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Jason Fulman* (fulman@usc.edu), **Jan Saxl** (J.Saxl@dpms.cam.ac.uk) and **Pham Tiep** (tiep@math.arizona.edu). *Cycle indices for finite orthogonal groups of even characteristic.*

We develop cycle index generating functions for orthogonal groups in even characteristic, and give some enumerative applications. A key step is the determination of the values of the complex linear-Weil characters of the finite symplectic group, and their inductions to the general linear group, at unipotent elements. We also define and study several natural probability measures on integer partitions. (Received July 30, 2010)