

I-Glo Photo-luminescent Trials – Summary Report

Physics Research Department
 Trial No - 3645
 Time – 23rd August 2018

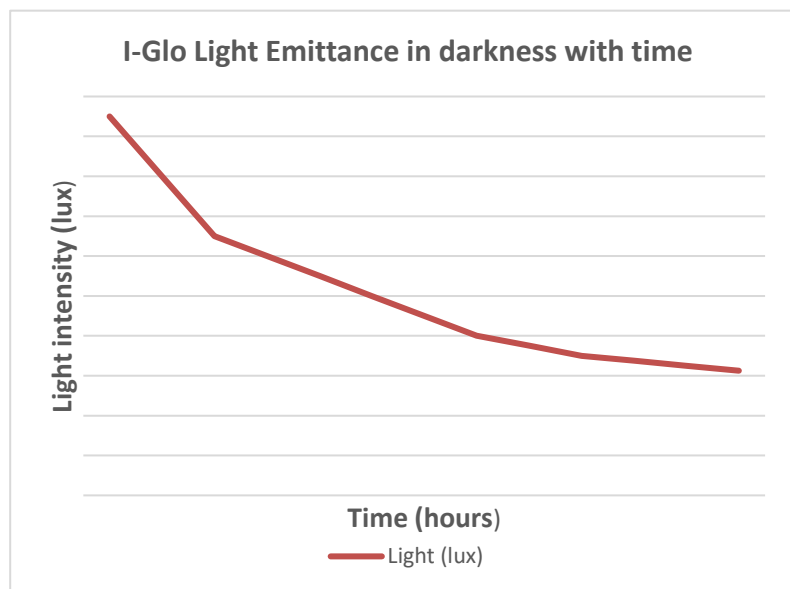
Introduction

In photometry, illuminance is the total luminous flux incident on a surface, per unit area. It is a measure of how much incident light illuminates the surface, wavelength weighted by the luminosity function to correlate with human brightness perception.

Method Statement

I-Glo sample -50mm diameter discs
 Light source – Xenon bulb – 250w
 Filter – interference filter attenuates stray light
 Instrument - Photoluminescent Spectrometer
 I-Glo 50mm discs were placed in the rotating sample holder within the photoluminescent spectrometer. Incident light from the Xenon light source is applied to the sample for 20 minutes and then removed leaving complete darkness.
 Light intensity was measured every hour.

Time (hrs)	Light (lux)
0	19
1	16
2	13
3	12
4	11
5	10
6	9
7	8
8	7.5
9	7
10	6.75
11	6.5
12	6.25



Ecological Impact

Artificial light pollution affects many animals since light and dark often signals when to eat, sleep, hunt, migrate, or reproduce. The maximum recorded light luminosity recorded was 19 lux (at time = 0) which is below the lower tolerance levels (50 lux) believed to initiate ecological impact on species such as bat colonies, moths beetles etc.