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## ACCEPTED MANUSCRIPT

# Field data and simulations to estimate the role of standby energy use of lighting control systems in individual offices

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### Highlights

- 57 real offices and their real occupancy are used for simulations
- Standby of lighting controls is included in the simulations
- The energy for standby accounts for about 30% of the total energy for lighting
- Standby portion increases with high luminous efficacies
- Energy for standby should be eliminated to secure savings from lighting controls

### Abstract

This paper investigates the effectiveness of lighting control systems (LCSs) in 57 individual office rooms of an educational building located in Lund, Sweden. The study uses simulations based on actual occupancy data. The simulations, performed with Daysim via the Honeybee interface, focus on the portion of standby energy use on total lighting energy use considering different combinations

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