PHOTOMETRIC & OPTICAL TESTING

TECHNICAL WORKSHOP

Living Lighting

Technical Workshop

Helping to Improve the quality of lighting

4 April 2017, Institute of Physics - London

Fee: £95 + VAT (£75 + VAT if booked before 13 March)

Photometric & Optical Testing Services is holding a one-day workshop to help business and technical leaders understand some of the most important technical challenges facing the lighting industry and to present the latest developments in safety standards and performance metrics. Experts from industry and academia will talk on four areas of popular concern to lighting professionals:

- LED flicker and product risk assessment in relation to IEEE 1789
- The assessment of the photobiological safety of lighting products
- The new IES TM-30 light source colour rendering metric
- Glare from LED luminaires – what it is and how it can be reduced

We will be holding an open Q & A session with the expert speakers and we encourage delegates to participate the discussion and to raise topics of concern.

Living Lighting Speakers:

Towards Flicker-Free Lighting
Jeffrey-Alexander Lemmens
Admesy, Netherlands

Colour Rendering Revisited – IES TM-30-15
Peter Raynham, UCL, UK

Photobiological Safety - How Not to Get Burnt
Dr Neil Haigh
Blueside Photonics, UK

Glare – How Not to be Blinded by the Light
Oliver Buchan
OBL Technical, UK

To register, go to: www.photometrictesting.co.uk
or send an email to events@photometrictesting.co.uk

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Living Lighting Agenda

When: 10:00 - 16:00, 4 April 2017
Where: Institute of Physics, 80 Portland Place, London, W1B 1NT (www.iop.org)
The Cost: £95 + VAT (early bird offer - book before 13 March and pay £75 + VAT)
To Register: www.photometrictesting.co.uk events@photometrictesting.co.uk

Towards Flicker-Free Lighting

Jeffrey-Alexander Lemmens, Admesy, Netherlands

The photometric flicker from LED-based lighting can not only be unpleasant but also dangerous to those susceptible to photo-induced epilepsy, for example. Until recently, we knew how to measure and quantify flicker, but we did not know what constituted an acceptable level of flicker versus that which is dangerous. With the publication in 2015 by the IEEE of the 1789 working standard, we now have a scientifically validated framework for assessing the flicker performance of LED lighting products. This talk will review the causes of flicker, the biological risks, the practical measures by which it can be reduced and the instrumentation required to measure the level of flicker and whether it is safe.

Photobiological Safety – How Not to Get Burnt

Dr Neil Haigh, Blueside Photonics, UK

The EU Artificial Optical Radiation Directive as enacted through UK employment legislation places a legal obligation on employers to assess the photobiological safety of light sources and lighting products operated in the workplace. This talk will provide an overview of the photobiological risks to the eyes and skin and a review of the European standard on photobiological safety measurements, EN 62471. The instrumentation required for performing photobiological safety tests will be discussed and an explanation of the four lighting “risk groups” presented.

Colour Rendering Revisited – IES TM-30-15

Dr Peter Raynham, University College London, UK

Colour rendering – that property of a light source that describes how “naturally” it renders the colour of objects – has been the subject of much debate. The existing standard, CIE 13.3, was published in 1995 and is widely held to provide a poor prediction of how LED lighting performs in practice. The TM-30-15 technical memorandum published by IESNA in 2015 describes a method for evaluating light source colour rendition that quantifies both the fidelity (the closeness to a reference) and the gamut (the increase or decrease in chroma) of a light source. It is considered to be a better descriptor of LED colour rendering and is being adopted by the global lighting industry as its metric of choice. This talk will compare the old CRI metric to the new and will interpret the colour vector graphics and rendering indices (fidelity index, gamut index) used in TM-30-15.

Glare – How Not to be Blinded by the Light

Oliver Buchan, OBL Technical, UK

Glare can be a tricky attribute to pin down, and a controversial one to put an objective measure to. The concept of 'lighting glare' means many things to many different people, but is bound by an understanding that it refers to a light source that either prevents something from being seen (disability glare) or causes an annoyance (discomfort glare). This talk provides a brief overview of a range of techniques to quantify glare, including a more in-depth look at the ubiquitous UGR ratings. It carries on with an in-depth discussion about the relationship between glare and physical parameters, such as light output, light directionality, physical dimensions, and the all important (but often forgotten) properties of the lit environment.

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