

# Donelson Christian Academy Softball Field



## OVERVIEW

Helios Energy™ partnered with Donelson Christian Academy to execute a capital improvement project that would replace all existing sports lighting at the softball complex following the destruction of the property in a 2020 tornado that devastated greater-Nashville.

## CHALLENGE

Replace and upgrade all sports lighting for the DCA softball field, ensuring that it meets all TN State standards for school sports fields, surpasses hurricane wind standards, and delivers unprecedented customization and control for ease of use.

**Need 1:** Meet and exceed hurricane standards so lights withstand any significant weather that may hit the area. This includes wind gusts up to 115 mph.

**Need 2:** Meet Tennessee regulatory standards set for lighting photometrics at high school sports facilities. For softball, the standard is set at a target 50-foot candles in the infield and 30-foot candles in the outfield.

**Need 3:** Add stand-alone mesh network, independent controls system that can be used without WIFI (no gateway or access to internet required) giving the end user complete control, remotely from an app that can be used anywhere.

## SOLUTION

Highly engineered solution that incorporated 22 fixtures across 4 poles rated to 115 mph, a reduction from 28 (1500 W) fixtures. These advanced LED fixtures have a 7-year warranty with Helios, resulting in a substantial reduction to DCA's maintenance costs.

All TN state photometric standards were far exceed with over 80 Fc delivered in the infield (avg. 83.57 Fc) and 60 Fc in the outfield (avg. 62.67).

The total lighting fixture count was reduced by 22% and the overall lighting wattage was reduced by 39%.

The lighting solution established a mesh network allowing coaches, administrators, and facility maintenance staff to manage the on-field lighting with the simple touch of a button. The controls system can be managed from any location, without WIFI, allowing for ultimate ease in usability and customization.

Average on-field foot candle (Fc) measurements:

Infield: 83.57 Fc

Outfield: 62.67 Fc

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## RESULTS

22 total fixtures installed atop 50-foot poles around the sports complex.

FIXTURE TYPE	FIXTURE DESCRIPTION	WATTAGE/EFFICIENCY	QUANTITY
LED Sports Light	1250W Sports Light W	5000K 40 DEG	18
LED Sports Light	1250W Sport Light N	5000K 25 DEG	4

## The Helios Energy™ Impact

- Drastically reduced overall maintenance costs and time for DCA administration and staff
- Notably improved environmental impact as old fixtures were all metal halide and all newly installed are LED



Founded in 1971 and located in Nashville, Tennessee, **Donelson Christian Academy** is a Christian private school that serves students from preschool through twelfth grade. DCA's mission is to serve Christ by assisting parents in providing students with a challenging, college-preparatory education taught from a nondenominational biblical worldview that develops the whole person into a Christ-like leader in the home, church, and community. The Academy focuses on Teaching in Truth and Challenging in Community to prepare students to Lead for the Kingdom.



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