ABSTRACT

Assessing the dynamic qualities of a daylit space requires different methods of assessment than those that have been developed for a space that is electrically lighted. With electric lighting, average illuminance is a significant and useful metric. However, in a daylit space, average illuminance has less meaning. Because daylight illumination levels are dynamic, the performance of daylight needs to be considered over time. Over the last few decades a variety of new daylighting metrics have been proposed to overcome the inability of older metrics to assess these dynamic condition. However, from several method, IES-LM-83-12 is believed to be the most up-to-dated method. IES LM-83-12 was created to develop new suite of metrics that are able to describe whether the performance of Daylighting in a room is consider to be feasible or not through two sub-methods called SDA (Spatial Daylight Autonomy) & ASE (Annual Sunlight Exposure). Simply, this method integrate some important inputs such as weather data, solar path and building geometry which will be simulated into a lux value at a certain point on every hour for one year. Thousand of illuminance value obtained will then be processed into a annual visual data which can be summarized based of preference criteria of LM-83-12 that observe two main aspect which is illuminance sufficiency & visual comfort

Keywords: Illuminance, Visual Comfort, Annual Daylight Simulation