K. Ramachandra asked whether the curve $z(t) = \zeta(\frac{1}{2} + it)$ $(t \in \mathbb{R})$, is dense in the complex plane. We show that if the Riemann hypothesis, a zero-spacing hypothesis, and a plausible assumption about the uniform distribution modulo one of the normalized ordinates of the zeros of the zeta function hold, then the answer is yes.