

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: P331923-830

Luminaire Tested: **S123DIP-S560D585U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331923-830
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-S560D585U830-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4125.5 lumens
Efficiency: N/A
Efficacy: 125.8 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: General Diffuse

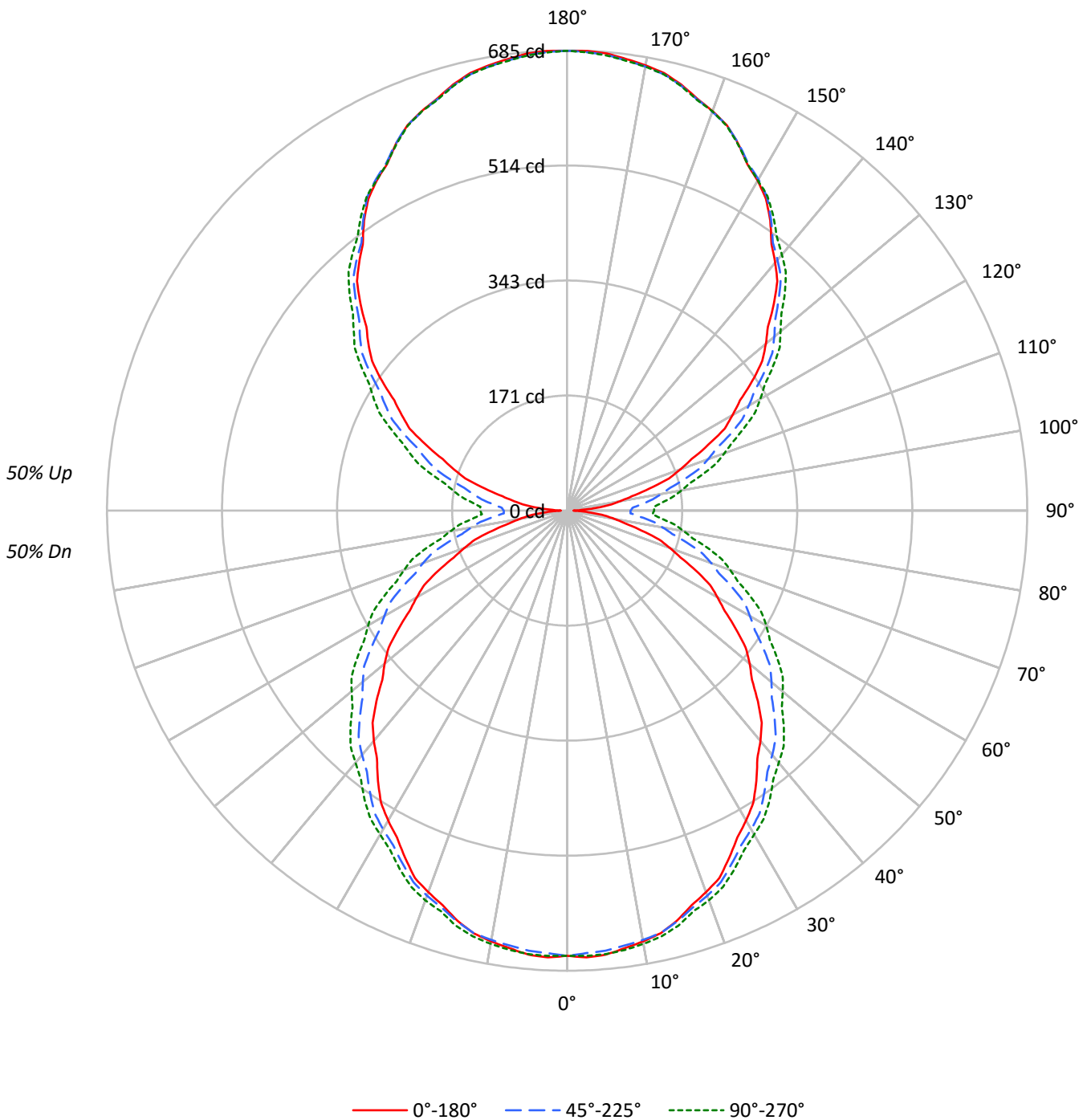
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7134	7134	7134
5°	7156	6954	6959
10°	7093	6795	6761
15°	7001	6612	6544
20°	6871	6405	6306
25°	6709	6166	6056
30°	6544	5951	5803
35°	6359	5723	5601
40°	6181	5515	5382
45°	5986	5318	5210
50°	5793	5121	5019
55°	5578	4919	4848
60°	5369	4716	4670
65°	5156	4499	4462
70°	4837	4254	4245
75°	4430	3973	4029
80°	3958	3698	3779
85°	3521	3508	3633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.8	1.5
10°-20°	179.1	4.3
20°-30°	267.9	6.5
30°-40°	319.9	7.8
40°-50°	334.7	8.1
50°-60°	314.1	7.6
60°-70°	262.3	6.4
70°-80°	187.7	4.5
80°-90°	114.0	2.8
90°-100°	114.8	2.8
100°-110°	185.1	4.5
110°-120°	261.4	6.3
120°-130°	318.2	7.7
130°-140°	344.4	8.3
140°-150°	331.7	8.0
150°-160°	277.7	6.7
160°-170°	184.8	4.5
170°-180°	64.7	1.6
0°-30°	509.8	12.4
0°-40°	829.7	20.1
0°-60°	1478.6	35.8
0°-90°	2042.6	49.5
90°-120°	561.3	13.6
90°-150°	1555.7	37.7
90°-180°	2083.0	50.5
0°-180°	4125.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	664	662	658	663	663	63
15°	632	634	633	640	640	178
25°	570	577	580	589	589	263
35°	491	502	512	522	526	307
45°	401	419	437	450	456	310
55°	306	330	356	375	381	274
65°	212	240	272	292	300	209
75°	115	149	185	208	217	123
85°	35	72	110	133	142	37
90°	10	51	94	120	130	8
95°	40	72	111	135	143	42
105°	127	146	181	201	209	135
115°	232	243	267	284	290	230
125°	337	339	358	370	374	300
135°	435	438	445	456	458	335
145°	527	527	529	534	535	329
155°	603	603	603	605	602	277
165°	656	655	655	658	654	185
175°	683	681	681	683	680	65
180°	684	684	684	684	684	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8
2.5°	665.7	665.3	665.0	664.5	664.1	663.5	662.4	661.4	660.3	659.3	660.3
5°	663.5	663.2	662.9	662.6	662.2	661.6	660.6	659.7	658.7	657.7	659.0
7.5°	657.0	657.0	657.1	657.2	657.3	656.9	655.9	655.0	654.0	653.1	654.7
10°	651.3	651.6	651.9	652.2	652.5	652.3	651.5	650.7	649.9	649.1	650.7
12.5°	644.3	644.8	645.3	645.6	646.1	646.1	645.5	645.0	644.4	643.9	645.4
15°	631.8	632.3	632.7	633.2	633.7	633.9	633.7	633.5	633.4	633.2	634.8
17.5°	615.9	616.8	617.8	618.8	619.7	620.2	620.1	620.0	620.0	619.9	621.3
20°	604.4	605.3	606.2	607.2	608.1	608.8	609.2	609.4	609.7	610.1	611.5
22.5°	592.2	593.1	594.1	595.1	596.1	596.7	597.2	597.7	598.1	598.5	600.4
25°	570.4	572.0	573.6	575.2	576.8	577.9	578.3	578.8	579.3	579.8	581.8
27.5°	548.5	550.3	552.1	553.9	555.7	557.1	558.2	559.2	560.2	561.3	563.1
30°	532.8	534.9	537.0	539.1	541.2	542.9	544.1	545.4	546.7	548.0	550.0
32.5°	515.5	517.8	520.2	522.5	524.9	526.9	528.6	530.2	531.9	533.6	535.6
35°	491.0	493.5	496.1	498.7	501.2	503.6	505.7	507.7	509.8	511.9	514.3
37.5°	465.0	467.9	470.7	473.6	476.5	479.3	481.8	484.4	486.9	489.6	492.3
40°	447.6	450.5	453.5	456.3	459.2	462.2	465.4	468.6	471.8	475.0	477.8
42.5°	428.6	432.2	435.6	439.1	442.7	446.1	449.5	452.8	456.2	459.5	462.5
45°	401.4	405.3	409.2	413.0	416.8	420.8	424.8	428.8	432.8	436.8	439.9
47.5°	373.0	377.4	381.7	386.1	390.4	394.9	399.5	404.1	408.7	413.3	416.7
50°	354.5	359.0	363.4	368.0	372.5	377.2	382.2	387.2	392.1	397.1	400.8
52.5°	334.9	339.6	344.4	349.1	353.8	359.0	364.5	369.9	375.4	381.0	384.7
55°	306.1	311.4	316.7	322.0	327.3	332.8	338.7	344.4	350.2	355.9	360.2
57.5°	278.1	283.6	289.2	294.6	300.2	306.1	312.5	318.8	325.1	331.4	335.7
60°	258.4	264.3	270.0	275.8	281.5	287.8	294.4	301.0	307.5	314.1	318.6
62.5°	240.0	245.9	251.8	257.7	263.6	270.0	277.0	284.0	291.0	297.9	302.4
65°	211.5	217.8	224.0	230.4	236.6	243.3	250.3	257.3	264.4	271.5	276.3
67.5°	182.7	189.4	196.0	202.6	209.2	216.1	223.4	230.5	237.7	244.9	250.2
70°	162.5	169.4	176.3	183.1	190.0	197.4	205.0	212.7	220.5	228.2	233.3
72.5°	143.9	150.9	157.8	164.7	171.5	179.0	186.9	194.9	202.8	210.8	216.1
75°	114.8	122.3	129.9	137.4	145.0	152.8	160.8	168.8	176.8	184.8	190.1
77.5°	89.4	97.0	104.6	112.2	119.8	127.6	135.7	143.8	151.9	160.0	165.6
80°	71.4	79.4	87.2	95.1	102.9	111.0	119.3	127.7	136.1	144.4	149.9
82.5°	55.9	63.9	71.8	79.8	87.8	96.0	104.5	113.0	121.5	130.0	135.4
85°	35.3	43.4	51.5	59.5	67.5	75.7	84.3	92.7	101.2	109.7	115.2
87.5°	19.3	27.5	35.8	44.0	52.2	60.6	69.1	77.6	86.1	94.5	100.1
90°	9.9	18.9	28.0	37.1	46.2	55.5	65.3	75.0	84.7	94.4	100.4
92.5°	21.8	29.7	37.6	45.5	53.4	61.8	70.8	79.7	88.7	97.6	103.3
95°	39.7	46.8	53.8	61.0	68.1	76.0	84.8	93.6	102.5	111.2	116.7
97.5°	63.4	69.7	76.0	82.2	88.5	95.8	104.0	112.2	120.4	128.6	133.8
100°	79.6	85.5	91.3	97.2	103.0	109.9	117.9	125.9	133.8	141.9	146.8
102.5°	98.4	103.4	108.5	113.6	118.6	125.2	133.2	141.2	149.3	157.3	162.2
105°	126.8	130.8	134.9	139.0	143.1	149.1	157.1	165.0	173.1	181.1	185.5
107.5°	159.0	162.4	165.8	169.3	172.7	177.9	184.8	191.8	198.8	205.8	210.5
110°	179.1	182.2	185.3	188.4	191.5	196.4	203.1	209.8	216.4	223.1	227.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	200.6	203.1	205.6	208.1	210.7	215.0	221.2	227.4	233.7	239.9	244.5
115°	232.1	234.4	236.7	238.9	241.2	245.2	250.7	256.2	261.7	267.3	271.3
117.5°	264.4	265.9	267.3	268.7	270.1	273.4	278.5	283.6	288.7	293.9	297.7
120°	284.1	285.6	287.1	288.6	290.1	293.2	297.9	302.7	307.4	312.1	315.6
122.5°	305.1	306.0	307.0	307.9	308.9	311.7	316.5	321.2	325.9	330.6	333.9
125°	336.6	337.0	337.2	337.6	338.0	340.4	344.8	349.2	353.6	358.1	360.9
127.5°	366.3	366.8	367.4	368.1	368.6	370.8	374.4	378.0	381.5	385.1	387.6
130°	386.1	386.8	387.6	388.4	389.2	391.1	393.9	396.7	399.5	402.5	405.0
132.5°	405.2	406.1	407.1	408.0	409.0	410.6	412.8	415.2	417.5	419.7	422.1
135°	435.3	435.8	436.4	437.0	437.5	438.7	440.3	442.0	443.6	445.2	447.6
137.5°	463.1	463.5	464.0	464.5	465.0	465.9	467.2	468.4	469.8	471.1	473.2
140°	481.9	482.5	483.1	483.7	484.3	484.8	485.5	486.1	486.6	487.3	489.6
142.5°	499.5	500.0	500.5	501.0	501.4	501.8	502.1	502.4	502.8	503.0	505.1
145°	527.1	527.2	527.2	527.3	527.4	527.5	527.9	528.3	528.7	529.0	530.2
147.5°	550.4	550.8	551.3	551.7	552.1	552.5	552.9	553.2	553.6	553.8	554.2
150°	567.2	567.4	567.7	567.9	568.2	568.4	568.6	568.8	569.1	569.3	569.3
152.5°	581.0	581.3	581.6	581.9	582.3	582.5	582.7	582.8	583.0	583.1	583.2
155°	602.7	602.7	602.7	602.7	602.7	602.8	602.9	602.9	603.1	603.2	603.7
157.5°	621.1	621.0	620.9	620.8	620.6	620.6	620.7	620.8	620.9	620.9	621.4
160°	632.7	632.5	632.3	632.1	631.8	631.7	631.7	631.7	631.7	631.7	632.3
162.5°	643.1	642.7	642.4	642.1	641.8	641.7	641.8	641.9	642.0	642.1	642.6
165°	656.4	656.1	655.7	655.3	655.0	654.8	654.8	654.8	654.8	654.8	655.5
167.5°	667.0	666.6	666.1	665.6	665.2	665.0	665.1	665.2	665.2	665.3	666.1
170°	673.1	672.6	672.1	671.7	671.2	670.9	670.9	670.9	670.9	670.9	671.8
172.5°	677.8	677.3	676.8	676.4	675.9	675.7	675.7	675.7	675.7	675.7	676.5
175°	682.8	682.3	681.8	681.4	680.9	680.6	680.6	680.6	680.6	680.6	681.4
177.5°	684.9	684.5	684.1	683.6	683.2	683.1	683.1	683.1	683.1	683.1	683.6
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8
2.5°	661.4	662.4	663.5	663.9	663.7	663.6	663.5	663.4
5°	660.3	661.6	662.9	663.5	663.3	663.1	663.0	662.8
7.5°	656.3	657.9	659.6	660.3	660.1	659.9	659.7	659.5
10°	652.3	653.9	655.5	656.1	655.8	655.5	655.2	654.9
12.5°	646.9	648.3	649.8	650.4	650.1	649.7	649.4	649.1
15°	636.4	638.0	639.6	640.4	640.2	640.0	639.9	639.7
17.5°	622.8	624.2	625.7	626.3	626.0	625.8	625.7	625.4
20°	613.0	614.4	615.9	616.7	616.8	617.0	617.2	617.3
22.5°	602.2	604.1	605.9	606.7	606.6	606.5	606.4	606.3
25°	583.9	586.1	588.1	589.2	589.2	589.2	589.2	589.2
27.5°	564.9	566.7	568.4	569.5	569.6	569.7	569.9	570.0
30°	551.9	553.7	555.7	556.7	556.7	556.7	556.7	556.7
32.5°	537.6	539.7	541.8	543.0	543.4	543.8	544.1	544.5
35°	516.7	519.2	521.5	523.0	523.7	524.3	525.0	525.7
37.5°	494.9	497.7	500.4	502.1	502.6	503.0	503.6	504.1
40°	480.5	483.2	486.0	487.7	488.3	489.0	489.6	490.2
42.5°	465.4	468.4	471.5	473.3	474.3	475.1	476.1	476.9
45°	442.9	445.9	449.0	451.2	452.4	453.7	455.1	456.3
47.5°	420.2	423.6	427.0	429.2	430.2	431.2	432.3	433.2
50°	404.4	408.2	411.9	414.2	415.4	416.5	417.6	418.8
52.5°	388.6	392.4	396.2	398.8	400.2	401.5	402.9	404.4
55°	364.6	368.9	373.2	376.1	377.4	378.6	379.9	381.3
57.5°	340.2	344.5	348.8	351.8	353.3	354.8	356.3	357.8
60°	323.1	327.5	332.1	335.2	337.0	338.7	340.4	342.2
62.5°	306.9	311.4	315.8	319.0	320.6	322.2	323.9	325.5
65°	281.1	285.9	290.8	294.0	295.6	297.2	298.8	300.4
67.5°	255.4	260.7	266.0	269.3	270.6	271.9	273.3	274.7
70°	238.5	243.6	248.7	252.0	253.6	255.2	256.8	258.4
72.5°	221.3	226.6	231.9	235.4	237.0	238.6	240.2	241.8
75°	195.4	200.8	206.0	209.6	211.5	213.5	215.4	217.4
77.5°	171.2	176.7	182.3	185.9	187.4	188.8	190.3	191.8
80°	155.3	160.8	166.3	169.8	171.4	173.0	174.6	176.2
82.5°	140.9	146.3	151.7	155.3	156.9	158.5	160.1	161.7
85°	120.6	126.1	131.6	135.1	136.7	138.3	139.9	141.5
87.5°	105.7	111.2	116.8	120.4	122.1	123.7	125.4	127.0
90°	106.3	112.3	118.2	122.2	123.9	125.8	127.6	129.5
92.5°	109.1	114.7	120.5	123.9	125.3	126.7	128.0	129.3
95°	122.2	127.6	133.1	136.6	138.2	139.8	141.4	143.0
97.5°	139.2	144.5	149.9	153.3	154.9	156.5	158.0	159.6
100°	151.8	156.8	161.9	165.3	167.2	169.0	170.9	172.7
102.5°	167.1	171.9	176.8	180.0	181.6	183.1	184.7	186.2
105°	190.0	194.5	199.0	202.1	203.8	205.5	207.2	208.8
107.5°	215.1	219.8	224.5	227.4	228.8	230.0	231.3	232.5
110°	232.3	237.0	241.7	244.5	245.5	246.7	247.7	248.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	249.0	253.6	258.3	261.3	262.7	264.0	265.4	266.7
115°	275.2	279.2	283.1	285.8	286.9	288.0	289.3	290.4
117.5°	301.4	305.2	309.1	311.4	312.3	313.2	314.1	315.1
120°	319.1	322.7	326.3	328.6	329.4	330.4	331.2	332.1
122.5°	337.1	340.4	343.7	345.7	346.5	347.2	348.1	348.8
125°	363.8	366.7	369.6	371.4	372.0	372.7	373.3	374.0
127.5°	390.1	392.7	395.1	396.6	397.2	397.8	398.3	398.8
130°	407.6	410.1	412.7	414.1	414.2	414.3	414.4	414.5
132.5°	424.4	426.8	429.1	430.6	431.0	431.4	431.9	432.3
135°	450.1	452.4	454.9	456.4	456.9	457.5	458.0	458.5
137.5°	475.1	477.2	479.2	480.4	480.8	481.1	481.5	481.8
140°	491.8	494.2	496.4	497.6	497.6	497.5	497.5	497.4
142.5°	507.1	509.2	511.1	512.3	512.4	512.6	512.7	512.8
145°	531.3	532.5	533.7	534.3	534.5	534.7	534.8	535.0
147.5°	554.6	555.0	555.4	555.5	555.3	555.3	555.1	555.0
150°	569.3	569.3	569.3	569.1	568.7	568.4	568.0	567.6
152.5°	583.5	583.7	583.9	583.7	583.2	582.6	582.0	581.5
155°	604.2	604.6	605.1	604.9	604.1	603.2	602.5	601.6
157.5°	622.0	622.5	622.9	622.8	622.2	621.5	620.9	620.2
160°	632.9	633.5	634.0	634.1	633.7	633.2	632.7	632.3
162.5°	643.2	643.9	644.4	644.3	643.6	642.8	642.1	641.3
165°	656.3	657.0	657.7	657.6	656.8	655.9	655.2	654.3
167.5°	666.8	667.6	668.4	668.4	667.6	666.8	666.1	665.3
170°	672.6	673.4	674.3	674.3	673.4	672.6	671.8	670.9
172.5°	677.1	677.9	678.6	678.6	677.8	676.9	676.1	675.2
175°	682.0	682.8	683.5	683.4	682.6	681.7	680.9	680.0
177.5°	684.3	684.9	685.4	685.3	684.7	684.0	683.3	682.7
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4

(END OF REPORT)