

Lighting in the office enviroment

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In the developed countries the number of people who do the office work is great nowadays and it's rapidly increasing. The U. S is not an exception, thus millions of Americans spent one third of their lifetime in the office environment. They are usually the most active consumers of painkillers, and the favorite clients of the companies producing glasses and contact lenses. Numerous researches proved that office work is one of the most harmful for the workers health, as it doesn't provide the needed amount of physical activity, in the same time making the employee spend great amounts of time in a place where some vital for health conditions, like airing, the level of noise or level of lighting are not appropriate.

The doctors consider poor lighting one of the main reasons that leads to the excessive eyestrain, muscle fatigue, headaches and poor posture, the article about the lighting in the office from the Officinado Website says. Except for this it lowers the effectiveness of the employees' labor due to the visual and muscle strain the office workers experience when the lighting conditions are poor.

The researches found the roots of this problem. The thing is that the level of lighting is excessive in most of the offices due to the fact that the appropriate level was calculated proceeding from the assumption that paperwork would be the main activity of the workers. But time passed, and more and more offices began to refuse from the pen and paper methods. Instead the computers appeared which completed the needed tasks more quickly and effectively, and without the piles of paper lying everywhere.

But the thing is that the level of lighting intended for paperwork is excessive for the PC users. Thus the employees have to work in the accommodations with the inappropriate lighting conditions, which causes discomfort to them, and, of course, makes their labor less effective than it could've been if the lighting was proper. To make their work more comfortable and effective the intensity of general lighting should be reduced, and the desk lights should be put for the pen and paper tasks.

One of the visual effects that appear because of the excessive lighting and improper disposal of the lighting sources is glare. The article Ergonomics in the Office by Bryan Galloy defines glare as the " visual effect caused by large differences in brightness between an object and its surroundings". He advises several methods for reducing it, which are:

Positioning light sources outside the employee's visual working field;

Covering light sources with glare shields;

Using matte finishes to reduce the reflectance of surfaces;

Installing glare screens on the VDT;

Covering windows or skylights with blinds or films.

The doctors say that in some extreme cases the glare can even impair vision temporarily, but in the office environment it's usually not that intensive.

Nevertheless, it can cause visual fatigue and eyestrain.

One more factor that causes visual discomfort for the office workers is the light reflected from the shiny polished objects. The PC users suffer from it much more than other workers, as the monitors reflect the light from the sources that are located behind the user or above him. To reduce this effect

the specialists advise to put the computer workstations between the rows of overhead lights instead of stationing them directly below them in order to reduce the intensity of light. The specialists also advise to put the computers in such a way for the person who operates the computer would not face the window or sit back to it, to make the light fall at the right angle and to move the source of light from the line of sight of the person who operates the PC.

Two primary types of lighting exist in the office, which are task lighting and ambient lighting. Ambient lighting is for satisfying the needs for general lighting and for low visual-demand tasks, while the task lighting is used for completing the tasks that demand certain preciseness. The specialists advise that the task lighting should be three times the intensity of ambient lighting.

The authors of the Office Ergonomics say that the lighting for the offices that use the PC together with completing the paperwork should be about 300-400 lux (30-40 footcandles). For the offices where the paper documents are not used it shouldn't be more than 200 lux (20 footcandles). It is also useful to minimize the outside lighting with the help of drapes, dark film, blinds or louvers, as it reduces the strain on the workers' eyes. One more way to reduce the light reflections on the monitor screen exists which is the monitor filter. It is a good idea to replace the light office desktops with the reflective finishes with the darker ones whose finishes are matte. The specialists also advise the computer users to adjust the screen's brightness and contrast controls to reduce the strain on the eyes.

As we see, proper lighting is very important for creating a comfortable and stimulating working environment for the employees. This goal can be

reached by regulating the level of artificial lighting in the accommodation, reducing the outer light with the help of the drapes, dark film and blinds and proper disposition of the computer workstations.

Works Cited

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