First-generation attempts at surveying our Universe using intensity mapping have focused on the power spectrum statistic, P(k), where the power of spatial fluctuations in the brightness temperature field is expressed as a function of Fourier wavenumber. In order to diagnose instrumental systematics and astrophysical foreground contamination, the power spectrum is often decomposed as P(kperp, kpara), where kperp and kpara are the wavevector components perpendicular and parallel to the line-of-sight, respectively. Unfortunately, such a description assumes a flat, plane-parallel sky. In this talk, I will introduce a generalized version of P(kperp, kpara) that respects widefield, curved-sky effects. If time permits, I will also discuss a potential solution to the light cone problem, where intensity mapping surveys probe such enormous volumes that datasets span multiple cosmic epochs, creating problems for data interpretation.