

# 1. Lamp type

Choose from halogen incandescent, fluorescent, high-intensity discharge or light-emitting diodes (LEDs).

#### 2. Light output

How many lumens of light output do you need to achieve the desired candlepower (or lux) illumination on the work surface, wall or street?

### 3. Light quality

What color rendering index (CRI) and correlated color temperature (CCT) is best for the application? What amount of deviation from one lamp to the other is allowed?

### 4. Fixture height

Is the application normal ceiling height, low-bay, high-bay or street lighting? Fixture height influences lumen output and light distribution characteristics.

### 5. Aesthetics

Looking for any accenting, shadowing and silhouetting characteristics? Will you need to change the luminaire color temperature or primary color based on time-of-day or type of retail product on display?

### 6. Facade setback

For building envelope outdoor lighting, how far away from the illuminated surface should lights be located? Should they be above ground or below ground? What about lighting angle?

## 7. Safety

The amount of lighting lumens and color quality often determine the level of safety. The use of motion sensors and the level of dimming are also safety metrics.

# 8. Energy consumption

The type of lighting will establish the initial potential energy savings. Add lighting controls (like motion sensors, timers and daylight sensors), and you can save even more.

# 9. Light pollution

Lighting fixtures can have BUG ratings, representing the amount of backlight, uplight and offensive glare they produce. In rare cases, the choice of lamp or luminaire and lighting schedule can harm its biological surroundings. Minimizing light pollution may require tradeoffs with lighting type and energy consumption.

#### 10. Electrical

Power draw, available voltages and level of power quality must be considered.

Ready to upgrade your outdoor lighting? We've got financial incentives for you! Call 1-800-787-1706, email energysavings@nationalgrid.com or visit ngrid.com/business.