Figure 4 - Prediction of FDR for single clusters and populations. (*A*) Probability density functions of observed % ISI_v for an example 8 Hz, 15% FDR cluster recorded for varying time lengths. (*B*) Prediction of FDR in single clusters recorded for 10 minutes. Cluster firing rates range randomly from 1 to 10 Hz, TP-FP covariance from -5.4 to 6.9 Hz^2, and contaminant neuron counts from 1 to infinity. Ceiling effect of predicted FDR at 0.75 due to theoretical limit of FDR when predicting with unknown N (see *Materials and Methods*). (*C*) Prediction of median and mean FDR in 1,000 cluster populations. Cluster FDRs are Cauchy-distributed around the population mean. Cluster firing rates range randomly from 4 to 16 Hz, TP-FP covariance from -49.2 to 113.7 Hz^2, and contaminant neuron counts from 1 to infinity. (*D*) Minimum recording time required for predictions of FDR in a single cluster to have a CV of 20%.