

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: P332533-935

Luminaire Tested: **S124DIP-S350D1205U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332533-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1205U935-4F0-1E-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: 4897.5 lumens
Efficiency: N/A
Efficacy: 116.1 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

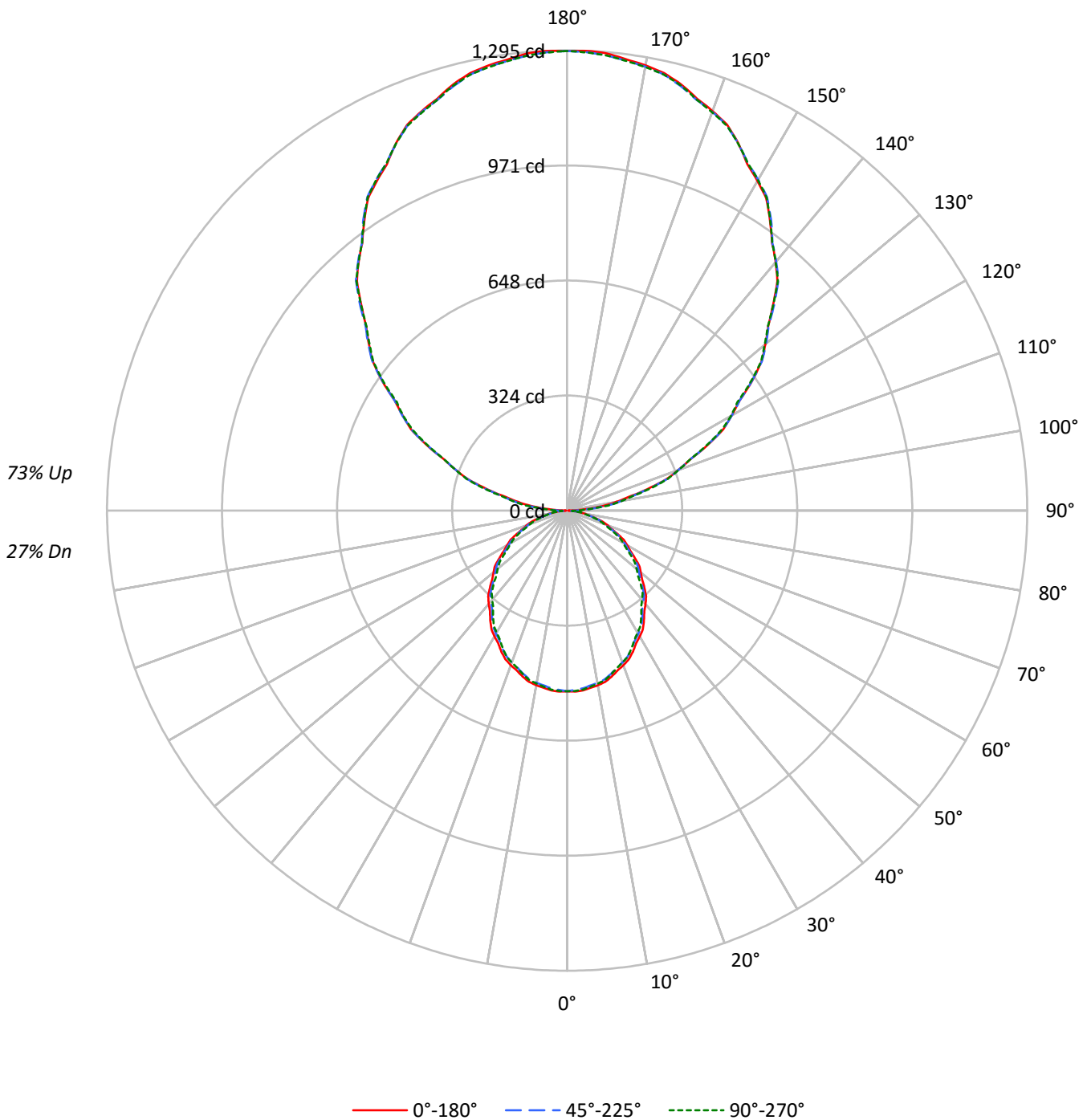
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	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°	4106	4106	4106
5°	4118	4068	4099
10°	4092	4036	4055
15°	4043	3978	3989
20°	3978	3907	3911
25°	3902	3827	3815
30°	3811	3731	3697
35°	3714	3631	3582
40°	3616	3518	3453
45°	3513	3406	3342
50°	3399	3307	3204
55°	3275	3178	3074
60°	3152	3034	2942
65°	3012	2896	2779
70°	2858	2712	2608
75°	2617	2492	2427
80°	2329	2236	2176
85°	2038	1964	1927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.9	1.0
10°-20°	135.0	2.8
20°-30°	198.6	4.1
30°-40°	230.9	4.7
40°-50°	230.9	4.7
50°-60°	202.0	4.1
60°-70°	150.0	3.1
70°-80°	85.2	1.7
80°-90°	28.5	0.6
90°-100°	85.3	1.7
100°-110°	252.7	5.2
110°-120°	428.9	8.8
120°-130°	565.6	11.5
130°-140°	635.2	13.0
140°-150°	624.2	12.7
150°-160°	525.0	10.7
160°-170°	349.3	7.1
170°-180°	122.3	2.5
0°-30°	381.5	7.8
0°-40°	612.4	12.5
0°-60°	1045.3	21.3
0°-90°	1309.0	26.7
90°-120°	767.0	15.7
90°-150°	2591.9	52.9
90°-180°	3588.0	73.3
0°-180°	4897.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	508	506	502	506	506	48
15°	484	482	476	478	477	136
25°	438	435	430	430	428	201
35°	377	374	368	366	364	236
45°	308	305	298	294	293	237
55°	233	231	226	221	218	208
65°	158	156	152	148	146	156
75°	84	82	80	78	78	89
85°	22	22	21	21	21	24
90°	3	14	22	28	30	5
95°	60	69	76	79	79	67
105°	233	234	238	241	244	247
115°	436	436	434	433	432	430
125°	635	635	634	632	630	566
135°	819	825	825	823	820	634
145°	995	999	1000	999	996	623
155°	1140	1140	1139	1143	1139	524
165°	1241	1238	1236	1242	1238	350
175°	1291	1287	1285	1292	1285	123
180°	1293	1293	1293	1293	1293	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6
2.5°	509.9	509.7	509.5	509.3	509.0	508.5	507.7	507.0	506.2	505.3	506.1
5°	508.2	507.8	507.5	507.1	506.8	506.1	505.1	504.1	503.1	502.0	503.1
7.5°	503.5	503.1	502.7	502.4	502.0	501.3	500.2	499.1	498.0	496.9	497.7
10°	499.2	498.9	498.5	498.2	497.8	497.1	495.8	494.6	493.5	492.3	493.0
12.5°	493.7	493.4	493.0	492.6	492.2	491.5	490.2	489.0	487.7	486.5	487.2
15°	483.7	483.4	483.0	482.7	482.3	481.5	480.1	478.7	477.3	476.0	476.6
17.5°	471.7	471.3	470.9	470.5	469.9	469.1	467.8	466.5	465.2	463.9	464.3
20°	463.0	462.5	462.1	461.6	461.2	460.3	458.9	457.5	456.2	454.8	455.1
22.5°	453.5	452.9	452.3	451.7	451.1	450.1	448.8	447.5	446.1	444.7	445.2
25°	438.1	437.5	436.9	436.2	435.6	434.6	433.3	432.0	430.8	429.6	429.6
27.5°	420.5	419.8	419.2	418.5	417.9	417.0	415.8	414.7	413.5	412.2	412.1
30°	408.8	408.0	407.3	406.6	405.9	404.9	403.7	402.5	401.4	400.2	399.8
32.5°	396.4	395.7	395.0	394.4	393.7	392.8	391.6	390.3	389.1	387.8	387.4
35°	376.9	376.3	375.7	375.1	374.4	373.5	372.2	370.9	369.7	368.4	367.8
37.5°	356.5	355.9	355.3	354.8	354.2	353.3	351.9	350.5	349.1	347.8	347.1
40°	343.1	342.4	341.7	341.0	340.3	339.2	337.9	336.5	335.1	333.8	332.9
42.5°	328.8	328.4	328.0	327.5	327.1	326.1	324.6	323.0	321.6	320.1	319.0
45°	307.7	307.0	306.4	305.8	305.1	304.1	302.6	301.2	299.8	298.3	297.3
47.5°	285.6	285.2	284.7	284.3	283.9	283.0	281.6	280.3	279.0	277.6	276.5
50°	270.6	270.3	269.9	269.5	269.1	268.4	267.1	265.8	264.5	263.3	262.0
52.5°	256.0	255.5	255.0	254.6	254.2	253.3	251.9	250.6	249.3	248.0	246.8
55°	232.7	232.5	232.1	231.9	231.6	230.8	229.5	228.3	227.0	225.8	224.7
57.5°	210.5	210.3	209.9	209.7	209.3	208.5	207.2	206.0	204.7	203.5	202.5
60°	195.2	194.8	194.3	193.8	193.4	192.6	191.4	190.2	189.1	187.9	187.1
62.5°	180.2	179.9	179.4	179.1	178.7	177.9	176.6	175.4	174.1	172.9	172.1
65°	157.7	157.3	156.8	156.4	155.9	155.2	154.3	153.4	152.5	151.6	150.7
67.5°	135.1	134.7	134.2	133.8	133.4	132.8	131.9	131.0	130.2	129.2	128.4
70°	121.1	120.4	119.8	119.2	118.5	117.8	117.1	116.4	115.6	114.9	114.2
72.5°	106.1	105.4	104.8	104.2	103.5	102.9	102.3	101.8	101.2	100.6	100.0
75°	83.9	83.5	83.1	82.6	82.1	81.7	81.3	80.8	80.3	79.9	79.6
77.5°	62.9	62.7	62.4	62.3	62.1	61.7	61.4	61.0	60.5	60.2	60.0
80°	50.1	49.9	49.6	49.3	49.1	48.8	48.6	48.5	48.3	48.1	47.9
82.5°	37.7	37.6	37.5	37.4	37.2	37.1	37.1	37.1	37.0	37.0	36.9
85°	22.0	22.0	22.0	22.0	22.0	22.0	21.7	21.5	21.4	21.2	21.2
87.5°	9.0	9.5	9.9	10.3	10.8	11.1	11.4	11.6	12.0	12.2	12.5
90°	3.0	5.4	7.9	10.3	12.7	14.9	16.7	18.4	20.2	22.0	23.3
92.5°	21.4	24.2	27.0	29.8	32.6	34.6	35.9	37.1	38.4	39.6	40.4
95°	60.0	62.0	64.1	66.0	68.0	69.8	71.4	72.9	74.5	76.0	76.7
97.5°	104.9	106.4	108.1	109.6	111.2	113.0	114.8	116.6	118.4	120.2	121.1
100°	140.1	140.9	141.8	142.7	143.6	145.1	147.1	149.0	151.0	153.1	153.5
102.5°	176.8	177.2	177.5	177.9	178.3	179.3	181.2	183.0	184.9	186.7	187.3
105°	233.1	233.3	233.5	233.8	233.9	234.5	235.4	236.3	237.2	238.1	238.8
107.5°	292.1	292.4	292.7	292.9	293.2	293.3	293.5	293.6	293.8	293.9	294.5
110°	332.1	332.5	332.9	333.5	333.9	334.0	333.8	333.6	333.3	333.1	332.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	373.7	373.8	373.9	374.0	374.1	373.9	373.5	373.2	372.7	372.3	372.2
115°	436.1	436.1	436.1	436.1	436.1	435.9	435.5	435.1	434.5	434.1	433.9
117.5°	495.0	495.2	495.3	495.5	495.7	495.6	495.2	495.0	494.6	494.4	493.6
120°	534.2	535.0	536.0	536.8	537.7	537.9	537.2	536.5	535.8	535.2	534.1
122.5°	575.0	575.3	575.7	576.0	576.4	576.4	576.1	575.8	575.5	575.1	574.5
125°	635.2	635.2	635.2	635.2	635.2	635.1	634.9	634.6	634.4	634.2	633.8
127.5°	689.8	690.5	691.1	691.8	692.5	692.7	692.2	691.9	691.6	691.2	690.8
130°	728.2	728.9	729.5	730.2	730.9	731.2	731.2	731.2	731.2	731.2	730.8
132.5°	767.4	767.9	768.4	768.9	769.4	769.6	769.4	769.2	769.0	768.9	768.4
135°	819.2	820.6	821.9	823.3	824.6	825.3	825.3	825.3	825.3	825.3	824.8
137.5°	875.6	876.3	876.9	877.5	878.1	878.7	879.0	879.3	879.7	880.0	879.5
140°	913.3	913.7	914.2	914.6	915.1	915.2	915.2	915.2	915.2	915.2	915.1
142.5°	947.7	948.1	948.6	949.0	949.5	949.6	949.4	949.3	949.1	948.9	948.8
145°	995.3	996.2	997.1	998.0	998.8	999.4	999.6	999.9	1000.1	1000.3	1000.1
147.5°	1042.5	1043.6	1044.7	1045.7	1046.8	1047.2	1047.1	1046.9	1046.7	1046.5	1046.4
150°	1071.3	1072.2	1073.2	1074.0	1074.9	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
152.5°	1098.5	1099.1	1099.6	1100.1	1100.7	1101.0	1101.2	1101.4	1101.6	1101.7	1102.3
155°	1140.3	1140.3	1140.3	1140.3	1140.3	1140.2	1140.1	1139.8	1139.5	1139.4	1140.2
157.5°	1175.5	1175.2	1174.7	1174.4	1174.0	1173.7	1173.7	1173.6	1173.6	1173.5	1174.2
160°	1196.4	1196.2	1195.9	1195.7	1195.5	1195.2	1195.1	1194.8	1194.6	1194.4	1195.1
162.5°	1215.6	1215.0	1214.4	1213.8	1213.2	1212.9	1212.6	1212.5	1212.2	1211.9	1213.1
165°	1241.4	1240.7	1240.0	1239.4	1238.7	1238.1	1237.7	1237.3	1236.8	1236.4	1237.7
167.5°	1261.2	1260.2	1259.3	1258.4	1257.5	1257.0	1257.1	1257.1	1257.1	1257.1	1258.5
170°	1272.4	1271.3	1270.1	1269.0	1267.9	1267.5	1267.7	1267.9	1268.2	1268.4	1269.7
172.5°	1280.4	1279.4	1278.5	1277.6	1276.7	1276.2	1276.3	1276.3	1276.3	1276.4	1277.9
175°	1291.4	1290.3	1289.2	1288.1	1286.9	1286.2	1286.1	1285.8	1285.6	1285.4	1286.9
177.5°	1295.0	1294.1	1293.2	1292.4	1291.4	1291.0	1291.0	1291.0	1291.0	1291.0	1292.3
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6
2.5°	506.8	507.6	508.2	508.6	508.5	508.4	508.3	508.2
5°	504.1	505.1	506.1	506.4	506.3	506.1	505.9	505.8
7.5°	498.4	499.3	500.1	500.4	500.3	500.2	500.1	500.0
10°	493.8	494.5	495.2	495.5	495.3	495.1	494.9	494.7
12.5°	488.0	488.8	489.7	489.9	489.7	489.4	489.1	488.9
15°	477.1	477.6	478.2	478.3	478.0	477.8	477.5	477.3
17.5°	464.6	464.9	465.3	465.4	465.2	465.0	464.9	464.7
20°	455.4	455.6	455.9	456.0	455.7	455.6	455.4	455.2
22.5°	445.7	446.2	446.7	446.8	446.4	446.1	445.7	445.5
25°	429.7	429.8	429.9	429.8	429.4	429.0	428.7	428.3
27.5°	411.8	411.6	411.4	411.0	410.6	410.2	409.7	409.2
30°	399.5	399.2	398.7	398.4	397.9	397.4	397.0	396.6
32.5°	386.9	386.5	386.1	385.6	385.2	384.7	384.3	383.8
35°	367.1	366.5	365.8	365.3	364.9	364.5	363.9	363.5
37.5°	346.4	345.7	345.0	344.4	343.8	343.2	342.6	342.0
40°	332.0	331.1	330.2	329.5	329.0	328.6	328.1	327.7
42.5°	318.0	316.9	315.9	315.2	314.9	314.6	314.3	314.0
45°	296.4	295.3	294.4	293.7	293.4	293.2	292.9	292.7
47.5°	275.3	274.2	273.1	272.2	271.6	270.9	270.2	269.5
50°	260.7	259.5	258.2	257.3	256.8	256.2	255.6	255.1
52.5°	245.7	244.6	243.5	242.5	241.9	241.2	240.5	239.8
55°	223.6	222.5	221.4	220.6	220.1	219.6	219.0	218.4
57.5°	201.5	200.4	199.4	198.6	198.1	197.6	197.1	196.5
60°	186.2	185.5	184.6	184.0	183.6	183.0	182.6	182.2
62.5°	171.4	170.7	169.9	169.3	168.8	168.4	168.0	167.5
65°	149.8	148.9	148.0	147.3	146.9	146.4	145.9	145.5
67.5°	127.5	126.7	125.8	125.3	125.2	125.0	124.9	124.8
70°	113.5	112.8	112.0	111.5	111.2	111.0	110.7	110.5
72.5°	99.4	98.8	98.2	97.8	97.6	97.3	97.0	96.8
75°	79.1	78.8	78.4	78.2	78.1	78.0	77.9	77.8
77.5°	59.9	59.8	59.8	59.6	59.3	59.1	58.8	58.6
80°	47.7	47.5	47.4	47.3	47.1	47.0	46.9	46.8
82.5°	36.8	36.7	36.6	36.5	36.4	36.2	36.2	36.1
85°	21.2	21.2	21.2	21.2	21.1	21.0	20.8	20.8
87.5°	12.7	13.0	13.3	13.4	13.5	13.7	13.8	13.9
90°	24.7	26.0	27.4	28.2	28.7	29.1	29.5	30.0
92.5°	41.2	42.0	42.8	43.3	43.7	43.9	44.2	44.4
95°	77.3	78.0	78.7	79.0	79.0	79.0	79.0	79.0
97.5°	121.8	122.6	123.5	123.8	123.8	123.8	123.8	123.8
100°	153.9	154.4	154.8	155.1	155.1	155.1	155.1	155.1
102.5°	187.9	188.6	189.2	189.5	189.8	189.9	190.1	190.3
105°	239.4	240.0	240.7	241.4	242.1	242.7	243.4	244.1
107.5°	295.2	295.8	296.4	296.7	296.6	296.6	296.5	296.5
110°	332.2	331.7	331.3	331.4	332.1	332.8	333.5	334.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	372.1	372.0	372.0	372.0	372.1	372.2	372.4	372.6
115°	433.7	433.4	433.3	433.0	432.8	432.6	432.4	432.1
117.5°	492.8	492.1	491.3	490.8	490.3	489.8	489.4	489.0
120°	533.0	531.8	530.7	530.4	530.8	531.2	531.8	532.2
122.5°	573.7	572.9	572.1	571.4	570.6	569.8	568.9	568.2
125°	633.3	632.8	632.4	632.0	631.5	631.1	630.6	630.2
127.5°	690.3	689.9	689.4	689.1	688.7	688.3	687.9	687.6
130°	730.3	729.9	729.4	728.8	727.9	727.0	726.1	725.2
132.5°	767.9	767.5	767.1	766.6	766.3	765.9	765.6	765.3
135°	824.4	823.9	823.5	822.9	822.3	821.6	820.9	820.3
137.5°	878.9	878.3	877.8	877.5	877.7	877.8	878.0	878.0
140°	914.8	914.6	914.4	914.2	914.0	913.7	913.5	913.3
142.5°	948.8	948.7	948.7	948.6	948.6	948.6	948.6	948.5
145°	999.9	999.6	999.4	998.9	998.3	997.6	997.0	996.3
147.5°	1046.2	1046.0	1045.8	1045.6	1045.4	1045.2	1044.9	1044.7
150°	1075.3	1075.3	1075.3	1075.2	1075.0	1074.8	1074.5	1074.4
152.5°	1102.8	1103.4	1103.9	1103.9	1103.3	1102.7	1102.1	1101.6
155°	1141.2	1142.0	1142.9	1142.9	1142.0	1141.2	1140.2	1139.4
157.5°	1174.9	1175.5	1176.2	1176.2	1175.4	1174.7	1173.9	1173.2
160°	1195.7	1196.4	1197.0	1196.8	1195.7	1194.6	1193.5	1192.4
162.5°	1214.4	1215.6	1216.8	1216.9	1215.7	1214.6	1213.5	1212.4
165°	1239.1	1240.4	1241.7	1241.9	1241.0	1240.2	1239.2	1238.4
167.5°	1259.8	1261.2	1262.5	1262.5	1261.1	1259.7	1258.4	1257.0
170°	1271.1	1272.4	1273.8	1273.6	1272.0	1270.5	1268.9	1267.4
172.5°	1279.4	1280.9	1282.5	1282.5	1280.8	1279.3	1277.7	1276.2
175°	1288.5	1290.0	1291.6	1291.6	1290.0	1288.5	1286.9	1285.4
177.5°	1293.5	1294.8	1296.0	1295.9	1294.4	1293.0	1291.6	1290.2
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4

(END OF REPORT)