

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: P331253-940

Luminaire Tested: **SA2XXDIP-C290D530U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331253-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C290D530U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2753.6 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

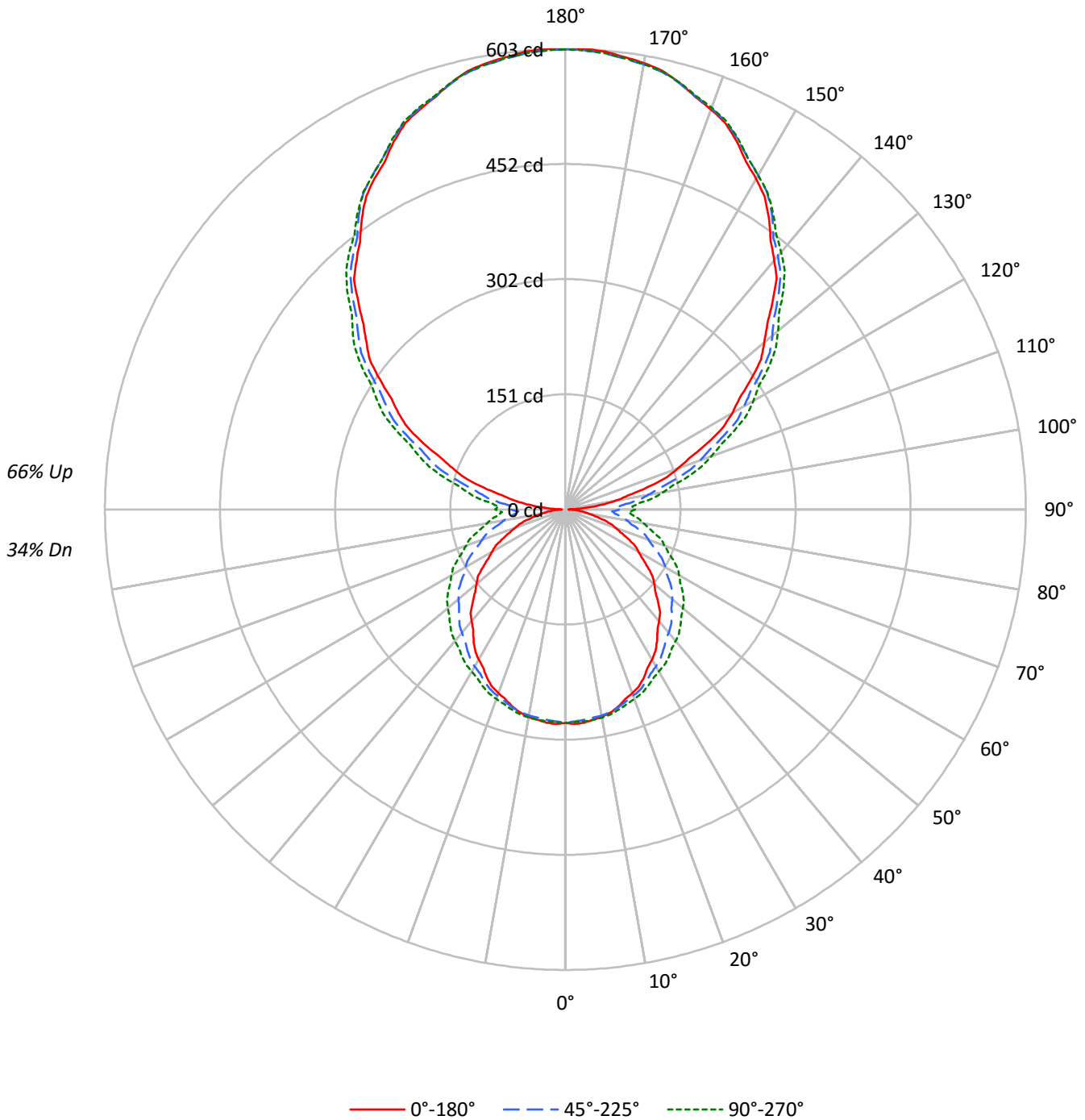
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	34
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27	22
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	27	24	23	18
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	24	21	19	15
5	64	52	44	38	57	47	40	35	38	33	29	29	25	23	21	19	17	13
6	59	47	39	33	53	42	35	30	34	29	25	26	22	20	19	16	14	11
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10	8
10	44	32	24	20	39	29	22	18	23	18	15	18	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4514	4514	4514
5°	4536	4345	4328
10°	4507	4215	4169
15°	4443	4079	4001
20°	4366	3935	3839
25°	4289	3793	3693
30°	4180	3650	3544
35°	4070	3510	3442
40°	3952	3391	3338
45°	3841	3286	3250
50°	3723	3189	3162
55°	3597	3086	3074
60°	3447	2979	2980
65°	3288	2854	2867
70°	3108	2717	2746
75°	2883	2585	2636
80°	2528	2450	2524
85°	2185	2333	2436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.5	1.0
10°-20°	75.9	2.8
20°-30°	115.1	4.2
30°-40°	140.2	5.1
40°-50°	150.8	5.5
50°-60°	146.5	5.3
60°-70°	127.9	4.6
70°-80°	98.4	3.6
80°-90°	68.5	2.5
90°-100°	83.7	3.0
100°-110°	151.8	5.5
110°-120°	224.7	8.2
120°-130°	278.8	10.1
130°-140°	304.3	11.1
140°-150°	294.2	10.7
150°-160°	246.1	8.9
160°-170°	163.2	5.9
170°-180°	57.0	2.1
0°-30°	217.5	7.9
0°-40°	357.7	13.0
0°-60°	654.9	23.8
0°-90°	949.7	34.5
90°-120°	460.2	16.7
90°-150°	1337.6	48.6
90°-180°	1804.0	65.5
0°-180°	2753.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	280	280	280	280	280	
5°	280	279	277	279	279	27
15°	267	268	268	272	271	75
25°	243	246	250	254	256	112
35°	210	216	224	233	236	131
45°	172	183	197	209	214	133
55°	132	147	167	181	187	118
65°	90	110	134	150	156	89
75°	50	73	98	115	121	53
85°	15	40	66	82	88	16
90°	4	35	71	86	92	4
95°	30	54	79	94	98	33
105°	111	125	147	161	166	118
115°	205	213	230	241	244	203
125°	297	302	313	322	325	265
135°	383	389	394	402	404	296
145°	465	468	471	474	474	290
155°	531	533	534	537	536	244
165°	578	578	578	581	579	163
175°	602	600	599	602	600	57
180°	602	602	602	602	602	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	281.2	280.9	280.7	280.4	280.3	279.9	279.4	278.9	278.4	277.9	278.2
5°	280.4	280.1	279.8	279.6	279.2	278.8	278.3	277.8	277.2	276.7	277.2
7.5°	277.8	277.6	277.4	277.2	277.1	276.8	276.3	276.0	275.5	275.1	275.8
10°	275.9	275.7	275.5	275.4	275.2	274.9	274.6	274.4	274.1	273.8	274.6
12.5°	272.6	272.7	272.7	272.8	272.8	272.7	272.5	272.3	272.1	271.9	272.6
15°	267.3	267.5	267.7	267.9	268.0	268.1	268.1	268.1	268.1	268.1	268.9
17.5°	260.6	260.9	261.3	261.7	262.1	262.4	262.7	263.0	263.2	263.6	264.4
20°	256.0	256.5	256.9	257.3	257.8	258.2	258.6	259.0	259.3	259.7	260.6
22.5°	251.2	251.6	252.2	252.7	253.2	253.8	254.2	254.8	255.3	255.7	256.7
25°	243.1	243.7	244.3	245.0	245.6	246.3	247.1	247.9	248.7	249.5	250.6
27.5°	233.4	234.3	235.4	236.4	237.5	238.4	239.3	240.3	241.3	242.3	243.6
30°	226.9	228.0	229.2	230.3	231.5	232.7	233.9	235.1	236.2	237.4	238.8
32.5°	219.7	221.1	222.3	223.6	225.0	226.3	227.7	229.1	230.5	231.8	233.5
35°	209.5	211.0	212.5	214.0	215.5	217.1	218.9	220.6	222.3	224.0	226.0
37.5°	198.2	200.0	201.8	203.6	205.3	207.3	209.6	211.7	213.9	216.2	218.4
40°	190.8	192.8	194.7	196.7	198.7	200.9	203.3	205.8	208.2	210.6	212.9
42.5°	183.7	185.7	187.6	189.6	191.6	193.9	196.8	199.6	202.3	205.1	207.7
45°	171.7	174.2	176.6	179.1	181.5	184.2	187.4	190.6	193.7	196.9	199.7
47.5°	160.0	162.6	165.3	167.9	170.6	173.8	177.5	181.1	184.9	188.5	191.5
50°	151.9	154.7	157.5	160.2	163.1	166.5	170.6	174.6	178.6	182.7	185.7
52.5°	144.1	147.0	150.0	152.9	155.9	159.4	163.7	168.0	172.3	176.6	179.7
55°	131.6	134.9	138.1	141.3	144.6	148.6	153.3	157.9	162.6	167.3	170.6
57.5°	119.3	123.0	126.6	130.3	133.9	138.1	142.9	147.7	152.5	157.3	160.8
60°	110.6	114.5	118.3	122.2	126.1	130.5	135.7	140.8	146.0	151.1	154.5
62.5°	102.8	106.8	110.8	114.9	118.9	123.4	128.6	133.7	138.8	144.0	147.6
65°	89.9	94.3	98.7	103.2	107.5	112.4	117.7	123.1	128.4	133.7	137.4
67.5°	78.1	82.8	87.3	91.9	96.6	101.6	107.0	112.4	117.9	123.3	127.1
70°	69.6	74.4	79.0	83.7	88.4	93.5	99.1	104.7	110.3	115.8	119.8
72.5°	61.9	66.7	71.5	76.3	81.2	86.4	92.1	97.7	103.4	109.1	112.9
75°	49.8	54.8	59.9	64.9	70.0	75.3	81.1	86.9	92.6	98.4	102.3
77.5°	38.2	43.4	48.7	53.9	59.3	64.8	70.7	76.5	82.4	88.2	92.1
80°	30.4	35.8	41.4	46.8	52.3	58.1	63.8	69.7	75.5	81.4	85.2
82.5°	23.9	29.3	34.8	40.1	45.6	51.3	57.2	63.1	69.0	74.9	78.7
85°	14.6	20.2	25.8	31.3	36.9	42.5	48.3	54.1	59.8	65.6	69.4
87.5°	8.0	13.6	19.4	25.0	30.6	36.6	42.8	49.0	55.3	61.5	65.2
90°	4.5	11.1	17.7	24.3	30.9	38.3	46.5	54.8	63.0	71.2	74.6
92.5°	12.8	18.6	24.5	30.3	36.2	42.2	48.3	54.5	60.6	66.7	70.3
95°	29.7	35.0	40.4	45.7	51.1	56.6	62.2	67.9	73.5	79.1	82.6
97.5°	51.2	55.9	60.6	65.5	70.2	75.3	81.0	86.6	92.2	97.8	101.1
100°	67.4	71.6	75.9	80.1	84.4	89.2	94.5	100.0	105.3	110.7	114.0
102.5°	84.2	87.9	91.7	95.5	99.2	103.8	109.1	114.4	119.8	125.1	128.4
105°	111.4	114.3	117.3	120.2	123.1	127.1	132.0	136.9	141.8	146.7	150.1
107.5°	139.1	141.7	144.3	146.9	149.5	153.0	157.5	161.9	166.5	170.9	174.1
110°	156.7	159.2	161.7	164.2	166.7	170.0	174.5	178.9	183.3	187.7	190.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	176.2	178.4	180.7	182.8	185.0	188.2	192.3	196.4	200.5	204.6	207.1
115°	205.0	206.7	208.4	210.0	211.7	214.5	218.3	222.1	225.9	229.7	232.3
117.5°	233.3	234.9	236.4	237.9	239.5	241.8	245.0	248.1	251.2	254.3	256.6
120°	252.4	253.7	254.9	256.2	257.4	259.5	262.2	264.8	267.5	270.3	272.8
122.5°	269.9	271.2	272.3	273.6	274.8	276.8	279.6	282.3	285.1	287.8	290.0
125°	296.8	297.7	298.8	299.8	300.9	302.6	305.1	307.6	310.2	312.7	314.9
127.5°	323.3	324.5	325.7	326.9	328.1	329.7	331.5	333.5	335.4	337.3	339.1
130°	340.0	341.3	342.8	344.1	345.4	347.1	348.7	350.4	352.0	353.7	355.6
132.5°	358.6	359.8	360.9	362.0	363.1	364.4	366.0	367.5	368.9	370.4	372.0
135°	383.3	384.5	385.8	387.0	388.3	389.5	390.6	391.7	392.8	394.0	395.7
137.5°	409.7	410.6	411.6	412.6	413.7	414.5	415.2	415.9	416.5	417.2	418.8
140°	425.5	426.4	427.4	428.3	429.2	430.1	430.8	431.5	432.3	433.0	434.4
142.5°	441.8	442.7	443.6	444.5	445.5	446.1	446.6	447.0	447.5	447.8	449.1
145°	464.8	465.6	466.4	467.2	468.0	468.7	469.3	470.0	470.7	471.4	472.0
147.5°	485.6	486.5	487.5	488.5	489.4	490.1	490.5	491.0	491.4	492.0	492.2
150°	499.9	500.5	501.2	501.9	502.6	503.1	503.5	504.0	504.4	505.0	505.2
152.5°	512.5	513.2	513.8	514.5	515.1	515.8	516.3	516.8	517.4	518.0	518.4
155°	531.4	531.7	532.1	532.4	532.7	533.1	533.4	533.8	534.0	534.4	535.0
157.5°	547.5	547.8	548.0	548.2	548.5	548.7	548.8	549.1	549.3	549.5	550.3
160°	557.3	557.5	557.8	557.9	558.2	558.4	558.5	558.6	558.7	558.8	559.5
162.5°	566.2	566.3	566.3	566.4	566.4	566.5	566.6	566.8	566.9	566.9	567.8
165°	578.2	578.0	577.9	577.8	577.7	577.7	577.7	577.7	577.7	577.7	578.5
167.5°	588.1	587.8	587.5	587.1	586.7	586.6	586.6	586.6	586.5	586.5	587.3
170°	593.4	593.1	592.7	592.4	592.1	591.8	591.7	591.6	591.5	591.4	592.2
172.5°	597.1	596.7	596.4	596.0	595.8	595.5	595.4	595.3	595.1	595.0	595.8
175°	601.5	601.2	600.8	600.6	600.2	599.9	599.7	599.5	599.2	599.0	599.8
177.5°	603.4	603.1	602.8	602.5	602.3	602.1	601.9	601.7	601.5	601.4	601.9
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
2.5°	278.6	278.9	279.3	279.5	279.3	279.1	279.0	278.8
5°	277.8	278.3	278.8	279.0	278.9	278.8	278.7	278.7
7.5°	276.4	277.1	277.8	278.0	277.9	277.9	277.8	277.7
10°	275.3	276.0	276.7	277.1	277.0	276.9	276.8	276.7
12.5°	273.3	274.0	274.7	275.1	275.0	274.9	274.8	274.7
15°	269.7	270.6	271.4	271.8	271.7	271.6	271.5	271.4
17.5°	265.3	266.1	266.9	267.3	267.3	267.3	267.3	267.3
20°	261.6	262.6	263.6	264.1	264.1	264.1	264.1	264.1
22.5°	257.8	258.8	259.8	260.3	260.5	260.6	260.7	260.9
25°	251.7	252.8	253.9	254.5	254.8	255.0	255.3	255.6
27.5°	245.0	246.4	247.7	248.5	248.7	248.9	249.1	249.3
30°	240.2	241.7	243.2	244.0	244.2	244.5	244.8	245.0
32.5°	235.1	236.8	238.5	239.6	240.0	240.6	241.0	241.5
35°	228.0	230.0	231.9	233.3	233.9	234.5	235.1	235.8
37.5°	220.5	222.7	225.0	226.4	227.0	227.7	228.4	229.0
40°	215.3	217.7	220.0	221.6	222.4	223.2	224.0	224.8
42.5°	210.3	212.8	215.3	217.0	217.8	218.6	219.5	220.3
45°	202.4	205.3	208.0	209.9	210.8	211.7	212.6	213.5
47.5°	194.4	197.2	200.2	202.2	203.1	204.1	205.1	206.1
50°	188.8	191.9	194.9	197.0	198.0	198.9	199.9	200.9
52.5°	182.8	185.9	189.0	191.2	192.3	193.3	194.4	195.4
55°	173.8	177.0	180.3	182.4	183.6	184.9	186.0	187.2
57.5°	164.3	167.7	171.2	173.5	174.8	175.9	177.1	178.3
60°	157.9	161.4	164.8	167.1	168.4	169.6	170.9	172.2
62.5°	151.2	154.9	158.5	161.0	162.1	163.3	164.5	165.7
65°	141.1	144.7	148.5	150.9	152.0	153.2	154.4	155.5
67.5°	130.7	134.5	138.2	140.7	141.9	143.1	144.4	145.6
70°	123.6	127.4	131.3	133.8	134.9	136.0	137.1	138.1
72.5°	116.6	120.5	124.2	126.8	128.0	129.4	130.7	132.0
75°	106.2	110.0	114.0	116.5	117.6	118.8	119.9	121.1
77.5°	95.9	99.8	103.6	106.2	107.5	108.7	109.9	111.2
80°	89.0	92.7	96.6	99.1	100.3	101.6	102.8	104.1
82.5°	82.5	86.3	90.1	92.6	93.7	95.0	96.1	97.3
85°	73.2	77.0	80.8	83.3	84.5	85.8	87.0	88.3
87.5°	68.8	72.4	76.1	78.5	79.6	80.8	82.0	83.2
90°	78.0	81.4	84.8	87.0	88.3	89.4	90.6	91.8
92.5°	73.8	77.5	81.1	83.4	84.4	85.6	86.7	87.7
95°	86.0	89.3	92.8	95.0	95.8	96.7	97.6	98.4
97.5°	104.5	107.8	111.1	113.3	114.4	115.4	116.5	117.4
100°	117.3	120.6	124.0	126.1	127.0	127.9	128.8	129.7
102.5°	131.8	135.1	138.5	140.6	141.5	142.3	143.2	144.1
105°	153.5	156.9	160.2	162.4	163.4	164.3	165.3	166.4
107.5°	177.2	180.3	183.4	185.2	185.7	186.1	186.6	187.1
110°	193.5	196.4	199.2	201.0	201.6	202.3	203.0	203.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	209.8	212.4	215.0	216.7	217.4	218.2	218.9	219.6
115°	234.9	237.5	240.0	241.7	242.4	243.0	243.6	244.3
117.5°	259.0	261.4	263.9	265.4	265.9	266.5	267.1	267.7
120°	275.3	277.8	280.4	281.9	282.6	283.2	283.8	284.5
122.5°	292.2	294.4	296.5	297.9	298.5	299.1	299.7	300.3
125°	316.9	319.1	321.1	322.5	323.2	324.0	324.6	325.3
127.5°	341.0	342.8	344.6	345.7	346.2	346.6	347.1	347.5
130°	357.6	359.4	361.4	362.5	362.7	363.0	363.3	363.6
132.5°	373.6	375.2	376.8	377.8	378.2	378.5	378.9	379.2
135°	397.5	399.3	401.1	402.2	402.5	402.9	403.3	403.7
137.5°	420.4	422.0	423.5	424.4	424.5	424.7	424.8	425.0
140°	435.9	437.4	438.8	439.5	439.6	439.7	439.8	439.9
142.5°	450.3	451.6	452.8	453.4	453.4	453.4	453.5	453.5
145°	472.7	473.3	473.9	474.3	474.3	474.3	474.3	474.3
147.5°	492.6	492.8	493.2	493.3	493.0	492.8	492.6	492.4
150°	505.6	506.0	506.3	506.3	506.0	505.6	505.2	505.0
152.5°	518.8	519.2	519.7	519.7	519.2	518.8	518.4	518.0
155°	535.6	536.1	536.7	536.8	536.5	536.1	535.7	535.5
157.5°	551.0	551.8	552.6	552.7	552.1	551.6	551.1	550.5
160°	560.2	560.9	561.5	561.7	561.2	560.8	560.3	559.8
162.5°	568.5	569.3	570.1	570.2	569.6	569.1	568.6	568.0
165°	579.3	580.1	580.8	580.9	580.3	579.8	579.3	578.6
167.5°	588.1	588.9	589.7	589.8	589.2	588.6	588.0	587.4
170°	593.0	593.8	594.5	594.6	593.9	593.3	592.5	591.9
172.5°	596.6	597.4	598.2	598.2	597.6	596.9	596.2	595.6
175°	600.6	601.4	602.2	602.3	601.5	600.8	600.2	599.5
177.5°	602.4	603.0	603.5	603.5	603.0	602.4	601.9	601.4
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5

(END OF REPORT)