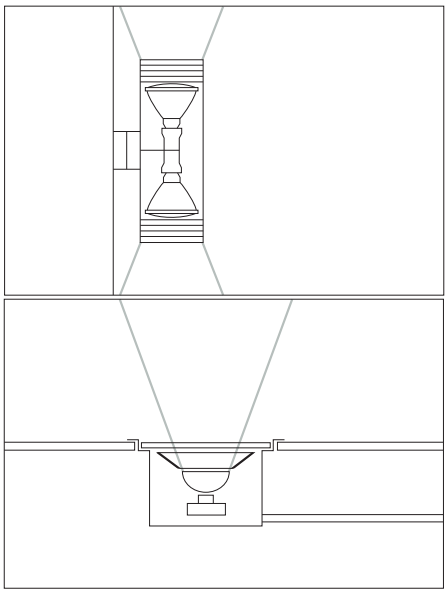
2.7.1.2 Uplights

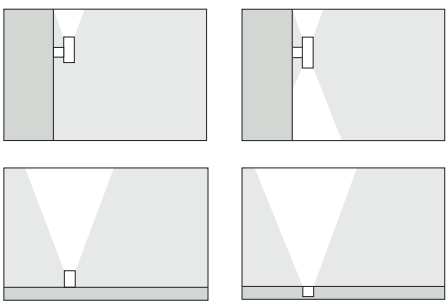
In contrast to downlights, **uplights** emit light upwards. They can therefore be used for lighting ceilings, for indirect lighting by light reflected from the ceiling or for illuminating walls using grazing light. Uplights can be mounted on or in the floor or wall.

Up-downlights combine a downlight and an uplight in one fixture. These luminaires are applied for the simultaneous lighting of floor and ceiling or for grazing lighting over a wall surface. They are available in wall and pendant versions. .

Wall-mounted combined uplight and downlight for PAR lamps.



Sectional drawing of a recessed floor luminaire for halogen reflector lamps.



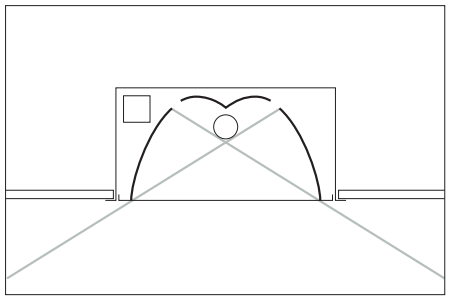
Mounting options for uplights and combined uplight/downlight: wall mounting, floor mounting, recessed floor mounting.

2.7.1.3 Louvred luminaires

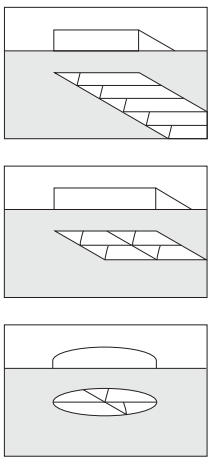
Louvred luminaires are designed for linear light sources such as fluorescent lamps or compact fluorescent lamps. Their name derives from their anti-dazzle attachments that may be anti-glare louvres, light controlling specular reflectors or prismatic diffusers.

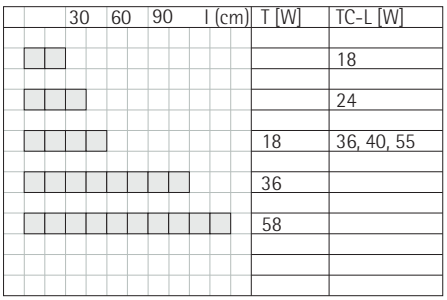
Being fitted with linear light sources of low luminance louvred luminaires produce little or no modelling effects. They generally have wide-beam light distribution, with the result that louvred luminaires are predominantly used for lighting wide areas.

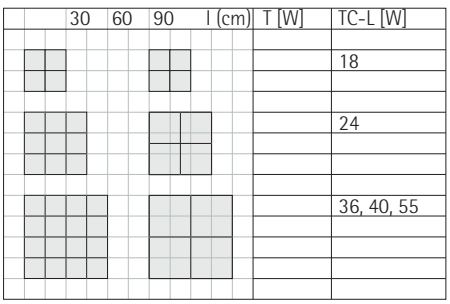
Louvred luminaires are usually long and rectangular in shape (linear fluorescents); square and round versions are also available for compact fluorescent lamps. Similar to downlights, they are available for recessed or surface mounting or as pendant fixtures.



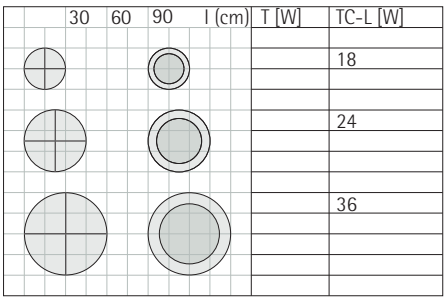
Louvred luminaire for fluorescent lamps with darklight reflector and involute upper reflector. Louvred luminaires can be rectangular, square or round.



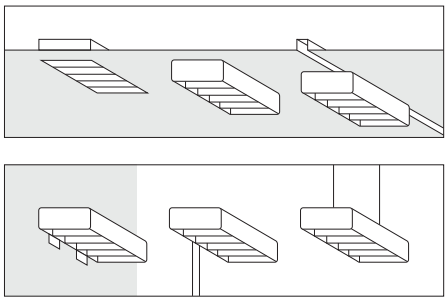




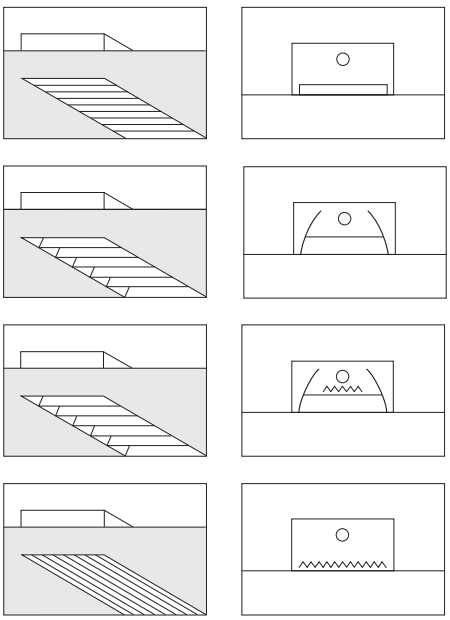
Comparison of shapes and sizes of louvred luminaires for different lamps.



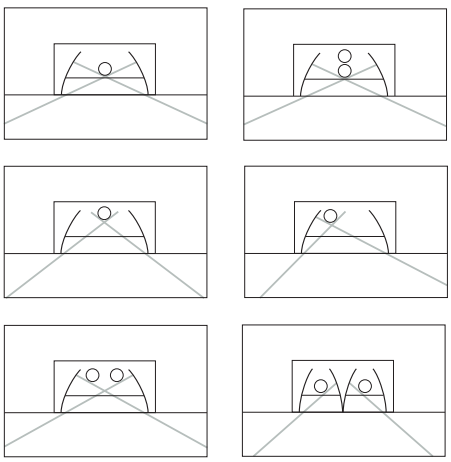
In their basic form louvred luminaires have axially symmetrical light distribution. They are available with cut-off angles of 30° to 40° and a variety of beam characteristics, so light distribution and glare limitation can be selected to suit the respective requirements. If a reduction in reflected glare is required, louvred luminaires with batwing distribution can be used. They emit light at predominantly low angles with the result that very little light is emitted in the critical reflecting range. Direct glare caused by louvred luminaires can be controlled in a number of ways. The simplest is the application of anti-dazzle louvres to limit the distribution angle. Enhanced luminaire efficiency is best achieved by light-controlling louvres. These louvres can have a highly specular or matt finish. Louvres with a matt finish provide uniform surface luminance in line with the luminance of the ceiling. In the case of highly specular reflectors, the louvre within the cut-off angle can appear to be dark, but they do sometimes lead to unwanted reflections in the louvre. A further means for controlling light in louvred luminaires is by using prismatic diffusers.



Mounting options for louvred luminaires: recessed ceiling, surface, mounting on tracks, walls, floor-standing or pendant mounting.



Different versions of louvred luminaires (from the top downwards): luminaire with transverse louvres, luminaire with parabolic louvres, luminaire with parabolic louvres and prismatic lamp diffuser for improving contrast rendition, luminaire with prismatic louvre.



Lamp arrangement in louvred luminaires: standard arrangement above the transverse louvres (top left). Lamp position to increase the cut-off angle (centre left). Twin-lamp version with lamps arranged horizontally and vertically (below left and top right). Lateral position for asymmetrical light distribution (centre right). Twin-lamp version with twin-louvre (below right).