Comparison of C_L-C_D Polar for NeuralFoil vs. XFoil

On HALE_02 Airfoil (out-of-sample)

HALE_02 Airfoil

$Re = 100M$
$Re = 10M$
$Re = 1M$
$Re = 200k$
$Re = 90k$
$Re = 50k$
$Re = 10k$

Analysis Method
— XFoil
- - NeuralFoil "xxxlarge"
⋯ NeuralFoil "medium"

Lift Coefficient C_L

Drag Coefficient C_D

Note the log-scale on C_D, which is unconventional - it's the only way to keep it readable given the wide range.