



CREE Edge High Output 421W

## LED Sports Lighting Solutions

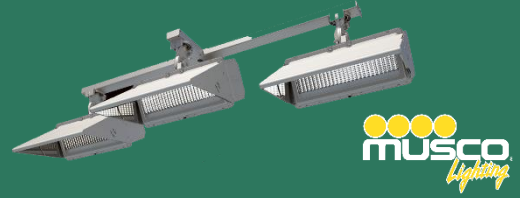
Tachibana Engineering is proud to introduce our turn-key sports lighting solutions, to help you finally migrate to LED lighting. We are well aware of the technical requirements of sports lighting is not only limited to lighting level, but other factors such as low glare, dimming, mounting and fully maintenance free are equally important, and more difficult to achieve.

We offer complimentary in-house lighting simulation on all the projects, as we believe it is the basic step to introduce to our client our LED solutions.

## Our Valuable Partners

### Musco Sports Lighting

- Since 1976, Musco has focused on the design and manufacturing of sports and large area lighting systems, from hometown Little League® baseball fields to professional sports stadiums, airports and container ports around the globe. All LEDs used are specially designed by CREE to Musco's specifications.



### CREE LED Lighting

- Founded in 1987 as a semiconductor company, and commercialized the World's First Blue LED. CREE is now a market-leading innovator of lighting-class LEDs, LED lighting, and pioneer in extremely low glare LED luminaire with WaveMax® Technology. All outdoor LED Lighting products are designed to last as long as 100,000 hours.



## Our Service

### The Steps to Deliver a LED Sports Lighting System

1. Understanding client's lighting requirement (Lux level, dimming, energy saving, etc)
2. Choosing the luminaire with correct wattages / lumen output
3. Study compliance with regulations
4. On-site visit and/or studying of design
5. Verify luminaire with a preliminary lighting simulation
6. Working with architect / structural engineer for cabling and mounting to achieve lowest glare
7. Finalising design, re-verify with lighting simulation



Understanding Lighting Level in Different Sports Applications  
At Tachibana Engineering, we study different guidelines set by different international sports bodies as basis of our lighting simulation. And as sports lovers, we challenge ourselves to deliver the best LED lighting in a players' perspective.

### Choosing the Best Performing Luminaire

It is important to match the correct wattages and lumen output, to the purpose required.

### Lighting Power Density by EMSD

Indoor Sports Arena for recreational purpose now has a maximum Lighting Power Density (LPD) of 17W/m<sup>2</sup>.



## Understanding the Consequences of Spill Light

- Loss of light directed to sports field
- Higher energy consumption
- Wasted / abusive light to neighborhood in urban areas leading to complaints

**Musco: Total Light Control — TLC for LED™**



**Other LED Manufacturer**



**Burnley Football Club returned to the Premier League in full force with the installation of Musco's LED floodlights at Turf Moor.**



**The nearly 300,000 yearly skiers and snowboarders at the Mount St. Louis Moonstone Ski Resort (MSLM) will enjoy an experience few other resorts in the world can match**



**Wimbledon to Unveil State-of-the-Art LED Lighting System at Centre Court for The Championships 2017**



## Our Projects with Musco and CREE LED Lighting

- Indoor Tennis Courts
- Golf Driving Range
- Indirect Lighting for Indoor Sports Arena



The TLC-LED 400W luminaire was the suitable choice to achieve the required illuminance for TV broadcasting (1000lx). While drawing only 400W of power, with dimming during normal use to achieve greater than 70% of energy savings. Most importantly, keeping glare at a low level for the players.



### CREE WaveMax® Technology

- Pioneer of Extremely Low Glare LED Light Engine
- Use of refraction to project light onto a much larger surface than the LED Chips
- Greatly reduce glare from strong light from a point source

WAVEGUIDES

Capture Light

Transport Light

