

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: P332249-935

Luminaire Tested: **S123RDIP-S340D585U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332249-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D585U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3135.0 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

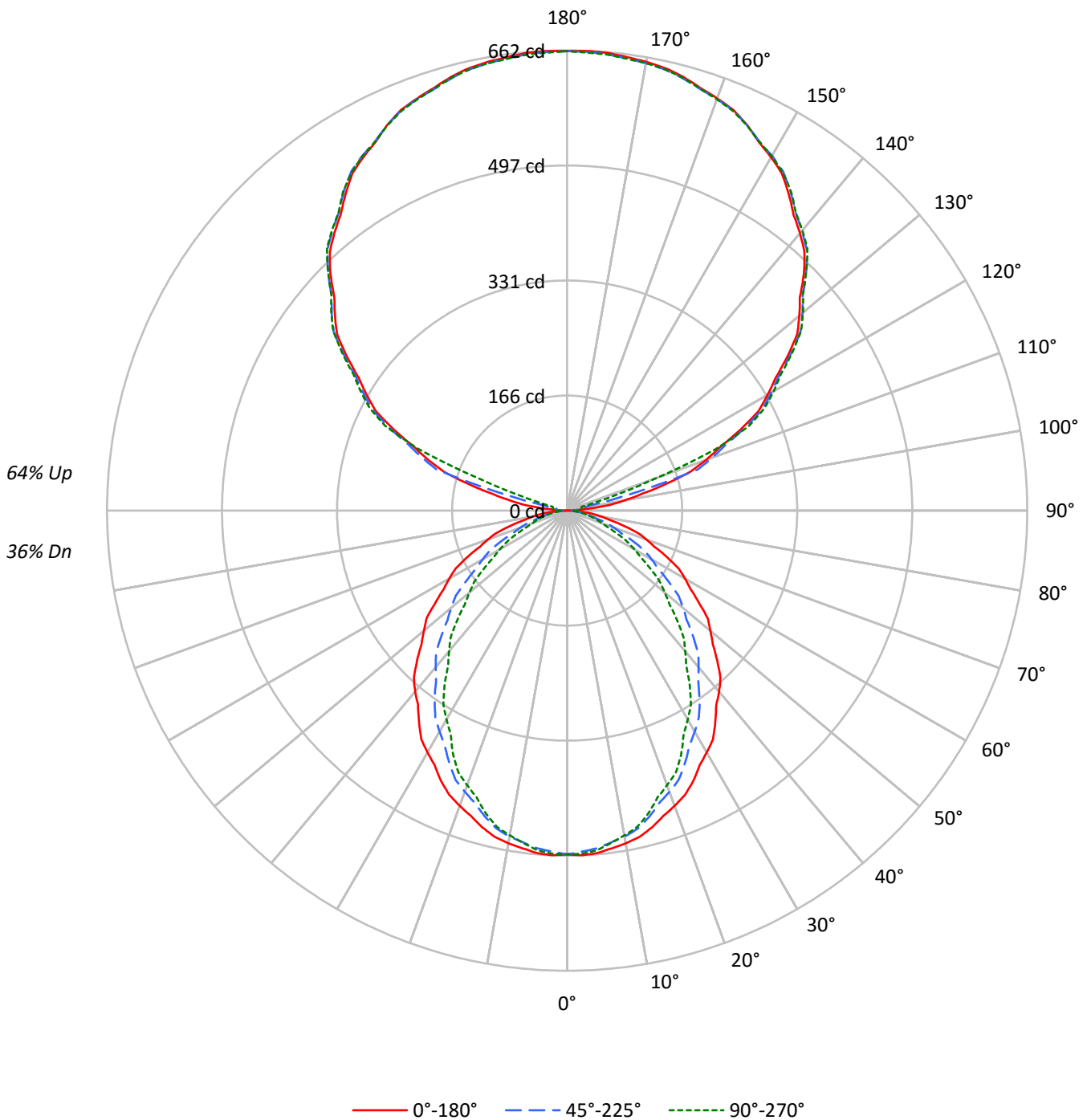
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	75	75	75	59	59	59	43	43	43	36
1	95	91	87	84	86	82	79	76	66	64	62	52	50	49	38	37	37	31
2	86	79	74	69	78	72	67	63	58	55	52	46	43	41	34	33	31	26
3	79	70	63	57	71	64	58	53	52	47	44	41	38	35	30	28	27	22
4	72	62	54	49	65	56	50	45	46	41	37	36	33	30	27	25	23	19
5	66	55	47	42	60	50	44	38	41	36	32	33	29	26	25	22	20	17
6	61	49	42	36	55	45	38	33	37	32	28	29	26	23	22	20	18	15
7	56	45	37	32	51	41	34	29	34	29	25	27	23	20	20	18	16	13
8	52	40	33	28	47	37	30	26	31	26	22	25	21	18	19	16	14	12
9	49	37	30	25	44	34	27	23	28	23	20	23	19	16	17	15	13	11
10	45	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5324	5324	5324
5°	5344	5271	5302
10°	5314	5205	5187
15°	5258	5084	5029
20°	5179	4931	4816
25°	5099	4760	4608
30°	4992	4561	4313
35°	4882	4365	4043
40°	4780	4131	3710
45°	4647	3902	3408
50°	4501	3641	3069
55°	4352	3342	2755
60°	4215	3023	2409
65°	4037	2677	2063
70°	3811	2247	1668
75°	3489	1768	1568
80°	3106	1568	1438
85°	2631	1383	1284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	1.5
10°-20°	129.2	4.1
20°-30°	186.1	5.9
30°-40°	209.6	6.7
40°-50°	200.5	6.4
50°-60°	164.2	5.2
60°-70°	110.8	3.5
70°-80°	55.7	1.8
80°-90°	16.6	0.5
90°-100°	24.0	0.8
100°-110°	114.5	3.7
110°-120°	275.1	8.8
120°-130°	350.3	11.2
130°-140°	374.3	11.9
140°-150°	350.0	11.2
150°-160°	282.3	9.0
160°-170°	182.2	5.8
170°-180°	62.8	2.0
0°-30°	361.8	11.5
0°-40°	571.4	18.2
0°-60°	936.2	29.9
0°-90°	1119.3	35.7
90°-120°	413.7	13.2
90°-150°	1488.3	47.5
90°-180°	2016.0	64.3
0°-180°	3135.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	495	495	495	495	495	
5°	495	492	488	491	491	47
15°	472	467	456	454	451	133
25°	429	419	401	393	388	197
35°	372	356	332	315	308	232
45°	305	286	256	234	224	235
55°	232	211	178	156	147	208
65°	158	136	105	86	81	157
75°	84	64	42	39	38	89
85°	21	13	11	10	10	24
90°	0	5	12	14	15	2
95°	30	11	15	18	19	37
105°	146	149	108	26	22	155
115°	274	278	282	287	289	271
125°	387	391	393	394	395	345
135°	482	485	487	488	487	371
145°	556	559	560	561	561	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6
2.5°	496.3	495.9	495.7	495.4	495.2	494.6	493.7	492.8	492.0	491.1	491.9
5°	494.6	494.2	493.8	493.4	492.8	492.1	491.0	490.0	488.9	487.8	488.6
7.5°	490.1	489.6	489.1	488.6	488.2	487.2	485.9	484.5	483.0	481.6	482.1
10°	486.2	485.6	485.0	484.4	483.7	482.6	481.0	479.4	477.8	476.2	476.3
12.5°	480.8	480.1	479.4	478.7	478.0	476.6	474.7	472.8	470.8	468.8	468.7
15°	471.8	470.8	469.8	468.8	467.9	466.1	463.6	461.2	458.7	456.2	455.7
17.5°	460.5	459.3	458.2	457.0	455.9	453.7	450.6	447.4	444.3	441.1	440.1
20°	452.1	450.7	449.3	447.9	446.4	444.0	440.7	437.2	433.9	430.5	429.3
22.5°	442.8	441.2	439.5	437.9	436.3	433.7	430.1	426.5	422.8	419.2	417.8
25°	429.3	427.1	424.8	422.6	420.3	417.2	413.1	409.0	404.8	400.8	398.9
27.5°	412.8	410.4	407.9	405.4	402.9	399.5	394.9	390.3	385.7	381.2	378.6
30°	401.6	398.9	396.2	393.6	390.9	387.0	382.0	377.0	372.0	367.0	364.0
32.5°	390.4	387.3	384.3	381.3	378.2	374.1	368.8	363.5	358.3	352.9	349.7
35°	371.5	368.2	365.1	361.9	358.7	354.3	348.8	343.2	337.7	332.2	328.4
37.5°	352.4	348.8	345.3	341.7	338.1	333.4	327.5	321.6	315.7	309.8	305.5
40°	340.2	336.3	332.3	328.5	324.5	319.3	313.1	306.7	300.4	294.0	289.5
42.5°	326.4	322.4	318.6	314.6	310.7	305.5	298.9	292.4	285.9	279.3	274.2
45°	305.3	301.3	297.3	293.3	289.2	283.8	277.0	270.1	263.2	256.3	251.2
47.5°	284.2	279.8	275.3	271.0	266.6	261.0	254.1	247.2	240.4	233.5	228.0
50°	268.8	264.6	260.5	256.2	252.0	246.3	239.1	231.9	224.6	217.4	211.9
52.5°	255.0	250.5	245.9	241.3	236.8	230.9	223.8	216.6	209.5	202.3	196.7
55°	231.9	227.5	223.2	218.8	214.4	208.4	200.9	193.3	185.7	178.1	173.0
57.5°	210.5	205.8	201.0	196.2	191.5	185.3	177.7	170.0	162.5	154.9	150.0
60°	195.8	190.9	186.0	181.1	176.2	170.0	162.6	155.2	147.8	140.4	135.6
62.5°	181.0	176.1	171.2	166.3	161.4	155.2	147.8	140.4	133.0	125.6	121.1
65°	158.5	153.6	148.7	143.8	138.9	132.9	126.0	119.0	112.1	105.1	100.7
67.5°	136.0	131.0	126.0	121.1	116.1	110.3	103.6	96.9	90.2	83.6	80.3
70°	121.1	116.3	111.5	106.7	101.9	96.3	90.1	83.9	77.7	71.4	68.3
72.5°	106.4	101.7	96.9	92.1	87.4	82.2	76.5	70.9	65.2	59.5	57.0
75°	83.9	79.6	75.3	71.0	66.7	62.2	57.3	52.3	47.4	42.5	41.7
77.5°	63.3	59.4	55.5	51.7	47.9	44.3	41.2	38.0	34.9	31.7	31.3
80°	50.1	46.5	42.9	39.2	35.6	32.8	30.9	29.0	27.1	25.3	25.0
82.5°	37.6	34.4	31.3	28.2	25.0	23.0	22.1	21.3	20.4	19.5	19.2
85°	21.3	19.3	17.3	15.4	13.4	12.3	12.1	11.8	11.5	11.2	11.0
87.5°	7.8	7.2	6.6	6.1	5.5	5.4	5.7	5.9	6.3	6.5	6.5
90°	0.5	1.5	2.7	3.8	4.8	6.1	7.5	9.0	10.3	11.8	12.2
92.5°	9.1	8.9	8.5	8.2	7.9	8.3	9.4	10.4	11.5	12.6	13.3
95°	30.0	25.5	21.0	16.5	12.1	10.4	11.6	12.8	14.0	15.2	16.0
97.5°	60.2	58.2	56.2	54.2	52.2	47.3	39.3	31.5	23.7	15.8	16.7
100°	83.0	85.2	87.4	89.5	91.7	84.3	67.2	50.3	33.2	16.2	17.0
102.5°	108.9	110.5	112.1	113.7	115.2	106.7	88.1	69.5	50.9	32.3	29.6
105°	146.4	147.6	148.8	149.9	151.1	146.8	137.0	127.2	117.4	107.5	88.3
107.5°	185.8	186.8	187.8	188.7	189.7	190.9	192.4	194.0	195.5	197.1	183.0
110°	212.2	213.0	213.9	214.7	215.6	216.7	217.8	219.0	220.2	221.4	217.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	237.3	238.1	238.8	239.6	240.4	241.4	242.6	243.8	245.0	246.2	246.3
115°	274.5	275.2	275.8	276.5	277.2	277.9	279.0	279.9	280.9	281.9	283.0
117.5°	310.6	311.3	312.2	313.0	313.7	314.4	315.0	315.5	316.0	316.4	317.4
120°	332.9	333.9	334.9	335.9	336.9	337.5	337.9	338.2	338.5	338.8	339.8
122.5°	355.8	356.5	357.3	358.2	359.0	359.6	360.0	360.4	360.8	361.3	361.9
125°	386.9	387.9	388.7	389.6	390.5	391.2	391.6	392.0	392.4	392.9	393.0
127.5°	417.2	418.1	419.0	419.8	420.7	421.4	421.9	422.5	423.0	423.5	423.9
130°	436.1	437.0	437.8	438.7	439.5	440.2	440.7	441.1	441.5	442.0	442.4
132.5°	454.2	455.0	455.9	456.8	457.6	458.2	458.6	458.9	459.3	459.7	460.1
135°	481.7	482.4	483.0	483.7	484.4	484.9	485.3	485.8	486.2	486.6	487.0
137.5°	505.3	506.2	507.0	507.8	508.6	509.2	509.4	509.6	509.9	510.1	510.7
140°	521.0	521.7	522.4	523.0	523.7	524.2	524.4	524.8	525.1	525.5	525.9
142.5°	535.5	536.2	536.9	537.5	538.2	538.6	539.0	539.3	539.7	540.0	540.4
145°	555.9	556.6	557.4	558.2	559.0	559.5	559.6	559.9	560.1	560.3	560.5
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	578.5
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6
2.5°	492.7	493.4	494.3	494.6	494.5	494.3	494.1	494.0
5°	489.5	490.3	491.0	491.4	491.2	491.0	490.9	490.7
7.5°	482.6	483.0	483.5	483.5	483.2	482.9	482.6	482.3
10°	476.4	476.5	476.6	476.4	476.0	475.5	475.0	474.6
12.5°	468.7	468.6	468.6	468.3	467.8	467.3	466.7	466.2
15°	455.2	454.8	454.3	453.8	453.2	452.5	451.9	451.3
17.5°	439.2	438.2	437.3	436.4	435.4	434.5	433.6	432.7
20°	428.2	427.0	425.9	424.7	423.6	422.6	421.5	420.4
22.5°	416.4	414.9	413.5	412.2	411.2	410.3	409.2	408.3
25°	397.0	395.2	393.3	391.8	390.9	389.9	388.9	388.0
27.5°	376.0	373.4	370.8	368.8	367.2	365.8	364.3	362.7
30°	361.0	358.0	355.0	352.8	351.3	349.9	348.4	347.0
32.5°	346.3	343.0	339.7	337.3	335.8	334.3	332.8	331.3
35°	324.5	320.6	316.8	314.1	312.5	310.9	309.3	307.7
37.5°	301.1	296.7	292.4	289.2	287.2	285.2	283.3	281.3
40°	284.8	280.2	275.5	272.2	270.1	268.1	266.0	264.0
42.5°	269.1	264.2	259.1	255.6	253.7	251.9	250.1	248.2
45°	246.2	241.1	236.0	232.4	230.3	228.2	226.0	223.9
47.5°	222.4	216.9	211.4	207.7	205.8	203.9	201.9	200.0
50°	206.4	200.9	195.4	191.6	189.5	187.4	185.4	183.3
52.5°	190.9	185.1	179.4	175.6	173.7	171.9	170.1	168.2
55°	167.8	162.6	157.5	153.9	152.2	150.4	148.6	146.8
57.5°	145.1	140.2	135.3	132.1	130.6	129.1	127.6	126.1
60°	130.8	126.0	121.1	118.0	116.5	114.9	113.5	111.9
62.5°	116.6	112.1	107.5	104.4	102.9	101.3	99.7	98.2
65°	96.3	92.0	87.6	85.0	83.9	83.0	82.1	81.0
67.5°	77.1	73.8	70.5	68.4	67.3	66.3	65.3	64.2
70°	65.2	62.1	58.9	56.9	55.9	54.9	53.9	53.0
72.5°	54.4	51.9	49.3	47.9	47.4	47.0	46.7	46.2
75°	40.7	39.9	38.9	38.4	38.2	38.1	37.9	37.7
77.5°	30.7	30.2	29.8	29.4	29.3	29.1	28.9	28.8
80°	24.7	24.5	24.2	24.0	23.8	23.6	23.4	23.2
82.5°	18.9	18.7	18.4	18.3	18.3	18.2	18.2	18.2
85°	10.8	10.7	10.5	10.4	10.4	10.4	10.4	10.4
87.5°	6.5	6.5	6.6	6.6	6.5	6.5	6.5	6.5
90°	12.7	13.1	13.5	13.9	14.1	14.3	14.6	14.7
92.5°	13.9	14.6	15.3	15.8	15.9	16.0	16.2	16.3
95°	16.8	17.5	18.3	18.7	18.7	18.7	18.7	18.7
97.5°	17.6	18.4	19.3	19.8	19.9	20.0	20.1	20.2
100°	17.9	18.9	19.7	20.1	20.3	20.4	20.5	20.7
102.5°	26.9	24.2	21.5	20.2	20.4	20.7	20.8	21.0
105°	68.9	49.6	30.3	20.8	20.9	21.2	21.4	21.6
107.5°	168.8	154.6	140.4	126.1	111.5	96.9	82.4	67.8
110°	214.3	210.7	207.1	197.4	181.8	166.3	150.7	135.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.3	246.4	246.5	244.9	241.6	238.2	235.0	231.7
115°	284.0	285.2	286.3	287.0	287.4	287.9	288.3	288.8
117.5°	318.2	319.1	319.9	320.5	320.6	320.6	320.7	320.8
120°	340.6	341.5	342.3	342.8	342.8	342.8	342.8	342.8
122.5°	362.5	363.1	363.7	364.0	364.1	364.2	364.3	364.4
125°	393.3	393.5	393.7	394.0	394.2	394.4	394.6	394.9
127.5°	424.2	424.6	424.9	425.0	424.7	424.6	424.3	424.1
130°	442.8	443.2	443.7	443.8	443.6	443.4	443.2	443.0
132.5°	460.5	461.0	461.4	461.5	461.2	460.8	460.5	460.2
135°	487.3	487.7	487.9	487.9	487.7	487.3	487.0	486.6
137.5°	511.2	511.7	512.2	512.4	512.1	512.0	511.7	511.5
140°	526.3	526.8	527.2	527.3	527.1	526.8	526.7	526.4
142.5°	540.7	541.1	541.4	541.4	541.1	540.8	540.4	540.2
145°	560.8	560.9	561.2	561.3	561.3	561.3	561.3	561.3
147.5°	578.8	578.9	579.2	579.0	578.5	578.0	577.6	577.0
150°	589.7	590.0	590.1	590.1	589.8	589.4	589.1	588.8
152.5°	599.5	599.9	600.3	600.2	599.8	599.3	598.7	598.2
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)