Soft Pumpkin Snickerdoodles

for the cookies:
1/2 cup butter, softened
1/2 cup sugar
1/3 cup brown sugar
1 egg
1/2 cup pumpkin puree
1 teaspoon vanilla
2 cups flour
1/2 teaspoon salt
1/2 teaspoon baking soda
1/2 teaspoon cream of tartar

for rolling: 1/4 cup sugar 3/4 teaspoon pumpkin pie spice

In a large bowl or the bowl of a stand mixer, beat together the butter and sugars until light and fluffy. Add the egg, pumpkin, and vanilla and beat until smooth. Add the flour, salt, baking soda, and cream of tartar, and mix until combined. Chill the dough in the refrigerator for 30 minutes. Toward the end of the chilling time, preheat the oven to 300. Line two baking sheets with parchment or silicone liners. In a small bowl, whisk together the sugar and pumpkin pie spice. Roll the dough into 1 inch balls, then roll each ball in the spiced sugar. Place one inch apart on the prepared baking sheets. Bake 13-15 minutes, or until just golden on the bottom. Remove from oven and let cool for a few minutes before removing to a cooling rack. Enjoy!