Noppawut Patirat 2014: A Comparison Study of Visual Performance and Subjective Impression of LED and Halogen Lamp among Thai People. Master of Architecture (Building Innovation), Major Field: Building Innovation, Department of Building Innovation. Thesis Advisor: Mr. Siradech Surit, D.Eng. 124 pages.

At present, the development of LED bulbs (LED) for illumination and decoration for residential areas and architecture become more popular in Thailand. With features such as energy saving of LED light bulbs and no radiation released for LED, this makes researches on LED are of interest for a lone time.

However, the studies on the influence on vision on the replacement of LED to other lamps are relatively limited, especially for Thai people. This study aimed to explore the visibility of the Thai people when there is a replacement of LED to each type of halogen. There are two factors to be investigated. The first factor is the lamp type and the second factor is the level of illuminance. The study investigated these two effects on visual performance, assessed by using NV test and on subjective impression of space evaluated by using Semantic Differential Scale (SDM) method. Two experiments were carried out in a dark test room at the Faculty of Architecture, Kasetsart University. There were two experiments to be carried out and each of them aimed to explore different type of the replacement of LED to halogen. There were 32 subjects participated in each experiment. In overall, the results indicated that LED can replace halogen and in several aspects LED perform better than halogen.

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