6.1.3 Secondary Reflector Luminaires

Secondary reflector luminaires are designed for use in pedestrianised places such as city squares and parks. In this luminaire, light is directed up from the light source in or on the column and then distributed from a large surface at the top of the column. By changing the area and tilt of the reflecting surface, the light distribution can be altered. Secondary reflector luminaires are inevitably inefficient compared to post top luminaires, but they do not cause glare, are not prone to deliberate or accidental damage and can provide a pleasing ambience. For examples of secondary reflector luminaires see Figures 98 and 99.

Figure 98
Symmetrical light distribution-fixed.

Figure 99
Asymmetrical light distribution-adjustable..

6.2 Floodlights

Floodlights can be used on urban ground for public sports lighting, to wash a large surface with light (advertising) or to pick out a specific feature of a building. Floodlights vary enormously in their size, power and light distribution. The smallest floodlights consist LED or 20 W metal halide lamp with different reflectors and accessories. The largest consist of a high intensity discharge lamp with power in the kilowatt range and a carefully shaped reflector. The light distribution of a floodlight can be rotationally symmetric, symmetrical about one axis or asymmetrical about one axis. This distribution is usually classified as narrow, medium or wide beam. The light sources used in public ground floodlights should be high pressure sodium, metal halide, but today more and more LED especially when having local manual or coinoperated switching where instant activation is essential. Floodlights need protection against dust and moisture and so are classified according to the IP system (see Chapter D / 7.4.1 / Tables 12 and 13) and are often soundly constructed of materials that resist attacks by vandals. Filters mounted in front of the floodlight can be used to change the light colour; in some cases coloured lamps may give a good alternative to filters or to colour changing LED. From case to case it must be checked for which types of metal halide lamps a replacement with coloured lamps is possible. Barn door baffles mounted on the floodlight can be used to modify the beam shape. Care is necessary when using floodlights to avoid glare to passers-by and especially to nearby residents. Figure 100 shows a floodlight with vandal proof cover.

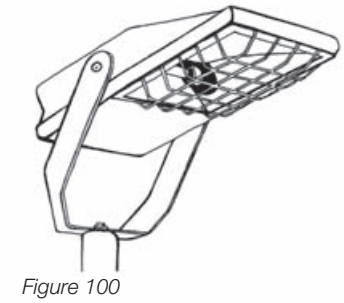

Figure 100
Typical playground vandal proof standard asymmetric flood light for metal halide lamp.