

# **Feasibility Study of Lighting Systems Using LED Lights in Educational Buildings**

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## **ABSTRACT**

*In this thesis, the measurement and analysis of light intensity is carried out, analysis of the calculation of new lamp costs with long lamp costs and energy savings that have been installed in the classroom and teacher room at SD N 05 Pagi Duri Kosambi. The method of measuring the intensity of information uses SNI 16-7062-2004 about "Measuring the Intensity of Illumination in the Workplace". From the results of analysis of the calculations performed, the intensity of illumination in the classroom and teacher room at SD N 05 Pagi Duri Kosambi apparently did not meet the recommended standards of SNI 03-6575-2001 on "Procedures for Designing Artificial Lighting Systems in Building Buildings" using the type of lamp Cool Essential Hannochs 36 Watt 4W PLC Daylight, therefore lighting intensity measurement was carried out using Philips 19.5 watt LED Daylight Cool Daylight type and after the results obtained from the calculations performed, the intensity of illumination in the classroom and teacher's room at SD N 05 Pagi Duri Kosambi has complied with SNI 03-6575-2001 standard on "Procedures for Designing Artificial Lighting Systems in Building Buildings." Substitution of the type of lamp in the room at SD N 05 Pagi Duri Kosambi by using Philips Philips 19.5 watt LED Cool Daylight at a cost of IDR 1,950,000 and annual energy cost savings of IDR 1,511,329.*

**Keywords:** *Energy Saving, Lighting Intensity, LED*