

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: P331316-830

Luminaire Tested: **SA2XXDIP-C485D925U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331316-830  
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-C485D925U830-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4974.1 lumens  
Efficiency: N/A  
Efficacy: 111.8 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

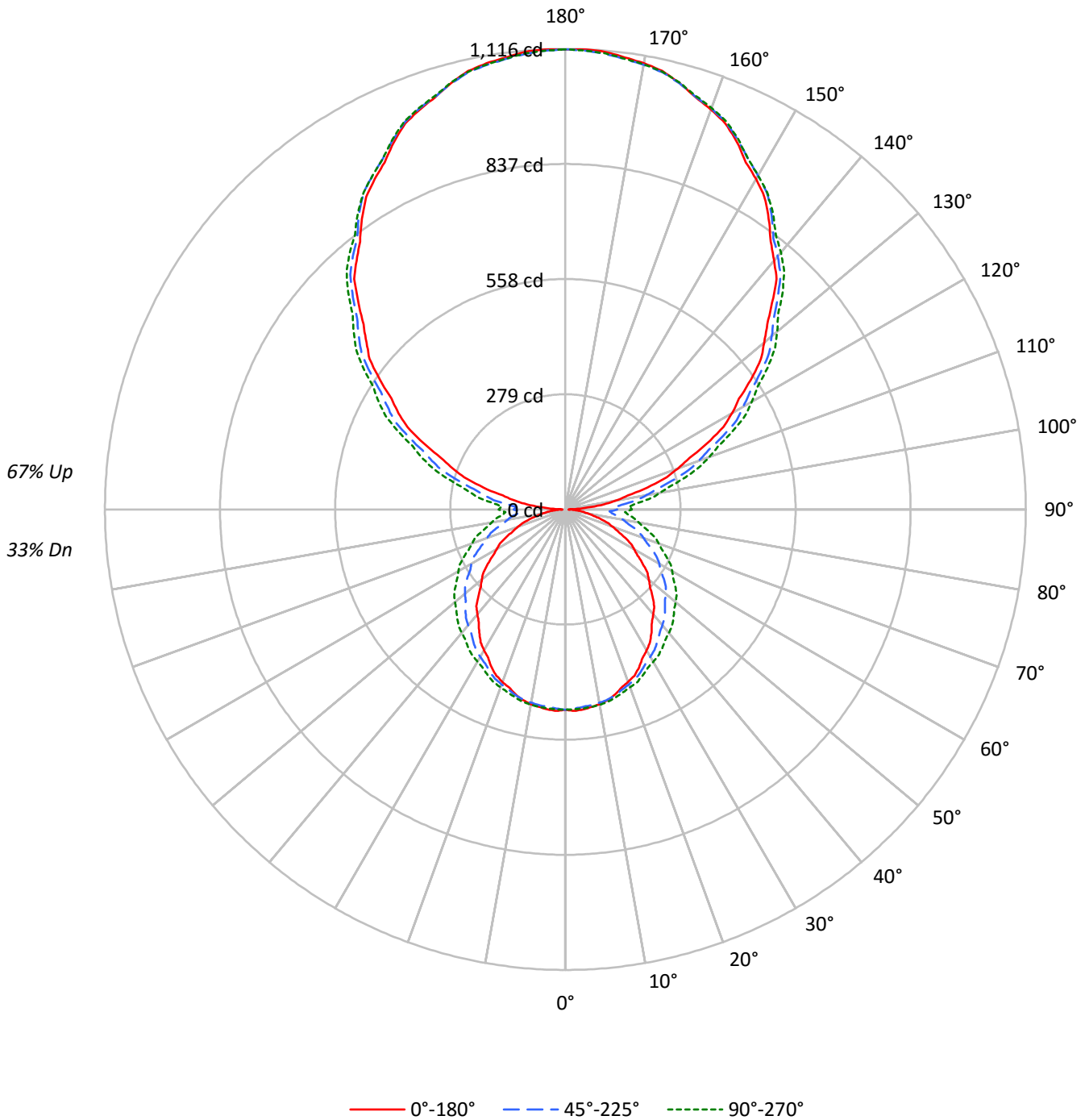
Input Watts (W): 44.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	33
1	93	88	84	80	84	80	76	73	63	61	58	48	47	45	34	33	32	26
2	84	77	70	65	75	69	64	59	55	51	48	42	39	37	30	28	26	21
3	77	67	59	53	69	60	54	49	48	43	39	37	33	31	26	24	22	17
4	70	59	51	45	62	53	46	41	42	37	33	32	29	26	23	21	19	14
5	64	52	44	38	57	47	40	35	38	32	28	29	25	22	21	18	16	12
6	59	47	39	33	53	42	35	30	34	28	25	26	22	19	19	16	14	11
7	54	42	34	28	48	38	31	26	30	25	21	23	20	17	17	14	12	9
8	50	38	30	25	45	34	28	23	28	23	19	21	18	15	15	13	11	8
9	47	34	27	22	42	31	25	20	25	20	17	20	16	13	14	12	10	8
10	43	31	24	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

**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	0.9
10°-20°	132.0	2.7
20°-30°	200.0	4.0
30°-40°	243.6	4.9
40°-50°	262.1	5.3
50°-60°	254.5	5.1
60°-70°	222.2	4.5
70°-80°	171.1	3.4
80°-90°	119.3	2.4
90°-100°	149.7	3.0
100°-110°	277.1	5.6
110°-120°	413.1	8.3
120°-130°	514.4	10.3
130°-140°	562.4	11.3
140°-150°	544.2	10.9
150°-160°	455.2	9.2
160°-170°	301.9	6.1
170°-180°	105.5	2.1
0°-30°	378.0	7.6
0°-40°	621.6	12.5
0°-60°	1138.1	22.9
0°-90°	1650.7	33.2
90°-120°	839.9	16.9
90°-150°	2460.9	49.5
90°-180°	3323.0	66.8
0°-180°	4974.1	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	61	126	151	162	7
95°	55	97	141	167	174	61
105°	206	230	268	293	302	218
115°	379	393	422	442	447	375
125°	549	558	577	593	599	491
135°	709	719	728	742	745	548
145°	860	866	872	877	877	537
155°	983	986	988	993	990	452
165°	1070	1069	1069	1074	1070	301
175°	1113	1110	1108	1114	1109	106
180°	1115	1115	1115	1115	1115	



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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°	13.9	23.8	33.6	43.5	53.3	63.6	74.6	85.5	96.4	107.4	113.7
90°	8.0	19.6	31.1	42.7	54.3	67.4	82.0	96.6	111.2	125.8	131.7
92.5°	23.2	33.5	43.8	54.1	64.4	74.8	85.6	96.3	107.1	117.7	123.9
95°	54.6	64.0	73.4	82.8	92.3	101.9	111.8	121.6	131.4	141.2	147.1
97.5°	94.3	102.6	111.0	119.4	127.8	136.9	146.7	156.5	166.3	176.1	181.9
100°	124.4	131.9	139.3	146.8	154.2	162.7	172.0	181.4	190.8	200.2	205.9
102.5°	155.4	162.0	168.7	175.3	181.9	189.9	199.2	208.5	217.8	227.2	232.9
105°	205.8	210.9	216.1	221.2	226.4	233.3	241.9	250.3	258.9	267.5	273.3
107.5°	257.1	261.7	266.3	270.8	275.3	281.5	289.3	297.1	304.9	312.6	318.1
110°	289.7	294.1	298.5	302.8	307.3	313.3	320.9	328.6	336.2	343.9	348.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	325.8	329.7	333.6	337.4	341.4	346.9	354.0	361.1	368.3	375.3	379.8
115°	379.1	382.0	385.0	388.0	391.0	395.8	402.4	409.0	415.7	422.3	426.7
117.5°	431.4	434.2	437.0	439.8	442.6	446.7	452.0	457.3	462.7	468.0	472.1
120°	466.7	469.1	471.4	473.6	476.0	479.4	484.0	488.6	493.1	497.8	502.1
122.5°	499.2	501.4	503.6	505.9	508.1	511.6	516.3	521.0	525.8	530.5	534.2
125°	548.8	550.7	552.6	554.5	556.4	559.5	563.9	568.3	572.6	577.0	580.6
127.5°	597.9	600.2	602.4	604.6	606.8	609.6	612.9	616.1	619.4	622.7	625.8
130°	628.8	631.3	634.0	636.5	639.0	641.8	644.6	647.5	650.4	653.2	656.6
132.5°	663.5	665.4	667.5	669.6	671.7	674.0	676.6	679.2	681.8	684.5	687.2
135°	709.0	711.2	713.6	715.9	718.2	720.3	722.3	724.2	726.2	728.2	731.3
137.5°	757.7	759.6	761.4	763.3	765.1	766.7	767.9	769.1	770.3	771.6	774.3
140°	787.0	788.8	790.5	792.2	794.0	795.5	796.8	798.2	799.6	801.0	803.4
142.5°	817.2	818.9	820.6	822.4	824.1	825.3	826.0	826.9	827.6	828.4	830.6
145°	859.7	861.2	862.6	864.1	865.5	867.0	868.2	869.4	870.7	871.9	873.1
147.5°	898.2	900.0	901.8	903.5	905.3	906.6	907.5	908.2	909.1	909.9	910.5
150°	924.6	925.9	927.1	928.4	929.6	930.7	931.5	932.4	933.2	934.1	934.6
152.5°	947.9	949.2	950.5	951.7	953.0	954.1	955.1	956.1	957.1	958.1	958.9
155°	983.0	983.5	984.2	984.9	985.4	986.1	986.7	987.3	988.0	988.5	989.7
157.5°	1012.9	1013.2	1013.7	1014.1	1014.6	1014.9	1015.3	1015.7	1016.1	1016.4	1017.9
160°	1031.0	1031.3	1031.7	1032.2	1032.6	1032.9	1033.1	1033.3	1033.5	1033.7	1035.0
162.5°	1047.4	1047.5	1047.6	1047.7	1047.8	1047.9	1048.2	1048.4	1048.6	1048.8	1050.2
165°	1069.5	1069.3	1069.0	1068.8	1068.7	1068.6	1068.6	1068.6	1068.6	1068.6	1070.0
167.5°	1087.9	1087.3	1086.7	1086.0	1085.4	1085.1	1085.1	1085.0	1085.0	1084.9	1086.4
170°	1097.7	1097.0	1096.5	1095.8	1095.1	1094.8	1094.6	1094.4	1094.1	1093.9	1095.4
172.5°	1104.5	1103.8	1103.2	1102.6	1101.9	1101.5	1101.4	1101.1	1100.9	1100.7	1102.2
175°	1112.8	1112.1	1111.4	1110.9	1110.2	1109.7	1109.3	1108.9	1108.4	1108.1	1109.5
177.5°	1116.2	1115.6	1115.1	1114.7	1114.1	1113.7	1113.3	1113.0	1112.7	1112.4	1113.3
180°	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7



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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°	120.0	126.3	132.6	136.8	138.8	140.8	142.9	145.0
90°	137.5	143.4	149.2	153.2	155.2	157.3	159.4	161.5
92.5°	130.2	136.4	142.6	146.7	148.6	150.5	152.4	154.4
95°	153.1	159.0	164.9	168.6	170.1	171.5	173.1	174.5
97.5°	187.7	193.5	199.3	203.0	204.8	206.7	208.5	210.3
100°	211.8	217.5	223.4	227.0	228.5	230.0	231.5	233.1
102.5°	238.7	244.6	250.4	254.1	255.6	257.1	258.6	260.1
105°	279.3	285.1	291.1	294.8	296.6	298.3	300.0	301.7
107.5°	323.5	328.9	334.4	337.4	338.2	338.9	339.8	340.5
110°	353.9	358.9	363.9	367.0	368.1	369.2	370.2	371.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	384.4	388.9	393.3	396.2	397.5	398.8	400.0	401.2
115°	431.2	435.7	440.2	443.0	444.0	445.2	446.3	447.3
117.5°	476.3	480.4	484.6	487.1	488.0	489.0	490.0	491.0
120°	506.5	510.9	515.3	518.0	519.1	520.2	521.3	522.4
122.5°	538.0	541.8	545.5	547.9	548.9	549.9	550.9	552.0
125°	584.2	587.8	591.4	593.8	595.0	596.2	597.4	598.6
127.5°	629.0	632.2	635.3	637.2	637.9	638.6	639.3	640.0
130°	659.9	663.3	666.6	668.5	668.8	669.3	669.7	670.1
132.5°	689.8	692.6	695.3	696.9	697.5	698.1	698.7	699.3
135°	734.4	737.4	740.6	742.4	743.0	743.7	744.3	744.9
137.5°	777.0	779.7	782.4	783.9	784.1	784.4	784.6	784.8
140°	806.0	808.4	811.0	812.3	812.4	812.5	812.6	812.7
142.5°	832.7	834.9	837.1	838.1	838.1	838.1	838.1	838.0
145°	874.2	875.4	876.6	877.1	877.0	876.9	876.9	876.8
147.5°	911.2	911.7	912.3	912.4	911.9	911.5	911.2	910.7
150°	935.3	935.9	936.5	936.5	935.9	935.3	934.6	934.1
152.5°	959.7	960.5	961.3	961.3	960.5	959.7	958.9	958.1
155°	990.7	991.7	992.8	993.0	992.3	991.7	991.1	990.4
157.5°	1019.3	1020.7	1022.1	1022.3	1021.3	1020.3	1019.3	1018.3
160°	1036.2	1037.5	1038.8	1039.0	1038.1	1037.3	1036.4	1035.6
162.5°	1051.6	1053.0	1054.4	1054.7	1053.7	1052.6	1051.7	1050.7
165°	1071.5	1072.9	1074.4	1074.6	1073.6	1072.5	1071.5	1070.4
167.5°	1087.8	1089.3	1090.7	1090.9	1089.9	1088.7	1087.7	1086.6
170°	1096.8	1098.3	1099.8	1099.9	1098.6	1097.4	1096.1	1094.9
172.5°	1103.6	1105.1	1106.5	1106.6	1105.4	1104.2	1102.9	1101.6
175°	1111.0	1112.4	1113.9	1114.0	1112.8	1111.4	1110.2	1109.0
177.5°	1114.4	1115.4	1116.3	1116.3	1115.4	1114.4	1113.3	1112.4
180°	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7	1114.7

(END OF REPORT)