



**Figure S1.** Actimetric analysis of P{UIE} flies ( $n=32$ ). (a) Flies show the expected bimodal activity peaks under 12:12 L:D conditions, which is degraded when flies are shifted to an 8:8 L:D schedule. (b) Chi-square periodogram of 12:12 L:D activity data shows a peak at a 24 hour period, consistent with normal circadian rhythmicity. (c) Chi-square periodogram of 8:8 L:D activity data shows altered periodicity of locomotor activity rhythms. The data file used to generate these figures is available as Table S1.