

Evaluation of Colour Perception in Different Correlated Colour Temperature of LED Lighting

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Abstract : The perception of colour is a subjective experience which depends on age, gender, race, cultural and educational backgrounds, etc. of an individual. However, colour perception is also affected by the correlated colour temperature (CCT) of a light source which is considered as one of the most fundamental quantitative lighting characteristics. This study focuses on evaluating colour perception in different CCT of light emitting diodes (LED) lighting. The aim is to compare the inherent colours with the perceived colours under two CCT of 'warm' (2700K), and 'cool' (4000K) LED lights and to understand how different CCT affect the perception of a colour. Analysis and specifications of colour attributes are made with Natural Colour System (NCS) which is an international colour communication system. The outcome of the study reveals the possible tendencies for perceived colours under different illuminance levels of LED lighting.

Keywords : colour perception, correlated colour temperature, inherent and perceived colour, LED lighting, natural colour system (NCS)

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