

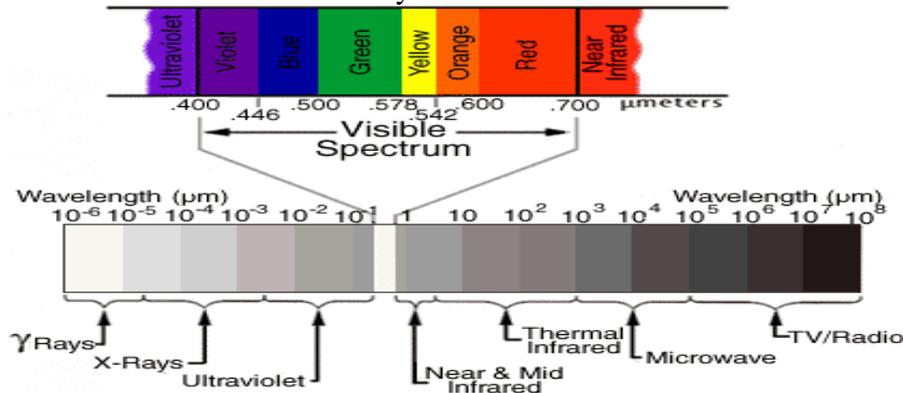
Infrared Thermographic Report
For



Report done by
John Cannamela
Level II Thermographer

What is Infrared?

- IR is part of the electromagnetic spectrum discovered in the 1800's
- By William Herschel



IR 101

- The IR imager sees emitted energy in the IR spectrum range from (shortwave) 3-5 microns (longwave) 7-13 microns.
- The amount of energy is seen through the imager. The reason everything is colored is to give the eye something to interpret.
- Interpretation is key with Thermography.

How Infrared can help Commissioning

Commissioning is the process where by the system is put through its sequence of operation at its design. There are many tools and techniques to start up and check out systems. Buildings all have their own special issues not in the design, that's why we commission.

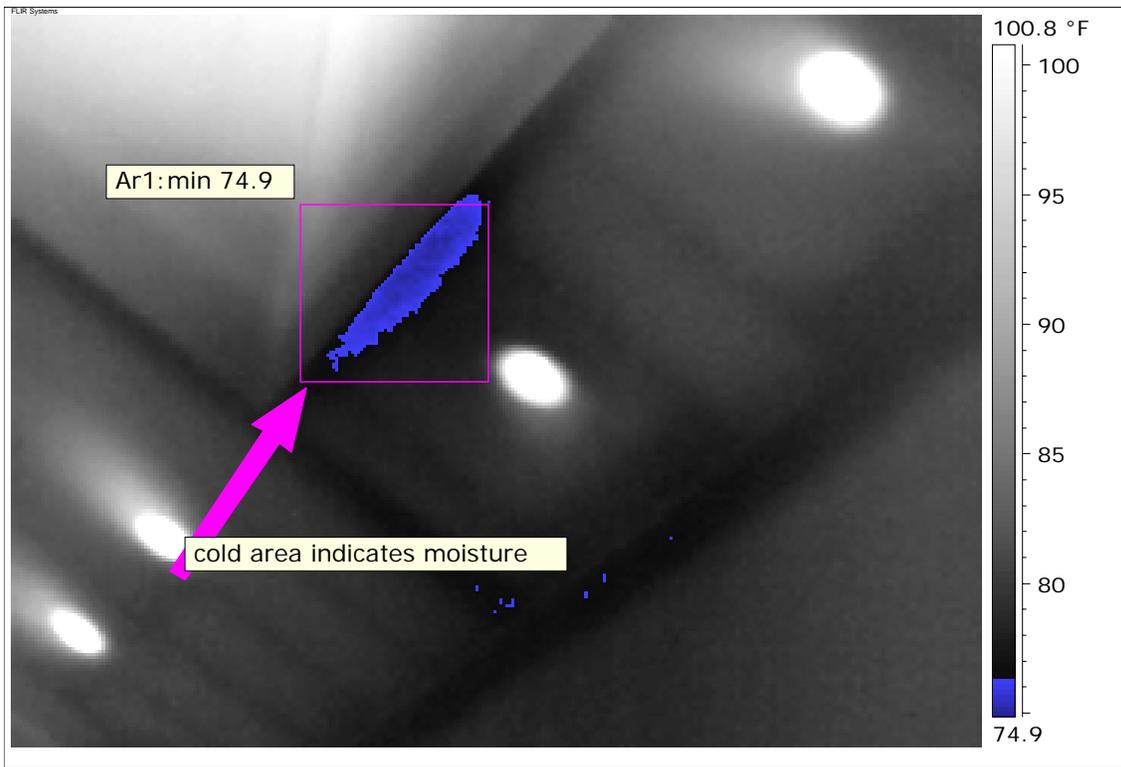
- Infrared Thermography can help as a great tool to help locate and even show why certain things don't work properly.

Building HVAC 101

Heating Ventilation & Air Conditioning

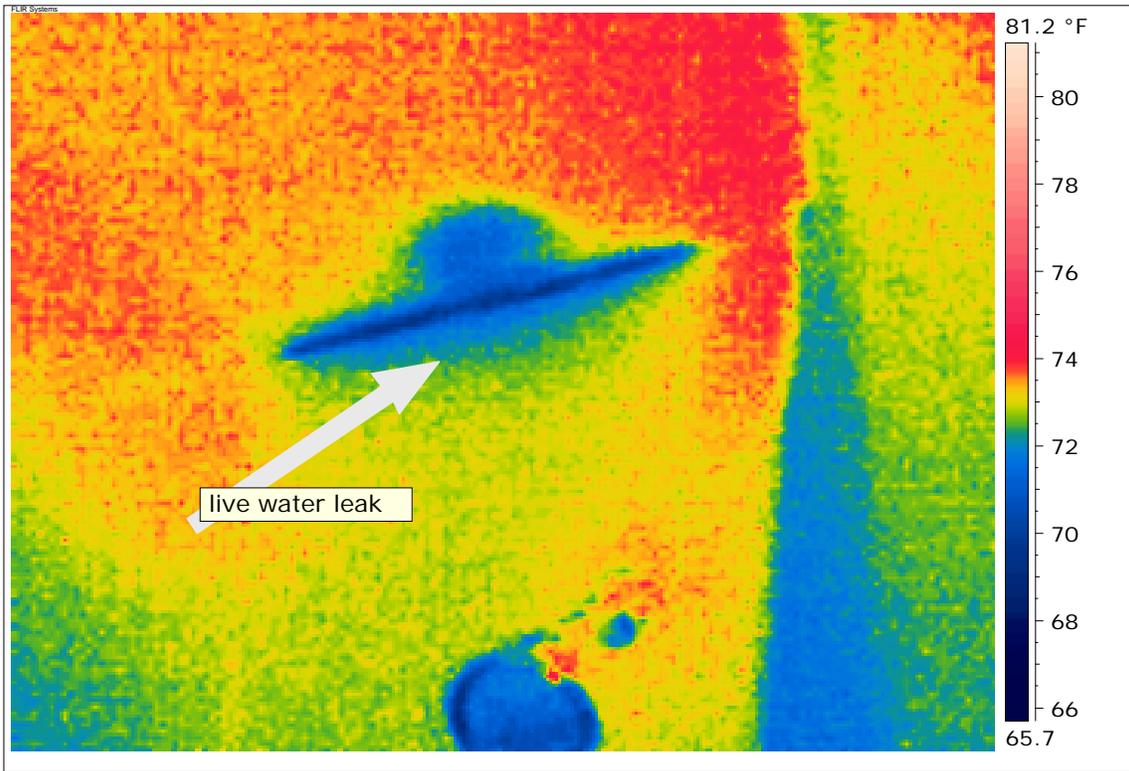
Buildings are conditioned by adding or removing heat from a given space through a medium. In this case the medium is air.

The air is circulated through a refrigerated coil or DX coil or chilled water coil, which removes heat and transfers the heat through the refrigerant/water to the condenser coil/cooling tower, via a fan/pump. Dirty filters or poor air flow causes coils to freeze and compressor failure.



Description: Lobby under skylight may have leak outside air temp is in the low 100's

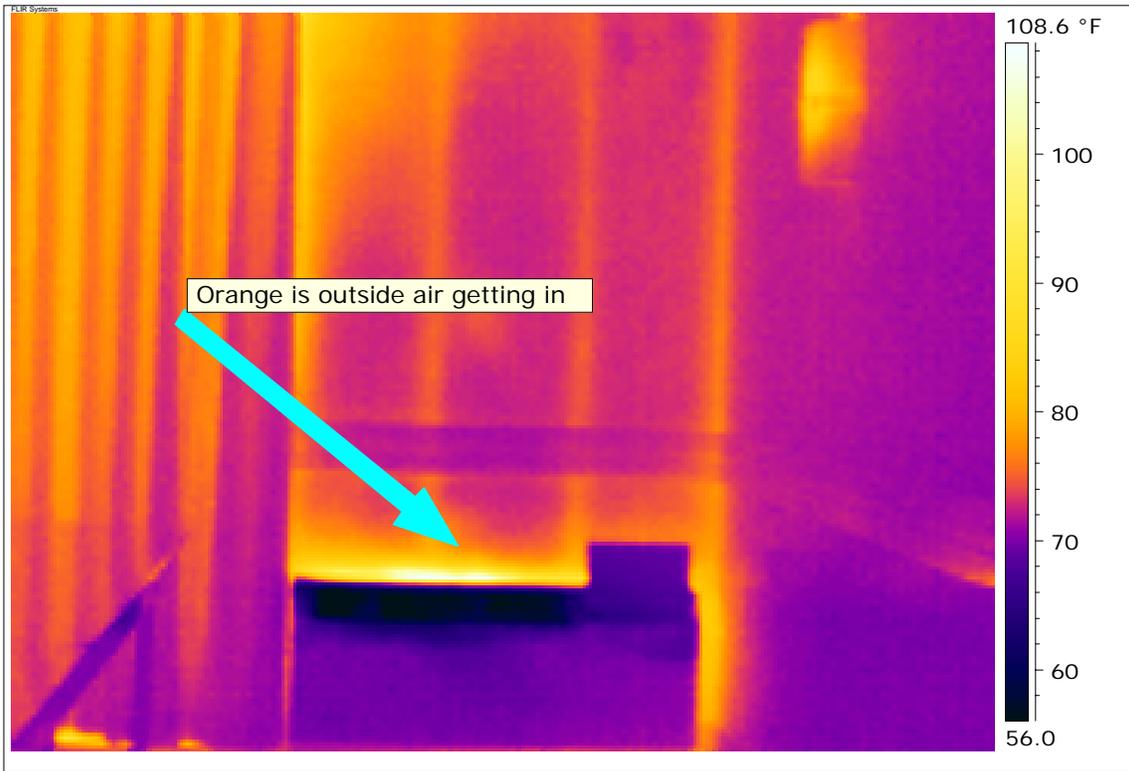




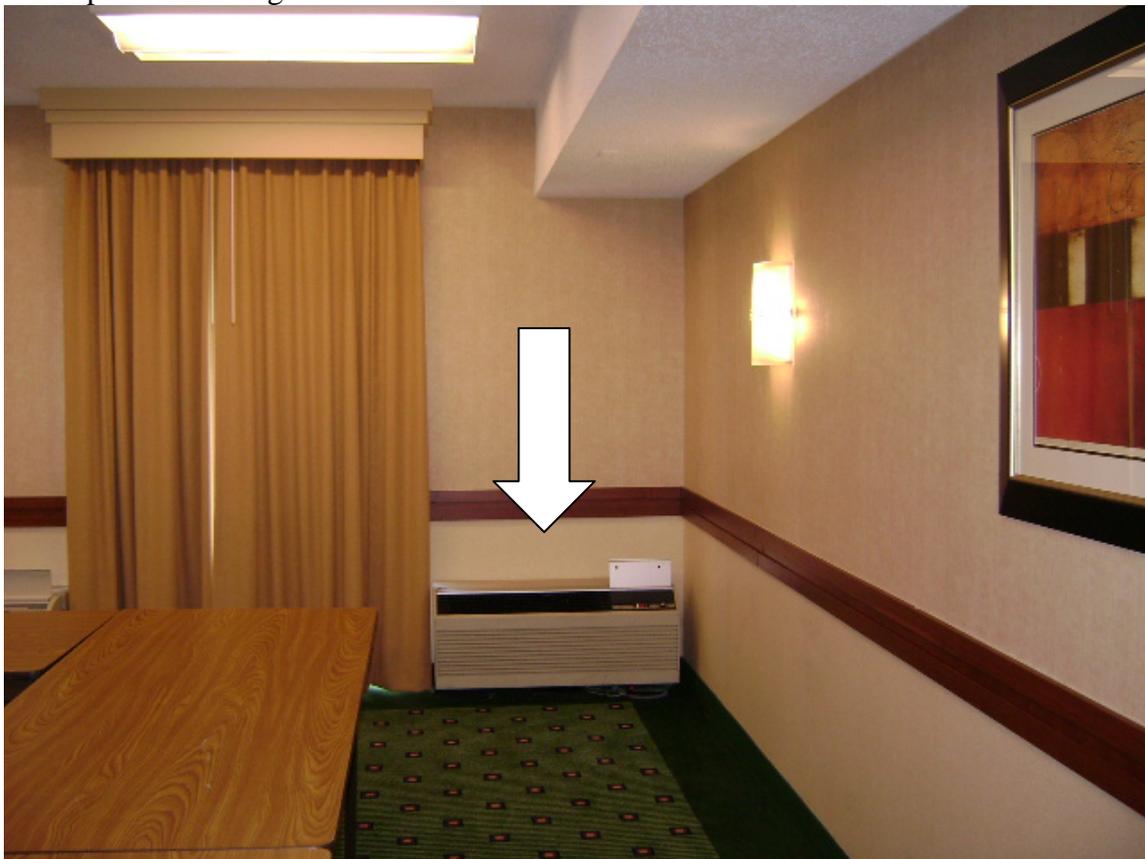
Description: Room 244 leak may be from above floor tub drain

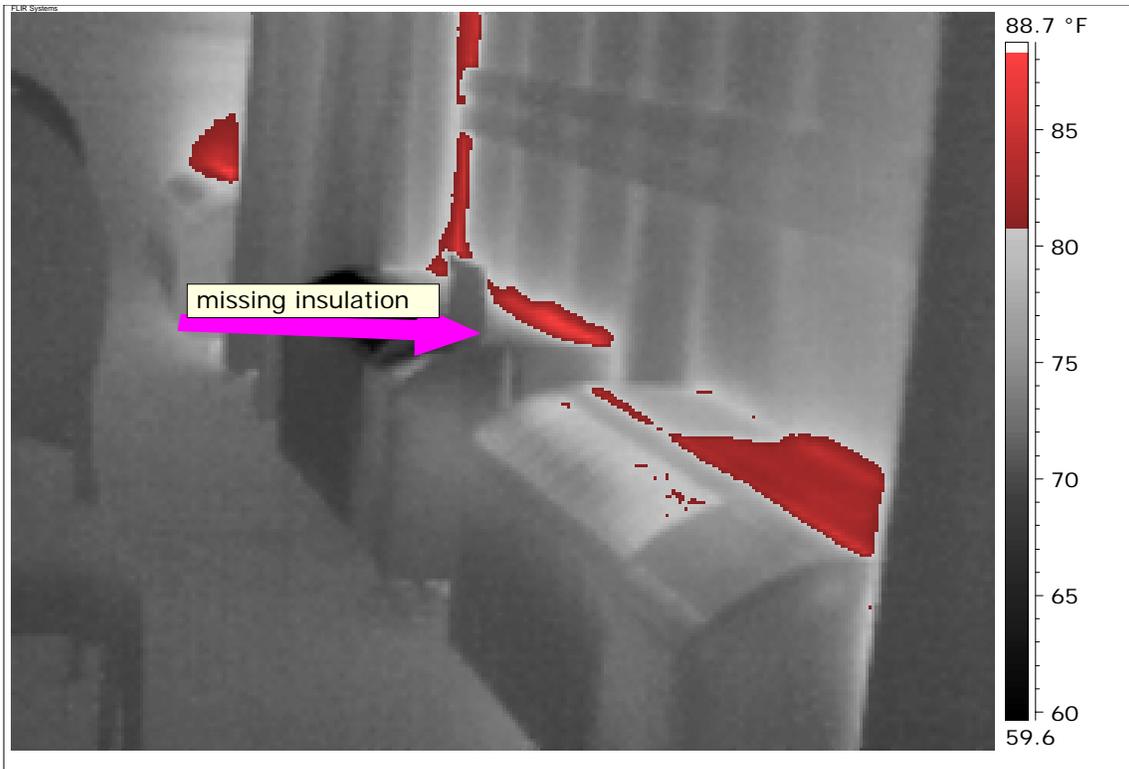


Thermographer: John Cannamela
704-200-6367



Description: Meeting room warm due too infiltration

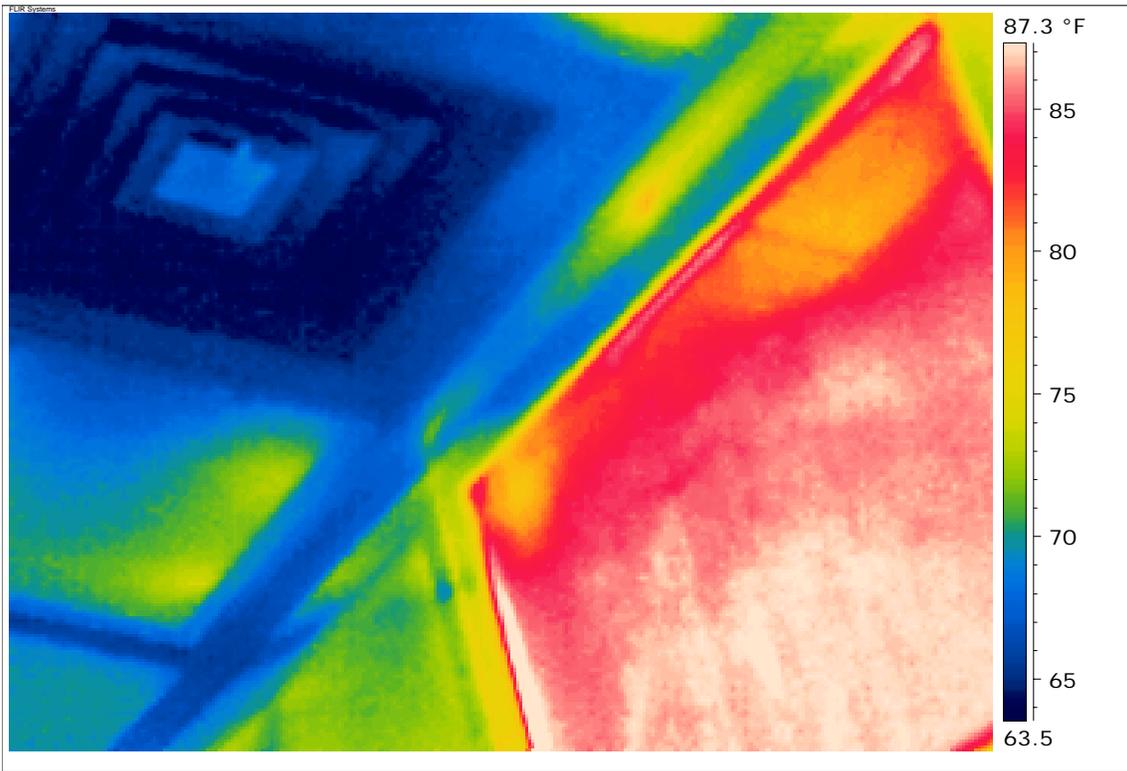




Description: Infiltration meeting rooms

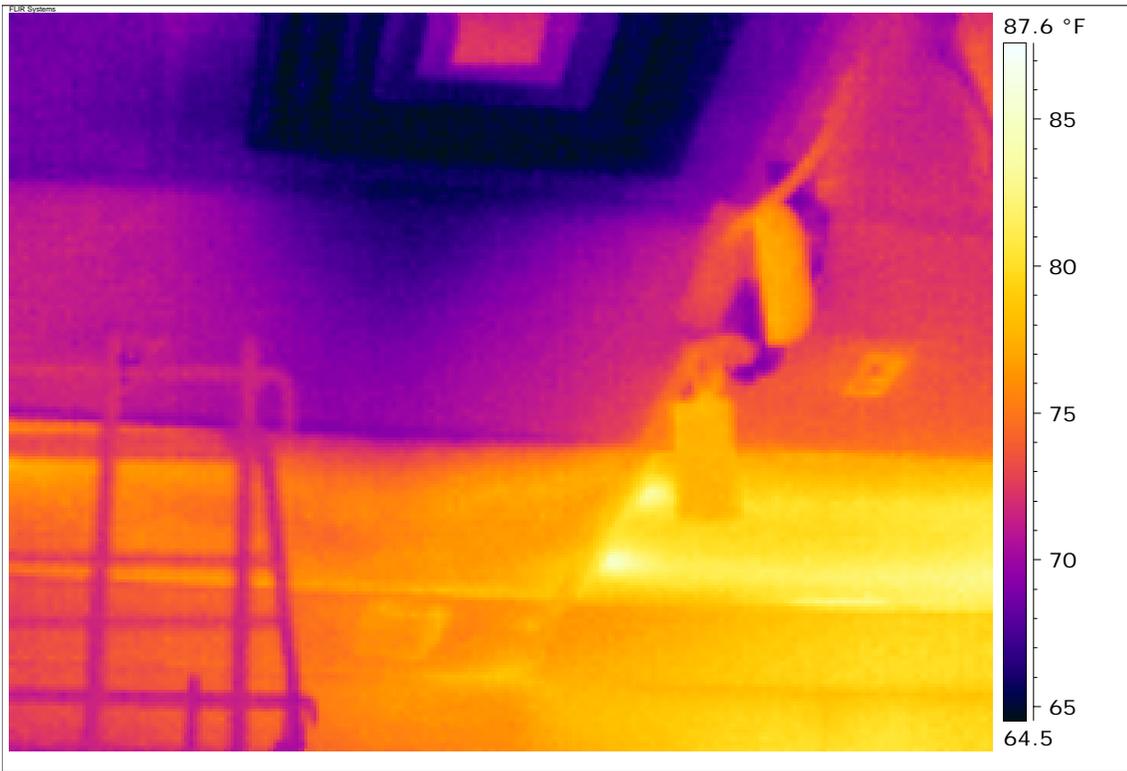


Description: missing insulation

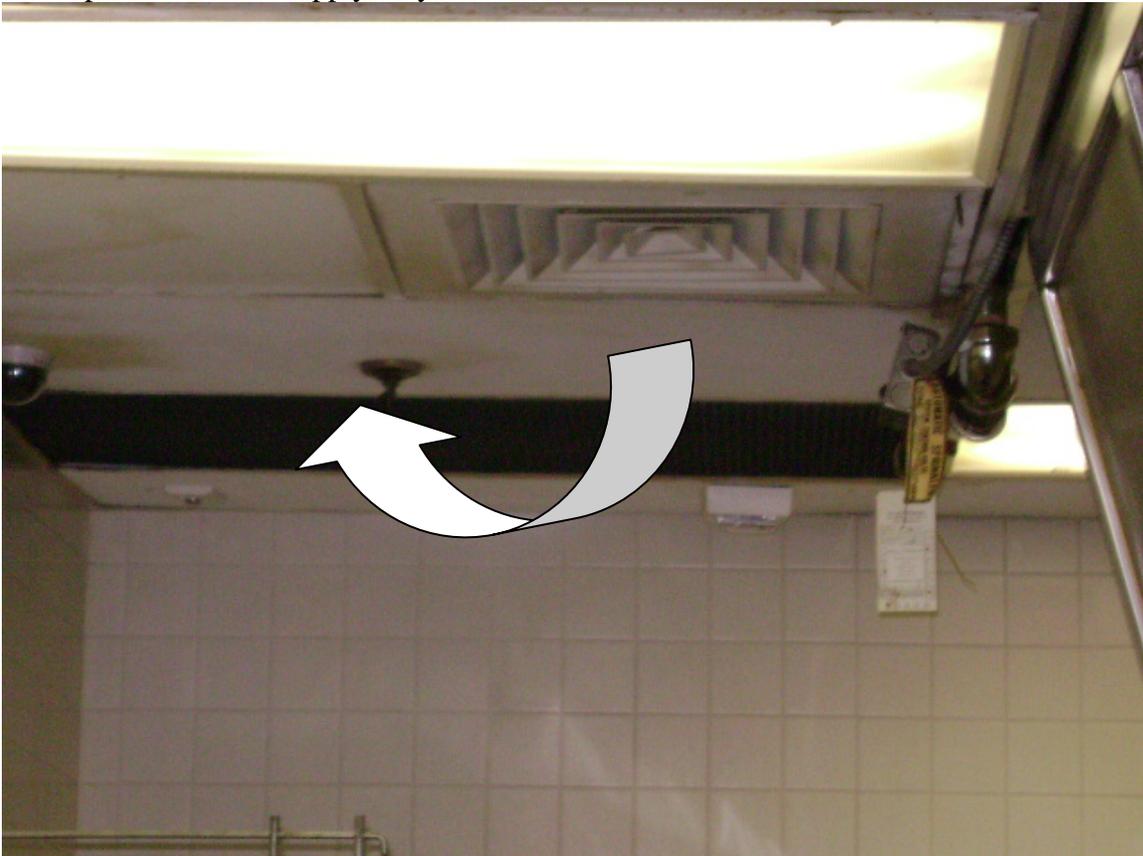


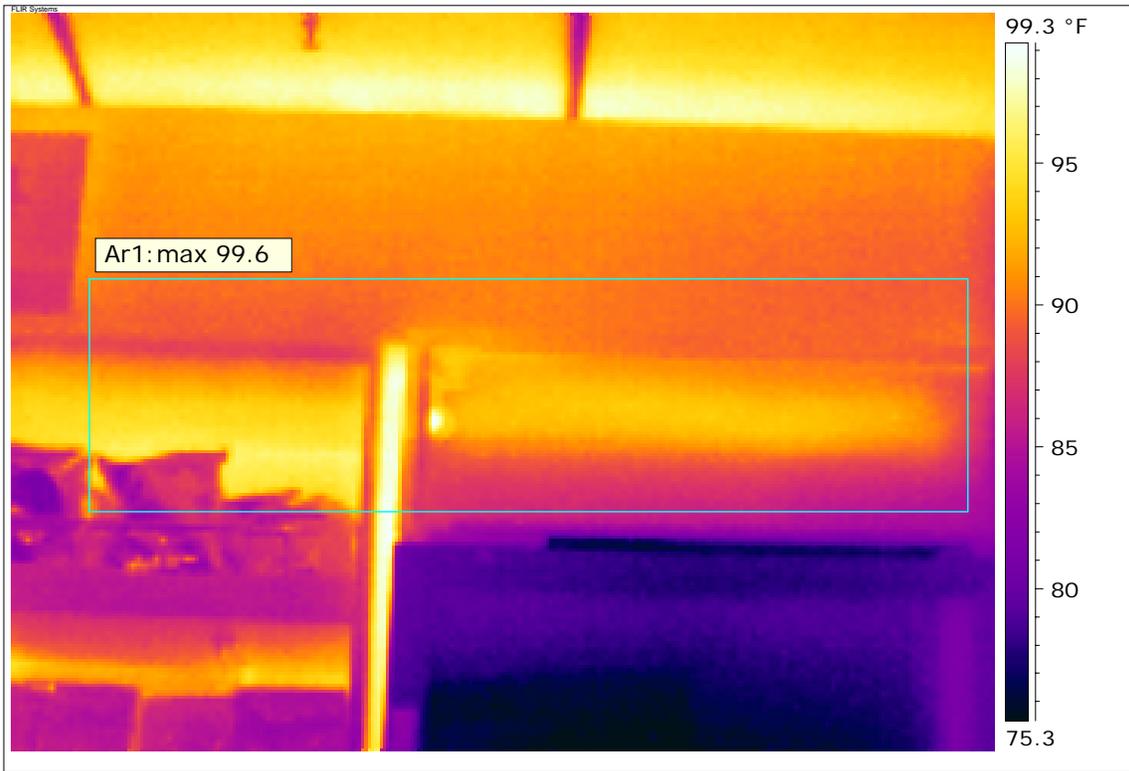
Description: Kitchen supply drawn into hood exhaust energy waste





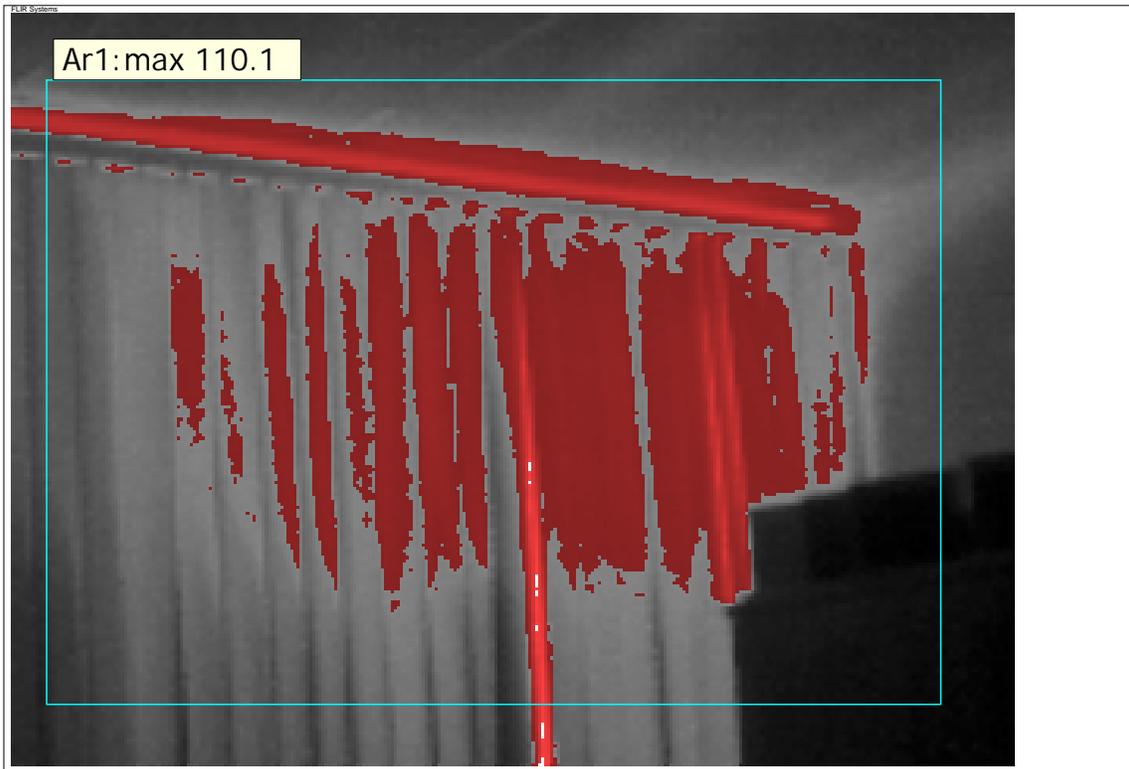
Description: Kitchen supply very close to return





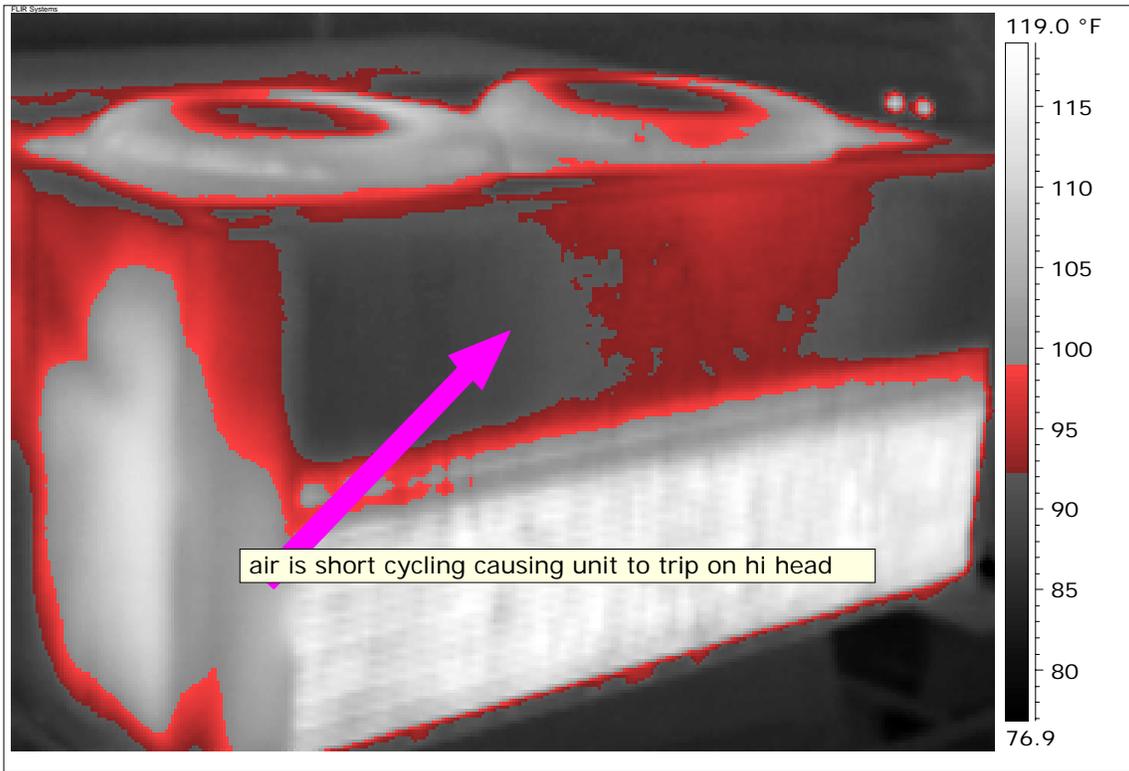
Description: Snack area not ventilated and Leslie's office is behind the wall



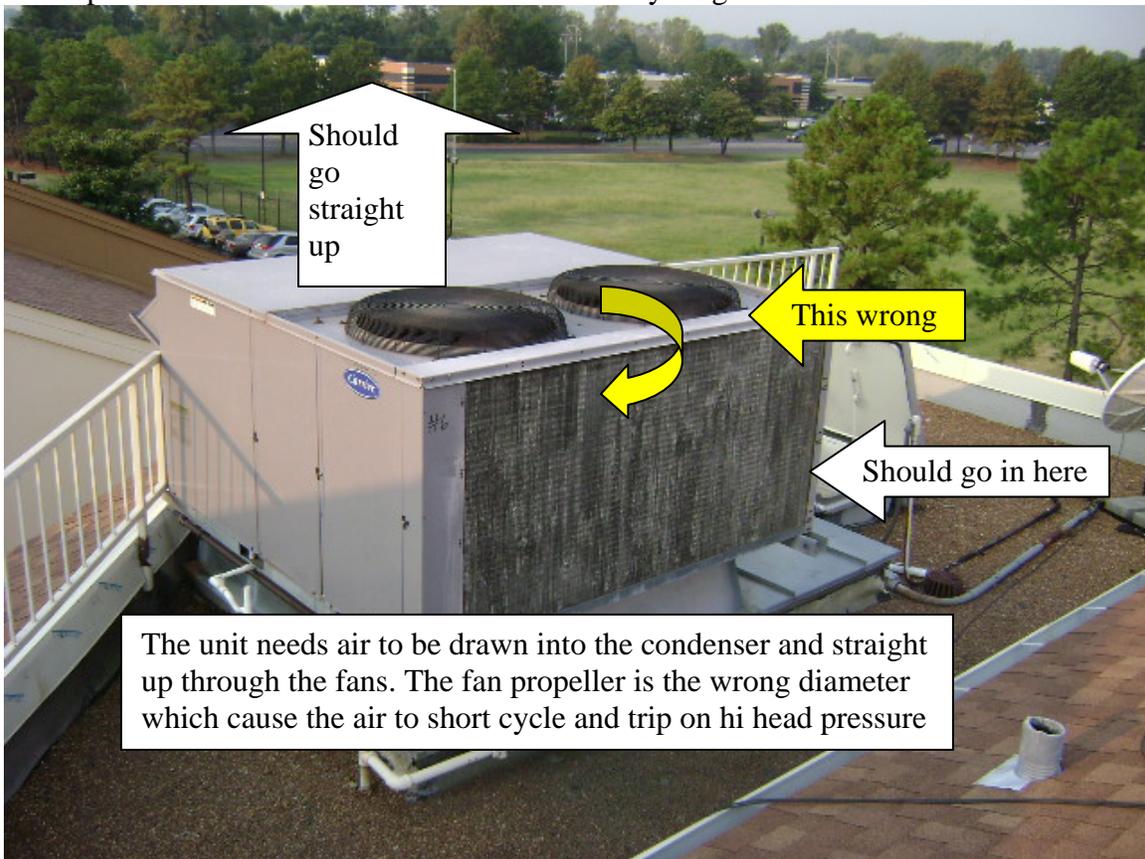


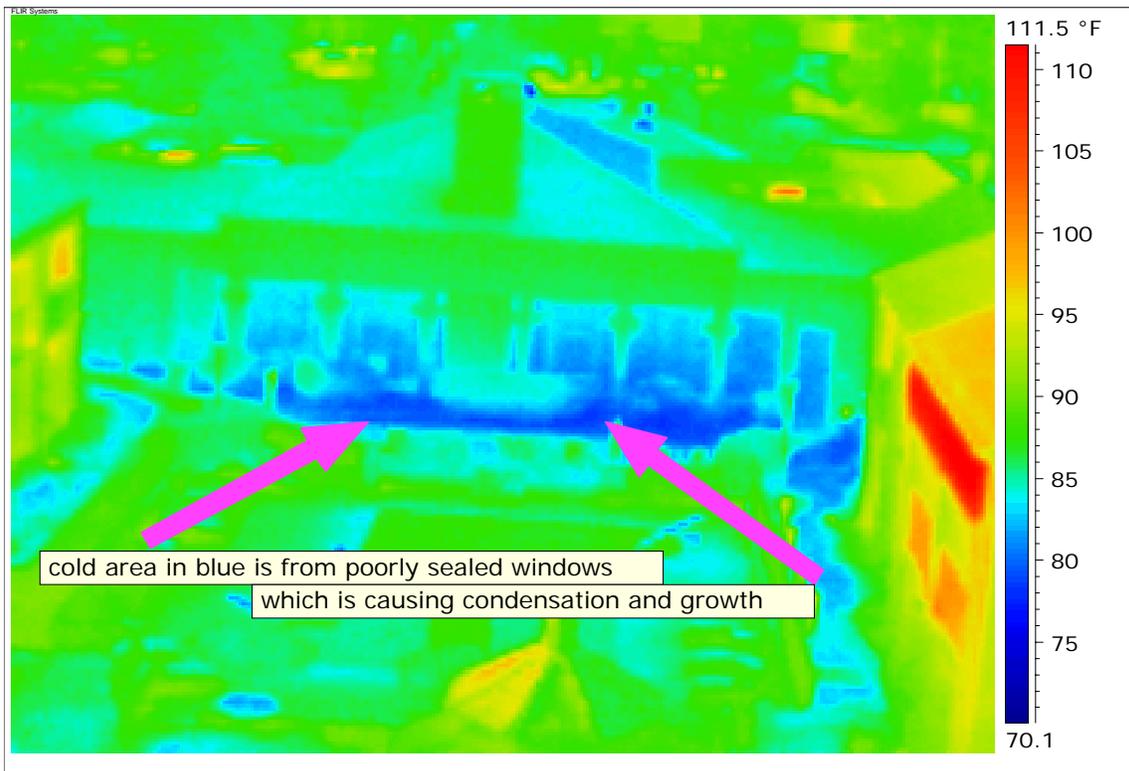
Description: Leslie's office large heat infiltration and lack of air flow due too leaking ductwork causes warm office





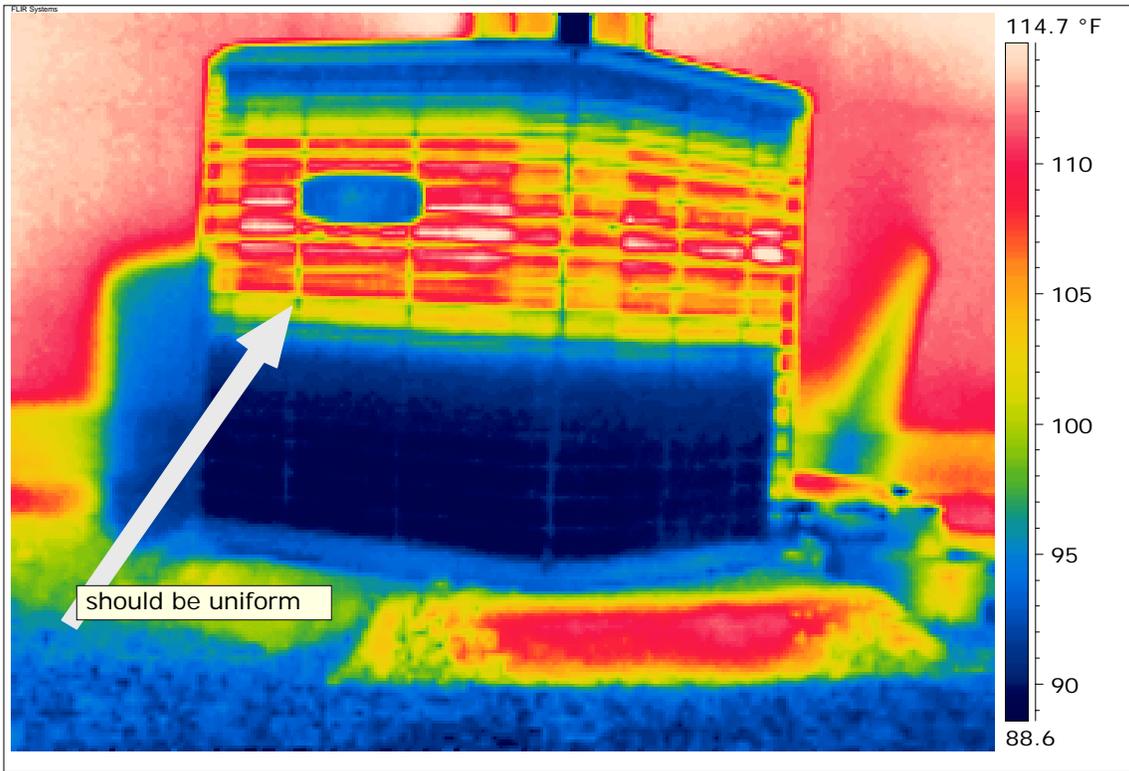
Description: Rtu 3rd floor east-cond fan air short cycling





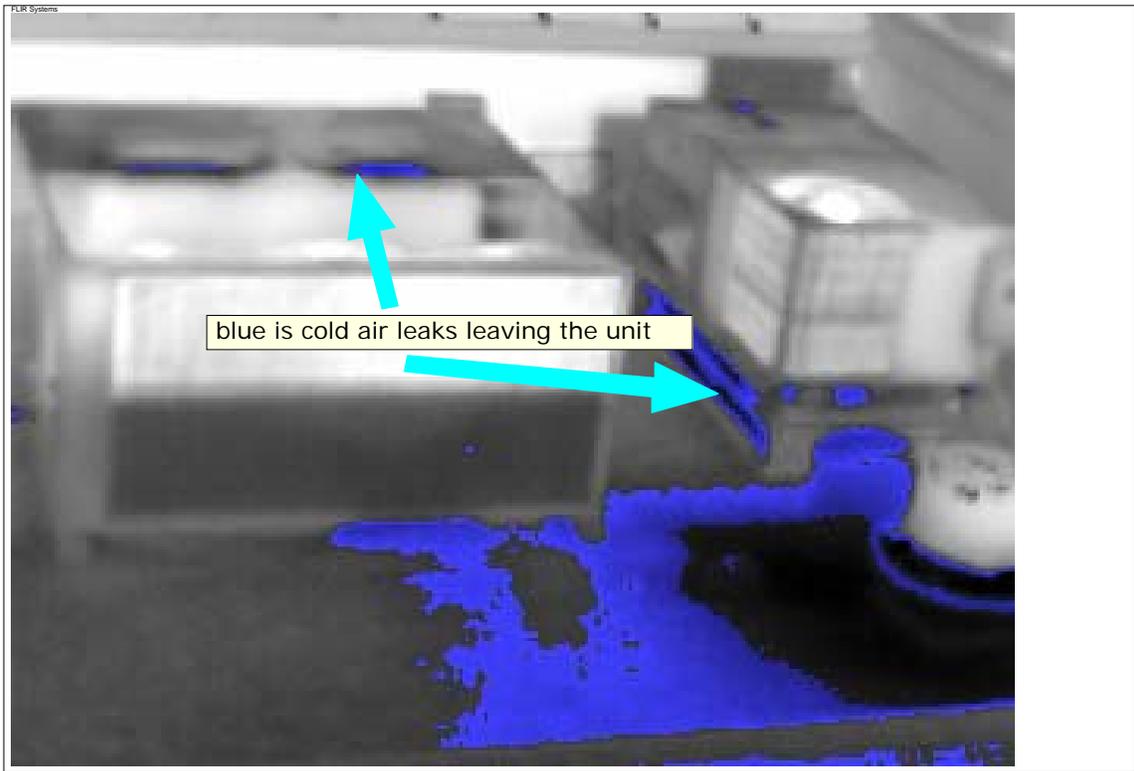
Description: roof view looking to the front

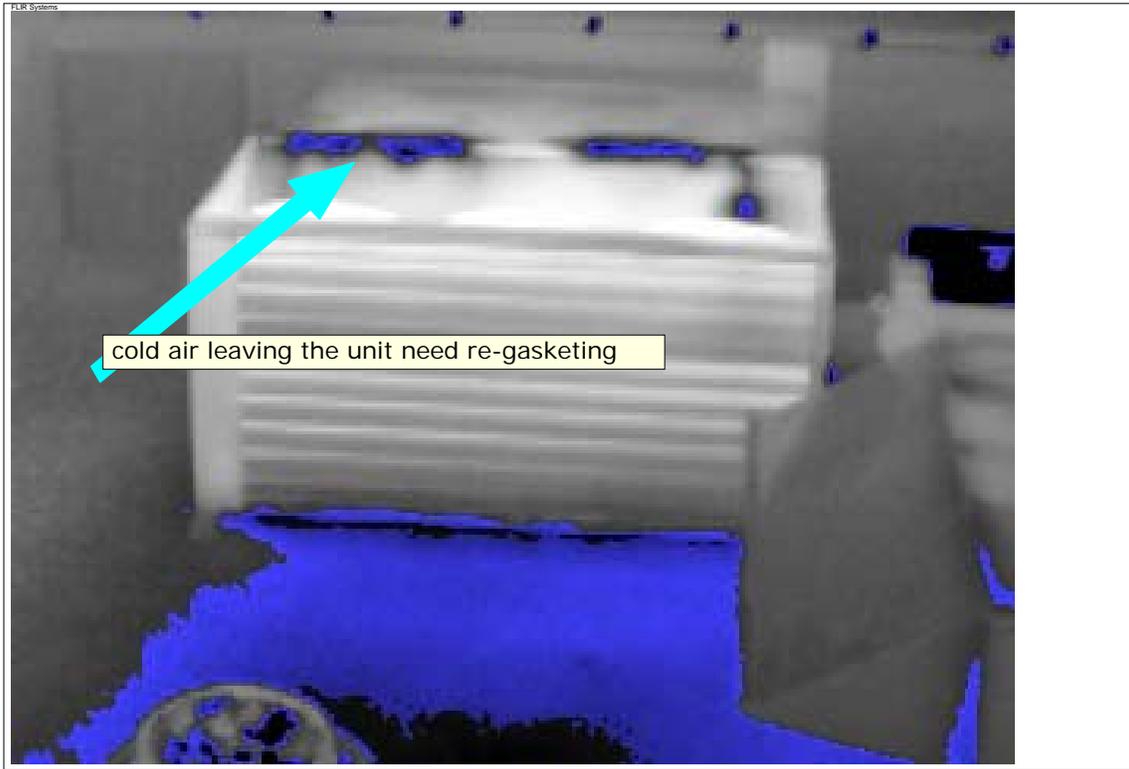




Description: Split system for computer room plugged condenser coil and is tripping

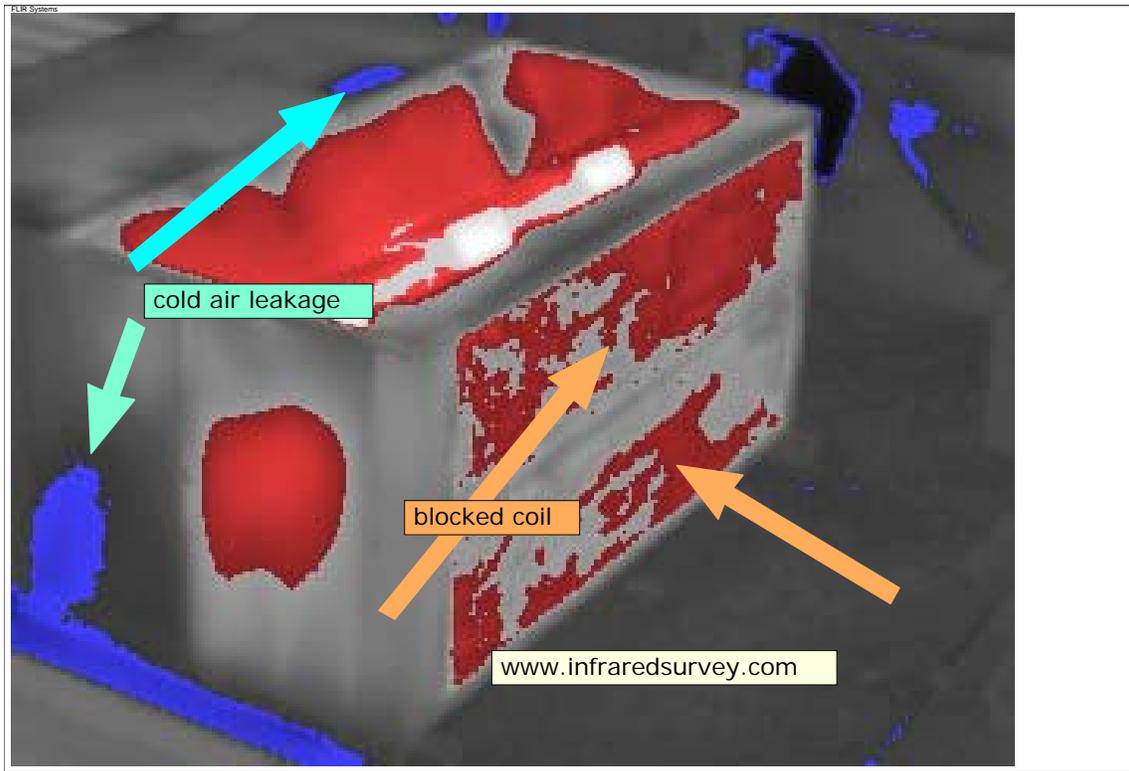






Description: energy loss in blue cold air leaking out instead of blowing into the space.





Description: Dirty coil blocked air flow in red will over work the compressors
Blue is air leakage

