# How much sky, at every point

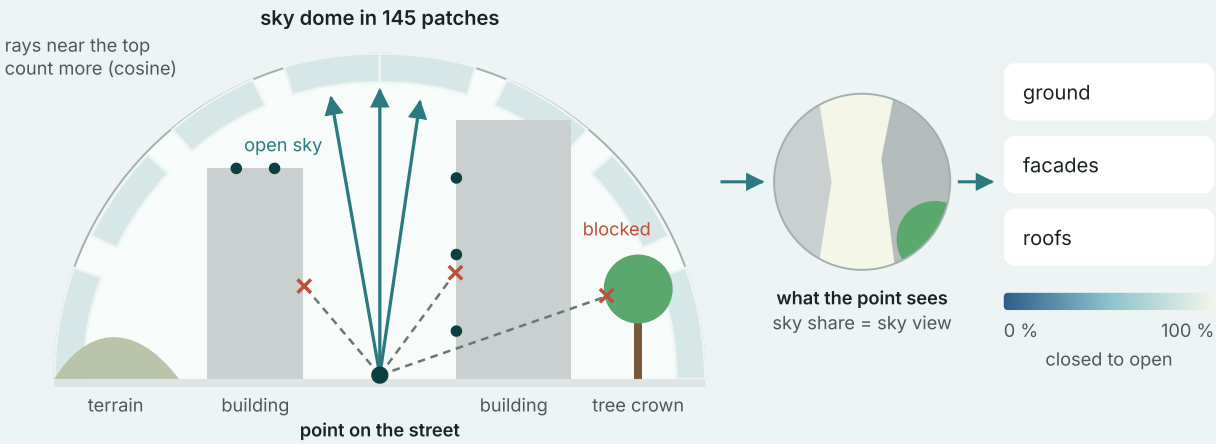
The visible sky from 0 to 100 %, on every point of the ground, the facades and the roofs. Open sky lets a street cool down at night. Little sky means a hot night, less daylight and trapped air.

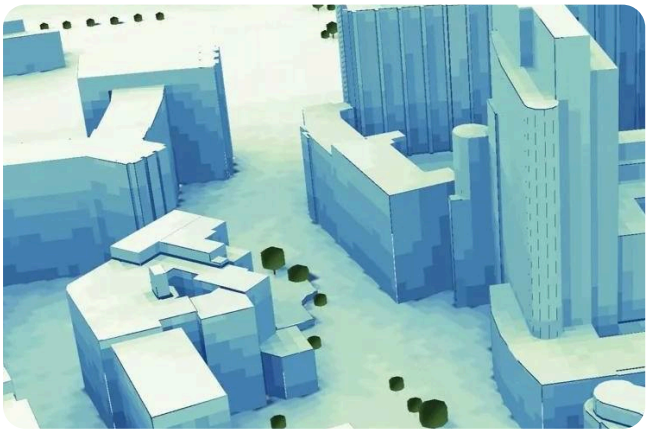
**0.7 points**
median difference from Radiance on a real Vienna tile

**0.997**
correlation with Radiance 6.1, same definition, 119 points

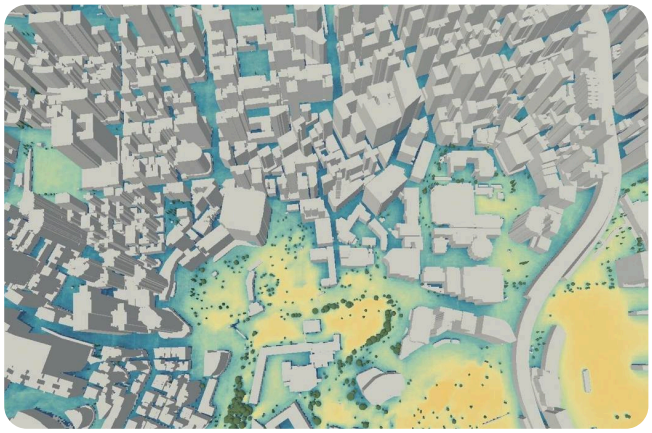
**1 to 4 s**
for one 512 m x 512 m tile

Checked against Radiance 6.1 with the same cosine-weighted definition: 95th percentile 2.9 points on the Vienna tile; street canyons and a courtyard, median 0.6 to 1.2 points. Aligned with VDI 3787 Part 1.



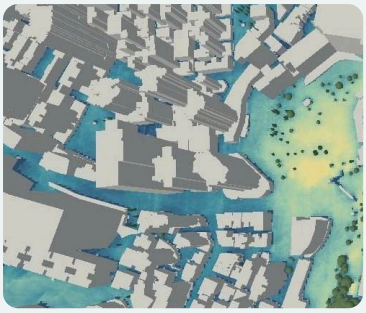



Vienna: sky view on every facade and the ground. Deep blue is closed, pale is open sky.



A dense city centre: narrow streets in blue, open parks and squares in yellow.

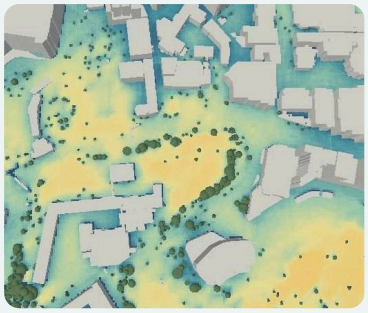
# What your users could get from it



### Where do streets cool down at night?

Heat escapes to open sky. Narrow streets with little sky stay warm all night. Find the urban heat island hot spots.

**Sell it as: night heat check**



### How open does the new square feel?

See how much sky a person has in the square, at the entrance and along the edges, before the design is fixed.

**Sell it as: openness map**



### Where is daylight possible?

Sky view on the street and on each facade shows where daylight can come in, and where it cannot.

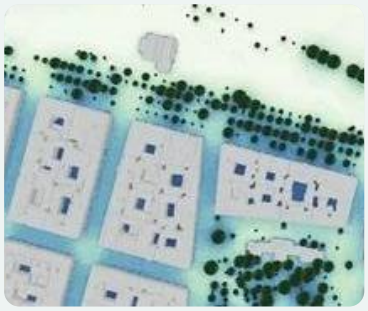
**Sell it as: daylight potential**



### Which massing keeps the most sky?

Run each option in seconds. Compare the sky share on streets, facades and courtyards, side by side.

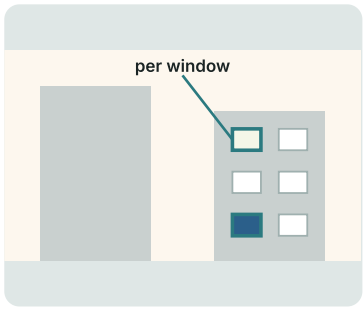
**Sell it as: massing openness score**



### More trees, or more night cooling?

Tree crowns give shade by day but block the sky at night. See the trade-off for each street before planting.

**Sell it as: tree planting check**




### How much sky does each window see? Next

One sky value per window, floor by floor. A fast first check for daylight in every flat.

**Sell it as: window sky check**

## Three ways into your web app

### 1 · A layer while you design

Sky view on the ground, facades and roofs, in the 3D view. Move a block and see the change in seconds.

### 2 · One number per option

"Square: more open sky than option A." "Courtyard: less sky." Easy to compare between options.

### 3 · A first check before heavy runs

Find the closed streets and dark facades first. Then run heat or daylight only where it matters.

**One upload, more answers.** The same buildings also give sun hours, daylight, solar radiation, wind and heat comfort. Sky view is also an input for the felt heat on every street.

A geometric measure: it is not a comfort or daylight result on its own.

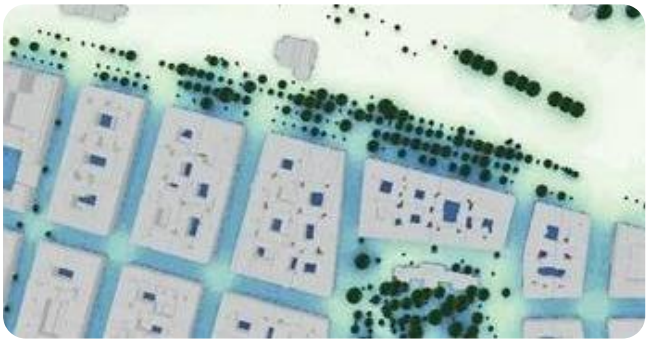
# What goes in, and how it is tested

| INPUT | WE GET IT AUTOMATICALLY | BETTER, IF YOU HAVE IT |
|---|---|---|
| **Buildings** Now | Your massing model, and the neighbours from OpenStreetMap or open 3D city models | Your own context model or the city 3D model |
| **Trees** Now | Open tree data, as crowns that block the sky | City tree register |
| **Terrain** Now | Open terrain data | National terrain model (1 m) |
| **Installations** Now | Canopies, shades and other objects from your model | Your detailed street design |
| **Points to compute** Now | A grid on the ground, facades and roofs of the whole tile | Your own points, such as seats or windows |

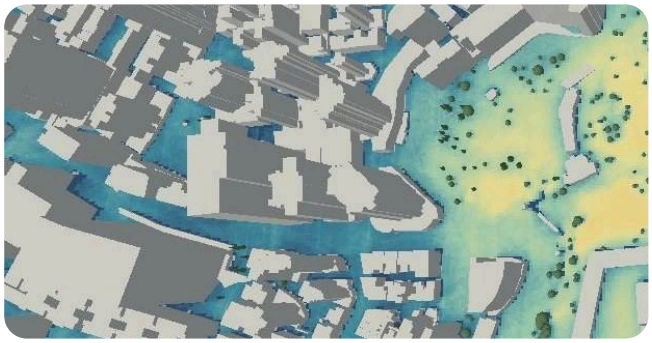
**Difference from Radiance 6.1, in percentage points (same cosine-weighted definition)**




Real Vienna tile, 119 points: correlation 0.997.



Vienna: open sky over the water, less sky under the rows of trees and in the narrow streets.



A dense city centre: the deep street canyons get the least sky (blue).

## What it does

- Sky view from 0 to 100 % on the ground, facades and roofs
- Cosine-weighted, the standard definition
- Hemispherical ray trace over 145 sky patches
- Buildings, tree crowns, terrain and installations block the sky
- About 1 to 4 s for a 512 m x 512 m tile
- Aligned with VDI 3787 Part 1
- Checked against Radiance 6.1 on a real Vienna tile
- Results through our SDK, ready for your web app

**Next step: pick one site where night heat or daylight matters. We run the sky view on its ground, facades and roofs and show you the result.**

Images: sample results of our model in Vienna and a dense city centre; buildings and trees from open 3D city data and OpenStreetMap (ODbL).