

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: P331932-830

Luminaire Tested: **S123DIP-S560D805U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331932-830
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-S560D805U830-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 4829.2 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

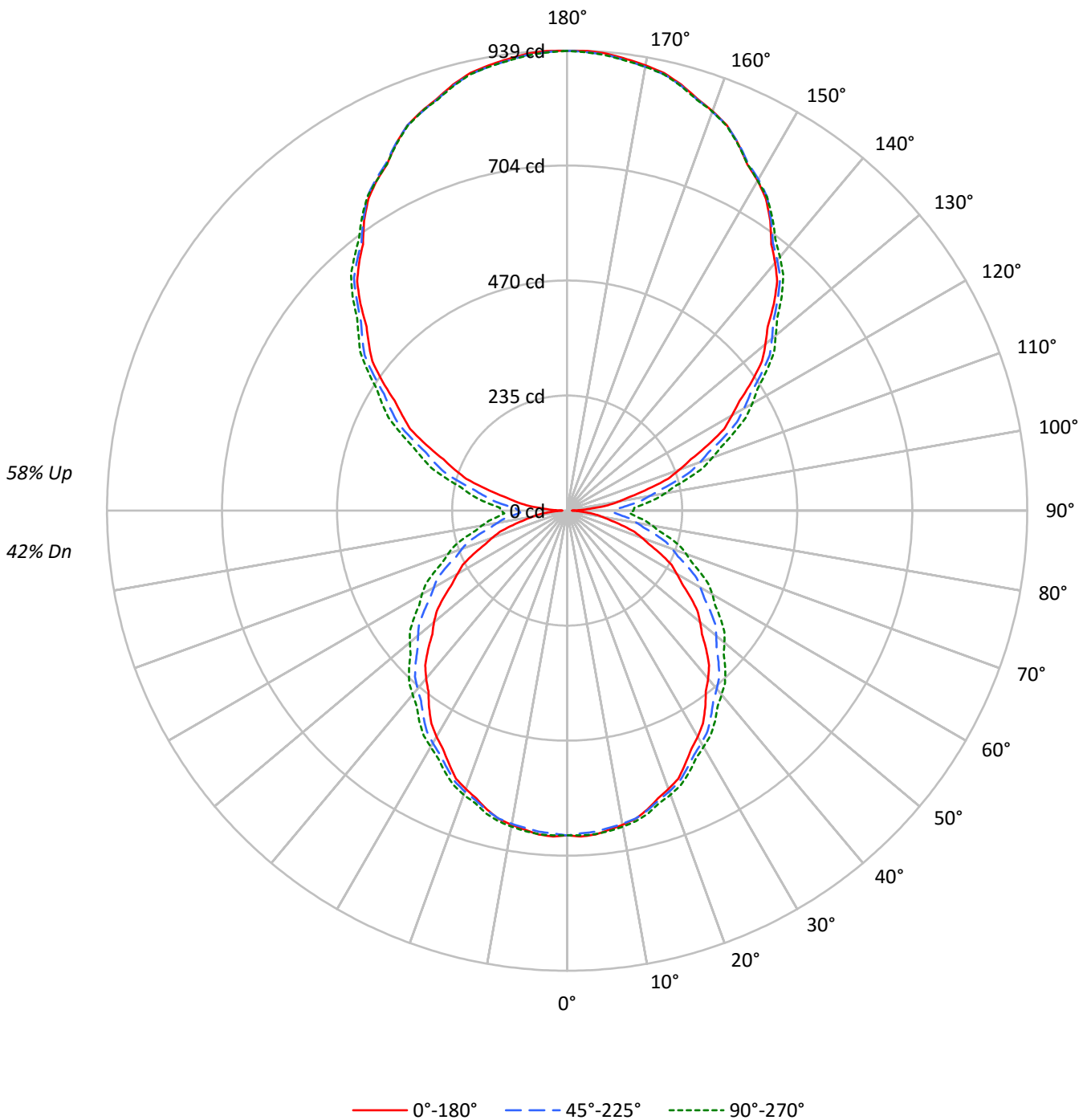
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	95	90	86	83	87	83	79	76	68	65	63	54	53	51	42	41	40	34
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	33	28
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	61	52	46	65	55	48	43	46	40	36	37	33	30	28	26	23	19
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	25	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	25	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	11
9	48	36	28	23	44	33	26	22	28	22	19	22	18	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	16	13	11	9

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	1.3
10°-20°	179.1	3.7
20°-30°	267.9	5.5
30°-40°	319.9	6.6
40°-50°	334.7	6.9
50°-60°	314.1	6.5
60°-70°	262.3	5.4
70°-80°	187.7	3.9
80°-90°	114.7	2.4
90°-100°	131.4	2.7
100°-110°	234.5	4.9
110°-120°	345.6	7.2
120°-130°	428.9	8.9
130°-140°	468.8	9.7
140°-150°	454.0	9.4
150°-160°	380.6	7.9
160°-170°	253.4	5.2
170°-180°	88.7	1.8
0°-30°	509.8	10.6
0°-40°	829.7	17.2
0°-60°	1478.6	30.6
0°-90°	2043.3	42.3
90°-120°	711.5	14.7
90°-150°	2063.2	42.7
90°-180°	2786.0	57.7
0°-180°	4829.2	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	53	99	126	135	9
95°	52	85	126	150	158	55
105°	172	191	228	248	256	183
115°	317	328	352	370	375	314
125°	460	464	482	494	496	411
135°	596	600	607	617	619	459
145°	722	723	725	730	730	451
155°	826	826	827	829	825	380
165°	900	898	898	901	897	254
175°	936	933	933	937	932	89
180°	938	938	938	938	938	



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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	27.7	36.0	44.3	52.6	61.1	69.7	78.3	86.9	95.5	101.1
90°	10.1	19.6	29.1	38.6	48.2	58.1	68.3	78.6	89.0	99.2	105.4
92.5°	26.7	34.9	43.1	51.3	59.5	68.2	77.5	86.7	96.0	105.3	111.1
95°	51.5	58.8	66.3	73.6	81.1	89.4	98.5	107.6	116.9	126.0	131.7
97.5°	84.3	90.8	97.3	103.8	110.3	117.8	126.2	134.7	143.2	151.7	157.1
100°	106.7	112.8	118.9	125.1	131.2	138.4	146.6	154.8	163.0	171.2	176.3
102.5°	132.7	137.9	143.1	148.3	153.5	160.3	168.6	176.9	185.3	193.6	198.6
105°	171.5	175.8	179.9	184.1	188.3	194.5	202.9	211.3	219.7	228.1	232.5
107.5°	216.1	219.6	223.0	226.5	230.0	235.3	242.4	249.6	256.7	263.8	268.6
110°	243.8	247.0	250.2	253.4	256.7	261.6	268.4	275.1	281.9	288.7	293.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	273.3	275.9	278.4	281.1	283.6	287.9	294.3	300.5	306.7	312.9	317.7
115°	316.8	319.2	321.6	324.0	326.5	330.4	335.8	341.3	346.8	352.2	356.2
117.5°	361.2	362.7	364.2	365.7	367.2	370.5	375.5	380.5	385.5	390.5	394.3
120°	388.3	390.1	391.9	393.6	395.4	398.6	403.0	407.6	412.0	416.5	420.0
122.5°	417.2	418.3	419.4	420.6	421.7	424.6	429.2	433.9	438.5	443.1	446.2
125°	460.5	461.0	461.5	462.0	462.5	464.9	469.2	473.5	477.9	482.2	484.9
127.5°	501.2	502.1	502.9	503.9	504.7	507.0	510.5	514.0	517.5	520.9	523.2
130°	528.3	529.5	530.7	531.8	532.9	534.9	537.5	540.3	543.0	545.7	548.1
132.5°	554.9	556.1	557.4	558.7	560.0	561.8	563.9	566.1	568.4	570.5	572.7
135°	596.2	597.0	597.8	598.6	599.5	600.7	602.3	603.9	605.4	607.0	609.3
137.5°	634.3	635.0	635.7	636.4	637.1	638.1	639.5	640.9	642.4	643.9	645.6
140°	660.3	661.1	661.9	662.7	663.5	664.3	665.0	665.5	666.2	666.8	669.1
142.5°	684.5	685.1	685.8	686.5	687.2	687.8	688.2	688.5	688.9	689.3	691.3
145°	722.2	722.4	722.5	722.6	722.8	723.1	723.7	724.2	724.6	725.1	726.2
147.5°	754.5	755.1	755.6	756.2	756.9	757.3	757.8	758.3	758.7	759.2	759.6
150°	777.4	777.8	778.1	778.4	778.7	779.1	779.4	779.8	780.0	780.4	780.4
152.5°	796.4	796.7	797.2	797.7	798.1	798.5	798.7	798.9	799.1	799.3	799.6
155°	826.0	826.0	826.0	826.0	826.0	826.1	826.3	826.5	826.7	826.8	827.5
157.5°	851.4	851.2	851.0	850.8	850.6	850.6	850.7	850.9	851.0	851.1	851.9
160°	867.3	867.0	866.7	866.4	866.0	865.9	865.9	865.9	865.9	865.9	866.7
162.5°	881.5	881.1	880.6	880.1	879.7	879.5	879.7	879.8	879.9	880.1	880.8
165°	899.8	899.3	898.8	898.3	897.8	897.6	897.6	897.6	897.6	897.6	898.5
167.5°	914.4	913.7	913.0	912.4	911.7	911.5	911.6	911.7	911.9	912.0	913.0
170°	922.7	922.0	921.3	920.7	920.0	919.6	919.6	919.6	919.6	919.6	920.9
172.5°	929.1	928.5	927.8	927.2	926.5	926.1	926.1	926.1	926.1	926.1	927.2
175°	935.9	935.2	934.6	934.0	933.3	932.9	932.9	932.9	932.9	932.9	934.0
177.5°	938.7	938.2	937.6	937.1	936.6	936.3	936.3	936.3	936.3	936.3	937.1
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1



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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°	106.7	112.3	117.9	121.5	123.2	124.8	126.5	128.2
90°	111.5	117.6	123.8	127.7	129.7	131.6	133.6	135.4
92.5°	117.0	122.8	128.7	132.2	133.6	134.8	136.1	137.3
95°	137.2	142.9	148.5	152.1	153.7	155.3	156.9	158.5
97.5°	162.7	168.2	173.7	177.3	178.8	180.4	181.9	183.4
100°	181.4	186.5	191.7	195.3	197.2	199.2	201.0	203.0
102.5°	203.7	208.7	213.7	217.0	218.5	220.0	221.6	223.1
105°	237.0	241.6	246.0	249.2	250.9	252.7	254.5	256.3
107.5°	273.5	278.3	283.1	286.2	287.4	288.6	289.8	291.1
110°	298.3	303.1	307.9	310.9	311.8	312.7	313.7	314.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	322.5	327.3	332.2	335.3	336.7	338.0	339.3	340.7
115°	360.2	364.2	368.3	370.8	371.9	373.1	374.2	375.3
117.5°	398.0	401.8	405.6	407.9	408.7	409.5	410.3	411.0
120°	423.5	427.1	430.6	432.7	433.6	434.3	435.1	435.9
122.5°	449.3	452.4	455.6	457.5	458.2	458.8	459.5	460.1
125°	487.7	490.3	493.0	494.6	495.1	495.6	496.1	496.5
127.5°	525.5	527.7	530.0	531.2	531.6	531.9	532.3	532.6
130°	550.5	552.9	555.3	556.4	556.2	556.0	555.8	555.6
132.5°	574.9	576.9	579.1	580.2	580.4	580.7	580.9	581.1
135°	611.5	613.8	616.0	617.4	617.8	618.3	618.8	619.3
137.5°	647.5	649.3	651.2	652.2	652.4	652.6	652.7	652.9
140°	671.4	673.5	675.8	676.7	676.5	676.1	675.7	675.4
142.5°	693.2	695.2	697.3	698.2	698.1	698.0	698.0	697.9
145°	727.4	728.5	729.6	730.2	730.2	730.1	730.1	730.1
147.5°	760.0	760.3	760.7	760.7	760.3	759.9	759.5	759.1
150°	780.4	780.4	780.4	780.0	779.4	778.7	778.1	777.4
152.5°	799.7	800.0	800.3	800.0	799.3	798.4	797.7	796.9
155°	828.1	828.8	829.4	829.2	828.0	826.9	825.8	824.6
157.5°	852.5	853.2	853.8	853.8	852.9	852.0	851.0	850.1
160°	867.5	868.4	869.1	869.2	868.6	867.9	867.2	866.6
162.5°	881.7	882.5	883.4	883.2	882.1	881.1	880.1	879.0
165°	899.6	900.5	901.5	901.4	900.3	899.1	898.0	896.8
167.5°	914.1	915.0	916.1	916.1	915.0	914.1	913.0	912.0
170°	922.0	923.1	924.3	924.3	923.1	922.0	920.9	919.6
172.5°	928.2	929.3	930.2	930.2	929.0	927.8	926.7	925.6
175°	934.9	935.9	936.9	936.8	935.7	934.5	933.3	932.2
177.5°	937.9	938.7	939.4	939.4	938.5	937.5	936.7	935.8
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1

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