

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: P332533-930

Luminaire Tested: **SA4XXDIP-C350D1205U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332533-930
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-C350D1205U930-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH 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: 4637.5 lumens
Efficiency: N/A
Efficacy: 109.9 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-Indirect

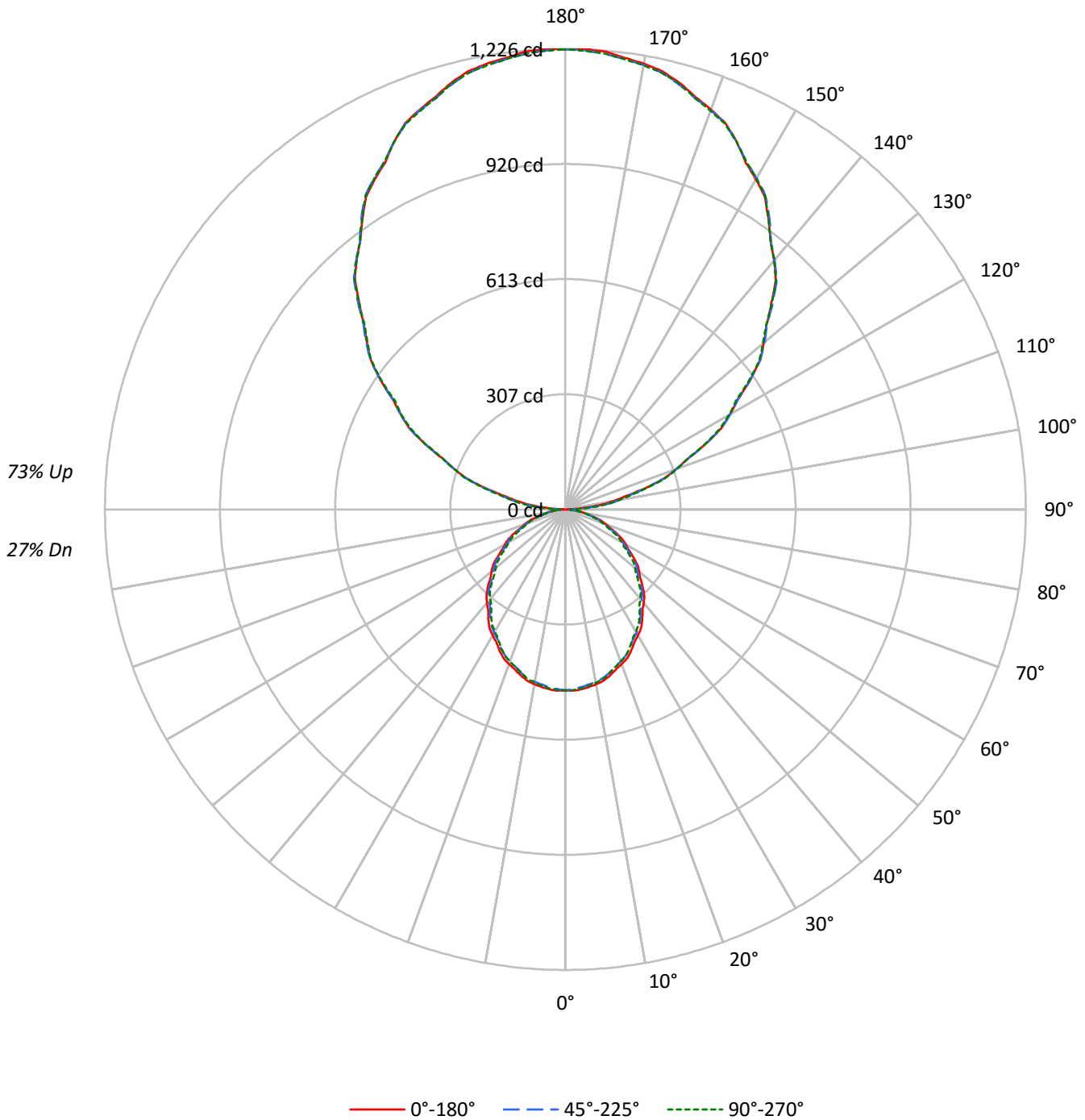
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	91	91	91	91	70	70	70	52	52	52	35	35	35	27				27
1	93	88	85	81	82	79	76	73	61	59	57	45	44	43	31	30	29				22	
2	84	77	71	66	75	69	64	60	54	50	48	40	38	36	27	26	25				19	
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	24	22	21				16	
4	70	60	52	46	62	54	47	42	42	37	34	31	28	26	21	19	18				14	
5	64	53	45	40	57	48	41	36	37	33	29	28	25	22	19	17	16				12	
6	59	47	40	34	53	43	36	31	34	29	25	25	22	19	17	15	14				10	
7	54	43	35	30	48	38	32	27	30	26	22	23	20	17	16	14	12				9	
8	50	39	31	26	45	35	28	24	28	23	19	21	18	15	14	12	11				8	
9	47	35	28	23	42	32	25	21	25	21	17	19	16	14	13	11	10				7	
10	44	32	25	21	39	29	23	19	23	19	15	18	14	12	12	10	9				7	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3888	3888	3888
5°	3900	3853	3881
10°	3875	3822	3841
15°	3828	3768	3777
20°	3766	3699	3703
25°	3695	3624	3613
30°	3608	3533	3500
35°	3517	3438	3392
40°	3424	3331	3270
45°	3327	3225	3164
50°	3218	3131	3034
55°	3102	3009	2911
60°	2984	2872	2785
65°	2854	2743	2632
70°	2705	2568	2469
75°	2480	2361	2299
80°	2208	2120	2064
85°	1936	1862	1815



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	1.0
10°-20°	127.8	2.8
20°-30°	188.1	4.1
30°-40°	218.7	4.7
40°-50°	218.7	4.7
50°-60°	191.3	4.1
60°-70°	142.1	3.1
70°-80°	80.7	1.7
80°-90°	27.0	0.6
90°-100°	80.8	1.7
100°-110°	239.3	5.2
110°-120°	406.2	8.8
120°-130°	535.6	11.5
130°-140°	601.5	13.0
140°-150°	591.0	12.7
150°-160°	497.1	10.7
160°-170°	330.7	7.1
170°-180°	115.8	2.5
0°-30°	361.2	7.8
0°-40°	579.9	12.5
0°-60°	989.8	21.3
0°-90°	1239.6	26.7
90°-120°	726.2	15.7
90°-150°	2454.3	52.9
90°-180°	3398.0	73.3
0°-180°	4637.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	481	480	475	479	479	46
15°	458	456	451	453	452	129
25°	415	412	407	407	406	191
35°	357	354	349	346	344	223
45°	291	288	282	278	277	225
55°	220	219	214	209	207	197
65°	149	147	144	140	138	148
75°	80	78	76	74	74	84
85°	21	21	20	20	20	23
90°	3	13	21	26	28	5
95°	57	65	72	75	75	63
105°	221	222	225	228	231	234
115°	413	413	411	410	409	407
125°	601	601	600	599	597	536
135°	776	781	782	780	777	600
145°	942	946	947	946	944	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°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	482.8	482.7	482.4	482.2	482.0	481.5	480.8	480.0	479.3	478.5	479.2
5°	481.2	480.9	480.5	480.2	479.9	479.2	478.3	477.4	476.4	475.4	476.4
7.5°	476.8	476.4	476.1	475.7	475.4	474.7	473.6	472.6	471.6	470.5	471.2
10°	472.7	472.4	472.1	471.7	471.4	470.7	469.5	468.4	467.3	466.2	466.8
12.5°	467.5	467.2	466.8	466.4	466.1	465.4	464.1	463.0	461.8	460.6	461.4
15°	458.0	457.7	457.4	457.1	456.7	455.9	454.6	453.3	452.0	450.8	451.3
17.5°	446.7	446.3	445.9	445.5	445.0	444.2	443.0	441.7	440.5	439.3	439.6
20°	438.4	438.0	437.6	437.1	436.7	435.9	434.6	433.3	431.9	430.6	431.0
22.5°	429.4	428.8	428.3	427.7	427.1	426.2	424.9	423.7	422.4	421.1	421.6
25°	414.8	414.3	413.7	413.0	412.5	411.6	410.3	409.1	408.0	406.8	406.8
27.5°	398.2	397.5	397.0	396.3	395.7	394.8	393.7	392.6	391.5	390.4	390.2
30°	387.1	386.4	385.7	385.0	384.3	383.4	382.3	381.2	380.1	379.0	378.6
32.5°	375.4	374.7	374.1	373.5	372.8	371.9	370.8	369.6	368.4	367.2	366.8
35°	356.9	356.4	355.8	355.1	354.6	353.7	352.5	351.2	350.1	348.9	348.3
37.5°	337.6	337.0	336.5	336.0	335.4	334.5	333.2	331.9	330.6	329.3	328.6
40°	324.9	324.2	323.6	322.9	322.2	321.2	319.9	318.6	317.3	316.1	315.2
42.5°	311.4	311.0	310.5	310.1	309.7	308.8	307.4	305.9	304.5	303.1	302.1
45°	291.4	290.7	290.2	289.6	288.9	288.0	286.6	285.2	283.9	282.5	281.5
47.5°	270.4	270.0	269.6	269.2	268.8	268.0	266.7	265.4	264.2	262.9	261.8
50°	256.2	255.9	255.6	255.2	254.9	254.1	252.9	251.7	250.5	249.3	248.1
52.5°	242.4	241.9	241.5	241.1	240.7	239.9	238.6	237.3	236.0	234.8	233.7
55°	220.4	220.1	219.8	219.6	219.3	218.6	217.4	216.2	215.0	213.8	212.8
57.5°	199.3	199.1	198.8	198.5	198.2	197.5	196.2	195.1	193.9	192.7	191.8
60°	184.8	184.4	184.0	183.5	183.1	182.4	181.2	180.1	179.0	177.9	177.2
62.5°	170.6	170.3	169.9	169.6	169.2	168.4	167.2	166.1	164.9	163.7	163.0
65°	149.4	149.0	148.5	148.1	147.7	147.0	146.1	145.3	144.4	143.6	142.7
67.5°	127.9	127.5	127.1	126.7	126.3	125.7	124.9	124.1	123.3	122.4	121.6
70°	114.6	114.0	113.4	112.8	112.2	111.5	110.9	110.2	109.5	108.8	108.1
72.5°	100.4	99.8	99.2	98.7	98.0	97.4	96.9	96.4	95.8	95.2	94.7
75°	79.5	79.1	78.7	78.2	77.8	77.4	77.0	76.5	76.1	75.7	75.3
77.5°	59.5	59.4	59.1	58.9	58.8	58.5	58.1	57.7	57.3	57.0	56.8
80°	47.5	47.2	47.0	46.7	46.5	46.2	46.1	45.9	45.7	45.6	45.3
82.5°	35.7	35.6	35.5	35.4	35.2	35.1	35.1	35.1	35.1	35.1	35.0
85°	20.9	20.9	20.9	20.9	20.9	20.8	20.5	20.4	20.2	20.1	20.1
87.5°	8.6	9.0	9.4	9.8	10.2	10.5	10.8	11.0	11.3	11.6	11.8
90°	2.9	5.1	7.5	9.8	12.1	14.1	15.8	17.4	19.2	20.9	22.1
92.5°	20.3	22.9	25.6	28.2	30.9	32.8	34.0	35.1	36.4	37.5	38.2
95°	56.8	58.7	60.7	62.5	64.4	66.1	67.6	69.1	70.5	72.0	72.6
97.5°	99.3	100.8	102.3	103.8	105.3	107.0	108.7	110.4	112.1	113.8	114.6
100°	132.6	133.5	134.3	135.1	136.0	137.4	139.3	141.1	143.0	145.0	145.4
102.5°	167.5	167.8	168.1	168.4	168.8	169.8	171.5	173.3	175.0	176.8	177.3
105°	220.7	220.9	221.1	221.4	221.5	222.1	222.9	223.7	224.6	225.4	226.1
107.5°	276.5	276.9	277.1	277.4	277.6	277.8	277.9	278.0	278.2	278.3	278.9
110°	314.5	314.9	315.3	315.8	316.2	316.3	316.1	315.8	315.6	315.4	315.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	353.8	354.0	354.1	354.2	354.2	354.1	353.7	353.4	352.9	352.5	352.5
115°	412.9	412.9	412.9	412.9	412.9	412.8	412.4	412.0	411.5	411.1	410.9
117.5°	468.7	468.9	469.0	469.2	469.4	469.3	469.0	468.7	468.4	468.1	467.4
120°	505.8	506.6	507.5	508.3	509.2	509.3	508.7	508.0	507.4	506.8	505.7
122.5°	544.5	544.8	545.1	545.4	545.8	545.8	545.5	545.3	544.9	544.6	544.0
125°	601.4	601.4	601.4	601.4	601.4	601.4	601.2	601.0	600.7	600.5	600.1
127.5°	653.2	653.9	654.4	655.1	655.7	655.9	655.5	655.2	654.8	654.5	654.1
130°	689.6	690.2	690.8	691.5	692.1	692.4	692.4	692.4	692.4	692.4	692.0
132.5°	726.7	727.2	727.7	728.1	728.6	728.7	728.6	728.4	728.2	728.1	727.6
135°	775.8	777.1	778.3	779.6	780.8	781.5	781.5	781.5	781.5	781.5	781.1
137.5°	829.2	829.8	830.4	831.0	831.5	832.0	832.3	832.7	833.0	833.3	832.8
140°	864.8	865.2	865.7	866.1	866.5	866.7	866.7	866.7	866.7	866.7	866.5
142.5°	897.4	897.8	898.2	898.6	899.1	899.2	899.0	898.9	898.7	898.5	898.5
145°	942.5	943.3	944.2	945.0	945.8	946.4	946.6	946.8	947.0	947.2	947.0
147.5°	987.2	988.2	989.2	990.2	991.2	991.6	991.5	991.3	991.2	991.0	990.8
150°	1014.5	1015.3	1016.2	1017.0	1017.8	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
152.5°	1040.2	1040.7	1041.2	1041.7	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°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	479.9	480.6	481.3	481.6	481.5	481.4	481.4	481.3
5°	477.4	478.3	479.2	479.6	479.4	479.2	479.1	478.9
7.5°	472.0	472.8	473.5	473.9	473.8	473.6	473.5	473.4
10°	467.6	468.2	469.0	469.2	469.0	468.8	468.6	468.5
12.5°	462.1	462.8	463.7	463.9	463.7	463.4	463.2	462.9
15°	451.8	452.2	452.8	452.9	452.7	452.4	452.2	451.9
17.5°	439.9	440.3	440.6	440.7	440.5	440.3	440.2	440.0
20°	431.2	431.5	431.7	431.8	431.5	431.4	431.2	431.0
22.5°	422.0	422.5	423.0	423.1	422.7	422.4	422.1	421.8
25°	406.9	407.0	407.1	407.0	406.6	406.3	405.9	405.6
27.5°	390.0	389.8	389.6	389.2	388.8	388.4	387.9	387.5
30°	378.3	378.0	377.6	377.2	376.7	376.3	375.9	375.5
32.5°	366.4	366.0	365.6	365.2	364.8	364.3	363.9	363.5
35°	347.6	347.1	346.4	345.9	345.5	345.1	344.6	344.2
37.5°	328.0	327.3	326.7	326.1	325.5	325.0	324.4	323.8
40°	314.4	313.5	312.7	312.0	311.5	311.1	310.7	310.3
42.5°	301.1	300.1	299.1	298.5	298.2	297.9	297.6	297.3
45°	280.6	279.6	278.8	278.1	277.9	277.6	277.4	277.1
47.5°	260.7	259.7	258.6	257.8	257.1	256.5	255.8	255.2
50°	246.9	245.7	244.5	243.6	243.1	242.6	242.1	241.6
52.5°	232.7	231.6	230.6	229.7	229.0	228.4	227.7	227.1
55°	211.7	210.7	209.7	208.9	208.4	207.9	207.3	206.8
57.5°	190.8	189.8	188.8	188.1	187.6	187.1	186.6	186.1
60°	176.3	175.6	174.8	174.2	173.8	173.3	172.9	172.5
62.5°	162.3	161.6	160.9	160.3	159.9	159.5	159.1	158.6
65°	141.9	141.0	140.1	139.5	139.1	138.6	138.2	137.8
67.5°	120.7	119.9	119.1	118.6	118.5	118.4	118.3	118.1
70°	107.5	106.8	106.1	105.6	105.3	105.1	104.8	104.6
72.5°	94.2	93.6	93.0	92.6	92.4	92.1	91.9	91.6
75°	74.9	74.6	74.3	74.0	73.9	73.9	73.8	73.7
77.5°	56.7	56.7	56.6	56.4	56.2	55.9	55.7	55.5
80°	45.2	45.0	44.8	44.8	44.6	44.5	44.4	44.4
82.5°	34.8	34.7	34.7	34.6	34.5	34.3	34.2	34.2
85°	20.1	20.1	20.1	20.1	20.0	19.9	19.7	19.6
87.5°	12.1	12.3	12.6	12.7	12.8	13.0	13.0	13.1
90°	23.4	24.6	25.9	26.7	27.1	27.6	28.0	28.5
92.5°	39.1	39.8	40.5	41.0	41.3	41.6	41.8	42.1
95°	73.2	73.9	74.5	74.8	74.8	74.8	74.8	74.8
97.5°	115.4	116.1	116.9	117.2	117.2	117.2	117.2	117.2
100°	145.8	146.2	146.6	146.8	146.8	146.8	146.8	146.8
102.5°	177.9	178.6	179.1	179.4	179.7	179.9	180.0	180.2
105°	226.7	227.3	228.0	228.6	229.3	229.8	230.5	231.1
107.5°	279.5	280.1	280.6	281.0	280.9	280.9	280.8	280.8
110°	314.5	314.1	313.7	313.8	314.5	315.1	315.8	316.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	352.4	352.3	352.2	352.2	352.4	352.5	352.6	352.8
115°	410.7	410.4	410.3	410.0	409.9	409.6	409.4	409.2
117.5°	466.7	465.9	465.2	464.7	464.2	463.8	463.4	463.0
120°	504.7	503.6	502.6	502.2	502.6	503.0	503.5	503.9
122.5°	543.2	542.5	541.8	541.0	540.3	539.6	538.7	538.0
125°	599.7	599.2	598.8	598.4	598.0	597.6	597.1	596.7
127.5°	653.7	653.3	652.8	652.5	652.2	651.8	651.4	651.1
130°	691.5	691.1	690.7	690.1	689.3	688.4	687.5	686.7
132.5°	727.2	726.8	726.4	725.9	725.6	725.3	725.0	724.6
135°	780.6	780.2	779.8	779.3	778.6	778.0	777.3	776.7
137.5°	832.3	831.7	831.2	831.0	831.1	831.2	831.4	831.4
140°	866.3	866.1	865.8	865.7	865.4	865.2	865.0	864.8
142.5°	898.5	898.4	898.4	898.3	898.3	898.2	898.2	898.1
145°	946.8	946.6	946.4	945.9	945.3	944.7	944.0	943.5
147.5°	990.7	990.5	990.3	990.1	989.9	989.7	989.4	989.3
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

(END OF REPORT)