

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: P332524-930

Luminaire Tested: **SA4XXDIP-C350D1035U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332524-930
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-C350D1035U930-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

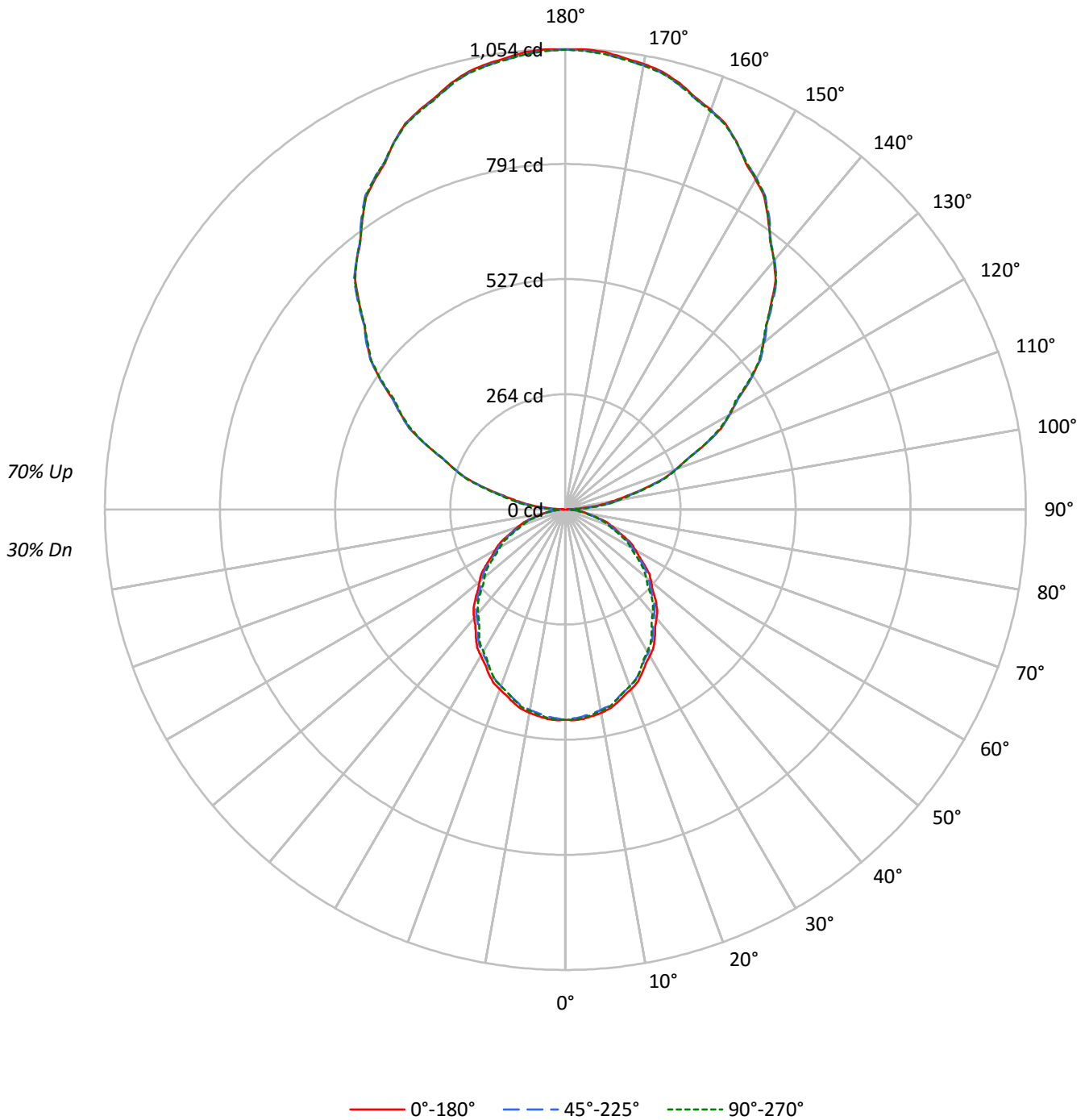
Lumens per Lamp: N/A
Luminaire Lumens: 4158.3 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 37.3
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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30
1	93	89	85	82	83	80	77	74	63	61	59	47	46	45	33	32	32	25
2	85	78	72	67	76	70	65	61	55	52	49	42	39	37	29	28	27	21
3	77	68	61	55	69	61	55	51	49	44	41	37	34	32	26	24	23	18
4	71	60	53	47	63	54	48	43	43	38	35	33	30	27	23	21	19	15
5	65	54	46	40	58	48	42	37	38	34	30	29	26	23	21	19	17	13
6	60	48	40	34	53	43	36	32	35	30	26	26	23	20	19	17	15	12
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10
8	51	39	32	26	46	35	29	24	28	24	20	22	18	16	16	13	12	9
9	47	35	28	23	42	32	26	21	26	21	18	20	17	14	14	12	11	8
10	44	32	25	21	40	29	23	19	24	19	16	18	15	13	13	11	10	8

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	1.1
10°-20°	127.8	3.1
20°-30°	188.1	4.5
30°-40°	218.7	5.3
40°-50°	218.7	5.3
50°-60°	191.3	4.6
60°-70°	142.1	3.4
70°-80°	80.7	1.9
80°-90°	26.4	0.6
90°-100°	69.4	1.7
100°-110°	205.6	4.9
110°-120°	348.9	8.4
120°-130°	460.1	11.1
130°-140°	516.7	12.4
140°-150°	507.8	12.2
150°-160°	427.1	10.3
160°-170°	284.1	6.8
170°-180°	99.5	2.4
0°-30°	361.2	8.7
0°-40°	579.9	13.9
0°-60°	989.8	23.8
0°-90°	1239.0	29.8
90°-120°	623.9	15.0
90°-150°	2108.6	50.7
90°-180°	2919.0	70.2
0°-180°	4158.3	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°	2	11	18	23	24	4
95°	49	56	62	64	64	54
105°	190	191	194	196	198	201
115°	355	355	353	352	352	350
125°	517	517	516	514	513	460
135°	666	671	671	670	667	515
145°	810	813	814	813	810	507
155°	928	928	927	930	927	427
165°	1010	1008	1006	1010	1008	285
175°	1051	1047	1046	1051	1046	100
180°	1052	1052	1052	1052	1052	



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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°	8.5	8.8	9.2	9.5	9.9	10.1	10.4	10.5	10.8	11.0	11.2
90°	2.4	4.4	6.4	8.4	10.4	12.1	13.5	15.0	16.5	17.9	19.0
92.5°	17.4	19.7	21.9	24.2	26.5	28.2	29.2	30.2	31.2	32.2	32.9
95°	48.8	50.5	52.1	53.7	55.4	56.7	58.0	59.4	60.6	61.9	62.4
97.5°	85.3	86.6	87.9	89.2	90.5	91.9	93.4	94.8	96.4	97.8	98.5
100°	113.9	114.6	115.4	116.1	116.8	118.0	119.6	121.2	122.9	124.5	124.9
102.5°	143.9	144.1	144.5	144.7	145.0	145.9	147.4	148.9	150.3	151.9	152.4
105°	189.6	189.8	190.0	190.1	190.4	190.8	191.5	192.2	193.0	193.7	194.2
107.5°	237.7	237.8	238.1	238.3	238.5	238.6	238.8	238.9	239.0	239.1	239.6
110°	270.2	270.5	270.9	271.3	271.7	271.7	271.5	271.3	271.2	271.0	270.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	304.0	304.1	304.2	304.3	304.4	304.2	303.9	303.5	303.2	302.9	302.8
115°	354.8	354.8	354.8	354.8	354.8	354.7	354.2	353.9	353.5	353.2	353.0
117.5°	402.7	402.8	402.9	403.1	403.2	403.2	402.9	402.7	402.4	402.2	401.5
120°	434.6	435.3	436.0	436.8	437.5	437.6	437.0	436.4	435.9	435.4	434.5
122.5°	467.7	468.1	468.3	468.6	468.9	469.0	468.7	468.4	468.1	467.9	467.3
125°	516.7	516.7	516.7	516.7	516.7	516.7	516.5	516.3	516.1	515.9	515.6
127.5°	561.2	561.7	562.2	562.8	563.4	563.5	563.2	562.9	562.6	562.3	562.0
130°	592.4	593.0	593.5	594.0	594.6	594.8	594.8	594.8	594.8	594.8	594.5
132.5°	624.4	624.8	625.1	625.5	625.9	626.1	625.9	625.7	625.6	625.5	625.1
135°	666.5	667.6	668.6	669.8	670.8	671.4	671.4	671.4	671.4	671.4	671.0
137.5°	712.4	712.9	713.4	713.9	714.4	714.8	715.1	715.4	715.7	716.0	715.5
140°	743.0	743.3	743.7	744.0	744.4	744.6	744.6	744.6	744.6	744.6	744.4
142.5°	770.9	771.4	771.7	772.1	772.4	772.5	772.4	772.3	772.1	771.9	771.9
145°	809.7	810.4	811.1	811.9	812.6	813.0	813.3	813.4	813.6	813.8	813.6
147.5°	848.2	849.0	849.9	850.8	851.6	852.0	851.8	851.7	851.5	851.4	851.3
150°	871.6	872.3	873.0	873.8	874.5	874.8	874.8	874.8	874.8	874.8	874.8
152.5°	893.7	894.1	894.5	895.0	895.4	895.7	895.9	896.0	896.2	896.3	896.7
155°	927.7	927.7	927.7	927.7	927.7	927.6	927.4	927.2	927.1	926.9	927.6
157.5°	956.3	956.0	955.7	955.4	955.0	954.9	954.8	954.8	954.8	954.7	955.3
160°	973.3	973.1	972.9	972.7	972.6	972.4	972.2	972.0	971.8	971.7	972.2
162.5°	988.9	988.5	988.0	987.5	987.0	986.7	986.5	986.3	986.2	985.9	986.9
165°	1009.9	1009.3	1008.9	1008.3	1007.7	1007.3	1006.9	1006.6	1006.2	1005.8	1006.9
167.5°	1026.1	1025.2	1024.5	1023.8	1023.0	1022.6	1022.6	1022.7	1022.7	1022.8	1023.9
170°	1035.1	1034.2	1033.3	1032.4	1031.5	1031.1	1031.4	1031.5	1031.7	1031.8	1033.0
172.5°	1041.6	1040.9	1040.2	1039.3	1038.6	1038.2	1038.3	1038.3	1038.4	1038.4	1039.6
175°	1050.6	1049.7	1048.8	1047.9	1047.0	1046.4	1046.3	1046.0	1045.9	1045.7	1047.0
177.5°	1053.5	1052.8	1052.1	1051.3	1050.6	1050.3	1050.3	1050.3	1050.3	1050.3	1051.2
180°	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2



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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°	11.4	11.7	11.8	12.0	12.1	12.1	12.2	12.3
90°	20.1	21.2	22.3	23.0	23.3	23.7	24.1	24.4
92.5°	33.5	34.2	34.8	35.3	35.5	35.7	36.0	36.1
95°	62.9	63.5	64.0	64.3	64.3	64.3	64.3	64.3
97.5°	99.1	99.8	100.4	100.8	100.8	100.8	100.8	100.8
100°	125.2	125.6	126.0	126.1	126.1	126.1	126.1	126.1
102.5°	152.9	153.4	153.8	154.2	154.3	154.5	154.7	154.7
105°	194.8	195.3	195.8	196.4	196.9	197.5	198.0	198.5
107.5°	240.1	240.6	241.1	241.3	241.3	241.2	241.2	241.2
110°	270.3	269.9	269.5	269.6	270.2	270.7	271.3	271.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	302.7	302.6	302.6	302.6	302.7	302.8	303.0	303.0
115°	352.8	352.6	352.5	352.3	352.1	351.9	351.7	351.6
117.5°	401.0	400.3	399.7	399.3	398.8	398.5	398.1	397.8
120°	433.6	432.7	431.8	431.5	431.9	432.2	432.6	432.9
122.5°	466.7	466.1	465.5	464.8	464.1	463.5	462.8	462.2
125°	515.2	514.9	514.5	514.1	513.8	513.4	513.1	512.7
127.5°	561.6	561.3	560.8	560.5	560.3	559.9	559.7	559.4
130°	594.2	593.8	593.5	592.9	592.2	591.4	590.7	590.0
132.5°	624.8	624.4	624.0	623.7	623.4	623.1	622.8	622.6
135°	670.7	670.3	669.9	669.4	669.0	668.4	667.8	667.3
137.5°	715.0	714.5	714.1	713.9	714.0	714.1	714.2	714.4
140°	744.3	744.0	743.9	743.7	743.6	743.3	743.1	743.0
142.5°	771.8	771.8	771.8	771.8	771.8	771.7	771.7	771.6
145°	813.4	813.3	813.0	812.7	812.1	811.6	811.1	810.5
147.5°	851.1	850.9	850.8	850.6	850.4	850.3	850.1	849.9
150°	874.8	874.8	874.8	874.7	874.6	874.3	874.2	874.0
152.5°	897.2	897.6	898.1	898.1	897.6	897.1	896.6	896.1
155°	928.4	929.0	929.8	929.8	929.0	928.4	927.6	926.9
157.5°	955.8	956.3	956.9	956.8	956.3	955.6	955.0	954.4
160°	972.7	973.3	973.8	973.6	972.7	971.8	970.9	970.0
162.5°	987.9	988.9	989.9	989.9	989.0	988.1	987.2	986.3
165°	1008.0	1009.1	1010.2	1010.3	1009.7	1008.9	1008.2	1007.5
167.5°	1024.9	1026.1	1027.1	1027.1	1026.0	1024.8	1023.7	1022.6
170°	1034.0	1035.1	1036.2	1036.1	1034.9	1033.6	1032.3	1031.0
172.5°	1040.8	1042.0	1043.3	1043.3	1042.0	1040.7	1039.5	1038.2
175°	1048.2	1049.5	1050.8	1050.8	1049.5	1048.2	1047.0	1045.7
177.5°	1052.3	1053.3	1054.3	1054.3	1053.1	1051.9	1050.8	1049.6
180°	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2	1052.2

(END OF REPORT)