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Quality in LED lighting

- Hotels have different lighting needs to factories. What are the key requirements of the different applications?
- The licht.de checklists* provide assistance for decision-makers and planners. They simplify the task of assessing the requirements of particular lighting systems.
- The first table lists quality criteria for decision-makers, whereas the second table shows product and system criteria for assessing quality.

For decision-makers: Quality criteria for lighting systems
Decision-makers need guidance on the relevance of the different quality criteria for their project.

	Office	Industry	Retail outlet	Public lighting	Home / Hotel	Museum
Life cycle costs	Very important	Very important	Minor importance	Extremely important	Relatively important	Minor importance
Lighting design	Very important	Minor importance	Extremely important	Relatively important	Very important	Extremely important
Product / System	Relatively important	Extremely important	Very important	Very important	Relatively important	Relatively important
Aesthetics	Very important	Minor importance	Very important	Very important / Minor importance	Very important	Very important

Supplier criteria should also be taken into account when awarding contracts.

For planners: Product and system criteria for quality assessment
The planner checklist requires specialist lighting technology knowledge. The purpose is to rate relevant aspects from the *ZVEI "Reliable Planning with LED lighting" guide* for individual applications. Decision-makers can use this to obtain answers to questions relating to product quality, and to calculate costs.

Data sheet specifications	Office	Industry	Retail outlet	Public lighting	Home / Hotel	Museum
Luminaire output: W	Relatively important	Extremely important	Very important	Relatively important	Minor importance	Relatively important
Luminaire luminous flux lm	Relatively important	Very important	Relatively important	Relatively important	Not important	Minor importance
Luminaire luminous efficacy: lm/W	Very important	Extremely important	Minor importance	Extremely important	Minor importance	Minor importance
Colour rendering index: CRI or R_a	Very important	Relatively important	Very important	Minor importance	Very important	Extremely important
Correlated colour temperature / CCT or TCP: K	Very important	Relatively important	Extremely important	Minor importance	Extremely important	Extremely important
Colour tolerance (initial, MacAdam): [Number]	Very important	Minor importance	Very important	Minor importance	Very important	Extremely important
Median useful life: L_x	Very important	Extremely important	Relatively important	Extremely important	Minor importance	Relatively important
Colour stability over time (if available)	Relatively important	Relatively important	Relatively important	Minor importance	Minor importance	Very important

Further information on individual application areas in industry, public lighting and retail outlets can be found on the licht.de website (checklists).

*The quality characteristics have been broken down using Likert scales.

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Get the best information on light and lighting!

More ideas and further information about LED lighting and LEDs can be found at www.licht.de:

- ZVEI "Reliable Planning with LED Lighting" guide

- ZVEI "The replaceability of LED light sources" white paper

- licht-wissen 17 "LED: Basics – Applications – Effects" brochure

- Videos: "LED – The Light of the Future" and "LEDs for the Home"

- Basic facts about LEDs and OLEDs

*PS: Want to know what **Human Centric Lighting (HCL)** means?*

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LEDs: Basics · Applications · Effects