Squares in Dominos

For \( n = 1, 2 \) or 3, we only have the trivial solutions.

For \( n = 4 \) the best solution is a slightly tilted diagonal strip between two corner squares.

\[ \alpha = 40.52^\circ \]
\[ x = 0.3691... \]
Below are the best known solutions for $n \leq 25$. Note that $n = 19$ is obtained from $n = 9$, with 10 added squares. The solution for $n = 23$ is likewise obtained from $n = 12$ with 11 added squares.

$n = 5$

$n = 6$

$n = 7$

$n = 8$

$n = 9$

$n = 10$
\[ \alpha = 43.08^\circ \]
\[ x = 0.0694... \]
\[ y = 0.5359... \]

\[ \alpha = 39.13^\circ \]
\[ x = 0.7108... \]
\[ y = 0.1325... \]
\[
3 + \sqrt{2/3} \\
6 + 2\sqrt{2/3}
\]