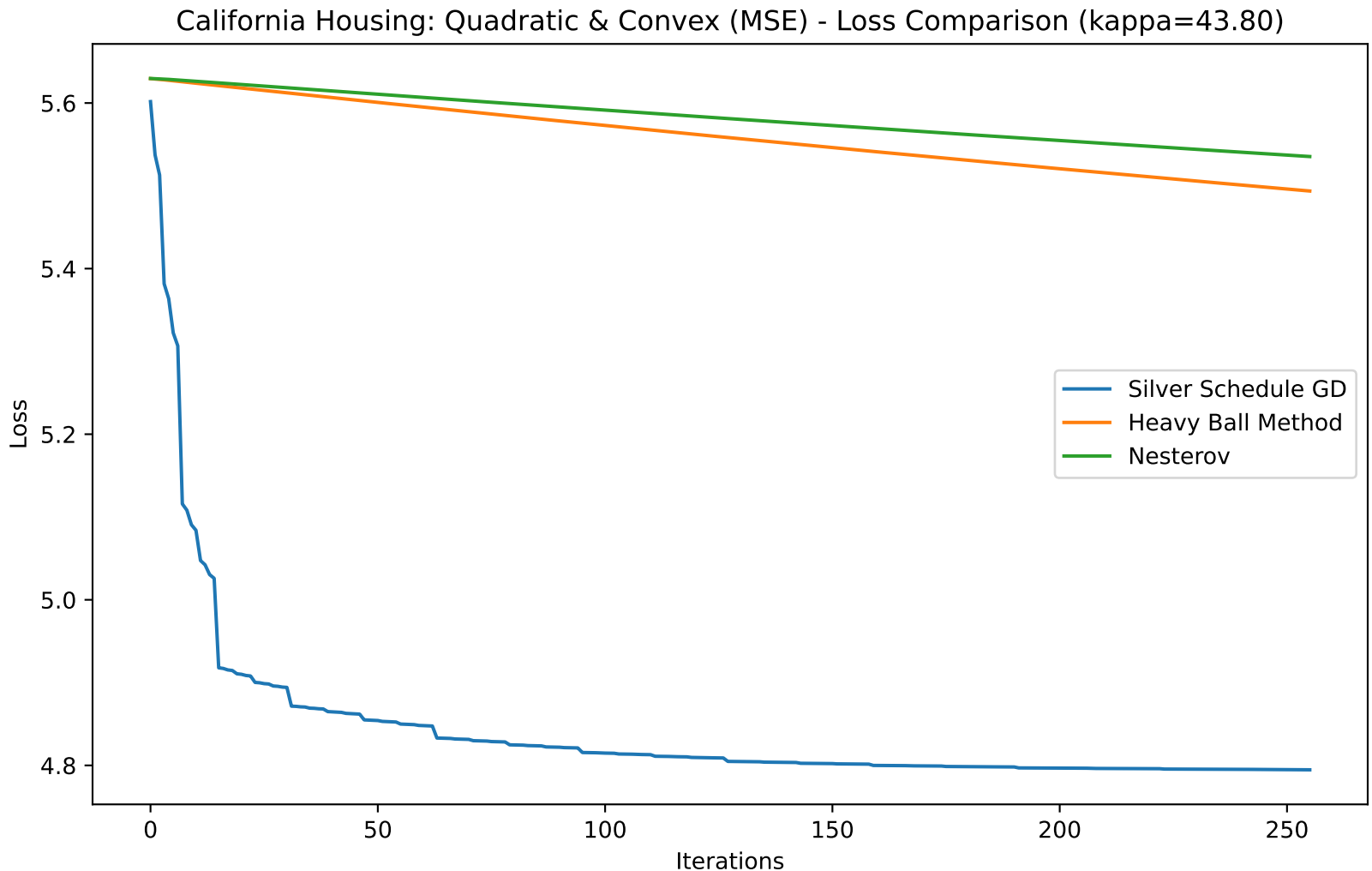
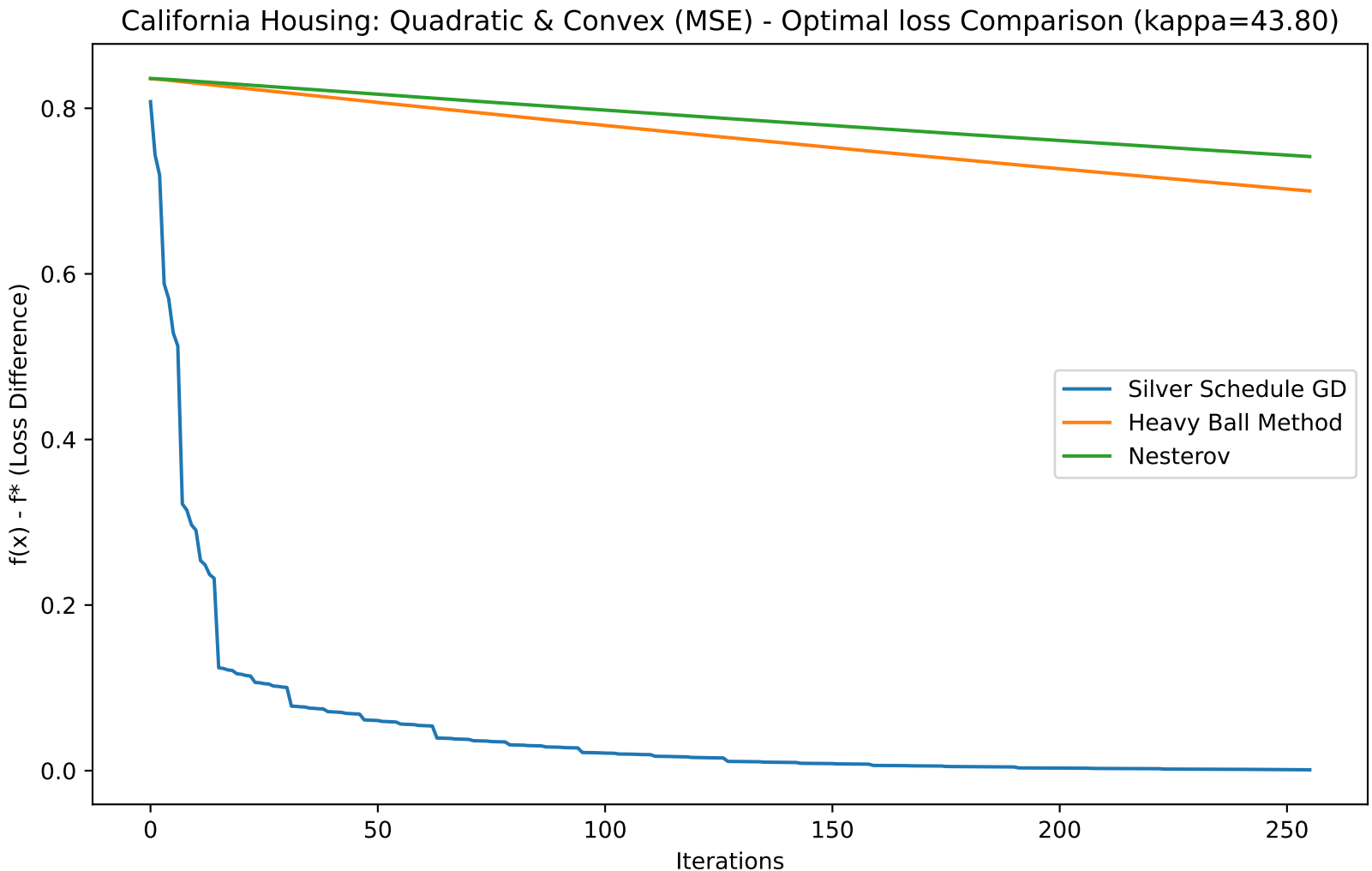
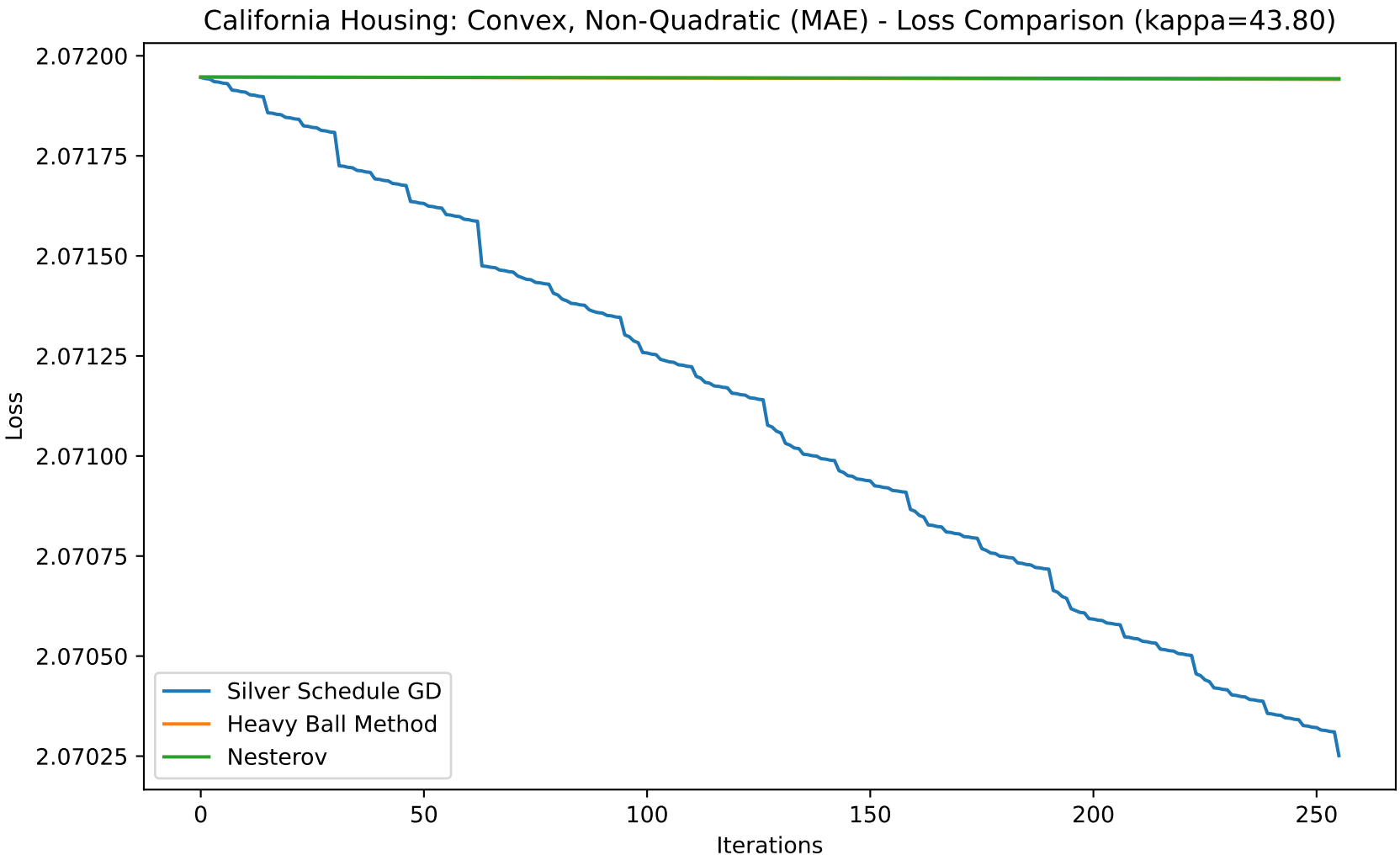
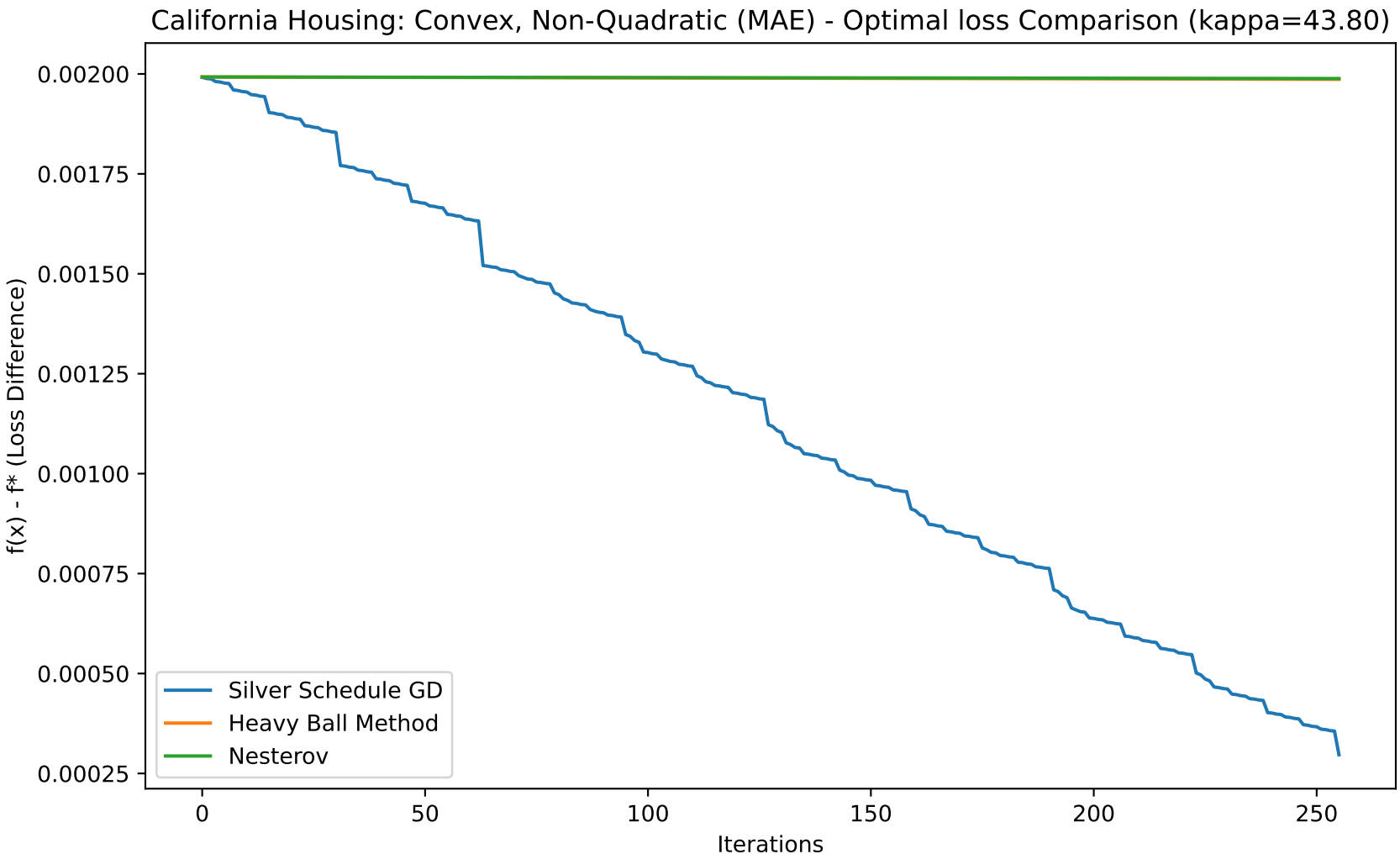
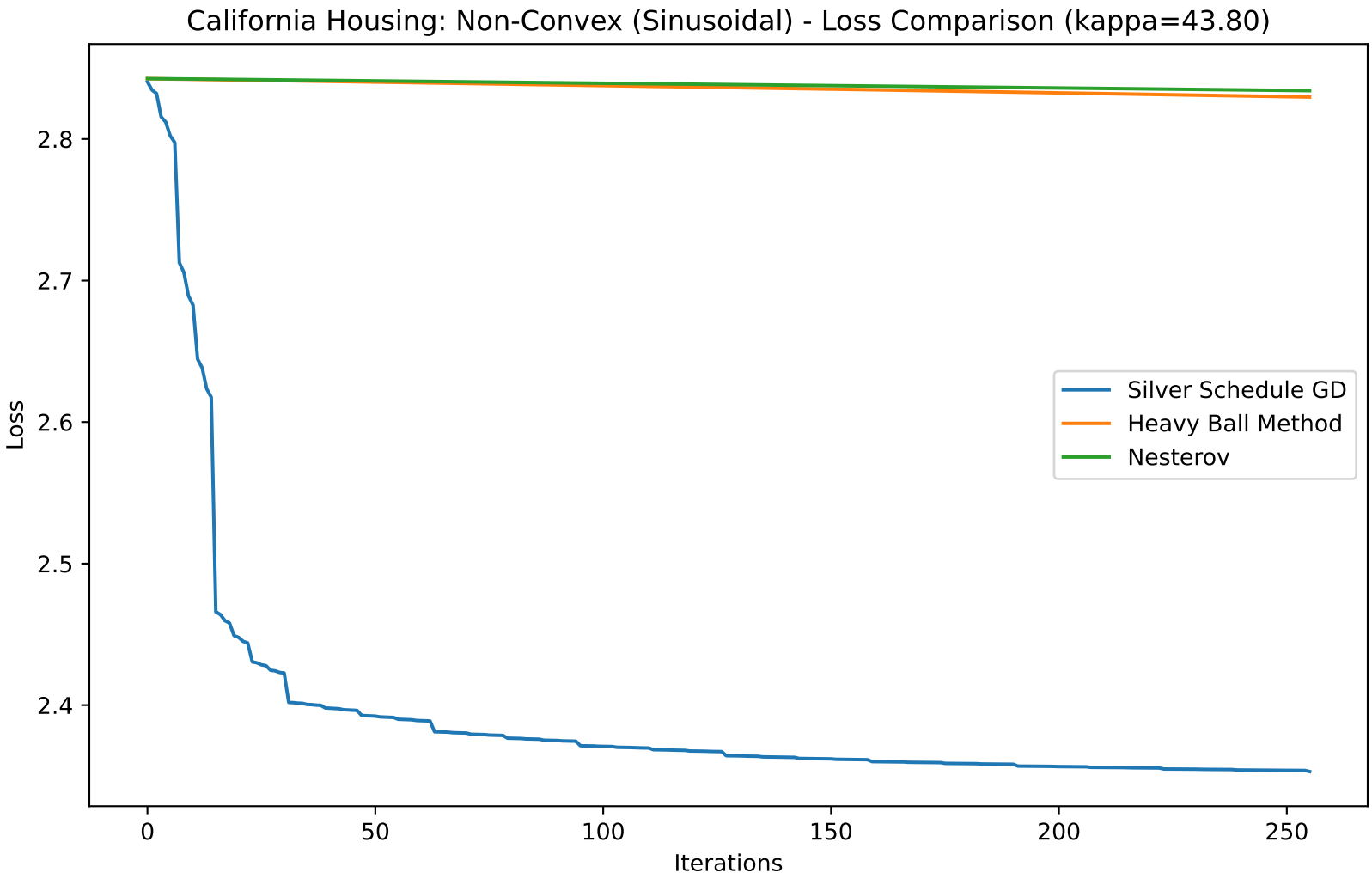
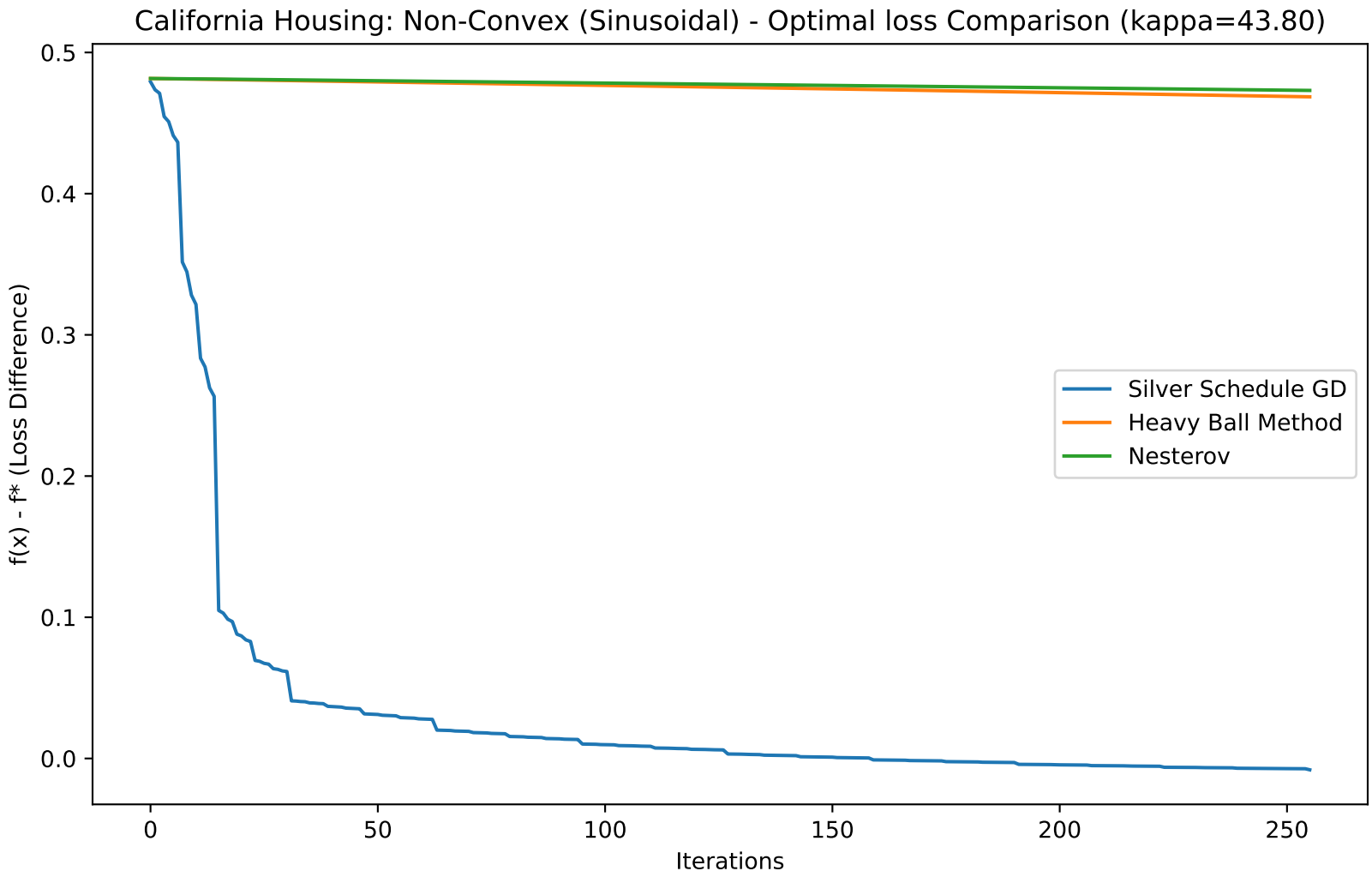

California Housing: Quadratic & Convex (MSE) - Loss Comparison (kappa=43.80)
Loss
Iterations
5.6
5.4
5.2
5.0
4.8
0
50
100
150
200
250
Silver Schedule GD
Heavy Ball Method
Nesterov

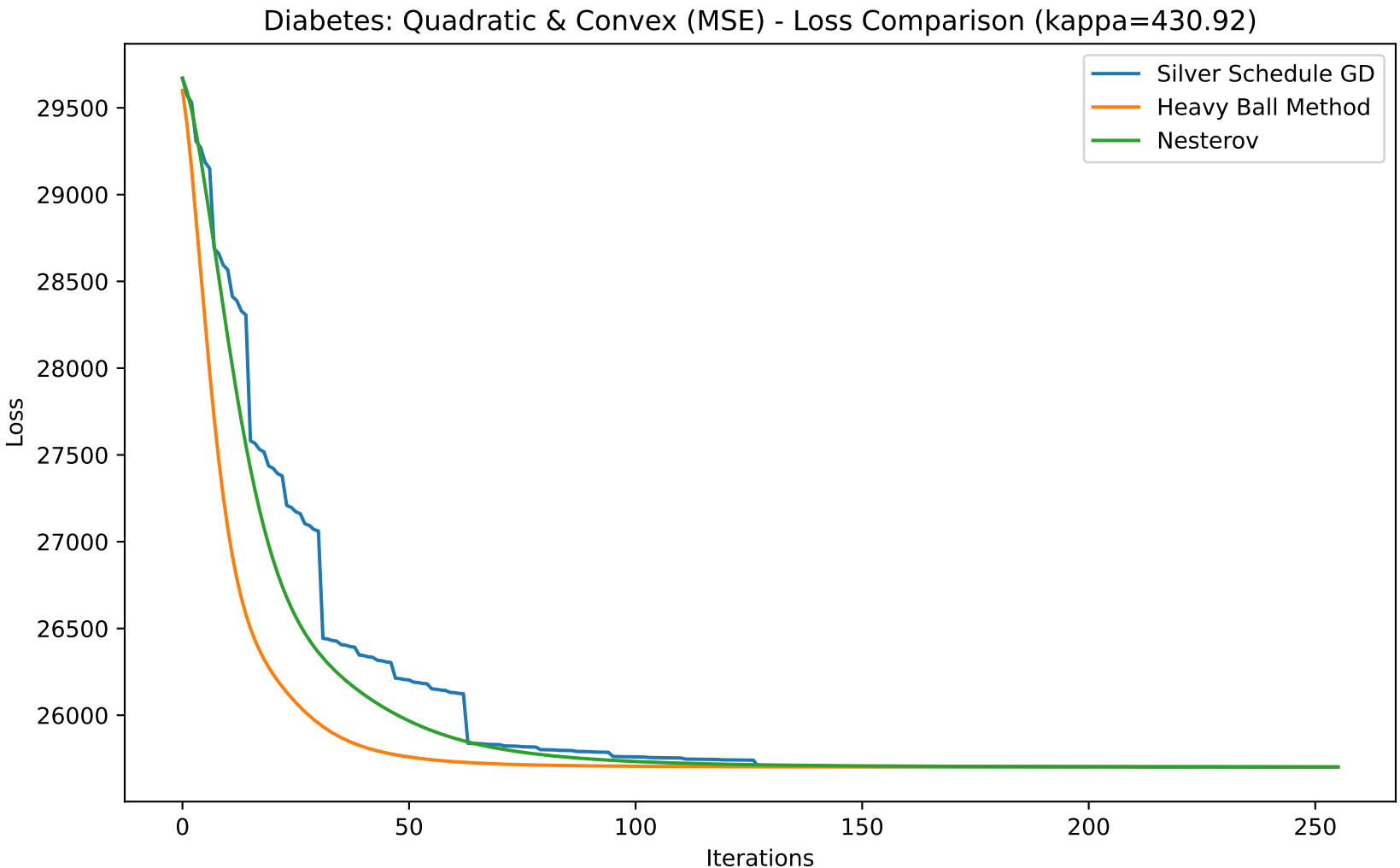

California Housing: Quadratic & Convex (MSE) - Optimal loss Comparison (kappa=43.80)
f(x) - f* (Loss Difference)
0.0
0.2
0.4
0.6
0.8
0
50
100
150
200
250
Iterations
Silver Schedule GD
Heavy Ball Method
Nesterov

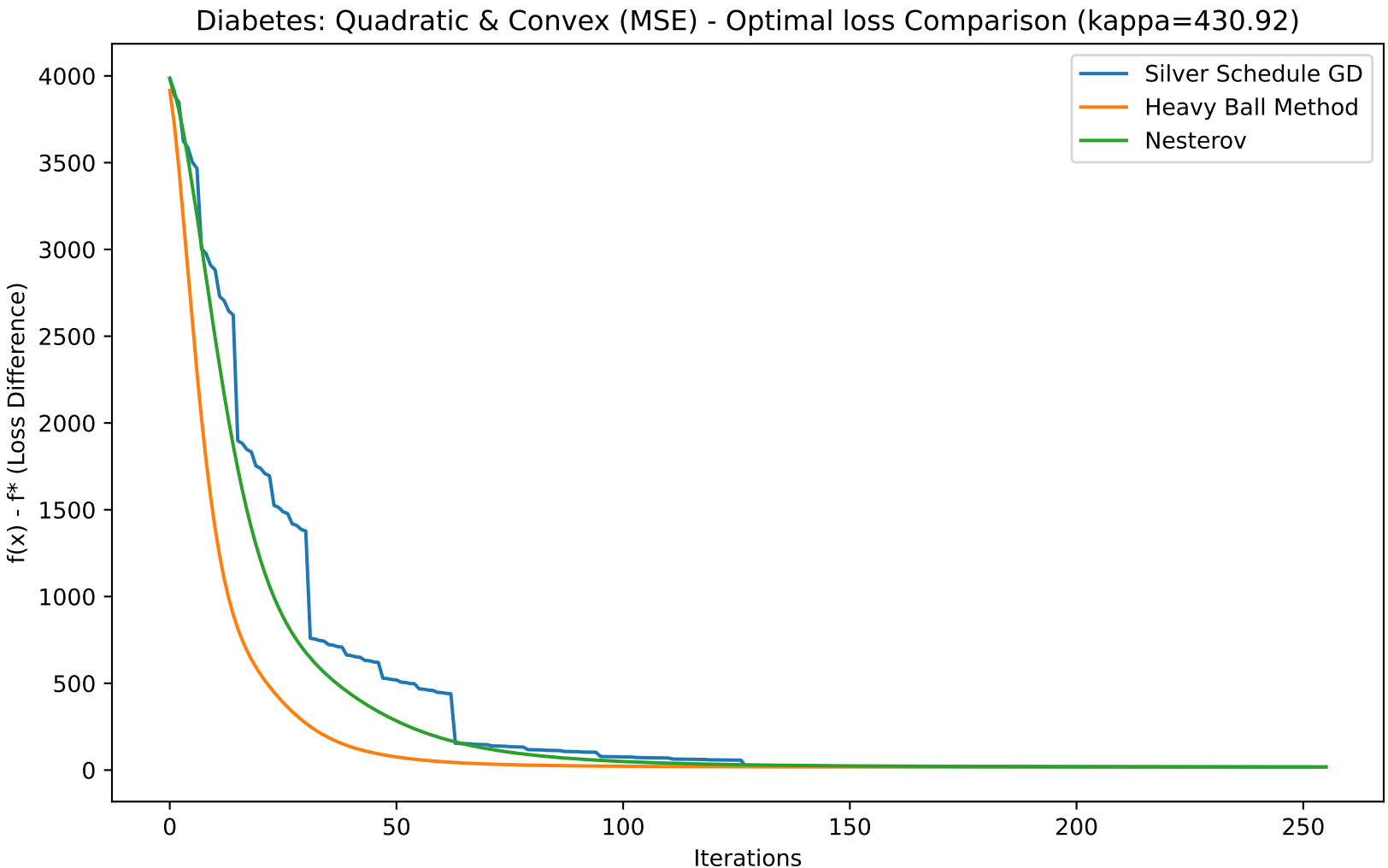

California Housing: Convex, Non-Quadratic (MAE) - Loss Comparison (kappa=43.80)
2.07200
2.07175
2.07150
2.07125
2.07100
2.07075
2.07050
2.07025
Loss
0
50
100
150
200
250
Iterations
Silver Schedule GD
Heavy Ball Method
Nesterov

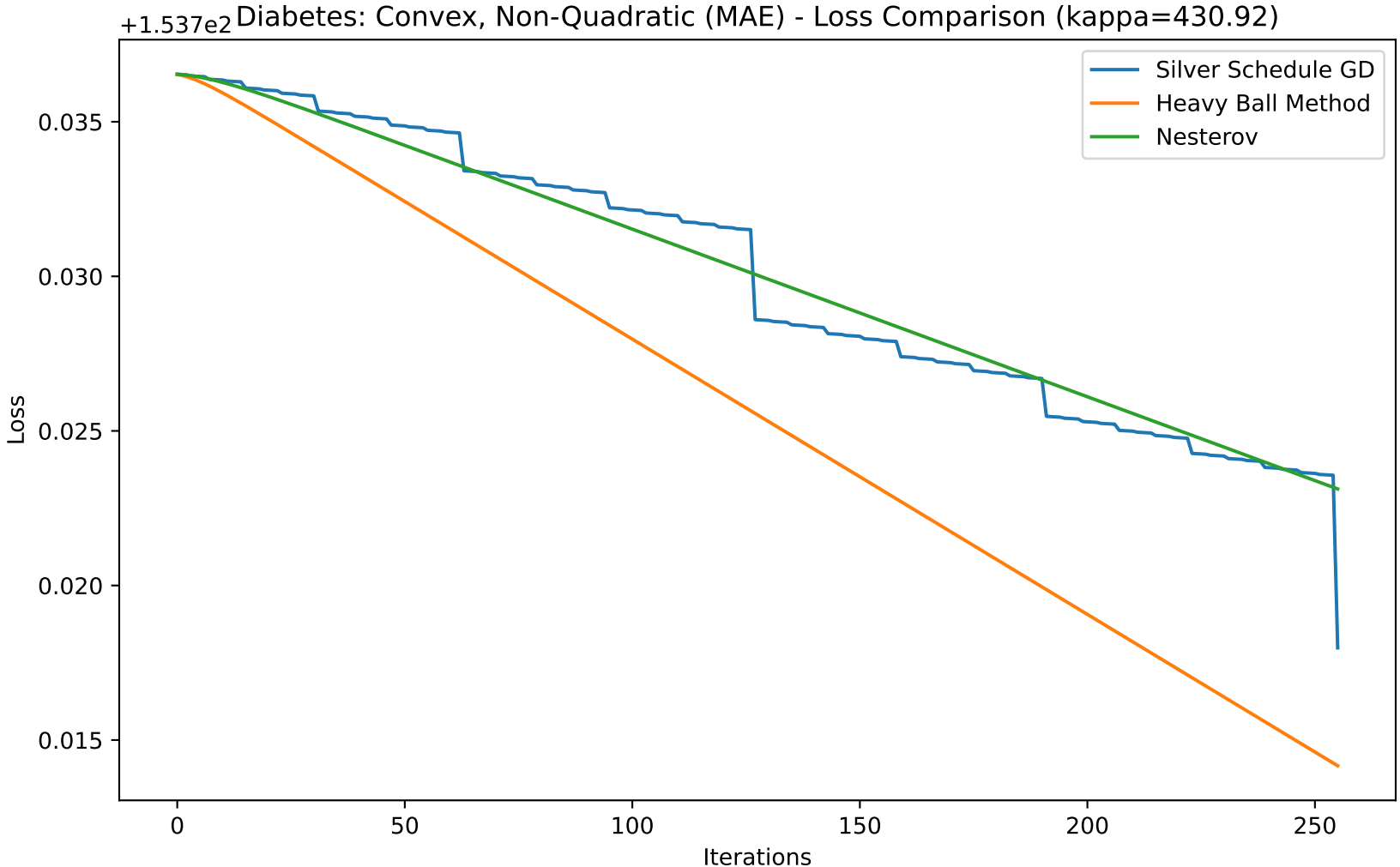

California Housing: Convex, Non-Quadratic (MAE) - Optimal loss Comparison (kappa=43.80)
f(x) - f* (Loss Difference)
0.00200
0.00175
0.00150
0.00125
0.00100
0.00075
0.00050
0.00025
0
50
100
150
200
250
Iterations
Silver Schedule GD
Heavy Ball Method
Nesterov

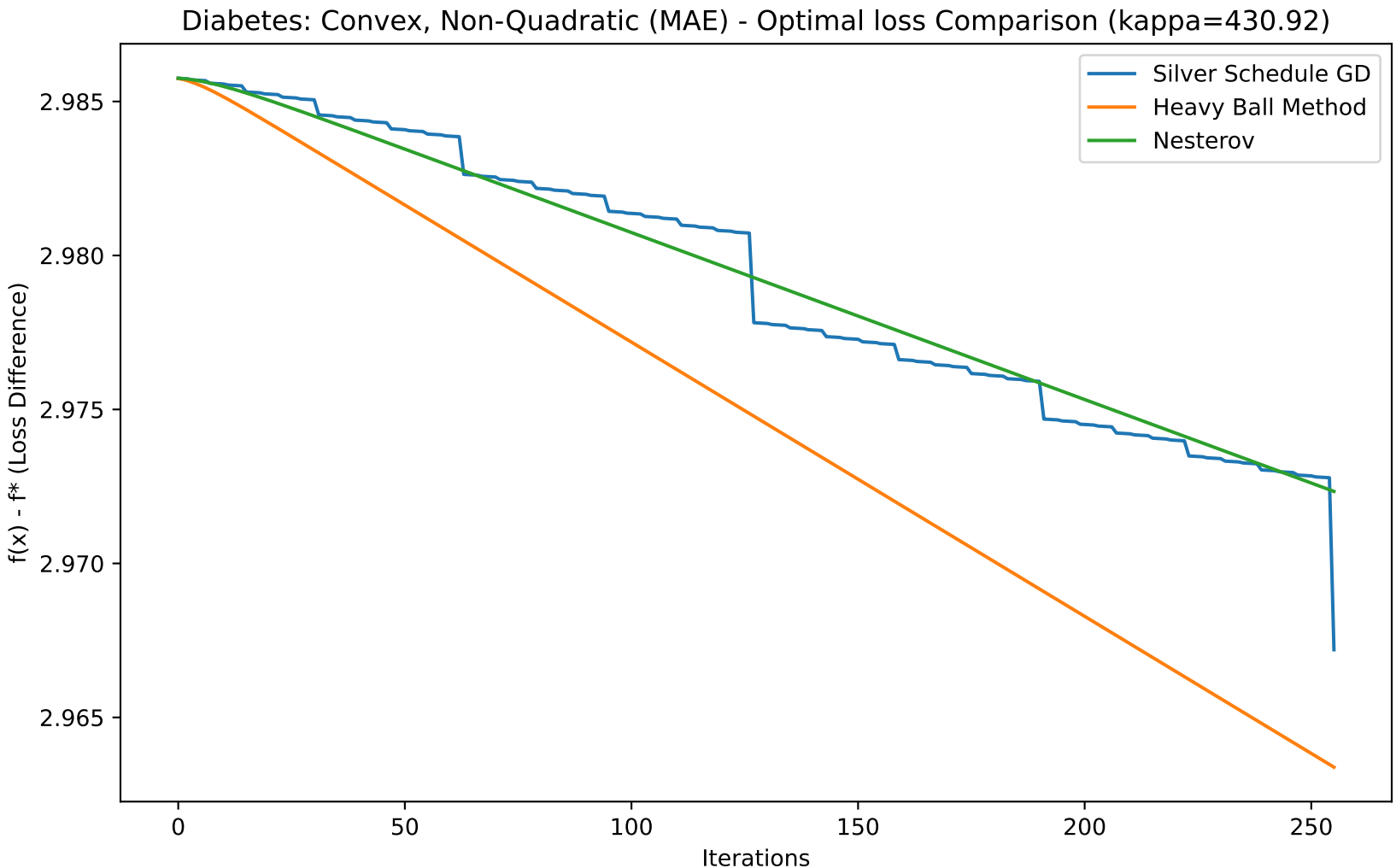

California Housing: Non-Convex (Sinusoidal) - Loss Comparison (kappa=43.80)
Loss
Iterations
2.8
2.7
2.6
2.5
2.4
0
50
100
150
200
250
Silver Schedule GD
Heavy Ball Method
Nesterov

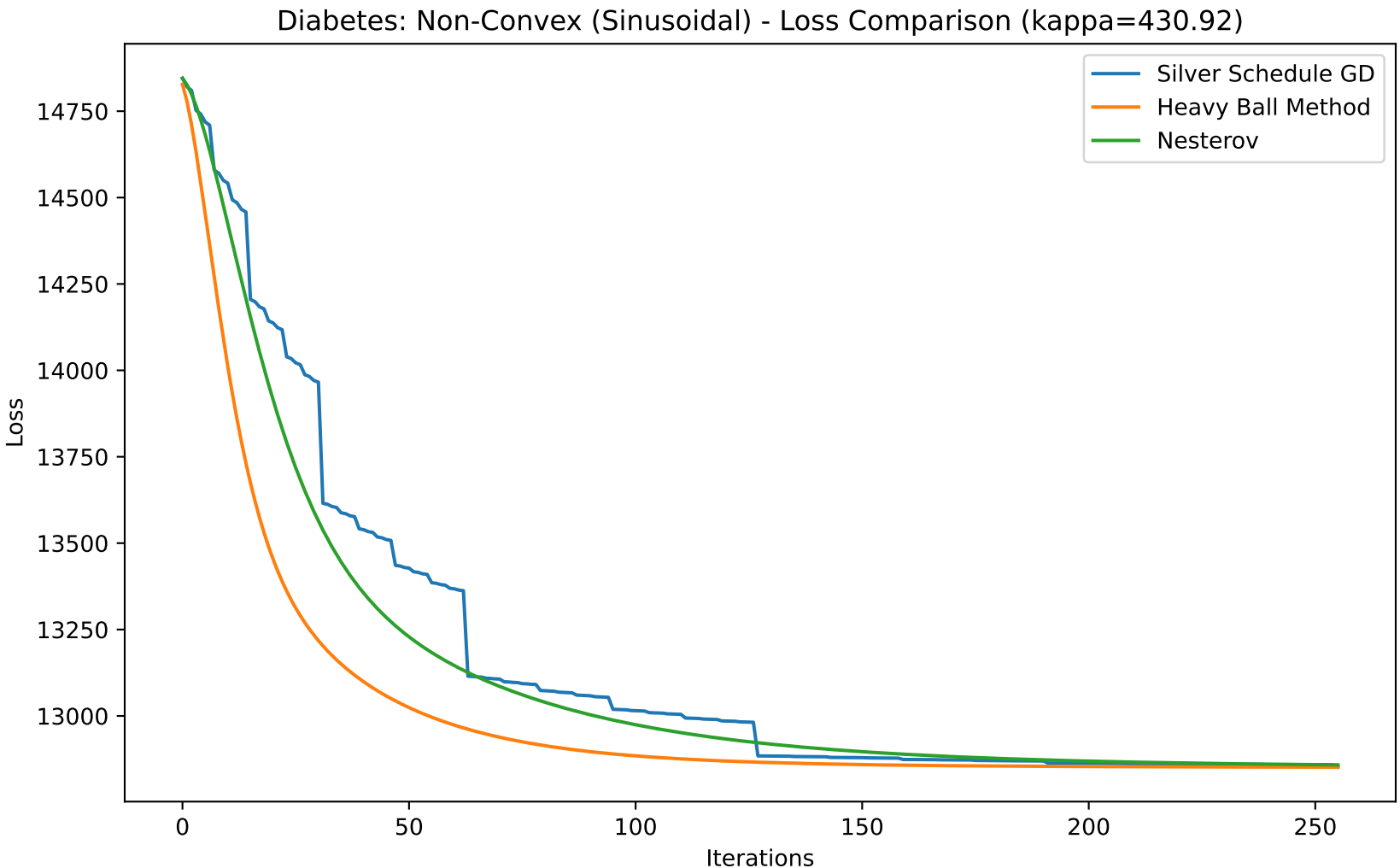

California Housing: Non-Convex (Sinusoidal) - Optimal loss Comparison (kappa=43.80)
f(x) - f* (Loss Difference)
Iterations
0.0
0.1
0.2
0.3
0.4
0.5
0
50
100
150
200
250
Silver Schedule GD
Heavy Ball Method
Nesterov

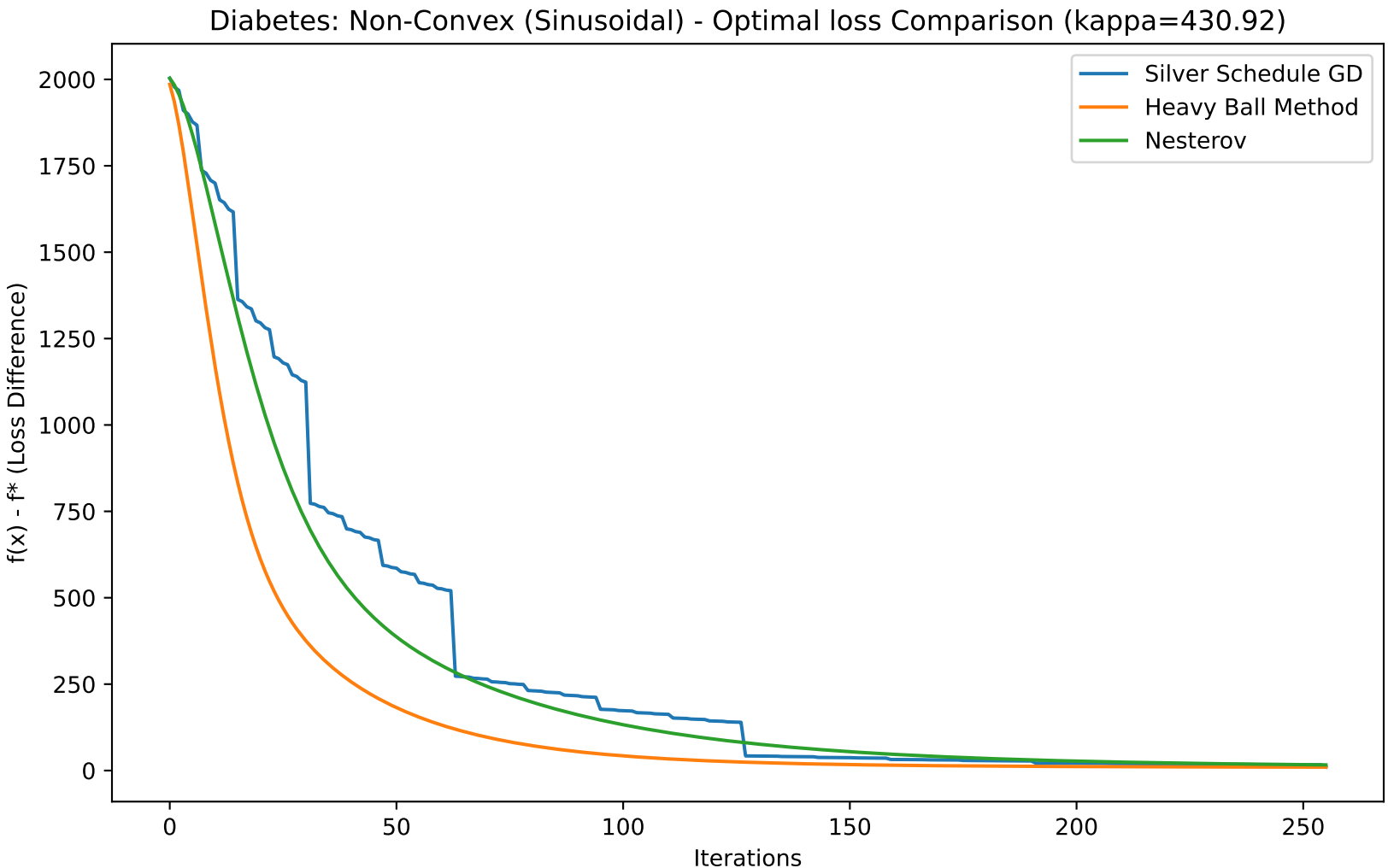

Diabetes: Quadratic & Convex (MSE) - Loss Comparison (kappa=430.92)
Silver Schedule GD
Heavy Ball Method
Nesterov
Loss
29500
29000
28500
28000
27500
27000
26500
26000
0
50
100
150
200
250
Iterations

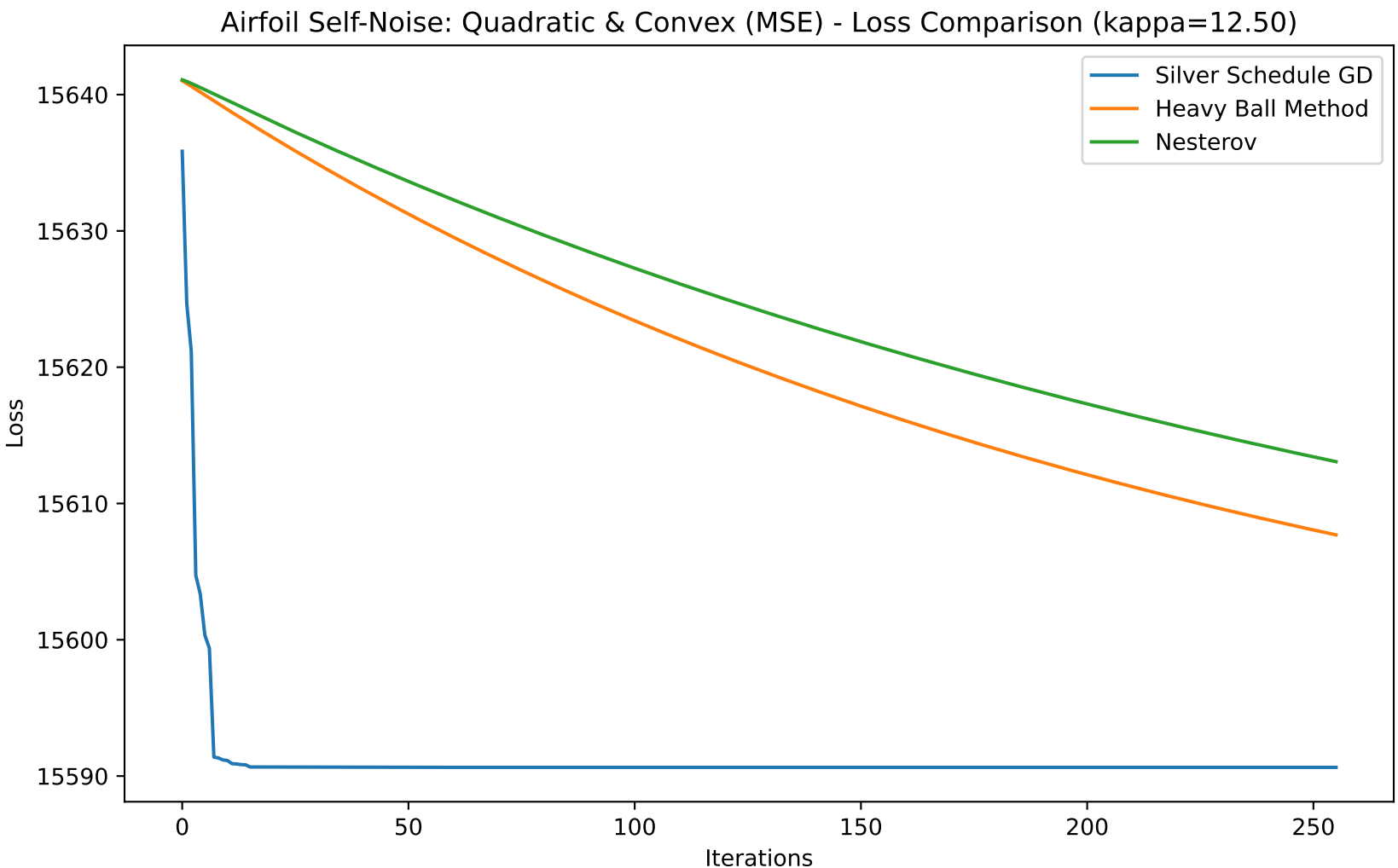

Diabetes: Quadratic & Convex (MSE) - Optimal loss Comparison (kappa=430.92)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
Iterations
4000
3500
3000
2500
2000
1500
1000
500
0
0
50
100
150
200
250

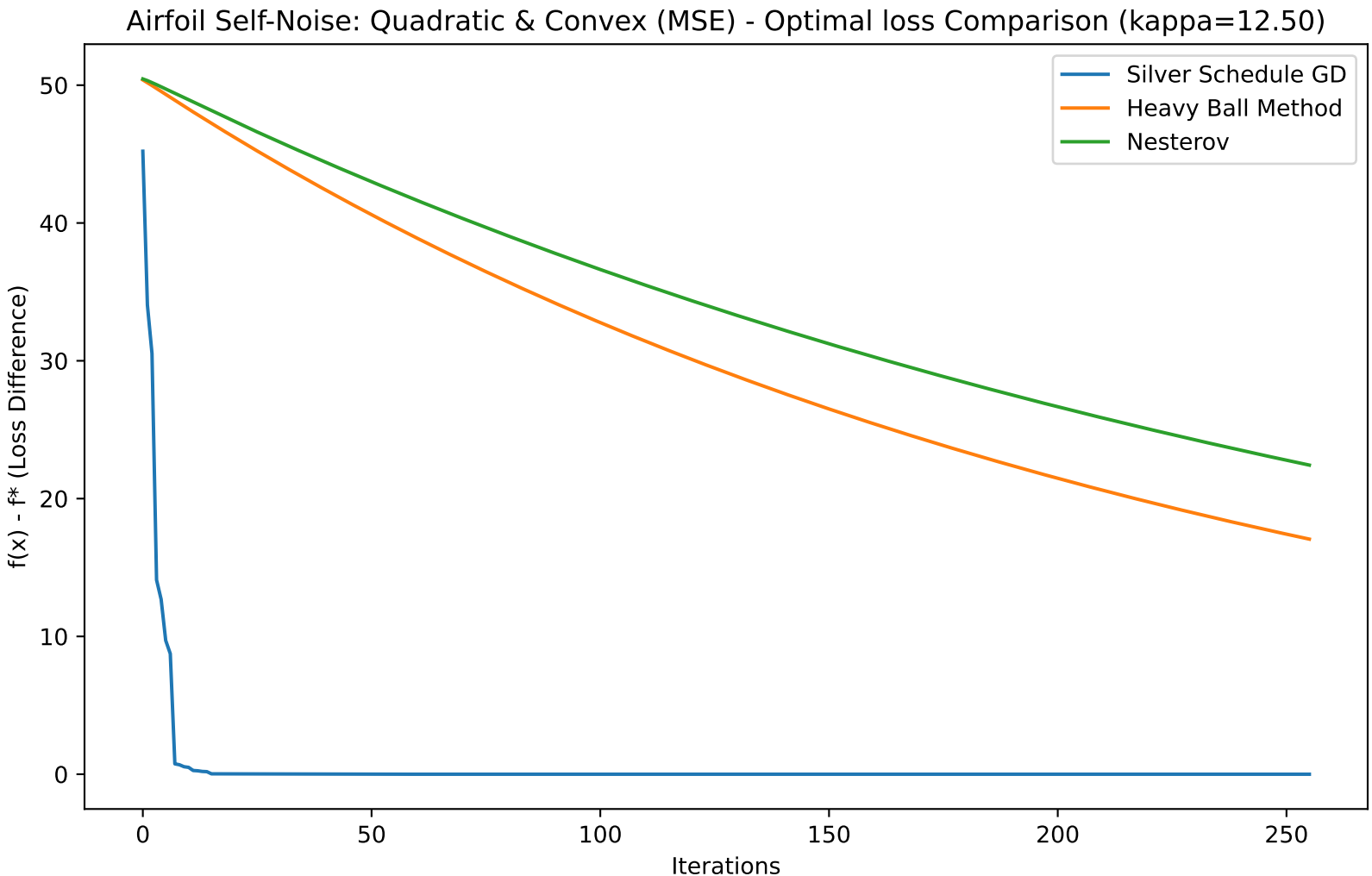

+1.537e2
Diabetes: Convex, Non-Quadratic (MAE) - Loss Comparison (kappa=430.92)
Silver Schedule GD
Heavy Ball Method
Nesterov
0.035
0.030
0.025
0.020
0.015
Loss
0
50
100
150
200
250
Iterations

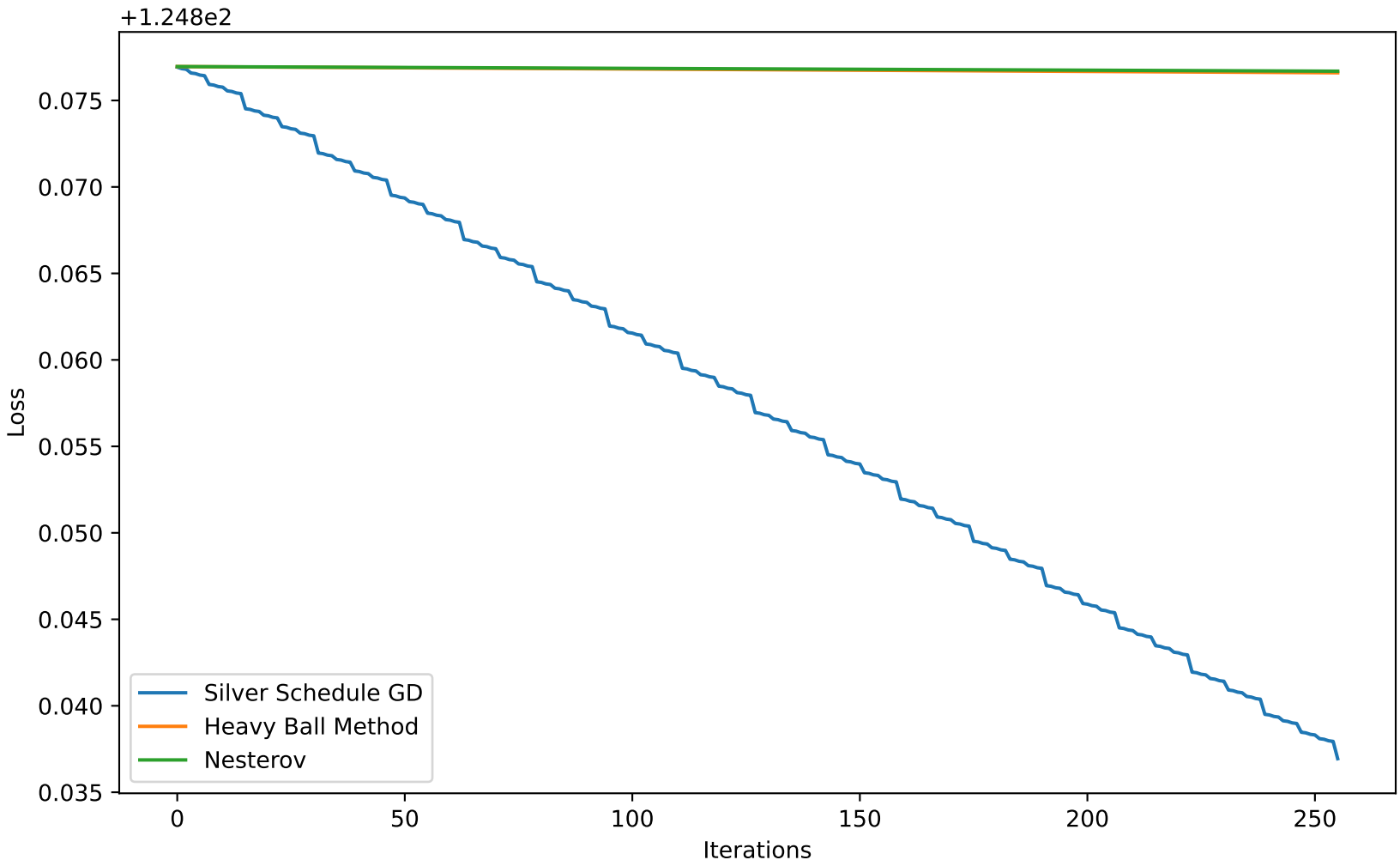

Diabetes: Convex, Non-Quadratic (MAE) - Optimal loss Comparison (kappa=430.92)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
2.985
2.980
2.975
2.970
2.965
0
50
100
150
200
250
Iterations

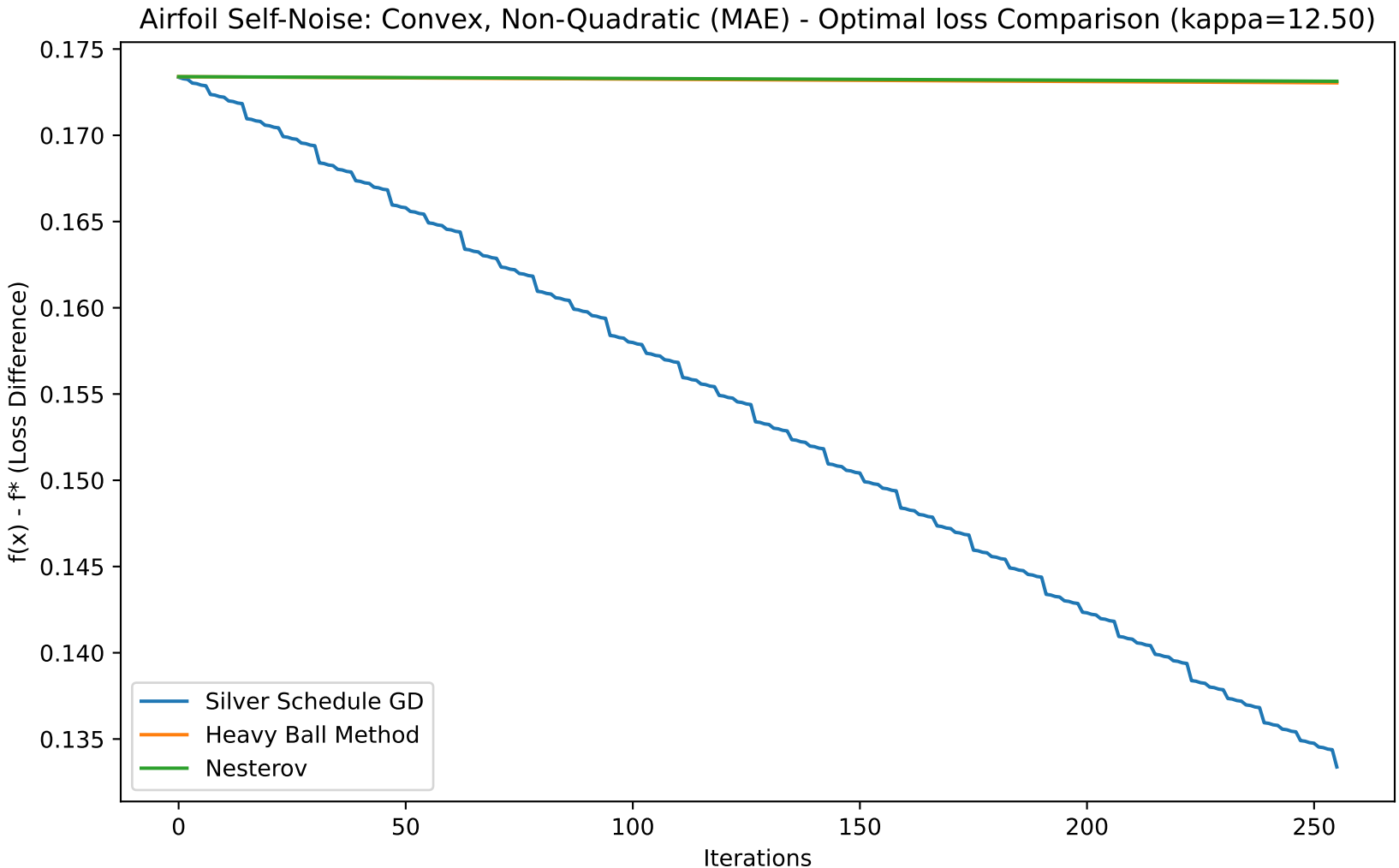

Diabetes: Non-Convex (Sinusoidal) - Loss Comparison (kappa=430.92)
Silver Schedule GD
Heavy Ball Method
Nesterov
Loss
14750
14500
14250
14000
13750
13500
13250
13000
0
50
100
150
200
250
Iterations

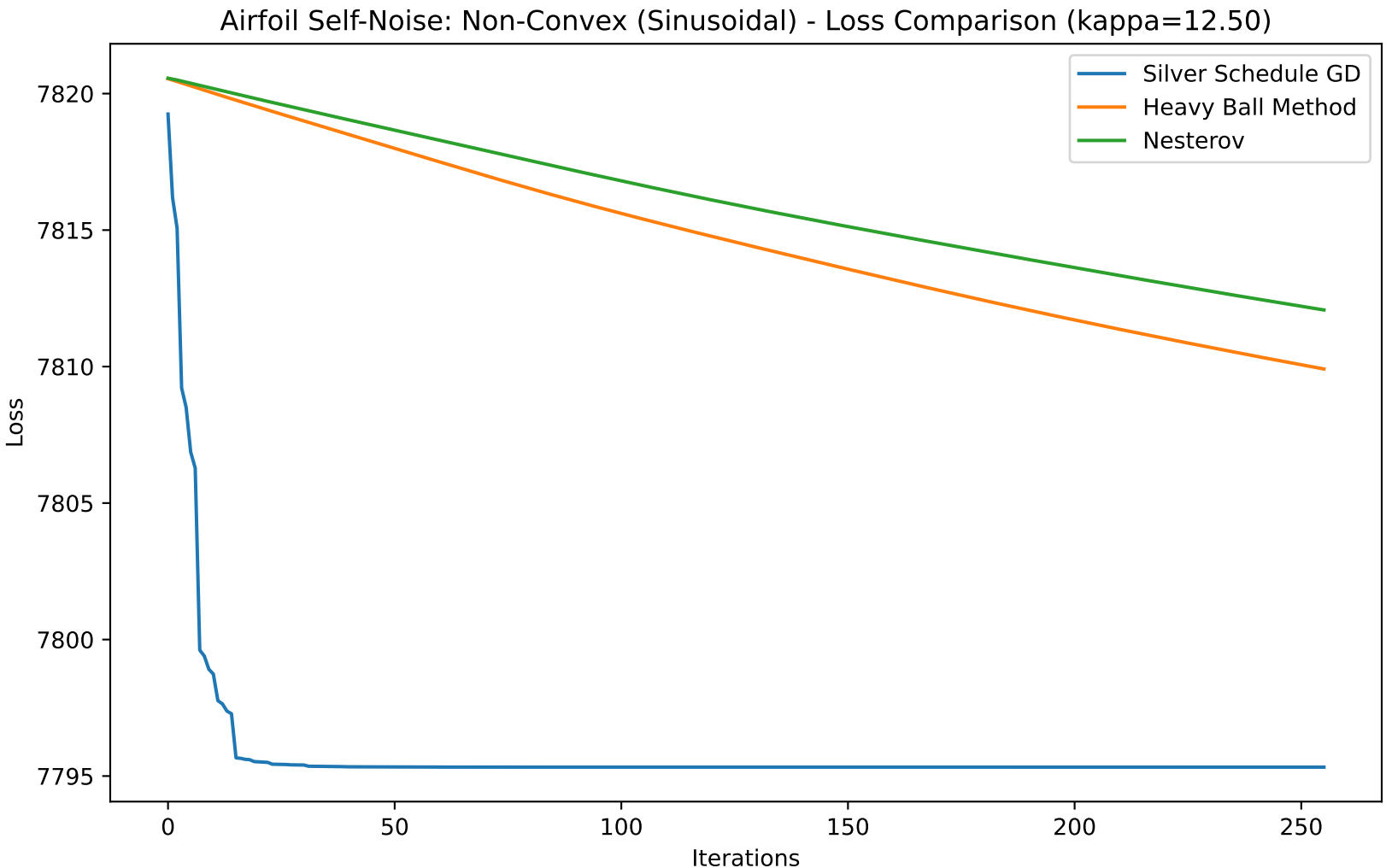

Diabetes: Non-Convex (Sinusoidal) - Optimal loss Comparison (kappa=430.92)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
Iterations
2000
1750
1500
1250
1000
750
500
250
0
0
50
100
150
200
250

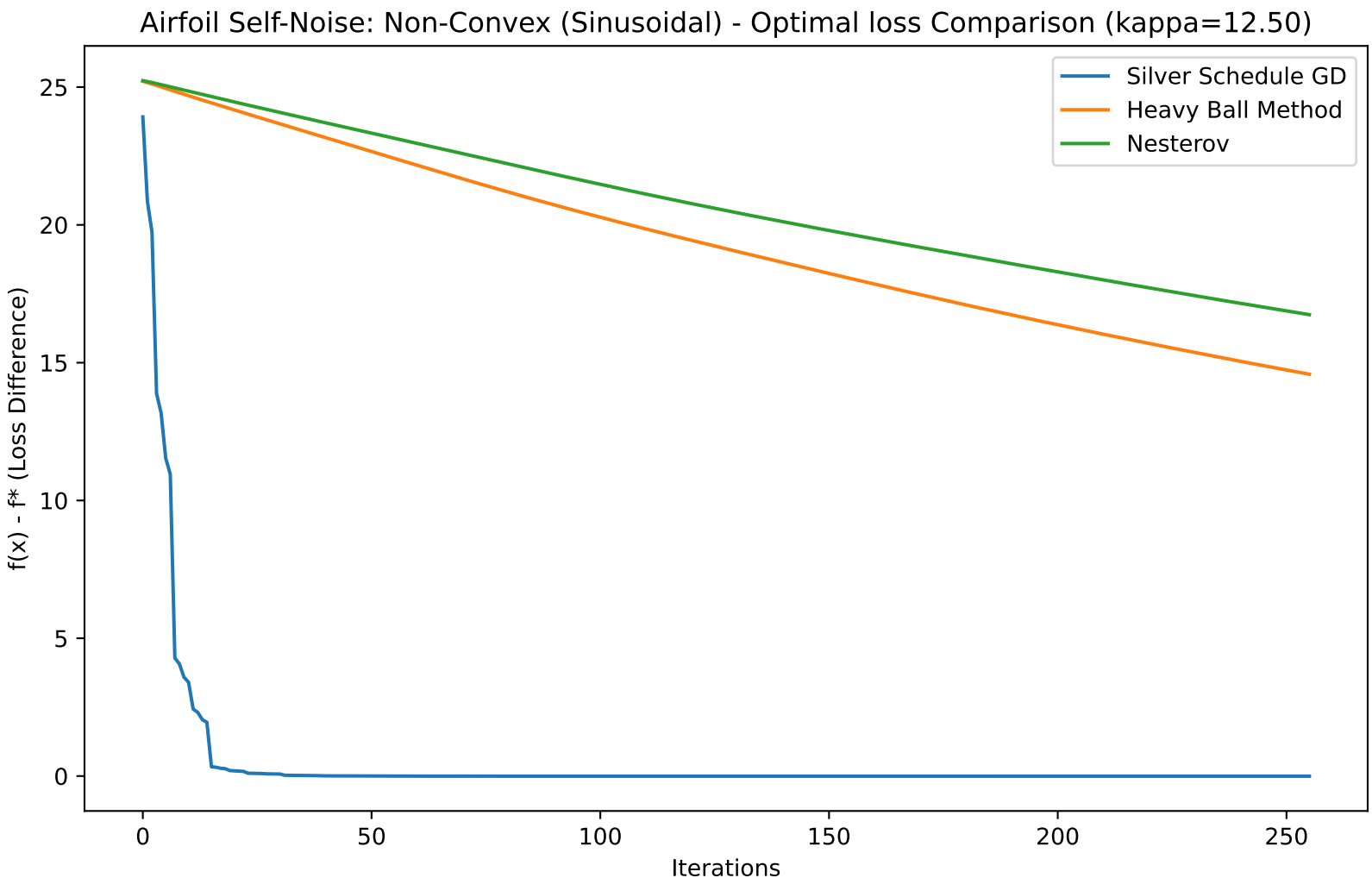

Airfoil Self-Noise: Quadratic & Convex (MSE) - Loss Comparison (kappa=12.50)
Silver Schedule GD
Heavy Ball Method
Nesterov
15640
15630
15620
15610
15600
15590
Loss
0
50
100
150
200
250
Iterations

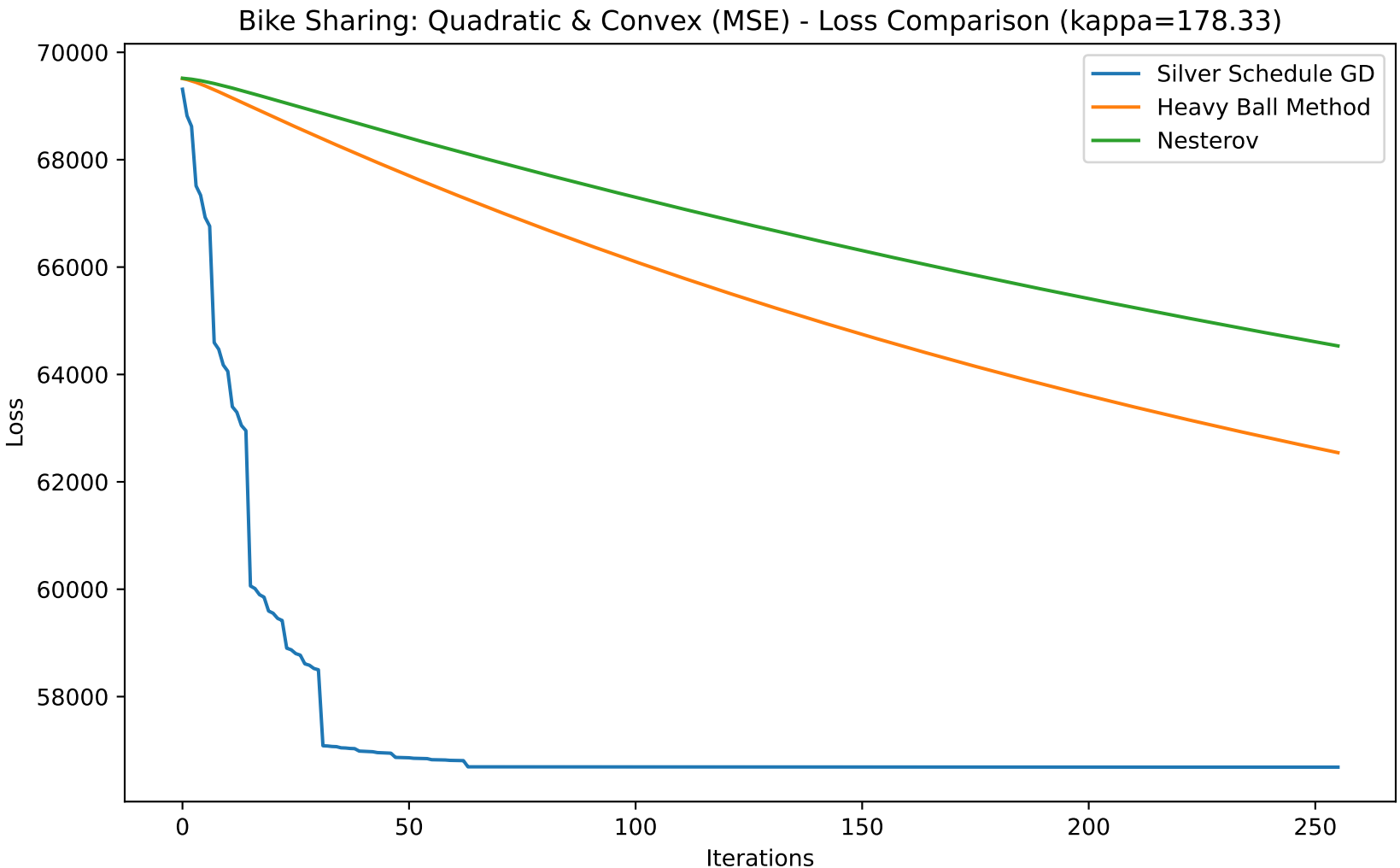

Airfoil Self-Noise: Quadratic & Convex (MSE) - Optimal loss Comparison (kappa=12.50)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
Iterations
0
10
20
30
40
50
0
50
100
150
200
250

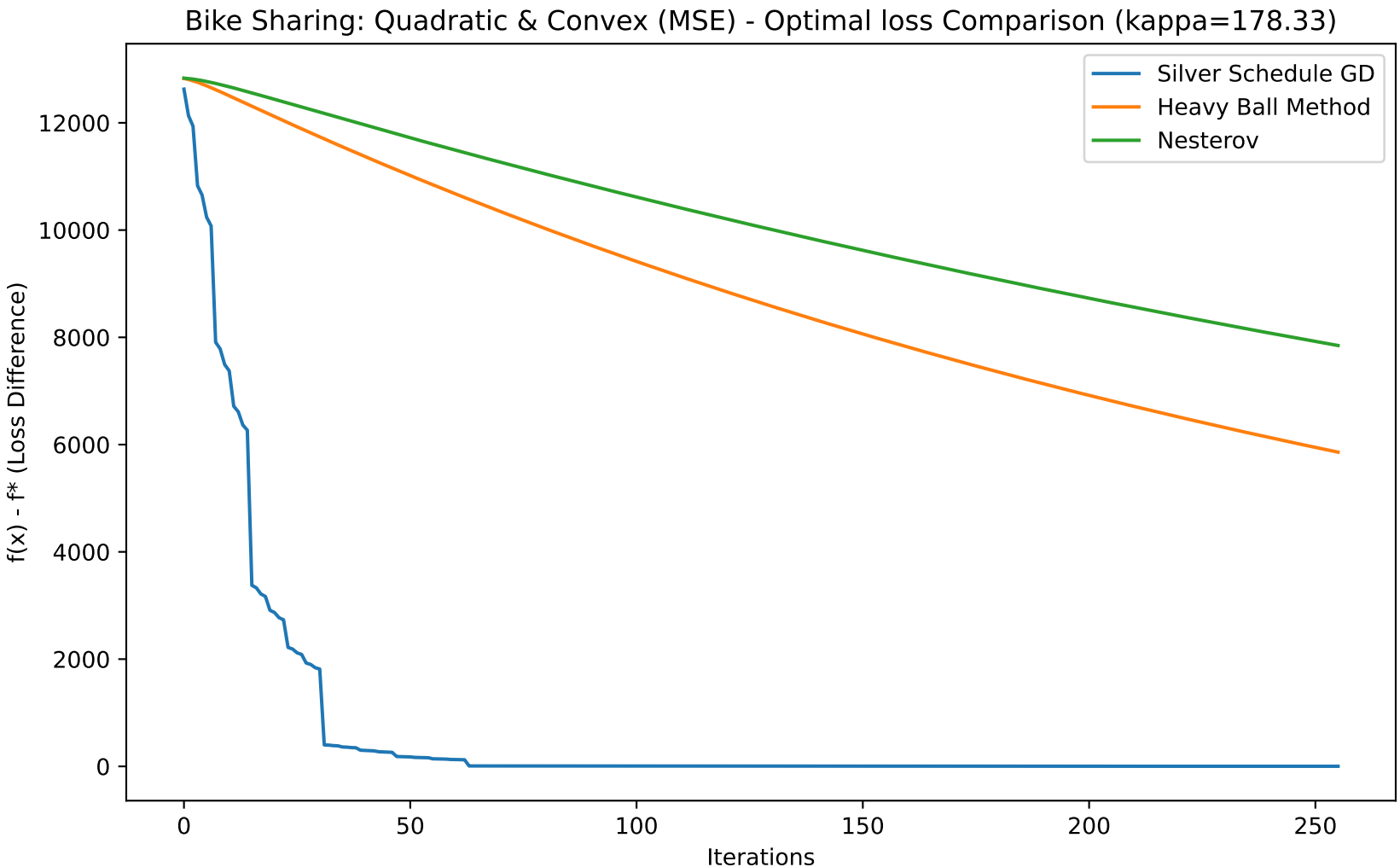

Airfoil Self-Noise: Convex, Non-Quadratic (MAE) - Loss Comparison (kappa=12.50)
+1.248e2
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
Loss
0
50
100
150
200
250
Iterations
Silver Schedule GD
Heavy Ball Method
Nesterov

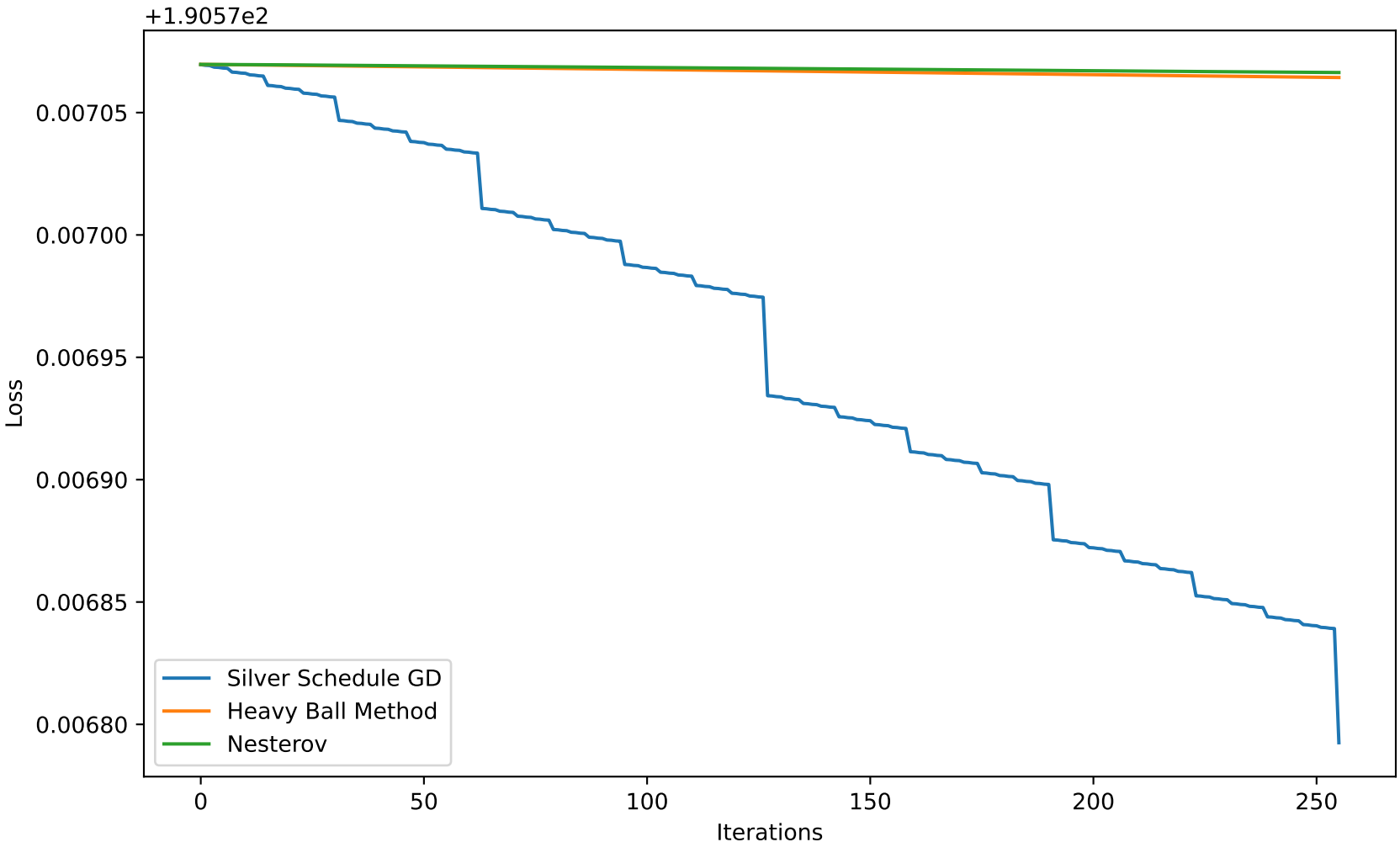

Airfoil Self-Noise: Convex, Non-Quadratic (MAE) - Optimal loss Comparison (kappa=12.50)
f(x) - f* (Loss Difference)
Iterations
0.175
0.170
0.165
0.160
0.155
0.150
0.145
0.140
0.135
0
50
100
150
200
250
Silver Schedule GD
Heavy Ball Method
Nesterov

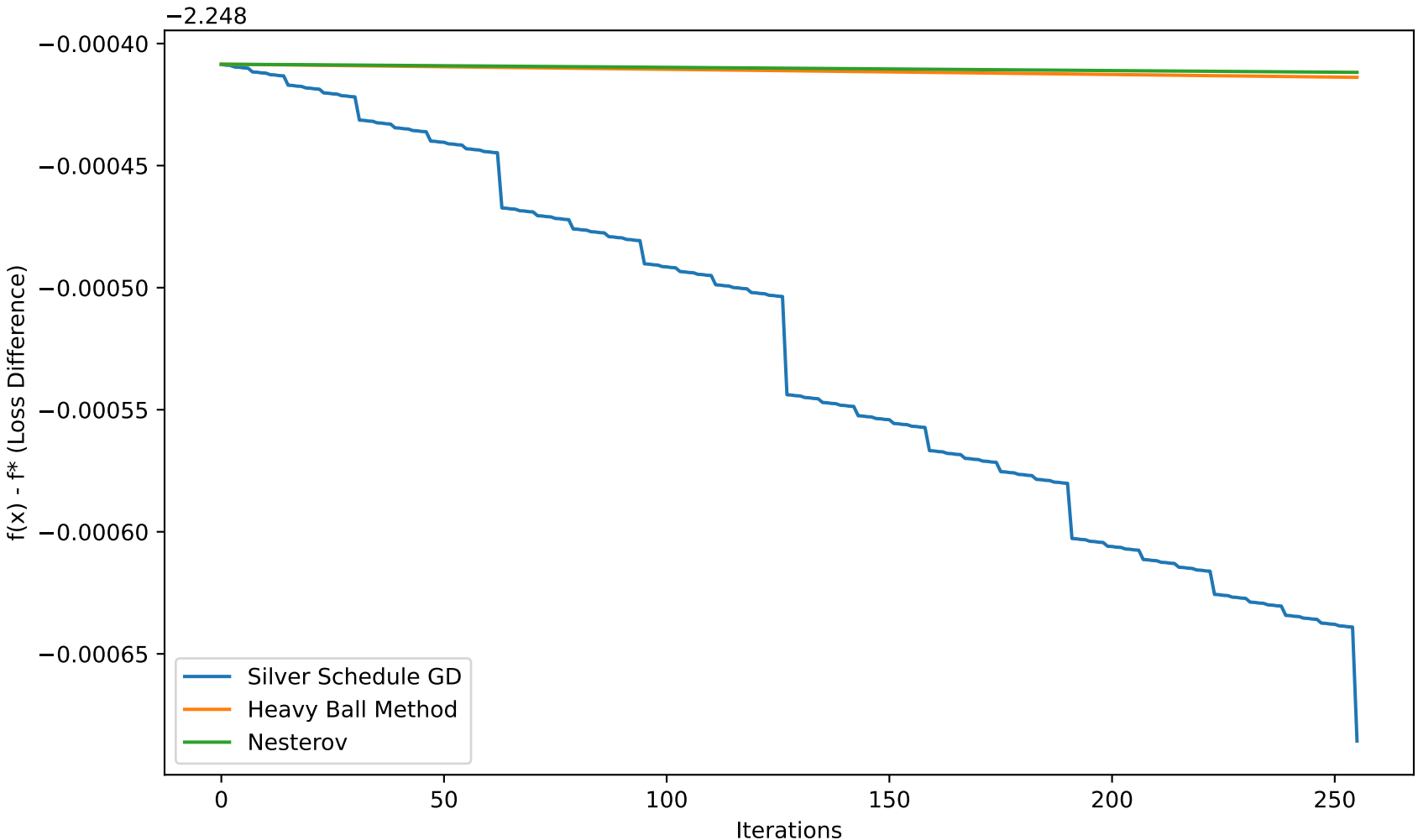

Airfoil Self-Noise: Non-Convex (Sinusoidal) - Loss Comparison (kappa=12.50)
Silver Schedule GD
Heavy Ball Method
Nesterov
Loss
7820
7815
7810
7805
7800
7795
0
50
100
150
200
250
Iterations

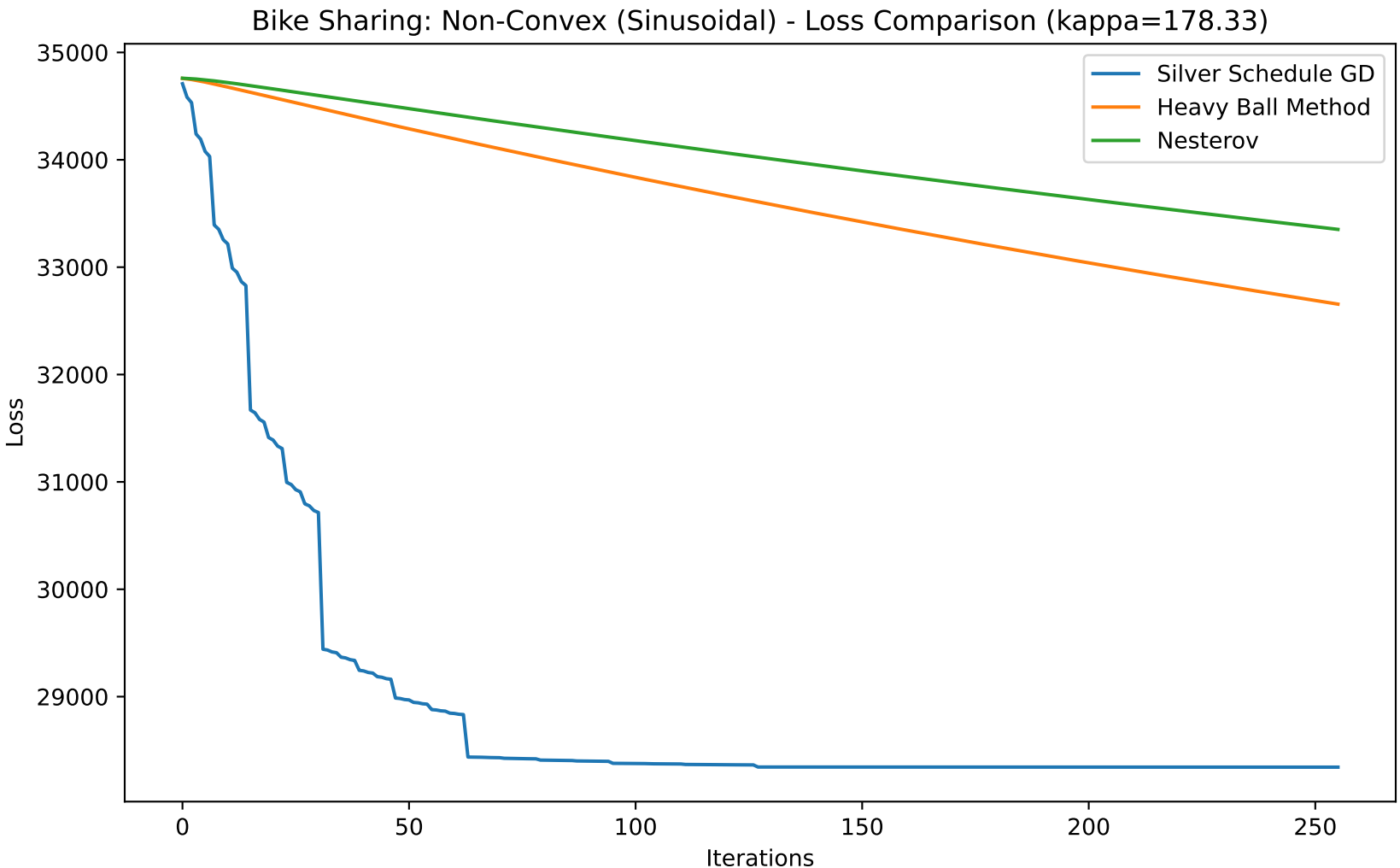

Airfoil Self-Noise: Non-Convex (Sinusoidal) - Optimal loss Comparison (kappa=12.50)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
Iterations
0
5
10
15
20
25
0
50
100
150
200
250

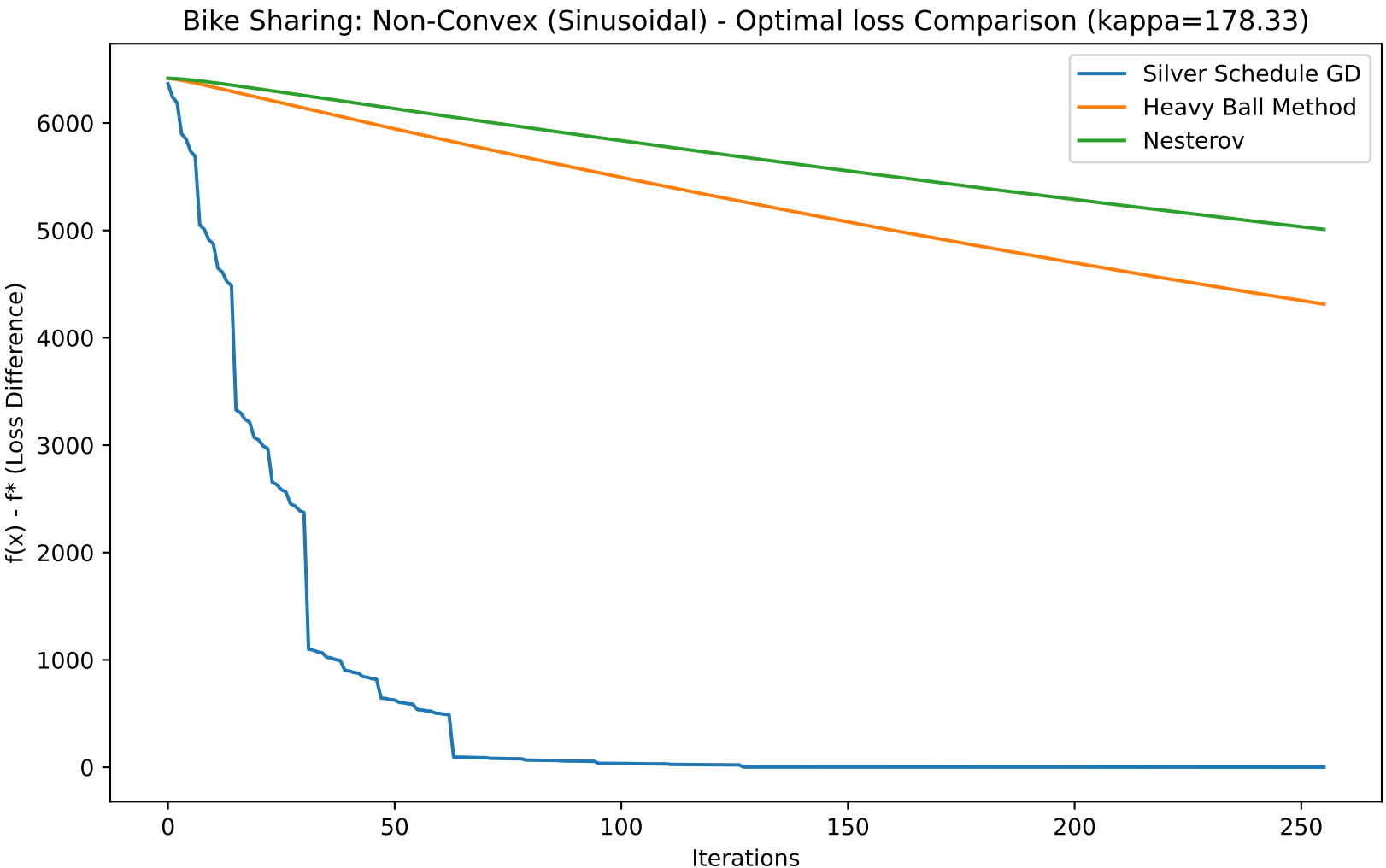

Bike Sharing: Quadratic & Convex (MSE) - Loss Comparison (kappa=178.33)
Silver Schedule GD
Heavy Ball Method
Nesterov
Loss
Iterations
70000
68000
66000
64000
62000
60000
58000
0
50
100
150
200
250

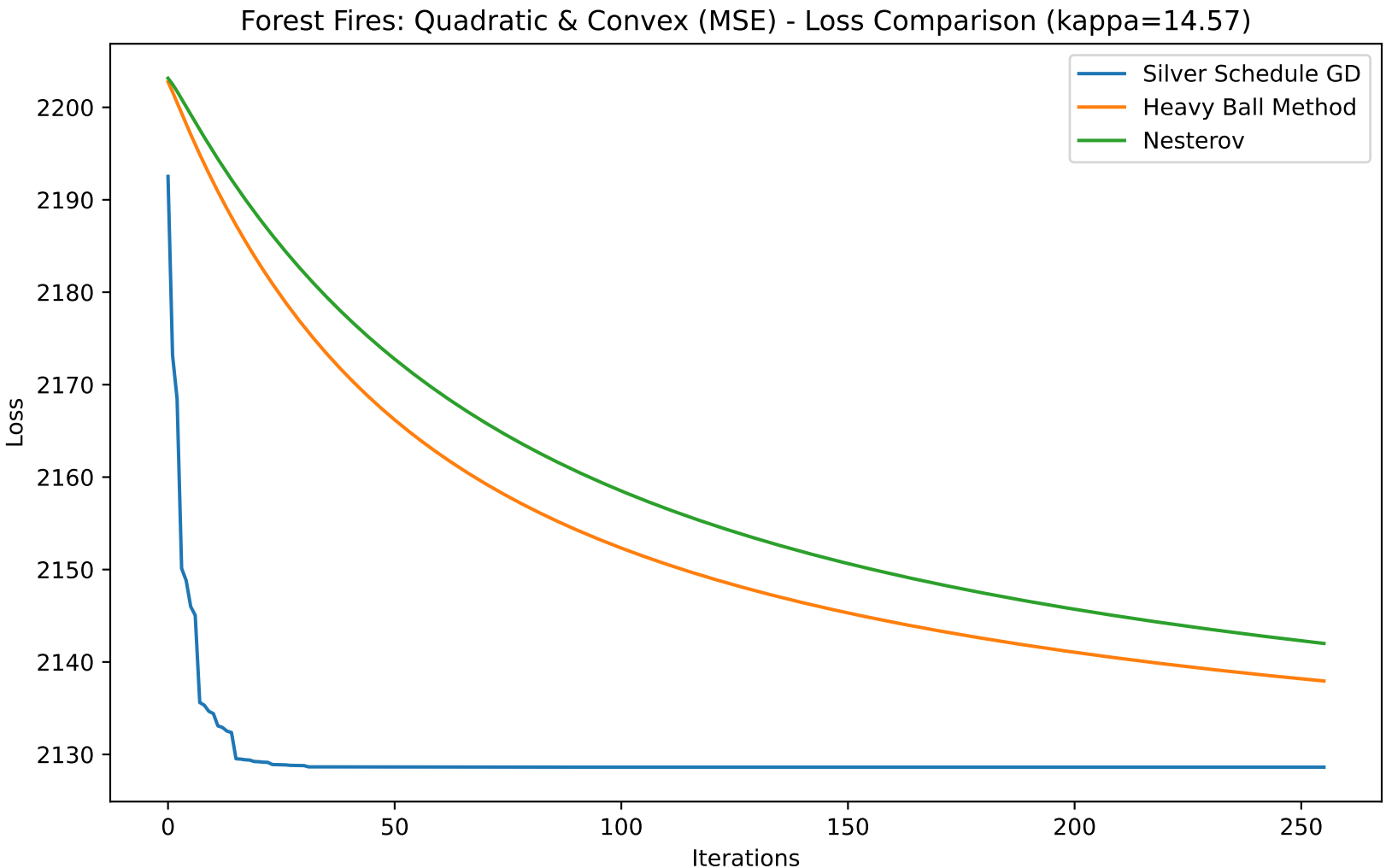

Bike Sharing: Quadratic & Convex (MSE) - Optimal loss Comparison (kappa=178.33)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
12000
10000
8000
6000
4000
2000
0
0
50
100
150
200
250
Iterations

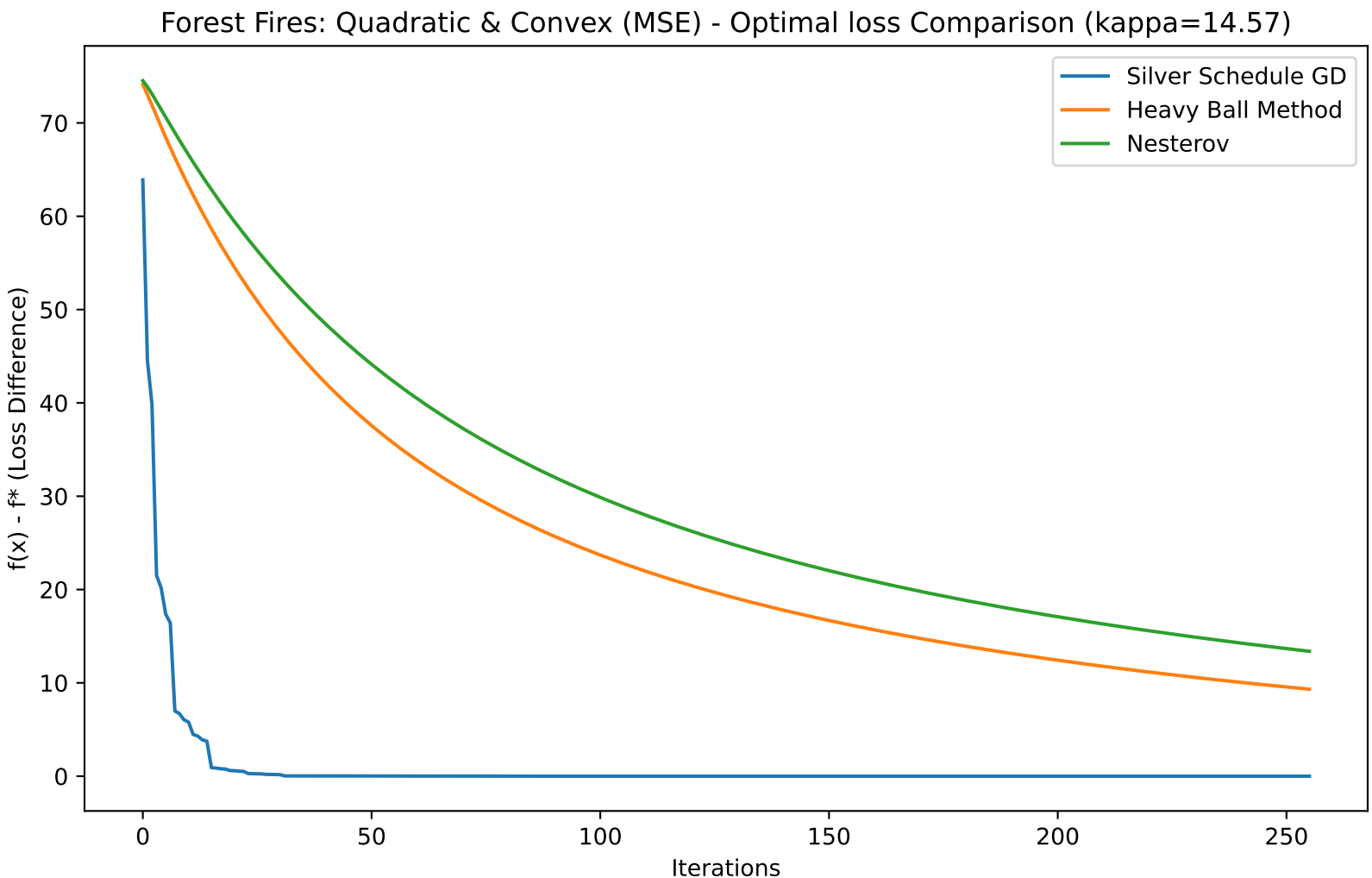

Bike Sharing: Convex, Non-Quadratic (MAE) - Loss Comparison (kappa=178.33)
+1.9057e2
0.00705
0.00700
0.00695
0.00690
0.00685
0.00680
Loss
0
50
100
150
200
250
Iterations
Silver Schedule GD
Heavy Ball Method
Nesterov

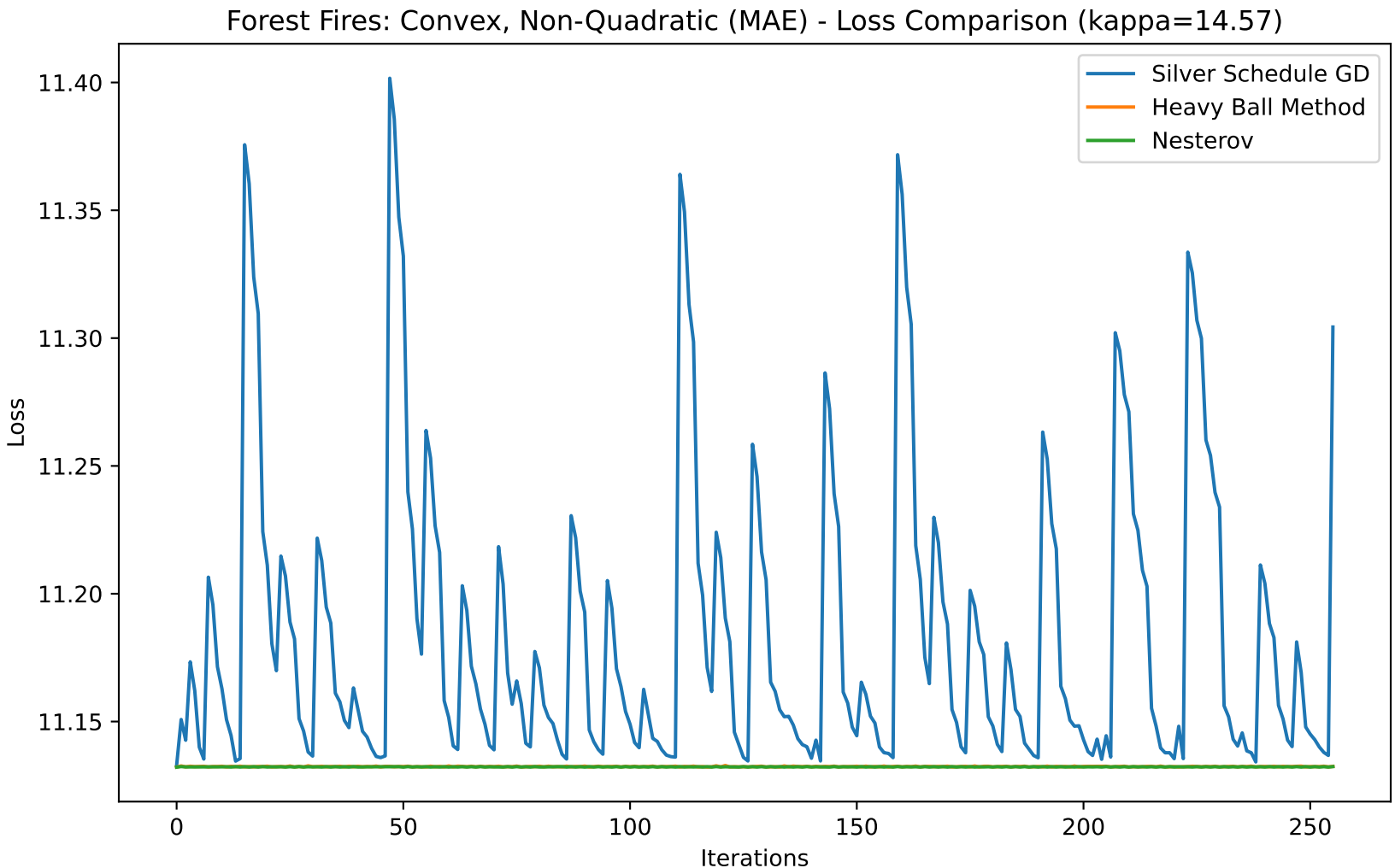

Bike Sharing: Convex, Non-Quadratic (MAE) - Optimal loss Comparison (kappa=178.33)
−2.248
−0.00040
−0.00045
−0.00050
−0.00055
−0.00060
−0.00065
f(x) - f* (Loss Difference)
Silver Schedule GD
Heavy Ball Method
Nesterov
0
50
100
150
200
250
Iterations

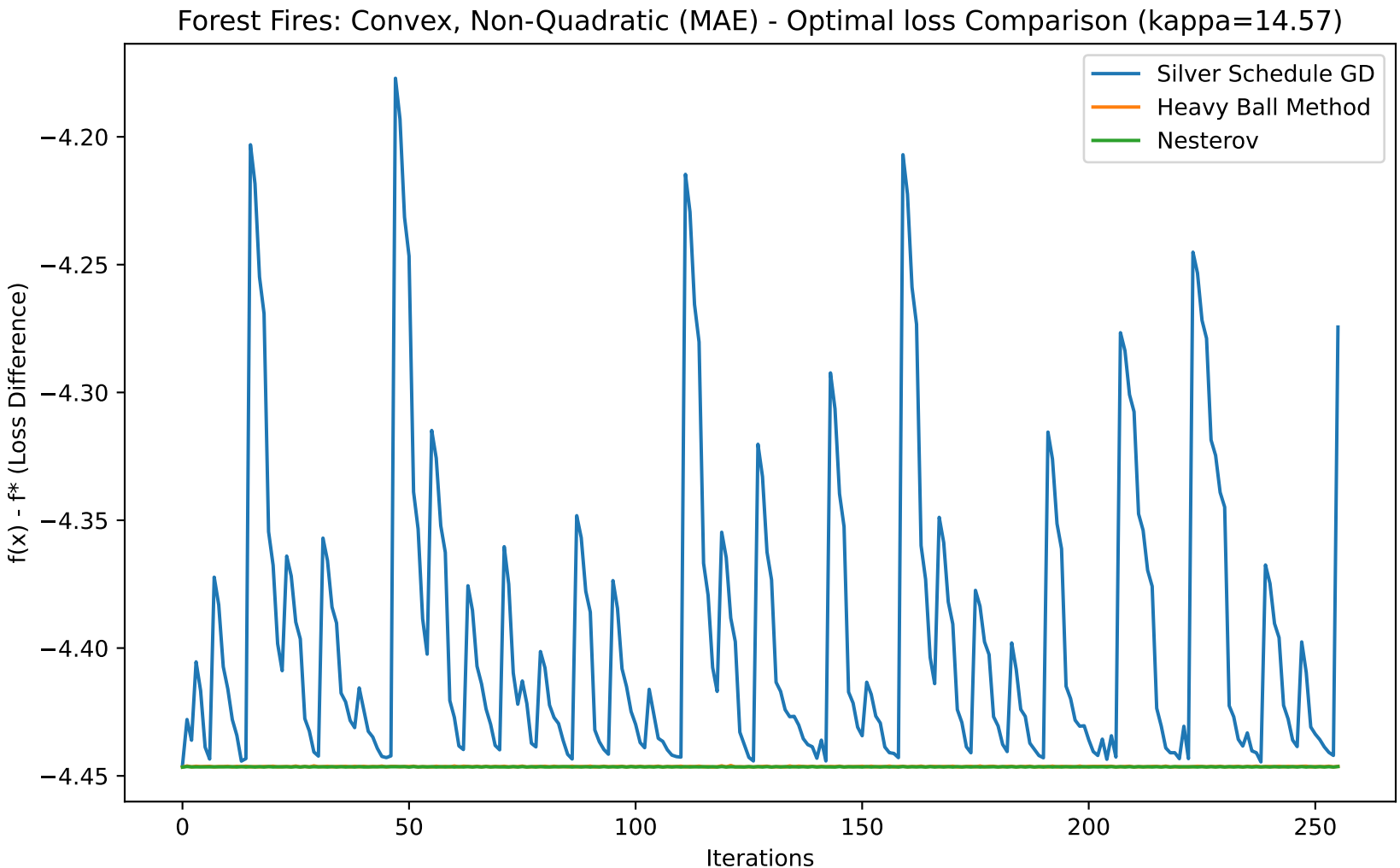

Bike Sharing: Non-Convex (Sinusoidal) - Loss Comparison (kappa=178.33)
Silver Schedule GD
Heavy Ball Method
Nesterov
Loss
Iterations
35000
34000
33000
32000
31000
30000
29000
0
50
100
150
200
250

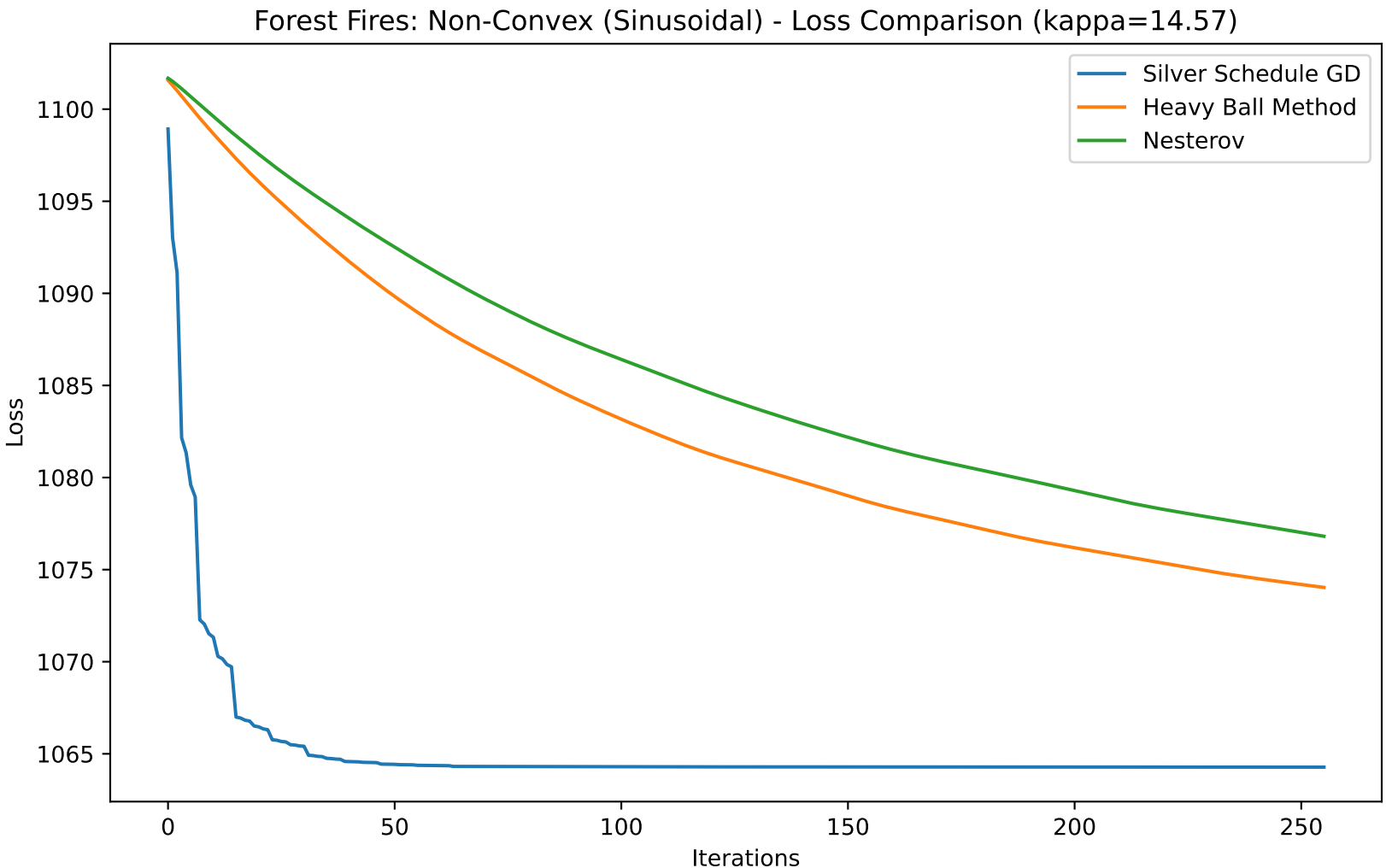

Bike Sharing: Non-Convex (Sinusoidal) - Optimal loss Comparison (kappa=178.33)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250
Iterations

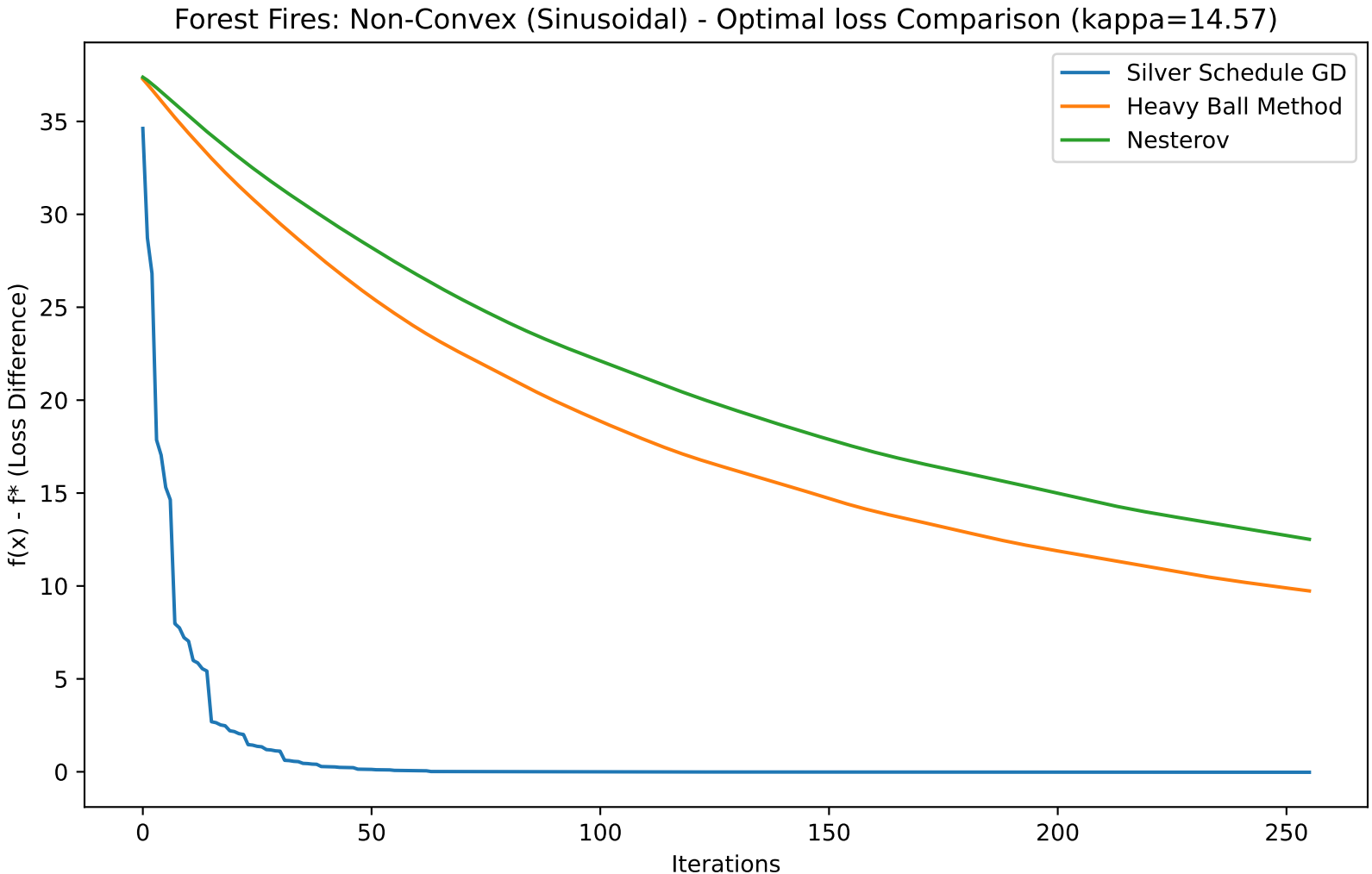

Forest Fires: Quadratic & Convex (MSE) - Loss Comparison (kappa=14.57)
Silver Schedule GD
Heavy Ball Method
Nesterov
Loss
2200
2190
2180
2170
2160
2150
2140
2130
0
50
100
150
200
250
Iterations


Forest Fires: Quadratic & Convex (MSE) - Optimal loss Comparison (kappa=14.57)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
Iterations
0
10
20
30
40
50
60
70
0
50
100
150
200
250


Forest Fires: Convex, Non-Quadratic (MAE) - Loss Comparison (kappa=14.57)
Silver Schedule GD
Heavy Ball Method
Nesterov
11.40
11.35
11.30
11.25
11.20
11.15
Loss
0
50
100
150
200
250
Iterations


Forest Fires: Convex, Non-Quadratic (MAE) - Optimal loss Comparison (kappa=14.57)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
−4.20
−4.25
−4.30
−4.35
−4.40
−4.45
0
50
100
150
200
250
Iterations


Forest Fires: Non-Convex (Sinusoidal) - Loss Comparison (kappa=14.57)
Silver Schedule GD
Heavy Ball Method
Nesterov
Loss
Iterations
1100
1095
1090
1085
1080
1075
1070
1065
0
50
100
150
200
250


Forest Fires: Non-Convex (Sinusoidal) - Optimal loss Comparison (kappa=14.57)
Silver Schedule GD
Heavy Ball Method
Nesterov
f(x) - f* (Loss Difference)
Iterations
0
5
10
15
20
25
30
35
0
50
100
150
200
250