

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: P332596-930

Luminaire Tested: **SA4XXDIP-C795D590U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332596-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D590U930-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

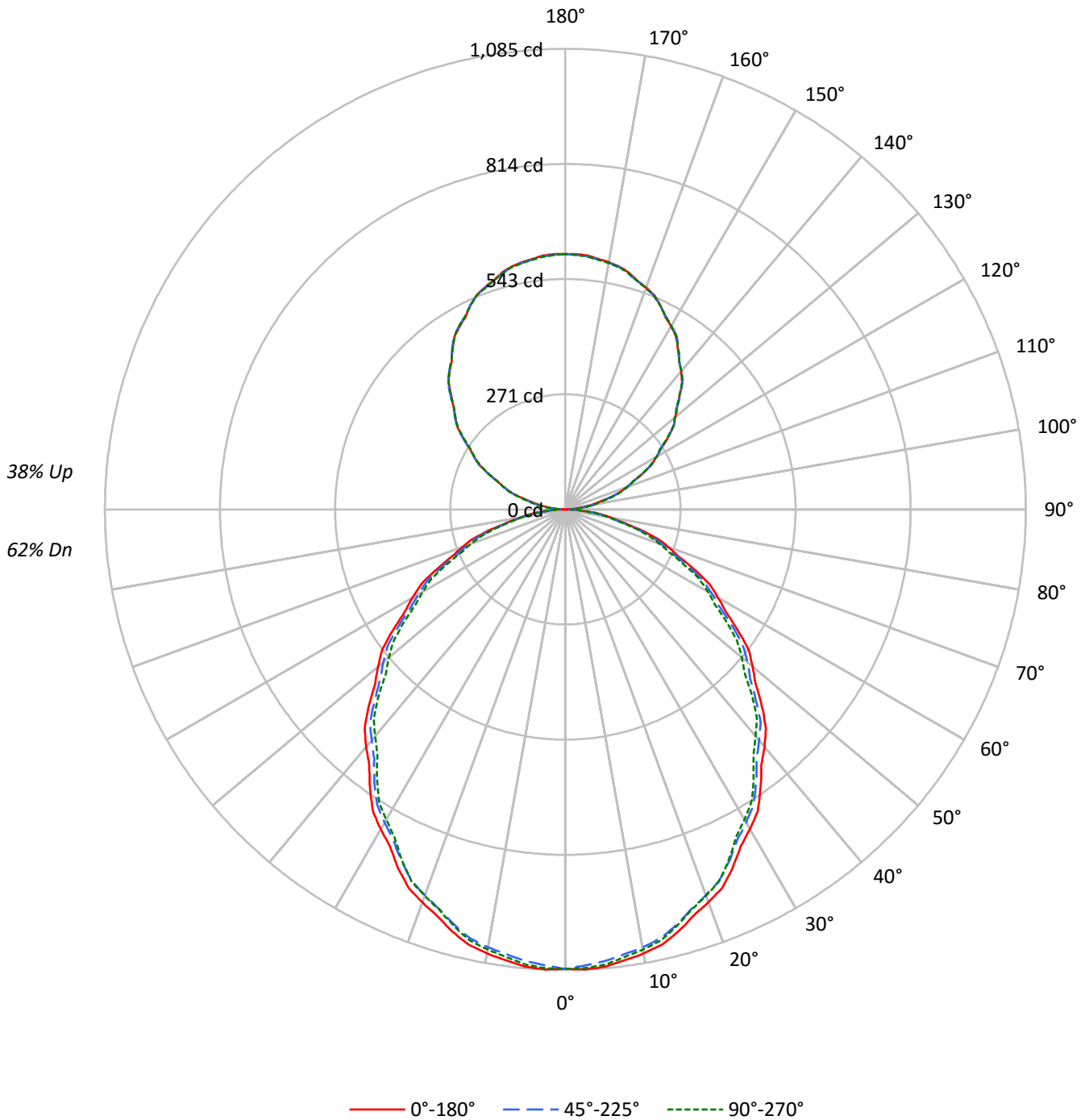
Lumens per Lamp: N/A
Luminaire Lumens: 4447.2 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 40.3
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	68	68	68	62
1	101	96	92	89	94	90	87	84	79	77	74	69	67	65	60	58	57	53
2	92	84	78	72	86	79	73	69	69	65	61	61	57	55	53	50	48	44
3	84	74	66	60	78	69	63	57	61	56	52	54	50	46	47	43	41	37
4	76	65	57	51	71	62	54	49	54	49	44	48	43	40	42	38	35	32
5	70	58	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28
6	65	52	44	38	60	49	42	37	44	38	33	39	34	30	34	30	27	24
7	60	47	39	34	56	45	37	32	40	34	29	35	30	27	31	27	24	22
8	56	43	35	30	52	41	34	29	36	30	26	32	27	24	29	25	22	19
9	52	39	32	27	49	37	30	26	34	28	24	30	25	22	26	22	20	17
10	49	36	29	24	46	34	28	23	31	25	21	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8737	8737	8737
5°	8763	8658	8721
10°	8708	8588	8630
15°	8603	8466	8487
20°	8463	8314	8322
25°	8304	8141	8118
30°	8108	7938	7866
35°	7906	7727	7624
40°	7695	7484	7347
45°	7476	7247	7108
50°	7232	7036	6818
55°	6970	6763	6542
60°	6707	6455	6260
65°	6411	6162	5914
70°	6080	5773	5549
75°	5571	5303	5168
80°	4956	4756	4635
85°	4335	4177	4094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.9	2.3
10°-20°	287.2	6.5
20°-30°	422.7	9.5
30°-40°	491.4	11.0
40°-50°	491.4	11.0
50°-60°	429.8	9.7
60°-70°	319.2	7.2
70°-80°	181.4	4.1
80°-90°	54.1	1.2
90°-100°	39.7	0.9
100°-110°	117.5	2.6
110°-120°	199.4	4.5
120°-130°	262.9	5.9
130°-140°	295.3	6.6
140°-150°	290.2	6.5
150°-160°	244.0	5.5
160°-170°	162.4	3.7
170°-180°	56.9	1.3
0°-30°	811.8	18.3
0°-40°	1303.1	29.3
0°-60°	2224.4	50.0
0°-90°	2779.1	62.5
90°-120°	356.5	8.0
90°-150°	1204.9	27.1
90°-180°	1668.0	37.5
0°-180°	4447.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1081	1078	1068	1077	1076	103
15°	1029	1025	1013	1018	1016	290
25°	932	926	914	915	911	429
35°	802	796	784	778	774	501
45°	655	648	635	626	623	505
55°	495	492	480	470	465	443
65°	336	331	323	314	310	332
75°	179	174	170	167	166	190
85°	47	47	45	45	44	52
90°	1	6	10	13	14	4
95°	28	32	35	37	37	31
105°	108	109	111	112	114	115
115°	203	203	202	201	201	200
125°	295	295	295	294	293	263
135°	381	384	384	383	381	295
145°	463	464	465	464	463	289
155°	530	530	530	531	530	244
165°	577	576	575	577	576	163
175°	600	598	598	600	598	57
180°	601	601	601	601	601	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1085.1	1084.6	1084.1	1083.7	1083.2	1082.1	1080.4	1078.7	1077.0	1075.4	1076.8
5°	1081.4	1080.7	1079.9	1079.1	1078.3	1076.8	1074.7	1072.6	1070.5	1068.4	1070.5
7.5°	1071.4	1070.6	1069.8	1069.0	1068.3	1066.7	1064.4	1062.0	1059.6	1057.3	1059.0
10°	1062.3	1061.6	1060.8	1060.1	1059.2	1057.6	1055.1	1052.6	1050.1	1047.6	1049.1
12.5°	1050.5	1049.8	1049.0	1048.2	1047.5	1045.7	1043.1	1040.4	1037.8	1035.1	1036.8
15°	1029.4	1028.6	1027.8	1027.0	1026.3	1024.5	1021.6	1018.7	1015.8	1012.9	1014.1
17.5°	1003.9	1002.9	1001.9	1001.0	1000.0	998.2	995.5	992.7	989.9	987.2	988.0
20°	985.1	984.1	983.3	982.3	981.3	979.3	976.5	973.5	970.7	967.8	968.4
22.5°	965.1	963.8	962.5	961.2	959.9	957.9	955.0	952.1	949.2	946.3	947.4
25°	932.2	930.9	929.5	928.2	926.8	924.8	922.1	919.4	916.7	914.0	914.2
27.5°	894.8	893.4	892.0	890.6	889.2	887.3	884.8	882.3	879.8	877.3	876.8
30°	869.8	868.3	866.7	865.2	863.6	861.6	859.1	856.6	854.1	851.6	850.8
32.5°	843.4	842.0	840.7	839.3	837.9	835.8	833.2	830.5	827.9	825.2	824.3
35°	802.2	800.8	799.5	798.1	796.8	794.8	792.1	789.4	786.7	784.0	782.6
37.5°	758.6	757.4	756.2	755.0	753.7	751.6	748.8	745.8	743.0	740.0	738.6
40°	730.2	728.6	727.1	725.5	724.0	721.8	718.9	716.0	713.1	710.2	708.3
42.5°	699.7	698.7	697.8	696.9	695.9	693.9	690.7	687.5	684.3	681.1	678.9
45°	654.8	653.4	652.1	650.7	649.4	647.1	644.1	641.0	637.9	634.8	632.7
47.5°	607.7	606.8	605.9	605.0	604.1	602.2	599.3	596.5	593.6	590.8	588.3
50°	575.8	575.0	574.3	573.5	572.7	571.0	568.3	565.7	562.9	560.2	557.5
52.5°	544.6	543.7	542.7	541.8	540.9	539.0	536.1	533.3	530.4	527.6	525.2
55°	495.2	494.6	494.0	493.4	492.8	491.2	488.5	485.8	483.1	480.5	478.1
57.5°	448.0	447.4	446.7	446.1	445.4	443.7	441.1	438.4	435.8	433.1	430.9
60°	415.4	414.4	413.4	412.5	411.6	409.8	407.3	404.8	402.3	399.8	398.0
62.5°	383.5	382.7	381.9	381.1	380.3	378.5	375.9	373.2	370.6	367.9	366.3
65°	335.6	334.7	333.7	332.7	331.7	330.3	328.4	326.4	324.5	322.6	320.7
67.5°	287.4	286.5	285.6	284.7	283.9	282.5	280.6	278.8	277.0	275.1	273.2
70°	257.6	256.2	254.9	253.5	252.2	250.7	249.2	247.6	246.1	244.6	243.0
72.5°	225.7	224.3	223.0	221.6	220.2	219.0	217.8	216.5	215.2	214.0	212.8
75°	178.6	177.7	176.8	175.8	174.8	173.8	172.8	171.9	171.0	170.0	169.2
77.5°	133.7	133.3	132.9	132.5	132.0	131.4	130.5	129.7	128.8	128.0	127.8
80°	106.6	106.1	105.5	104.9	104.4	103.9	103.5	103.1	102.7	102.3	101.9
82.5°	80.3	80.1	79.7	79.5	79.2	79.1	79.0	78.9	78.8	78.8	78.5
85°	46.8	46.8	46.8	46.8	46.8	46.6	46.2	45.9	45.5	45.1	45.1
87.5°	18.3	18.4	18.4	18.5	18.6	18.7	18.7	18.7	18.7	18.7	18.8
90°	1.4	2.5	3.7	4.8	6.0	6.9	7.7	8.6	9.4	10.2	10.8
92.5°	9.9	11.3	12.6	13.9	15.2	16.1	16.7	17.3	17.9	18.4	18.8
95°	27.9	28.9	29.8	30.7	31.6	32.4	33.2	33.9	34.7	35.3	35.6
97.5°	48.8	49.5	50.2	51.0	51.7	52.5	53.3	54.2	55.0	55.9	56.3
100°	65.1	65.6	66.0	66.4	66.8	67.4	68.3	69.3	70.2	71.2	71.3
102.5°	82.2	82.3	82.5	82.7	82.8	83.4	84.2	85.0	85.9	86.7	87.1
105°	108.4	108.4	108.5	108.7	108.8	109.0	109.4	109.8	110.2	110.6	111.0
107.5°	135.7	135.9	136.0	136.2	136.3	136.4	136.4	136.5	136.6	136.6	136.9
110°	154.4	154.6	154.8	155.0	155.2	155.2	155.2	155.1	155.0	154.8	154.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.7	173.7	173.8	173.8	173.9	173.8	173.7	173.4	173.3	173.1	173.0
115°	202.8	202.8	202.8	202.8	202.8	202.6	202.4	202.2	202.0	201.8	201.7
117.5°	230.1	230.2	230.2	230.3	230.4	230.4	230.2	230.1	229.9	229.8	229.4
120°	248.3	248.7	249.2	249.6	250.0	250.1	249.7	249.4	249.1	248.7	248.3
122.5°	267.3	267.4	267.6	267.7	267.9	268.0	267.8	267.7	267.5	267.4	267.0
125°	295.3	295.3	295.3	295.3	295.3	295.2	295.1	295.1	294.9	294.8	294.6
127.5°	320.7	321.0	321.3	321.6	321.9	322.0	321.8	321.6	321.5	321.3	321.1
130°	338.5	338.8	339.2	339.5	339.7	339.9	339.9	339.9	339.9	339.9	339.7
132.5°	356.8	357.0	357.2	357.4	357.7	357.8	357.7	357.6	357.5	357.4	357.2
135°	380.8	381.5	382.0	382.7	383.4	383.6	383.6	383.6	383.6	383.6	383.4
137.5°	407.1	407.3	407.6	407.9	408.2	408.5	408.6	408.8	409.0	409.1	408.9
140°	424.5	424.8	424.9	425.2	425.3	425.5	425.5	425.5	425.5	425.5	425.3
142.5°	440.5	440.8	441.0	441.2	441.4	441.4	441.3	441.2	441.2	441.1	441.1
145°	462.7	463.1	463.5	463.9	464.3	464.6	464.7	464.8	464.9	465.0	464.9
147.5°	484.6	485.1	485.6	486.1	486.7	486.8	486.7	486.7	486.6	486.5	486.4
150°	498.0	498.5	498.9	499.3	499.7	499.9	499.9	499.9	499.9	499.9	499.9
152.5°	510.7	510.9	511.2	511.4	511.7	511.8	511.9	512.0	512.1	512.2	512.4
155°	530.1	530.1	530.1	530.1	530.1	530.0	529.9	529.9	529.8	529.6	530.0
157.5°	546.5	546.3	546.1	545.9	545.8	545.6	545.6	545.6	545.6	545.5	545.8
160°	556.1	556.0	556.0	555.9	555.7	555.6	555.5	555.5	555.3	555.2	555.5
162.5°	565.1	564.8	564.5	564.3	564.0	563.8	563.7	563.6	563.5	563.4	563.9
165°	577.1	576.7	576.4	576.2	575.8	575.6	575.4	575.2	574.9	574.8	575.4
167.5°	586.3	585.9	585.4	585.0	584.6	584.3	584.3	584.4	584.4	584.4	585.1
170°	591.5	591.0	590.4	590.0	589.4	589.2	589.3	589.4	589.5	589.6	590.3
172.5°	595.2	594.8	594.4	593.9	593.5	593.3	593.3	593.3	593.3	593.4	594.0
175°	600.3	599.8	599.3	598.8	598.3	597.9	597.9	597.8	597.6	597.5	598.3
177.5°	602.0	601.6	601.2	600.8	600.3	600.1	600.1	600.1	600.1	600.1	600.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1078.4	1079.9	1081.5	1082.2	1082.1	1081.9	1081.7	1081.6
5°	1072.6	1074.7	1076.8	1077.7	1077.3	1077.0	1076.6	1076.2
7.5°	1060.7	1062.4	1064.0	1064.8	1064.6	1064.4	1064.1	1063.9
10°	1050.7	1052.2	1053.8	1054.3	1053.9	1053.5	1053.2	1052.8
12.5°	1038.5	1040.2	1041.9	1042.4	1042.0	1041.4	1040.8	1040.3
15°	1015.2	1016.4	1017.5	1017.8	1017.2	1016.7	1016.1	1015.5
17.5°	988.7	989.4	990.2	990.3	989.9	989.5	989.2	988.8
20°	969.0	969.6	970.1	970.2	969.8	969.5	969.1	968.7
22.5°	948.4	949.4	950.5	950.6	949.9	949.3	948.5	947.9
25°	914.4	914.6	914.8	914.5	913.8	913.0	912.2	911.4
27.5°	876.4	875.9	875.4	874.7	873.8	872.8	871.8	870.8
30°	850.0	849.3	848.5	847.7	846.7	845.7	844.7	843.8
32.5°	823.4	822.5	821.6	820.6	819.6	818.6	817.7	816.8
35°	781.3	779.9	778.5	777.4	776.4	775.5	774.5	773.6
37.5°	737.1	735.6	734.3	732.9	731.6	730.3	729.0	727.7
40°	706.4	704.5	702.5	701.1	700.1	699.2	698.2	697.2
42.5°	676.6	674.4	672.1	670.7	670.1	669.4	668.8	668.1
45°	630.6	628.4	626.3	625.0	624.4	623.8	623.2	622.6
47.5°	586.0	583.6	581.1	579.3	577.8	576.3	574.9	573.4
50°	554.8	552.1	549.4	547.5	546.3	545.2	544.0	542.9
52.5°	522.9	520.4	518.0	516.2	514.7	513.2	511.8	510.3
55°	475.8	473.5	471.2	469.4	468.3	467.2	465.9	464.8
57.5°	428.7	426.5	424.3	422.7	421.5	420.4	419.3	418.2
60°	396.3	394.6	392.8	391.5	390.5	389.6	388.6	387.7
62.5°	364.7	363.1	361.6	360.3	359.3	358.3	357.4	356.4
65°	318.8	316.8	314.9	313.5	312.5	311.5	310.5	309.6
67.5°	271.4	269.5	267.7	266.6	266.4	266.1	265.8	265.5
70°	241.5	239.9	238.4	237.3	236.8	236.2	235.6	235.1
72.5°	211.6	210.3	209.1	208.2	207.6	207.0	206.4	205.9
75°	168.4	167.6	166.9	166.4	166.2	166.0	165.8	165.7
77.5°	127.5	127.3	127.1	126.7	126.2	125.7	125.2	124.7
80°	101.6	101.2	100.8	100.5	100.3	100.1	100.0	99.7
82.5°	78.3	78.0	77.8	77.6	77.5	77.2	77.0	76.8
85°	45.1	45.1	45.1	45.0	44.8	44.6	44.4	44.2
87.5°	18.9	19.1	19.2	19.2	19.3	19.3	19.4	19.4
90°	11.5	12.1	12.7	13.1	13.4	13.5	13.8	13.9
92.5°	19.2	19.6	19.9	20.1	20.3	20.4	20.5	20.6
95°	36.0	36.3	36.6	36.8	36.8	36.8	36.8	36.8
97.5°	56.7	57.0	57.4	57.6	57.6	57.6	57.6	57.6
100°	71.6	71.7	72.0	72.1	72.1	72.1	72.1	72.1
102.5°	87.3	87.6	87.9	88.1	88.2	88.3	88.4	88.5
105°	111.3	111.6	111.9	112.2	112.5	112.8	113.2	113.5
107.5°	137.2	137.5	137.8	137.9	137.9	137.9	137.9	137.9
110°	154.4	154.3	154.0	154.1	154.4	154.7	155.0	155.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	173.0	172.9	172.9	172.9	173.0	173.0	173.1	173.2
115°	201.6	201.5	201.4	201.3	201.2	201.1	201.0	200.9
117.5°	229.1	228.8	228.4	228.1	227.9	227.7	227.5	227.3
120°	247.8	247.2	246.7	246.5	246.8	247.0	247.2	247.4
122.5°	266.7	266.4	266.0	265.6	265.2	264.9	264.5	264.2
125°	294.4	294.2	294.0	293.8	293.6	293.3	293.2	292.9
127.5°	320.9	320.7	320.5	320.3	320.2	320.0	319.8	319.7
130°	339.5	339.3	339.1	338.8	338.3	337.9	337.5	337.1
132.5°	357.0	356.8	356.6	356.4	356.2	356.0	355.9	355.7
135°	383.2	383.0	382.8	382.5	382.2	381.9	381.6	381.3
137.5°	408.5	408.3	408.1	407.9	408.0	408.1	408.1	408.2
140°	425.3	425.2	425.1	424.9	424.9	424.8	424.7	424.5
142.5°	441.1	441.1	441.0	441.0	441.0	441.0	440.9	440.9
145°	464.8	464.7	464.6	464.4	464.1	463.7	463.4	463.2
147.5°	486.3	486.2	486.2	486.1	486.0	485.8	485.8	485.7
150°	499.9	499.9	499.9	499.9	499.7	499.6	499.5	499.5
152.5°	512.7	512.9	513.1	513.1	512.9	512.6	512.3	512.1
155°	530.4	530.8	531.3	531.3	530.8	530.4	530.0	529.6
157.5°	546.2	546.5	546.8	546.7	546.4	546.1	545.7	545.4
160°	555.9	556.1	556.4	556.4	555.9	555.3	554.8	554.3
162.5°	564.5	565.1	565.7	565.7	565.2	564.6	564.1	563.6
165°	576.0	576.6	577.2	577.3	576.9	576.5	576.1	575.7
167.5°	585.6	586.3	586.9	586.9	586.3	585.6	585.0	584.3
170°	590.8	591.5	592.1	592.1	591.3	590.6	589.9	589.1
172.5°	594.8	595.5	596.1	596.1	595.4	594.7	593.9	593.3
175°	599.0	599.7	600.4	600.4	599.7	599.0	598.3	597.5
177.5°	601.3	601.9	602.4	602.4	601.8	601.1	600.4	599.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3

(END OF REPORT)