

# Hybrid Fiber Optic LED Lighting

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The Sunlight Collector  
tracks the sun throughout the day and  
is located on a building's roof or  
façade.

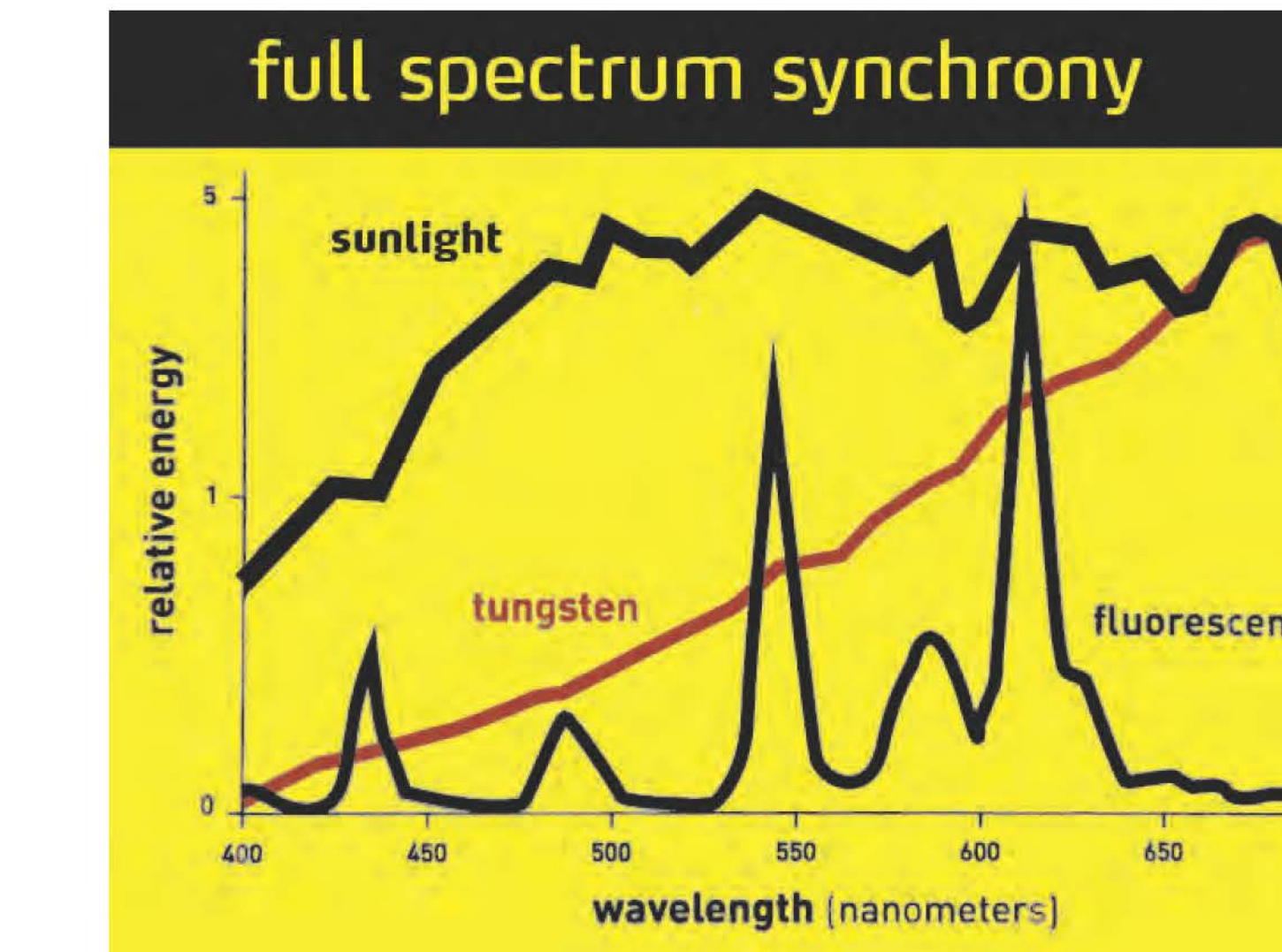
heliostat

fiber

The Fiber Optic Cable  
transmits the incident sunlight  
from the exterior into a building's  
deep interior spaces.

luminaire

The Luminaire  
distributes the available  
sunlight and supplements it  
with LED lighting when necessary.



Light & Health  
Natural full  
spectrum lighting  
mediates circadian rhythms,  
and decreases the likelihood  
of S.A.D.

Bringing the Outside In

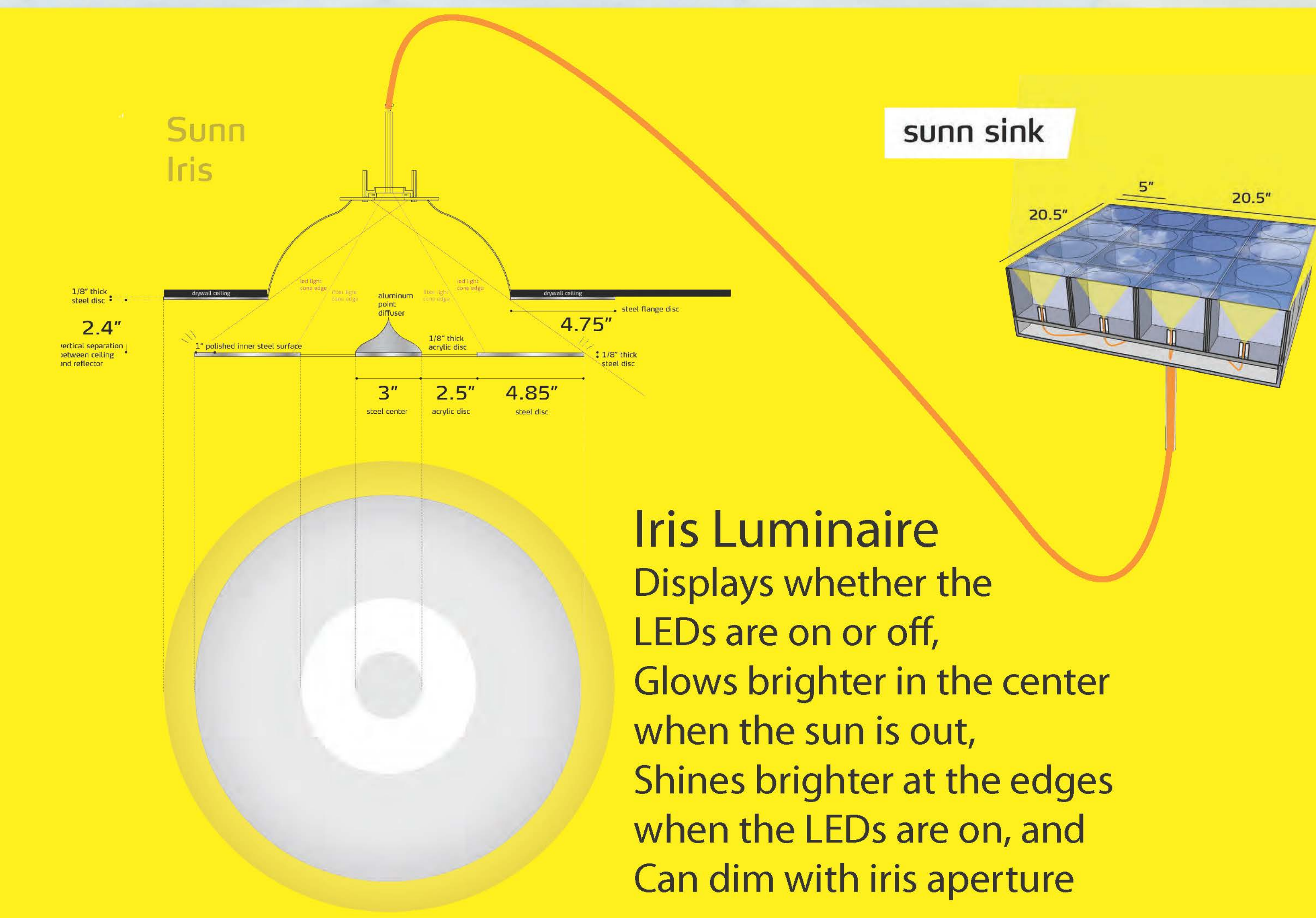
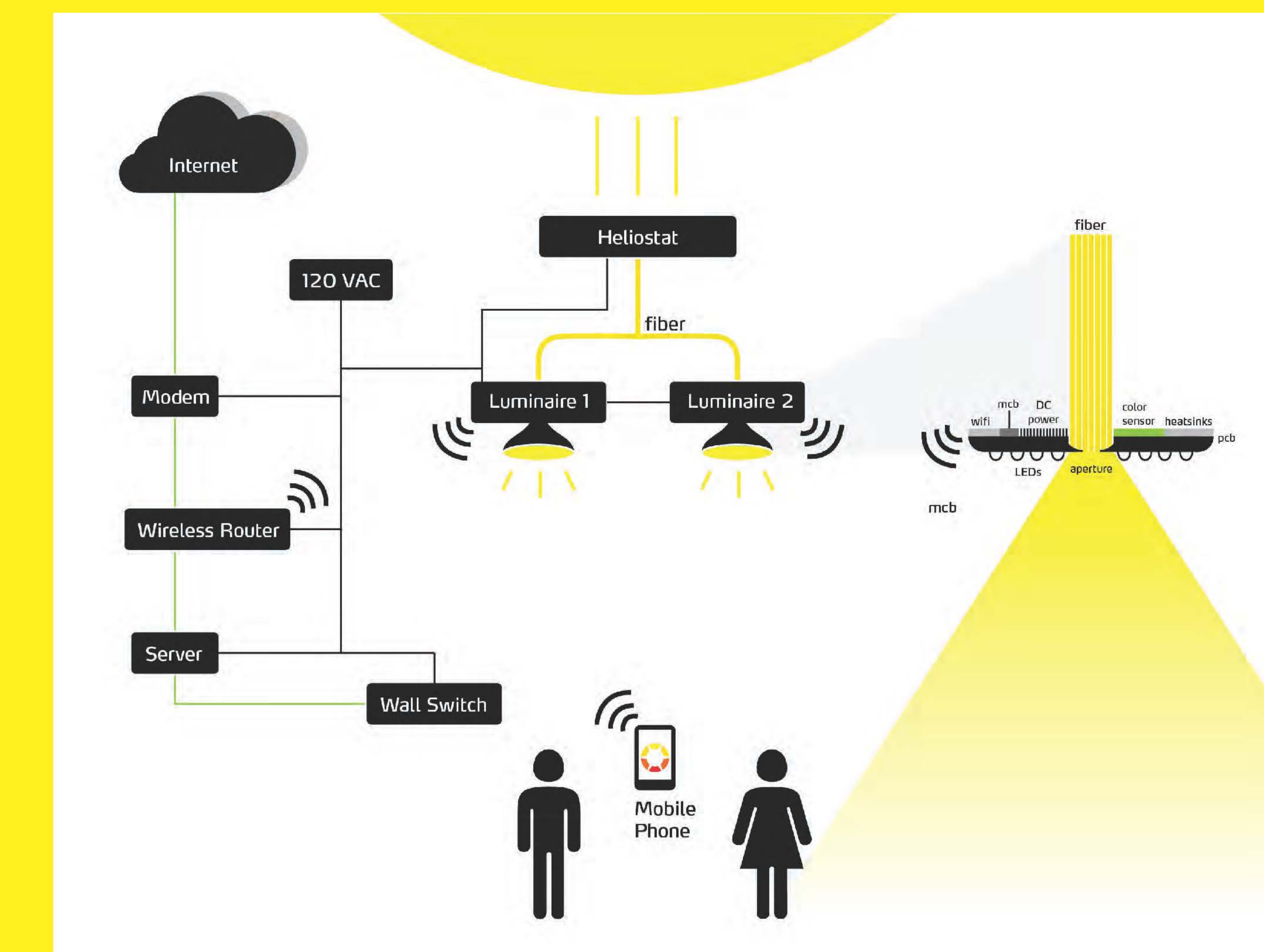
The system boasts reduced energy  
consumption, high CRI, dynamic color  
temperature, long lamp life, standardized  
parts, BIS integration, and an ROI due to  
energy savings of up to 90%.

## The Lighting Control System

- optimizes the lighting condition based on available sunlight.
- engages dynamic LED lighting if no sunlight is available
- wirelessly coordinates multiple light fixtures.
- allows a user to control everything from a web or phone app.



When the sun is out, the interior luminaire  
emits natural light. In overcast weather and during the  
evening hours, the luminaire's efficient LEDs activate  
to mimic the brightness and quality of the sun.



Iris Luminaire  
Displays whether the  
LEDs are on or off,  
Glow brighter in the center  
when the sun is out,  
Shines brighter at the edges  
when the LEDs are on, and  
Can dim with iris aperture

The Lighting Exhibit  
is a small room used to  
display the luminaire and to  
perform lighting quality and human  
factors tests.

Tradeoffs  
-cost of fiber optic cable  
-decreasing LED costs  
-lens diameter/fiber tolerance

