

## Tennis Court Lighting



### Lighting Standard

Appropriate tennis court lighting should meet the requirements of AS2560.2.1-2004 Sports Lighting part 2.1: Specific applications: Lighting for outdoor tennis.

This standard details the required lighting levels for recreational, club competition and national tennis facilities. A professional design will provide conformance with these requirements.

The requirements for club competition is 350 lux in the principal playing area and an average of 250 lux for the total playing area. There are lighting uniformity requirements also provided combined with glare rating limitations for players and colour rendering requirements.

A new installation should be in excess of these requirements as floodlights over time degrade due to lamp depreciation, materials depreciation and build-up of dirt.

### Spill Lighting

It is also important that the tennis court lighting does not adversely affect neighbours. Lighting should be designed to meet the requirements of AS4282-1997 control of the obtrusive effects of outdoor lighting.

The standard is complex however it can be summarised as ensuring spill light at the boundary does not exceed 10 lux on initial conditions and that the glare level does not exceed the requirements of the standard. It is important to note that glare can travel long distances and cause annoyance or worse to residents and traffic despite meeting the requirements of spill light. Floodlights should not be tilted outward and luminaires should be selected that tend to limit the light to the court. Light that does not hit the court but instead illuminates surrounds is being wasted costing the club in money as well as good relations with neighbours.

A good design should address these issues. Design drawings should show this standard is being met. A design that fails to meet these measures may need to be removed. There are a number of examples where this has occurred.

## Location of Light Poles

Poles for dual tennis court lighting can be located as 4 pole schemes: side mount and corner mount or 9 pole schemes.

More space is required for the nine pole scheme. Single courts can be illuminated using 6 or 4 pole schemes. The choice depends on the space available and the sum of money available to the tennis club.

## Lamp Source

In tennis court lighting metal halide has been the choice for lighting for many years. Metal halide provides a good crisp white light for which the fixtures designed. They have many years of proven performance.

LED (Light Emitting Diode) technology has greatly improved over the last ten years to the point where it has supplanted metal halide and fluorescent lamp technologies in most areas. This is due to LED lamps having the advantages of long life, lower depreciation, good colour rendering, low colour shift, improved uniformity (with good design), instant start and higher energy efficiency.

It is predicted as LED technology continues in popularity that metal halide lamps will become progressively harder to source. This is especially true of some of the lower wattages.

## Choosing LED Luminaires

Floodlights designed for LED are an emergent technology that has improved in leaps and bounds over the last two years.

Improvements are being made constantly and many new options enter the lighting market regularly. There are a lot range of floodlights available of quality and suitability.

Luminaires that have not undergone TM21 testing should not be considered. This testing provides information as to long term lamp depreciation and expected life. This helps to ensure that a quality fixture is installed.



**Above:** Typical LED tennis court light fitting



Typical Metal Halide tennis court light fitting