STOUCH LIGHTING®
LED LIGHTING SOLUTIONS

Decorative Post Top Lighting

E-Guide

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Definition

What is a Post Top Lighting Application?

Post Top Lighting is a term to describe the outdoor lighting that is commonly mounted on poles and located in roadways, pathways, parking lots and commercial and educational campuses. Decorative Post Top Fixtures are generally used to provide illumination to areas for pedestrian and vehicle use and safety, with the most frequent attribute being that the light fixtures are mounted vertically to poles ranging from 7ft to 20 ft high. It is not uncommon to see multiple fixtures mounted on a single pole, with the specific mounting method varying significantly.

Below are a few image examples of Decorative Post Top Lights:

Most existing Post Top fixture applications utilize High Intensity Discharge (HID) lamps such as Metal Halide, High Pressure Sodium, and if they are very old, Mercury Vapor Lamps.

Download Our Lighting Comparison E-Book

Common Issues

What are some common issues with conventional Decorative Post-Top Lights?

Energy Costs

Common (HID) Lamp wattages used for Decorative Area Light Fixtures range from 100 Watts to 250 Watts. The higher the wattage the higher the light output. The function of the area being illuminated, combined with the quantity, spacing, and mounting height of the poles and fixtures plays a role in the existing wattages that are utilized. For a standard streetscape or campus, multiple 100w or 250w HID Fixtures (very common Post Top Lamp wattages) can cost between **$6,300 and $15,700** to operate per year, in electricity alone.

Maintenance Costs

Like most outdoor lighting applications, Maintenance costs are often a big concern for HID Decorative Post Top fixtures. In additional to the potential lamp **lifetime concerns**, Post-Top Lights, being commonly mounted on poles in excess of 10ft, often require the use of a bucket truck or lift to change out a lamp or a Ballast (can't forget about those ballast!). Many, municipalities, campuses, and facility management companies do not own a bucket truck or lift and as a result have to hire an outside contractor to maintain this fixtures, these are expenses that can really add up over the course of a few years. It can easily cost up to **$1,120 in labor and material** to maintain a single post top light fixture over the course of 3 years.

Lighting Performance

Depending on the type of HID Lamp your facility utilizes, the performance characteristics of your Decorative Post Top fixture can vary significantly. For example, if you are using Metal Halide lamps you may see light that is **Whiter**, but these types of lamps tend to have accelerated lumen degradation, meaning the light output of the lamps decrease quickly after initial install, and as a result the overall lifetime of the lamp decreases (we have all seen those decorative street light fixtures that have "pink" lamps that are barely providing any lighting on the ground). If you are using High Pressure Sodium you may see longer "useful" life as these lamps see less lumen degradation then Metal Halide, but their fuel structure produces a very "Orange" light with a very low **Color Rendering Index**. So basically you trade a longer life for a poorer quality light, in regards to visual perspective.

Benefits of LED

What are the benefits of LED Post Top Light applications?

Outdoor LED Lighting, such as LED Post Top fixtures, provide some excellent benefits for walkways or pathways requiring illumination because of how they **GENERATE** light and how they **DISTRIBUTE** light. **Light Emitting Diodes** generate light via a semi-conductor, as opposed to the consumption of a "fuel source" like in HID lamps. In regards to "distributing" light, LED fixtures commonly utilize "Multi-Point" sources, meaning the fixtures have Multiple Diodes with individual optics. When you compare this to the way most HID fixtures distribute light (with a single bulb and reflectors within the fixture), the result is light that is more **EVENLY** "distributed' across a given area.

Benefits of LED

The three most common benefits of LED Post Top Lighting?

Energy Savings

Common wattages for LED Post Top Lights can range from 25 Watts to 106 Watts, often resulting in a 35%-80% reduction in energy consumption. The reason for this can be referenced to the **GENERATION** comments above, and can result in savings of up **$800 per fixture per year** in electricity costs

Maintenance Cost Reduction

Again, due to the way LED's generate light, the way they progress through their functional life is much different. Instead of ceasing to function properly once a fuel source is significantly reduced, LED generated light output degrades **VERY SLOWLY** over time. As a result the functional life (often in excess of **100,000 hours**) of an LED product can be significantly longer than that of an **HID Lamp**, which in turn drastically reduces the costs for maintaining Post-Top fixtures over a longer period of time.

Lighting Performance

Moving on to the way LED fixtures **DISTRIBUTE** light. As a result of the Multi-Point design, LED Post Top Lighting applications often provide a very **EVENLY** distributed light pattern. What this means is that light levels across a given surface will vary less as the distance from the pole or fixture changes. Compared to HID fixtures, which often product a "bright spot" directly underneath the fixture with light levels decreasing drastically as the distance from the pole increases. The result, in regards to **LED vs HID**, is a more even foot candle distribution from the LED conversion. In addition to the even distribution of light, LEDs are available in a range of **color temperatures**, and as a result provide a range of options to increase the visual perception of "brightness".

Next Steps

What are the next steps to improve my Decorative Post Top Light application?

The first step is to speak with a LED lighting solutions provider that is **manufacturer neutral**. Why this approach as opposed to the company you may have used for the past several years? Unless that company has a focus on providing **LED solutions**, it is unlikely that will have the performance focused mentality that is required to obtain the desired results of an LED Lighting project for your municipal, campus, industrial and Post Top Light applications.

A crucial step in any LED project is understanding that **LED Lighting is NOT a commodity**.

Prior decades consisted of building facility managers and building owners evaluating product options purely on cost, assuming that all of the options in consideration were equal in quality. This is not case with exterior LED Lighting.

A solution focused supplier should ask you about your project objectives.

Do you have...

- **Budget constraints?**
- **Return On Investment Criteria?**
- **Energy reduction targets?**
- **Lighting performance requirements?**

The appropriate partner will want to get an understanding of your desired outcome, not just what specific products they can sell you. **Not all LED products are created equal**. There are different levels of value from different manufacturers for different applications, and by working with a company that has the product expertise to recommend a solution that meets your project priorities, you will ultimately achieve the best results. We'd love to know more about your **upcoming lighting project**, or **contact us** and we'll get in touch with you.