

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: P331922-840

Luminaire Tested: **S123DIP-S560D585U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331922-840
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: S123DIP-S560D585U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4752.8 lumens
Efficiency: N/A
Efficacy: 144.9 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

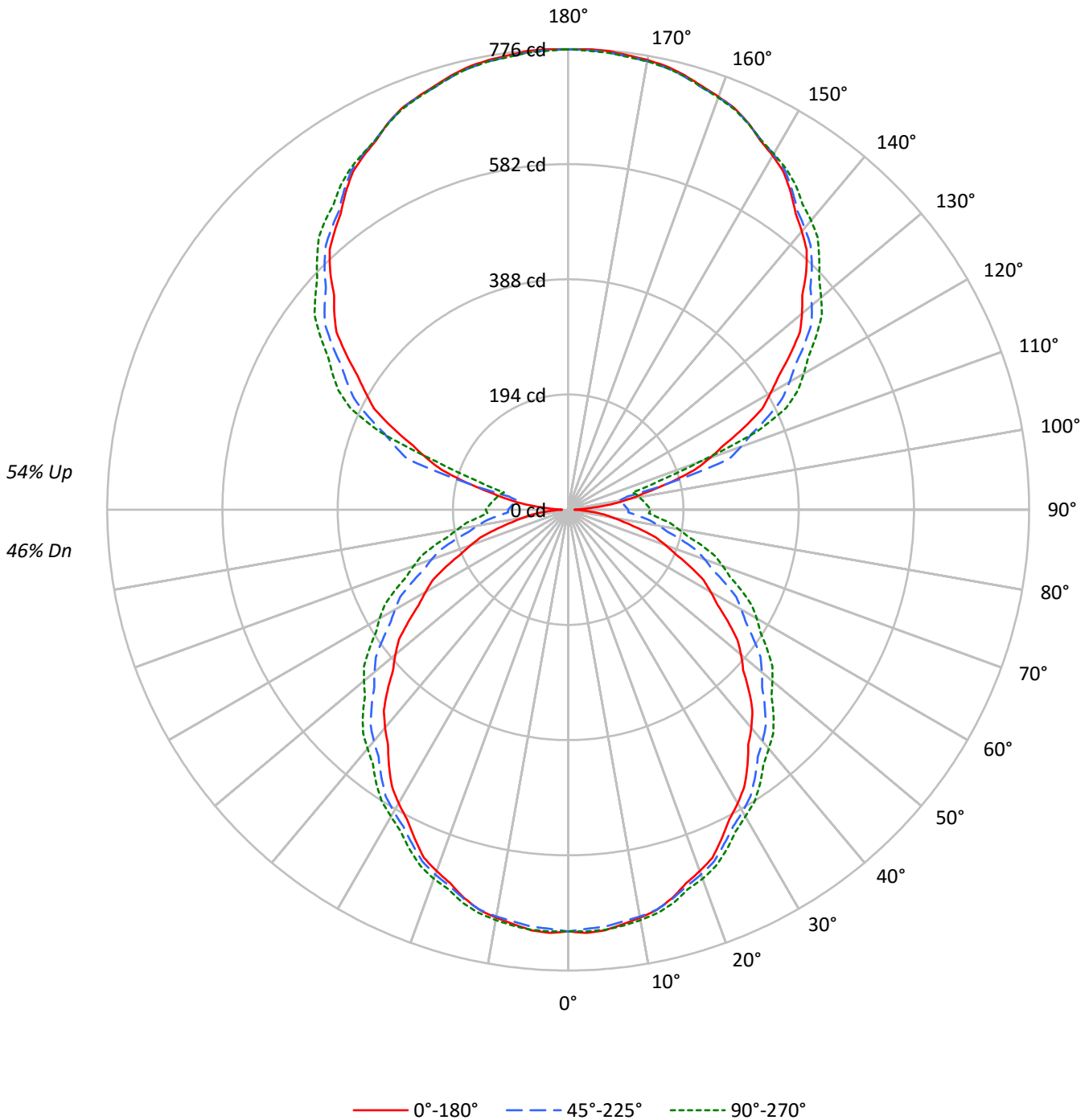
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331922-840

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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	42	37
2	87	79	73	67	79	73	67	62	60	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	51	53	48	44	43	40	36	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7643	7643	7643
5°	7667	7451	7455
10°	7599	7280	7244
15°	7501	7084	7012
20°	7361	6862	6756
25°	7189	6606	6489
30°	7011	6375	6216
35°	6812	6132	6000
40°	6623	5910	5767
45°	6414	5697	5582
50°	6206	5488	5378
55°	5978	5271	5194
60°	5753	5053	5005
65°	5525	4819	4780
70°	5183	4558	4549
75°	4746	4256	4316
80°	4241	3962	4047
85°	3780	3757	3892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	1.4
10°-20°	191.9	4.0
20°-30°	287.0	6.0
30°-40°	342.8	7.2
40°-50°	358.6	7.5
50°-60°	336.5	7.1
60°-70°	281.1	5.9
70°-80°	201.1	4.2
80°-90°	122.1	2.6
90°-100°	103.4	2.2
100°-110°	189.6	4.0
110°-120°	359.6	7.6
120°-130°	432.0	9.1
130°-140°	448.5	9.4
140°-150°	412.6	8.7
150°-160°	331.2	7.0
160°-170°	213.7	4.5
170°-180°	73.7	1.5
0°-30°	546.3	11.5
0°-40°	889.0	18.7
0°-60°	1584.2	33.3
0°-90°	2188.5	46.0
90°-120°	652.7	13.7
90°-150°	1945.7	40.9
90°-180°	2564.0	53.9
0°-180°	4752.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	711	709	705	710	710	67
15°	677	679	678	686	685	191
25°	611	619	621	631	631	282
35°	526	538	548	560	563	329
45°	430	449	468	482	489	332
55°	328	354	381	401	408	294
65°	227	257	291	313	322	224
75°	123	160	198	223	233	131
85°	38	77	118	143	152	40
90°	11	54	101	129	139	9
95°	44	52	94	121	130	50
105°	178	200	184	109	112	188
115°	326	340	372	395	404	322
125°	456	462	486	502	510	408
135°	567	570	580	595	598	436
145°	653	656	657	664	668	408
155°	718	717	718	720	717	331
165°	757	756	755	759	756	214
175°	775	773	773	777	772	74
180°	775	775	775	775	775	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	713.3	712.9	712.5	712.0	711.6	710.8	709.7	708.6	707.5	706.4	707.5
5°	710.9	710.5	710.2	709.9	709.5	708.8	707.8	706.8	705.8	704.7	706.1
7.5°	704.0	704.0	704.1	704.2	704.3	703.8	702.8	701.8	700.7	699.7	701.5
10°	697.8	698.1	698.4	698.8	699.1	698.9	698.0	697.2	696.3	695.5	697.2
12.5°	690.3	690.8	691.4	691.8	692.3	692.3	691.7	691.1	690.4	689.8	691.5
15°	676.9	677.4	677.9	678.4	678.9	679.1	678.9	678.7	678.6	678.4	680.1
17.5°	659.8	660.9	662.0	663.0	664.0	664.5	664.4	664.3	664.3	664.2	665.7
20°	647.5	648.5	649.5	650.6	651.6	652.3	652.7	653.0	653.3	653.7	655.2
22.5°	634.5	635.5	636.5	637.6	638.6	639.3	639.9	640.4	640.9	641.3	643.3
25°	611.2	612.9	614.6	616.3	618.0	619.1	619.7	620.2	620.7	621.2	623.4
27.5°	587.6	589.6	591.6	593.5	595.4	596.9	598.0	599.2	600.3	601.4	603.3
30°	570.9	573.1	575.3	577.6	579.9	581.7	583.0	584.4	585.7	587.1	589.3
32.5°	552.3	554.8	557.3	559.9	562.4	564.5	566.3	568.0	569.9	571.7	573.9
35°	526.0	528.8	531.5	534.3	537.0	539.6	541.8	544.0	546.2	548.5	551.1
37.5°	498.2	501.3	504.3	507.5	510.6	513.5	516.2	519.0	521.7	524.5	527.5
40°	479.6	482.7	485.8	488.9	492.0	495.2	498.7	502.1	505.5	509.0	511.9
42.5°	459.2	463.0	466.8	470.5	474.3	478.0	481.6	485.1	488.8	492.3	495.5
45°	430.1	434.2	438.4	442.5	446.6	450.8	455.1	459.4	463.7	468.0	471.3
47.5°	399.6	404.3	409.0	413.6	418.3	423.1	428.1	432.9	437.9	442.8	446.5
50°	379.8	384.7	389.4	394.3	399.1	404.1	409.5	414.9	420.1	425.5	429.4
52.5°	358.8	363.9	369.0	374.1	379.1	384.7	390.5	396.4	402.2	408.2	412.2
55°	328.0	333.7	339.3	345.0	350.7	356.6	362.8	369.0	375.2	381.3	386.0
57.5°	298.0	303.9	309.8	315.7	321.6	328.0	334.8	341.5	348.3	355.1	359.7
60°	276.9	283.2	289.3	295.5	301.6	308.3	315.4	322.4	329.4	336.5	341.3
62.5°	257.1	263.5	269.8	276.1	282.5	289.3	296.8	304.3	311.7	319.2	324.0
65°	226.6	233.4	240.0	246.8	253.5	260.6	268.2	275.7	283.3	290.8	296.0
67.5°	195.7	202.9	210.0	217.0	224.2	231.6	239.3	247.0	254.7	262.4	268.0
70°	174.1	181.5	188.8	196.2	203.6	211.5	219.6	227.9	236.2	244.5	249.9
72.5°	154.2	161.7	169.1	176.4	183.8	191.8	200.3	208.8	217.3	225.9	231.6
75°	123.0	131.1	139.2	147.2	155.3	163.7	172.3	180.9	189.5	198.0	203.7
77.5°	95.7	103.9	112.1	120.2	128.4	136.7	145.4	154.1	162.8	171.5	177.4
80°	76.5	85.0	93.4	101.9	110.3	119.0	127.8	136.8	145.8	154.7	160.6
82.5°	59.9	68.5	77.0	85.5	94.1	102.9	112.0	121.1	130.2	139.3	145.1
85°	37.9	46.5	55.1	63.7	72.3	81.1	90.3	99.4	108.5	117.5	123.4
87.5°	20.7	29.5	38.4	47.2	55.9	64.9	74.0	83.1	92.2	101.3	107.2
90°	10.6	20.3	30.0	39.8	49.5	59.5	70.0	80.4	90.8	101.2	107.6
92.5°	20.2	27.4	34.6	41.9	49.1	57.7	67.6	77.5	87.4	97.3	103.7
95°	43.6	45.1	46.6	48.0	49.5	55.1	64.9	74.7	84.6	94.4	100.7
97.5°	78.2	81.9	85.6	89.3	93.0	94.2	93.1	91.9	90.7	89.6	95.7
100°	104.3	112.4	120.4	128.5	136.5	134.5	122.5	110.4	98.4	86.3	92.3
102.5°	134.1	140.9	147.6	154.5	161.3	157.6	143.6	129.6	115.5	101.5	103.2
105°	177.8	183.4	188.9	194.4	200.0	200.7	196.5	192.4	188.2	184.2	166.3
107.5°	223.2	227.8	232.5	237.1	241.8	248.4	257.3	266.1	275.0	283.8	271.8
110°	253.5	257.6	261.7	265.8	269.9	276.1	284.4	292.7	301.0	309.3	309.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	283.0	286.4	289.9	293.4	296.8	302.6	310.5	318.6	326.6	334.6	339.0
115°	325.9	328.7	331.5	334.4	337.2	342.2	349.6	356.9	364.3	371.6	377.0
117.5°	368.0	370.2	372.4	374.7	376.9	381.1	387.6	393.9	400.3	406.8	411.8
120°	393.6	395.7	397.6	399.6	401.6	405.7	411.7	417.8	423.8	429.9	434.8
122.5°	420.3	421.7	423.1	424.5	426.0	429.6	435.5	441.3	447.2	453.1	457.7
125°	456.2	457.3	458.3	459.3	460.3	463.5	469.1	474.5	480.1	485.5	489.4
127.5°	491.7	492.5	493.4	494.2	495.0	497.9	502.6	507.4	512.1	516.8	520.7
130°	513.8	514.6	515.5	516.3	517.2	519.6	523.5	527.5	531.5	535.4	539.2
132.5°	534.4	535.3	536.3	537.3	538.4	540.4	543.6	546.7	549.9	553.0	556.6
135°	566.6	567.1	567.7	568.4	569.0	570.5	572.9	575.3	577.6	580.1	583.6
137.5°	594.1	594.9	595.7	596.6	597.4	598.5	599.9	601.2	602.6	603.9	607.2
140°	611.9	612.7	613.4	614.2	615.0	615.8	616.7	617.6	618.5	619.4	622.5
142.5°	628.9	629.5	630.2	630.9	631.5	632.0	632.5	633.0	633.5	634.0	636.7
145°	652.8	653.5	654.2	655.0	655.7	656.2	656.4	656.7	656.9	657.2	658.8
147.5°	674.5	675.1	675.7	676.2	676.8	677.2	677.5	677.7	678.0	678.3	678.9
150°	688.3	688.7	689.0	689.4	689.8	690.1	690.4	690.6	690.9	691.2	691.5
152.5°	700.7	700.9	701.0	701.3	701.5	701.7	701.8	702.0	702.1	702.3	702.7
155°	718.2	718.0	717.7	717.5	717.2	717.2	717.3	717.4	717.5	717.7	718.3
157.5°	731.8	731.8	731.7	731.7	731.7	731.6	731.5	731.4	731.2	731.1	732.0
160°	740.1	740.0	739.9	739.7	739.6	739.5	739.3	739.2	739.1	739.0	739.7
162.5°	748.0	747.6	747.3	747.0	746.6	746.4	746.3	746.2	746.0	745.9	746.8
165°	757.4	757.0	756.7	756.3	755.9	755.6	755.5	755.4	755.3	755.1	756.2
167.5°	764.8	764.3	763.8	763.3	762.8	762.4	762.4	762.4	762.4	762.4	763.6
170°	768.9	768.4	767.9	767.4	766.9	766.6	766.6	766.6	766.6	766.6	767.7
172.5°	771.7	771.1	770.4	769.8	769.2	769.0	769.1	769.2	769.3	769.4	770.4
175°	775.3	774.7	774.0	773.4	772.7	772.4	772.5	772.7	772.8	773.0	773.9
177.5°	776.2	775.7	775.2	774.7	774.2	774.0	774.1	774.2	774.3	774.4	775.2
180°	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	708.6	709.7	710.8	711.3	711.1	711.0	710.9	710.7
5°	707.5	708.8	710.2	710.8	710.6	710.4	710.3	710.1
7.5°	703.2	704.9	706.7	707.4	707.2	707.0	706.8	706.6
10°	698.9	700.6	702.4	703.0	702.7	702.4	702.0	701.7
12.5°	693.1	694.6	696.2	696.8	696.5	696.1	695.8	695.5
15°	681.9	683.6	685.3	686.1	685.9	685.7	685.6	685.4
17.5°	667.3	668.8	670.3	671.1	670.8	670.6	670.3	670.0
20°	656.8	658.3	659.8	660.8	660.9	661.1	661.3	661.4
22.5°	645.2	647.2	649.1	650.1	649.9	649.8	649.7	649.6
25°	625.6	627.9	630.2	631.3	631.3	631.3	631.3	631.3
27.5°	605.2	607.1	609.0	610.2	610.3	610.4	610.6	610.7
30°	591.3	593.3	595.4	596.4	596.4	596.4	596.4	596.4
32.5°	576.0	578.2	580.5	581.8	582.2	582.6	583.0	583.4
35°	553.6	556.2	558.8	560.4	561.1	561.8	562.5	563.2
37.5°	530.3	533.2	536.1	538.0	538.5	539.0	539.6	540.1
40°	514.8	517.8	520.7	522.5	523.2	523.9	524.5	525.2
42.5°	498.7	501.9	505.1	507.2	508.2	509.1	510.1	511.0
45°	474.5	477.8	481.1	483.4	484.7	486.1	487.6	488.9
47.5°	450.2	453.8	457.5	459.9	460.9	462.0	463.1	464.1
50°	433.3	437.4	441.3	443.8	445.0	446.3	447.5	448.7
52.5°	416.4	420.4	424.5	427.3	428.8	430.2	431.7	433.2
55°	390.6	395.3	399.9	402.9	404.3	405.7	407.1	408.5
57.5°	364.5	369.1	373.8	376.9	378.5	380.1	381.7	383.3
60°	346.2	350.9	355.8	359.1	361.0	362.8	364.8	366.7
62.5°	328.8	333.7	338.4	341.7	343.5	345.2	347.0	348.7
65°	301.1	306.3	311.5	315.0	316.7	318.4	320.1	321.8
67.5°	273.7	279.3	285.0	288.5	289.9	291.3	292.9	294.3
70°	255.5	260.9	266.5	270.0	271.8	273.5	275.2	276.9
72.5°	237.1	242.8	248.4	252.2	253.9	255.6	257.3	259.0
75°	209.3	215.1	220.8	224.6	226.6	228.7	230.8	232.9
77.5°	183.4	189.3	195.3	199.1	200.8	202.3	203.9	205.5
80°	166.4	172.3	178.1	181.9	183.6	185.3	187.0	188.7
82.5°	151.0	156.7	162.6	166.4	168.1	169.9	171.6	173.3
85°	129.3	135.1	141.0	144.7	146.4	148.1	149.9	151.6
87.5°	113.2	119.2	125.1	129.0	130.8	132.5	134.3	136.0
90°	113.9	120.3	126.6	130.9	132.8	134.8	136.7	138.8
92.5°	110.3	116.7	123.3	127.4	129.2	130.9	132.7	134.4
95°	106.8	113.1	119.4	123.3	125.0	126.7	128.5	130.2
97.5°	101.9	108.0	114.1	118.2	120.0	121.8	123.7	125.5
100°	98.4	104.3	110.4	114.3	116.1	118.0	119.8	121.7
102.5°	104.8	106.5	108.2	110.0	111.9	113.9	115.8	117.8
105°	148.5	130.7	112.8	104.7	106.5	108.4	110.2	112.0
107.5°	259.8	247.8	235.8	222.0	206.4	190.9	175.3	159.8
110°	309.7	310.0	310.2	301.9	285.0	268.0	251.2	234.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	343.5	347.8	352.2	353.3	350.9	348.5	346.2	343.9
115°	382.4	387.8	393.2	396.9	398.8	400.6	402.5	404.5
117.5°	417.0	422.1	427.2	430.5	431.9	433.3	434.8	436.3
120°	439.9	444.8	449.8	452.9	454.1	455.3	456.6	457.8
122.5°	462.1	466.7	471.2	474.1	475.4	476.8	478.1	479.4
125°	493.3	497.2	501.0	503.6	505.1	506.5	508.1	509.5
127.5°	524.4	528.3	532.1	534.4	535.3	536.2	537.1	538.2
130°	543.0	546.7	550.5	552.8	553.6	554.3	555.1	555.9
132.5°	560.4	564.0	567.6	569.9	570.7	571.5	572.3	573.1
135°	587.0	590.5	594.0	595.9	596.4	596.9	597.4	597.8
137.5°	610.6	613.9	617.2	619.1	619.8	620.4	621.0	621.6
140°	625.6	628.6	631.8	633.6	634.2	634.8	635.4	636.0
142.5°	639.3	642.1	644.8	646.4	646.9	647.4	647.9	648.4
145°	660.5	662.1	663.7	664.9	665.6	666.2	666.9	667.6
147.5°	679.6	680.2	681.0	681.3	681.4	681.4	681.4	681.5
150°	691.7	692.0	692.2	692.3	692.3	692.3	692.2	692.2
152.5°	703.2	703.6	704.1	704.1	703.6	703.0	702.5	702.0
155°	718.9	719.6	720.2	720.1	719.4	718.6	717.9	717.1
157.5°	732.7	733.5	734.3	734.1	733.1	732.2	731.1	730.1
160°	740.5	741.2	742.0	741.9	741.1	740.2	739.3	738.4
162.5°	747.6	748.5	749.4	749.4	748.6	747.8	747.0	746.3
165°	757.2	758.2	759.2	759.3	758.4	757.5	756.6	755.7
167.5°	764.6	765.6	766.6	766.6	765.6	764.6	763.6	762.4
170°	768.7	769.7	770.7	770.7	769.7	768.7	767.7	766.6
172.5°	771.4	772.4	773.5	773.5	772.3	771.2	770.0	768.9
175°	774.8	775.7	776.6	776.5	775.5	774.5	773.5	772.3
177.5°	776.0	776.8	777.6	777.5	776.5	775.5	774.5	773.5
180°	775.3	775.3	775.3	775.3	775.3	775.3	775.3	775.3

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