Almost Tilings with T-tetrominos

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A T-tetromino is a polyomino formed from four squares stuck together to form a T. It is easy to see that one can tile a 4×4 square with four T-tetrominos. On the other hand, Walkup showed that if n is even but not a multiple of 4, then the $n \times n$ square cannot be tiled perfectly. We show that an $n \times n$ square with n odd cannot be tiled to leave one hole.