

# FT Opto Laboratories

## Client

Eflare Corp Pty Ltd  
222 St Kilda Rd  
St Kilda Vic  
Australia

## Report No

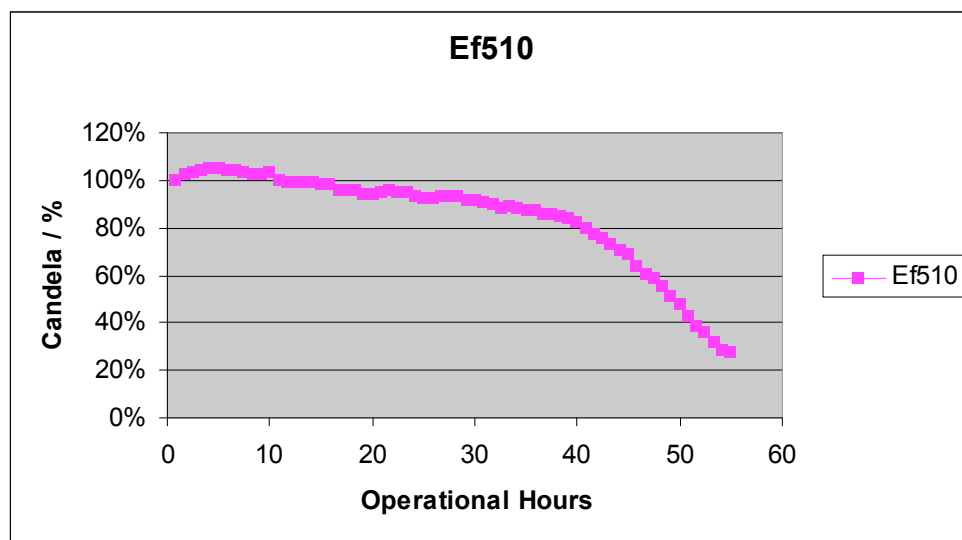
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## Date

15 August 2005

## Battery Life of Eflare

Measurements on the EF510 product show a measured Brightness in Candela vs. Time profile in continuous use as below:



Unlike a tungsten or halogen bulb-based product, the internal circuit maintains near-constant brightness despite the battery voltage dropping during use. Once the batteries are almost exhausted, the brightness starts to drop more rapidly and the LBI (low battery indicator) comes on.

The LBI uses the battery voltage as a measure of when to activate. This is set by the designer to where the brightness is 50 to 70% of the initial value. Due to tolerances inherent in all electronic components and batteries, this setting has a range. The lowest time when the LBI is active is 40 hours, but 50 is typical. It could be high as 60 hours.

**Notes:**

The human eye can detect light over a enormous range of intensity levels, and has developed a logarithmic response to brightness. A halving (drop of 50%) of Candela level is only just detectable by most people. The limit of detection is said to be 2dB (drop of 37%).

In actual typical operation the Eflare is used for a few hours, then stored, which allows the batteries to recuperate. The continuous test gives an indication which is more severe than normal use.

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