BSI IEC/TR 62778:2014

Instruction Manual: BS PD IEC/TR 62778:2014

Application of IEC 62471 for the Assessment of Blue Light Hazard to Light Sources and Luminaires

1. Introduction

This instruction manual provides an overview and guidance for understanding and applying**BS PD IEC/TR 62778:2014**. This technical report details the application of IEC 62471 for assessing the blue light hazard associated with light sources and luminaires. It is intended for professionals involved in the design, manufacturing, testing, and regulation of lighting products.
The document clarifies the methodology and considerations for evaluating potential risks related to blue light emission, ensuring compliance with safety standards.

2. Overview of IEC/TR 62778:2014

IEC/TR 62778:2014 is a technical report that provides guidance on how to apply the photobiological safety standard IEC 62471 specifically for the assessment of blue light hazard. It focuses on practical aspects for manufacturers and testing laboratories.
Key aspects covered include:

- Clarification of measurement conditions.
- Interpretation of results in relation to blue light hazard categories.
- Guidance for different types of light sources and luminaires.

3. Relationship with IEC 62471

IEC 62471, "Photobiological safety of lamps and lamp systems," is the foundational standard for assessing optical radiation hazards. IEC/TR 62778:2014 serves as a supplementary document, providing specific interpretations and application details for the blue light hazard component of IEC 62471.
It does not replace IEC 62471 but rather offers practical guidance for its implementation concerning blue light, which is a critical aspect of photobiological safety.

4. Assessment Methodology for Blue Light Hazard

The assessment of blue light hazard involves measuring the spectral radiance of a light source or luminaire and comparing it against exposure limits defined in IEC 62471. IEC/TR 62778:2014 provides recommendations on:

- **Measurement Setup:** Proper positioning and calibration of measurement equipment.
- **Calculation of Blue Light Weighted Radiance:** Specific formulas and weighting functions to apply.
- **Hazard Classification:** How to assign a risk group (e.g., Exempt, Risk Group 1, Risk Group 2) based on the calculated values.

5. Application to Light Sources

For individual light sources (e.g., LEDs, fluorescent lamps), the technical report guides how to assess their inherent blue light hazard before integration into a luminaire. This includes considerations for:

- Component-level assessment.
- Impact of drive current and operating temperature.
- Specific requirements for different lamp types.

6. Application to Luminaires

When light sources are integrated into a luminaire, the overall blue light hazard can change due to optics, diffusers, and housing. IEC/TR 62778:2014 provides guidance on:

- Assessment of the complete luminaire system.
- Consideration of viewing angles and distances.
- How to account for shielding and light distribution.

7. Key Considerations

Users of this technical report should pay attention to the following critical points:

- The report is a *technical report*, not a normative standard, offering guidance rather than strict requirements.
- It focuses exclusively on blue light hazard and does not cover other photobiological hazards.
- Regular updates to related standards (e.g., IEC 62471) should be monitored for any changes impacting this report's application.

8. Specifications

Attribute	Detail
Title	BS PD IEC/TR 62778:2014 Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires
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9. Support & Further Information

For further details, clarifications, or to purchase the full document, please refer to the official BSI website or authorized distributors of international standards.
It is recommended to consult the latest versions of all referenced standards and technical reports for the most current information.
For inquiries regarding the content of this technical report, please contact the publisher, BSI, directly.

Related Documents - IEC/TR 62778:2014

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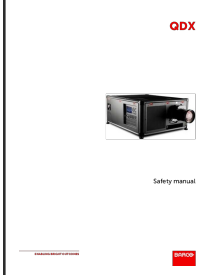
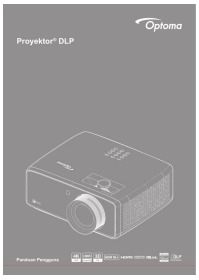
	Certificate of Registration: Network18 Media & Investment Limited - ISO/IEC 27001:2022 Certificate of Registration for Network18 Media & Investment Limited, confirming compliance with ISO/IEC 27001:2022 for their Information Security Management System. Details scope of services and certification validity.
	BSI SOC 2 Attestation: Build Trust and Differentiate Your Business Learn how BSI's SOC 2 attestation helps organizations build trust, differentiate themselves, and navigate the complex security and privacy landscape by demonstrating robust data protection controls.
	BS EN 61558-2-6:2009 - Safety of Transformers, Reactors, Power Supply Units This document details the particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers for supply voltages up to 1100 V, as per BS EN 61558-2-6:2009.

	[Barco QDX Projector Safety Manual] Comprehensive safety manual for Barco QDX series projectors, covering electrical safety, laser radiation, fire hazards, installation, and handling precautions. Includes model information, warnings, and compliance details.
	[Panduan Pengguna Proyektor Optoma DLP] Panduan pengguna komprehensif untuk proyektor Optoma DLP, mencakup keselamatan, pemasangan, pengoperasian, pengaturan, pemecahan masalah, dan spesifikasi produk.