

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: P332530-940

Luminaire Tested: **SA4XXDIP-C350D1205U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332530-940
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-C350D1205U940-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

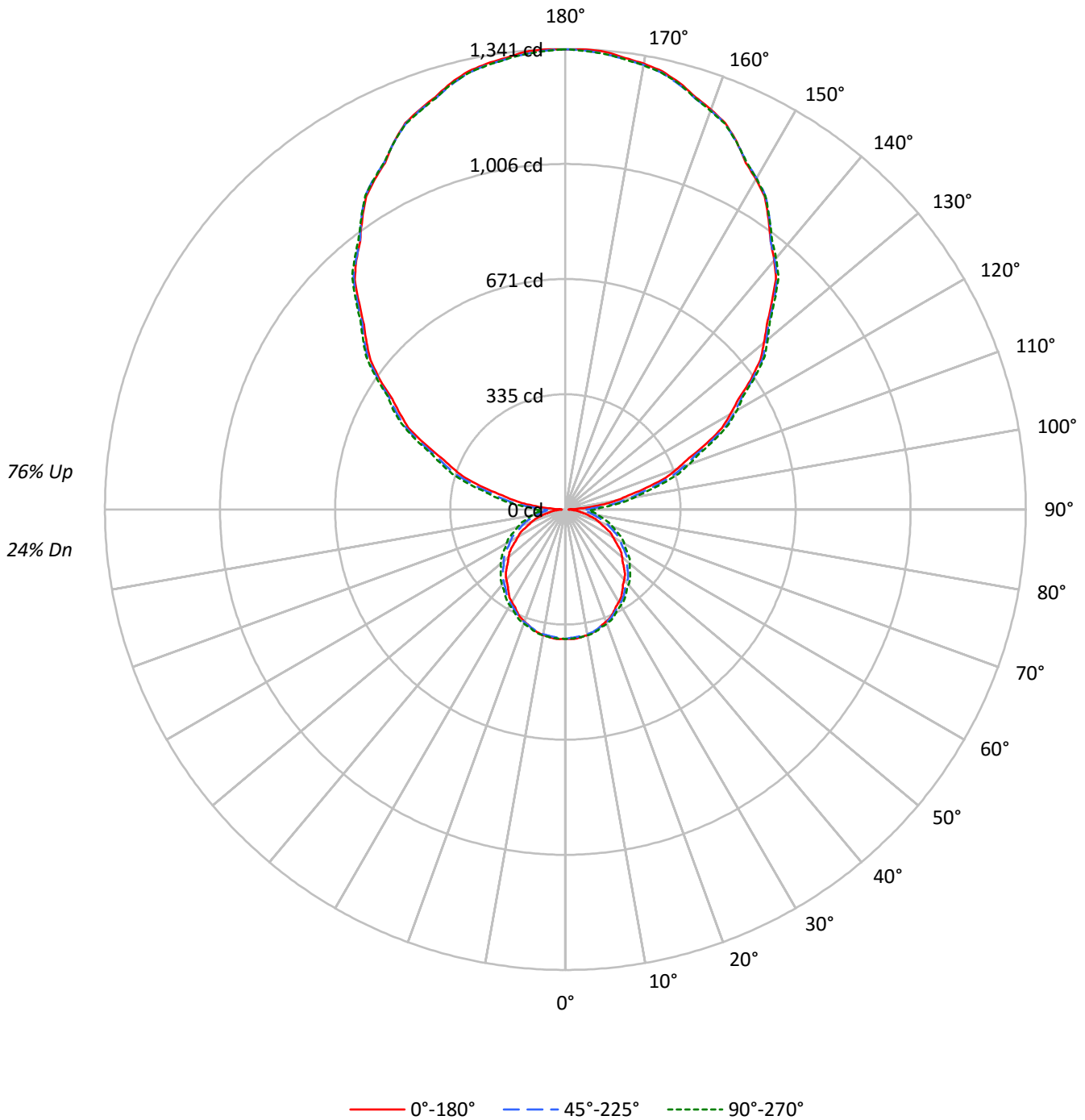
Lumens per Lamp: N/A
Luminaire Lumens: 5005.3 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24				24
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19				19
2	83	76	70	65	73	67	62	58	52	48	45	37	35	33	24	23	21	16				16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13				13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	23	19	17	15	11				11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9				9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8				8
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7				7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	13	13	11	9	6				6
9	46	34	27	22	41	30	24	20	24	19	16	17	14	12	12	10	8	6				6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5				5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3043	3043	3043
5°	3053	2974	2982
10°	3033	2925	2923
15°	3006	2869	2854
20°	2965	2807	2785
25°	2919	2737	2710
30°	2869	2668	2634
35°	2812	2597	2566
40°	2768	2530	2497
45°	2700	2466	2436
50°	2643	2396	2373
55°	2585	2328	2298
60°	2493	2242	2231
65°	2392	2149	2146
70°	2271	2045	2049
75°	2101	1926	1961
80°	1913	1816	1875
85°	1676	1717	1825



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.7	0.7
10°-20°	102.3	2.0
20°-30°	154.6	3.1
30°-40°	187.1	3.7
40°-50°	197.8	4.0
50°-60°	186.2	3.7
60°-70°	154.4	3.1
70°-80°	108.5	2.2
80°-90°	65.3	1.3
90°-100°	124.8	2.5
100°-110°	288.7	5.8
110°-120°	462.3	9.2
120°-130°	596.0	11.9
130°-140°	662.2	13.2
140°-150°	647.3	12.9
150°-160°	543.7	10.9
160°-170°	361.7	7.2
170°-180°	126.7	2.5
0°-30°	292.6	5.8
0°-40°	479.7	9.6
0°-60°	863.6	17.3
0°-90°	1191.9	23.8
90°-120°	875.8	17.5
90°-150°	2781.3	55.6
90°-180°	3813.0	76.2
0°-180°	5005.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	377	377	377	377	377	
5°	377	376	373	376	376	36
15°	362	362	361	364	364	102
25°	331	333	335	339	340	152
35°	290	295	299	304	306	181
45°	241	249	257	264	267	187
55°	189	198	211	219	222	168
65°	131	144	159	169	173	130
75°	73	88	106	117	122	77
85°	22	40	59	71	76	24
90°	10	38	65	82	88	8
95°	68	91	116	129	134	74
105°	245	255	274	288	294	260
115°	454	458	470	477	480	448
125°	660	660	669	674	675	588
135°	849	855	858	863	863	657
145°	1031	1035	1036	1037	1036	645
155°	1181	1181	1180	1184	1180	543
165°	1286	1283	1280	1286	1282	362
175°	1338	1332	1331	1338	1331	127
180°	1340	1340	1340	1340	1340	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	378.3	378.0	377.8	377.6	377.4	376.9	376.4	375.8	375.1	374.5	375.1
5°	377.4	377.0	376.7	376.5	376.2	375.8	375.1	374.4	373.8	373.1	373.9
7.5°	374.2	374.0	373.8	373.6	373.4	373.1	372.6	372.0	371.5	371.0	371.8
10°	371.4	371.3	371.2	371.1	371.0	370.8	370.3	369.8	369.3	368.9	369.7
12.5°	367.7	367.7	367.7	367.7	367.7	367.5	367.1	366.8	366.5	366.2	366.9
15°	361.7	361.9	361.9	362.0	362.1	362.0	361.7	361.4	361.1	360.9	361.7
17.5°	353.6	353.8	354.1	354.4	354.6	354.8	354.7	354.6	354.6	354.5	355.4
20°	347.8	348.0	348.4	348.7	348.9	349.1	349.2	349.3	349.4	349.5	350.4
22.5°	341.3	341.7	342.1	342.4	342.8	343.0	343.2	343.4	343.6	343.8	344.6
25°	330.9	331.4	332.1	332.6	333.1	333.6	333.9	334.1	334.4	334.7	335.7
27.5°	319.2	320.1	320.9	321.7	322.5	323.2	323.6	324.0	324.5	324.9	325.8
30°	311.5	312.3	313.0	313.7	314.5	315.2	315.8	316.5	317.2	317.8	318.9
32.5°	303.1	304.0	304.9	305.8	306.7	307.5	308.2	308.9	309.7	310.4	311.6
35°	289.5	290.7	291.8	292.9	294.1	295.1	296.0	296.9	297.9	298.8	300.1
37.5°	276.0	277.2	278.6	279.8	281.2	282.3	283.6	284.7	285.9	287.0	288.4
40°	267.2	268.4	269.7	270.8	272.1	273.3	274.6	276.0	277.2	278.6	280.0
42.5°	257.1	258.4	259.8	261.2	262.5	263.9	265.6	267.1	268.6	270.1	271.7
45°	241.4	243.2	245.0	246.7	248.5	250.3	252.1	253.9	255.7	257.4	259.0
47.5°	226.5	228.4	230.2	232.0	233.8	235.8	237.8	240.0	242.0	244.1	245.7
50°	215.7	217.8	219.8	221.9	223.9	226.0	228.1	230.2	232.2	234.3	236.1
52.5°	204.9	207.0	209.0	211.1	213.1	215.3	217.7	220.1	222.4	224.8	226.7
55°	189.1	191.1	193.1	195.0	197.0	199.4	202.2	205.0	207.8	210.6	212.5
57.5°	171.5	173.9	176.3	178.8	181.2	183.8	186.6	189.4	192.2	195.0	197.2
60°	160.0	162.4	164.9	167.3	169.7	172.5	175.6	178.7	181.7	184.9	187.0
62.5°	148.8	151.5	154.2	156.9	159.4	162.4	165.4	168.5	171.7	174.8	176.9
65°	130.8	133.8	136.9	139.8	142.9	146.0	149.1	152.3	155.5	158.7	161.0
67.5°	113.5	116.7	119.9	123.1	126.3	129.6	133.0	136.4	139.8	143.2	145.6
70°	101.7	104.9	108.1	111.3	114.5	117.9	121.5	125.0	128.6	132.2	134.6
72.5°	90.2	93.5	96.8	100.0	103.3	106.8	110.6	114.4	118.2	122.0	124.4
75°	72.6	76.1	79.5	83.0	86.5	90.2	94.2	98.1	102.0	105.9	108.6
77.5°	56.2	59.8	63.5	67.1	70.8	74.7	78.8	83.0	87.1	91.2	93.9
80°	46.0	49.8	53.5	57.2	61.0	64.9	69.1	73.2	77.3	81.5	84.3
82.5°	35.8	39.8	43.7	47.6	51.5	55.5	59.7	63.8	67.9	72.1	74.9
85°	22.4	26.3	30.2	34.2	38.2	42.2	46.5	50.6	54.8	59.1	61.9
87.5°	13.1	17.5	21.8	26.1	30.4	34.9	39.3	43.8	48.2	52.8	55.7
90°	9.9	16.1	22.5	28.7	35.0	41.1	47.0	52.8	58.7	64.6	68.7
92.5°	28.6	34.9	41.1	47.4	53.7	59.5	64.8	70.2	75.4	80.8	84.3
95°	67.7	72.9	78.0	83.1	88.3	93.6	99.1	104.5	110.0	115.5	118.7
97.5°	113.5	117.9	122.2	126.5	130.8	135.8	141.5	147.2	152.9	158.6	161.9
100°	149.7	153.0	156.4	159.8	163.1	167.6	173.4	179.1	184.9	190.6	193.6
102.5°	187.8	190.3	192.8	195.3	197.9	201.8	207.3	212.8	218.2	223.7	226.9
105°	245.2	247.3	249.4	251.5	253.6	256.8	261.3	265.6	270.0	274.4	277.5
107.5°	306.2	308.0	309.9	311.7	313.4	316.1	319.5	323.0	326.4	329.8	332.7
110°	347.3	349.1	350.9	352.7	354.5	356.9	359.9	362.9	366.0	369.1	370.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	390.1	391.4	392.6	393.9	395.1	397.1	399.8	402.5	405.3	408.0	409.9
115°	454.2	455.0	455.9	456.7	457.6	459.3	461.8	464.4	466.9	469.5	471.3
117.5°	515.1	515.8	516.5	517.1	517.8	519.4	521.8	524.3	526.8	529.3	530.5
120°	555.4	556.5	557.8	558.9	560.2	561.8	563.7	565.8	567.8	569.9	570.6
122.5°	597.6	598.0	598.4	598.9	599.3	600.7	602.9	605.1	607.3	609.7	610.7
125°	659.5	659.4	659.3	659.2	659.2	660.1	662.3	664.4	666.6	668.6	669.9
127.5°	716.0	716.6	717.2	717.8	718.5	719.4	720.9	722.3	723.7	725.1	726.4
130°	755.5	756.1	756.6	757.2	757.9	758.9	760.4	761.9	763.4	764.9	766.2
132.5°	796.1	796.5	796.9	797.3	797.7	798.4	799.4	800.5	801.5	802.5	803.7
135°	849.4	850.7	852.1	853.5	854.9	855.9	856.5	857.2	857.8	858.4	859.5
137.5°	907.8	908.3	908.8	909.4	910.0	910.5	911.2	912.0	912.7	913.3	914.1
140°	946.7	947.1	947.4	947.8	948.2	948.4	948.5	948.6	948.7	948.8	949.8
142.5°	982.0	982.5	982.8	983.3	983.7	983.8	983.6	983.4	983.1	982.9	983.9
145°	1031.3	1032.1	1032.9	1033.7	1034.6	1035.1	1035.3	1035.5	1035.7	1036.0	1036.3
147.5°	1080.1	1081.1	1082.2	1083.2	1084.1	1084.6	1084.4	1084.2	1084.1	1083.9	1083.8
150°	1110.0	1110.8	1111.6	1112.4	1113.3	1113.7	1113.7	1113.7	1113.7	1113.7	1113.7
152.5°	1137.8	1138.4	1138.9	1139.4	1140.0	1140.3	1140.5	1140.7	1140.9	1141.0	1141.6
155°	1181.0	1181.0	1181.0	1181.0	1181.0	1180.9	1180.7	1180.4	1180.2	1180.0	1180.9
157.5°	1217.5	1217.1	1216.7	1216.3	1215.8	1215.6	1215.6	1215.5	1215.5	1215.4	1216.1
160°	1239.0	1238.9	1238.6	1238.3	1238.1	1237.9	1237.7	1237.4	1237.2	1237.0	1237.7
162.5°	1258.9	1258.3	1257.8	1257.1	1256.5	1256.2	1255.9	1255.7	1255.4	1255.2	1256.4
165°	1285.7	1285.0	1284.2	1283.6	1282.9	1282.3	1281.8	1281.4	1280.9	1280.5	1281.8
167.5°	1306.2	1305.2	1304.2	1303.2	1302.3	1301.8	1301.9	1301.9	1302.0	1302.0	1303.4
170°	1317.8	1316.6	1315.5	1314.3	1313.1	1312.7	1313.0	1313.1	1313.4	1313.7	1315.0
172.5°	1326.1	1325.1	1324.1	1323.1	1322.2	1321.7	1321.8	1321.9	1321.9	1322.0	1323.5
175°	1337.5	1336.3	1335.2	1334.0	1332.8	1332.1	1331.9	1331.7	1331.5	1331.2	1332.8
177.5°	1341.2	1340.2	1339.3	1338.5	1337.5	1337.0	1337.0	1337.0	1337.0	1337.0	1338.4
180°	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	375.6	376.1	376.7	376.8	376.8	376.7	376.7	376.6
5°	374.6	375.3	376.1	376.5	376.4	376.2	376.1	376.0
7.5°	372.6	373.4	374.3	374.7	374.6	374.5	374.4	374.3
10°	370.6	371.4	372.3	372.6	372.6	372.5	372.4	372.3
12.5°	367.7	368.5	369.3	369.6	369.6	369.6	369.6	369.5
15°	362.6	363.4	364.3	364.6	364.5	364.4	364.4	364.3
17.5°	356.2	357.1	358.0	358.4	358.3	358.2	358.2	358.1
20°	351.3	352.3	353.2	353.7	353.7	353.7	353.7	353.7
22.5°	345.6	346.5	347.5	348.0	348.2	348.3	348.5	348.7
25°	336.8	337.8	338.9	339.4	339.5	339.6	339.7	339.7
27.5°	326.8	327.8	328.8	329.3	329.4	329.5	329.6	329.8
30°	319.9	320.9	321.9	322.5	322.7	323.0	323.2	323.3
32.5°	312.7	314.0	315.1	315.8	316.0	316.2	316.4	316.6
35°	301.5	302.7	304.1	304.9	305.1	305.4	305.8	306.0
37.5°	289.7	291.0	292.3	293.2	293.5	293.7	294.1	294.4
40°	281.4	282.8	284.2	285.1	285.4	285.9	286.2	286.6
42.5°	273.2	274.8	276.3	277.3	277.6	277.9	278.2	278.5
45°	260.6	262.3	263.9	264.8	265.4	265.8	266.3	266.7
47.5°	247.4	249.0	250.7	251.7	252.4	252.9	253.4	254.0
50°	238.0	239.9	241.7	243.0	243.5	244.1	244.7	245.2
52.5°	228.5	230.4	232.3	233.5	234.1	234.6	235.2	235.8
55°	214.4	216.2	218.1	219.4	219.9	220.4	221.1	221.6
57.5°	199.5	201.7	203.9	205.3	205.8	206.3	206.9	207.4
60°	189.2	191.4	193.5	194.9	195.7	196.4	197.2	198.0
62.5°	179.1	181.2	183.3	184.9	185.6	186.3	187.1	187.8
65°	163.4	165.8	168.1	169.6	170.4	171.1	171.9	172.6
67.5°	148.0	150.4	152.8	154.4	155.1	155.8	156.5	157.3
70°	137.1	139.7	142.2	143.8	144.5	145.2	145.8	146.4
72.5°	126.9	129.4	131.8	133.4	134.1	134.8	135.6	136.3
75°	111.2	113.8	116.5	118.2	119.0	119.8	120.7	121.5
77.5°	96.6	99.2	101.9	103.7	104.6	105.5	106.4	107.3
80°	87.1	89.9	92.7	94.5	95.2	96.0	96.8	97.5
82.5°	77.8	80.7	83.6	85.4	86.2	87.0	87.9	88.7
85°	64.7	67.5	70.4	72.2	73.1	74.1	75.0	76.0
87.5°	58.8	61.7	64.7	66.7	67.6	68.6	69.5	70.4
90°	72.8	76.9	81.0	83.6	84.9	86.1	87.3	88.5
92.5°	87.7	91.2	94.7	96.9	98.0	99.0	100.0	101.0
95°	121.9	125.1	128.3	130.4	131.3	132.1	133.0	133.8
97.5°	165.2	168.4	171.7	173.8	174.6	175.4	176.2	177.0
100°	196.5	199.6	202.6	204.4	205.0	205.7	206.3	207.0
102.5°	229.9	233.0	236.1	238.1	239.1	240.0	240.9	241.7
105°	280.5	283.6	286.6	288.8	290.3	291.7	293.1	294.5
107.5°	335.7	338.7	341.6	343.4	344.0	344.6	345.3	345.9
110°	372.5	374.2	375.9	377.4	378.8	380.3	381.7	383.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	412.0	413.9	415.9	417.3	418.2	419.1	420.0	420.9
115°	473.1	474.9	476.8	478.0	478.3	478.8	479.2	479.7
117.5°	531.6	532.8	534.0	534.7	535.0	535.3	535.6	535.8
120°	571.3	572.0	572.7	573.7	575.0	576.1	577.4	578.5
122.5°	611.8	612.9	614.0	614.5	614.3	614.1	614.0	613.9
125°	671.3	672.6	674.0	674.7	674.8	674.8	674.9	675.0
127.5°	727.6	728.8	730.0	730.8	731.1	731.4	731.6	731.9
130°	767.3	768.6	769.8	770.3	769.9	769.5	769.2	768.8
132.5°	804.8	805.9	807.1	807.8	808.0	808.2	808.3	808.6
135°	860.6	861.6	862.6	863.1	863.0	862.8	862.7	862.6
137.5°	914.9	915.6	916.4	917.1	917.7	918.3	918.9	919.5
140°	950.7	951.7	952.7	953.3	953.6	953.9	954.0	954.3
142.5°	985.0	986.0	987.0	987.7	988.0	988.4	988.7	989.1
145°	1036.6	1037.0	1037.3	1037.3	1037.0	1036.7	1036.3	1036.1
147.5°	1083.6	1083.5	1083.4	1083.4	1083.4	1083.5	1083.6	1083.7
150°	1113.7	1113.7	1113.7	1113.6	1113.3	1113.1	1112.9	1112.7
152.5°	1142.1	1142.7	1143.3	1143.3	1142.6	1142.0	1141.4	1140.9
155°	1181.9	1182.8	1183.7	1183.7	1182.8	1181.9	1180.9	1180.0
157.5°	1216.8	1217.5	1218.2	1218.2	1217.4	1216.6	1215.8	1215.0
160°	1238.3	1239.0	1239.7	1239.5	1238.3	1237.2	1236.1	1234.9
162.5°	1257.7	1258.9	1260.2	1260.3	1259.1	1257.9	1256.8	1255.6
165°	1283.3	1284.6	1286.0	1286.2	1285.3	1284.4	1283.4	1282.5
167.5°	1304.8	1306.2	1307.5	1307.5	1306.1	1304.7	1303.2	1301.8
170°	1316.4	1317.8	1319.2	1319.0	1317.4	1315.8	1314.2	1312.6
172.5°	1325.1	1326.6	1328.2	1328.2	1326.5	1324.9	1323.3	1321.7
175°	1334.4	1336.1	1337.7	1337.7	1336.1	1334.4	1332.8	1331.2
177.5°	1339.6	1341.0	1342.2	1342.1	1340.6	1339.2	1337.7	1336.2
180°	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5

(END OF REPORT)