

ABSTRACT

Availability of solar radiation data in somewhere is very important for the purposes of energy efficient buildings. This data is used to estimate the load of heat that should be avoided entering into the room, so that the energy used to cool the room which not large. SNI 03- 06389-2010 conservation of Sheath building energy (Konservasi Energi Selubung Bangunan) only has data on solar radiation for the city of Jakarta, while for other cities is not yet available. This research was conducted on the measurement of solar radiation with artificial instruments to receive solar radiation of the four direction wind namely East, West, North, and South. The measurement is carried out using BHI750 sensor in high place which is not deterred by a shadow in the city of Bandung and measured from 07.00 a.m to 18.00 p.m based on measurement data provided on SNI-03-06389-2010. The results of the calibration data is done testing the Mean Bias Error (MBE) with the method of observation in each sensor with a range of 2,32 up to 6,17 and have the value of Coefficient of Variation of Root Mean Square Error CV (RSME) in each sensor with the range 11,13 up to 29,61. Each of this errors is still within tolerance within the ASHRAE standard After the calibration of instrument was measured by solar radiation, measurement is carried out for 7 days beginning on the date of 23 to 29 September 2018. Measurement results for 7 days is obtained that the surface of the wall that leads to the East, South, North and West of the Solar radiation exposure of 362, 240, 254, 331 in units of W/m².

Key Words: Solar Factor, Solar Radiation