Figure 10.1
Daylight provided by a north light roof

10.2.4 Need for good colour vision

Where colour is used to convey information, lighting with good colour rendering properties is required. Examples of applications where colour is used in this way are electrical assembly, where components are colour coded; food processing, where colour is used to judge freshness and suitability for consumption; and printing and painting, where consistency of colour is important. For such applications, a light source with a CIE general colour rendering index of at least 80 is recommended. For some tasks where very fine colour discrimination is required, e.g. grading diamonds, special lighting which enhances the relevant colour differences is used.

Where colours are used to identify the contents of pipes and conduits, it is essential that the lighting should make it easy to identify these colours correctly.

10.2.5 Obstruction

Many industrial premises contain obstructions. Obstructions tend to produce shadows. Shadows are cast when light coming from a particular direction is intercepted by an opaque object. Shadows can be minimised by:

- using a larger number of smaller wattage light sources rather than a smaller number of larger wattage light sources so that light is incident from many directions
- using luminaires with a widespread light distribution
- having high-reflectance surfaces in the space
- providing local lighting of the shadowed area.

Figure 10.2 shows a small workshop where shadows have been minimised by using a large number of fixtures and high reflectance surfaces.