

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: P331631-935

Luminaire Tested: **S122RDIP-S290D725U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331631-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIP-S290D725U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3122.0 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

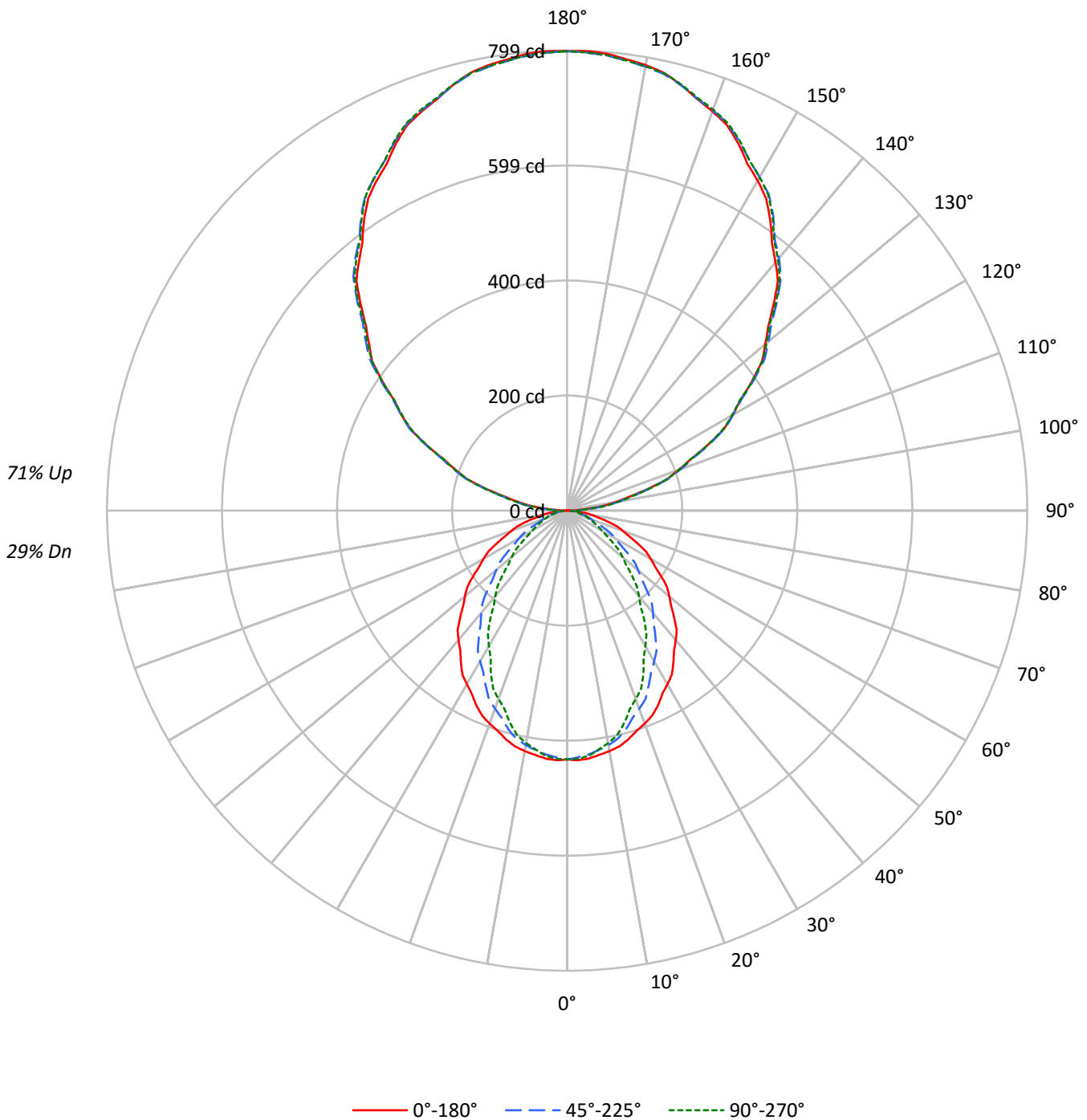
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	29
1	93	89	85	82	83	80	77	74	63	61	59	47	46	45	33	32	31	25
2	85	78	72	67	76	70	65	61	55	52	49	42	40	38	29	28	27	21
3	78	69	62	56	69	62	56	51	49	45	42	37	34	32	26	24	23	18
4	71	61	54	48	64	55	49	44	44	39	36	33	30	28	23	21	20	16
5	65	54	47	41	58	49	42	38	39	34	31	30	27	24	21	19	18	14
6	60	49	41	35	54	44	37	33	35	30	27	27	24	21	19	17	16	12
7	56	44	36	31	50	40	33	29	32	27	24	25	21	19	18	16	14	11
8	51	40	32	27	46	36	30	25	29	24	21	22	19	17	16	14	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9
10	45	33	26	22	40	30	24	20	24	20	17	19	16	14	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6978	6978	6978
5°	7005	6891	6929
10°	6951	6779	6720
15°	6870	6578	6387
20°	6761	6290	5976
25°	6649	5964	5574
30°	6490	5630	5062
35°	6337	5267	4610
40°	6182	4890	4089
45°	6003	4464	3617
50°	5815	4037	3152
55°	5624	3578	2711
60°	5406	3094	2251
65°	5154	2598	2048
70°	4858	2143	1884
75°	4492	1953	1759
80°	3961	1748	1599
85°	3112	1371	1371



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	1.3
10°-20°	111.1	3.6
20°-30°	156.0	5.0
30°-40°	170.1	5.4
40°-50°	156.4	5.0
50°-60°	122.8	3.9
60°-70°	80.1	2.6
70°-80°	41.3	1.3
80°-90°	13.9	0.4
90°-100°	50.5	1.6
100°-110°	157.0	5.0
110°-120°	268.3	8.6
120°-130°	352.8	11.3
130°-140°	396.0	12.7
140°-150°	388.3	12.4
150°-160°	325.7	10.4
160°-170°	216.0	6.9
170°-180°	75.5	2.4
0°-30°	307.5	9.8
0°-40°	477.6	15.3
0°-60°	756.8	24.2
0°-90°	892.1	28.6
90°-120°	475.8	15.2
90°-150°	1612.8	51.7
90°-180°	2230.0	71.4
0°-180°	3122.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	432	430	425	428	428	41
15°	411	406	394	386	382	116
25°	373	360	335	319	313	172
35°	322	301	267	243	234	201
45°	263	236	196	169	158	203
55°	200	169	127	104	96	179
65°	135	103	68	55	54	134
75°	72	45	31	29	28	76
85°	17	9	7	7	7	20
90°	1	9	24	22	23	3
95°	35	41	43	43	42	40
105°	145	147	148	149	149	153
115°	269	273	272	271	269	266
125°	392	397	396	394	393	350
135°	507	514	516	515	513	391
145°	615	620	624	624	622	384
155°	703	705	707	710	709	324
165°	765	765	764	769	766	216
175°	796	794	793	797	794	76
180°	798	798	798	798	798	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	432.2	432.2	432.2	432.2	432.2	432.2	432.2	432.2	432.2	432.2	432.2
2.5°	433.8	433.4	433.1	432.7	432.4	431.8	431.0	430.3	429.6	428.8	429.5
5°	432.2	431.8	431.4	430.9	430.5	429.6	428.5	427.4	426.3	425.2	425.9
7.5°	427.7	427.2	426.6	426.1	425.6	424.6	423.4	422.0	420.7	419.4	419.6
10°	424.0	423.4	422.8	422.1	421.5	420.3	418.6	416.9	415.2	413.5	413.2
12.5°	419.3	418.5	417.8	417.1	416.3	414.8	412.6	410.4	408.1	405.9	405.4
15°	411.0	410.1	409.1	408.2	407.3	405.3	402.3	399.4	396.4	393.5	391.8
17.5°	401.0	399.5	398.0	396.6	395.1	392.5	388.7	385.0	381.2	377.4	375.4
20°	393.5	391.8	390.0	388.2	386.5	383.5	379.1	374.8	370.5	366.1	363.9
22.5°	385.4	383.4	381.4	379.5	377.5	374.1	369.2	364.3	359.5	354.6	351.7
25°	373.2	370.3	367.6	364.8	362.1	357.7	352.0	346.3	340.5	334.8	331.2
27.5°	358.4	355.4	352.4	349.4	346.3	341.6	335.1	328.6	322.2	315.7	311.6
30°	348.1	344.8	341.5	338.2	334.9	329.8	322.8	315.9	308.9	302.0	297.6
32.5°	338.1	334.2	330.4	326.5	322.6	317.2	310.1	303.0	295.9	288.8	283.8
35°	321.5	317.1	312.6	308.2	303.8	297.7	290.1	282.4	274.8	267.2	261.7
37.5°	305.0	300.1	295.2	290.3	285.4	279.0	270.8	262.6	254.5	246.3	240.3
40°	293.3	288.2	282.9	277.7	272.5	265.7	257.3	248.8	240.4	232.0	225.8
42.5°	281.5	276.0	270.4	265.0	259.5	252.4	243.7	235.0	226.3	217.6	211.2
45°	262.9	257.0	251.2	245.4	239.5	232.0	222.9	213.8	204.7	195.5	189.4
47.5°	244.7	238.5	232.4	226.2	220.0	212.2	202.8	193.4	183.9	174.5	168.4
50°	231.5	225.4	219.2	213.0	206.9	199.0	189.4	179.9	170.3	160.7	154.7
52.5°	218.7	212.2	205.9	199.4	193.0	185.0	175.6	166.3	157.0	147.6	141.8
55°	199.8	193.1	186.3	179.5	172.7	164.7	155.2	145.9	136.5	127.1	121.9
57.5°	180.6	173.6	166.6	159.7	152.7	144.7	135.7	126.7	117.7	108.7	103.8
60°	167.4	160.5	153.5	146.5	139.6	131.6	122.7	113.7	104.8	95.8	91.4
62.5°	154.5	147.7	140.7	133.7	126.7	119.0	110.5	101.9	93.4	84.9	80.7
65°	134.9	127.9	120.9	113.8	106.8	99.4	91.5	83.7	75.9	68.0	65.1
67.5°	116.0	109.0	102.0	95.1	88.1	81.0	74.0	67.0	59.9	52.9	51.5
70°	102.9	96.1	89.3	82.6	75.8	69.4	63.4	57.3	51.4	45.4	44.5
72.5°	90.3	83.9	77.3	70.9	64.3	58.7	53.9	49.1	44.3	39.4	38.7
75°	72.0	65.9	59.8	53.7	47.6	43.1	40.1	37.2	34.3	31.3	30.7
77.5°	53.9	48.6	43.2	37.9	32.5	29.2	27.7	26.3	24.9	23.5	23.2
80°	42.6	38.2	33.8	29.4	24.9	22.2	21.4	20.5	19.6	18.8	18.4
82.5°	32.3	28.8	25.4	22.0	18.5	16.4	15.8	15.2	14.6	14.1	13.9
85°	16.8	15.0	13.2	11.4	9.6	8.4	8.2	7.9	7.7	7.4	7.4
87.5°	5.2	4.9	4.7	4.6	4.4	4.6	5.3	5.9	6.5	7.2	7.1
90°	0.7	2.5	4.3	6.0	7.8	10.4	13.7	17.0	20.2	23.6	23.2
92.5°	12.0	13.3	14.6	15.9	17.2	18.3	19.0	19.8	20.7	21.4	21.4
95°	35.0	36.5	38.0	39.5	41.0	41.8	42.2	42.4	42.8	43.0	43.0
97.5°	64.0	65.3	66.6	67.8	69.2	70.2	70.7	71.3	71.8	72.4	72.4
100°	85.5	86.7	87.8	89.0	90.2	91.1	91.5	92.0	92.4	92.9	92.9
102.5°	108.1	109.0	110.0	111.0	111.9	112.7	113.2	113.8	114.3	114.9	115.0
105°	144.7	145.2	145.6	146.0	146.5	146.9	147.1	147.5	147.7	148.1	148.4
107.5°	181.6	182.3	182.9	183.6	184.2	184.5	184.5	184.5	184.5	184.5	184.7
110°	205.3	206.1	207.1	207.9	208.9	209.3	209.3	209.3	209.3	209.3	209.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	231.1	232.0	232.9	233.8	234.7	235.1	235.0	234.9	234.7	234.6	234.3
115°	269.2	270.1	271.0	271.9	272.8	273.1	272.8	272.5	272.2	271.9	271.7
117.5°	307.1	308.3	309.5	310.7	311.9	312.1	311.3	310.5	309.6	308.8	308.4
120°	332.4	333.6	334.8	336.0	337.3	337.3	336.0	334.8	333.6	332.4	332.4
122.5°	355.6	357.1	358.5	359.9	361.4	361.6	360.8	360.0	359.1	358.3	357.9
125°	391.7	393.0	394.3	395.7	397.1	397.5	397.1	396.6	396.1	395.7	395.3
127.5°	426.8	428.5	430.2	432.0	433.6	434.2	433.7	433.2	432.6	432.0	431.5
130°	448.9	450.8	452.8	454.7	456.7	457.4	457.2	456.8	456.6	456.3	456.0
132.5°	473.6	475.3	476.8	478.4	480.0	480.8	480.9	481.0	481.0	481.0	480.4
135°	506.8	508.4	510.1	511.7	513.3	514.3	514.6	514.9	515.2	515.5	515.4
137.5°	541.7	542.9	544.3	545.7	547.0	547.9	548.3	548.6	549.1	549.4	549.3
140°	562.7	564.0	565.3	566.6	568.0	569.0	569.8	570.6	571.3	572.0	572.0
142.5°	584.2	585.5	586.9	588.2	589.5	590.5	591.0	591.5	592.0	592.5	592.6
145°	615.1	616.1	617.3	618.3	619.3	620.3	621.2	622.1	622.9	623.9	624.1
147.5°	642.7	643.9	645.2	646.4	647.7	648.7	649.3	649.9	650.5	651.1	651.3
150°	661.6	662.5	663.3	664.3	665.1	665.9	666.5	667.1	667.7	668.3	668.7
152.5°	678.2	679.2	680.0	681.0	681.8	682.6	683.4	684.1	684.8	685.5	686.0
155°	703.3	703.7	704.2	704.6	705.1	705.5	705.9	706.5	706.9	707.3	708.1
157.5°	724.7	725.0	725.3	725.6	725.9	726.2	726.4	726.7	726.9	727.2	728.2
160°	737.6	737.9	738.2	738.5	738.8	739.0	739.2	739.3	739.5	739.6	740.5
162.5°	749.4	749.5	749.6	749.6	749.7	749.8	749.9	750.1	750.3	750.4	751.4
165°	765.2	765.1	764.9	764.7	764.6	764.5	764.5	764.5	764.5	764.5	765.6
167.5°	778.3	777.9	777.5	777.1	776.6	776.4	776.4	776.3	776.3	776.2	777.3
170°	785.4	785.0	784.5	784.0	783.6	783.3	783.2	783.0	782.8	782.6	783.8
172.5°	790.2	789.8	789.4	788.8	788.4	788.2	788.0	787.8	787.7	787.6	788.6
175°	796.2	795.7	795.2	794.8	794.4	794.0	793.7	793.4	793.1	792.8	793.8
177.5°	798.6	798.2	797.9	797.5	797.1	796.9	796.6	796.3	796.1	795.9	796.6
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	432.2	432.2	432.2	432.2	432.2	432.2	432.2	432.2
2.5°	430.2	430.8	431.5	431.8	431.7	431.5	431.4	431.3
5°	426.7	427.5	428.3	428.5	428.3	428.0	427.7	427.5
7.5°	419.8	420.1	420.3	420.2	419.7	419.2	418.8	418.4
10°	412.9	412.7	412.4	412.0	411.5	411.0	410.4	409.9
12.5°	405.0	404.5	404.1	403.4	402.5	401.7	400.8	399.9
15°	390.2	388.5	386.8	385.6	384.8	383.8	383.0	382.1
17.5°	373.4	371.4	369.5	367.8	366.3	364.8	363.3	361.8
20°	361.8	359.6	357.4	355.3	353.4	351.5	349.7	347.8
22.5°	349.0	346.1	343.4	341.2	339.8	338.4	336.9	335.5
25°	327.7	324.1	320.6	318.1	316.8	315.5	314.2	312.9
27.5°	307.4	303.2	299.1	296.0	293.9	291.9	289.8	287.7
30°	293.1	288.7	284.2	280.9	278.4	276.1	273.8	271.5
32.5°	278.7	273.6	268.5	264.9	262.8	260.5	258.3	256.1
35°	256.2	250.7	245.2	241.5	239.6	237.7	235.8	233.9
37.5°	234.3	228.3	222.2	218.1	215.9	213.7	211.5	209.3
40°	219.6	213.4	207.2	203.0	200.8	198.5	196.2	194.0
42.5°	204.7	198.4	192.0	187.8	185.5	183.4	181.2	179.0
45°	183.2	177.0	170.9	166.8	164.7	162.6	160.5	158.4
47.5°	162.2	156.1	150.0	145.9	144.0	142.2	140.3	138.4
50°	148.8	142.8	136.7	132.9	131.0	129.2	127.3	125.5
52.5°	136.0	130.3	124.5	120.7	119.1	117.4	115.6	114.0
55°	116.7	111.5	106.2	102.8	101.2	99.5	97.9	96.3
57.5°	99.1	94.3	89.5	86.4	85.1	83.7	82.3	80.8
60°	87.0	82.6	78.1	75.2	73.8	72.4	71.0	69.7
62.5°	76.5	72.2	68.0	65.4	64.6	63.8	62.9	62.1
65°	62.2	59.2	56.2	54.6	54.3	54.1	53.8	53.6
67.5°	50.2	48.8	47.4	46.7	46.3	46.1	45.8	45.5
70°	43.7	42.8	41.9	41.3	40.9	40.6	40.2	39.9
72.5°	38.0	37.2	36.5	36.1	35.8	35.6	35.4	35.2
75°	30.0	29.4	28.8	28.5	28.4	28.3	28.2	28.2
77.5°	22.7	22.4	22.0	21.9	21.7	21.5	21.4	21.3
80°	18.1	17.7	17.4	17.2	17.2	17.2	17.2	17.2
82.5°	13.7	13.4	13.3	13.2	13.2	13.2	13.2	13.2
85°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
87.5°	7.0	6.8	6.7	6.6	6.7	6.7	6.7	6.8
90°	23.0	22.6	22.4	22.3	22.5	22.6	22.7	22.9
92.5°	21.5	21.6	21.6	21.7	21.7	21.8	21.8	21.8
95°	43.0	43.0	43.0	43.0	42.6	42.4	42.0	41.8
97.5°	72.4	72.4	72.4	72.4	72.4	72.3	72.3	72.2
100°	92.9	92.9	92.9	92.8	92.6	92.5	92.4	92.2
102.5°	115.2	115.3	115.5	115.4	115.3	115.1	114.9	114.8
105°	148.7	149.0	149.3	149.4	149.4	149.4	149.4	149.4
107.5°	184.8	184.9	185.0	184.8	184.1	183.4	182.7	182.0
110°	209.3	209.3	209.3	209.1	208.6	208.2	207.8	207.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.8	233.5	233.2	232.8	232.5	232.1	231.9	231.5
115°	271.6	271.5	271.3	271.0	270.5	270.1	269.7	269.2
117.5°	308.1	307.7	307.3	306.9	306.5	306.0	305.6	305.1
120°	332.4	332.4	332.4	332.3	331.7	331.3	330.9	330.5
122.5°	357.6	357.2	356.9	356.5	356.2	355.9	355.5	355.2
125°	394.9	394.3	393.9	393.6	393.5	393.3	393.2	393.0
127.5°	431.0	430.4	429.9	429.4	429.0	428.4	428.0	427.5
130°	455.7	455.4	455.1	454.6	454.0	453.5	452.9	452.3
132.5°	479.7	479.1	478.5	477.9	477.3	476.9	476.4	476.0
135°	515.2	515.1	514.9	514.6	514.2	513.8	513.2	512.8
137.5°	549.2	549.1	549.0	548.6	548.0	547.4	546.8	546.2
140°	572.0	572.0	572.0	571.7	571.2	570.6	570.0	569.4
142.5°	592.7	592.9	593.0	592.7	592.1	591.5	591.0	590.4
145°	624.1	624.3	624.5	624.2	623.6	623.0	622.4	621.8
147.5°	651.7	652.0	652.4	652.3	651.7	651.1	650.6	650.0
150°	669.2	669.6	670.1	670.1	669.6	669.2	668.7	668.3
152.5°	686.6	687.3	687.8	687.8	687.3	686.6	686.0	685.5
155°	708.8	709.6	710.3	710.5	710.0	709.6	709.1	708.7
157.5°	729.3	730.3	731.3	731.4	730.7	730.0	729.3	728.6
160°	741.4	742.4	743.2	743.4	742.8	742.2	741.6	741.0
162.5°	752.4	753.5	754.5	754.6	753.9	753.2	752.4	751.7
165°	766.6	767.7	768.7	768.9	768.1	767.3	766.6	765.9
167.5°	778.3	779.4	780.4	780.6	779.8	779.0	778.3	777.5
170°	784.8	785.8	786.9	787.0	786.1	785.1	784.3	783.3
172.5°	789.6	790.7	791.7	791.8	790.9	790.0	789.1	788.2
175°	794.9	795.9	796.9	797.0	796.2	795.2	794.4	793.5
177.5°	797.3	798.1	798.7	798.7	798.1	797.3	796.6	795.9
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5

(END OF REPORT)