



PERMANENT DOCUMENT

ERS 002

ENEC Requirement Sheet 002
Horticultural luminaires with LED

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Application of EN IEC 60598 series and EN 62471:2008 to LED Horticultural Luminaires for the granting of the ENEC Mark within the European Certification System (ECS)

Table of change

Revision	Reason to change

1 Introduction

This Permanent Document details the specifications for granting the ENEC Mark for Horticultural Luminaires with LED according to the application of EN 60598 series and EN 62471.

Horticultural luminaires are defined as luminaires capable of providing Horticultural Lighting. Horticultural Lighting is the application of optical radiation that can stimulate biological response of plants and the component.

In addition to what is required by EN IEC 60598-1:2021+A11:2022 (and relevant applicable parts two), the Horticultural Luminaire with LED, shall be classified in RG0 (Exempt Group), in accordance with the requirements of the EN 62471, for all Photobiological Risks except the Blue Light Hazard whose requirements are already addressed in subclause 4.24 of the EN IEC 60598-1:2021+A11:2022.

During the evaluation of Photobiological Risks (EN 62471), the hazard values shall be reported as either irradiance or radiance values at a distance which produces an illuminance of 500 lux where General Lighting is provided together with Horticultural Lighting and at 200 mm for all other cases.

Recommendations for the correct use, in addition to that already requested by the EN IEC 60598-1, maintenance and installation should be provided (e.g.: the distance which provides 500 lux if this is higher than 200 mm).

Particular attention should be paid to the classification of the luminaire, particularly to the IP rating that should be carefully considered according to the intended use of the Horticultural Luminaire.

2 Requirements

2.1 The Horticultural Luminaire shall be in compliance with the requirements of the EN IEC 60598-1:2021+A11:2022 (and relevant applicable parts two).

2.2 The Horticultural Luminaire shall be classified in accordance with the requirements of the EN 62471:2008 as follows:

- Actinic Ultraviolet Hazard : RG0 (exempt Group);
- Near-UV Hazard : RG0 (exempt Group);
- Retinal Thermal Hazard : RG0 (exempt Group);
- Retinal thermal, weak visual stimulus ^a . : RG0 (exempt Group);
- Infrared Radiation Hazard for the eye ... : RG0 (exempt Group);

^a: if applicable according to 4.3.6 of EN 62471:2008

NOTE 1: Blue Light Hazard requirements are already addressed in subclause 4.24 of the EN IEC 60598-1:2021+A11:2022.

NOTE 2: The above limits are fully aligned with limits listed in IEC 62471-7:2023 - Photobiological safety of lamps and lamp systems - Part 7: Light sources and luminaires primarily emitting visible radiation.

If the Horticultural Luminaire, where General Lighting is provided together with Horticultural Lighting, complies with limits as listed in IEC 62471-7:2023 then the requirements in this clause are considered fulfilled.

2.3 The hazard values, during the evaluation of Photobiological Risks according to EN 62471:2008 as required in clause 2.2, shall be reported as either irradiance or radiance values considering the following distance:

- a distance which produces an illuminance of 500 lux where General Lighting is provided together with Horticultural Lighting;
- 200 mm for all other cases.

2.4 In line with the requirements of 3.3 of EN IEC 60598-1, the following information shall be provided:

- correct use, maintenance and installation of the Horticultural Luminaire;

EXAMPLE: the distance which provides 500 lux if this is higher than 200 mm.

- intended use related to the given classification of the Horticultural Luminaire.

EXAMPLE: according to environmental conditions (IP rating or rated ambient temperature).

3 License requirement information text

The following requirement information shall be stated on the ENEC license:

- in row 7 according to ENEC 321
“ERS 002: month-yyyy shall be added to the “standard used”;
- in row 13 (Additional) according to ENEC 321
 - if the requirement of clause 2.2 has been fulfilled according to EN 62471:2008:
“*The Horticultural Luminaire was evaluated according to the EN 62471:2008 to cover Photobiological Hazards other than those already covered by EN 60598 series (blue light).*”
 - if the requirement of clause 2.2 has been fulfilled according to IEC 62471-7:2023:
“*The Horticultural Luminaire was evaluated according to the IEC 62471-7:2023 to cover Photobiological Hazards.*”

4 Additional data to be shown on the ENEC license

No additional data to be added to the ENEC License.