Table 1: Performance Results for Barrier_2D_mu0.1 Problem

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
QQN-Bisection-2	4.00e-1	6.74e-15	4.00e-1	4.00e-1	125.5	0.0	0.003
QQN-Bisection-1	4.00e-1	2.90e-14	4.00e-1	4.00e-1	65.8	0.0	0.002
L-BFGS-Aggressive	4.00e-1	1.15e-15	4.00e-1	4.00e-1	65.7	0.0	0.001
QQN-GoldenSection	4.00e-1	1.10e-9	4.00e-1	4.00e-1	144.2	0.0	0.002
QQN-CubicQuadraticInterpolation	4.00e-1	1.10e-8	4.00e-1	4.00e-1	83.8	0.0	0.002
L-BFGS	4.00e-1	4.93e-10	4.00e-1	4.00e-1	163.9	0.0	0.004
L-BFGS-Limited	4.00e-1	1.29e-10	4.00e-1	4.00e-1	150.8	0.0	0.004
QQN-StrongWolfe	4.00e-1	4.20e-14	4.00e-1	4.00e-1	108.3	0.0	0.003
L-BFGS-Conservative	4.00e-1	5.47e-8	4.00e-1	4.00e-1	880.4	0.0	0.023
Adam-WeightDecay	4.00e-1	2.27e-9	4.00e-1	4.00e-1	1498.4	0.0	0.032
GD	4.00e-1	2.64e-11	4.00e-1	4.00e-1	292.1	0.0	0.008
Adam	4.00e-1	1.38e-4	4.00e-1	4.00e-1	2502.0	0.0	0.049
GD-WeightDecay	4.00e-1	6.36e-6	4.00e-1	4.00e-1	49.0	0.0	0.002
Adam-Robust	4.09e-1	7.17e-3	4.00e-1	4.27e-1	2502.0	0.0	0.055
Trust Region-Conservative	4.71e-1	7.74e-2	4.01e-1	6.13e-1	421.4	0.0	0.003
Adam-AMSGrad	4.13e-1	1.06e-2	4.01e-1	4.31e-1	2502.0	0.0	0.055
Trust Region-Precise	4.72e-1	1.30e-1	4.07e-1	8.14e-1	72.3	0.0	0.001
Trust Region-Adaptive	5.15e-1	1.22e-1	4.42e-1	7.59e-1	6.2	0.0	0.000
GD-AdaptiveMomentum	4.65e-1	4.95e-3	4.60e-1	4.70e-1	1.6	0.0	0.000
Adam-Fast	5.15e-1	2.22e-2	4.74e-1	5.54e-1	31.4	0.0	0.001
GD-Momentum	5.05e-1	2.44e-2	4.82e-1	5.80e-1	20.9	0.0	0.001
GD-Nesterov	5.03e-1	1.17e-2	4.85e-1	5.26e-1	20.4	0.0	0.001
Trust Region-Standard	5.57e-1	6.39e-2	4.86e-1	6.42e-1	2.8	0.0	0.000
Trust Region-Aggressive	1.50e0	5.56e-1	5.85e-1	2.09e0	5.0	0.0	0.000