Measurement of the double-differential cross section $d\sigma/d\phi^*$ of $Z \rightarrow \mu\mu$ events at CMS NICHOLAS MUCIA, Northwestern Univ, CMS COLLABORATION — We present a measurement of the double-differential cross section $d\sigma/d\phi^*$ using $Z \rightarrow \mu\mu$ events produced in pp collisions recorded with the CMS detector in 2012. The observable $\phi^*$ depends only on the angular variables of the two leptons. This variable is closely related to the transverse momentum of the $Z$ boson but suffers less from experimental resolution. Theoretical predictions are compared to the measured cross sections.