



Here are some examples of Good & bad lighting. A [pdf version](#) is also available, care of the [Dark Sky Society](#) (requires Acroread).

GOOD

BAD

Car-park Light Fittings



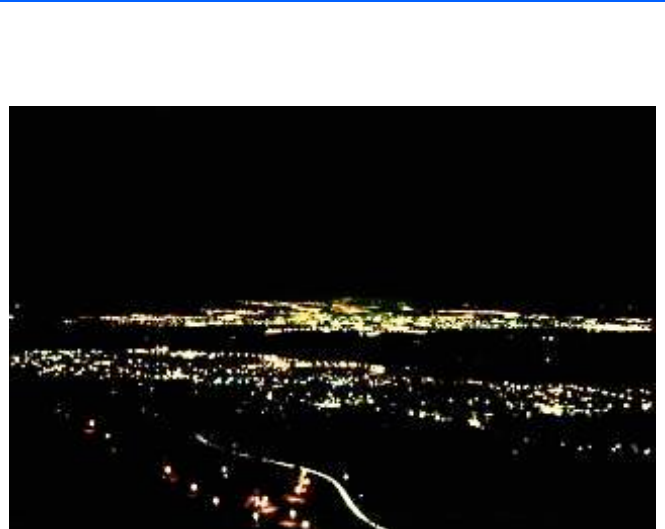
(Courtesy Urbis, DW Windsor, others)

These light fittings all have cut-off designs. No light is wasted, and no light escapes above the horizontal.



These inefficient lights have rounded bowls which shine light in no specific direction; they even shine light above the

horizontal!





*Bluewater shopping centre car-park lighting
(DW Windsor)*



This example shows that a location can be very well lit, without generating light pollution, and with stylish lighting. Each of the black poles actually has a dual light fitting on top. There is absolutely zero loss of light above the horizontal. This is a job very well done!

(Credit: Chris Baddiley)

This picture shows that reflection off the ground does not significantly contribute to light pollution. All the sources of light in this photograph are point sources, indicating actual light bulbs. Only in the foreground can reflection off the ground be seen, and that is more diffuse than the light source itself (Click to enlarge). Admittedly, if the ground were snow covered, then reflection would contribute to sky-glow.

Street and Motorway Lights



*Full cut-off
motorway lights*

These pictures shows some excellent motorway lights. 100% of the lighting here shines onto the road where it is needed, resulting in a brighter road without contributing to light pollution. No wonder that the [City of Calgary, Canada](#) are replacing all their street-lighting and saving themselves millions of dollars!



*Poor road/motorway lights
(image by Highways Agency)*

This photo demonstrates the horrible orange glow given off by low pressure sodium street lights. These are very inefficient lights, as there is no obvious direction of the light towards the street.

Home "Security" floodlights





When a security light is directed downwards, anybody standing beneath the light is clearly visible to onlookers. Needless to say, criminals avoid well directed security lights.

An outward facing "security light" is a major security risk. As can be seen in this photograph, somebody standing beneath the light is barely visible – the view is dominated by glare. Homes have been broken into directly beneath such lights. Leaving an *indoor* light on is more effective than any *outdoor* light.

Sports Facilities



*Upton Leisure Centre, Chester
(Abacus Lighting)*

Here is an example of a well-lit sports facility. The lights are clearly directed towards the ground, and the glow is at a minimum, even though the photographer is only a few hundred feet away. The sports surface is also brightly and evenly lit.

Additional photographic examples: [1](#) [2](#)



*Iford Golf Driving Range, nr Bournemouth, UK
(Bournemouth Daily Echo, photo: Richard Crease)*

This golf driving range has been extremely careless with its lighting. Many local residents are very upset about the glare from the lights, which is very intrusive. The lights can be seen from many miles away in the New Forest, the UK's latest National Park

Business Lighting



When the lighting of this petrol station in the US was improved (to prevent blinding motorists with glare) the number of customers, and the amount of petrol sold, increased immediately! So better quality lighting is more appealing. (Copyright 2002, Rensselaer Polytechnic Institute, lighting research centre, as in *Sky & Telescope*, December 2002.)



False daylight from overlit businesses create unanticipated hazards. Our eyes need time to adapt to different light levels. For example, when leaving bright petrol stations people cannot see clearly until their eyes adapt to the lower light levels, and some motorists forget to turn their headlights on with poor lighting.

