

1. Bird Inspired airfoil families are AS609X. chose AS6091 for this study.

Ref: Ananda, Gavin & Selig, Michael. (2018). Design of Bird-Like Airfoils. 10.2514/6.2018-0310.

2. $(2L)^2/\text{Area}=2L/W$

I divided the aspect ratio column in data by 2. In XFLR5 I assumed the length to be 1. I found the width accordingly.

3. Data recorded for C_l and C_d . ($\alpha=2$) and $Re=10000$ to 200000

Aspect Ratio	C_l	C_l/C_d	Ideal AoA
3.2290144	0.456	15.818	2.81
3.3038872	0.470	15.837	2.90
3.4221907	0.477	15.797	2.12
3.6248866	0.461	15.570	2.91
4.0143150	0.478	15.665	2.63
4.1631097	0.480	15.789	2.09
4.5245578	0.487	15.831	2.27
4.9019238	0.490	15.908	2.54
5.0768881	0.489	15.943	2.95
5.6736968	0.503	15.890	2.15
6.4262137	0.523	15.900	2.48
7.5000000	0.533	15.959	2.80
8.5737863e	0.578	15.966	2.42
9.0299147	0.588	15.970	2.79
9.3263032	0.591	15.978	2.65
9.9231119	0.598	15.967	2.84
10.0098076	0.601	15.983	2.67
10.0475442	0.599	15.978	2.75
10.0836890	0.605	15.986	2.39
10.0985685	0.612	15.979	2.65
10.1375113	0.619	15.991	2.70
10.1577809	0.614	15.980	2.27
10.1696113	0.617	15.983	2.82
10.1770986	0.616	15.996	2.82