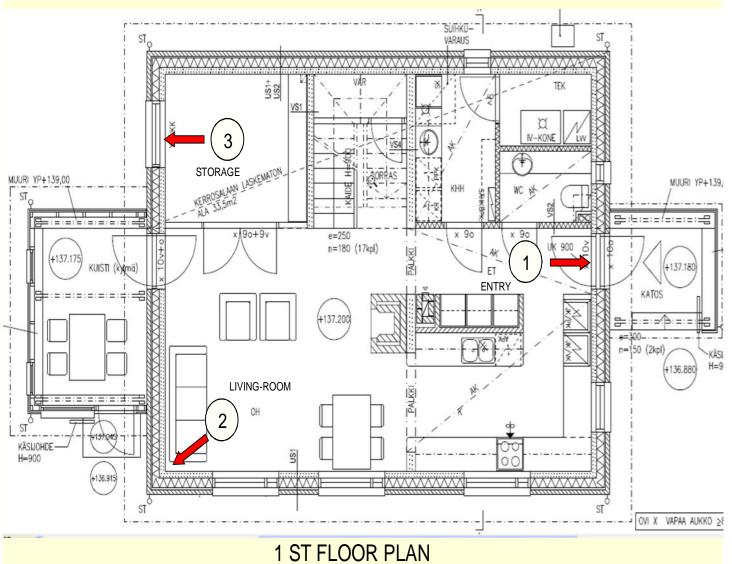
### Santa Claus comes from Finland



### TEMPERATURE DIFFERENCE DURING THERMOPICTURING WERE OUTSIDE -19.7°C **INSIDE** +20°C





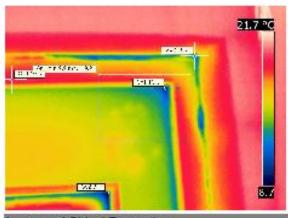
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students



### Image and Object Parameters Text Comments

Camera Model FLIR B360\_ Western

Image Date 24.2.2010 8:59:56

Image Name IR\_0149.jpg

Emissivity 0,84

Reflected apparent 20,0 °C

temperature

Object Distance 1,0 m

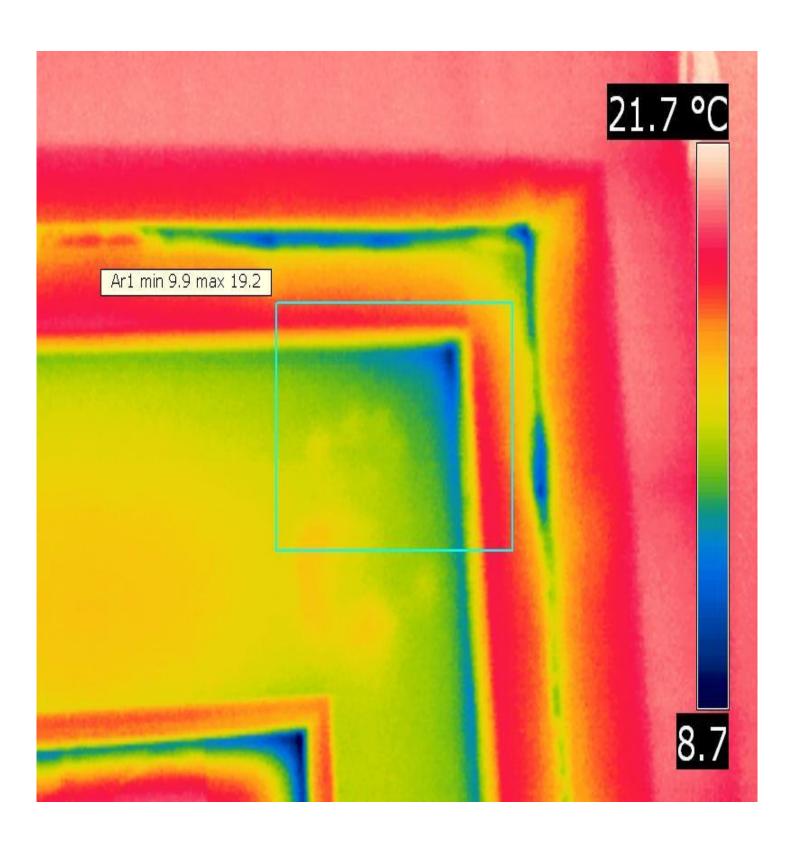
Description

Point 1 Point 1

Main entrance door right upper corner Main entrance door

Piste 1 Piste 1

I kerros ulko-ovi ylänurkka I kerros Ulko-ovi





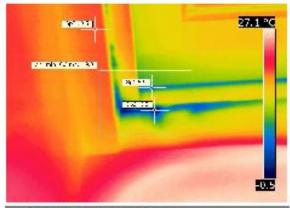
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Contact Person Thermographer Matti Haara / Risto Timo Kauppi

Rantasalo / Students



### Image and Object Parameters

Camera Model	FLIR B360 Western	Possible defect	Broken insulation strip

Image Date 24.2.2010 9:04:16

Image Name IR\_0151.jpg

**Emissivity** 0,84

20,0 °C Reflected apparent

temperature

Object Distance 1,0 m

### Description

Point1

1st floor main entrance left lower comer

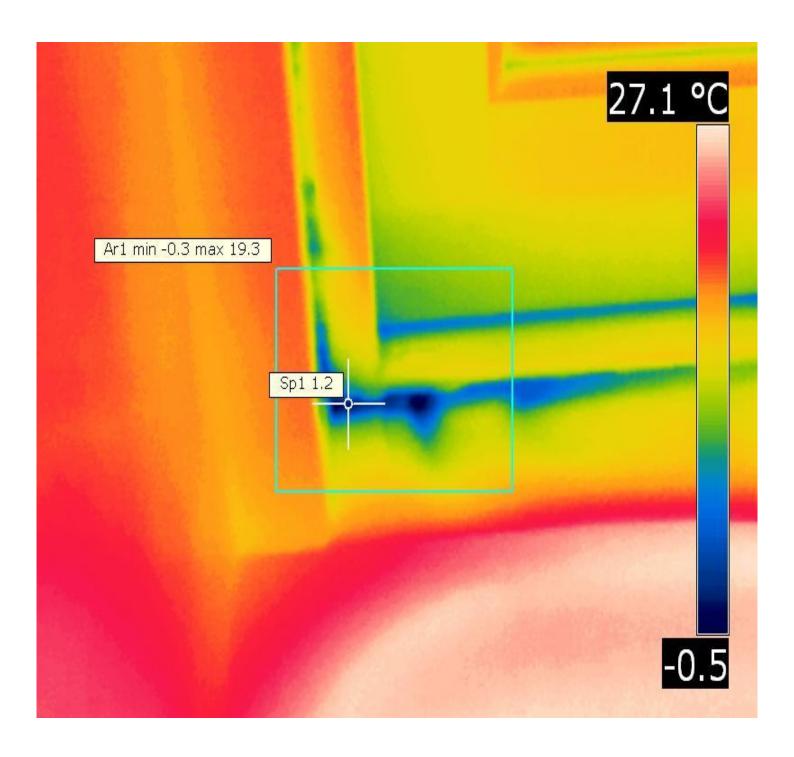
Ulko-oven vasen alakulma

Point1

1st floor main entrance left lower corner

Ulko-oven vasen alakulma

**Text Comments** 





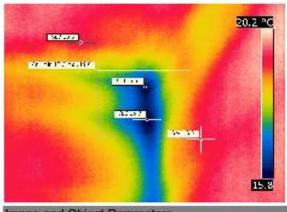
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students





### Image and Object Parameters

**Text Comments** 

Camera Model	FLIR B360_Western			
Image Date	24.2.2010 8:26:18			
Image Name	ID 0444 :			

Image Name IR\_0141.jpg

**Emissivity** 0,84 20,0 °C Reflected apparent

temperature

Object Distance 1,0 m

### Description

Point 2

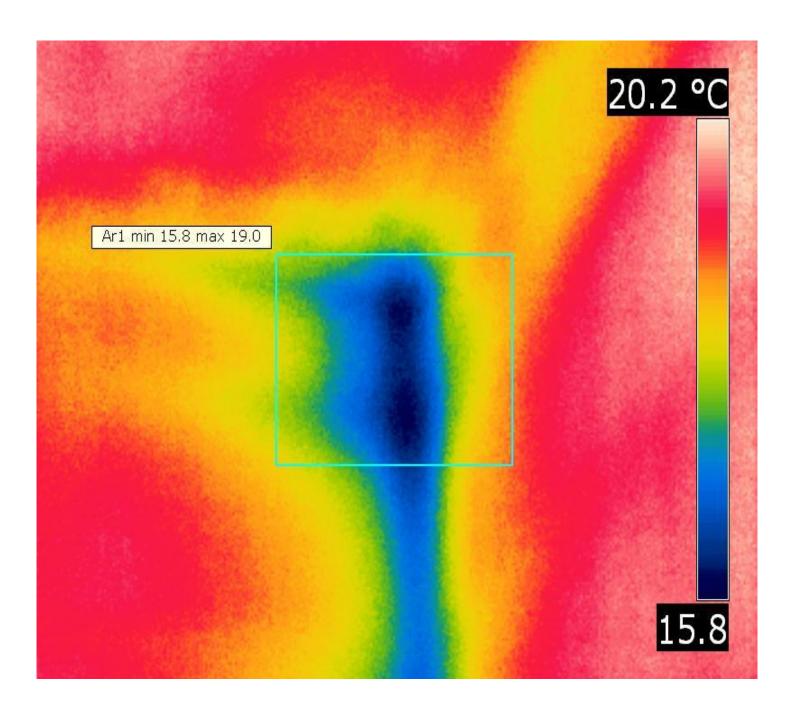
1st floor The corner of ceiling at the living room

Ensimmäinen kerros olohuoneen katon nurkkaus

Point 2

1st floor The corner of ceiling at the living room

Ensimmäinen kerros olohuoneen katon nurkkaus





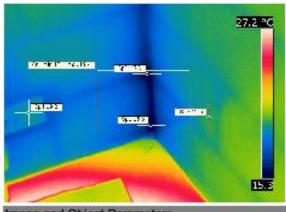
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students





I st floor The corner of floor at the living room

**Text Comments** 

### Image and Object Parameters

Camera Model FLIR B360\_Western Image Date 24.2.2010 8:30:21

Image Name IR\_0143.jpg

Emissivity 0,84
Reflected apparent 20,0 °C

temperature

Object Distance 1,0 m

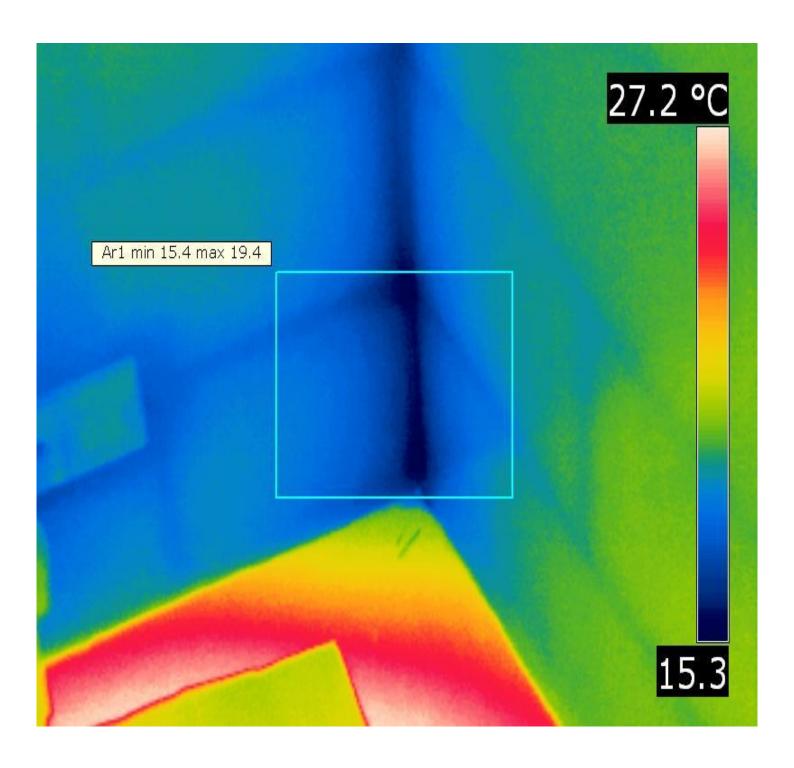
### Description

Point 2 Point 2

I st floor The corner of floor at the living room

ste 2 P

I kerros olohuoneen lattian nurkkaus I kerros olohuoneen lattian nurkkaus





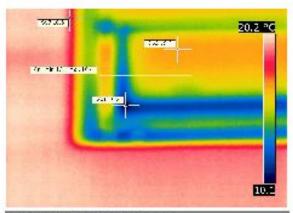
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students





### Image and Object Parameters

Camera Model FLIR B360\_ Western

Image Date 24.2.2010 8:48:49

Image Name IR\_0147.jpg

Emissivity 0,84

Reflected apparent 20,0 °C

temperature

Object Distance 1,0 m

### Description

Point 3

1st floor storage room bottom line of the window

Piste 3

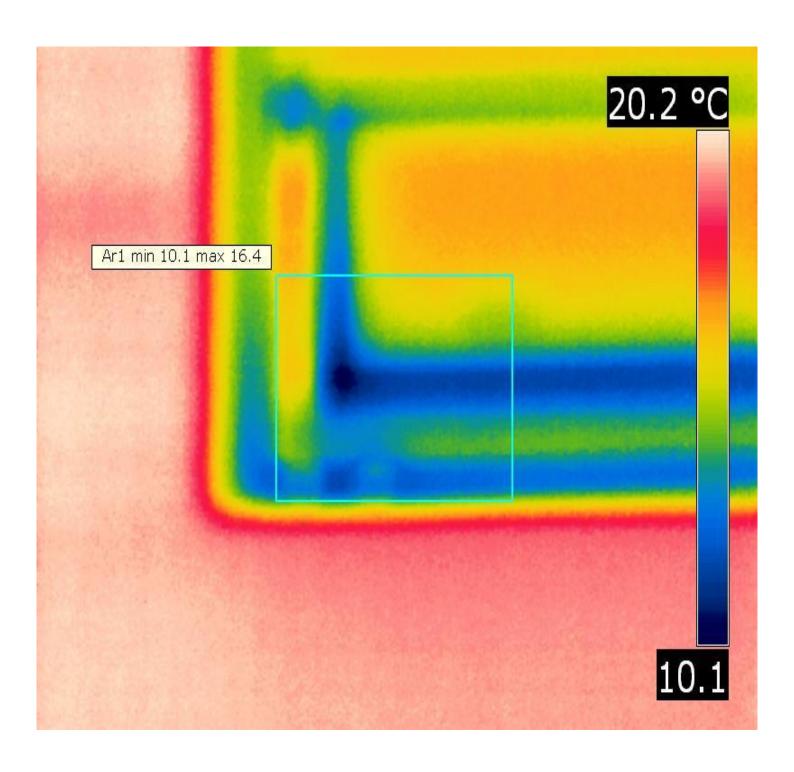
I kerros varasto ikkunan alareuna

Point 3

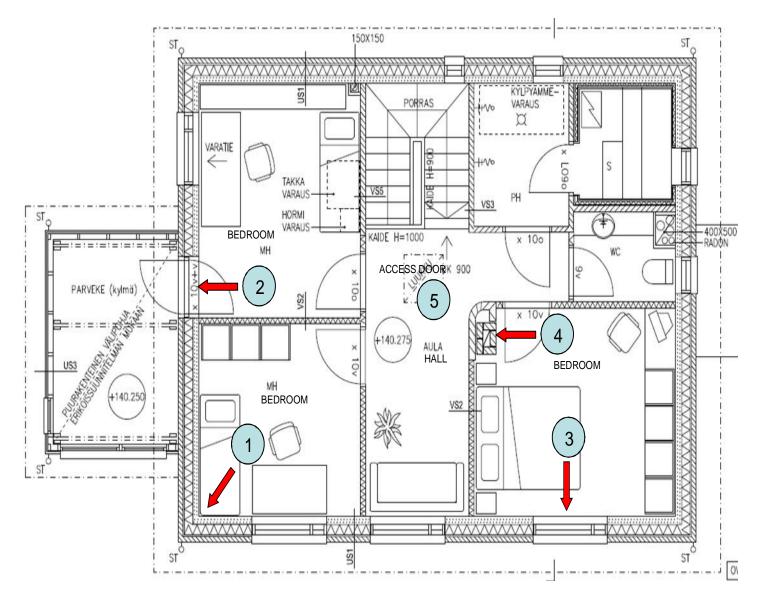
1st floor storage room bottom line of the window

Piste 3

I kerros varasro ikkuna







2ND FLOOR PLAN



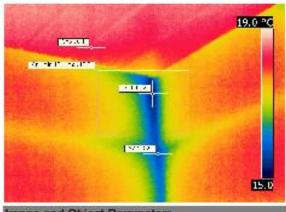
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students





### Image and Object Parameters

**Text Comments** 

Camera Model	FLIR B360_ Western		
Image Date	24.2.2010 9:13:20		
Image Name	IR 0157 ipg		

IR\_0157.jpg

Emissivity 0,84 20,0 °C Reflected apparent

temperature

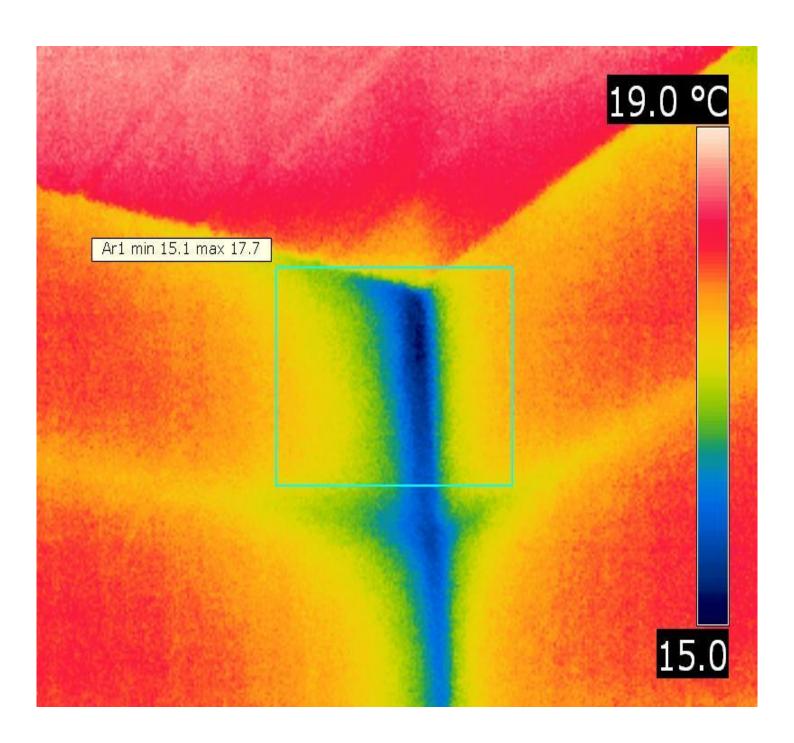
Object Distance 1,0 m

### Description

Point 1 Point 1

2 nd floor bedroom the corner of the ceiling 2 nd floor bedroom the corner of the ceiling

Il kerros makuuhuone katon raja Il kerros makuuhuone katon raja





Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

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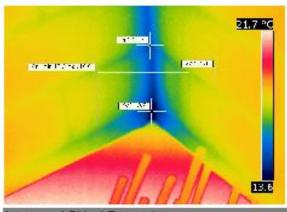




Image and Object Parameters Text Comments

Camera Model FLIR B360\_ Western Image Date 24.2.2010 9:13:53

Image Name IR\_0159.jpg

Emissivity 0,84

Reflected apparent 20,0 °C

temperature

Object Distance 1,0 m

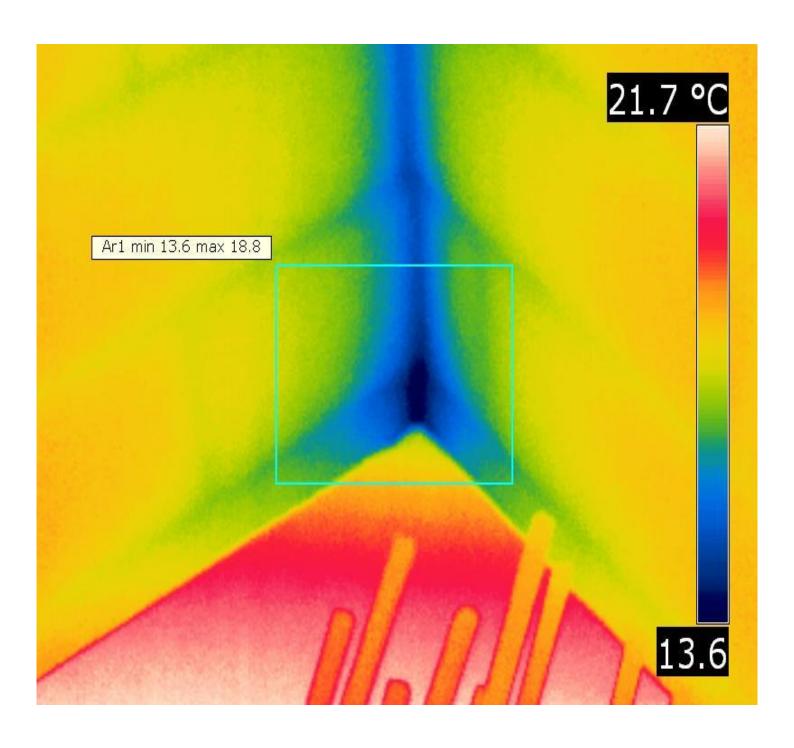
### Description

Point 1 Point 1

2 nd floor bedroom corner of the floor 2 nd floor bedroom corner of the floor

ste 1 Piste

II kerros makuuhuone lattian raja II kerros makuuhuone lattian raja





area but is glazed

Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students



### Image and Object Parameters

Camera Model FLIR B360\_ Western The terrace The terrace is not heated

**Text Comments** 

Image Date 24.2.2010 9:15:43

Image Name IR\_0161.jpg

Emissivity 0,84
Reflected apparent 20,0 °C

temperature

Object Distance 1,0 m

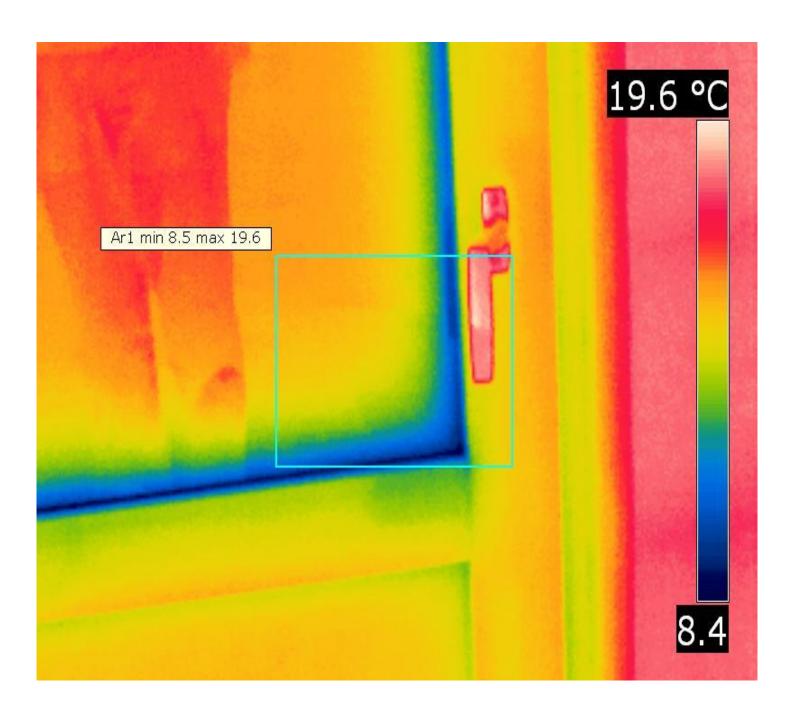
### Description

Point 2 Point 2

2 nd floor bedroom terrace door 2 nd floor bedroom terrace door

ste 2 Piste

II kerros makuuhuone parvekkeen ovi II kerros makuuhuone parvekkeen ovi





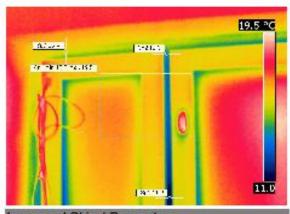
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Contact Person Thermographer Matti Haara / Risto Timo Kauppi

Rantasalo / Students



### Image and Object Parameters



**Text Comments** 

Camera Model	FLIR B360_ Western 24.2.2010 9:10:14		
Image Date			
Image Name	IR_0153.jpg		

Emissivity 0,84 20,0 °C Reflected apparent

temperature

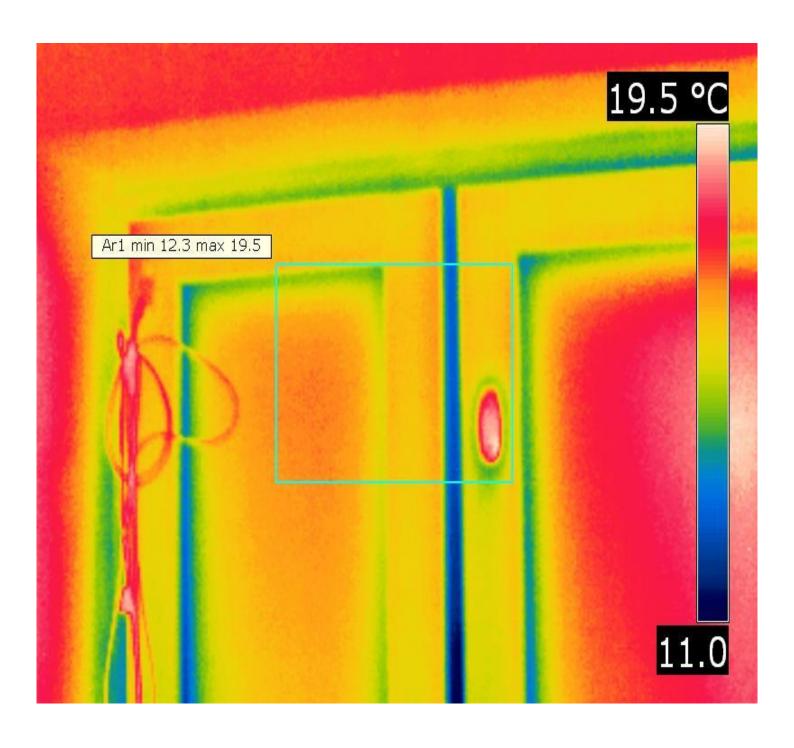
1,0 m Object Distance

### Description

Point 3 Point 3

2 nd bedroom window upper corner 2 nd bedroom window upper corner

II kerros makuuhuone Ikkuna Il kerros makuuhuone Ikkuna





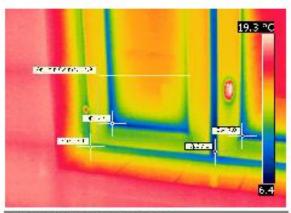
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students



# Text Comments

### Image and Object Parameters

Camera Model FLIR B360\_ Western

Image Date 24.2.2010 9:11:42

Image Name IR\_0155.jpg

Emissivity 0,84

Reflected apparent 20,0 °C

temperature

Object Distance 1,0 m

### Description

Point 3

2 nd floor bedroom lower corner of the window

Piste 3

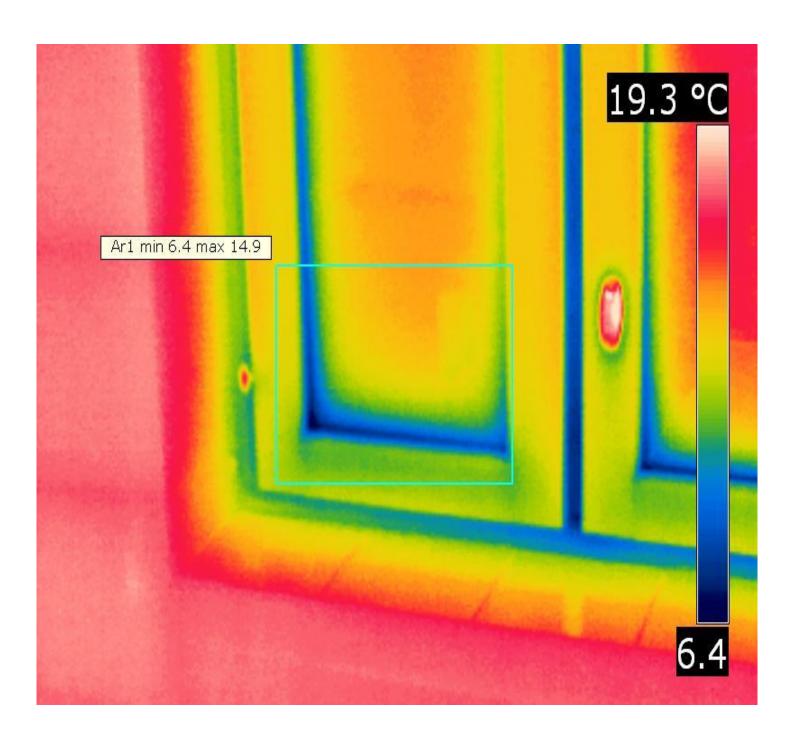
II kerros makuuhuoneen ikkunan alaosa

Point 3

2 nd floor bedroom lower corner of the window

Piste 3

II kerros makuuhuoneen ikkunan alaosa





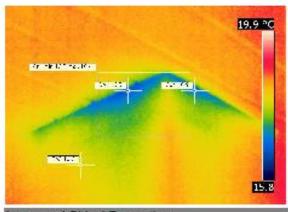
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students





### Image and Object Parameters

**Text Comments** 

Camera Model	FLIR B360_ Western			
Image Date	24.2.2010 9:17:15			

Image Name IR\_0163.jpg

Emissivity 0,84
Reflected apparent 20,0 °C

temperature

Object Distance 1,0 m

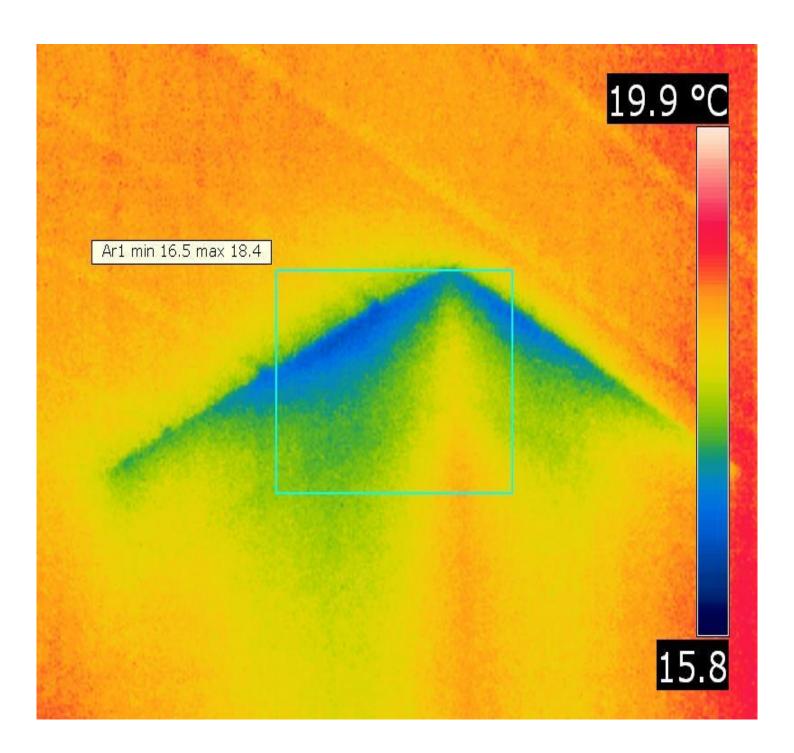
_							72			
100	0	9	7	П	п	п	п	О	п	٦
_	-	_	-	ш	u	-	•	_	ш	L

Point 4 Point 4

2 nd floor chimney upper corner 2 nd floor chimney upper corner

Piste 4 Piste 4

II kerros piipun yläosa II kerros piipun yläosa





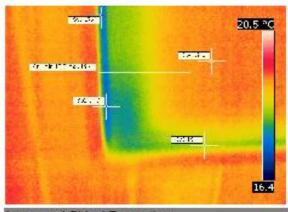
Report Date 16.3.2010

Company Koulutuskeskus Salpaus Customer Timo Kauppi

Address Ståhlberginkatu 6, LAHTI Site Address Kimmelkatu 2, LAHTI

Thermographer Matti Haara / Risto Contact Person Timo Kauppi

Rantasalo / Students





### Image and Object Parameters

**Text Comments** 

Camera Mo	odel	FLIR B360_ Western			
Image Date		24.2.2010 9:18:47			

Image Name IR\_0165.jpg

**Emissivity** 0,84

Reflected apparent temperature

20,0 °C

Object Distance 1,0 m

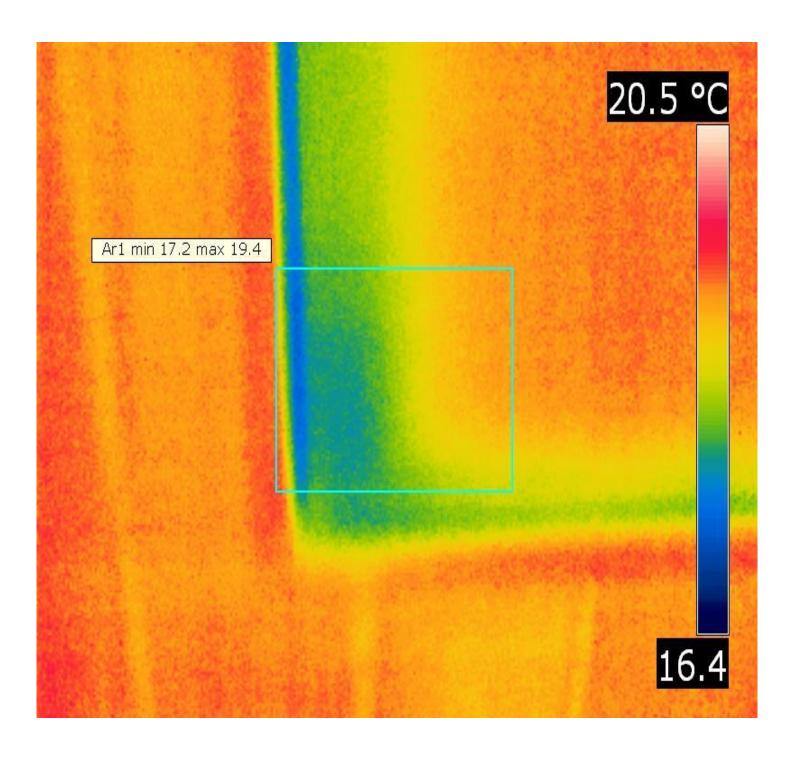
### Description

Point 5 Point 5

Access door to the attic space Access door to the attic space

Piste 5

II kerros kattoluukku II kerros kattoluukku



## Every young family wants this type of family house in Finland

