

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: P331325-940

Luminaire Tested: **SA2XXDIP-C485D1080U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331325-940
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-C485D1080U940-4F0-1E-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

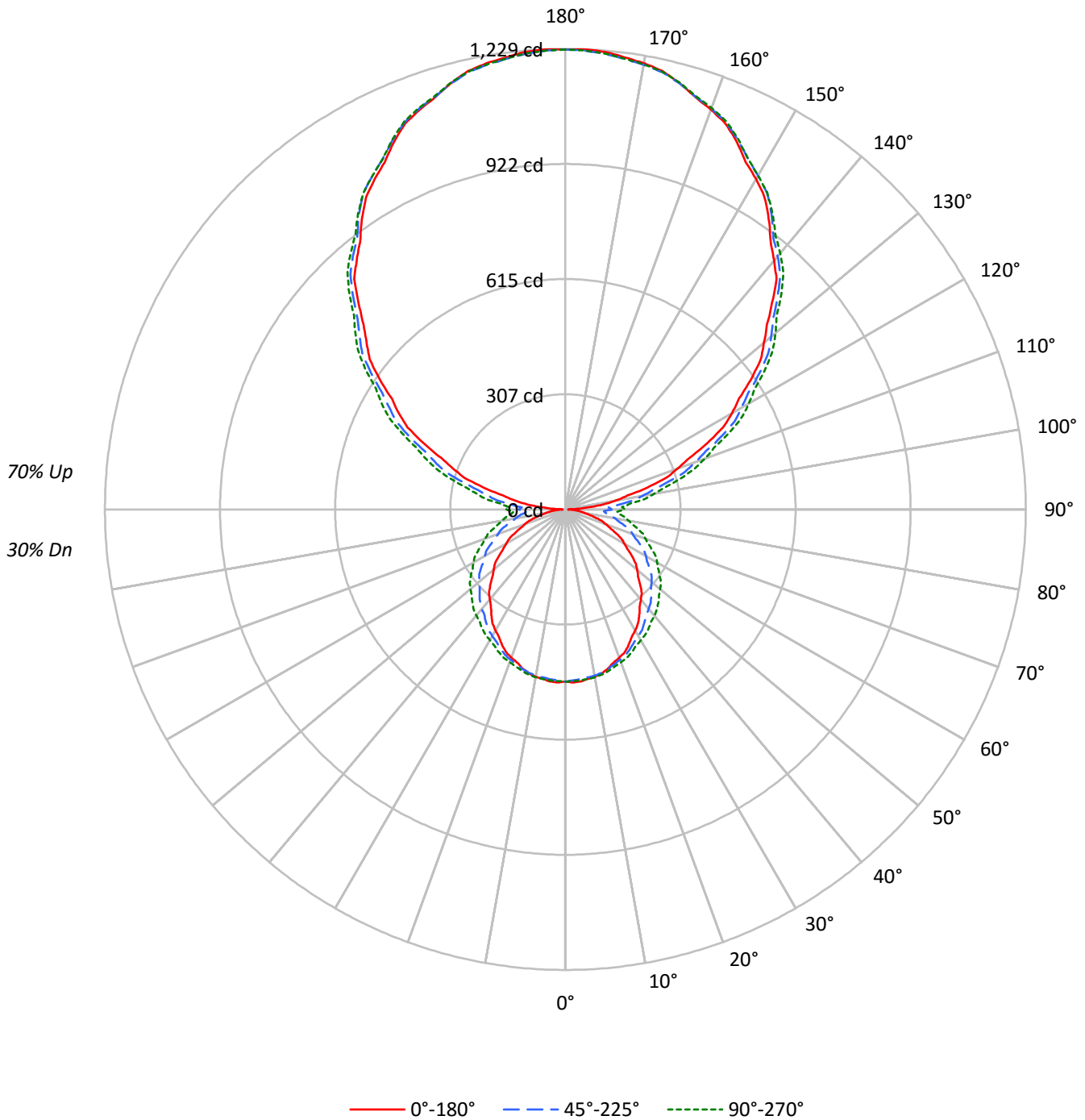
Lumens per Lamp: N/A
Luminaire Lumens: 5190.1 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	0.8
10°-20°	124.9	2.4
20°-30°	189.2	3.6
30°-40°	230.5	4.4
40°-50°	247.9	4.8
50°-60°	240.8	4.6
60°-70°	210.2	4.1
70°-80°	161.8	3.1
80°-90°	113.5	2.2
90°-100°	152.6	2.9
100°-110°	296.2	5.7
110°-120°	449.0	8.7
120°-130°	563.1	10.9
130°-140°	617.9	11.9
140°-150°	599.0	11.5
150°-160°	501.2	9.7
160°-170°	332.4	6.4
170°-180°	116.2	2.2
0°-30°	357.6	6.9
0°-40°	588.1	11.3
0°-60°	1076.8	20.7
0°-90°	1562.4	30.1
90°-120°	897.8	17.3
90°-150°	2677.9	51.6
90°-180°	3628.0	69.9
0°-180°	5190.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	8	60	124	148	158	7
95°	59	101	143	167	174	66
105°	226	249	285	310	318	239
115°	417	431	458	477	482	412
125°	604	614	632	646	652	540
135°	781	792	801	813	816	603
145°	947	954	960	965	964	591
155°	1082	1086	1089	1093	1091	498
165°	1178	1177	1177	1183	1179	332
175°	1225	1222	1220	1227	1221	116
180°	1227	1227	1227	1227	1227	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.3	22.6	32.0	41.4	50.7	60.6	71.2	81.7	92.1	102.6	108.5
90°	7.7	19.1	30.4	41.7	53.1	66.0	80.5	95.1	109.6	124.1	129.7
92.5°	24.5	34.6	44.6	54.6	64.6	74.8	85.1	95.4	105.8	116.0	122.0
95°	59.2	68.5	77.7	86.9	96.2	105.5	114.9	124.2	133.6	142.9	148.5
97.5°	103.1	111.3	119.5	127.7	135.9	144.7	154.1	163.5	172.9	182.3	187.8
100°	136.2	143.6	150.9	158.2	165.5	173.6	182.6	191.5	200.5	209.6	215.0
102.5°	170.5	176.9	183.4	189.9	196.4	204.1	213.0	221.9	230.9	239.8	245.3
105°	226.0	231.0	235.9	240.9	245.9	252.5	260.6	268.9	277.0	285.2	290.8
107.5°	282.7	287.1	291.6	296.0	300.4	306.4	313.7	321.1	328.4	335.8	341.0
110°	318.6	322.9	327.3	331.6	335.9	341.7	349.0	356.2	363.5	370.8	375.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	358.4	362.2	366.0	370.0	373.8	379.2	385.8	392.5	399.2	406.0	410.2
115°	417.0	420.0	423.0	426.0	429.0	433.6	439.8	446.0	452.2	458.4	462.6
117.5°	474.7	477.6	480.5	483.5	486.3	490.3	495.1	500.0	504.9	509.7	513.5
120°	513.7	516.1	518.5	520.9	523.4	526.6	530.7	534.8	539.0	543.0	547.2
122.5°	549.3	551.8	554.2	556.7	559.1	562.5	566.8	571.1	575.2	579.5	583.0
125°	604.1	606.3	608.3	610.4	612.4	615.5	619.6	623.6	627.7	631.7	635.0
127.5°	658.3	660.7	663.2	665.7	668.2	670.8	673.9	676.8	679.8	682.9	685.6
130°	692.2	695.1	697.9	700.7	703.6	706.3	709.0	711.6	714.3	716.9	720.1
132.5°	730.3	732.6	734.9	737.2	739.5	741.9	744.4	746.9	749.4	751.8	754.3
135°	780.6	783.2	785.7	788.2	790.8	793.0	795.0	796.8	798.8	800.8	803.6
137.5°	834.3	836.3	838.4	840.4	842.4	844.1	845.3	846.6	847.8	849.1	851.6
140°	866.6	868.5	870.4	872.4	874.3	875.9	877.4	878.9	880.3	881.7	884.1
142.5°	899.7	901.7	903.6	905.5	907.4	908.8	909.6	910.5	911.3	912.2	914.3
145°	946.7	948.3	949.9	951.5	953.1	954.7	956.0	957.4	958.8	960.2	961.3
147.5°	989.2	991.1	993.0	995.0	996.9	998.4	999.3	1000.2	1001.1	1002.0	1002.6
150°	1018.2	1019.6	1020.9	1022.3	1023.7	1024.8	1025.8	1026.7	1027.6	1028.6	1029.2
152.5°	1043.8	1045.3	1046.6	1048.0	1049.4	1050.6	1051.8	1052.8	1054.0	1055.1	1056.0
155°	1082.4	1083.1	1083.8	1084.5	1085.2	1085.8	1086.5	1087.3	1088.0	1088.6	1089.8
157.5°	1115.4	1115.8	1116.2	1116.7	1117.2	1117.6	1118.0	1118.5	1118.8	1119.3	1120.9
160°	1135.2	1135.7	1136.1	1136.6	1137.1	1137.4	1137.6	1137.9	1138.1	1138.4	1139.7
162.5°	1153.4	1153.5	1153.6	1153.7	1153.9	1154.0	1154.2	1154.4	1154.7	1154.9	1156.5
165°	1177.7	1177.5	1177.2	1177.0	1176.8	1176.7	1176.7	1176.7	1176.7	1176.7	1178.3
167.5°	1198.0	1197.3	1196.6	1196.0	1195.2	1194.9	1194.8	1194.8	1194.7	1194.7	1196.3
170°	1208.8	1208.1	1207.4	1206.7	1206.0	1205.6	1205.3	1205.1	1204.9	1204.6	1206.2
172.5°	1216.2	1215.6	1214.9	1214.2	1213.4	1213.0	1212.8	1212.5	1212.3	1212.1	1213.7
175°	1225.4	1224.7	1224.0	1223.2	1222.6	1222.0	1221.6	1221.1	1220.7	1220.1	1221.8
177.5°	1229.0	1228.5	1228.0	1227.4	1226.9	1226.4	1226.0	1225.7	1225.3	1224.9	1226.0
180°	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	114.5	120.5	126.4	130.4	132.2	134.2	136.2	138.1
90°	135.1	140.5	146.0	149.7	151.8	153.7	155.8	157.7
92.5°	127.9	133.8	139.6	143.5	145.3	147.1	148.9	150.8
95°	154.1	159.7	165.4	168.8	170.1	171.5	172.8	174.1
97.5°	193.2	198.8	204.2	207.8	209.5	211.2	212.9	214.6
100°	220.5	226.0	231.4	234.9	236.3	237.6	239.1	240.5
102.5°	250.8	256.4	262.0	265.4	266.8	268.2	269.7	271.0
105°	296.4	302.1	307.7	311.4	313.0	314.6	316.2	317.9
107.5°	346.2	351.3	356.4	359.4	359.9	360.4	361.1	361.6
110°	380.2	385.0	389.7	392.5	393.4	394.4	395.3	396.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	414.3	418.5	422.7	425.3	426.5	427.6	428.7	429.8
115°	466.8	471.1	475.3	477.9	478.8	479.7	480.6	481.6
117.5°	517.4	521.2	525.0	527.4	528.2	529.0	529.9	530.7
120°	551.3	555.4	559.5	562.1	563.0	564.0	564.9	565.9
122.5°	586.5	590.0	593.4	595.7	596.6	597.4	598.2	599.1
125°	638.3	641.6	644.9	647.1	648.2	649.3	650.4	651.5
127.5°	688.5	691.3	694.2	695.9	696.4	697.1	697.6	698.1
130°	723.1	726.2	729.3	730.9	731.2	731.5	731.7	732.0
132.5°	756.7	759.1	761.5	762.9	763.4	763.8	764.3	764.7
135°	806.5	809.4	812.3	814.0	814.4	814.9	815.4	815.9
137.5°	854.2	856.7	859.3	860.6	860.7	860.8	860.8	860.9
140°	886.5	888.9	891.3	892.4	892.3	892.3	892.3	892.2
142.5°	916.3	918.4	920.5	921.5	921.3	921.1	921.0	920.9
145°	962.4	963.5	964.7	965.1	964.9	964.7	964.6	964.4
147.5°	1003.3	1003.9	1004.5	1004.6	1004.1	1003.5	1003.0	1002.5
150°	1029.9	1030.6	1031.4	1031.4	1030.6	1029.9	1029.2	1028.6
152.5°	1056.9	1057.7	1058.5	1058.5	1057.7	1056.9	1056.0	1055.1
155°	1090.9	1092.1	1093.2	1093.4	1092.8	1092.1	1091.4	1090.7
157.5°	1122.4	1124.0	1125.5	1125.8	1124.6	1123.6	1122.5	1121.3
160°	1141.1	1142.5	1143.9	1144.1	1143.2	1142.3	1141.3	1140.4
162.5°	1158.1	1159.6	1161.2	1161.4	1160.3	1159.2	1158.1	1157.0
165°	1179.9	1181.5	1183.1	1183.3	1182.2	1181.1	1179.9	1178.8
167.5°	1197.9	1199.5	1201.1	1201.3	1200.2	1198.9	1197.7	1196.6
170°	1207.8	1209.4	1211.0	1211.2	1209.8	1208.4	1207.0	1205.7
172.5°	1215.3	1216.9	1218.5	1218.6	1217.3	1215.8	1214.5	1213.1
175°	1223.4	1225.0	1226.6	1226.7	1225.4	1224.0	1222.6	1221.2
177.5°	1227.2	1228.2	1229.3	1229.3	1228.2	1227.2	1226.0	1224.9
180°	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4	1227.4

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