

**Building Name: MOE Building**

**Address: 1 North Buona Vista Drive, Singapore 138675**

The MOE Building features innovative daylighting design. Light shelves that form part of the façade draw daylight and reflect it into the office area, and the ceiling near windows is slanted to ensure even gradation of the natural light. Thanks to good daylight utilization, provision of lux level by artificial lighting can be reduced to 300lux from the standard of 500lux. Lighting energy is further decreased by extensive use of energy efficient bulbs and adopting a general-task combination lighting strategy, which results in an impressively low lighting power density of 3.51W/m<sup>2</sup>. To cut down heat gains from the facade, windows are all double-glazed, so that the benefit of lighting energy reduction will not be offset by extra heat gains from windows.



An under-floor air supply system is used in place of the conventional overhead system. It makes use of the displacement strategy and hence provides more effective cooling by allowing the air temperature to be set at a higher value as compared to the overhead system, while maintaining the same level of thermal comfort, thus saving energy consumption in air-conditioning building.



The chiller plant was optimized by making adjustments to the chilled water supply temperature and other parameters. Variable speed drives were installed for both condenser water pumps and on the air side to achieve better matching between supply and load. In addition, rooms with occasional use are installed with FCUs to provide the flexibility of turning-on-off according to whether there is occupancy and demand.