

This is especially true if the luminaires are positioned within the site, between obstructions, and with overlapping light patterns. Reflectance of site materials can also be used to advantage. If the owner uses containers that are painted a highly reflective colour, or paves the area with concrete rather than asphalt, light diffusely reflected from these surfaces will diminish the depth of shadows.

Building facades: security lighting for building exteriors is based on the principle that all points of entry to the building and the areas around them should be easily seen. Depending on the construction of the building, the points of entry can consist of walls and roof as well as doors and windows. The most comprehensive approach is to light the whole building. Security lighting for buildings is more effective if the building has a high reflectance facade and the area adjacent to the building also has a high reflectance.



Figure 18.5
Lighting of a complete
building facade

The building can be lighted by luminaires set in the ground, mounted on the building or mounted on poles (Lyons, 1980; Leslie and Rodgers, 1996). Ground-mounted floodlights can provide uniform building lighting but they are very accessible and hence can easily be sabotaged. Luminaires mounted on the building are more economical than pole-mounted luminaires, since the expense of the pole is eliminated and wiring costs are reduced. However, for anything other than a simple rectangular building, it is difficult to adequately illuminate all of the building surfaces without using an excessive number of luminaires. Pole-mounted luminaires are usually the best option for uniformly lighting the surfaces of buildings and the surrounding area.

Perimeter fences: the purpose of lighting perimeter fences is to enable guards to detect intruders loitering outside the fence or attempting to get over or through the fence. Fences come in several different forms from masonry through steel palisades to chain link. The form of lighting used will depend on the possibility of seeing through the fence and whether one or both sides of the fence line are to be patrolled.

If the fence is solid, there is no possibility of seeing through it. Nonetheless, if both sides of the fence are to be guarded, lighting can be provided on both sides by positioning a luminaire directly above the top of the fence. The luminaire should be located well above the top of the wall to reduce the shadowed area at the base of the wall.

If a view through the fence is possible, and if the fence is patrolled from either inside or outside the secure area, it is useful to be able to see both sides of the fence from one side. For this to happen, light needs to be provided on both sides. This can be done from pole-mounted fixtures set back from the fence (Lyons, 1980).