Fluorescent Lights

LT

Fluorescent Lighting System

- Optimum light spectrum and lamp efficiency
- Low infrared radiation - low heat to test articles
- Non-specular lighting
- Soft shadows
- Simplified wiring
- Low power consumption

Fluorescent lighting systems are superior solutions for crash testing facilities light challenges such as lamp efficiency, heat output, point source lighting, and shadows.
High efficiency lamps with Ra (CRI) = 85 and daylight (6500K) color temperature and efficiency levels that exceed 90 lumens per watt are used to create the Fluorescent lighting system. These lamps are common for industrial use and widely available.
Tungsten halogen and metal halide lamps have an extremely hot filament and a red hot quartz arc tube, respectively. These hot sources emit large amounts of infrared radiation which is detrimental to most test articles. Fluorescents are a cool source with low infrared emission therefore the heat produced is primarily shed by convection and does not directly warm the test article.
Intense point source lighting creates intense reflections on shiny surfaces that can interfere with test analysis. Tungsten halogen and metal halide systems both have extremely intense light sources, the filament and the arc, respectively. In contrast fluorescent light is diffused at its source. The low source intensity allows a systems that does not create hot reflections. Furthermore the lower light intensity means that lamps that are in an opposing camera view are less likely to cause lens flare or blooming.
Modern high speed video surpasses film in every metric except dynamic range. Fundamentally sensor response is linear to the number of photons falling on the pixel, whereas the eye has a logarithmic response to light. For this reason a shadow that does not appear too deep to the eye can be impenetrable in the video. Similarly highlights can be blown out, obliterating detail. For analysis purposes flat even light minimizes these problems and also increases exposure latitude so operator camera setting accuracy is less critical. Fluorescent is unsurpassed for lighting evenness, being the opposite of a point source.

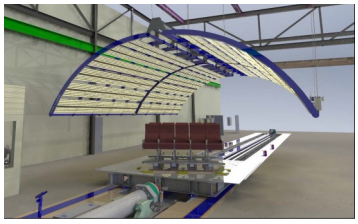
Available for:

- 3.1MN ServoSled
- 2.0MN ServoSled
- 1.4MN ServoSled
- Conversion Sled
- ServoSled 1000

The primary features of the Fluorescent lighting system include:

- **Efficient** – This system uses high efficiency T54HO lamps that exceed 90 lumens per watt and are commonly used in industrial settings, therefore easily accessible
- **Cool Source** – Fluorescents are a cool source with low infrared emissions as compared to Tungsten halogen and metal halide lamps which have extremely hot filaments and red hot quarts arc tubes respectively.
- **Diffuse Lighting** – Low source intensity lighting, as provided by fluorescent lighting, does not create intense point source lighting like other lighting styles providing less lens flare and bloom for cameras.

Fluorescent Lighting System



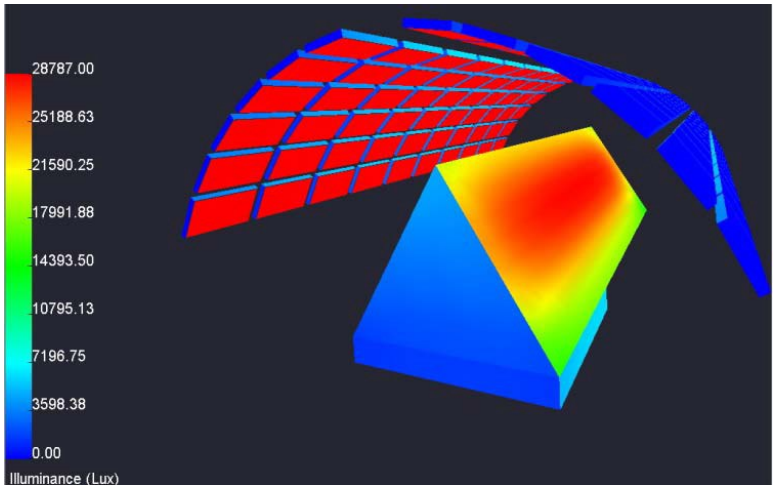
System Specifications:

Lamp Information	T5 54W HO - 5600K Daylight (6500k) daylight color temperature 35 Klux feasible level Low heat radiation

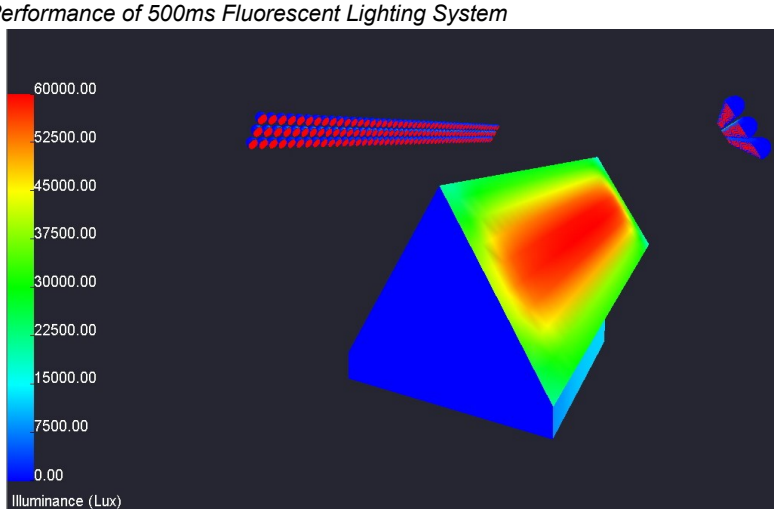
Provided by Seattle Safety
- Light frame, ballast, bulbs and wiring
- Control system
- Installation

Provided by Customer
- Overhead mounting provisions
- Power distribution box for lighting

The red band in the tungsten simulation is one-stop (30,000 vs. 60,000 lux.) It does exist due to the optics of the lenticulated PAR, but the simulation exaggerates its effect. Photographically this is quite even illumination.



Photometric Performance of 500ms Fluorescent Lighting System



Photometric Performance of 500ms Tungsten Halogen Lighting System

4502 B Street NW
Auburn WA, 98001
USA
+1-253-395-4321
sales@seattlesafety.com

Germany
+49 (0) 172-1492610
sales@seattlesafety.com