

MEASURING LIGHT



As the nights draw in, people start to think about mobile lighting towers and how they can be used to support their construction and rail projects through the darker nights.

But how do you know how much light you need? How do you measure it and choose the right tower for you? What's the difference between a lumen and a lux? Here is our simple guide:



Fast Fact 1:

Illuminance is a measure of how much luminous flux a light gives out. This is measured in lumens and is the total amount of "visible" light and spread.



Fast Fact 2:

Light illuminance is measured in lux unit or lx. It is equal to one lumen per square metre



Fast Fact 3:

Majority of lighting tower manufacturers provide light plots which show the light spread for the total number of lamp heads on a model. These are measured in lux per metre.



Fast Fact 4:

When choosing a lighting tower it's important to consider your objectives and the wider project criteria. For example your customer could need a lighting tower for a quarry close to a residential area so the lighting towers specified need to offer super silent operation and light pollution needs to be considered. An inner city construction site could require an eco-solution with zero noise and a zero emissions tower, whilst a film studio needs a lighting tower that has auxiliary power and does not emit diesel fumes. Customers should consider mobile lighting towers that are fit for purpose not just because they light an area.



Fast Fact 5:

At the moment the most popular lighting tower lights are Metal Halide and LED. LED lighting towers offer greater fuel efficiencies and can provide up to ten times longer life span, 50,000 hours on the SMC TL-90 LED products. However Laser lighting is anticipated to offer even more efficiencies and clear crisp light



Fast Fact 6:

When choosing a lighting tower you need to look for the following key features for best practice:

- Advanced Safety System fitted as standard to include automatic mast descent when handbrake is released, mast deployment alarm, an Emergency stop button and auto shut down to operate in the event of low oil pressure/high engine temperature.
- Zintec plated canopy to avoid rust and corrosion
- Look out for new models with a levelling sensor
- How many units you can fit onto one flatbed truck minimum of ten units is most cost effective

Fast Fact 7:

There are no statutory workplace lighting levels in the UK however the HSE has produced the below guide on minimum criteria:

Activity	Typical locations/types of work	Average illuminance (lux) lx.	Minimum Measured Illuminance (lux) lx.
Movement of people, machines and vehicles ¹	Lorry park, corridors, circulation routes	20	5
Movement of people, machines and vehicles in hazardous areas; rough work not requiring any perception of detail	Construction site clearance, excavation and soil work, loading bays, bottling and canning plants	50	20
Work requiring limited perception detail	Kitchens, factories assembling large components, potteries	100	50
Work requiring perception of detail	Offices, sheet metal work, book binding	200	100
Work requiring perception of fine detail	Drawing offices, factories assembling electronic components, textile production	500	200