Predictive models for human mobility have important applications in many fields including traffic control, ubiquitous computing, and contextual advertisement. The predictive performance of models in literature varies quite broadly, from over 90% to under 40%. In this work, we study which underlying factors - in terms of modeling approaches and spatio-temporal characteristics of the data sources - have resulted in this remarkably broad span of performance reported in the literature. Specifically, we investigate which factors influence the accuracy of next-place prediction, using a high-precision location dataset of more than 400 users observed for periods between 3 months and one year. We show that it is much easier to achieve high accuracy when predicting the time-bin location than when predicting the next place. Moreover, we demonstrate how the temporal and spatial resolution of the data have strong influence on the accuracy of prediction. Finally, we reveal that the exploration of new locations is an important factor in human mobility, and we measure that on average 20-25% of transitions are to new places, and approx. 70% of locations are visited only once. We discuss how these mechanisms are important factors limiting our ability to predict human mobility.