Converging surface wave fields create a large-amplitude feature at the origin referred to as focal spot. Its properties are governed by local medium properties and have long been used in medical imaging approaches such as passive elastography. Modern dense seismic arrays consisting of many hundreds of sensors allow now the application of noise correlation-based focal spot imaging in seismology. Here we use numerical experiments to study the resolution properties of focal spots to explore the limits of seismological data applications. Focal spot imaging is based on the correlation of diffuse isotropic wavefields. Here, however, we perform numerical experiments using an equivalent time-reversal approach to synthesize Rayleigh wave focal spots in an elastic half-space from Green's functions computed with the AXITRA solver. Simulations are performed using an 85 x 85 receiver grid separated by 8 m and 72 time-reversal mirrors in the far field. The Rayleigh wave speed is 2 km/s near the surface and increases with depth for multi-layered media. The mirrors are located at the surface, on a circle at 12 km distance from the origin to simulate refocusing surface waves. Mirrors located inside the medium are used to simulate the contribution of biasing body waves. The 2D focal spot amplitude fields obtained under these conditions are compared, for frequencies between 2 and 15 Hz, to a theoretical near-field surface wave Green's tensor parametrization using non-linear least square fitting techniques to demonstrate the feasibility of estimating the dispersion curve in multi-layered media. The set-up is further used to study effects of azimuthally variable energy fluxes on the dispersion estimates. Data from different distance ranges from the origin in the regression process to estimate dispersion mimics the effect of variable wavelength-to-aperture ratios. We find that the vertical-radial component is more sensitive to non-isotropic wavefields compared to the vertical-vertical component. However, the results for impinging P-waves energy shows that the vertical-radial component-based estimates are more stable and accurate. The tool can thus be used to test different filtering methods to account for anisotropic fluxes and P-wave energy to efficiently use each component. These results inform the focal spot imaging study using USArray data discussed in an accompanying abstract.