



# **PUBLIC-PRIVATE PARTNERSHIPS TO ADVANCE HIGH-EFFICIENCY LIGHTING**

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# Cree Company Mission

LEAD THE LED LIGHTING REVOLUTION  
to obsolete energy-inefficient lighting



# About Sandy Grove Middle School (Hoke County, NC)

- Nation's first 'net-positive energy', LEED Platinum designed, leased public school
- Energy Reduction Initiative

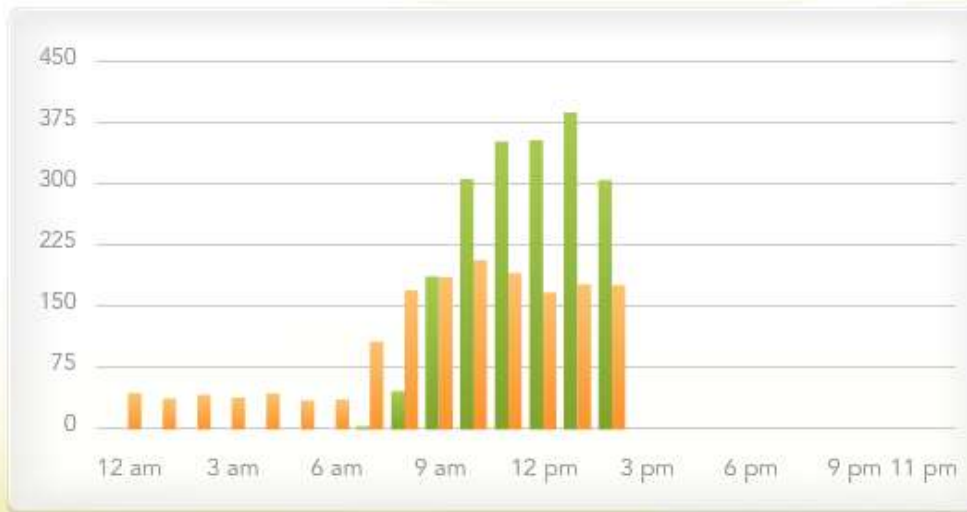
## Solar Photovoltaic Electricity Production (undergoing verification)

Kilowatt-hours of electricity produced today



**Total Production**

1,949  
Kilowatt-hours



**Total Use**

1,676  
Kilowatt-hours

**23%**

PERFORMANCE NOW



# Architected For Maximum Energy Efficiency



Over 80% of inside and outside fixtures are LED, which have a 20 to 25 year life-span with no bulb replacement. LEDs use 60% less energy than standard fluorescent fixtures and emit less heat, which helps keep cooling costs low. Plus they let us see colors better!

## Total Electricity Data (undergoing verification)

Kilowatt-hours of electricity consumed today



## Electricity by Area

Consumption today



# Sandy Grove Middle School Lighting Advantages

## Calculated Projected Savings

		Lighting	
		Interior Lighting	Exterior Lighting
Baseline Energy Use	Energy Star Baseline System Description	T8 w/ electronic ballasts .112 KW each	Tradeable and non tradeable surfaces per ASHRAE 90.1, total 20.9 kW
	Energy Star Baseline System Energy Use (kWh)	321,893	200,750
Sandy Grove Energy Use	Sandy Grove Middle School System Description	LED	Design layout of tradeable and non tradeable surfaces, total 8.9 kW
	Sandy Grove Middle School System Energy Use (kWh)	46,800	42,230
	Estimated Annual Energy Savings (kWh)	275,093	158,520
	Estimated Annual Energy Savings (%)	85.46%	78.96%
	Total Annual Energy Savings Schoolwide * Based on .11/kwh	\$30,300	\$17,400

### Cree CR24 Troffer



Delivered Light Output: 2200, 3100, 4000, 5000 lumens  
 Input Power: 22-50 watts  
 CRI: CRHE 90, CR 90, CRHD 80  
 CCT: 3000K, 3500K, 4000K, 5000K

**BASE SPECS**

**90W**

3-Lamp 32W T8 Troffers

➔

**UPGRADING TO LED**

**40W**

LED Troffers

**56%**

Immediate Reduction In Energy Use

# LED Lighting Advantages

- **Creates noticeably better visual environments for learning.**
  - **Clarity/Visibility**
- **Reduced fatigue.**
- **Improved Security**
- **Significant energy & maintenance savings.**
- **Helps reduce carbon footprint.**
- **Supports sustainability efforts.**

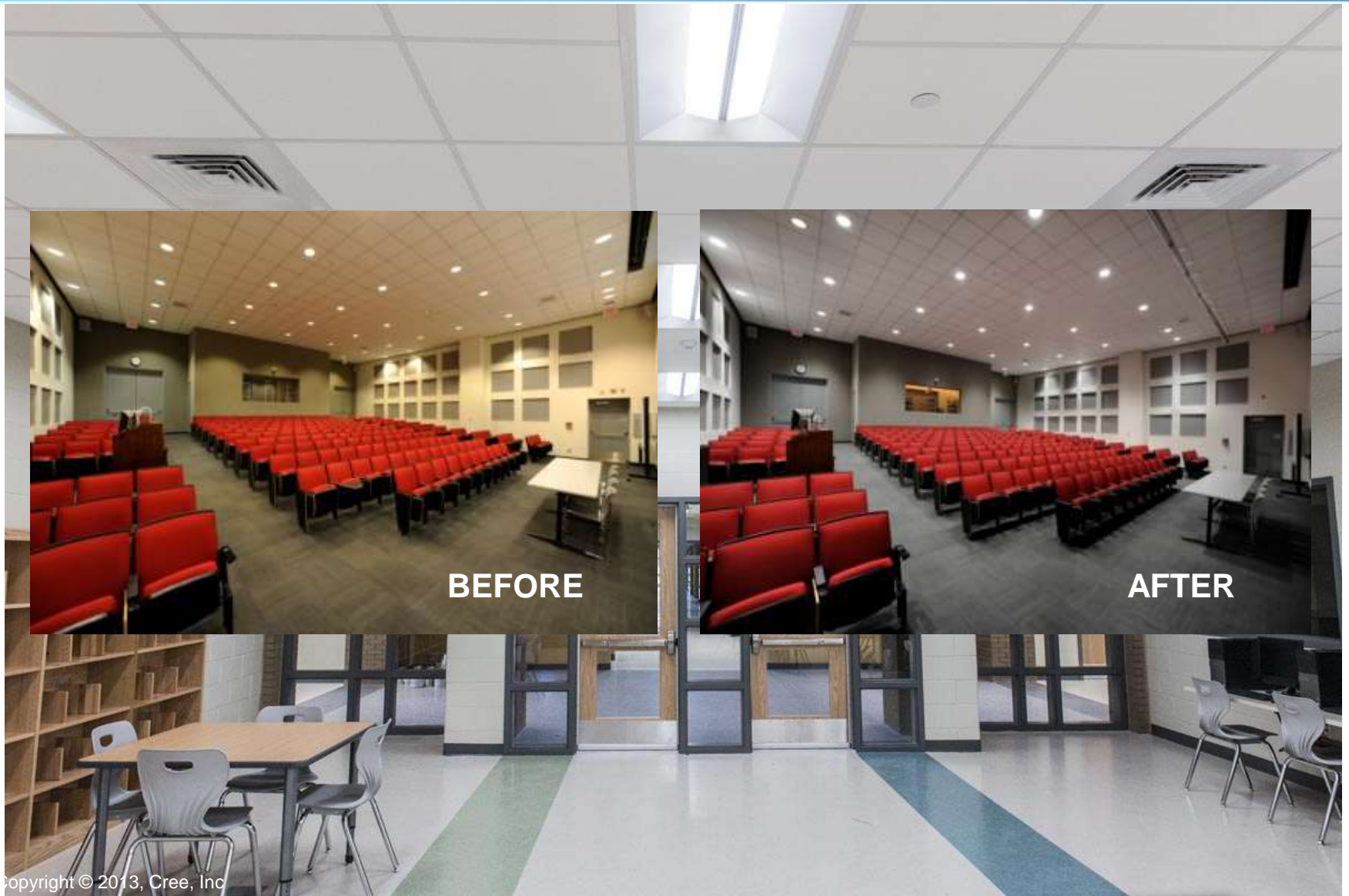


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**CREE** 

# Seeing is Believing!



**BEFORE**

**AFTER**

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# Application Shots





# The Cree LED Lighting Difference

- **25+ years** of pioneering innovation and no distractions from other lighting technologies – Cree is **completely dedicated** to LED lighting
- From dust...to device...to market...**Cree's vertical integration** enables end-to-end development optimization
- Our **10-year limited warranty** underscores Cree's commitment to the long-term performance and reliability of our products.

# QUESTIONS?



[www.cree.com](http://www.cree.com)