

**UNIVERSITI TEKNOLOGI MARA**

**READING PERFORMANCE WITH  
DIFFERENT CORRELATED COLOUR  
TEMPERATURE AMONG PRESBYOPIA**

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**Thesis submitted in fulfillment of the requirements for  
the degree of**

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## **AUTHOR'S DECLARATION**

I declare that the work in this dissertation was carried out in accordance with the regulations of University Teknologi MARA. It is original and the results my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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## ABSTRACT

**Introduction:** Correlated colour temperature (CCT) is important characteristic of lights to be considered regarding to human perception. Good selection of lighting can improved the reading performance among presbyopia. **Objective:** The aim of this study is to determine the effect of warm white light (WWL) (CCT = 2856 K), cool white light (CWL) (CCT = 4100 K) and artificial daylight (DL)(CCT = 6500 K) on the near reading performance among presbyopia. **Methodology:** This study involved fourteen presbyopia subjects aged between 35 to 65 years old (3 male, 11 female), with their mean value of distance refractive power was - 0.75D and mean value of addition power was +2.00D. GTI ColorMatcher light booth consist of three sources of light and two types of UiTM Mrw reading charts had been used to evaluate reading performance among presbyopia. **Result:** One-way repeated-measure ANOVA showed that the reading performance were statistically significant increase CWL to DL and WWL to DL [12.68 (95% CI, 0.84 to 24.51) wpm,  $p < 0.05$ ] and [13.33(95% CI, 1.73 to 24.92) wpm,  $p < 0.05$ ]. However there were no significant difference in term of reading accuracy between CWL, WWL, and DL. **Conclusion:** The instillation of high CCT could give benefit in increasing the reading performance and reading accuracy among presbyopia.

*Keywords: Reading performance, Correlated Colour Temperature, Presbyopia*