	602.9	602.8	602.8	602.7	603.6	605.5	607.5	609.4	611.3	612.5
127.5°	654.7	655.2	655.7	656.3	656.9	657.8	659.1	660.4	661.7	663.0	664.1
130°	690.7	691.3	691.8	692.4	692.9	693.9	695.2	696.6	698.0	699.4	700.5
132.5°	727.9	728.2	728.6	729.0	729.4	730.0	730.9	731.9	732.8	733.8	734.8
135°	776.6	777.8	779.1	780.3	781.6	782.5	783.1	783.7	784.3	784.9	785.9
137.5°	830.0	830.5	831.0	831.4	832.0	832.5	833.2	833.8	834.5	835.0	835.8
140°	865.6	865.9	866.3	866.6	866.9	867.2	867.2	867.3	867.4	867.5	868.4
142.5°	897.9	898.3	898.6	899.0	899.4	899.5	899.4	899.1	898.9	898.7	899.6
145°	942.9	943.6	944.4	945.1	945.9	946.4	946.6	946.8	947.0	947.2	947.5
147.5°	987.6	988.5	989.4	990.3	991.2	991.6	991.5	991.3	991.2	991.0	990.9
150°	1014.9	1015.6	1016.4	1017.1	1017.9	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
152.5°	1040.3	1040.8	1041.3	1041.8	1042.3	1042.6	1042.8	1042.9	1043.1	1043.3	1043.7
155°	1079.8	1079.8	1079.8	1079.8	1079.8	1079.7	1079.5	1079.3	1079.0	1078.9	1079.7
157.5°	1113.1	1112.8	1112.4	1112.1	1111.7	1111.4	1111.4	1111.3	1111.3	1111.3	1111.9
160°	1132.9	1132.7	1132.5	1132.2	1132.0	1131.8	1131.6	1131.4	1131.1	1131.0	1131.6
162.5°	1151.0	1150.5	1150.0	1149.4	1148.8	1148.5	1148.3	1148.1	1147.9	1147.6	1148.8
165°	1175.5	1174.8	1174.2	1173.6	1173.0	1172.4	1172.0	1171.6	1171.2	1170.8	1172.0
167.5°	1194.3	1193.4	1192.5	1191.6	1190.7	1190.3	1190.3	1190.3	1190.4	1190.4	1191.7
170°	1204.8	1203.8	1202.7	1201.7	1200.6	1200.2	1200.4	1200.6	1200.9	1201.1	1202.3
172.5°	1212.4	1211.5	1210.6	1209.7	1208.9	1208.4	1208.5	1208.6	1208.6	1208.7	1210.1
175°	1222.9	1221.8	1220.7	1219.7	1218.6	1218.0	1217.8	1217.6	1217.4	1217.2	1218.6
177.5°	1226.3	1225.4	1224.6	1223.8	1222.9	1222.5	1222.5	1222.5	1222.5	1222.5	1223.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	343.4	343.9	344.4	344.5	344.5	344.5	344.4	344.3
5°	342.5	343.2	343.9	344.2	344.1	344.0	343.9	343.8
7.5°	340.7	341.4	342.3	342.6	342.5	342.4	342.3	342.3
10°	338.8	339.6	340.4	340.7	340.6	340.6	340.5	340.4
12.5°	336.2	337.0	337.6	337.9	337.9	337.9	337.9	337.9
15°	331.5	332.2	333.0	333.4	333.3	333.2	333.1	333.0
17.5°	325.7	326.5	327.3	327.7	327.6	327.5	327.5	327.4
20°	321.2	322.1	322.9	323.4	323.4	323.4	323.4	323.4
22.5°	316.0	316.8	317.7	318.2	318.4	318.5	318.6	318.8
25°	307.9	308.8	309.8	310.3	310.4	310.5	310.5	310.6
27.5°	298.8	299.7	300.6	301.1	301.2	301.3	301.3	301.5
30°	292.4	293.4	294.3	294.9	295.1	295.3	295.5	295.6
32.5°	285.9	287.1	288.1	288.8	288.9	289.1	289.3	289.4
35°	275.7	276.8	278.0	278.8	279.0	279.2	279.6	279.8
37.5°	264.9	266.0	267.3	268.1	268.3	268.6	268.9	269.1
40°	257.3	258.5	259.8	260.7	261.0	261.4	261.7	262.0
42.5°	249.8	251.3	252.7	253.6	253.8	254.0	254.4	254.6
45°	238.3	239.8	241.2	242.1	242.6	243.0	243.4	243.9
47.5°	226.2	227.6	229.2	230.2	230.7	231.2	231.7	232.3
50°	217.6	219.3	221.0	222.2	222.7	223.1	223.7	224.2
52.5°	209.0	210.7	212.4	213.5	214.0	214.5	215.1	215.6
55°	196.0	197.7	199.4	200.6	201.1	201.5	202.1	202.6
57.5°	182.4	184.4	186.5	187.7	188.2	188.7	189.1	189.6
60°	173.0	175.0	176.9	178.2	179.0	179.6	180.3	181.0
62.5°	163.7	165.7	167.6	169.0	169.7	170.3	171.0	171.7
65°	149.4	151.6	153.7	155.1	155.8	156.5	157.2	157.8
67.5°	135.3	137.5	139.7	141.1	141.8	142.4	143.1	143.8
70°	125.4	127.8	130.0	131.5	132.1	132.7	133.3	133.9
72.5°	116.0	118.3	120.5	122.0	122.6	123.3	124.0	124.7
75°	101.7	104.0	106.5	108.0	108.8	109.6	110.4	111.1
77.5°	88.3	90.7	93.2	94.8	95.6	96.4	97.3	98.1
80°	79.7	82.2	84.8	86.4	87.1	87.8	88.5	89.1
82.5°	71.1	73.8	76.4	78.1	78.8	79.6	80.4	81.1
85°	59.2	61.7	64.3	66.0	66.9	67.8	68.6	69.5
87.5°	53.7	56.4	59.2	61.0	61.8	62.7	63.5	64.3
90°	66.5	70.3	74.0	76.5	77.6	78.7	79.8	80.9
92.5°	80.2	83.4	86.6	88.6	89.6	90.5	91.5	92.4
95°	111.5	114.4	117.3	119.2	120.0	120.7	121.6	122.3
97.5°	151.1	154.0	157.0	158.9	159.6	160.4	161.1	161.8
100°	179.7	182.5	185.2	186.9	187.4	188.1	188.7	189.2
102.5°	210.2	213.0	215.9	217.7	218.6	219.4	220.2	221.0
105°	256.5	259.3	262.0	264.1	265.4	266.7	268.0	269.3
107.5°	307.0	309.7	312.3	314.0	314.5	315.1	315.7	316.3
110°	340.6	342.1	343.6	345.0	346.3	347.7	349.0	350.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	376.7	378.5	380.3	381.6	382.4	383.2	384.0	384.8
115°	432.6	434.2	435.9	437.0	437.3	437.7	438.1	438.5
117.5°	486.1	487.1	488.2	488.9	489.2	489.4	489.7	489.9
120°	522.4	523.0	523.7	524.6	525.7	526.8	527.9	529.0
122.5°	559.4	560.4	561.4	561.8	561.7	561.5	561.4	561.3
125°	613.8	615.0	616.2	616.9	616.9	617.0	617.1	617.2
127.5°	665.3	666.3	667.5	668.2	668.5	668.7	669.0	669.2
130°	701.6	702.7	703.8	704.3	703.9	703.6	703.3	703.0
132.5°	735.8	736.9	737.9	738.6	738.7	738.9	739.1	739.3
135°	786.8	787.7	788.7	789.1	789.0	788.9	788.8	788.6
137.5°	836.5	837.1	837.9	838.5	839.0	839.6	840.2	840.7
140°	869.3	870.2	871.1	871.6	871.9	872.1	872.3	872.5
142.5°	900.6	901.5	902.5	903.0	903.4	903.7	904.0	904.3
145°	947.8	948.1	948.4	948.4	948.1	947.9	947.5	947.3
147.5°	990.8	990.7	990.6	990.6	990.6	990.7	990.8	990.8
150°	1018.2	1018.2	1018.2	1018.1	1017.9	1017.7	1017.5	1017.3
152.5°	1044.2	1044.8	1045.3	1045.3	1044.7	1044.2	1043.6	1043.1
155°	1080.6	1081.4	1082.2	1082.2	1081.4	1080.6	1079.7	1078.9
157.5°	1112.6	1113.1	1113.8	1113.8	1113.0	1112.3	1111.6	1110.9
160°	1132.2	1132.9	1133.5	1133.3	1132.2	1131.1	1130.2	1129.1
162.5°	1149.9	1151.0	1152.2	1152.3	1151.2	1150.1	1149.1	1148.0
165°	1173.3	1174.5	1175.8	1176.0	1175.2	1174.4	1173.5	1172.6
167.5°	1192.9	1194.3	1195.5	1195.5	1194.2	1192.9	1191.6	1190.3
170°	1203.6	1204.8	1206.2	1206.0	1204.5	1203.1	1201.6	1200.1
172.5°	1211.5	1212.9	1214.4	1214.4	1212.8	1211.4	1209.9	1208.4
175°	1220.1	1221.6	1223.0	1223.0	1221.6	1220.1	1218.6	1217.2
177.5°	1224.8	1226.0	1227.2	1227.1	1225.7	1224.4	1223.0	1221.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7

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