

# The *Qualite*<sup>®</sup> Lighting System

## A Comprehensive Overview

### Patented Reflector Design

#### **Engineered for efficiency, beam spread and beam control**

- Highest fixture efficiency in the industry up to 77.7%.
- 3 optional fixture series with visor and 2 without, facilitate customizing moderate to extreme spill and glare control.
- Qualite designed custom peens and steps, creating higher efficiencies and the perfect beam spreads for Sports Lighting applications.

#### **Narrow to wide beams spreads (NEMA 2 on up) will fit any application**

- Most competitors lack an efficient narrow beam. They substitute *more* wider fixtures, creating a “flat light” environment which lacks modeling (see RP-6-01 paragraph 2.3.6)

### Ability to Design per the Application

#### **Lighting Design Flexibility**

- Qualite can meet the *true* IESNA design guidelines *or* meet the constant type energy efficient design strategy (designing 10% below the target maintained level).
- Qualite works hand-in-hand with each customer to solve specific challenges. (Spill light, obstructions, existing poles, etc.)
- Qualite offers 4-wattage options (1000w, 1500w, 1650w or 2000w) to fit any application. *Some competitors are limited to only one wattage choice and attempt to make the application fit their fixture.* If too high a wattage is used on a small area (Tennis courts, Basketball courts, etc.) the *beam intensity will be too high and light uniformity will suffer!*

#### **System Flexibility**

- Qualite offers many fixture mounting options. Our structural engineers will work with you to customize mounting options.
- Many pole options are available, including:
  - Direct embedded
  - Anchor base concrete
  - Steel
  - Service baskets
- Control options include:
  - UL listed contactor cabinets
  - ReQuest remote control/monitoring system
  - Timers or photo sensors
- Warranty options
  - 10 year standard
  - 10 year comprehensive
  - 25 year comprehensive
  - Custom warranty

# Constant type Lighting Strategy – Pros & Cons

## Pros

- Reduced power consumption
- Reduced installation costs (fewer fixtures)
- Reduced maintenance costs (typically sold with a 10-25 year warranty)

## Cons

- Higher initial cost (due to costlier fixtures or warranty costs)
- Uniformity issues when outages occur due to fewer fixtures
- Sub-par light levels
  - The IESNA RP-6-01 definition of **maintained average luminance** is the value below which the average luminance on a specified surface is not allowed to fall. It is the average luminance value on the specified surface at the time maintenance must be carried out.
  - There is a misconception that the constant or continuous type of strategy meets the IESNA'S performance criteria because of a statement within the RP-6-01 that states: "*A variation between predicted performance and the actual site survey results is to be expected. The individual readings should be within +/- 10% of the calculated mean.*" However, the very next sentence states "*Corrective action should be taken to bring the installation into conformance.*"

## Calculating True System Cost

To calculate a **COMPLETE** system cost add the *Initial equipment cost*, *Operating cost (Energy cost + Maintenance cost)* and the *Cost of money*. The formulas and examples below are based on a 1500W system for 25 years.

A. *Energy cost* of Luminaire over 25 years:

\_\_\_\_\_ (#) luminaries  
 x \_\_\_\_\_ kW demand per luminaire  
 x \_\_\_\_\_ hours (average annual usage)  
 x \$0.1035 kW/hour (2007 national average) x 25 years

B. *Maintenance cost* to re-lamp all luminaries over 25 years (assuming no Warranty):

\_\_\_\_\_ (#) fixtures.  
 x \_\_\_\_\_ (\$) per lamp including labor  
 x \_\_\_\_\_ hours (annual average usage)/lamp replacement hrs x 25 years

Total: \_\_\_\_\_ (A + B) = *Operating cost*

C. Example: 25 yr System cost analysis example based on 600 hrs of annual usage

Company X uses 100 fixtures at \$700 ea.  
*Initial equipment cost*..... \$ 70,000  
*Operating cost* (25 Years)..... \$299,176  
*Cost of money*..... \$ 0  
 Total **\$369,176**

Company Y uses 75 fixtures at \$2000 ea.  
*Initial equipment cost*.....\$150,000  
*Operating cost* (25 years).....\$186,882  
*Cost of money*.....\$190,908\*  
 Total **\$527,790**

\* \$80,000 Compounded Annually at an interest rate of 5% for 25 years.



ISO 9001-2000 Certified

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