



# Shedding Light on Efficiency:

## A Case Study on Achieving Illumination Goals with Fewer LED Fixtures

LANTANA LED, a leading provider of commercial and industrial LED lighting solutions, was recently faced with the challenge of achieving an illumination level of 50 foot-candles at the 3-foot horizontal plane for a large-scale project while finding a more efficient and cost-effective solution for a hyperscale data hall.

### Challenge

The primary challenge for LANTANA LED was twofold: achieve the required illumination level while reducing the number of LED fixtures, thereby saving on product and material costs, labor, and installation time.

### Solution

After an in-depth analysis and careful planning, LANTANA LED proposed an ingenious solution: replacing the 4-foot fixtures with 6-foot fixtures. The longer fixtures would provide a greater spread of light, reducing the total fixtures needed to meet the illumination requirement.

This strategic change allowed LANTANA LED to decrease the total fixtures from 737 to 556, reducing the initial requirement by 181.

### Results

Implementing the 6-foot fixtures significantly decreased material and product costs due to fewer fixtures. Additionally, the reduction in fixtures resulted in less labor required for installation, further reducing project costs.

Moreover, the reduction in fixtures did not compromise the illumination quality. The project successfully achieved the target of 50 foot-candles at the 3-foot horizontal plane, proving the efficiency and effectiveness of LANTANA LED's innovative approach.

## Key Takeaways

1. **Innovation in Design:** Replacing 4-foot fixtures with 6-foot fixtures allowed for fewer fixtures while maintaining the required illumination.
2. **Cost Savings:** The reduction in the number of fixtures led to significant savings in product and material costs.
3. **Efficiency in Installation:** Fewer fixtures resulted in less labor and installation time, reducing project costs.
4. **Successful Outcome:** Despite reducing fixtures, the project met the target illumination level of 50 foot candles at the 3-foot horizontal plane.



## Conclusion

LANTANA LED offers a smart solution for optimizing the lighting layout by replacing 4-foot fixtures with 6-foot fixtures. This upgrade enables a wider light distribution, reducing the fixtures required to meet the desired illumination levels. As a testament to the success of this strategic change, LANTANA LED effectively decreased the total number of fixtures from 737 to 556, surpassing the initial requirement by an impressive 181.

With fewer fixtures, this innovative approach lowers costs and reduces installation and maintenance requirements while illustrating LANTANA LED's commitment to delivering exceptional solutions for its clients. With their expertise and dedication, customers can trust LANTANA LED to provide reliable and sustainable lighting solutions for various applications.

## About LANTANA LED

*Founded on the principles of innovation from the industrialized construction sector, LANTANA LED is transforming the lighting experience with sustainable and energy-efficient LED solutions. Their blend of aesthetics, quality, and functionality has resulted in products that enhance spaces, save energy, and reduce maintenance costs. UL Certified for Elevated Ambient Operating Temperatures and backed by a 10-year warranty, LANTANA LED's offerings embody reliability and longevity while prioritizing sustainability by incorporating recycled materials into their products.*