SALIX
SOLVING ENERGY EFFICIENCY
FINANCE IN THE PUBLIC SECTOR

Lighting Upgrade in Sports halls

Introduction

The following guide sets out a number of key considerations which should be made when implementing energy efficient lighting upgrade projects in sports halls and gymnasiums. Salix Finance funds interest free loans and the reason the above advice appears on our website is to ensure that any project which looks to ensure greater energy efficiency is fit for purpose.

Design principles

Lighting in sports halls require careful design consideration to ensure that projects provide safe, adequate lighting that can withstand impacts from fast moving objects such as basketballs, netballs or footballs. It will rarely be the case that lighting designed for general purpose areas will be fit for purpose in a sports hall.

Lighting in sports halls needs to be provided uniformly across the area to a suitable brightness, giving adequate levels of illumination and contrast so that activities can be performed safely and easily while contributing to the overall ambience of the area. Sports halls may be used for a range of different activities that the lighting will need to provide for including day-to-day sporting activities and potentially non-sporting activities such as school examinations. The usage of the space and thus requirement of lighting under different activities should be consulted as part of the initial lighting design. Care must also be taken to ensure that all lights and most importantly the fittings are sufficiently well designed and tested to ensure they can withstand any potential impacts.

Relevant standards

All luminaires to be installed in sports halls must conform to BS EN 60598-1 'Luminaires. General requirements and tests'[1].

There are standards of lighting that are specific to sports halls. Sport England offer guidance on the design and implementation of artificial sports hall lighting. Those wishing to undertake a sports hall lighting upgrade are encouraged to read this guidance note which can be downloaded from the Sports England website.

CIBSE Lighting Guide 4: Sports lighting[2] qualifies that "impact to the equipment can cause breakages and falling objects are a danger to the players and spectators. It is essential the lighting equipment is capable of withstanding and absorbing impacts and shock and securely fixed". It is vital therefore that any lighting installed will be able to withstand the types of impacts which are likely to occur.

Luminaires may have IK ratings which can give additional assurance that further testing has been carried out to determine the degree of protection a fitting enclosure provides against mechanical impacts. Testing to this measure will be carried out in accordance with BS EN 62262 'Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts'[3].

[1] BS EN 60598-1 - http://shop.bsigroup.com/ProductDetail/?pid=000000000030194205
[2] CIBSE Lighting Guide 4: Sports - http://www.cibse.org/Knowledge/CIBSE-LG/Lighting-Guide-04-Sports-Lighting
[3] BS EN 62262- http://shop.bsigroup.com/ProductDetail/?pid=000000000030087850