

ANALISIS PERBANDINGAN EFIKASI LAMPU HEMAT ENERGI BERGARANSI DAN TIDAK BERGARANSI

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INTISARI

Telah dilakukan penelitian tentang analisis perbandingan efisiensi lampu hemat energi bergaransi dan lampu hemat energi tidak bergaransi. Tujuan penelitian ini untuk mengetahui perbandingan nilai efisiensi antara lampu hemat energi bergaransi dan lampu hemat energi tidak bergaransi dengan menggunakan variasi daya pada lampu hemat energi. Hasil dari penelitian ini dapat digunakan untuk menentukan kualitas lampu hemat energi dan menambah khasanah penelitian lampu hemat energi.

Metode yang digunakan dalam penelitian ini adalah metode titik demi titik dengan menggunakan luxmeter. Metode ini digunakan karena sesuai untuk mengukur besarnya efisiensi lampu hemat energi yang kemudian dapat dibandingkan dengan hasil yang telah sesuai dengan standar.

Berdasarkan penelitian diperoleh hasil B 11 watt memiliki nilai fluks cahaya (597.56 ± 10.17) lumen, nilai efisiensi (54.32 ± 0.92) lumen/watt, eror nilai fluks cahaya 0.60%, eror nilai efisiensi 0.60%. B 8 watt memiliki nilai fluks cahaya (422.47 ± 6.82) lumen, nilai efisiensi (52.81 ± 0.85) lumen/watt, eror nilai fluks cahaya 1.75%, eror nilai efisiensi 2.21%. B 5 watt memiliki nilai fluks cahaya (22.60 ± 8.28) lumen, nilai efisiensi (44.72 ± 1.66) lumen/watt, eror nilai fluks cahaya 4.85%, eror nilai efisiensi 4.85%. A 11 watt memiliki nilai fluks cahaya (251.80 ± 23.00) lumen, nilai efisiensi (22.89 ± 2.09) lumen/watt, eror nilai fluks cahaya 57.61%, eror nilai efisiensi 57.61%. A 8 watt memiliki nilai fluks cahaya (193.26 ± 23.81) lumen, nilai efisiensi (24.16 ± 2.98) lumen/watt, eror nilai fluks cahaya 55.06%, eror nilai efisiensi 55.26%. A 5 watt memiliki nilai fluks cahaya (131.32 ± 23.33) lumen, nilai efisiensi (26.26 ± 4.67) lumen/watt, eror nilai fluks cahaya 44.12%, eror nilai efisiensi 44.12%.

Kata kunci: Lampu, efisiensi, hemat energi

COMPARATIVE ANALYSIS OF WARRANTED ENERGY-SAVING LIGHT EFFICACY AND NON WARRANTED ENERGY-SAVING LIGHT

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ABSTRACT

Research comparative analysis of energy-saving light efficacy under warranty and energy-saving light not under warranty has done. The purpose of this research was to knowing the comparison of the efficacy between energy-efficient lights under warranty and energy-saving light not under warranty using power variations on energy-saving light. The results of this research can be used to decide the quality of the energy-saving light and add the glossary research energy-saving light.

The method that used in this research was a point by point method by using luxmeter. It was used because appropriate to measure the efficacy of energy-saving light and then can be compared with the results in appropriate with the standard.

Based on the research, results of the acquired B 11 watt has light flux value (597.56 ± 10.17) lumen, efficacy value (54.32 ± 0.92) lumen/watt, light flux error value 0.60%, efficacy error value 0.60%. B 8 watt has light flux value (422.47 ± 6.82) lumen, efficacy value (52.81 ± 0.85) lumen/watt, light flux error value 1.75%, efficacy error value 2.21%. B 5 watt has light flux value (223.60 ± 8.28) lumen, efficacy value (44.72 ± 1.66) lumen/watt, light flux error value 4.85%, efficacy error value 4.85%. A 11 watt has light flux value (251.80 ± 23.00) lumen, efficacy value (22.89 ± 2.09) lumen/watt, light flux error value 57.61%, efficacy error value 57.61%. A 8 watt has light flux value (193.26 ± 23.81) lumen, efficacy value (24.16 ± 2.98) lumen/watt, light flux error value 55.06%, efficacy error value 55.26%. A 5 watt has light flux value (131.32 ± 23.33) lumen, efficacy value (26.26 ± 4.67) lumen/watt, light flux error value 44.12%, efficacy error value 44.12%.

Keywords : Lamp, efficacy, energy saving