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HID Retrofit LED Lighting Comparing LED to Metal Halide Lighting

A metal halide bulb used in gas station lighting features a 20,000 hour life dissipates 400 watts of total power

A custom LED retrofit to replace the metal halide provides 50,000+ hours of life dissipates 60 Watts of total power

LED Conclusion
longer life + low energy = dramatically increased savings over time.

The saving of energy and money is just the beginning. There are many more advantages to retrofitting your Metal Halide Lights with HID Retrofit LED Lighting.

Metal Halide Operation

Metal halides require gas under extreme pressure and high temperature within the bulb. As the device operates, the internal temperature and pressure increases. LED lights use no gas, no pressure, and operate without excess heat. Instead, LED lights are solid state, eliminating several risks associated with high pressure gasses and high temperatures.

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Lighting Start-Up and Cool-Down

During start-up, the metal halide will not operate at maximum luminous output and will require up to five minutes to achieve the pressure and temperature required for optimal performance. In the event of a brief power failure, the arc will extinguish. A cooling period as long as 12 minutes may be required prior to restart. Unlike the metal halide, LED lights respond instantly, and do not require a warm-up period. In the event of a momentary power failure, the LEDs will resume normal operation the moment that power is restored.

LED Lighting Heat Dissipation

Most traditional light bulbs, including metal halide, dissipate heat from the front of the bulb and out into the atmosphere. This can create challenges in certain applications where the direction of heat dissipation is critical. LED lights generate significantly less heat when compared to the metal halide bulb. Not only do the LEDs generate less heat, but they also dissipate their thermal energy back into the mounting fixture.

LED Beam Angle

Metal halides produce mass amounts of wasted light from the top and sides of the lens. Not only does this result in a lower system efficiency, but also contributes to environmental "light pollution". Glare from uncontrolled High Intensity Lighting can be hazardous to drivers and detracts from natural light. LED lights feature superior directional characteristics, and can dramatically reduce light pollution. The narrow beam angle featured on many LED lights provides illumination within the intended areas only. Not only does this reduce light pollution, but also promotes higher overall system efficiency.



HID Retrofit LED Lighting

Retrofit to LED Lighting without changing the fixture.



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