



Dark Skies Herefordshire: What is Good Lighting?

Dark Skies Herefordshire aims to conserve and enhance dark skies across the rural landscape of Herefordshire, raise people’s awareness of Artificial Light At Night (ALAN) and the need for Responsible Outdoor Lighting At Night (ROLAN). It is a volunteer-led initiative that is supported by Herefordshire CPRE (HCPRE).

Are you blinded by the light?

Not all lighting is bad. It’s about having the right light in the right place at the right time. Unnecessary lighting costs money through using excess energy and emits additional carbon into the atmosphere. Long term exposure to Artificial Light At Night (ALAN) can have a detriment impact on night-time pollinators and humans’ health & wellbeing. For rural communities, obtrusive lighting can be a blot on the landscape and prevent people from seeing the Milky Way. Dark skies are healthy landscapes for flora, fauna, people and planet.

How do you measure the 'visible' light emitted?

Watts are a measure of power not light intensity.

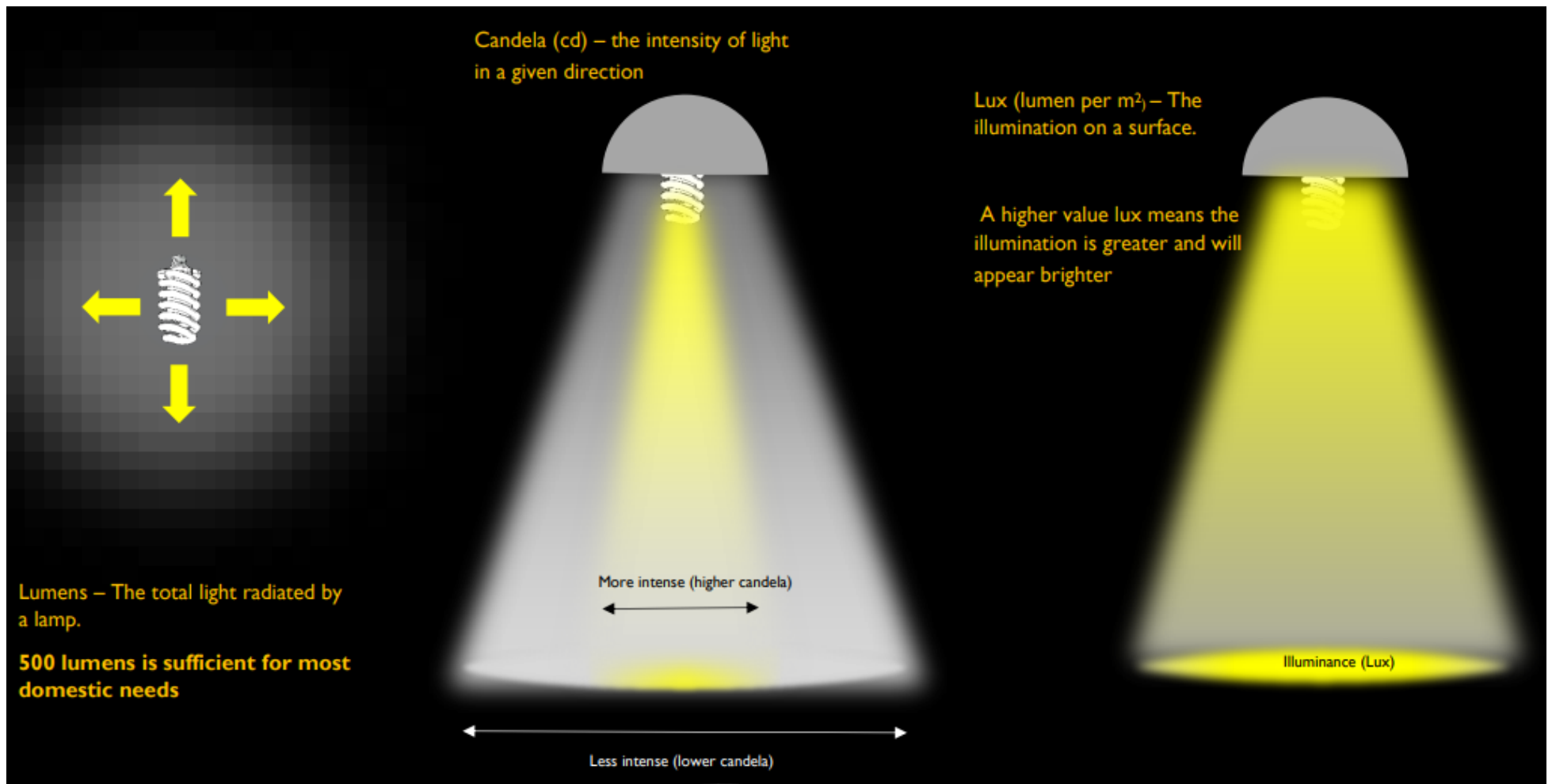
More recently, manufacturers refer to the ‘Lumen’ (lm) output of a bulb. This is simply a measure of the total amount of ‘visible’ light emitted from a source.

The conversion table provided by Universal Lighting outlines the approximate lumen output emitted from light sources of varying wattages.

For example a 11w LED bulb produces the equivalent level of brightness (630+ lumens) as a 60 watt standard incandescent light bulb. Refer to Figure1 : [What Are Lumens And Why Do They Matter - Universal Lighting \(universal-lighting.co.uk\)](http://www.universal-lighting.co.uk)

The light radiating from a light is only part of the equation, lighting specialists also consider the intensity of the light (Candela) and the illumination on a particular surface (Lux). Refer to Figure 2 from South Downs National Park Technical Advice Note (2021).

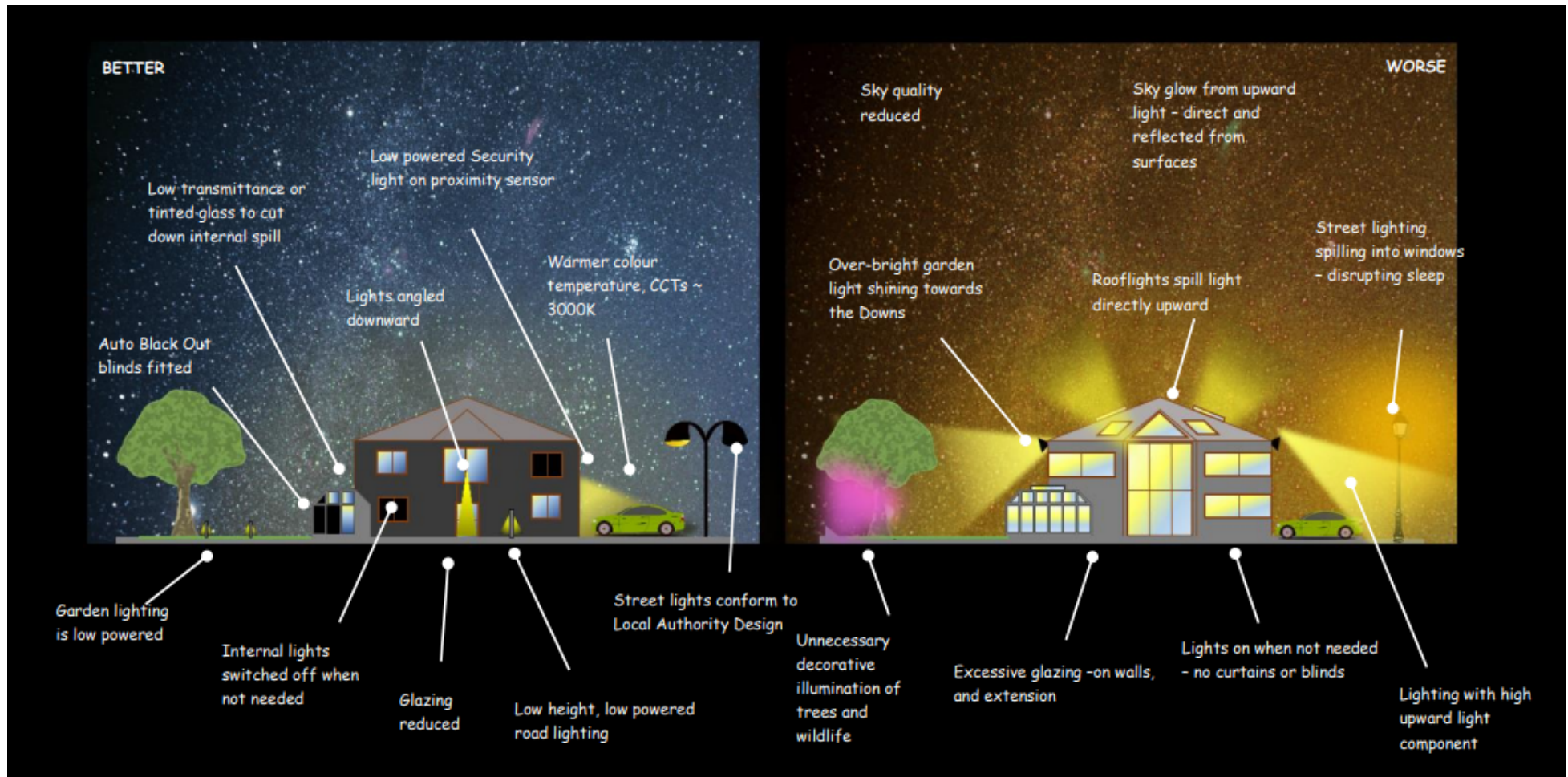
EFFICIENCY	Least		Most	
BULB TYPE				
LUMENS	STANDARD	HALOGEN	CFL	LED
450	40 W	29 W	9 W	8 W
800	60 W	43 W	14 W	13 W
1100	75 W	53 W	19 W	17 W
1600	100 W	72 W	23 W	20 W
RATED LIFE	1 year	1-3 years	6-10 years	15-25 years
SAVINGS	×	up to 30%	up to 75%	up to 80%



No matter where you live, you can make a difference. Help enhance and conserve dark skies by switching off unnecessary lights and changing the light bulb with a lower emitting lumen, warmer hue on all other lights in and outside your home or business.

Put the Right Light in the Right Place at the Right Time.

Figure 3 is from South Downs National Park Technical Advice Note (2021) and pictorially shows the difference between good and bad lighting.



For more information and detail of lighting for commercial and sporting buildings, go to the South Downs National Park's Technical Advice Note (2021) on <https://www.southdowns.gov.uk/planning-policy/supplementary-planning-documents/technical-advice-notes-tans/dark-skies-technical-advice-note-tan>

LIGHT TO PROTECT THE NIGHT

Five Principles for Responsible Outdoor Lighting



USEFUL	TARGETED	LOW LIGHT LEVELS	CONTROLLED	COLOR
				
ALL LIGHT SHOULD HAVE A CLEAR PURPOSE Before installing or replacing a light, determine if light is needed. Consider how the use of light will impact the area, including wildlife and the environment. Consider using reflective paints or self-luminous markers for signs, curbs, and steps to reduce the need for permanently installed outdoor lighting.	LIGHT SHOULD BE DIRECTED ONLY TO WHERE NEEDED Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.	LIGHT SHOULD BE NO BRIGHTER THAN NECESSARY Use the lowest light level required. Be mindful of surface conditions as some surfaces may reflect more light into the night sky than intended.	LIGHT SHOULD BE USED ONLY WHEN IT IS USEFUL Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.	USE WARMER COLOR LIGHTS WHERE POSSIBLE Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.
1	2	3	4	5