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**Lighting**

## **Turn on the right lights to keep employees awake and on the job**

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Offices should be comfortable spaces for people to work in. From a practical and profitable perspective, offices can be designed to enhance employee comfort, resulting in greater productivity. This includes a feature sometimes overlooked: lighting.

Improper lighting affects people's health and performance as well as their ability to see clearly. It may cause physical discomfort or create diversions, such as glare on computer screens. The more comfortable and focused workers are in their environments, the more productive they can be.

### **Ready to work**

Research shows that lighting clearly affects people's behavior. For example, lack of natural (full spectrum) light can cause sluggishness, fatigue, food cravings and lack of concentration. Since many offices do not have natural light available, other sources must be used.

Typical commercial light source options include standard incandescent, halogen, fluorescent and metal halide lamps. Each lamp type offers unique color temperatures, color-rendering capabilities and wattage options.

The key to effective lighting in the workplace is to create a comfortable feel in the space. In a relaxed setting, employees may have better attitudes, be more productive, and ultimately perform better.

Often, lighting is an individual preference based on people's life experiences. For example, incandescent lighting may make some people feel comfortable because it may create a residential-type atmosphere. Some fluorescent lamp color characteristics can simulate natural light. Some lamp types, however, may cause people to appear pale and washed-out or produce significant amounts of heat.

Regardless of which light source is preferred, proper light levels are important. Too much light can cause as much discomfort as too little. The incorporation of lighting controls, such as dimmer switches and dual switching, gives occupants more flexibility and comfort in their environment.

Some spaces may have multiple lighting systems installed to give occupants more options. This provides the capability to adjust surrounding light levels in order to enhance employees' quality of work and their productivity.

### **Setting priorities**

When designing a lighting plan for the work place, priorities may depend on the type of work performed in the space. For example, where color is relevant (such as retail clothing sales or food preparation), lamp color rendering may be the most important.

For computer users, reducing glare on the computer screen may be the priority.

In today's computer-driven society, lighting glare on computer screens is a common problem. This annoying glare can create a diversion and physically impair the workers' abilities by causing eyestrain and headaches.

A computer user may see bright reflections due to hot spots produced with indirect lighting or visible lamps associated with direct lighting. These reflections show up as glare on the screen because they are much brighter in contrast to the rest of the ceiling. This glare can be reduced by using proper light fixture types, spacings and mounting heights to achieve an even light distribution with low contrast across the ceiling.

Indirect lighting, when spaced and suspended at proper heights, can be effective in computer-equipped spaces.

#### **A case in point**

Showcasing the way lighting can create a positive work environment, a Houston-based engineering firm recently upgraded its entire lighting system concurrent with a major office remodel. Since the employees regularly meet with various architects, consultants, and building owners in their offices, the lighting was designed to create a walk-through lighting showroom for viewing and demonstrating lighting options.

Incorporated into the lighting design are an assortment of fixture types from different manufacturers, as well as different light distribution patterns, lamp types, lamp color temperatures and lighting controls.

Additionally, each office has a different style of direct or indirect lighting designed to help eliminate glare on computer screens. Some offices have dimmable lighting, dual switching or remote lighting control to accommodate various light comfort levels. Other areas have multiple lighting systems for increased flexibility during presentations or individual meetings.

Because lighting is such a vital feature in the work place, options should be considered when employers desire a comfortable working environment and productive employees.

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