Transport Properties in Electron-Doped La$_{2-x}$Ce$_x$CuO$_4$ Thin Films$^1$ KUI JIN, XIAOHANG ZHANG, PAUL BACH, RICHARD GREENE, University of Maryland, College Park — The electron-doped high-Tc cuprate La$_{2-x}$Ce$_x$CuO$_4$ (LCCO) is quite different from other members, such as Pr$_{2-x}$Ce$_x$CuO$_4$ (PCCO) and Nd$_{2-x}$Ce$_x$CuO$_4$ (NCCO). One distinct difference is that the optimal Ce doping in LCCO is ~0.10, compared to Ce ~0.15 in PCCO and NCCO. Here, we will present a detailed and systematic study of the magnetic field and temperature dependence of the transport properties of LCCO, including the low-temperature Hall effect and in-plane angular magnetoresistance.

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