

GAP Tool Box Talk: Lighting



Purpose

The purpose of this talk is to provide you with information on the minimum recommendations for lighting within areas of work.

Regulation 8 of the Workplace (Health, Safety and Welfare) 1992 states that LIGHTING must be suitable and sufficient.

And particular attention should be given to:

- Building / Construction sites
- Outside roadways
- Footpaths

Assessment of the work area:

Where there is a requirement for light to be put in place, a suitable and sufficient risk assessment should always be undertaken to establish the requirements and the controls that may be required.

A RISK ASSESSMENT would involve:

- Identifying the areas of risk and the hazards present in the work area
- Checking that existing control measures are adequate and identifying if more needs to be done to control and safeguard employees
- Ascertaining if the risk be eliminated entirely, and where this is not possible, the employer must ensure that suitable lighting is put in place

Assessment of the work area:

- Employees should be provided with appropriate PPE (Personal Protection Equipment)
- When selecting PPE, consider the time it takes to do the task, the environment in which the task is being carried out and the effort required
- If changes take place the Risk Assessment must be reviewed and maintained on an ongoing basis
- The employer should ensure that any changes are communicated to all employees who may be affected



The risk assessment can be broken down in to:

- The activity
- Types of work
- Minimum brightness



The Activity

- Movement of people and vehicles
- Movement of people and vehicles in a hazardous area and rough work
- Work requiring limited perception of detail
- Work requiring perception of detail
- Work requiring perception of fine detail

Types of Work

- Driving, general pedestrian movement, unloading equipment or supplies
- Less detailed carpentry or concrete pouring
- Brick laying, carpet laying, slab levelling, drain laying, roofing or scaffolding
- Electrical work, fine detail carpentry, plumbing, surveying or tiling
- Viewing site plans, fine detail electrical work or fine finishing of plastering

Minimum Brightness in LUX

In determining the minimum brightness for different types of work the purpose is to avoid fatigue. Minimum brightness in LUX ranges from 5 –200

Activity	Typical Types of Construction	Minimum brightness in LUX
Movement of people and vehicles	Driving, general pedestrian movement, unloading equipment or supplies	5
Movement of people and vehicles in a hazardous area and rough work	Less detailed carpentry, concrete pouring	20
Work requiring limited perception of detail	Brick laying, carpet laying, slab levelling, drain laying, roofing, scaffolding	50
Work requiring perception of detail	Electrical work, fine detail carpentry, plumbing, surveying, tiling	100
Work requiring perception of fine detail	Viewing site plans, fine detail electrical work, fine finishing of plastering	200

Guidance available on the downloadable Reference Chart at www.gap-group.co.uk/safety

Lighting Area Coverage Reference Chart

HSE Minimum Lighting Recommendations

Activity	Typical types of construction work*	Minimum Brightness in lux
Movement of people, machines and vehicles (1)	Drying, general pedestrian movement, unloading equipment or supplies	5
Movement of people, machines and vehicles in hazardous areas, rough work not requiring any perception of detail	Low detailed carpentry, concrete pouring	20
Work requiring limited perception of detail (2)	Block laying, carpet laying, slab leveling, drain laying, roofing, scaffolding	50
Work requiring perception of detail (3)	Electrical work, fine detail carpentry, plumbing, surveying, tiling	100
Work requiring perception of fine detail (4)	Viewing site plans, fine detail electrical work, fine finishing of plastering	200

* Based on HSE guidance and produced in conjunction with HSL.

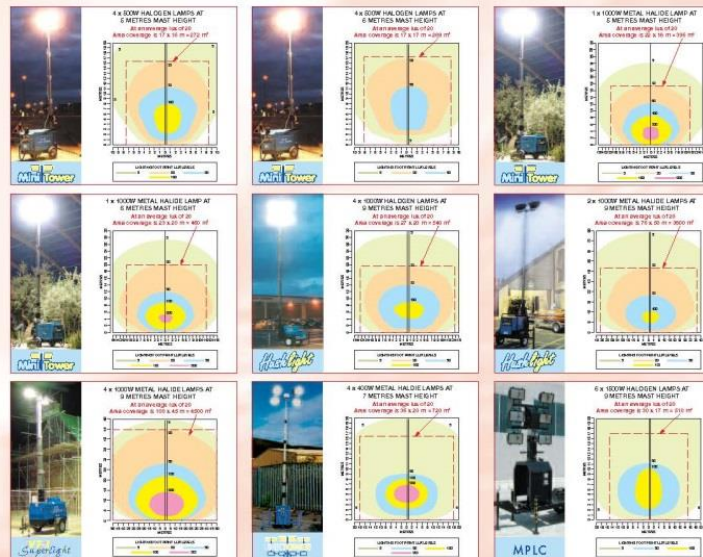
(1) Only safety has been considered, because no perception of detail is needed and road traffic is unlikely. However, where it is necessary to see detail to recognise a hazard or to take care in performing the task, a minimum of 5 lux should be provided as well as to avoid road fatigue, the figure needs to be increased to that for work requiring perception of detail. The CIBSE Guide is a reference.

(2) Lighting gives more information and recommendation based on specialist knowledge, practical experience, technical feasibility and economic reality.

(3) The purpose is to avoid fatigue, the luminance will be adequate for safety purposes.

(4) The purpose is to avoid fatigue, the luminance will be adequate for safety purposes.

For guidance in the lighting of a specific area please contact GenFit.



Name of lamp type	Life (hours)	Apparent colour	Colour rendering	Time until full light output is produced	Time before full light output is produced after restarting the lamp
Tungsten halogen	2000 - 4000	Warm white light	Excellent	Immediate	Immediate
Metal halide	5000 - 10,000	Normally cold white light	Good	5 minutes	10 minutes

We build towers to your specific requirements



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