

## IC-Meter data:

### Monthly Statistics for Energy and Indoor Climate

**16 Aug 2015 - 14 Sep 2015**

*Location:* Demo 3A Energy Module

*Room:* Floorheating - Heatpump - G. floor

*Box ID:* 679C1022

*User:* demo@ic-meter.com

*Location created:* 8th Feb 2014

*Timezone:* Europe/Copenhagen

### Energy Balance for the Entire Building

1 3 5 7 9



**Central heat actual indoor temp.**

15.2 kWh/day

1 3 5 7 9



**Savings if 20 °C indoor**

6.6 kWh/day (43%)



**Passive solar:**

7.6 kWh/day



**Specific heat losses:**

137 W/°C

### Energy label and yearly consumption



**Energy label:** A 2010 (Calculated after BE10 - Denmark)



**Energy Supply:** 12,402 kWh/year (41 kWh/m<sup>2</sup>\*year)

- Measured data calibrated to 20 °C indoor and standard DK-Weather conditions

### Indoor Climate Meter data - Avg. Values for 6 active hours\*

\*On workdays between 6:00-8:00 and 20:00-22:00 and on weekends between 9:00-11:00



**CO<sub>2</sub>:**

1,021 ppm



**Temperature:**

23.4 °C



**Relative humidity:**




53.2 %



**More Statistics >>>**

Relative distribution for time of the day in workdays and weekends, ventilation key figures and local weather

## Classification of indoor climate






All indoor meter data are classified according to a Smiley/traffic light concept, where  green is good,  yellow is less good and  red is bad.

The classification reflects the indoor climate with respect to health, what is good for the building and the climate outside. The thresholds as listed in the table below have been specified by the Technological University of Denmark, Center for Indoor Climate and Energy.

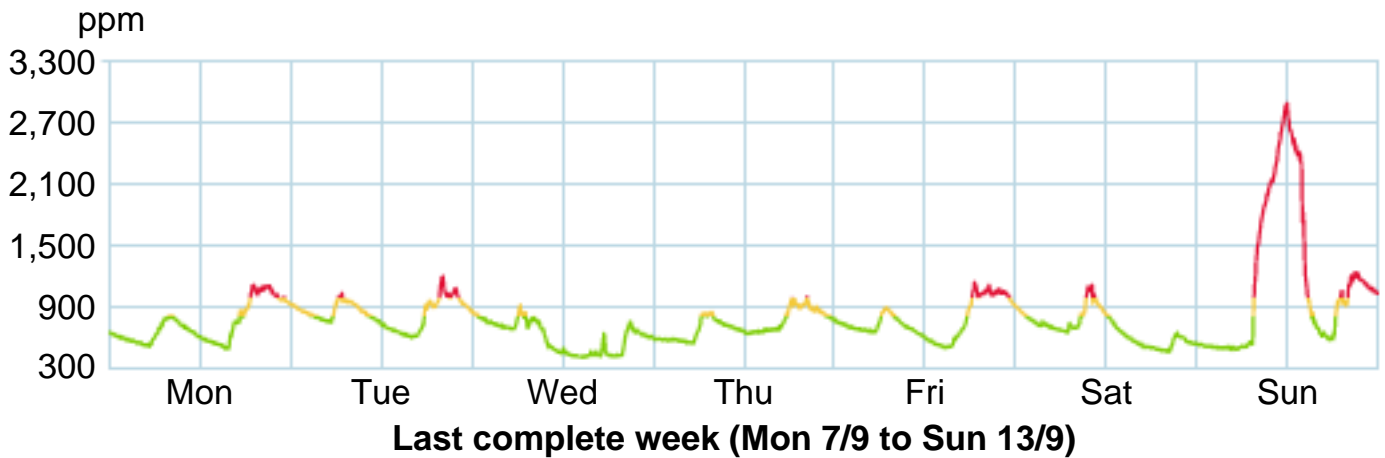
### Indoor climate classes for Aug 2015

Indoor climate classes	Bad	Less good	Good	Less good	Bad
					
Fresh Air (CO <sub>2</sub> ) ppm			Below 800	800-1,000	Above 1,000
Temperature °C	Below 18	18-20	20-23	23-25	Above 25
Relative Humidity %	Below 20	20-25	25-48	48-60	Above 60

### Indoor climate classes for Sep 2015

Indoor climate classes	Bad	Less good	Good	Less good	Bad
					
Fresh Air (CO <sub>2</sub> ) ppm			Below 800	800-1,000	Above 1,000
Temperature °C	Below 18.7	18.7-20.7	20.7-23.7	23.7-25.7	Above 25.7
Relative Humidity %	Below 20	20-25	25-50.5	50.5-63.1	Above 63.1

## CO<sub>2</sub> - 16 Aug 2015 - 14 Sep 2015

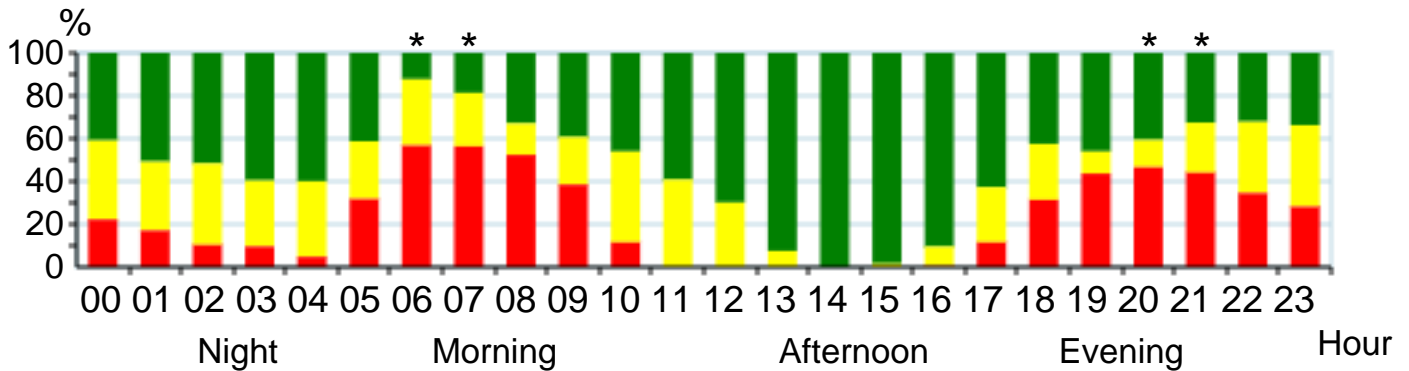


### CO<sub>2</sub> - Workdays

Relative distribution on the three climate classes for the period

Average CO <sub>2</sub>	Good	Less good	Bad
832 ppm	<span style="color: green;">●</span> 52 %	<span style="color: yellow;">●</span> 25 %	<span style="color: red;">●</span> 23 %

Relative distribution for time of the day and climate classes

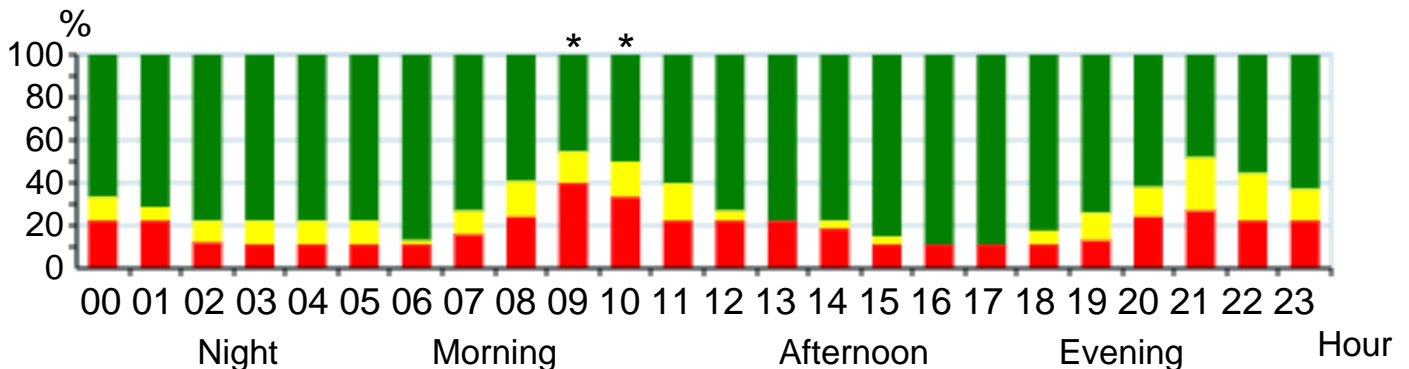


### CO<sub>2</sub> - Weekends

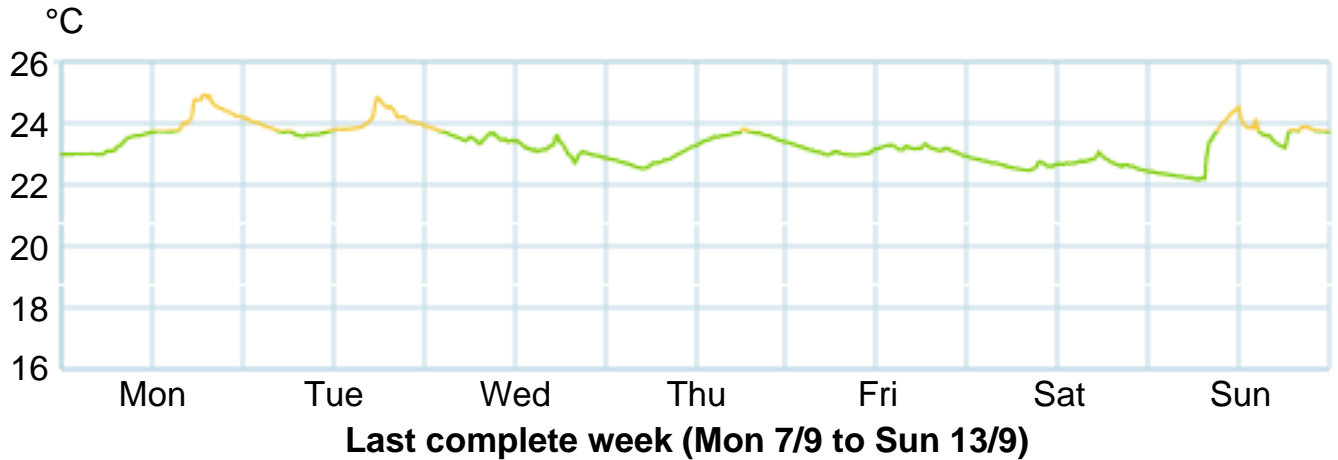
Relative distribution on the three climate classes for the period

Average CO <sub>2</sub>	Good	Less good	Bad
780 ppm	<span style="color: green;">●</span> 71 %	<span style="color: yellow;">●</span> 10 %	<span style="color: red;">●</span> 19 %

Relative distribution for time of the day and climate classes






## Temperature - 16 Aug 2015 - 14 Sep 2015

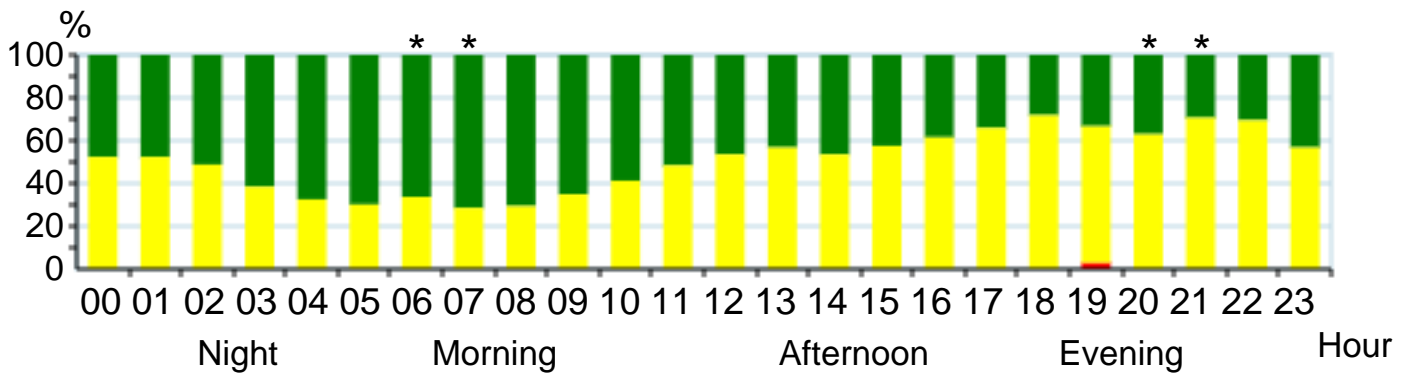


## Temperature - Workdays

Relative distribution on the three climate classes for the period




Average Temperature	Good	Less good	Bad
23.4 °C	 49 %	 51 %	 0 %

Relative distribution for time of the day and climate classes

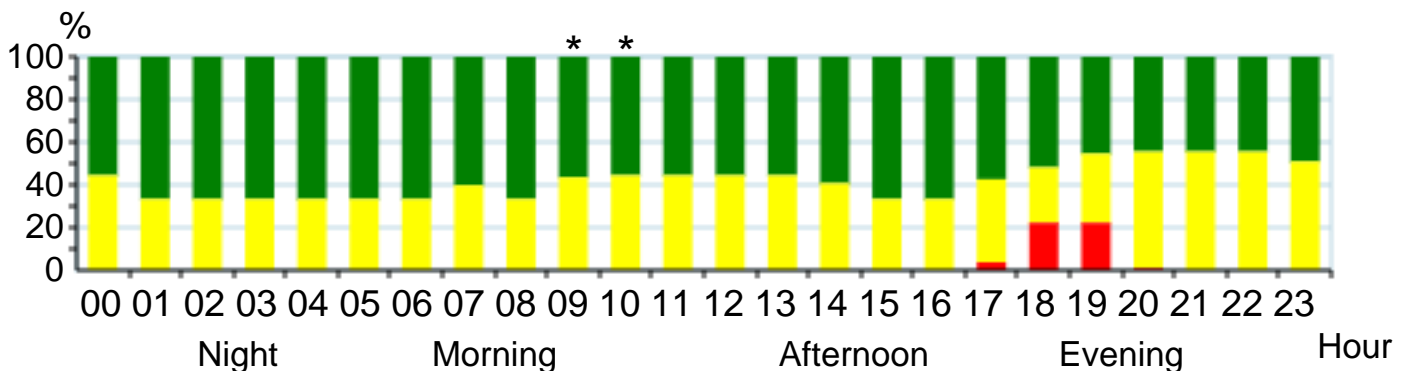


## Temperature - Weekends

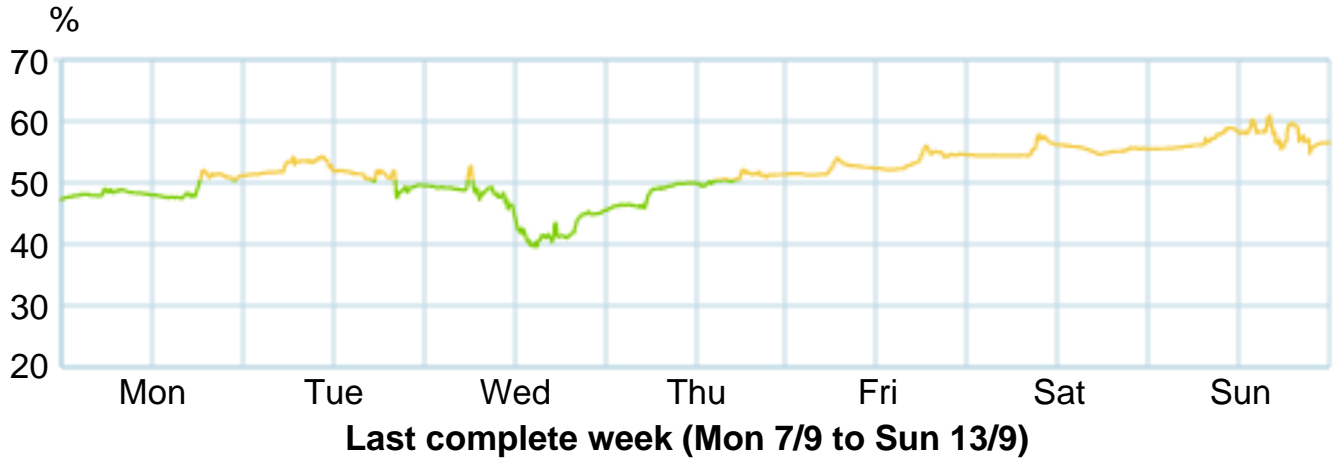
Relative distribution on the three climate classes for the period

Average Temperature	Good	Less good	Bad
23.3 °C	 58 %	 40 %	 2 %

Relative distribution for time of the day and climate classes



## Humidity - 16 Aug 2015 - 14 Sep 2015

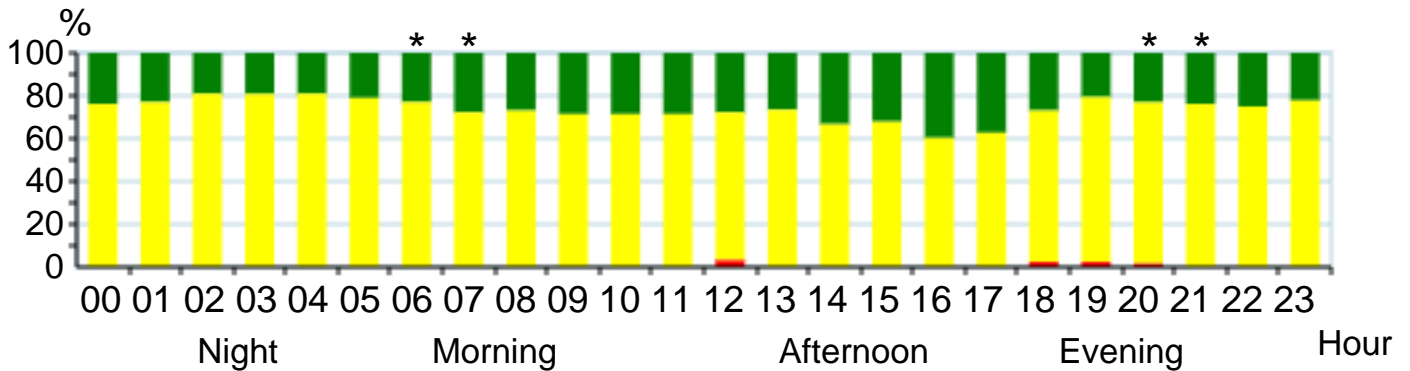


### Humidity - Workdays

Relative distribution on the three climate classes for the period

Average Humidity	Good	Less good	Bad
52.1 %	<span style="color: green;">●</span> 26 %	<span style="color: yellow;">●</span> 73 %	<span style="color: red;">●</span> 1 %

Relative distribution for time of the day and climate classes

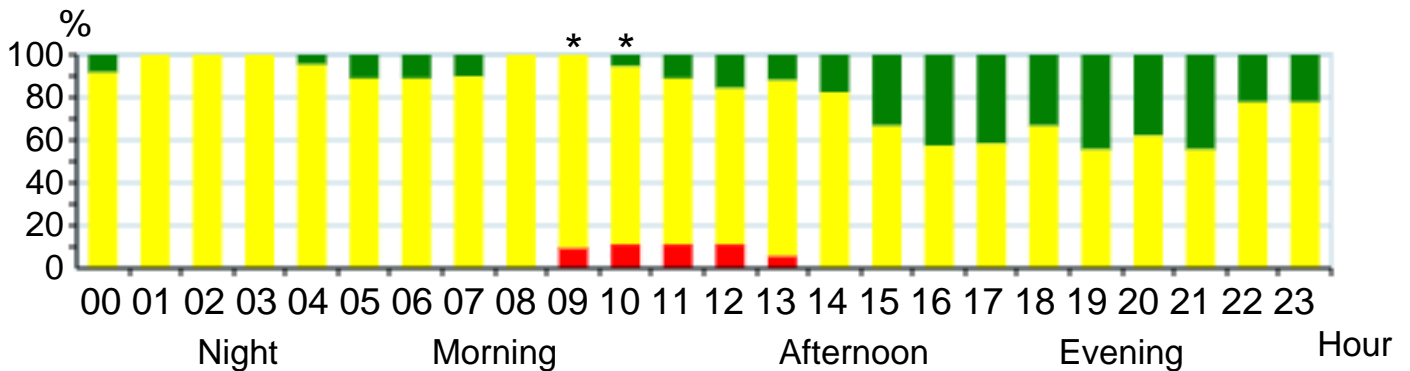


### Humidity - Weekends

Relative distribution on the three climate classes for the period

Average Humidity	Good	Less good	Bad
52.4 %	<span style="color: green;">●</span> 18 %	<span style="color: yellow;">●</span> 80 %	<span style="color: red;">●</span> 2 %

Relative distribution for time of the day and climate classes



**Period: 16 Aug 2015 - 14 Sep 2015**

### **Ventilation key figures**

Air change rate: 1.4 /h

469.1 m<sup>3</sup>/h

Heavy ventilation: N/A minutes /day

Vapor production: 9.8 kg /day

IC-Meter calculates four key figures based on measurements from the previous 30 days.

- *Relative air change per hour pct./hour* (Air change rate) indicates how many m<sup>3</sup> get replaced in a room during an hour, compared to the volume of the room.
- *Absolute air change per hour m<sup>3</sup>/hour* indicates how many m<sup>3</sup> get replaced in a room during an hour.
- *Heavy ventilation minutes/day* indicates minutes when the relative air change rate is above 3. This corresponds to e.g. two open windows resulting in the air in the room being replaced quickly.
- *Vapor production kg/day* indicates the average total vapor produced in a room to maintain a higher absolute humidity indoor than in the air outside.

### **More information**

More information on [www.ic-meter.com](http://www.ic-meter.com)

**Period: 16 Aug 2015 - 14 Sep 2015**

### Local Weather

Average temperature	Min	Max
15.3 °C	5.8 °C	24.2 °C

Average humidity	Min	Max
81.4 %	29.3 %	100.0 %

Wind speed m/s	Direction		
Average wind speed	1.	2.	3.
3.4 m/s	E	SV	SE

Read more about the measurement concept of IC-Meter on [www.ic-meter.com](http://www.ic-meter.com)