

Do high output fluorescents perform better than HID?

Yes. There are several key areas in which high output fluorescents out-perform HID:

Rated Life: This is average period a lamp will perform prior to failing. The rated life of T5HO linear fluorescents and metal halide HID fixtures are both 20,000 hours, but lumen depreciation occurs much more rapidly during the rated life of a metal halide...which leads to the next performance point:

Maintaining Lumen Output: This relates to the amount of original lumens emitted by a lamp after a percentage of it's rated life has passed. Lumens decrease over the life of most lamps, so a lamp that maintains its lumen output for a longer period of time is more efficient.

At 40% of rated lamp life, an HID metal halide will emit only 65% of its original lumen output and continue to drop dramatically throughout its remaining life. This drop in lumen output creates color shifting causing a "cave effect" in the illuminated area. In contrast, a T5 HO lamp will still emit 93% of its original lumen output at 40% of its rated lamp life, and will remain at 93% up through 90% to 95% of its rated life.

CRI (Color Rendition Index): The CRI of a given lamp indicates how accurately it renders colors visible to the human eye. The highest CRI of 100 is based on the colors rendered by sunlight. Low CRI indicates poor color rendering. The CRI of metal halide HID lamps is 65, whereas the CRI of T5 fluorescents is around 80 to 82.

Heat: HID's emit an immense amount of heat. This requires additional energy to run air conditioning in controlled temperature environments.

Safety: The pressurized metal particles within the arc tube of a metal halide lamp heat up to extremely high temperatures creating a glow that emits light. This can present a safety hazard if both the inner and outer casing of the lamp are accidentally shattered causing burning metal particles to possibly fall on employees and/or paper products below. Because fluorescent lamps contain phosphorus elements which are excited by gases to create light, there are no burning particles present if a lamp is broken.

