

# Venture's Technical Information: EFFECTIVE LIGHTING MANAGEMENT - Group Relamping

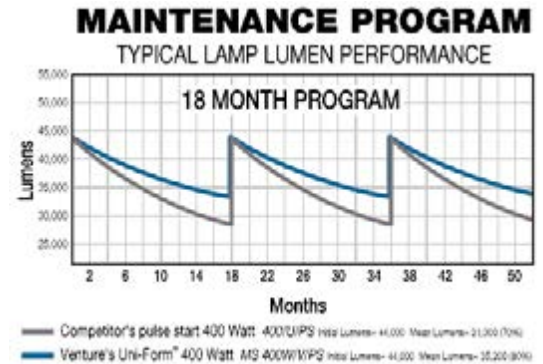


Group relamping offers significant savings in time and labor costs over spot replacing failed lamps. Regularly scheduled maintenance based on projected lamp life and lumen depreciation keeps a lighting system functioning at its maximum by replacing all lamps at their economic life. This provides:

- Optimum light output
- Superior aesthetic quality
- Optimum energy efficiency
- Lower labor costs

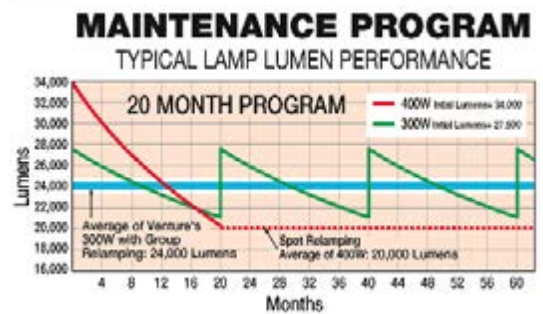
## 1) Optimum Light Output:

Light levels are at their peak when your lighting installation is new. Most traditional metal halide lamps decrease in light output to 40% of initial light output by the end of rated life. A number of factors may accelerate this reduction in efficacy (lumens per watt). Group relamping at economic life keeps the light levels from dropping significantly. It also provides an opportunity to remove dirt accumulation in the luminaires. Cleaning during group relamping saves time and helps maintain optimum light levels. A cleaner, well-lit environment increases safety and security, can contribute to higher worker productivity and creates a better impression on visitors.



## 2) Aesthetic Quality:

The quality of light changes over economic life, shifting 200K to 300K in color. In the last 25% of rated life it may accelerate, shifting 500K to 600K. This causes old lamps to appear blue or pink especially when compared to new lamps. All the lamps in an area will generally change color together; so the color shift of the lamps will be most noticeable during spot relamping.



## 3) Optimum Energy Efficiency:

While the light output of traditional metal halide lamps decreases over life, they still consume the same (or sometimes more) electricity. Since energy is the largest cost of lighting, group relamping prevents almost half of the energy from being wasted by under-performing lamps. For example, a 400 watt traditional metal halide lamp may consume \$800 of electricity over rated life. After 60% of rated life, about \$320 is wasted on lamps providing less than mean lumens. Spot relamping wastes energy dollars. The cost of a new lamp and the labor to install it as part of group relamping is generally less than 5% of the total energy cost.



## 4) Cost Effective Replacement:

Group relamping, as a planned maintenance program, reduces downtime and labor costs. Spot relamping often takes an employee away from regular duties just to replace a burned out lamp. This inconvenience grows as lamp failures increase towards the end of rated life. Group relamping not only eliminates wasted labor and workday disruptions, it allows for scheduling during normal shutdown periods.

Group relamping at economic life is a practical way to reduce energy and maintenance costs, as well as sustain workers' visual acuity with a bright workplace environment. It also offers the opportunity to replace older lighting with Venture's energy saving Energy Master® retrofit products or new, more efficient Uni-Form pulse start systems.