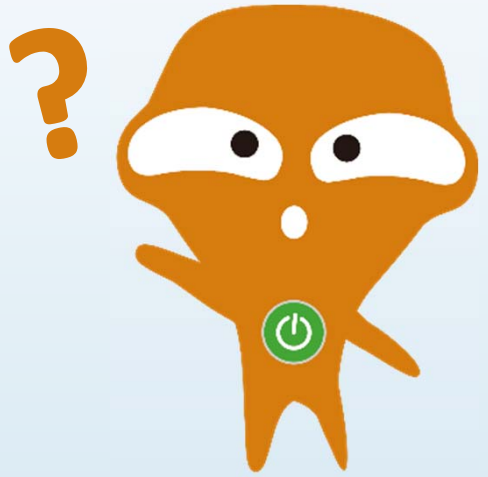
Energy Saving Charter 2020 and 4T Charter Online Briefing Sessions

How to Conduct Indoor Temperature Measurement?



Energy Saving Charter 2020 and 4T Charter
Online Briefing Sessions

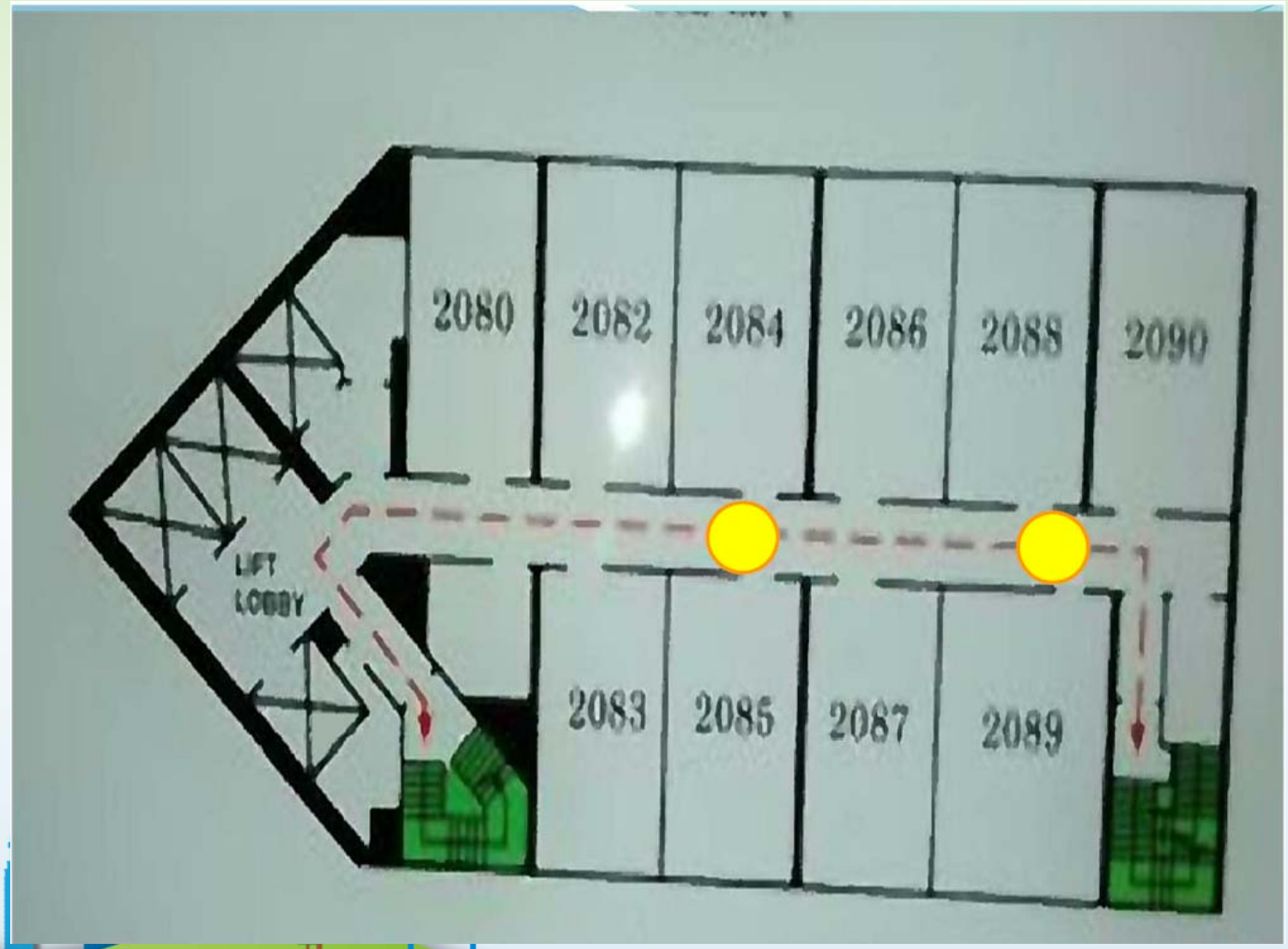
General Guidelines on Routine Air Temperature Measurements

Number of Sampling Points

- Measurements should be taken at **air-conditioned space**

  (Each floor for multi-storey air-conditioned premises)
- One sampling point per 2,000 m^2
- Two sampling points for area >4000 m^2
- Sufficient number of samples for area <4000 m^2

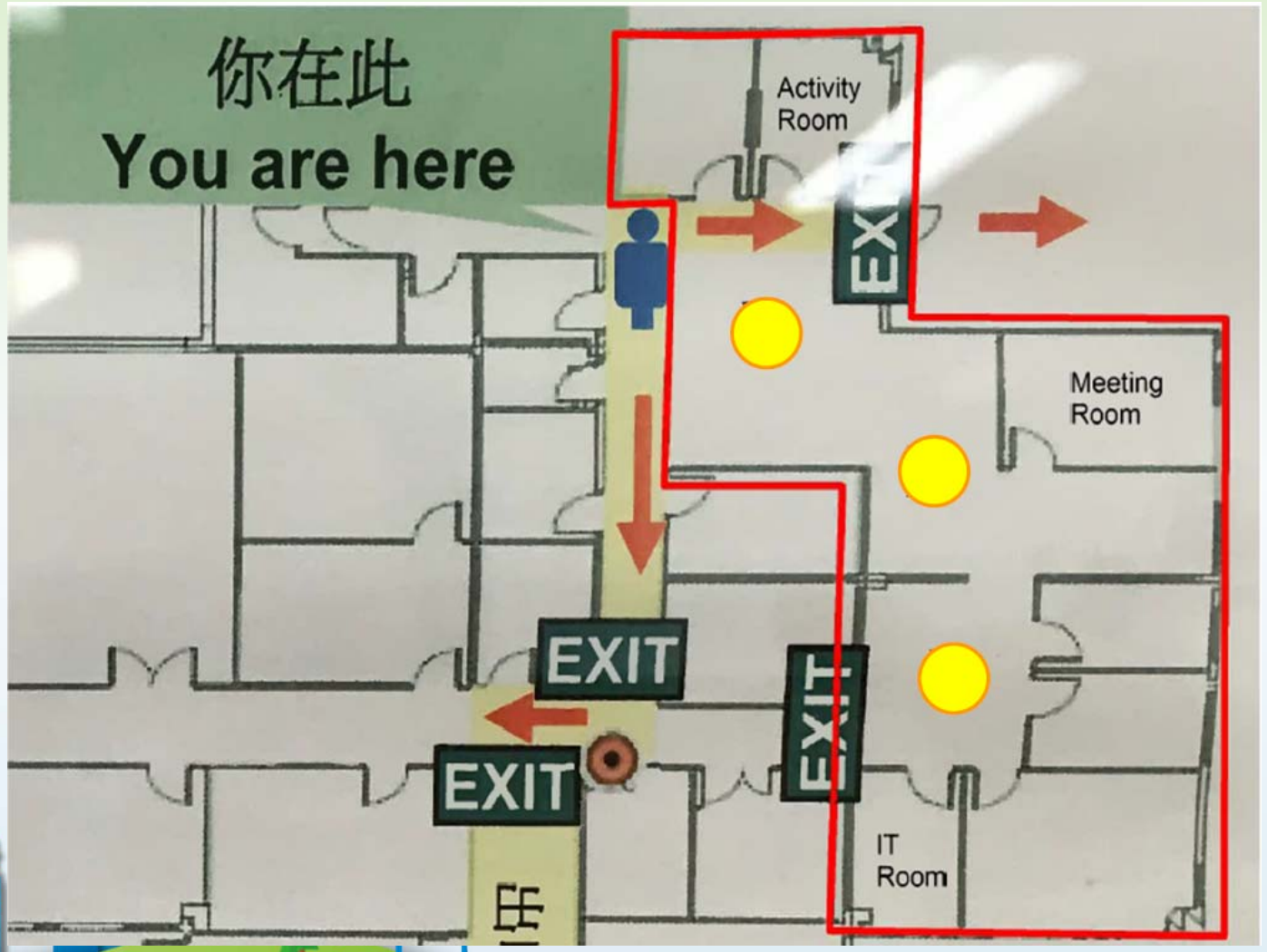
Example 1



Example 2


Stair No.A
EXIT
閣下在此
You are here
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
Stair No.1
Stair No.2

Example 3


你在此
You are here
Activity Room
EXIT
Meeting Room
EXIT
EXIT
IT Room

Number of Sampling Points

Average indoor temperature is the

numerical average all sampling points

General Consideration for Selecting Locations for Measurement

Measurements shall be taken …

- Occupied zones during the occupied hours
- The sampling locations should be representative locations

Measurements shall be taken …

- In air-conditioned areas with both high and low occupancy rate
- At least 0.5 metre inward *from corners, windows, walls, doors*
- Not under direct sunlight
- At a height of 1.1 metres above the floor level for physical measurement

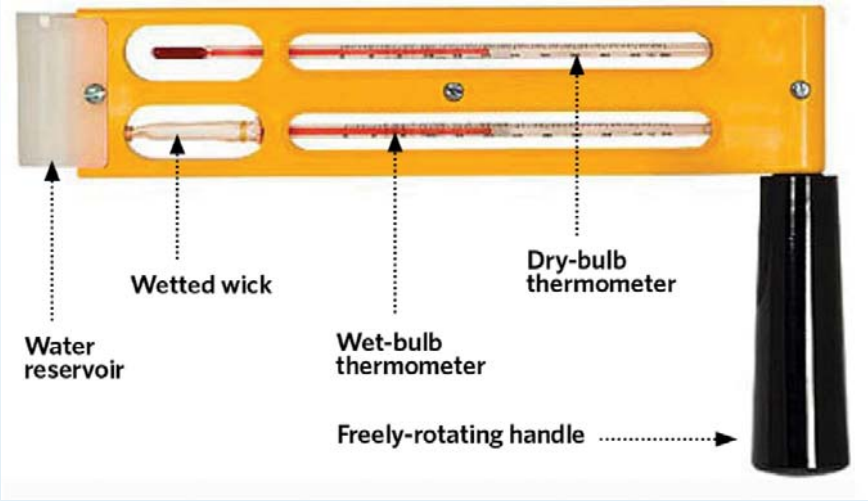
Measurements shall be taken …

- Not directly in front of:
  - Air supply diffusers
  - Induction units
  - Floor fans
  - Heaters
  - Exhaled breath of the operators, lifts, escalators, entrance or exit, etc.

Measuring Instrument

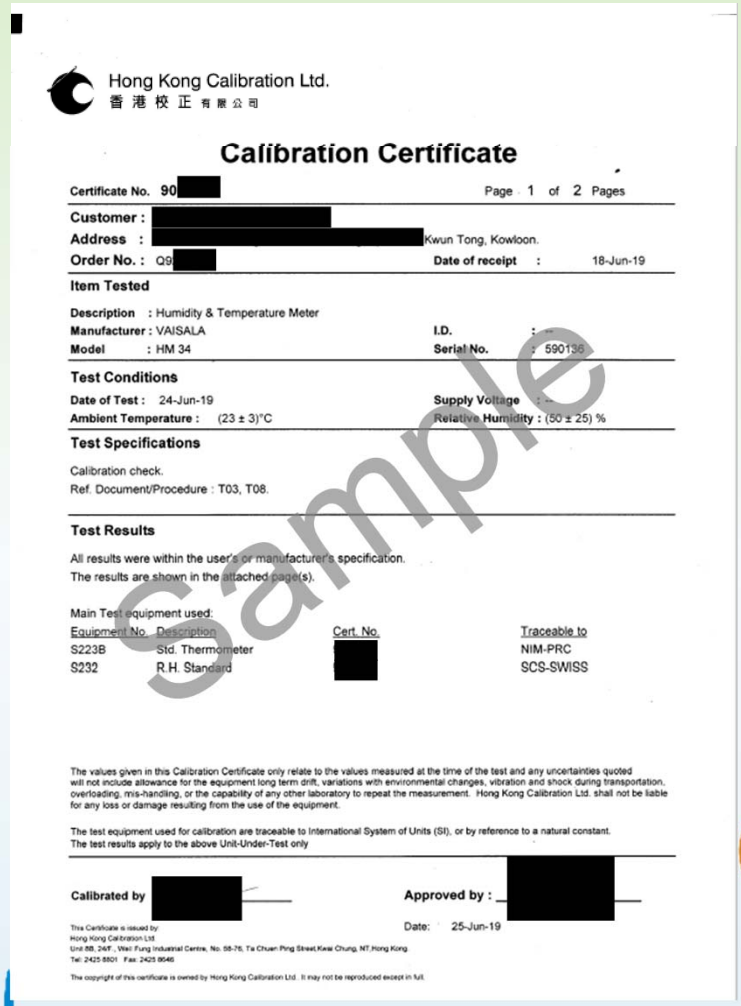
By Electronic or Mechanical Thermometer

(Adequate measuring time, normally one minute)



Measuring Instrument

Should have a valid calibration certificate issued by an accredited laboratory of Hong Kong Laboratory Accreditation Scheme (HOKLAS).



Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 90[redacted] Page 1 of 2 Pages

Customer : [redacted]
Address : [redacted] Kwun Tong, Kowloon.
Order No. : Q9[redacted] **Date of receipt :** 18-Jun-19

Item Tested

Description : Humidity & Temperature Meter
Manufacturer : VAISALA **I.D.** :
Model : HM 34 **Serial No.** : 590136

Test Conditions

Date of Test : 24-Jun-19 **Supply Voltage** :
Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.
Ref. Document/Procedure : T03, T08.

Test Results

All results were within the user's or manufacturer's specification.
The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S223B	Std. Thermometer	[redacted]	NIM-PRC
S232	R.H. Standard		SCS-SWISS

Sample

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by [redacted] **Approved by :** [redacted]

Date: 25-Jun-19

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Wai Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

Temperature Record

- Temperature readings captured by the BMS
- Seek assistance from building management offices for capturing air temperature reading

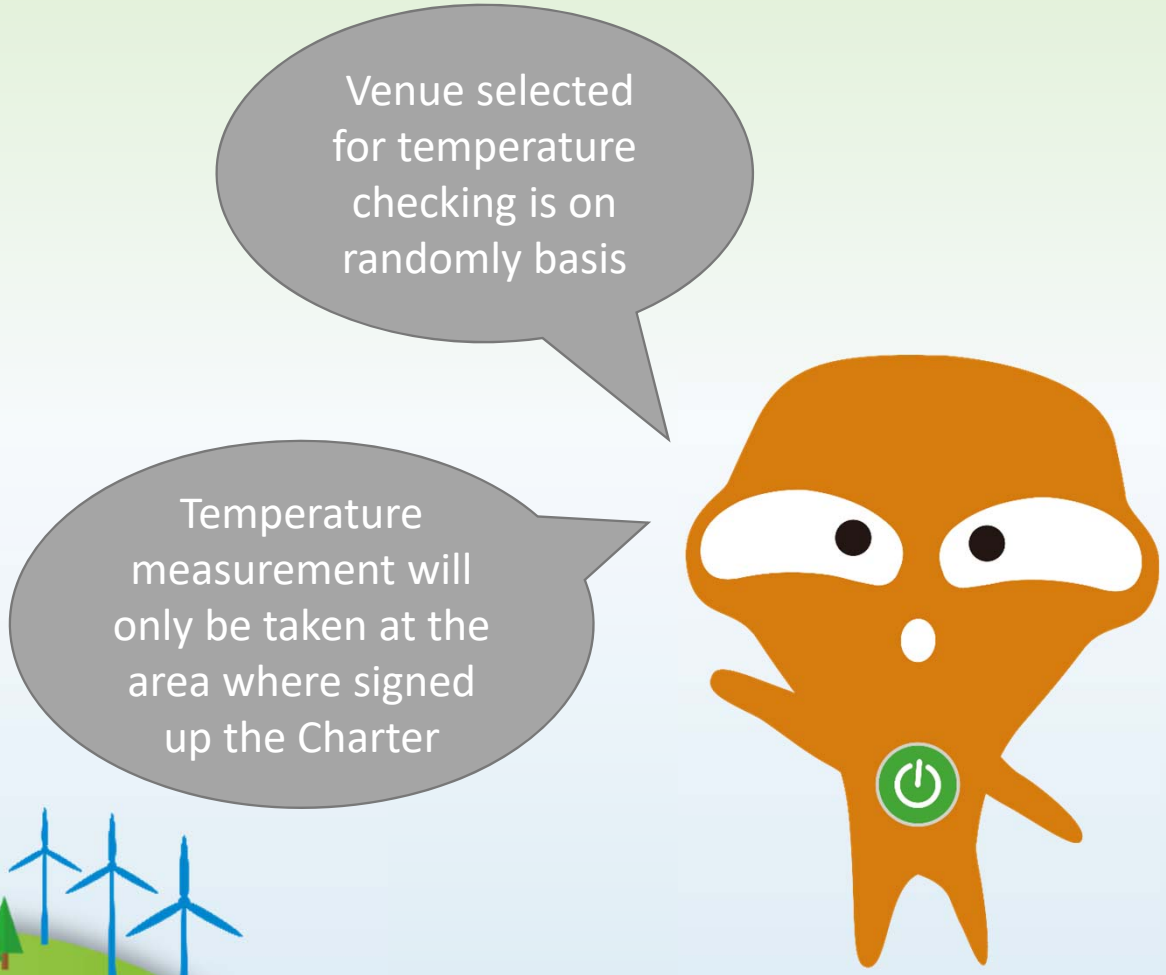
Temperature Record

Records of Temperature Measurement

- Measurement suggested to be taken at least twice a week
- Keep a record of the routine temperature measurements for future reference and review

Site Visit Record

Year	Site No.
2017	58
2018	63
2019	63



Example of Temperature Measurement Record

Example (G/F)

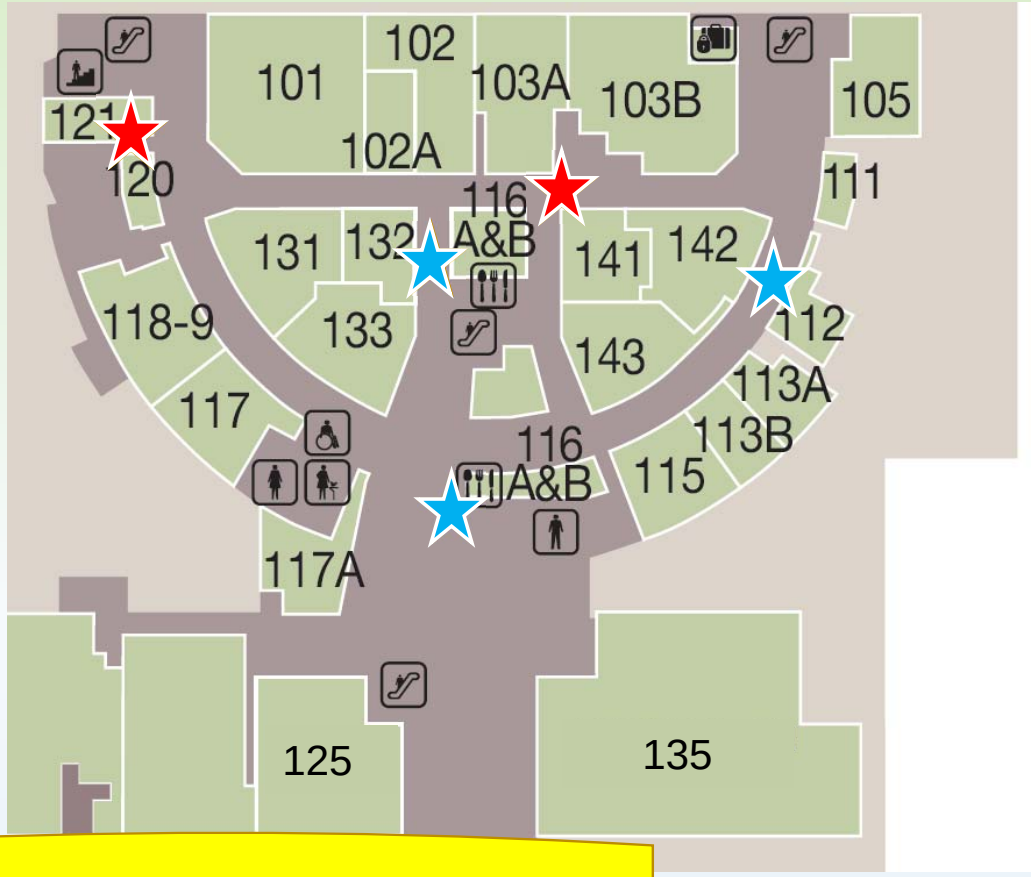
Location	Measured Temperature (°C)
Lift Lobby	24.3
G03	24.5

Average Indoor Temperature for G/F (2 point) : 24.4°C

Example (1/F)

Location	Measured Temperature (°C)
103A	23.8
121	24.0
132	24.2
116A&B	24.6
112	23.9

Average Indoor Temperature for 1/F (5 points) : 24.1°C



Average Indoor Temperature of the shopping mall (G/F and 1/F, 7 points): 24.2°C

For More Information:

https://www.energysaving.gov.hk/esc2020/tc/tips/index.html#item1

Thank You