



The largest cost of a lighting system to a commercial user is not initial cost of the fixtures and installation, but energy and maintenance costs. The largest lighting maintenance cost is relamping — changing the burned out light bulbs. It is not the cost of the lamp itself that is expensive (although that does need to be factored), but the labor in-

involved, and the disruption to business. One of the best ways to minimize these costs is to use a practice called “Group Relamping”.

In a typical non-group relamping scenario, when a lamp burns out in the workplace, it is replaced individually with a new lamp as soon as possible. This is called *spot relamping* and it proves to be a very inefficient use of maintenance staff (MS) time and hence a waste of money. First, the problem must be identified and communicated to the MS and then there is often a site visit required to assess what is needed. Next a new lamp and proper equipment are acquired (this may require a trip to buy the lamp and rental of a lift). Access to the fixture is gained. This often requires moving workstation equipment out of the way to install a ladder or lift. Once the lamp is changed, the equipment must be put away and the workspace normalized. Hours or days later another lamp burns out somewhere else and the process is repeated. This can take a lot of time, disrupt worker or customer operations, and introduce safety concerns.

With the use of *group relamping* procedures, all of the lamps in an area are installed at once and then at a predetermined interval all of the lamps are replaced, before they start burning out on a regular basis. This allows a trained MS crew to schedule access to an area, bring in all the necessary equipment and supplies, work in an efficient manner (possibly at night, on the weekend or some other scheduled downtime), and then leave that area until the next scheduled group relamping.

Determining the group relamping schedule is based on a number of variables that contribute to what are called Light Loss Factors (LLF). LLFs include lamp life; annual hours of use; and lamp lumen depreciation.

To determine the group relamping interval, find that point when the lamps in an area will start burning out on a regular enough basis to make it cost effective to just replace them all even if they aren't burned out yet. This usually works out to 70% to 80% of rated lamp life (after allowing for burn cycle changes). There will be some lamps that will burn out prior to this time and should be spot relamped as needed.

An expanded version of this article may be found on our website at [www.lightingdesignlab.com/articles](http://www.lightingdesignlab.com/articles) or on the [www.betterbricks.com](http://www.betterbricks.com) website.

## group relamping



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