Blue Light - Data Centers

SMR1-601-PAR16-FIX

Clarte Lighting offers 465 nm to 485 nm blue light LED's in all 2″ PAR16 scale, 2 3/4″ PAR20 optical scale, 4″ PAR30 optical scale and 4 1/2″ PAR38 optical scale optical array fixtures, but the 2″ scale PAR16 mono point architectural fixture is ideal for data center rack illumination as a cost effective, visually minimalistic architectural fixture solution that provides a high quality of saturated directed blue light to illuminate data center racks to achieve optimum visual acuity

Blue Lighting Data Center Visual Benefits

The blue lighting in data centers is typically used for task-intensive applications like server rack illumination.
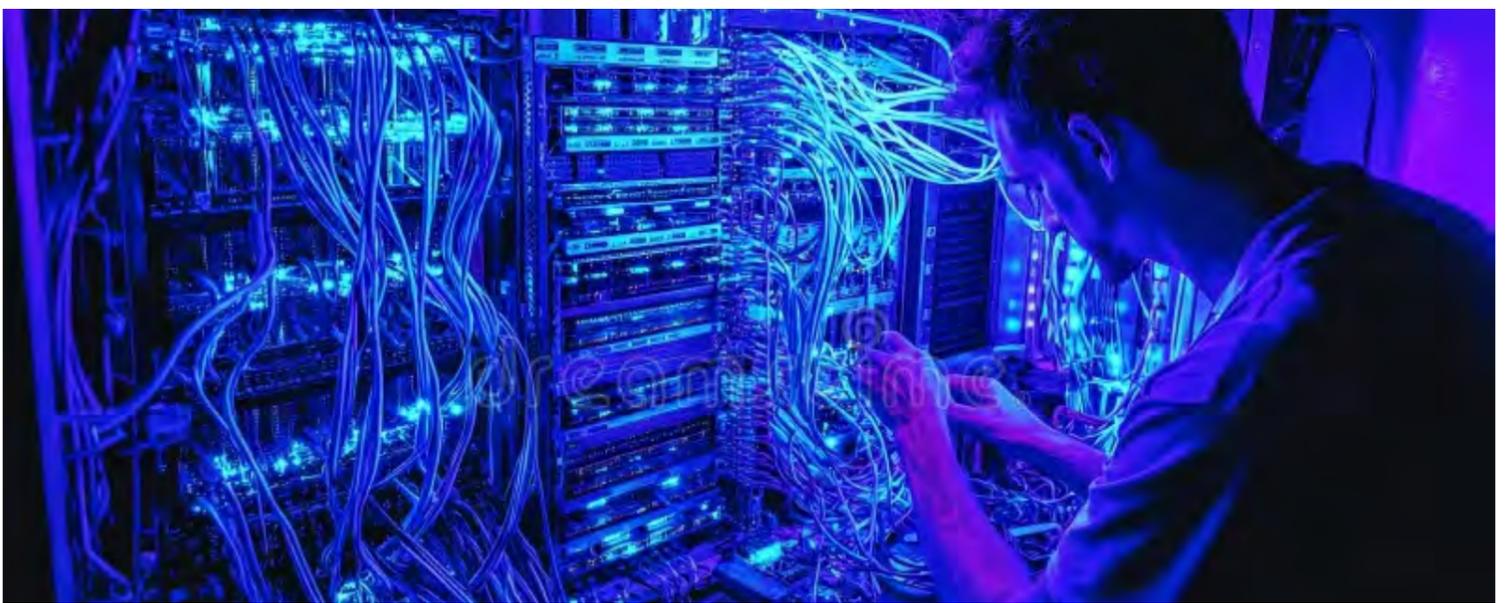
Blue colored lighting for data centers enhances the technicians alertness during a 24/7 operation, improves visual contrast and creates a high tech atmosphere in the space.

- **Improved Alertness & Cognitive Function** - Blue light in the 460 nm to 500 nm range stimulates the brain, helping to counteract early morning nighttime fatigue. Blue light suppresses melatonin, creating enhanced performance.

  Photoceptors in the retina signal to the brain to stay alert when exposed to 460 nm to 500 nm blue light range, Clarte Lighting blue light fixtures are 465 nm to 485 nm.

- **Enhanced Visual Clarity and Reduced Eye Strain** - Blue lighting helps technicians to see high densely placed cabling and service indicator lights, with a higher contrast, creating reduced eye fatigue.

- **Create Modern Aesthetic** - Blue lighting in the 465 nm to 485 nm range, provides an enhanced aesthetic to the stacks of racks.

Lighting is a key part of a technician's performance and mental state of being during long hours of operation.

Clarte Lighting Mono Point 2″ PAR16 Scale Operational Benefits.

Data Center Lighting Operates continually 24 hours a day and 365 days year creating extreme thermal conditions to any LED junction temperature and high utility cost to operate the lighting system.

Lower junction temperatures creates longer L70 life of the LED and lighting systems life.

Lower watts per square foot to illuminate the server stacks also creates compounding energy cost savings over time and a lower BTU heat load emitted from the lighting system into the space.

1. Utilize 1 LED driver to operate 1, 2, 3 or 4 fixtures reducing the cost to purchase, install and maintain LED drivers by up to -75%.
   - **4 LED Blue Fixtures to 1 LED Driver Wiring Schematic**

2. Powering 2, 3 or 4 LED fixtures with 1 LED driver reduces energy consumption per fixture by -37% as compared to an LED driver per fixture.
   - **-37% less energy consumption**

3. Junction temperature of 65C to 85C, compared to typical LED fixtures of 85C to 105C, creates L70 life of 150,000+ hrs. for an overall lower cost of ownership over time.
   - **10 Points of Light L70 Life**