For windows, what is required is an ability to shut out a direct view of the sun and sky, preferably while leaving some view out.

11.3.4 Light source colour properties

Light sources with a CIE general colour rendering index (CRI) of at least 80 should be used in all functional parts of a school. For circulation areas, light sources with a CRI of at least 60 are acceptable.

As for colour appearance, the correlated colour temperatures (CCT) of light sources commonly used in schools varies from 3,000 K to 5,000 K and sometimes as high as 6,500 K. CCTs at the lower end of this range will give a warm appearance to the interior but do not blend well with daylight. Higher CCTs will blend better with daylight but give a cool colour appearance to the space. Very high CCTs will also produce a perception of greater brightness for the same luminance and enhance visual acuity. Whatever light source CCT is chosen, it should be used throughout the school.

11.3.5 Control systems

Lighting controls should be installed in educational premises for three purposes:

- to minimise the use of electricity when there is sufficient daylight available
- to avoid the waste of energy by turning off the lighting when the space is empty
- to provide some flexibility in the use of the space.

To minimise the use of electricity when there is sufficient daylight available, it is necessary to wire the installation so that luminaires at the same distance from the windows can be switched or dimmed together (Figure 11.3). Ideally, a dimming system should be used with a photosensor to detect the amount of daylight available.

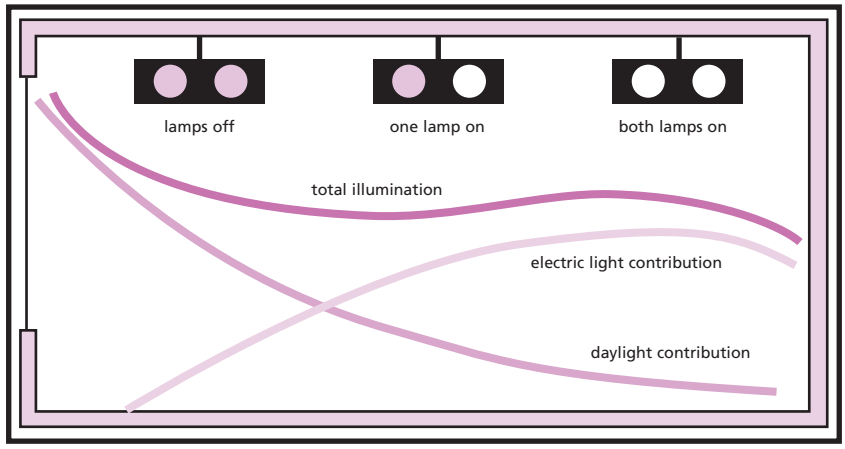

Figure 11.3 Balancing daylight and electric light in a classroom

To avoid the waste of energy by turning off the lighting when the space is unoccupied, motion sensors with an automatic switch off and a manual switch on should be used. To provide some flexibility in the space, a switching or dimming system should be provided under the control of the teacher or instructor.