

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: P332868-930

Luminaire Tested: **S124RDIP-S350D365U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332868-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S350D365U930-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2357.2 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

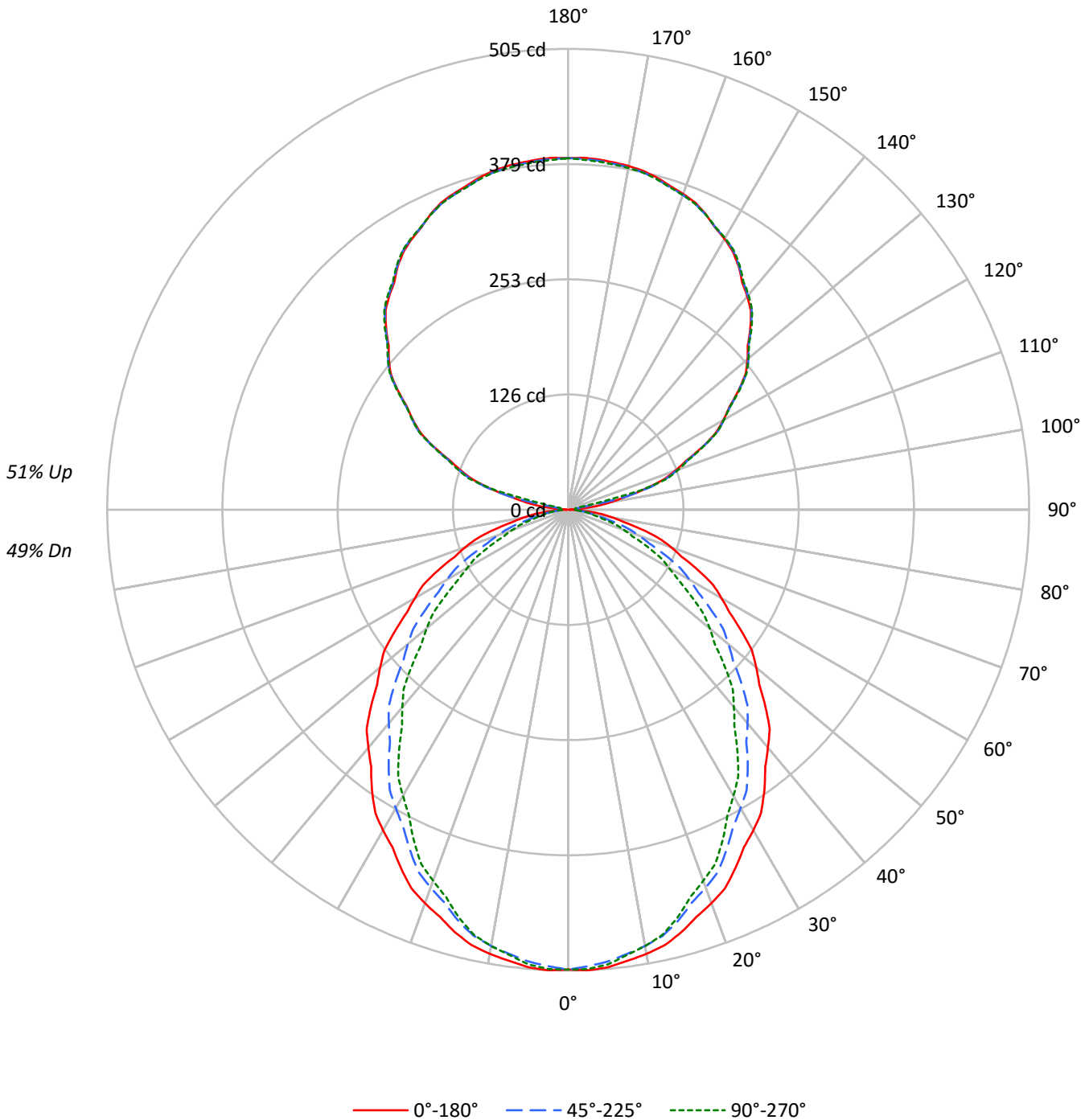
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	98	94	90	87	90	87	83	80	73	71	69	61	59	58	50	48	47	42
2	89	82	76	71	82	76	71	66	64	61	57	54	51	49	44	42	40	36
3	82	72	65	59	75	67	61	56	57	52	48	48	44	41	39	37	35	31
4	75	64	56	51	69	60	53	47	51	46	41	43	39	36	35	32	30	26
5	69	57	49	43	63	53	46	41	46	40	36	38	34	31	32	29	26	23
6	63	51	43	38	58	48	41	36	41	36	31	35	31	27	29	26	23	20
7	59	47	39	33	54	43	36	31	37	32	28	32	27	24	26	23	21	18
8	54	42	35	29	50	39	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	29	25	31	26	22	27	23	20	22	19	17	15
10	47	35	28	24	44	33	27	22	29	24	20	25	21	18	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4069	4069	4069
5°	4078	4028	4053
10°	4052	3980	3980
15°	4006	3896	3867
20°	3942	3786	3716
25°	3861	3657	3564
30°	3781	3522	3375
35°	3693	3381	3183
40°	3587	3222	2977
45°	3490	3062	2767
50°	3378	2880	2545
55°	3258	2688	2303
60°	3127	2480	2055
65°	3007	2220	1813
70°	2832	1931	1539
75°	2611	1603	1251
80°	2278	1223	1148
85°	1936	1112	1037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.3	2.0
10°-20°	132.0	5.6
20°-30°	190.6	8.1
30°-40°	216.1	9.2
40°-50°	208.7	8.9
50°-60°	173.5	7.4
60°-70°	119.8	5.1
70°-80°	60.7	2.6
80°-90°	16.7	0.7
90°-100°	13.2	0.6
100°-110°	84.0	3.6
110°-120°	160.7	6.8
120°-130°	204.0	8.7
130°-140°	218.3	9.3
140°-150°	204.1	8.7
150°-160°	164.6	7.0
160°-170°	106.2	4.5
170°-180°	36.6	1.6
0°-30°	370.0	15.7
0°-40°	586.1	24.9
0°-60°	968.3	41.1
0°-90°	1165.6	49.4
90°-120°	257.9	10.9
90°-150°	884.3	37.5
90°-180°	1192.0	50.6
0°-180°	2357.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	504	504	504	504	504	
5°	503	502	497	501	500	48
15°	479	475	466	465	463	135
25°	433	426	411	404	400	200
35°	375	362	343	330	323	234
45°	306	291	268	250	242	236
55°	232	216	191	172	164	207
65°	157	140	116	100	95	155
75°	84	69	51	43	40	88
85°	21	13	12	11	11	23
90°	1	4	6	8	9	2
95°	16	7	6	8	8	20
105°	87	88	90	92	82	91
115°	162	163	162	163	163	159
125°	228	229	228	229	229	203
135°	282	282	283	284	284	217
145°	326	326	326	327	327	203
155°	357	357	356	357	357	165
165°	377	375	375	377	375	106
175°	385	384	384	386	383	37
180°	385	385	385	385	385	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0
2.5°	505.2	504.9	504.7	504.4	504.1	503.6	502.9	502.1	501.3	500.6	501.3
5°	503.2	502.9	502.6	502.2	501.8	501.2	500.1	499.1	498.1	497.1	497.9
7.5°	498.6	498.3	498.0	497.6	497.3	496.4	495.0	493.7	492.4	491.1	491.5
10°	494.3	493.9	493.5	493.1	492.6	491.6	490.1	488.5	487.0	485.5	485.8
12.5°	488.8	488.3	487.8	487.3	486.8	485.7	483.8	482.0	480.2	478.3	478.6
15°	479.3	478.5	477.8	477.0	476.2	474.7	472.6	470.4	468.3	466.2	466.0
17.5°	467.8	466.7	465.5	464.5	463.3	461.5	458.9	456.3	453.8	451.2	450.7
20°	458.9	457.7	456.6	455.5	454.4	452.4	449.5	446.5	443.6	440.7	440.0
22.5°	449.0	447.7	446.5	445.2	443.9	441.7	438.6	435.5	432.4	429.3	428.3
25°	433.4	431.9	430.3	428.8	427.2	424.7	421.2	417.7	414.1	410.6	409.1
27.5°	417.0	415.1	413.1	411.2	409.3	406.4	402.7	398.9	395.2	391.4	389.6
30°	405.6	403.4	401.3	399.2	397.1	394.0	389.9	385.9	381.8	377.8	375.7
32.5°	393.5	391.1	388.7	386.3	383.8	380.6	376.4	372.3	368.1	363.9	361.4
35°	374.7	371.9	369.2	366.5	363.7	360.2	356.0	351.6	347.4	343.1	340.1
37.5°	354.6	351.7	348.9	346.1	343.2	339.5	334.7	330.0	325.2	320.5	317.2
40°	340.4	337.5	334.7	331.9	329.1	325.2	320.3	315.4	310.5	305.7	302.1
42.5°	326.8	323.8	320.8	317.9	315.0	310.9	305.8	300.7	295.6	290.5	286.8
45°	305.7	302.5	299.3	296.1	292.9	288.8	283.6	278.5	273.4	268.2	264.0
47.5°	283.8	280.5	277.3	273.9	270.7	266.4	261.1	255.7	250.3	245.0	240.6
50°	269.0	265.6	262.3	258.9	255.6	251.2	245.7	240.2	234.7	229.3	224.9
52.5°	253.9	250.5	247.3	244.0	240.8	236.3	230.6	225.0	219.4	213.8	209.5
55°	231.5	228.1	224.7	221.3	217.8	213.3	207.7	202.2	196.6	191.0	186.5
57.5°	209.5	205.9	202.4	198.8	195.2	190.7	185.2	179.7	174.2	168.7	164.2
60°	193.7	190.3	186.9	183.4	180.0	175.5	170.1	164.5	159.1	153.6	149.1
62.5°	179.5	175.9	172.4	168.8	165.3	160.7	155.1	149.4	143.8	138.2	134.0
65°	157.4	153.8	150.1	146.4	142.7	138.1	132.6	127.1	121.6	116.2	112.5
67.5°	134.5	131.0	127.4	123.9	120.4	116.1	111.0	105.9	100.8	95.7	92.5
70°	120.0	116.4	112.8	109.3	105.6	101.3	96.4	91.6	86.7	81.8	79.0
72.5°	104.6	101.3	98.1	94.8	91.6	87.6	83.0	78.4	73.8	69.1	66.8
75°	83.7	80.6	77.4	74.2	71.0	67.4	63.4	59.4	55.4	51.4	49.3
77.5°	62.6	59.9	57.2	54.5	51.9	48.8	45.6	42.3	39.1	35.8	34.7
80°	49.0	46.6	44.0	41.6	39.1	36.5	34.0	31.4	28.8	26.3	26.0
82.5°	37.3	35.0	32.7	30.4	28.1	26.3	24.8	23.3	21.9	20.4	20.2
85°	20.9	19.2	17.4	15.7	13.9	13.0	12.7	12.5	12.2	12.0	11.8
87.5°	7.3	6.8	6.4	6.0	5.6	5.5	5.5	5.5	5.5	5.6	5.6
90°	0.9	1.5	2.3	3.0	3.7	4.3	4.8	5.3	5.8	6.4	6.7
92.5°	3.7	3.7	3.7	3.8	3.8	4.1	4.6	5.1	5.6	6.1	6.5
95°	15.8	13.7	11.5	9.3	7.2	6.1	6.1	6.2	6.3	6.4	6.7
97.5°	33.7	35.0	36.4	37.7	39.1	36.2	29.0	21.9	14.8	7.6	7.7
100°	47.3	48.4	49.6	50.7	51.9	48.0	39.2	30.3	21.5	12.7	11.6
102.5°	62.5	63.3	64.2	65.0	65.9	65.7	64.6	63.4	62.2	61.1	49.3
105°	86.7	87.1	87.5	87.9	88.3	88.6	88.9	89.3	89.6	89.9	90.5
107.5°	109.3	109.4	109.7	109.8	110.1	110.3	110.8	111.2	111.6	112.1	112.3
110°	124.5	124.7	124.8	125.1	125.2	125.6	125.9	126.3	126.7	127.1	127.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	139.3	139.6	139.9	140.2	140.6	140.9	141.0	141.2	141.4	141.6	141.5
115°	161.9	162.2	162.3	162.5	162.7	162.7	162.7	162.7	162.6	162.5	162.7
117.5°	182.4	182.6	182.9	183.2	183.4	183.6	183.8	183.9	184.0	184.2	184.2
120°	196.2	196.5	196.7	197.0	197.2	197.3	197.3	197.2	197.1	197.1	197.2
122.5°	209.1	209.3	209.5	209.6	209.8	209.9	209.9	210.0	210.1	210.3	210.3
125°	227.6	227.9	228.1	228.4	228.7	228.7	228.6	228.4	228.4	228.2	228.4
127.5°	245.2	245.2	245.2	245.3	245.4	245.6	245.9	246.1	246.5	246.8	246.7
130°	256.4	256.5	256.6	256.7	256.7	256.8	257.0	257.2	257.4	257.6	257.6
132.5°	266.8	266.9	267.0	267.2	267.3	267.4	267.7	267.9	268.2	268.4	268.5
135°	282.3	282.3	282.3	282.2	282.1	282.2	282.5	282.7	283.0	283.2	283.4
137.5°	296.1	296.2	296.2	296.2	296.3	296.4	296.7	296.9	297.3	297.5	297.7
140°	305.2	305.2	305.4	305.5	305.7	305.7	305.9	306.1	306.1	306.3	306.5
142.5°	313.2	313.4	313.6	313.9	314.1	314.3	314.4	314.5	314.5	314.6	314.7
145°	325.6	325.8	326.0	326.2	326.4	326.4	326.4	326.4	326.4	326.4	326.5
147.5°	335.4	335.8	336.1	336.6	336.9	337.0	337.0	336.9	336.8	336.8	336.8
150°	342.6	342.8	343.1	343.4	343.6	343.7	343.6	343.6	343.5	343.5	343.5
152.5°	348.6	348.8	349.0	349.2	349.4	349.4	349.4	349.2	349.1	349.0	349.1
155°	357.0	357.1	357.1	357.2	357.3	357.2	357.0	356.8	356.6	356.4	356.7
157.5°	364.1	364.0	364.0	363.9	363.9	363.8	363.6	363.4	363.1	363.0	363.3
160°	368.3	368.0	367.9	367.7	367.5	367.4	367.3	367.2	367.1	367.0	367.5
162.5°	371.9	371.7	371.5	371.2	371.0	370.8	370.7	370.6	370.6	370.6	371.0
165°	376.6	376.3	375.9	375.6	375.3	375.1	375.1	375.1	375.1	375.1	375.7
167.5°	380.3	379.9	379.6	379.3	379.0	378.8	378.7	378.7	378.6	378.6	379.2
170°	382.4	382.0	381.6	381.2	380.8	380.7	380.7	380.8	380.8	380.9	381.4
172.5°	383.8	383.4	382.9	382.6	382.2	382.0	382.1	382.2	382.2	382.3	382.8
175°	385.2	384.8	384.5	384.1	383.7	383.5	383.6	383.7	383.8	383.8	384.4
177.5°	386.0	385.6	385.2	384.8	384.5	384.3	384.5	384.6	384.7	384.7	385.2
180°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0
2.5°	502.1	502.9	503.6	503.9	503.9	503.9	503.8	503.7
5°	498.8	499.6	500.5	500.8	500.7	500.5	500.3	500.1
7.5°	492.1	492.7	493.3	493.3	493.1	492.8	492.5	492.3
10°	486.2	486.5	486.8	486.8	486.5	486.2	485.8	485.5
12.5°	478.7	479.0	479.2	479.1	478.6	478.1	477.6	477.1
15°	465.9	465.7	465.5	465.1	464.5	463.9	463.3	462.7
17.5°	450.2	449.8	449.3	448.6	447.7	446.8	445.9	445.0
20°	439.4	438.6	438.0	437.1	435.9	434.8	433.7	432.6
22.5°	427.2	426.2	425.2	424.2	423.3	422.4	421.5	420.5
25°	407.6	406.3	404.8	403.7	402.8	401.9	401.0	400.1
27.5°	387.8	386.0	384.2	382.7	381.4	380.2	379.0	377.7
30°	373.5	371.4	369.2	367.5	366.1	364.8	363.4	362.0
32.5°	359.0	356.4	354.0	352.0	350.7	349.4	348.1	346.8
35°	337.2	334.4	331.4	329.2	327.7	326.1	324.6	323.0
37.5°	314.0	310.7	307.4	305.0	303.5	301.9	300.4	298.8
40°	298.4	294.8	291.2	288.7	287.1	285.6	284.1	282.5
42.5°	283.2	279.5	275.8	273.2	271.6	269.9	268.3	266.8
45°	259.8	255.6	251.4	248.5	247.0	245.4	243.9	242.4
47.5°	236.3	231.9	227.6	224.5	222.8	221.1	219.4	217.8
50°	220.6	216.4	212.1	209.1	207.5	205.9	204.2	202.6
52.5°	205.0	200.7	196.4	193.3	191.7	190.0	188.3	186.5
55°	182.1	177.7	173.2	170.2	168.5	166.9	165.3	163.6
57.5°	159.6	155.2	150.6	147.7	146.5	145.3	144.0	142.8
60°	144.6	140.2	135.7	132.8	131.4	130.1	128.7	127.3
62.5°	130.0	125.8	121.7	119.1	118.0	116.9	115.8	114.7
65°	108.8	105.1	101.4	99.1	98.0	97.0	96.0	94.9
67.5°	89.4	86.2	83.0	80.9	79.7	78.6	77.5	76.3
70°	76.1	73.3	70.5	68.6	67.8	66.9	66.0	65.2
72.5°	64.3	61.9	59.5	57.9	57.1	56.3	55.5	54.7
75°	47.4	45.4	43.5	42.2	41.7	41.2	40.7	40.1
77.5°	33.5	32.4	31.2	30.6	30.4	30.2	30.1	29.9
80°	25.8	25.4	25.2	25.0	24.9	24.9	24.8	24.7
82.5°	20.0	19.8	19.6	19.5	19.4	19.3	19.2	19.2
85°	11.7	11.4	11.3	11.2	11.2	11.2	11.2	11.2
87.5°	5.6	5.6	5.6	5.7	5.8	5.9	6.0	6.0
90°	7.1	7.5	7.9	8.2	8.2	8.4	8.5	8.6
92.5°	6.8	7.3	7.7	7.8	7.9	7.9	7.9	8.0
95°	7.1	7.5	7.9	8.1	8.2	8.2	8.3	8.3
97.5°	7.7	7.7	7.7	7.8	7.9	7.9	8.0	8.1
100°	10.5	9.4	8.3	7.8	7.9	7.9	8.0	8.1
102.5°	37.6	25.8	14.1	8.2	8.2	8.2	8.3	8.3
105°	91.1	91.6	92.2	91.3	89.0	86.7	84.4	82.1
107.5°	112.7	112.9	113.2	113.5	113.7	114.0	114.2	114.5
110°	127.3	127.4	127.6	127.8	127.9	128.2	128.3	128.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	141.5	141.5	141.5	141.6	141.9	142.1	142.4	142.6
115°	162.7	162.9	163.1	163.1	163.1	163.1	163.1	163.1
117.5°	184.1	184.1	184.1	184.0	184.0	184.0	184.0	183.9
120°	197.3	197.5	197.6	197.6	197.5	197.3	197.2	197.1
122.5°	210.3	210.4	210.5	210.5	210.3	210.3	210.1	210.0
125°	228.6	228.8	228.9	229.1	229.2	229.3	229.3	229.3
127.5°	246.7	246.6	246.6	246.5	246.5	246.5	246.4	246.4
130°	257.7	257.8	257.9	257.9	257.9	257.9	257.9	257.9
132.5°	268.6	268.6	268.7	268.7	268.6	268.6	268.6	268.5
135°	283.5	283.6	283.7	283.9	284.0	284.1	284.3	284.4
137.5°	297.8	298.0	298.1	298.2	298.1	298.1	298.0	298.0
140°	306.6	306.9	307.0	307.2	307.3	307.3	307.4	307.4
142.5°	314.9	315.0	315.1	315.2	315.3	315.3	315.3	315.3
145°	326.6	326.7	326.7	326.8	326.9	327.1	327.2	327.3
147.5°	336.9	337.0	337.0	337.0	337.1	337.1	337.2	337.3
150°	343.5	343.5	343.5	343.5	343.6	343.6	343.6	343.7
152.5°	349.2	349.3	349.4	349.4	349.4	349.4	349.4	349.3
155°	356.9	357.2	357.4	357.5	357.3	357.1	356.9	356.7
157.5°	363.6	363.9	364.3	364.3	363.9	363.6	363.3	363.0
160°	367.9	368.3	368.6	368.6	368.3	367.9	367.5	367.0
162.5°	371.3	371.7	372.1	372.0	371.6	371.2	370.7	370.3
165°	376.2	376.7	377.2	377.2	376.6	376.0	375.4	374.9
167.5°	379.8	380.3	380.8	380.8	380.2	379.5	378.9	378.3
170°	382.0	382.5	382.9	382.9	382.3	381.6	381.0	380.3
172.5°	383.4	383.8	384.3	384.3	383.6	382.9	382.2	381.5
175°	385.0	385.6	386.1	386.0	385.2	384.5	383.7	382.9
177.5°	385.6	386.0	386.5	386.3	385.7	385.1	384.5	383.8
180°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2

(END OF REPORT)