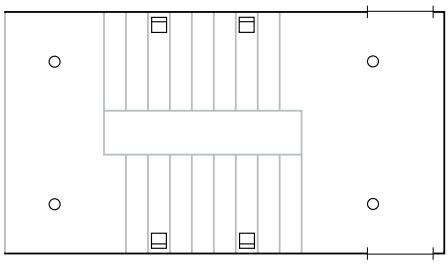
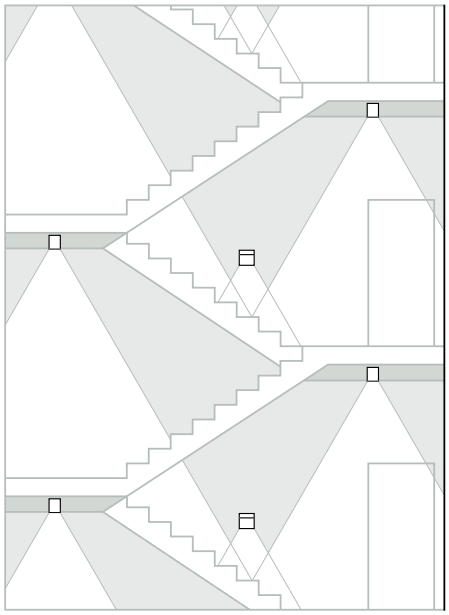
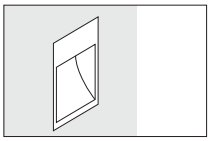
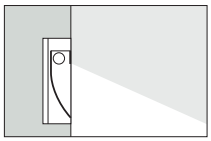


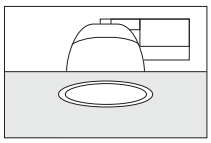


Two different types of luminaire are used to illuminate the flights of stairs and landings. Floor washlights provide the lighting for the flights of stairs, whereas the landings are illuminated by recessed downlights.

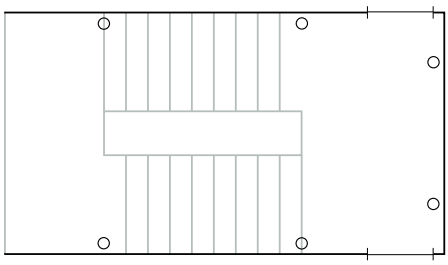
Floor washlight for compact fluorescent lamps.

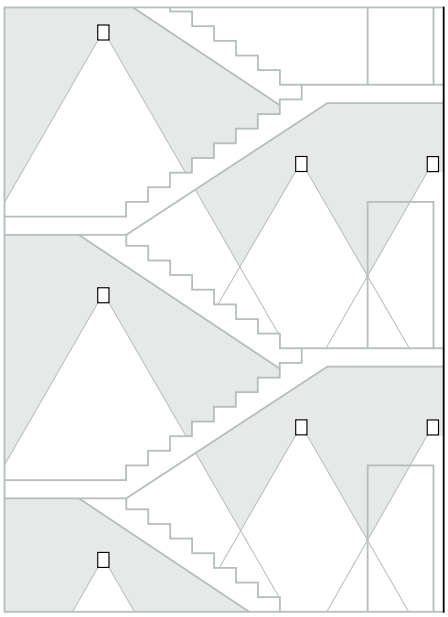




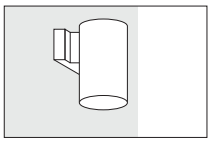


Recessed downlight for compact fluorescent lamps.





Wall-mounted downlights installed above the foot and top of each flight of stairs and above the doors on the landings illuminate the staircases. This arrangement of luminaires produces excellent visual conditions. Mounting the luminaires on the walls also makes this lighting solution suitable for open staircases, where installation can sometimes be difficult.



Wall-mounted downlight for compact fluorescent lamps.

4.5 Team offices

The lighting of team offices for small groups is required to fulfil a number of conditions, as laid down in the standards for the lighting of workplaces. The requirements include the following quality criteria: the level and uniformity of the lighting, luminance distribution, limitation of direct and reflected glare, the direction of light and shadow, luminous colour and colour rendering.

Other requirements that may have to be met may concern the correlation of daylight and artificial light, the presence of drawing boards, and above all the lighting of spaces with personal computers. Luminances in the space should be balanced and special attention paid to optimum glare control through the installation of suitable luminaires. The luminaires used for the lighting of spaces with personal computers are required to meet especially stringent standards to avoid reflected glare on computer screens. Luminaires constructed in accordance with the standards are referred to in Germany as VDT-approved luminaires and can be used without reservation for the illumination of such workplaces. It should be pointed out, however, that VDT-approved luminaires do have the following disadvantages in spite of their glare limiting qualities: the low vertical lighting they produce, the fact that the luminaires have to be arranged in close proximity to one another, and the increased reflected glare on horizontal visual tasks. For the lighting of spaces with positive image screens or if luminaires are installed outside the critical area of the screens, it is advisable to install wide-angle luminares and satin finished reflectors, and to only use the VDT-approved fixtures as a solution for the most critical cases concerning the lighting of personal computers.

One way of lighting team offices is to provide uniform illumination using luminaires arranged according to a set grid, where character and glare limitation can be influenced by the choice of luminaires and whether they are direct, indirect or direct-indirect fixtures. Another possibility is to provide equally uniform, but lower ambient lighting supplemented by task lights. For team offices which are clearly subdivided into individual areas (working area, circulation zone, social area, conference area) it is possible to develop a zonal concept, lighting each area in accordance with the activity that takes place there. By switching different combinations of luminares the lighting can be adjusted to suit the use of the space, e.g. by combining luminaires for fluorescent lamps and halogen lamps. It is also possible to provide daylight-related switching of luminaires located near windows.

For economically efficient lighting it is advisable to use conventional or compact fluorescent lamps. Efficiency can be further increased by the use of electronic control gear, which also enhances visual comfort through the avoidance of flickering effects.