

radiana

FOR THE PERFECT ENVIRONMENT

A division of WMS Underfloor Heating Limited
Heritage House, Woodside Lane,
Brookmans Park, Hertfordshire, AL9 6DE
01707 64 99 22
enquiries@radiana.co.uk
radiana.co.uk





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FOR THE PERFECT ENVIRONMENT

Create the perfect
environment with **Radiana**

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A modern office interior with glass walls and a central text overlay. The office is bright and clean, with a grey floor and white walls. The text overlay is a dark rectangle with the word 'radiana' in white lowercase letters and the tagline 'FOR THE PERFECT ENVIRONMENT' in smaller white uppercase letters below it. The background shows a glass-walled office space with a desk, a chair, and a window looking out onto a city skyline.

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FOR THE PERFECT ENVIRONMENT



+ change is in the air

Radiana creates the perfect environment through intelligent climate control. It sets the right temperature, manages humidity levels and improves air quality to provide a comfortable, healthy environment in which to work, live or play.



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Introducing **Radiana**

The **benefits** of having a hidden indoor climate control system...



Building Occupier

No draughts

Reduced running costs

Quick response times

Improved thermal comfort for visitors and staff, and therefore increased productivity



The Main Contractor

Reduces number of trades on site

Reduces co-ordination between trades

Program benefits

Removes hot works as opposed to HVAC



The Installer

No specialist certification required to install

No hot works permits needed

No handling of ozone damaging gases

A much simpler commissioning process

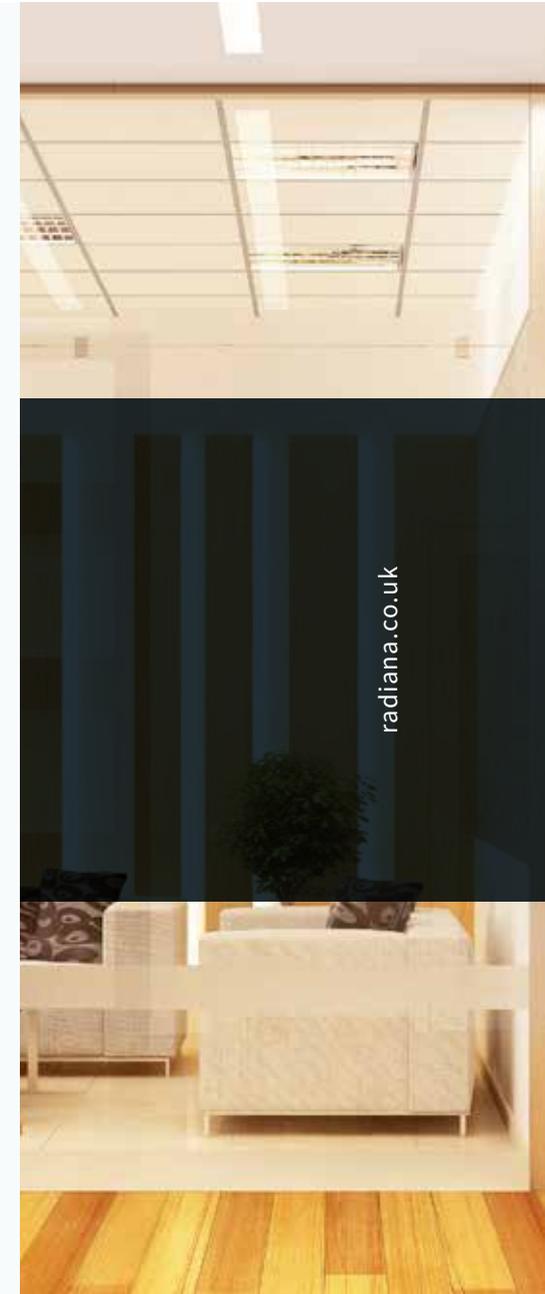


The Building Facilities Manager

No filters and coils to periodically clean

No condensate drains eliminating common AC leak problems

Simple system meaning on site managers can maintain rather than waiting for professional AC engineers



A system that's designed to benefit everyone...

16 minutes per employee is wasted every single day in the UK due to a poorly managed climate. That is eight days a year; another set of bank holidays for each employee!



Efficiency

REDUCED COST AND ENVIRONMENTAL IMPACT

- Reduced running costs
- Lower carbon impact
- Health benefits
- Less maintenance



Comfort

A COMPLETELY UNIQUE COOLING AND HEATING SYSTEM

- Improved thermal comfort
- Zoneable temperature control
- Draught free
- Silent running
- Invisible
- Easy to use



Control

SUPPORT RIGHT THROUGH THE PROCESS

- Design and provide complete working drawings for the system
- Prepare and send all materials to site
- Train each different trade
- Check installation, turn system on
- Demonstrate use to client



How **radiant heating** and **cooling** works...

Radiant cooling cools a ceiling by passing cold water through the pipes which absorb the heat radiated from the rest of the room.

Heat always travels to colder areas. Therefore areas that are 'colder' will always attract heat rays to them. The hot 'rays' travel from the radiant heat element until they reach a surface, such as a wall, floor or piece of furniture.

There are no hot or cold spots in an environment heated or cooled from the ceiling because radiation expands equally in all directions.

This is recognised by certification by the International WELL Building Institute. The Well v2 standard only gives credits to radiant cooling. Radiana can give you those credits.



Radiana is kinder to the environment

Globally, the energy consumed by air conditioning systems in commercial buildings will have doubled during the last decade.

In a typical office, air conditioning can account for over 30% of annual electricity consumption.

In the UK our cities are becoming ever hotter. The urban heat island effect is not a new phenomenon, but countries like the UK are more exposed to the threats of extreme heat as summers get longer and hotter.

Air-conditioning cools buildings but in so doing heats up the external environment.

Problems with current systems and dissatisfaction with the thermal environment in many buildings create arguments over temperature, cold draughts and fluctuating temperatures.

The future; Radiant cooling and heating addresses these problems; increasing well-being, giving energy savings and reduces your carbon footprint.

The system uses water as the basis of transferring heat and as water is so much more efficient than air at carrying temperature our systems are typically 50% more efficient than air conditioning.

Radiana can also maximise the heat pump efficiency because it can run consistently at a higher temperature compared to air only systems. Radiant cooling runs typically at 16 rather than the 7 degrees of traditional systems.

Both of these facts mean that radiant cooling can lead to an energy saving of between 20 - 40 %. This resulting in lower costs, lower CO2 emissions (by the same amount: between 20-40%) and reduced contribution to the heat island effect.

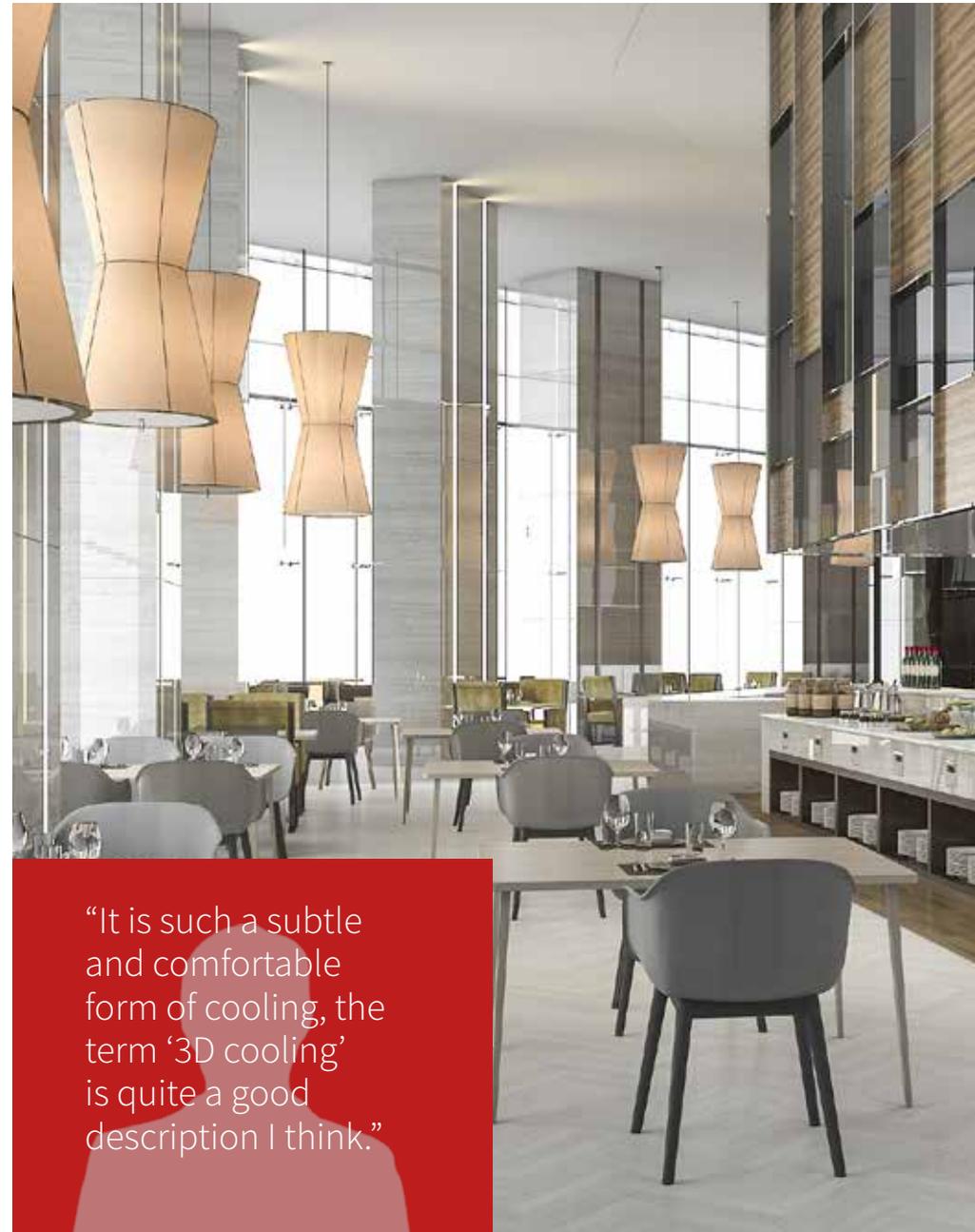
These energy savings can be quantified via recognition in the SBEM tool.



Radiana, making air cooling systems a thing of the past

With the invisible, intelligent Radiana ceiling system you'll quickly understand why there's no better way to control your environment.

The Radiana ceiling system fits in a standard ceiling grid and is designed to regulate room temperatures using radiant heating and cooling technology. Its exceptional performance and customisability make it thermally and acoustically ideal for a wide range of applications, from offices, schools and conference rooms to restaurants, hospitals and airports.



“It is such a subtle and comfortable form of cooling, the term ‘3D cooling’ is quite a good description I think.”



Set yourself free from traditional air cooling with the revolutionary **Radiana**

Radiana conditions a building's environment using radiation in a way that is totally in harmony with nature. This innovative product allows you to cool or heat without draughts, noise or the dehumidifying effect of traditional air conditioning.

Up to 64 tiles can be connected in series directly to a manifold loop, without any significant loss of efficiency.

The tiles are simply set into the existing ceiling suspension grid, ensuring easy access during inspections. If needed, moving the tiles for maintenance of hydraulic connections is straightforward.

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A **simple system** for a sophisticated solution

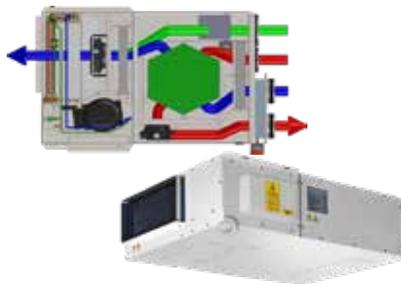


The Panel

The tile assembly consists of a 35mm thick pre-formed insulation backing board and a gypsum tile bonded together, and is very easy to install and maintain.

The Climate Control System and App

The control system integrates a unique technology to modulate radiant fluid temperatures so that surfaces stay above the dew-point. A sensor for each controllable zone records air temperature, radiant temperature, and humidity. The temperature can be monitored and controlled using the Radiana App accessible on any device.



The Ventilation and Humidity Control Unit

This unit maintains the humidity at comfortable levels, the dehumidifier will be sized and specified for your project size.

The **ceiling mounted system** designed not to be noticed

Flexible fittings

70mm gaps between the capillary pipes enable you to fit spot lights, speakers, sprinklers etc. in the usual way.

Easy to install

The Radiana tiles can be installed in a standard ceiling grid.

Multiple design finishes

The gypsum tile is pre-finished with options for different designs.

Push fit connectors

Push fit connectors, which are guaranteed for 10 years.

Fire retardant insulation

A number of different options are available for insulation.





Heating and Cooling

Radiana ceiling tiles can be used for heating and cooling and can be coupled with a vast range of heating/cooling sources, dependant on the specific application and your own preference.



Complete Control

Radiana ceiling tiles offer complete zoned control, so even in an open plan space everyone will be happy in the comfort of their preference.



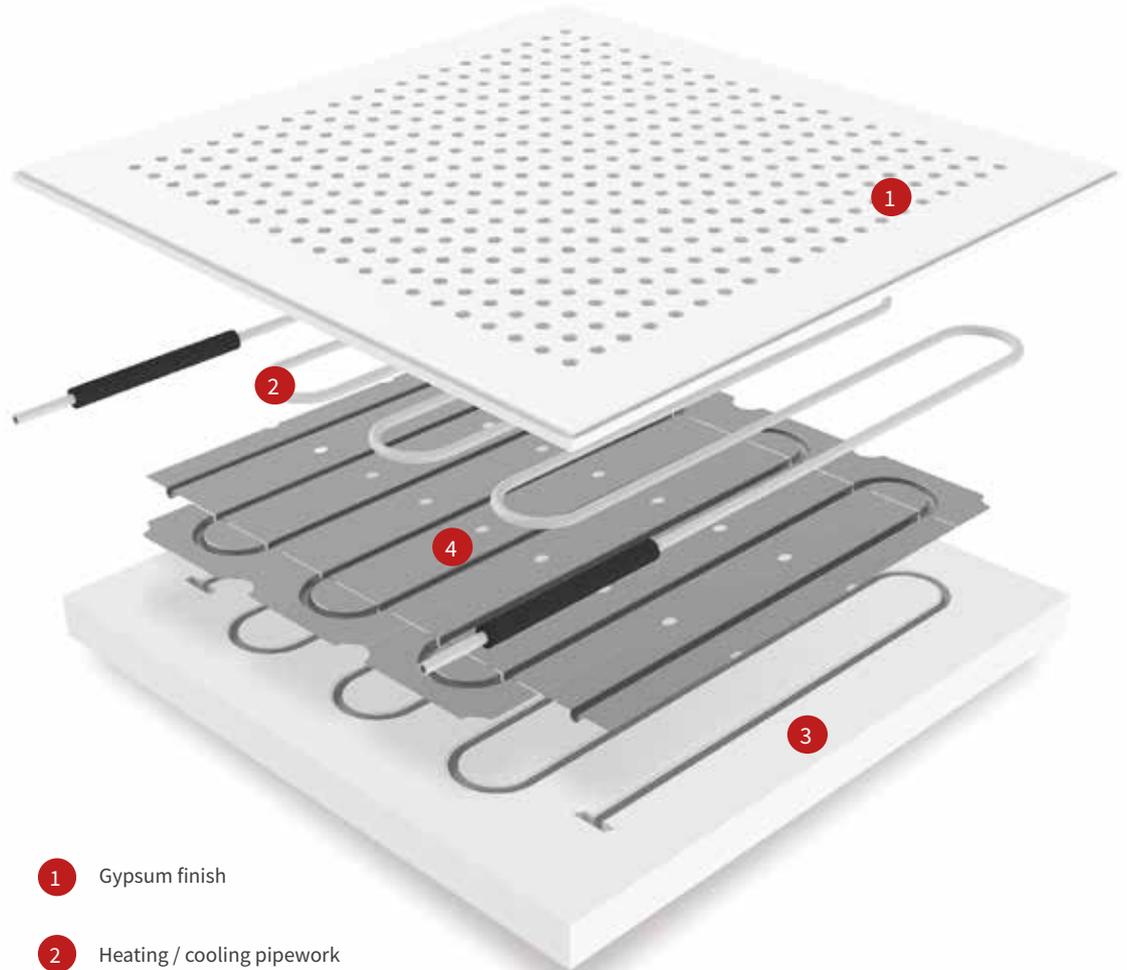
Fast and Easy to Install

The Radiana ceiling tile system is installed directly to the existing ceiling suspension grid in much the same way as traditional ceiling tile systems.



Optimise Acoustics

Radiana's adaptability to any gypstone ceiling tile allows you to tailor the acoustic performance of your ceiling system to directly suit your needs.

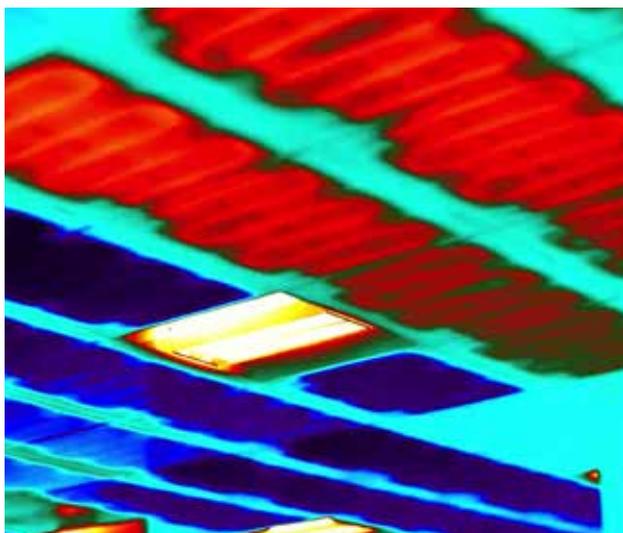


- 1 Gypsum finish
- 2 Heating / cooling pipework
- 3 37.5mm fire-rated insulation
- 4 Aluminium diffusion plate



Complete Zoned Control

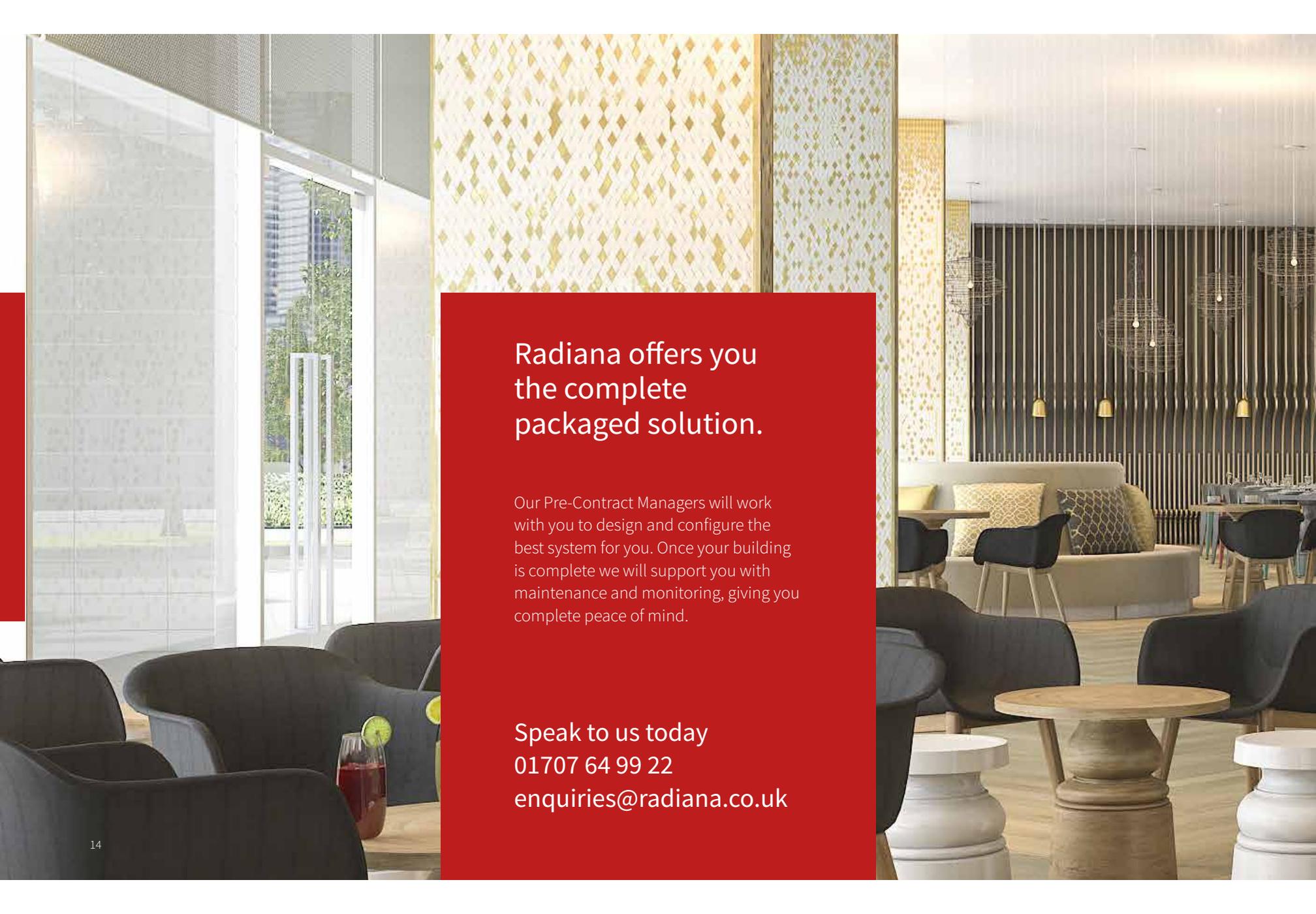
These thermal images are showing one zone on heat whilst the other is on cool. Visit us to experience it for yourself .



Technical Specification of Radiana

Radiana active ceiling tile panel		
Dimension		600 x 600mm
Thickness		52.5mm
Weight (dry)		12.84kg/m ²
Water content		2.27 litres (including supply and return backbone pipes)
Radiant tubing		PEX with oxygen barrier
Diameter		8 mm (~ 5/16") O.D. - 5.5 mm (~ 7/16") I.D.
Spacing		70.3mm
Heat output [†]	typical	88w/m
	max	222w/m
Cooling output [†]	typical	74w/m
	max	114w/m
Effective radiant surface		~ 90%
Operating temperature		7°C - 60°C
Surface flame (ASTM E84)		Class A12-S1, d0
Flame spread Index		0
Smoke developed Index		5

To experience **Radiana** for yourself please call **01707 64 99 22** or email enquiries@radiana.co.uk



Radiana offers you
the complete
packaged solution.

Our Pre-Contract Managers will work with you to design and configure the best system for you. Once your building is complete we will support you with maintenance and monitoring, giving you complete peace of mind.

Speak to us today
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