

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: P331887-927

Luminaire Tested: **S123DIP-S340D805U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331887-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D805U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3325.5 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

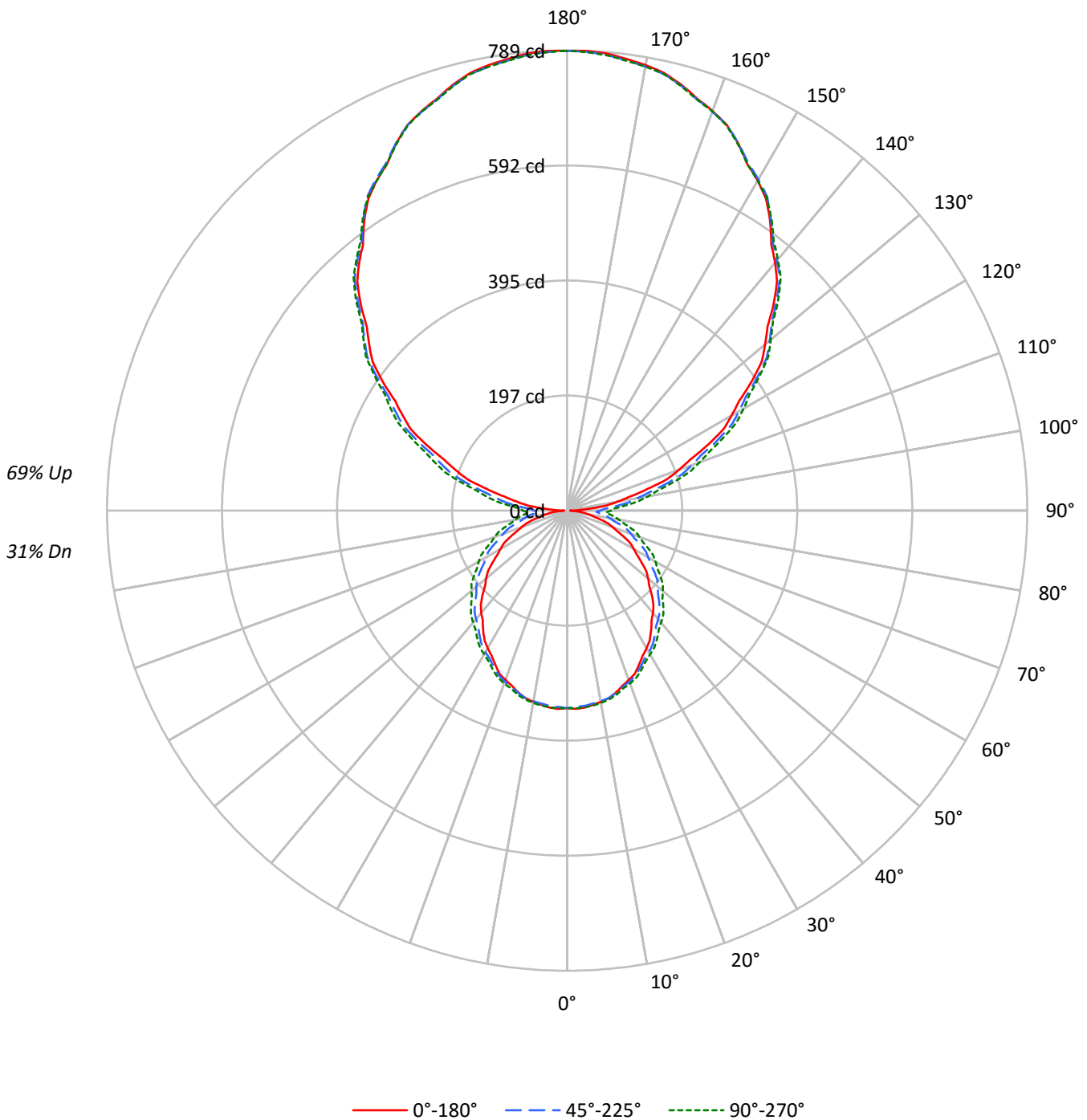
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	81	83	80	76	73	63	61	58	48	46	45	33	32	32	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	24	22	17
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	41	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	27	31	25	22	23	20	17	17	14	12	10
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	9
9	47	35	27	22	42	32	25	21	25	20	17	20	16	13	14	12	10	8
10	44	32	25	20	39	29	23	18	23	18	15	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3647	3647	3647
5°	3658	3556	3557
10°	3626	3473	3456
15°	3579	3380	3345
20°	3513	3274	3224
25°	3430	3152	3096
30°	3345	3043	2966
35°	3251	2926	2863
40°	3161	2820	2752
45°	3061	2718	2664
50°	2962	2618	2566
55°	2852	2516	2478
60°	2745	2411	2388
65°	2636	2300	2280
70°	2471	2174	2170
75°	2265	2031	2059
80°	2023	1890	1932
85°	1805	1794	1856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	1.0
10°-20°	91.6	2.8
20°-30°	137.0	4.1
30°-40°	163.6	4.9
40°-50°	171.1	5.1
50°-60°	160.6	4.8
60°-70°	134.1	4.0
70°-80°	96.0	2.9
80°-90°	59.6	1.8
90°-100°	87.3	2.6
100°-110°	180.1	5.4
110°-120°	279.1	8.4
120°-130°	354.0	10.6
130°-140°	391.1	11.8
140°-150°	381.0	11.5
150°-160°	319.9	9.6
160°-170°	212.9	6.4
170°-180°	74.6	2.2
0°-30°	260.6	7.8
0°-40°	424.2	12.8
0°-60°	755.9	22.7
0°-90°	1045.5	31.4
90°-120°	546.5	16.4
90°-150°	1672.6	50.3
90°-180°	2280.0	68.6
0°-180°	3325.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	339	338	336	339	339	32
15°	323	324	324	327	327	91
25°	292	295	296	301	301	134
35°	251	257	262	267	269	157
45°	205	214	223	230	233	158
55°	156	169	182	192	195	140
65°	108	123	139	149	154	107
75°	59	76	94	106	111	63
85°	18	37	56	68	72	19
90°	5	30	57	71	76	6
95°	41	60	82	96	100	44
105°	142	153	174	184	189	152
115°	265	272	283	292	295	262
125°	386	389	398	403	403	345
135°	501	504	507	511	512	386
145°	607	608	609	612	611	379
155°	694	694	695	697	693	319
165°	756	754	754	758	754	213
175°	787	784	784	787	784	75
180°	788	788	788	788	788	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	340.3	340.2	339.9	339.8	339.5	339.2	338.7	338.1	337.6	337.1	337.6
5°	339.2	339.1	338.9	338.7	338.6	338.3	337.7	337.2	336.8	336.3	336.9
7.5°	335.9	336.0	336.0	336.0	336.0	335.8	335.3	334.9	334.4	333.9	334.7
10°	333.0	333.1	333.3	333.4	333.6	333.5	333.0	332.6	332.2	331.8	332.6
12.5°	329.4	329.6	329.9	330.1	330.3	330.3	330.0	329.7	329.5	329.2	329.9
15°	323.0	323.2	323.4	323.7	323.9	324.1	323.9	323.8	323.8	323.7	324.6
17.5°	314.9	315.4	315.8	316.3	316.8	317.0	317.0	317.0	317.0	317.0	317.7
20°	309.0	309.4	309.9	310.5	310.9	311.2	311.4	311.6	311.7	311.9	312.7
22.5°	302.8	303.2	303.7	304.2	304.8	305.1	305.3	305.5	305.8	306.0	307.0
25°	291.6	292.4	293.3	294.1	294.9	295.4	295.6	295.9	296.1	296.4	297.5
27.5°	280.4	281.3	282.3	283.2	284.2	284.9	285.3	285.9	286.5	286.9	287.9
30°	272.4	273.5	274.6	275.6	276.7	277.5	278.2	278.8	279.5	280.2	281.1
32.5°	263.6	264.7	265.9	267.1	268.3	269.3	270.2	271.1	272.0	272.7	273.9
35°	251.0	252.3	253.7	254.9	256.3	257.5	258.5	259.6	260.6	261.7	262.9
37.5°	237.7	239.2	240.7	242.2	243.6	245.0	246.3	247.6	249.0	250.3	251.7
40°	228.9	230.4	231.8	233.3	234.7	236.3	238.0	239.6	241.2	242.9	244.3
42.5°	219.1	220.9	222.7	224.5	226.3	228.1	229.8	231.5	233.2	234.9	236.5
45°	205.3	207.2	209.1	211.1	213.1	215.1	217.1	219.2	221.3	223.3	224.9
47.5°	190.7	192.9	195.1	197.4	199.6	201.9	204.2	206.6	208.9	211.3	213.0
50°	181.3	183.5	185.8	188.1	190.4	192.8	195.4	198.0	200.5	203.0	204.9
52.5°	171.2	173.6	176.0	178.5	180.9	183.5	186.3	189.2	191.9	194.7	196.7
55°	156.5	159.2	161.9	164.6	167.3	170.2	173.1	176.1	179.0	182.0	184.2
57.5°	142.2	145.0	147.8	150.7	153.4	156.5	159.7	163.0	166.2	169.4	171.7
60°	132.1	135.1	138.1	141.0	143.9	147.1	150.5	153.8	157.2	160.6	162.9
62.5°	122.7	125.7	128.7	131.7	134.8	138.1	141.6	145.2	148.8	152.3	154.6
65°	108.1	111.4	114.5	117.7	121.0	124.4	127.9	131.6	135.1	138.8	141.2
67.5°	93.4	96.8	100.2	103.5	106.9	110.5	114.2	117.9	121.5	125.2	127.9
70°	83.0	86.6	90.1	93.6	97.1	100.9	104.8	108.8	112.7	116.6	119.3
72.5°	73.6	77.2	80.6	84.2	87.7	91.5	95.5	99.7	103.7	107.8	110.5
75°	58.7	62.6	66.4	70.3	74.1	78.1	82.2	86.3	90.4	94.5	97.2
77.5°	45.7	49.6	53.5	57.4	61.2	65.3	69.4	73.5	77.6	81.8	84.7
80°	36.5	40.6	44.6	48.6	52.6	56.8	61.0	65.3	69.6	73.8	76.6
82.5°	28.6	32.6	36.8	40.8	44.9	49.1	53.5	57.8	62.1	66.5	69.2
85°	18.1	22.2	26.3	30.4	34.5	38.7	43.1	47.4	51.7	56.1	58.9
87.5°	10.0	14.3	18.7	23.1	27.4	31.8	36.4	40.9	45.5	50.0	52.9
90°	5.4	10.9	16.2	21.6	27.0	32.7	38.7	44.6	50.6	56.6	59.9
92.5°	19.5	24.1	28.6	33.2	37.7	42.6	47.7	52.8	58.0	63.1	66.3
95°	40.6	44.8	49.0	53.1	57.3	61.9	67.0	72.2	77.2	82.4	85.5
97.5°	68.5	72.2	75.7	79.3	82.9	87.1	91.7	96.3	101.0	105.6	108.7
100°	87.5	91.0	94.4	97.9	101.3	105.3	109.8	114.2	118.7	123.2	126.0
102.5°	109.6	112.4	115.3	118.1	121.0	124.7	129.4	134.0	138.6	143.2	145.9
105°	142.3	144.6	146.8	149.0	151.3	154.8	159.5	164.3	169.1	173.9	176.2
107.5°	180.0	181.9	183.7	185.5	187.4	190.2	194.1	197.9	201.8	205.6	208.2
110°	203.5	205.3	207.0	208.7	210.5	213.2	216.7	220.3	223.9	227.4	230.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	228.3	229.7	231.1	232.4	233.8	236.1	239.3	242.5	245.7	248.9	251.7
115°	265.1	266.5	267.8	269.3	270.7	272.7	275.4	278.1	280.7	283.4	285.5
117.5°	302.4	303.3	304.2	305.1	305.9	307.6	310.0	312.4	314.8	317.3	319.2
120°	325.4	326.6	327.9	329.1	330.3	332.0	334.0	336.0	338.0	340.1	341.8
122.5°	349.7	350.5	351.3	352.1	353.0	354.5	356.7	358.9	361.2	363.4	364.8
125°	386.3	386.7	387.1	387.6	388.0	389.3	391.3	393.5	395.5	397.7	398.9
127.5°	420.6	421.4	422.2	422.9	423.7	425.0	426.7	428.3	430.0	431.7	432.5
130°	443.3	444.3	445.4	446.4	447.4	448.5	449.7	451.0	452.2	453.4	454.5
132.5°	465.8	466.9	468.0	469.1	470.2	471.2	472.2	473.2	474.3	475.2	476.1
135°	500.6	501.3	502.1	502.8	503.5	504.3	505.1	505.8	506.6	507.3	508.3
137.5°	532.7	533.3	533.9	534.6	535.2	535.9	536.8	537.7	538.5	539.4	540.1
140°	554.7	555.4	556.1	556.7	557.5	558.0	558.4	558.7	559.1	559.5	560.6
142.5°	575.0	575.6	576.2	576.9	577.5	578.0	578.3	578.5	578.8	579.2	580.1
145°	606.7	606.9	607.1	607.3	607.5	607.8	608.2	608.6	609.0	609.4	610.0
147.5°	634.1	634.6	635.1	635.6	636.1	636.5	636.9	637.3	637.7	638.1	638.3
150°	653.4	653.7	653.9	654.3	654.5	654.8	655.1	655.4	655.6	655.9	655.9
152.5°	669.3	669.6	670.0	670.4	670.8	671.1	671.3	671.5	671.6	671.8	672.0
155°	694.3	694.3	694.3	694.3	694.3	694.3	694.5	694.7	694.8	694.9	695.5
157.5°	715.6	715.4	715.3	715.1	714.9	714.9	715.0	715.2	715.3	715.3	716.0
160°	729.0	728.7	728.4	728.2	727.9	727.8	727.8	727.8	727.8	727.8	728.4
162.5°	740.8	740.5	740.1	739.7	739.3	739.2	739.3	739.4	739.5	739.7	740.3
165°	756.2	755.8	755.4	755.0	754.6	754.4	754.4	754.4	754.4	754.4	755.2
167.5°	768.5	767.9	767.4	766.8	766.3	766.1	766.2	766.3	766.4	766.5	767.4
170°	775.5	774.9	774.4	773.8	773.2	772.9	772.9	772.9	772.9	772.9	774.0
172.5°	780.9	780.4	779.8	779.3	778.7	778.4	778.4	778.4	778.4	778.4	779.3
175°	786.6	786.0	785.5	785.0	784.4	784.1	784.1	784.1	784.1	784.1	785.0
177.5°	788.9	788.5	788.1	787.6	787.2	787.0	787.0	787.0	787.0	787.0	787.6
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	338.1	338.7	339.2	339.4	339.4	339.3	339.2	339.1
5°	337.5	338.3	338.9	339.2	339.1	339.0	338.9	338.8
7.5°	335.6	336.4	337.2	337.5	337.5	337.3	337.2	337.2
10°	333.5	334.3	335.1	335.4	335.3	335.1	334.9	334.8
12.5°	330.7	331.4	332.2	332.5	332.3	332.2	332.0	331.8
15°	325.3	326.1	327.0	327.3	327.3	327.2	327.1	327.0
17.5°	318.4	319.2	319.9	320.2	320.0	320.0	319.9	319.7
20°	313.4	314.1	314.9	315.3	315.4	315.4	315.5	315.6
22.5°	307.8	308.8	309.7	310.2	310.1	310.1	310.1	310.0
25°	298.5	299.6	300.6	301.2	301.2	301.2	301.2	301.2
27.5°	288.8	289.7	290.7	291.1	291.2	291.3	291.3	291.4
30°	282.1	283.1	284.1	284.6	284.6	284.6	284.6	284.6
32.5°	274.9	275.9	276.9	277.6	277.8	278.0	278.2	278.4
35°	264.2	265.4	266.6	267.4	267.8	268.1	268.4	268.7
37.5°	253.0	254.4	255.9	256.7	256.9	257.2	257.5	257.7
40°	245.7	247.1	248.4	249.3	249.6	250.0	250.3	250.6
42.5°	238.0	239.5	241.0	242.0	242.5	242.9	243.4	243.8
45°	226.4	228.0	229.6	230.7	231.3	232.0	232.7	233.3
47.5°	214.8	216.6	218.3	219.4	219.9	220.5	220.9	221.5
50°	206.8	208.7	210.6	211.8	212.4	212.9	213.5	214.1
52.5°	198.7	200.6	202.6	203.9	204.6	205.3	206.0	206.7
55°	186.4	188.6	190.8	192.3	192.9	193.6	194.2	194.9
57.5°	173.9	176.1	178.3	179.8	180.6	181.4	182.2	182.9
60°	165.2	167.5	169.8	171.3	172.2	173.2	174.0	175.0
62.5°	156.9	159.1	161.4	163.0	163.9	164.7	165.6	166.4
65°	143.7	146.2	148.6	150.3	151.1	151.9	152.7	153.5
67.5°	130.6	133.2	135.9	137.7	138.3	139.0	139.7	140.4
70°	121.9	124.5	127.1	128.9	129.7	130.5	131.3	132.1
72.5°	113.1	115.8	118.5	120.3	121.1	121.9	122.8	123.6
75°	99.9	102.6	105.4	107.2	108.1	109.2	110.1	111.1
77.5°	87.5	90.4	93.2	95.0	95.8	96.6	97.3	98.1
80°	79.4	82.2	85.0	86.7	87.6	88.4	89.3	90.1
82.5°	72.0	74.8	77.6	79.4	80.2	81.0	81.8	82.7
85°	61.7	64.5	67.3	69.1	69.9	70.7	71.5	72.3
87.5°	55.8	58.7	61.6	63.5	64.3	65.2	66.1	67.0
90°	63.2	66.6	69.9	72.2	73.3	74.3	75.4	76.5
92.5°	69.5	72.6	75.8	77.6	78.3	78.8	79.5	80.0
95°	88.6	91.7	94.7	96.7	97.5	98.3	99.2	100.0
97.5°	111.8	114.9	118.0	119.9	120.6	121.4	122.2	122.9
100°	128.7	131.5	134.4	136.3	137.4	138.5	139.6	140.6
102.5°	148.6	151.4	154.1	155.8	156.6	157.4	158.1	158.9
105°	178.5	180.8	183.1	184.7	185.7	186.7	187.7	188.8
107.5°	210.9	213.5	216.1	217.8	218.3	218.9	219.4	220.0
110°	232.7	235.4	238.1	239.6	240.0	240.4	240.8	241.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	254.4	257.1	259.8	261.5	262.2	262.8	263.5	264.2
115°	287.6	289.7	291.8	293.2	293.7	294.2	294.7	295.2
117.5°	321.1	323.1	325.0	326.1	326.3	326.5	326.8	327.0
120°	343.6	345.3	347.1	348.1	348.4	348.6	349.0	349.3
122.5°	366.3	367.7	369.2	370.0	370.2	370.4	370.6	370.7
125°	400.1	401.2	402.3	403.0	403.0	403.0	403.1	403.1
127.5°	433.3	434.2	435.1	435.5	435.4	435.3	435.2	435.1
130°	455.4	456.5	457.5	457.7	457.2	456.8	456.3	455.8
132.5°	476.9	477.8	478.6	478.9	478.7	478.6	478.3	478.2
135°	509.2	510.2	511.0	511.6	511.7	511.8	512.0	512.1
137.5°	540.8	541.5	542.2	542.6	542.5	542.3	542.2	542.1
140°	561.7	562.8	563.9	564.2	563.6	563.1	562.5	562.0
142.5°	581.1	582.0	583.0	583.3	583.0	582.7	582.3	582.0
145°	610.5	611.0	611.6	611.6	611.5	611.2	611.0	610.8
147.5°	638.5	638.7	638.8	638.7	638.2	637.6	637.1	636.6
150°	655.9	655.9	655.9	655.6	654.9	654.3	653.6	652.9
152.5°	672.2	672.4	672.6	672.4	671.7	671.1	670.3	669.7
155°	696.0	696.6	697.1	696.9	695.9	695.0	694.0	693.1
157.5°	716.5	717.1	717.6	717.6	716.8	716.1	715.3	714.5
160°	729.1	729.8	730.5	730.6	730.0	729.4	728.9	728.3
162.5°	741.0	741.7	742.4	742.3	741.4	740.5	739.7	738.8
165°	756.1	756.9	757.7	757.6	756.7	755.7	754.7	753.8
167.5°	768.3	769.1	769.9	769.9	769.1	768.3	767.4	766.5
170°	774.9	775.9	776.8	776.8	775.9	774.9	774.0	772.9
172.5°	780.1	781.0	781.8	781.8	780.8	779.8	778.9	777.9
175°	785.8	786.6	787.4	787.3	786.4	785.4	784.4	783.5
177.5°	788.3	788.9	789.6	789.6	788.8	788.0	787.3	786.5
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5

(END OF REPORT)