

It is important to appreciate that while daylight factor is useful for identifying the minimum contribution daylight will make to the illuminance, it is not relevant for determining if visual discomfort is likely to occur. Visual discomfort is most likely to occur when either the sun or a high luminance part of the sky is visible. Even when examining the minimum contribution that daylight can make to the illuminance, it is important to appreciate that, in practice, the daylight factor will vary with orientation of the window, e.g. in the UK, windows facing south will have higher values than those facing north. Corrections for window orientation can be applied by multiplying the daylight factor by a weighting factor to give the orientation-weighted daylight factor. The weighting factors for north, east, south and west-facing windows are 0.77, 1.04, 1.20 and 1.00 respectively.

Daylight requirements for buildings are covered in BS 8206: Part 2 and the SLL Lighting Guide 10: *Daylighting and window design*. Unless the designer has some guidance about the amount of daylight preferred or required, the window area may be reduced on the basis of the building's overall thermal performance.

### 7.3 Daylight as a contribution to room brightness

In most buildings, users prefer rooms to have a daylit appearance during daytime hours, even when there is significant use of electric light. This appearance can be achieved by ensuring that the changing brightness of daylight is clearly noticeable on walls and other interior surfaces.

For a daylit appearance without any electric lighting, the average daylight factor should not be less than 5 percent. For a daylit appearance with the use of electric lighting, the average daylight factor should be not less than 2 percent. For this condition, daylight will be sufficient for part of the year but for others additional electric lighting will be required. In both cases, the surface reflectances and the positions of windows should be high so that inter-reflected lighting in the space is strong and even.

In a room where the average daylight factor is less than 2 percent, the general appearance will be of an electrically lit interior. Daylight will be noticeable only on room surfaces immediately adjacent to windows, although the windows may still provide adequate views out for occupants throughout the room.

### 7.4 Daylight for task illumination

Where daylight alone is required to provide the illumination for a visual task, the illuminance should not fall below the recommended maintained value during daytime. The illuminance uniformity within the immediate task area should be similar to that recommended for electric lighting although the illuminance diversity may be greater. This can be determined from the daylight factors and the daylight availability.

### 7.5 Types of daylighting

Daylight can be delivered into a building through conventional windows, clerestory windows or rooflights as well as a number of remote distribution systems, such as light pipes.

#### 7.5.1 Windows

Windows have the advantage of providing both daylight to the interior and a view out. Their disadvantage is that the amount of daylight delivered to the office decreases dramatically as the distance from the window increases, although the view out is preserved over a larger distance as long as there are no major internal obstructions.