

Bringing daylight indoors

Collecting daylight for distribution to areas of a building where daylight typically is absent, reducing electricity consumption.

LIGHTING CONSTITUTES 35 percent of California's commercial electricity consumption, according to the California Energy Commission. Here and across the country, reducing these loads would significantly reduce energy consumption and the associated negative environmental impacts.

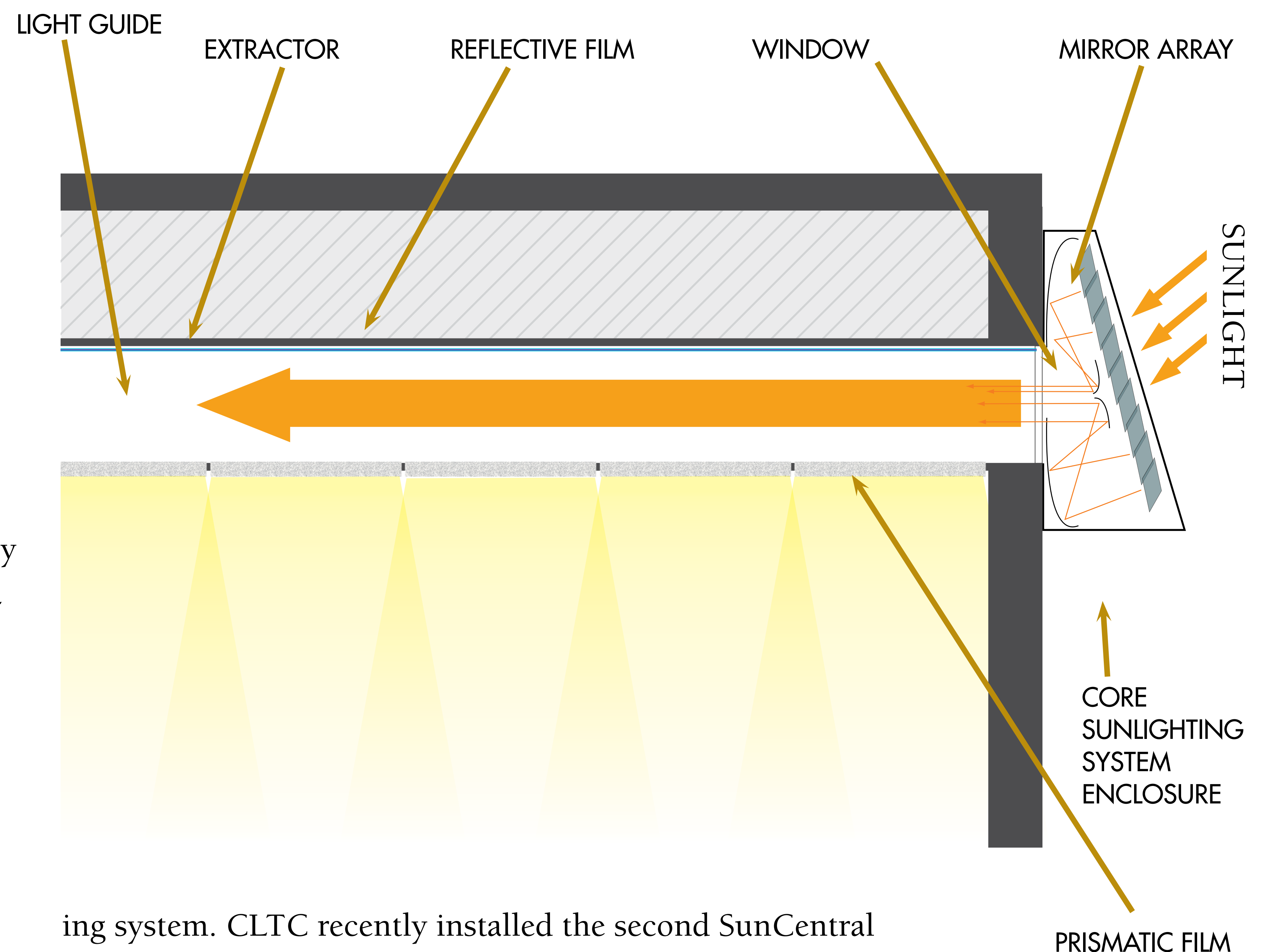
The California Lighting Technology Center at UC Davis is working with researchers at the University of British Columbia (UBC) to install and demonstrate a SunCentral core sunlighting system at UC Davis. The system collects daylight and distributes it to areas where daylight is typically absent. This eases daytime demands for electric lighting, reduces greenhouse gas emissions and alleviates stress on the electricity grid during demand peaks.

FEATURES

- Combination of moveable and fixed mirrors allow sunlight to be directed through the light guide
- Horizontal light guide redirects and distributes daylight to the building core, where daylight normally is absent
- Integrated lighting can automatically dim based on available sunlight

DEMONSTRATION:

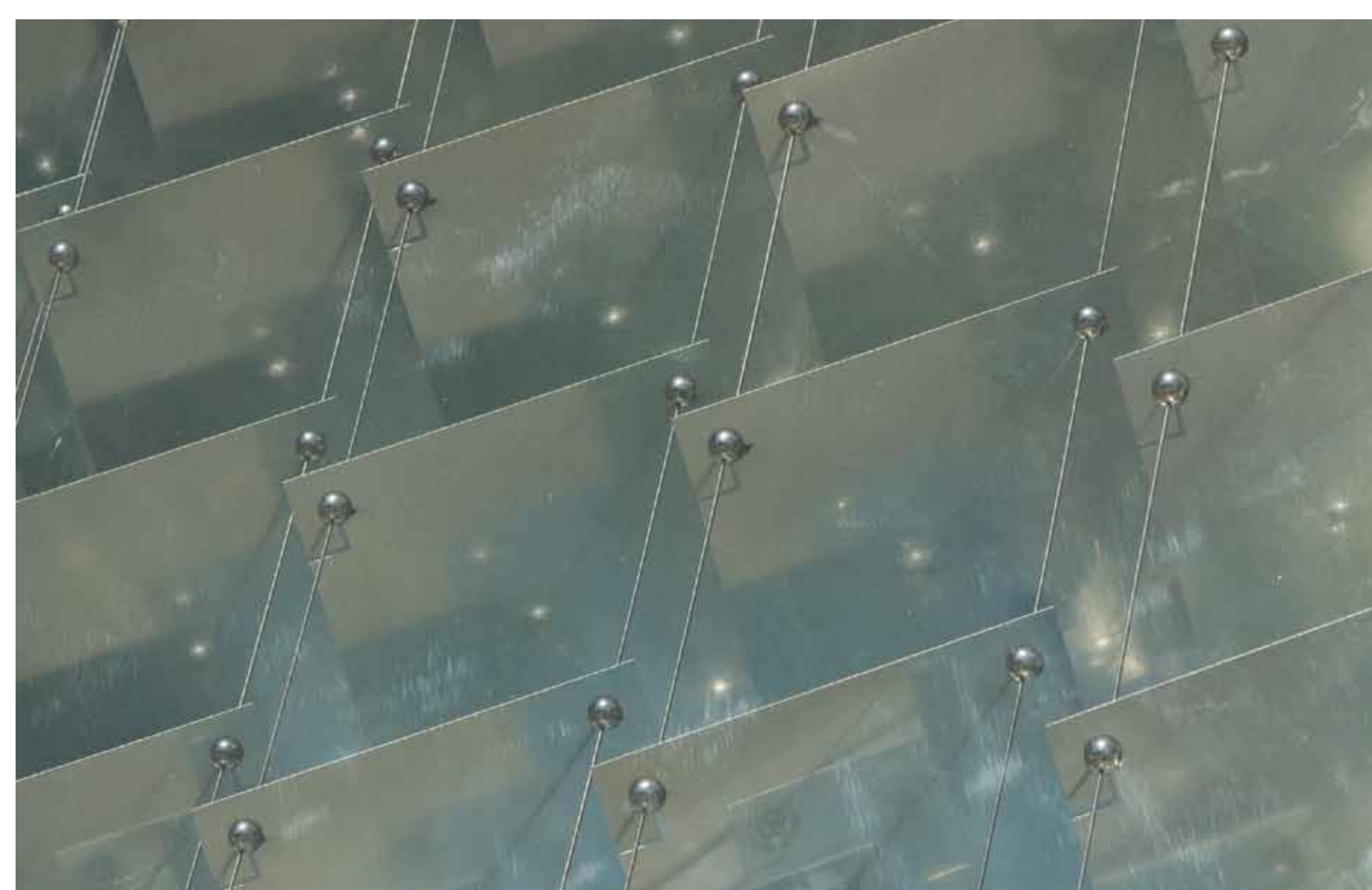
Veterinary Medicine Facility N-2 Building, UC Davis. Researchers at UBC developed the SunCentral core sunlight-



ing system. CLTC recently installed the second SunCentral core sunlighting system in the United States on a Veterinary Medicine facility building at UC Davis. Another installation is planned. Both installations will be monitored to determine their annual performance on comfort, energy, peak electricity demand and occupant response for California's mid-Central Valley latitude and climate.



SunCentral core sunlighting system light guide interior view



Close-up of the mirror array in the SunCentral core sunlighting system



SunCentral core sunlighting system installation at the Veterinary Medicine Facility N-2 Building at UC Davis

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