A prisoner was thrown into a medieval dungeon with 145 doors. Nine, shown by black bars, are locked, but each one will open if before you reach it you pass through exactly 8 open doors. You don't have to go through every open door but you do have to go through every cell and all 9 locked doors. If you enter a cell or go through a door a second time, the doors clang shut, trapping you.

The prisoner (in the lower right corner cell) had a drawing of the dungeon. He thought a long time before he set out. He went through all the locked doors and escaped through the last, upper left corner one. What was his route?