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Urban Outdoor Thermal Comfort of the Hot-Humid Region

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Abstract

The study on outdoor comfort is becoming popular due to the fact that the thermoregulatory model is seen as inadequate in explaining outdoor thermal comfort conditions. Hot-humid region can be said as experiencing a critical environmental condition because of its constantly high temperature and humidity throughout the year. Thus, this study focus on the assessment of thermal comfort of outdoor urban spaces in Kuala Lumpur, Malaysia (3° 9'N and 101° 44'E). Survey on human response towards outdoor thermal comfort in hot-humid climate of Kuala Lumpur, Malaysia was carried out during day time between 0900h to 1800h along with measurement of environmental parameters such as air temperature (°C), wind velocity (m/s), radiant temperature (°C), relative humidity (%) and solar radiation (lux). A total of 123 samples were involved in this study which took place within four sites around Kuala Lumpur. Survey results were then correlated with the environmental parameters to further develop the comfort zone for hot-humid outdoor environment specifically for Kuala Lumpur and, generally, for hot-humid regions. © 2016 The Authors.

Index Keywords

Air, Surveys; Environmental conditions, Environmental parameter, High temperature, Hot humid climate, Outdoor environment, Outdoor thermal comfort, Radiant temperatures, Thermoregulatory; Thermal comfort

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