The horocycle flow on a $\mathbb{Z}^d$ cover of a compact hyperbolic surface has no finite invariant measures, and infinitely many (ergodic) infinite invariant Radon measures. We describe the generic points for these measures. Here "generic" means the convergence to the right limit of the ratio of Birkhoff integrals for any pair of continuous functions with compact support whose integral is non-zero.

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