

## Project Overview

Wimbledon Centre Court  
London, UK

Competition  
Sports Facility



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Centre Court's retractable roof and updated lighting ensure a wonderful championship experience.

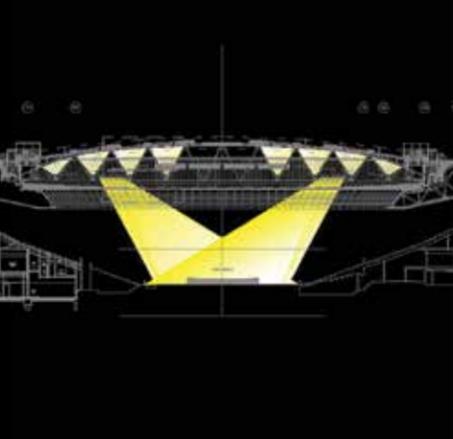
## Wimbledon Centre Court Maximises the Playing, and Viewing, Experience.

Since the Wimbledon tennis tournament began more than 130 years ago, the game had been subject to the volatility of English weather and fading light levels. This changed in 2009, when Wimbledon Centre Court received a retractable roof and lighting retrofit.

Players and spectators alike could now experience championship matches with no risk of weather interruption, untenable heat, or unpredictable winds, with lighting that increased illumination levels and minimised glare.

"The sliding roof was lower than in any other major professional venue, creating a potential problem with glare. From the selection of a fabric roof membrane to the colour selection of the moving roof trusses, everything had an effect on system integration."

**Corey Berhost—  
ME Engineers**



Lighting is easy-to-use and fail-safe, whether the roof is open or closed.

Discussion has begun to include a Quantum Total Light Management upgrade for Court Number One.

## Quick response, predictable reliability

A much improved GUI simplifies changes and offers cleaner, crisper graphics.

## Challenge

As would be expected with the refurbishment of a 90 year old building, the lighting scheme installed in the project had to overcome a variety of challenges; these included lighting one of the lowest roof spaces in any professional sports venue worldwide, and meeting the high illuminance levels required by the BBC for its high-definition coverage of the event.

An additional requirement specified by The All England Lawn Tennis Club (AELTC) was to ensure an easy-to-use, fail-safe way of controlling the lighting for Championship and non-Championship games, whether the roof was open or closed.

In 2017, this iconic tennis venue upgraded the lighting again, replacing the slow-start, high-energy HID lighting with efficient LED fixtures, and upgrading to a Lutron Quantum Total Light Management system with Quantum Vue facility management software.

Not only is Centre Court now impervious to Mother Nature's fickle ways, but the lighting is more responsive, can be turned on and off with no delay or warm-up time, and ensures flicker-free performance in real time as well as during slow-motion replay.

## Solution

Originally, ME Engineers worked with the architect, Populous, and the client, and introduced the technique of indirect sports lighting. What was discovered was that by reflecting some of the light off the roof itself, a layer of diffused light could be added to blanket the court and reduce the number of direct luminaires required, therefore minimising glare for spectators and viewers.

For the lighting upgrade, ME Engineers was again called on to work their magic. Director, Russel Evans knew that the LED fixtures would only be as good as their ability to be meticulously programmed and controlled. ME Engineers has a long-established trust in Lutron solutions and service, and turned to the Lutron team for a lighting control system that not only delivered superb performance, but could respond to exacting demands for tournament security and predictable reliability.

## Results

The original GRAFIK 7000 system installed in 2009, was programmed with two distinct operating modes – Championship and non-Championship. As a result of the recent Lutron Quantum upgrade, and with the proper password permissions, all lighting in Centre Court can be controlled remotely from within the Championship space. Additional levels of security can be assigned per event. This ensures lighting is able to react instantaneously to accommodate player needs without any chance of compromising the system at any time.

Working with the Lutron Services Team, ME Engineers was able to utilise the original GRAFIK XP dimming panels, while upgrading the processors, and installing a much improved Graphical User Interface (GUI) that simplifies changes and offers cleaner, crisper graphics that are "much nicer to work with," according to Evans.

The lighting upgrade has proven so successful that there are future plans to roll this solution out to Court Number One as well. Quantum Vue software will enable the entire system to be monitored and controlled securely from a central location, and enhance what is already the world's greatest competition tennis venue.

"With Quantum Total Light Management and Quantum Vue, the updated LED lighting can be perfectly tuned for each event from within the Championship venue."

**Russel Evans –  
ME Engineers**

<b>Client</b>	The All England Lawn Tennis Club (AELTC)
<b>Architect</b>	Populous
<b>Lighting Architect</b>	ME Engineers Ltd
<b>Equipment provider</b>	Lutron Electronics Co., Inc.
<b>Photography</b>	The All England Lawn Tennis Club (AELTC)
<b>Lutron products</b>	GRAFIK 7000 control processor, Lutron XP Softswitch, Quantum



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With proper password permissions, lighting in Centre Court can be controlled from within the space.

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