The timing data is not able to establish a time difference between testing primes around 1000 and 10,000. Instead we will try for larger numbers, such that a comparable difference can be established.

From 10,000,000 to 100,000,000 it takes a little over 3 times as long to test a prime, which is roughly the $\sqrt{10}$ that is expected. My machine (Macbook M4 Air) may simply be too powerful for the smaller intended values of this test.

Regardless, these larger numbers lend support to the $\Theta(\sqrt{n})$ prediction and is compatible with the notion that programs on your machine run in time proportional to the number of steps required for the computation.