THERMAL COMFORT
PERFORMANCE
Talking Points

Keywords: Thermal comfort, performance, comfort, gender

Impacts

- Buildings that deliver improved thermal comfort will enable occupants to be healthier and more productive which can benefit an organization both economically and in output efficiency (McCartney 2002, Zeiler 2009).

The Optimal Temperature for Human Performance

- The optimal temperature range for cognitive function was found to be between 22-26 degrees Celsius (71.8-78.8 degrees Fahrenheit), but can vary due to the type of task (Seppanen 2006, Rupp 2015). For example, critical thinking tasks were performed better under cooler temperatures and creativity-oriented tasks were yielded better performance under slightly warmer environments (Zeiler 2009, Heerwagen 2000, Tarantini 2017, Chang 2019).

Impact of Gender on Thermal Comfort

- Optimal temperatures for performance can vary by gender. Males have been found to perform better in cooler temperatures than females and females perform significantly higher in warmer temperatures than males (Schellen 2012, Chang 2019).

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