6.4 In-Ground (Above-Ground) Up-Lights, Directional Lights

For some design needs, in-ground or above-ground uplighters may be applicable. They could be used as tree up-lights, installed either in ground recessing housings (mostly they are part of the light fixture) or as above-ground up-lighters on site-made base or on spike, fixed in the soil.

By using in-ground fixtures in the UAE, the quality of the housings and the materials used becomes a main topic. Irrigation water can destroy some cast aluminium composition materials very fast. All these in-ground luminaires require a proper drainage, regardless of which IP5X or 6X rating they have. Only the IP 68 rating would allow a fixture to be all the time under water.

In case of on-site made base plate or on spike mounting, then the problem of drainage is obsolete. Nevertheless the material topic is of the same importance as with in-ground fixtures, due to not well controlled or maintained irrigation systems.

During the installation process, the availability of aiming possibilities and/or the lighting colours ‘white’ or ‘RGB’ are parameters to be considered.

For orientation purposes ground mounted with directional lights (so called ‘path-lights’ or ‘way-markers’) could be used in some designs. These in-ground lights are available in many shapes and with many different effects and/or light distributions. It is to be considered that such orientation lights could reach the required lighting levels, but the uniformity will not be as per standards, if unless a mass of such fixtures will are used with very small distances between the fixtures. The width of the pathway must be considered to be a limitation when applying such installations.

All of the above systems require a very detailed design process and a clear on-going communication with the client.

For all types of in-ground fixtures, it is recommended to use them only in cases where there is no other way of lighting available, especially if it is required to replace lamps. The previous past experience shows that maintenance of in-ground luminaires is not being undertaken correctly and breaching the IP resistance plus diminishing the project lighting quality is mostly a big problem in all installations worldwide. On one side, there is the problem of the lighting maintenance, plus on the other side, there is the question of possible damage by cars, people, transportation of materials and, including, maintenance of other related areas, as such may occur.

One more topic concerns the ’aiming’ of such in-ground or above-ground fixtures. Past experience shows that for most of the time, the design is not fully carried out up