



Using the Dent LIGHTLogger™ to measure lighting use

Overview

The most effective way to reduce lighting energy use is to turn lights off when they are not needed. The impact of energy awareness campaigns on lighting use can be measured with lighting time-of-use loggers.

The Dent LIGHTINGlogger is well suited to this specific task. It requires no electrical connections or software to use.

Procedure

1. **Before the start** of the awareness program or other strategy, identify the most appropriate lighting circuits (one or more lighting fixtures controlled by a single on-off switch) to monitor. Each circuit will need a logger.
2. **Clear each logger's memory** at the start of each new project by pressing and holding its RESET button on the upper left of the logger (see figure 1) with a paper clip or pen until "rESEt" appears on the display.
3. **Place the logger inside a lighting fixture** with the photo sensor directed toward the light source (figure 2).
4. **Monitor for one or two weeks**, including weekends. Avoid closures or other unusual circumstances.
5. **At the end of the first monitoring period**, record the totalized run time values and percentages from the logger display. This is the baseline lighting use.
6. **After the strategy has been implemented**, reset the loggers and repeat the monitoring. The difference represents the program's potential energy savings.
7. **Cost savings for each lighting circuit can be estimated** with the following equation:

$$\text{\$ savings} = \Delta T * W * R \text{ where}$$

- ΔT is the reduction in usage in hours
- W is total wattage of lighting per circuit
- R is the dollars per kilowatt-hour



Figure 1: Dent LIGHTINGlogger



Figure 2: LIGHTINGlogger in lighting fixture

For More information Refer to the "dent time-of-use loggers" application note on the Tool Lending Library website if you desire more information on time-of-use loggers.