Table 2.2 Ranges of useful reflectances

Room surface	Reflectance range	Relative illuminance
Ceiling	0.6–0.9	0.3–0.9
Walls	0.3–0.8	0.5–0.6
Working planes	0.2–0.6	1.0
Floor	0.1–0.5	—

It has become the convention to translate luminance ratios into relative illuminances, since it is the illuminance that is used in lighting design practice. Table 2.2 gives the ranges of relative illuminances for general lighting using ceiling-mounted luminaires with a predominantly downward light distribution for a typical office. The values shown are based on research findings modified by design application and experience.

2.3.5 Room surfaces

The lighting system should play a role in reinforcing the architectural character of the interior, using daylight where possible as part of an energy-saving strategy. Spatial clarity, mood, and the visual nature of the space may be emphasised by the choice of light distribution and use of colour, as discussed in sections 1.6, Directional qualities and modelling, 1.7, Surfaces, and 3.6.3, Illuminance ratio charts.

The reflectance and finish of the major surfaces in an interior will play an important part in the use of light. High-reflectance surfaces will help inter-reflection, and are normally recommended for working interiors. This does not preclude the judicious use of colour and lower reflectance as part of the décor to give visual interest.

Matt finishes are normally recommended to avoid specular reflections or disguise surface imperfections.

2.3.5.1 Ceilings

The ceiling cavity (see Figure 3.15) will play a less significant role in a small room than it will in a large one where it can occupy a substantial part of the field of view.

The recommendation for general lighting with a predominantly downward distribution is for the ratio of average illuminance on the ceiling to the average illuminance on the horizontal working plane to be within the range 0.3–0.9.

In general the ceiling cavity reflectance should be as high as practicable, at least 0.6. The reflectance of the surface finish therefore should be of the order of 0.8 (see section 3.8.3.3, Effective reflectance).

Luminous ceilings utilising large diffusing panels are not recommended for lighting interiors for which the recommended unified glare rating is less than 19. In any case, the average luminance of such luminous ceilings should not be greater than 500 cd/m^2.

For indirect lighting, the average luminance of all surfaces forming the ceiling cavity should not be more than 500 cd/m^2. However, small areas of luminance of up to 1500 cd/m^2 will generally be acceptable, provided that sharp changes from high to low luminance are avoided (Uplighting design – see CD).