sources of light. Depending on their degree of specularity, texture and shape, their appearance will also vary with the direction of view.

(*b*) The layout and orientation of luminaires and sources of reflected light. Single sources of relatively small size will produce harsh modelling, the effect becoming softer as the number and size of the sources increase. The predominant direction of light has a fundamental effect on appearance; lighting from above provides a distinct character that is totally different to that achieved by lighting from the side or from lower angles. In addition, colour differences between sources of light of various distributions and orientation strongly influence the lit appearance of spaces, surfaces and objects. With so many variables, luminance patterns become too complex to predict in detail.

This element of unpredictability is generally acceptable (or even desirable) provided that the basic rules of good lighting practice are observed, such as the limitation of extremes of glare, contrast and veiling reflection. The importance of modelling is obvious for retail display, exhibition work and the creation of mood. However, any lighting installation that fails to create appropriate degrees of modelling will provide visual results that are perceived as bland and monotonous. Virtually all environments can benefit from a lighting approach that considers the question of direction and the resulting revelation of architectural form, texture and facial modelling. The designer must decide where in the range, from harsh or dramatic to soft or subtle, modelling the design aim should be set. Further information is given on specification of modelling in section 2.3.8, Modelling and emphasis, and on modelling design in section 3.6.3, Illuminance ratio charts.

1.6.1 Revealing form

The revelation of the form of an object or structure is determined by the relationship of the incident angle and intensity of light to the surface in question, the position of the viewer relative to the surface, and the nature or composition of the surface.

Light reveals surfaces by three basic methods; emission, silhouette and reflection. Figure 1.14(a)–(e) show an identical form revealed by these methods. Revelation by emission (Figure 1.14(a)) or silhouette (Figure 1.14(b)) exposes little or none of the three-dimensional quality of the form. However, the white vase (Figure 1.14(c)) is dramatically revealed as three-dimensional by the gradation of reflected light over its surface. The same visual message is provided by the highlight on the surface of the glossy black vase (Figure 1.14(d)). The vase in Figure 1.14(e) is lit to provide a balanced rendering of the form by the use of a strong rear 'key' light and a less intense frontal 'fill' light.

The relationship between the intensity of strongly directional, emphatic lighting and the ambient or general illuminance level within a space is critical. In an otherwise dark space a relatively low intensity of directional light will strongly reveal an object, whilst the same degree of emphasis in a brightly lit space will require considerably greater intensity from the directional highlighting. Subtle and pleasant modelling is usually favoured in general working areas and public spaces, where more extreme