



## Security Lighting

Lighting plays an important role in raising the comfort level for those using streets and other open spaces at night. Well lighted public and private spaces invite more people to use those spaces, and according to Art Hushen, Tampa Police Crime prevention unit "Lighting is the number one activity in controlling criminal activity." However, providing effective, useful and efficient security lighting means more than just putting up some lights.

## Effective Security Lighting

A recent study at the Lighting Research Center established that there are several major factors that need to be taken into account in designing effective security lighting:

- ◆ **Light Levels (horizontal and vertical)**
- ◆ **Light uniformity**
- ◆ **Light glare**
- ◆ **Light color**

Each of these elements plays an important role in the effectiveness of security lighting.

### Light levels

The Illuminating Engineering Society (IES) recommends the following illumination levels for security lighting:

Recommended Illumination		
	Horizontal	Vertical
Public Space	1- 5 fc	.5-.8 fc 5' above ground
Parking Facilities		
<i>open parking</i>	minimum 3 fc on pavement	.3 fc at 5' above ground
<i>covered</i>	minimum 6 fc on pavement	6 fc at 5' above ground
<i>sidewalks &amp; grounds</i>	minimum .6 fc on pavement	.6 fc at 5' above ground
Parks	minimum 1 fc at ground level	1 fc at 5' above ground
Fast food restaurants		
<i>parking lot, sidewalks</i>	minimum 3 fc at ground level	3 fc at 5' above ground
<i>drive-up window</i>	minimum 6 fc at ground level	3 fc at 5' above ground
Convenience stores		
<i>parking lots</i>	minimum 6 fc at ground level	minimum 1.2 fc at 5'
<i>sidewalks, refuse area</i>	minimum 3 fc at ground level	minimum 1.2 fc at 5'
<i>storefront exit</i>	minimum 5 fc at ground level	minimum 1.2 fc at 5'
Source: IES Lighting Handbook, 2000		

## **Light Glare**

Glare affects a person's ability to see even when the illumination is bright because glare reduces visibility and visual performance. Poor quality light fixtures, while providing light, actually may make it more difficult to see because of the glare associated with the fixture that "spill" light and cause glare. Floodlights and wallpacks are examples of fixtures that spill light. Glare can be controlled and reduced by directing the light down and allowing only 10% of the light above the line of sight.

## **Light Color**

The light color is also an important consideration in lighting design. Low light levels make it difficult to distinguish colors. Additionally, some lighting can actually change the appearance of the colors of cars, clothing and vegetation. Metal halide lights that produce a white light are a good choice for security lighting because the light they produce does not distort actual colors enhancing the sense of security provided by security lighting.

## **Summary**

Good lighting increases security and decreases the opportunity for crime. But good lighting is not just putting up lights. It requires consideration of the factors outlined above, as well as others. For a free security lighting consultation, contact your Tampa Electric account manager or the Tampa Police Department.