

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: P331325-830

Luminaire Tested: **SA2XXDIP-C485D1080U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331325-830
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-C485D1080U830-4F0-1E-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: 5485.9 lumens
Efficiency: N/A
Efficacy: 111.1 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

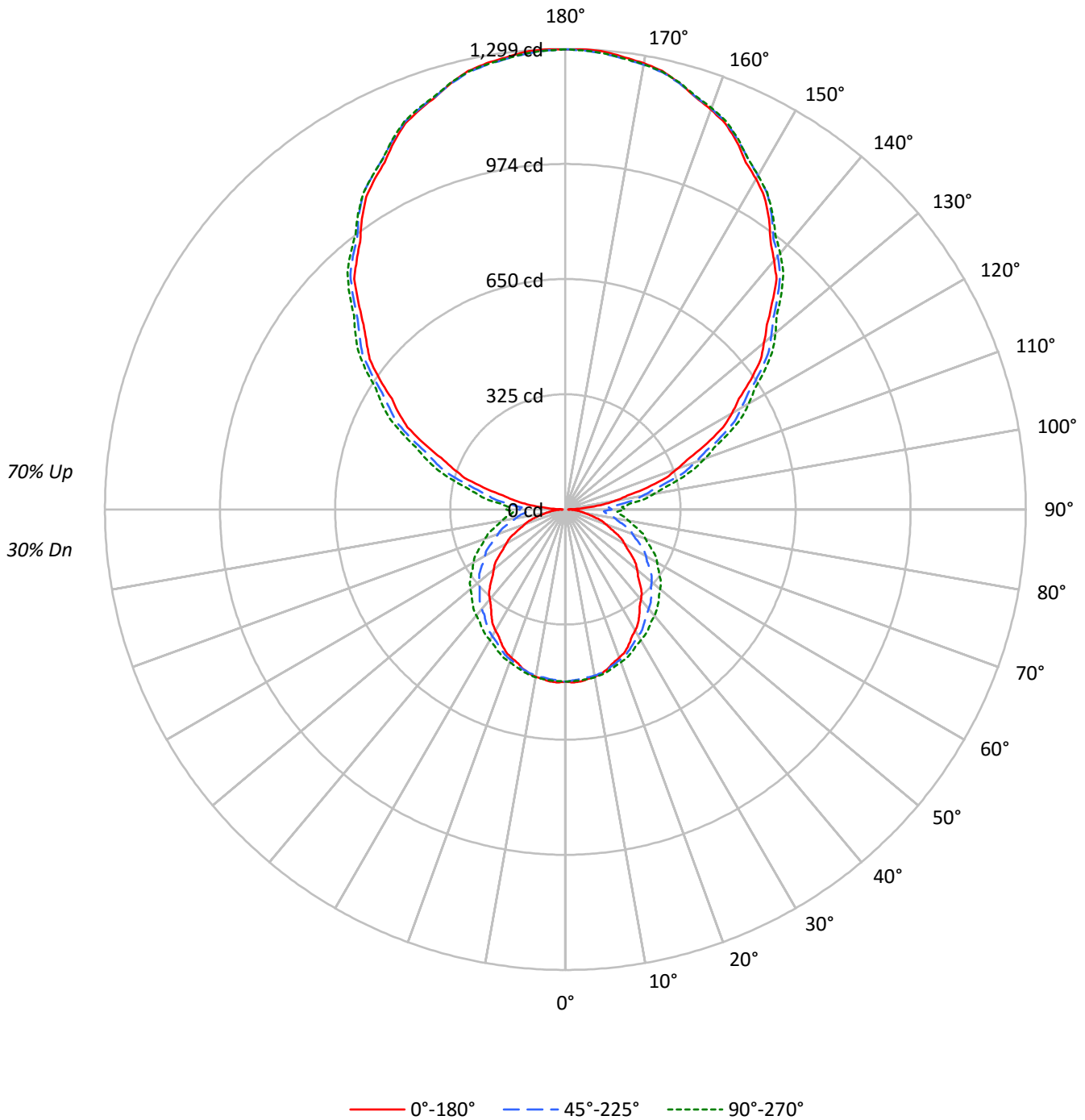
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	0.8
10°-20°	132.0	2.4
20°-30°	200.0	3.6
30°-40°	243.6	4.4
40°-50°	262.1	4.8
50°-60°	254.5	4.6
60°-70°	222.2	4.1
70°-80°	171.1	3.1
80°-90°	120.0	2.2
90°-100°	161.3	2.9
100°-110°	313.1	5.7
110°-120°	474.6	8.7
120°-130°	595.2	10.9
130°-140°	653.1	11.9
140°-150°	633.2	11.5
150°-160°	529.8	9.7
160°-170°	351.4	6.4
170°-180°	122.8	2.2
0°-30°	378.0	6.9
0°-40°	621.6	11.3
0°-60°	1138.1	20.7
0°-90°	1651.4	30.1
90°-120°	949.0	17.3
90°-150°	2830.5	51.6
90°-180°	3834.0	69.9
0°-180°	5485.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	8	63	131	156	167	8
95°	63	107	151	177	184	70
105°	239	263	301	327	336	253
115°	441	456	485	504	509	436
125°	639	649	668	683	689	571
135°	825	837	846	860	862	637
145°	1001	1008	1015	1020	1019	625
155°	1144	1147	1151	1156	1153	526
165°	1245	1244	1244	1251	1246	351
175°	1295	1292	1290	1297	1291	123
180°	1297	1297	1297	1297	1297	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	14.0	23.9	33.8	43.7	53.6	64.1	75.2	86.3	97.4	108.5	114.7
90°	8.1	20.2	32.1	44.1	56.1	69.7	85.1	100.5	115.8	131.2	137.0
92.5°	25.9	36.6	47.1	57.7	68.3	79.1	89.9	100.9	111.8	122.6	128.9
95°	62.6	72.4	82.1	91.9	101.7	111.5	121.4	131.3	141.2	151.0	156.9
97.5°	109.0	117.6	126.3	135.0	143.6	153.0	162.9	172.9	182.8	192.7	198.5
100°	143.9	151.7	159.5	167.2	174.9	183.5	193.0	202.5	212.0	221.5	227.2
102.5°	180.2	187.0	193.9	200.8	207.5	215.7	225.2	234.6	244.0	253.4	259.3
105°	238.9	244.2	249.4	254.7	260.0	266.9	275.5	284.2	292.8	301.4	307.4
107.5°	298.8	303.5	308.2	312.8	317.5	323.9	331.6	339.4	347.1	355.0	360.4
110°	336.8	341.3	345.9	350.5	355.1	361.2	368.9	376.5	384.2	391.9	396.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	378.8	382.9	386.9	391.1	395.1	400.8	407.8	414.9	422.0	429.1	433.6
115°	440.7	443.9	447.1	450.3	453.5	458.4	464.9	471.5	478.0	484.6	489.0
117.5°	501.8	504.8	507.9	511.0	514.1	518.2	523.3	528.5	533.7	538.8	542.8
120°	543.0	545.5	548.1	550.6	553.3	556.7	561.0	565.3	569.7	573.9	578.3
122.5°	580.6	583.2	585.8	588.4	591.0	594.6	599.1	603.6	608.0	612.6	616.2
125°	638.6	640.8	643.0	645.2	647.3	650.6	654.9	659.1	663.5	667.7	671.2
127.5°	695.8	698.3	701.0	703.6	706.2	709.1	712.3	715.4	718.6	721.8	724.7
130°	731.7	734.7	737.6	740.6	743.7	746.6	749.4	752.1	755.0	757.8	761.1
132.5°	771.9	774.4	776.8	779.2	781.7	784.2	786.8	789.5	792.1	794.7	797.3
135°	825.1	827.8	830.5	833.1	835.8	838.2	840.3	842.3	844.3	846.4	849.4
137.5°	881.8	884.0	886.2	888.3	890.4	892.2	893.5	894.8	896.2	897.5	900.1
140°	916.0	918.0	920.0	922.1	924.2	925.9	927.5	929.0	930.5	932.0	934.5
142.5°	951.0	953.1	955.1	957.2	959.1	960.6	961.5	962.4	963.3	964.2	966.4
145°	1000.7	1002.4	1004.1	1005.8	1007.5	1009.1	1010.5	1012.0	1013.4	1014.9	1016.1
147.5°	1045.6	1047.6	1049.6	1051.7	1053.8	1055.3	1056.2	1057.2	1058.2	1059.1	1059.8
150°	1076.2	1077.7	1079.1	1080.6	1082.0	1083.3	1084.3	1085.2	1086.2	1087.2	1087.9
152.5°	1103.3	1104.8	1106.3	1107.8	1109.2	1110.5	1111.7	1112.9	1114.1	1115.2	1116.2
155°	1144.2	1144.8	1145.6	1146.3	1147.1	1147.7	1148.5	1149.2	1150.0	1150.7	1151.9
157.5°	1178.9	1179.4	1179.9	1180.3	1180.9	1181.3	1181.8	1182.2	1182.6	1183.1	1184.8
160°	1200.0	1200.4	1200.9	1201.4	1201.9	1202.2	1202.5	1202.8	1203.0	1203.2	1204.7
162.5°	1219.2	1219.3	1219.4	1219.5	1219.7	1219.7	1220.0	1220.2	1220.5	1220.8	1222.4
165°	1244.8	1244.6	1244.3	1244.1	1243.9	1243.8	1243.8	1243.8	1243.8	1243.8	1245.5
167.5°	1266.3	1265.6	1264.8	1264.1	1263.4	1263.0	1262.9	1262.9	1262.8	1262.8	1264.5
170°	1277.7	1277.0	1276.2	1275.4	1274.8	1274.3	1274.0	1273.8	1273.6	1273.3	1275.0
172.5°	1285.5	1284.9	1284.1	1283.4	1282.6	1282.1	1282.0	1281.7	1281.4	1281.2	1282.9
175°	1295.2	1294.5	1293.7	1293.0	1292.3	1291.7	1291.2	1290.7	1290.2	1289.7	1291.5
177.5°	1299.1	1298.5	1298.0	1297.4	1296.8	1296.3	1295.9	1295.5	1295.1	1294.8	1295.9
180°	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	121.0	127.3	133.6	137.8	139.8	141.9	143.9	146.0
90°	142.8	148.5	154.3	158.3	160.4	162.5	164.7	166.7
92.5°	135.2	141.4	147.6	151.7	153.5	155.5	157.4	159.4
95°	162.9	168.8	174.8	178.4	179.8	181.3	182.7	184.0
97.5°	204.2	210.1	215.8	219.6	221.4	223.2	225.1	226.9
100°	233.1	238.8	244.6	248.3	249.8	251.2	252.7	254.2
102.5°	265.1	271.0	276.9	280.5	282.0	283.5	285.0	286.4
105°	313.3	319.3	325.3	329.1	330.8	332.5	334.2	336.0
107.5°	365.9	371.4	376.7	379.8	380.4	381.0	381.6	382.2
110°	401.9	406.9	411.9	414.9	415.8	416.9	417.8	418.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	437.9	442.3	446.8	449.6	450.8	451.9	453.2	454.3
115°	493.4	497.9	502.4	505.1	506.1	507.1	508.0	509.1
117.5°	546.9	550.9	555.0	557.4	558.3	559.1	560.1	560.9
120°	582.7	587.1	591.4	594.2	595.1	596.2	597.1	598.1
122.5°	619.9	623.6	627.3	629.6	630.6	631.4	632.4	633.3
125°	674.7	678.2	681.6	684.0	685.1	686.4	687.5	688.6
127.5°	727.7	730.8	733.8	735.6	736.1	736.8	737.4	737.9
130°	764.3	767.6	770.9	772.6	772.9	773.2	773.5	773.7
132.5°	799.8	802.4	804.9	806.4	806.9	807.4	807.9	808.3
135°	852.4	855.5	858.6	860.4	860.8	861.4	861.9	862.4
137.5°	902.9	905.5	908.2	909.6	909.7	909.8	909.8	909.9
140°	937.1	939.5	942.1	943.3	943.2	943.2	943.2	943.1
142.5°	968.6	970.7	973.0	974.0	973.8	973.6	973.6	973.4
145°	1017.3	1018.4	1019.6	1020.1	1019.9	1019.7	1019.5	1019.4
147.5°	1060.5	1061.1	1061.8	1061.9	1061.3	1060.7	1060.2	1059.6
150°	1088.6	1089.4	1090.1	1090.1	1089.4	1088.6	1087.9	1087.2
152.5°	1117.1	1117.9	1118.9	1118.9	1117.9	1117.1	1116.2	1115.2
155°	1153.1	1154.3	1155.6	1155.7	1155.1	1154.3	1153.6	1152.8
157.5°	1186.4	1188.1	1189.7	1190.0	1188.7	1187.6	1186.5	1185.2
160°	1206.2	1207.6	1209.1	1209.3	1208.3	1207.4	1206.4	1205.4
162.5°	1224.1	1225.7	1227.4	1227.6	1226.4	1225.3	1224.1	1222.9
165°	1247.2	1248.9	1250.6	1250.8	1249.6	1248.4	1247.2	1245.9
167.5°	1266.2	1267.9	1269.6	1269.8	1268.6	1267.2	1266.0	1264.8
170°	1276.7	1278.4	1280.1	1280.3	1278.7	1277.3	1275.8	1274.4
172.5°	1284.6	1286.3	1288.0	1288.1	1286.7	1285.2	1283.7	1282.2
175°	1293.2	1294.9	1296.6	1296.7	1295.2	1293.7	1292.3	1290.8
177.5°	1297.1	1298.3	1299.4	1299.4	1298.3	1297.1	1295.9	1294.8
180°	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4

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