

IEC/EN 62471 REQUIREMENTS FOR RISK GROUP CLASSIFICATIONS – EXPOSURE TIMES

	Exempt	Group 1 (Low Risk)	Group 2 (Moderate Risk)	Group 3 (High Risk)
Reference in EN 62471	Section 6.1.1	Section 6.1.2	Section 6.1.3	Section 6.1.4

6.1.1 – No photobiological hazard

6.1.2 – Does not pose a hazard due to normal behavioral limitations on exposure

6.1.3 – Does not pose a hazard due to the aversion response to very bright light sources or due to thermal discomfort

6.1.4 – May pose a hazard even for momentary or brief exposure

Exempt group requirement is met by any lamp that does not pose:

- a. an actinic ultraviolet hazard (Es) within 8-hours exposure (30000 seconds), nor
- b. a near-UV hazard (EUVA) within 1000 seconds, (about 16 min) nor
- c. a retinal blue-light hazard (LB) within 10000 seconds (about 2,8 h), nor
- d. a retinal thermal hazard (LR) within 10 seconds, nor
- e. an infrared radiation hazard for the eye (EIR) within 1000 seconds.

Risk Group 1 requirement is met by any lamp that exceeds the limits for the Exempt Group but that does not pose:

- a. an actinic ultraviolet hazard (Es) within 10000 seconds, nor
- b. a near ultraviolet hazard (EUVA) within 300 seconds, nor
- c. a retinal blue-light hazard (LB) within 100 seconds, nor
- d. a retinal thermal hazard (LR) within 10 seconds, nor
- e. an infrared radiation hazard for the eye (EIR) within 100 seconds.

Risk Group 2 requirement is met by any lamp that exceeds the limits for Risk Group 1 but that does not pose:

- a. an actinic ultraviolet hazard (Es) within 1000 seconds exposure, nor
- b. a near ultraviolet hazard (EUVA) within 100 seconds, nor
- c. a retinal blue-light hazard (LB) within 0,25 seconds (aversion response), nor
- d. a retinal thermal hazard (LR) within 0,25 seconds (aversion response), nor
- e. an infrared radiation hazard for the eye (EIR) within 10 seconds.

Risk Group 3 are classified as lamps which exceed the limits for Risk Group 2.