Figure S2. Analysis of the noise equation $\langle \cos(0, \kappa) \rangle \approx [\cos(\frac{\sigma_\phi}{\sqrt{\pi/2}})]^2$

Pseudopodia are extended with a variance σ_ϕ^2. In this equation, the notation $\langle \cos(0, \kappa) \rangle$ is the average of the cosines of the angles on a circle with weights given by the von Mises Probability Distribution (vMD) with mean of 0 degrees and variance given by $\kappa = 1/\sigma_\phi^2$. The figure reveals that $\langle \cos(0, \kappa) \rangle$ deviates less than 2% from the simple expression $[\cos(\frac{\sigma_\phi}{\sqrt{\pi/2}})]^2$ for values of $\sigma_\phi < 40$ degrees.