



## Beginners Guide to Artificial Optical Radiation Regulations (ie Bright Lights!)

New regulations requiring employers to control the exposure of their workforce to artificial optical radiation like bright lights came into force from April 2010. The 'Control of Artificial Optical Radiation at Work Regulations 2010', which came into force on 27th April, implements the 'EU Optical Radiation Directive of 2006'.



### What is it?

Very simply, the objective of the regulations is to protect workers from exposure to intense sources of artificial light.

### What don't you have to worry about?

Most workplace light sources are intrinsically safe and will not be covered by the new regulations. Safe light sources include:

- ✓ All forms of ceiling-mounted lighting used in offices etc with diffusers over the bulb. These include compact fluorescent floodlighting, ceiling-mounted tungsten halogen spotlights and ceiling-mounted tungsten lamps.

- ✓ Compact fluorescent lamps and tungsten halogen lamps when situated at distances more than 60cm from the user.
- ✓ All forms of task lighting, including desk lamps.
- ✓ Photocopiers.
- ✓ Computer or similar display equipment, including personal digital assistants.
- ✓ Photographic flash-lamps.
- ✓ Gas-fired overhead heaters.
- ✓ Vehicle indicator, brake reversing and fog lamps.

- ✗ Interactive whiteboard presentation equipment.
- ✗ Vehicle headlights.
- ✗ Non-laser medical applications such as: operating theatre and precision task lighting; diagnostic lighting such as foetal trans-illuminators and X-ray viewing boxes.
- ✗ Ultra violet insect traps.

### What could be a problem?

Some more intensive light sources could be a problem if they are in very close proximity to workers or stared at for long periods. These include:

- ✗ Ceiling-mounted fluorescent lighting without diffusers.
- ✗ High-pressure mercury floodlighting.
- ✗ Desktop projectors.



is an independent firm of accountants, tax advisors and business advisors

114 High Street  
Cranfield  
MK43 0DG

Tel 01234 752566  
Tel 01908 616104  
Fax 01234 752577  
info@vowles.co.uk  
www.vowles.co.uk



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- × Art and entertainment applications such as spotlights, effect lights and flash-lamps.
- × Any Class 1, 1M, 2, 2M & 3R laser devices not used in combination with magnifying aids. Examples include laser printers; CD/DVD recorders; materials processing lasers; disconnected fibre-optic systems; bar code scanners; level and alignment devices in civil engineering and surveying; and laser pointers.

Human instinct is to look away from these intense light sources before they hurt your eyes (but equally, it is a natural instinct to initially look at a light or at movement). Also, intense light sources are normally used at a safe distance from other workers. If this is the case they will not have any effect on the health of workers and no additional action is required.

## Be aware of hazards!

Intense and hazardous sources of light that the regulations are intended to cover include:

- × Welding (both arc and oxy-fuel) and plasma cutting – mainly eye damage.
- × Pharmaceutical and research activities where ultra violet fluorescence and sterilisation systems can cause skin burn.
- × Hot industries where furnaces cause eye and skin damage.
- × Ultra violet curing of inks in the printing industry.
- × Ultra violet curing of paints during motor vehicle repairs.
- × Laser surgery, blue light and ultra violet therapies in the medical and cosmetic treatment sector can

lead to eye and skin damage.

- × Class 3B and Class 4 lasers used in research and education which have the potential to cause permanent eye and skin damage.
- × Manufacture and repair of equipment containing lasers that would otherwise be hidden.

These very intense lights pose a potential risk of harming the eyes and skin, however this hazard has long been recognised.

Most employers who use these hazardous sources of optical radiation are already taking sensible control measures to protect their workers by preventing their exposure to the light source. This is usually achieved through the use of engineered measures such as remote controls, interlocked screens and covers, preventing close approach to the source and by clamping (rather than holding) work pieces.

In some cases, where other measures are not reasonably practicable they resort to the use of personal protective equipment.

## What to do next?

What, if anything, will businesses need to do differently because of these regulations?

- The key requirement is to ensure that the eyes and skin of workers are properly protected.
- Businesses with only safe sources need do nothing different.
- Businesses with hazardous sources will need to assure themselves that workers are protected and risk assessments are suitable and sufficient.

In other words, review your Health and Safety policies, carry out and document a risk review - and make sure it includes a review of all artificial light sources.

## Problem solving!

Possible solutions to any problem are:

- ✓ Use an alternative light source (if it can achieve the same result)
- ✓ Prevent the light source from reaching the skin or eyes of workers by using screens or covers or similar.
- ✓ Re-organise work or working spaces to reduce exposure of workers and others.
- ✓ Issue appropriate personal protective equipment.

## Want Help?

If you need help with this then please let us know and we can arrange for our specialist to contact you.

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MK43 0DG  
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