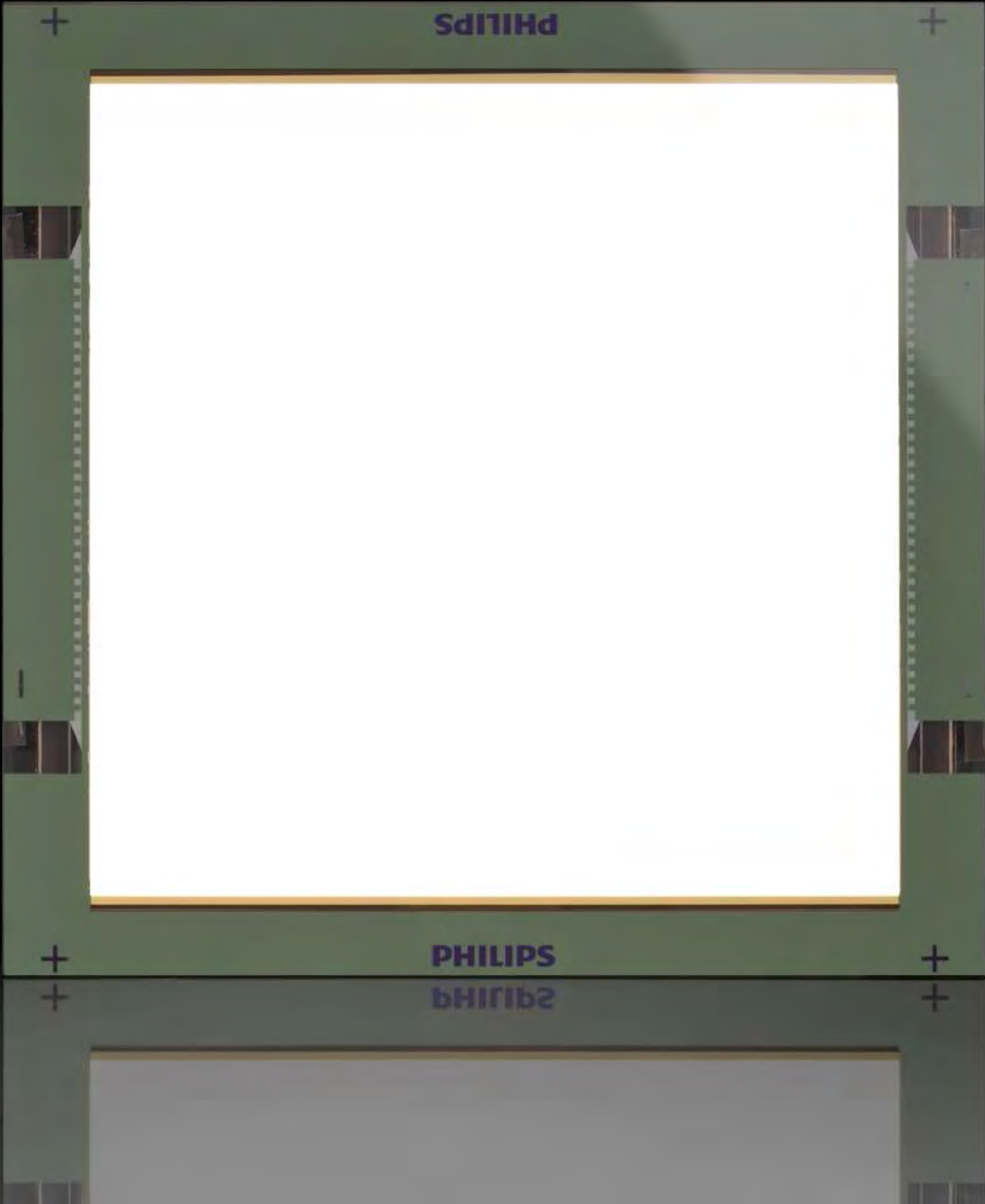


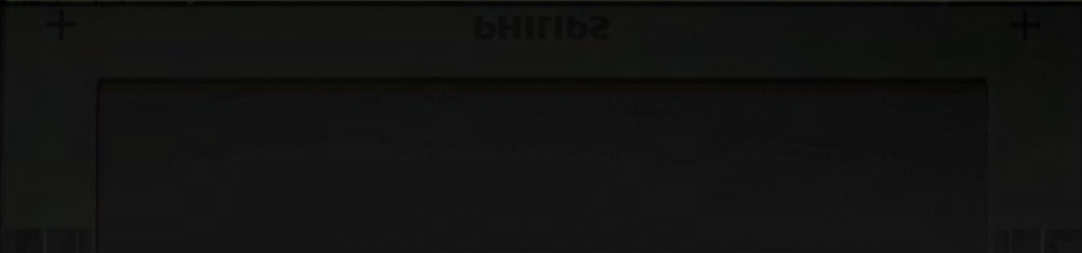
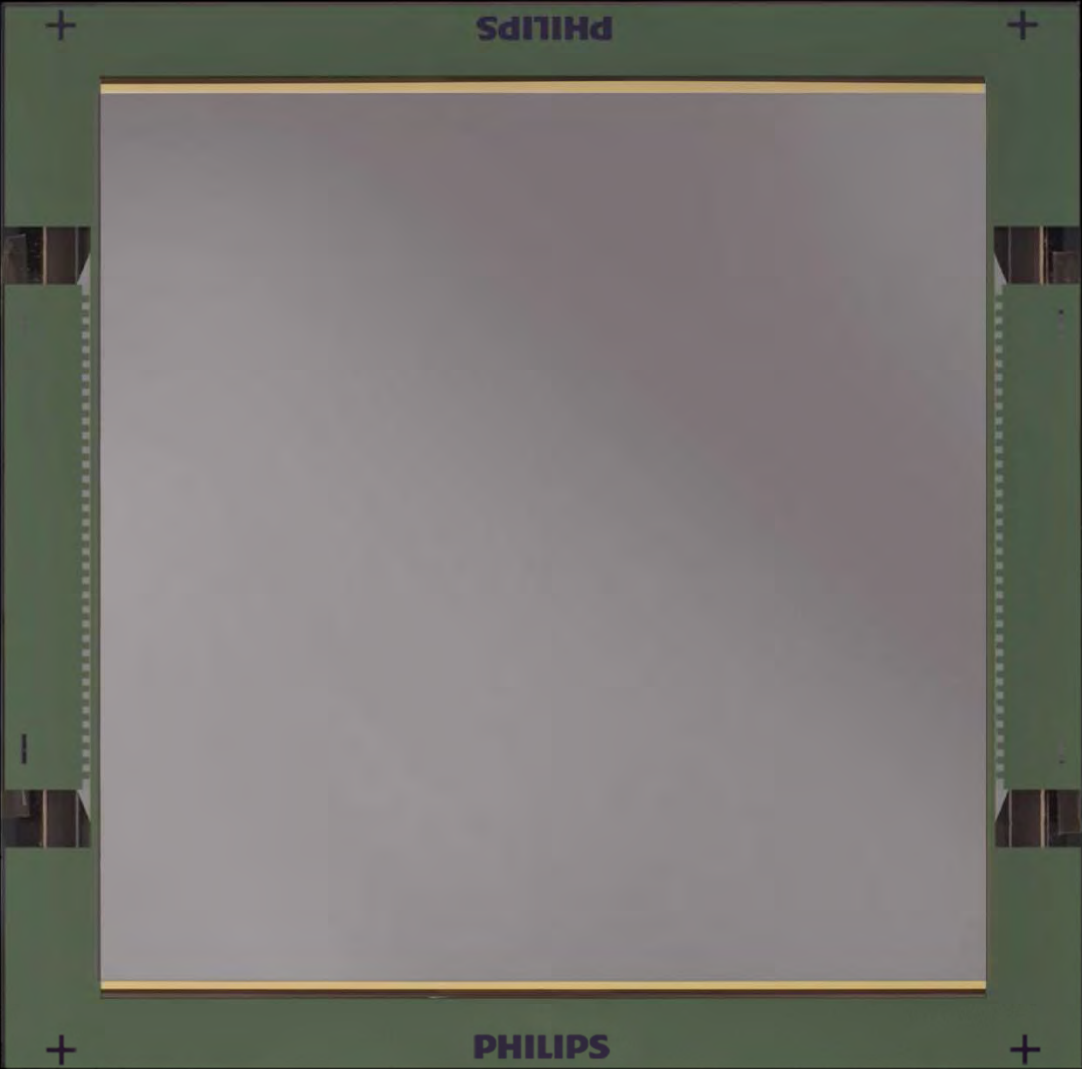
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Philips Lumiblade

The World of OLED lighting







Philips Lumiblade

Light as a material

OLEDs opens up a whole new world of opportunities for working with light. Functional as well as decorative, and surprisingly easy to use, organic lighting represents a new raw material.



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How it works – a layer of light

OLED works by passing electricity through nanometer thin layers of organic semiconductors sandwiched between two electrodes. The electric current travels from the positive to the negative electrode through the organic film, causing the film to emit light. To protect the organic layers, the OLED is completely sealed between two glass plates.

Glass cover & Getter

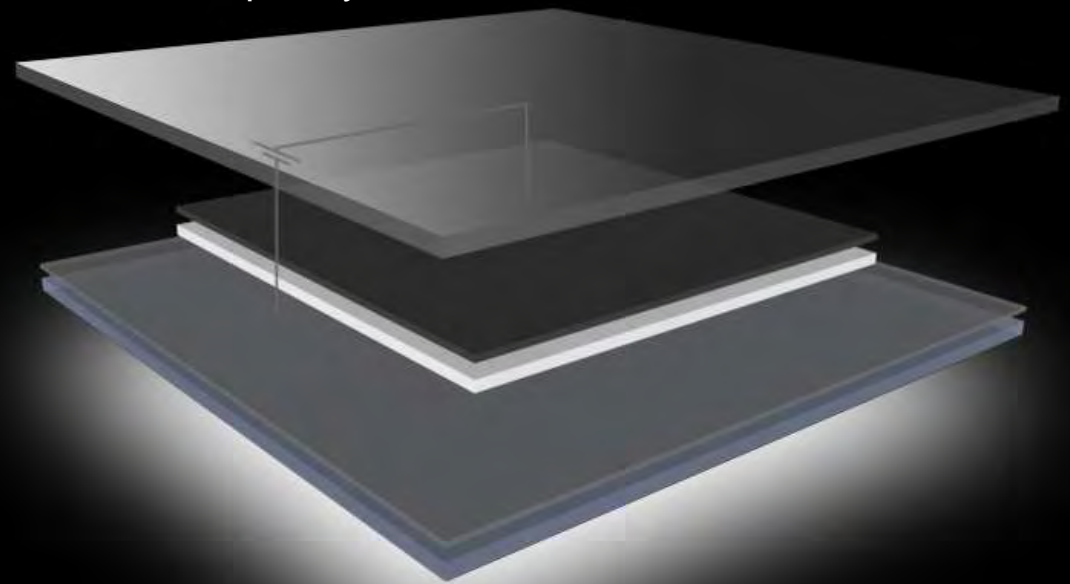
Metal cathode

Organic layer(s)

Transparent anode

Glass substrate

Light



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A new perception of light

Rather than a beam emerging from a single light-emitting point, light coming from the larger surface provides pleasant, uniform illumination.

The OLED produces a soft light, casting no shadows and no glare:

It's about pureness and subtle beauty.



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Ultra-flat and ultra-light

OLED lighting works by passing electricity through one or more extremely thin layers of organic semiconductor material.

It's only 1,8 mm thick and a lightweight.



Philips Lumiblade

Highly efficient and long-living

Today at par with halogen with no losses due to secondary optics.
Made from a natural – and thus sustainable – material.

No drawbacks of conventional lighting like harmful substances
and heat dissipation.

Lifetime: 15.000 hours



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Instant on and dimmable

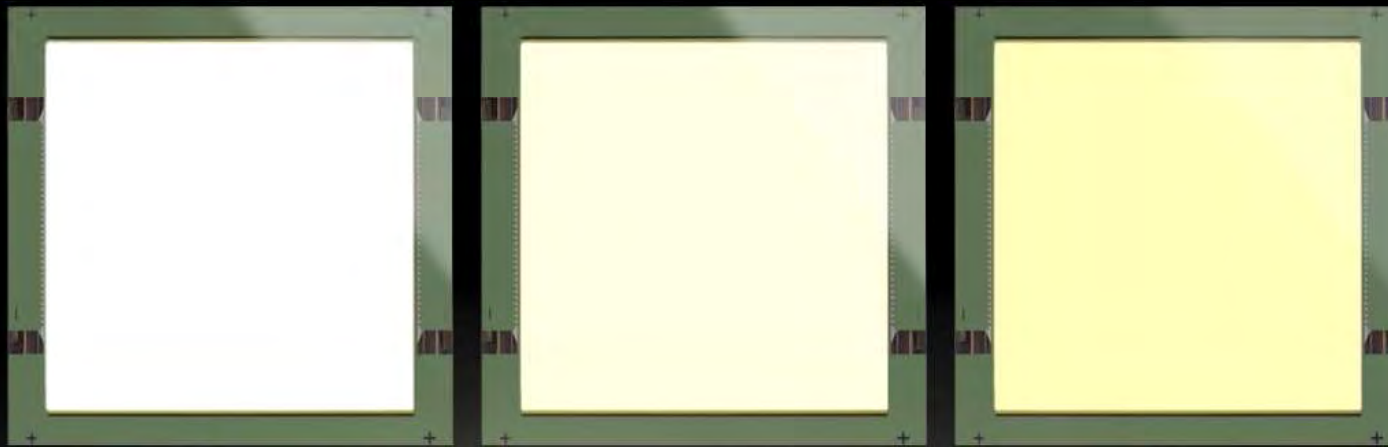
All actions of staging the light between instant on and smooth dimming are possible.



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All shades of white

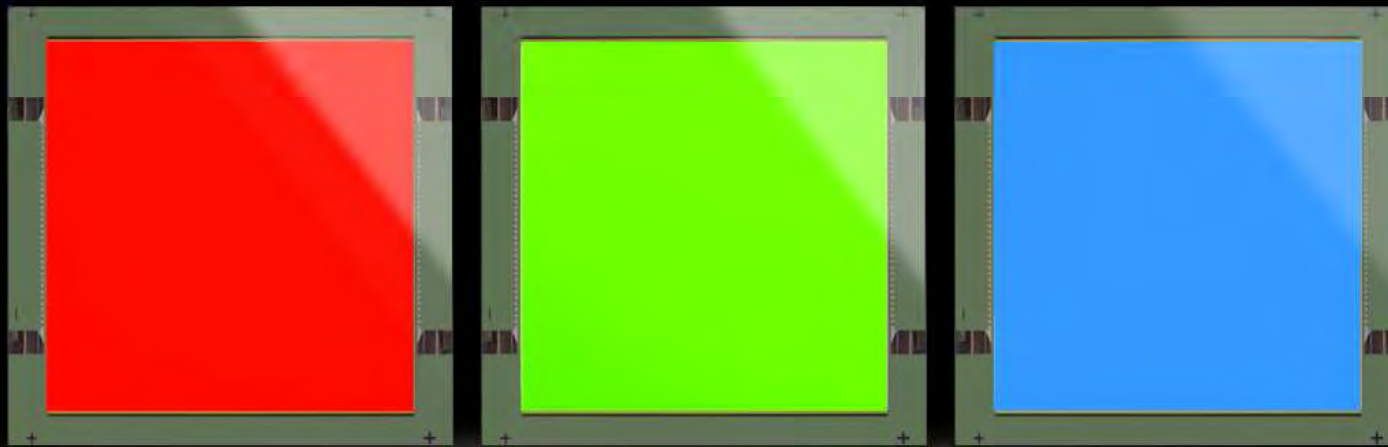
The OLED is able to produce the bright white emitted by an LED as well as the warm white radiated by an incandescent bulb.



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All colors

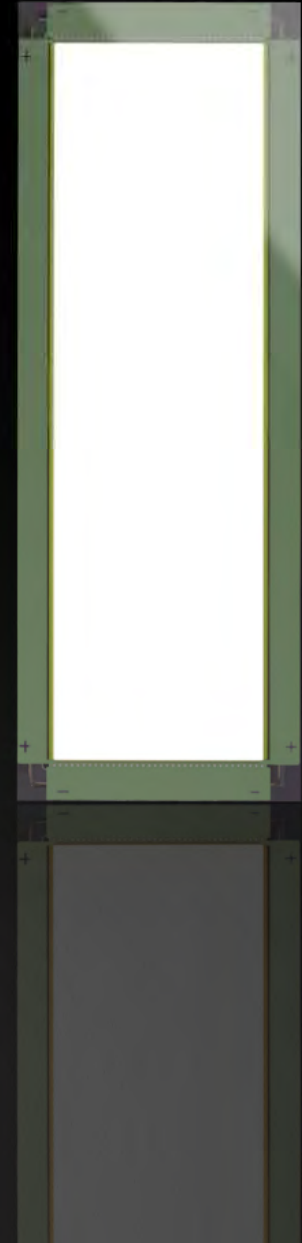
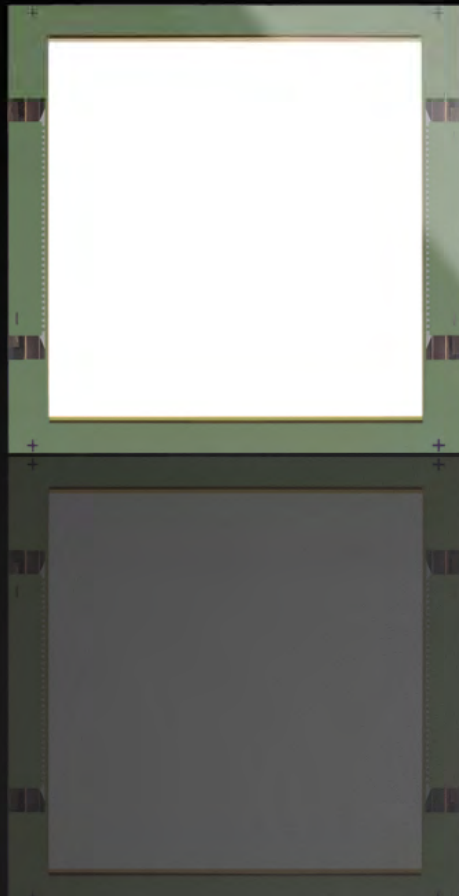
The colors emitted are produced by mixing RGB molecule materials in determined amounts and combinations, so that even specific color shades can be created.



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All shapes

Besides symmetric forms, all kind of free shapes, ovals, rounds etc. are possible.



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What happens next?

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Color tunability



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Color tunability



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Color tunability

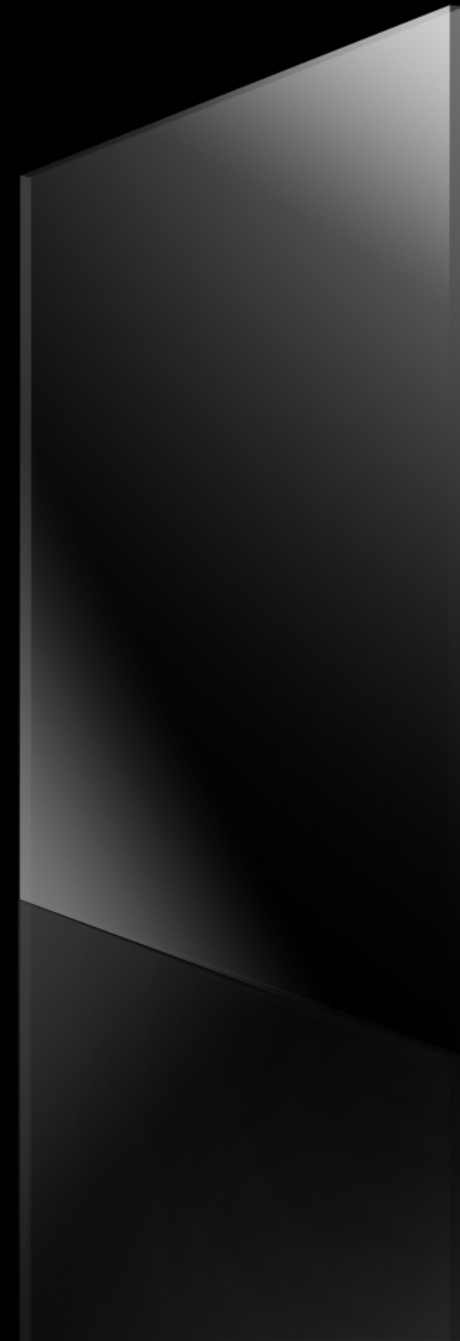
OLEDs will be color tunable in about 5 years from now.



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Transparency

Transparency in the off-state is perceived as a very attractive product feature, because no other material can make glass glow – without being visible in the off-state.



Philips Lumiblade

Transparency

Transparency in the off-state is perceived as a very attractive product feature, because no other material can make glass glow – without being visible in the off-state.

Transparent OLEDs will be available as of mid 2013.



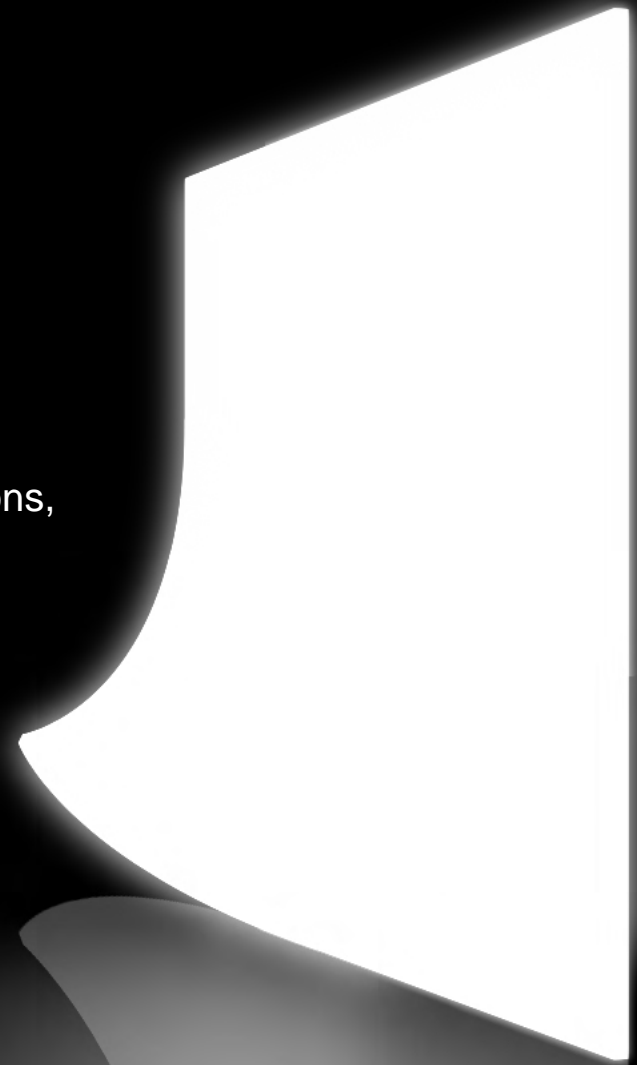
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Flexibility

The next thing we are working on, are flexible OLEDs.

Flexible OLED displays are already on the market, but if it comes to small molecule OLEDs in lighting applications, it is still in a research phase.

OLEDs will be flexible in 5 years from now.



Philips Lumiblade

Roadmap - Decorative Line

Year	2013	2015	2018
Efficacy	15 lm/w	15 lm/w	35 lm/w
L70	15,000 h	30,000 h	40,000 h
Luminance	2,500 cd/m ²	2,500 cd/m ²	3,000 cd/m ²
Max size	120*120 mm	150*150 mm	1.000*1.000 mm
Features	transparent, structured		color changeable/flexible

As a rule of thumb: we expect the overall performance to double every 2-3 years.

Note: OLEDs of the Lumiblade Decorative Line are normally reflecting in off-state as where otherwise indicated. Color point adjustable to customer specifications. Short realization and production cycle for new forms and shapes.

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Roadmap - Performance Line

Year	2013	2015	2018
Efficacy	60 lm/W	>90 lm/W	130 lm/W
L70	15,000 h	20,000 h	40,000 h
Luminance	4,000 cd/m ²	5,000 cd/m ²	>5,000 cd/m ²
Lumen Output	12,000 lm/m ²	15,000 lm/m ²	>15,000 lm/m ²
CRI	>90	>92	>95
Max size	120*120 mm	170*170 mm	400*400 mm

As a rule of thumb: we expect the overall performance to double every 2-3 years.

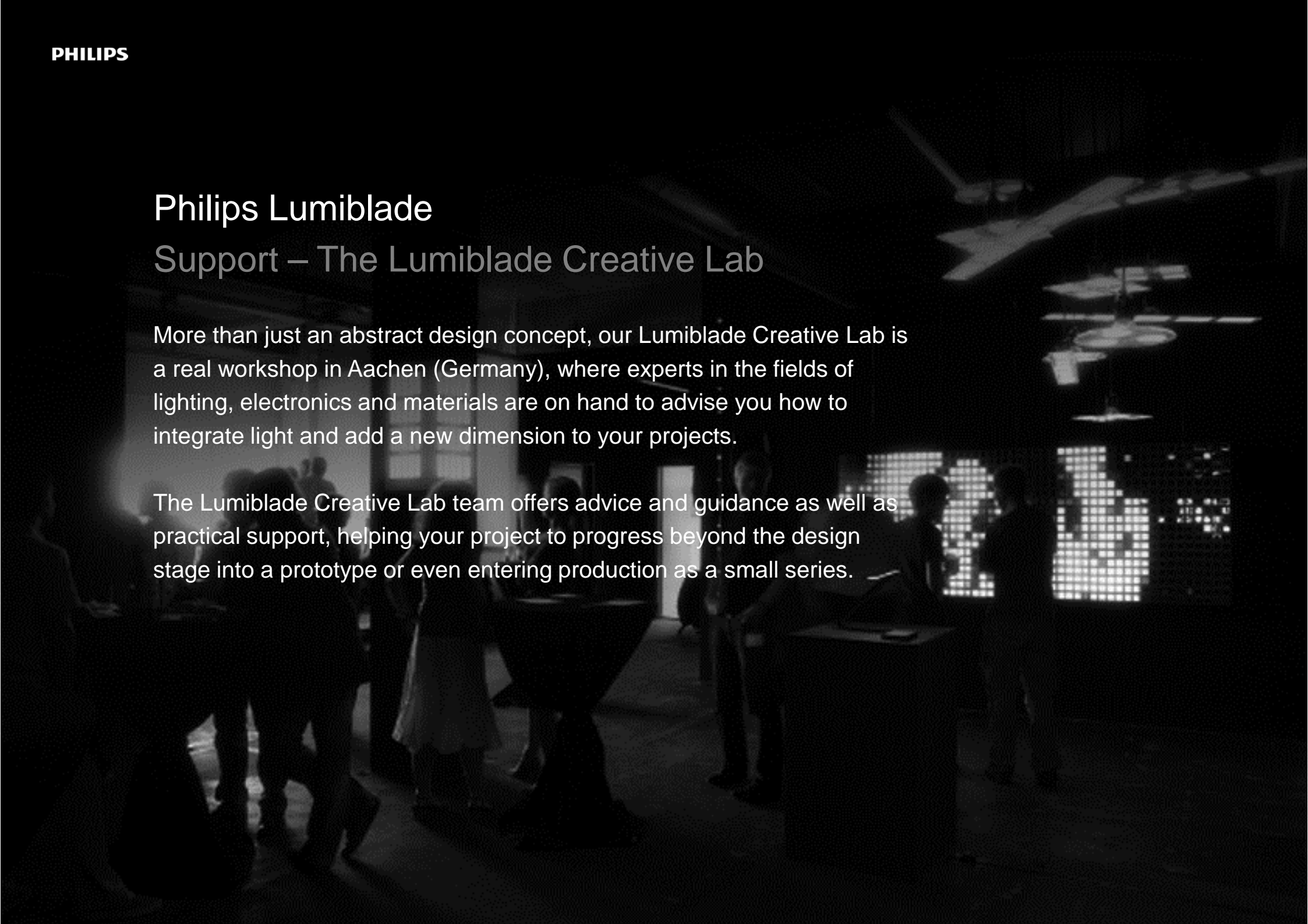
Note: OLEDs of the Lumiblade OLED Performance line are non reflective in off-state.

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Support – The Lumiblade Creative Lab

More than just an abstract design concept, our Lumiblade Creative Lab is a real workshop in Aachen (Germany), where experts in the fields of lighting, electronics and materials are on hand to advise you how to integrate light and add a new dimension to your projects.

The Lumiblade Creative Lab team offers advice and guidance as well as practical support, helping your project to progress beyond the design stage into a prototype or even entering production as a small series.



Philips Lumiblade

Our Module

The Philips Lumiblade module is a ready-to-use product, incorporating all the necessary electrical controls – enabling you to integrate OLED technology into your design projects, easily and effectively.



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Philips Lumiblade OLED Panel GL350

Combining the best of both Worlds



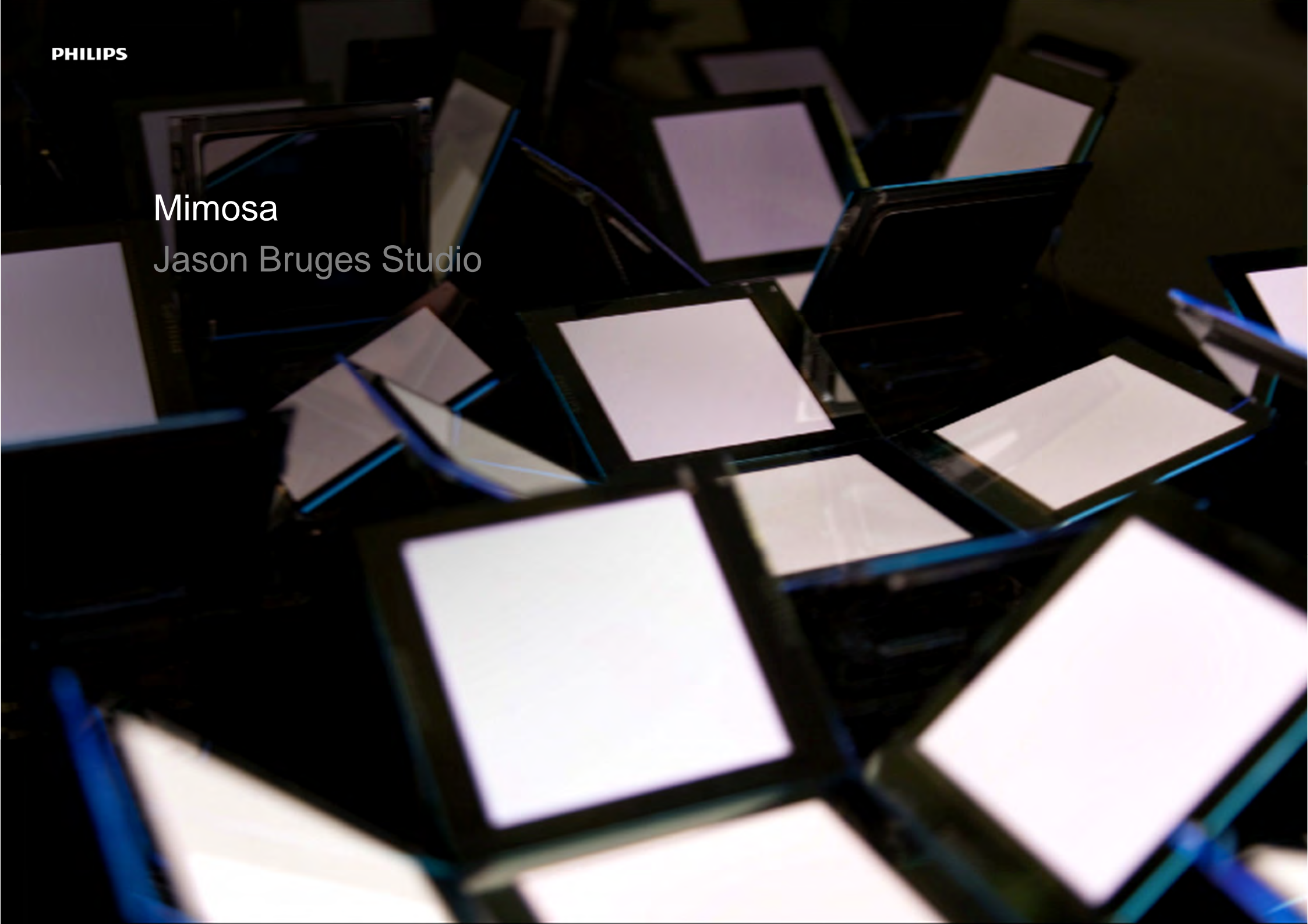
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Realized projects

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Mimosa

Jason Bruges Studio



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Philips LivingShapes interactive wall

Light installation the easy way



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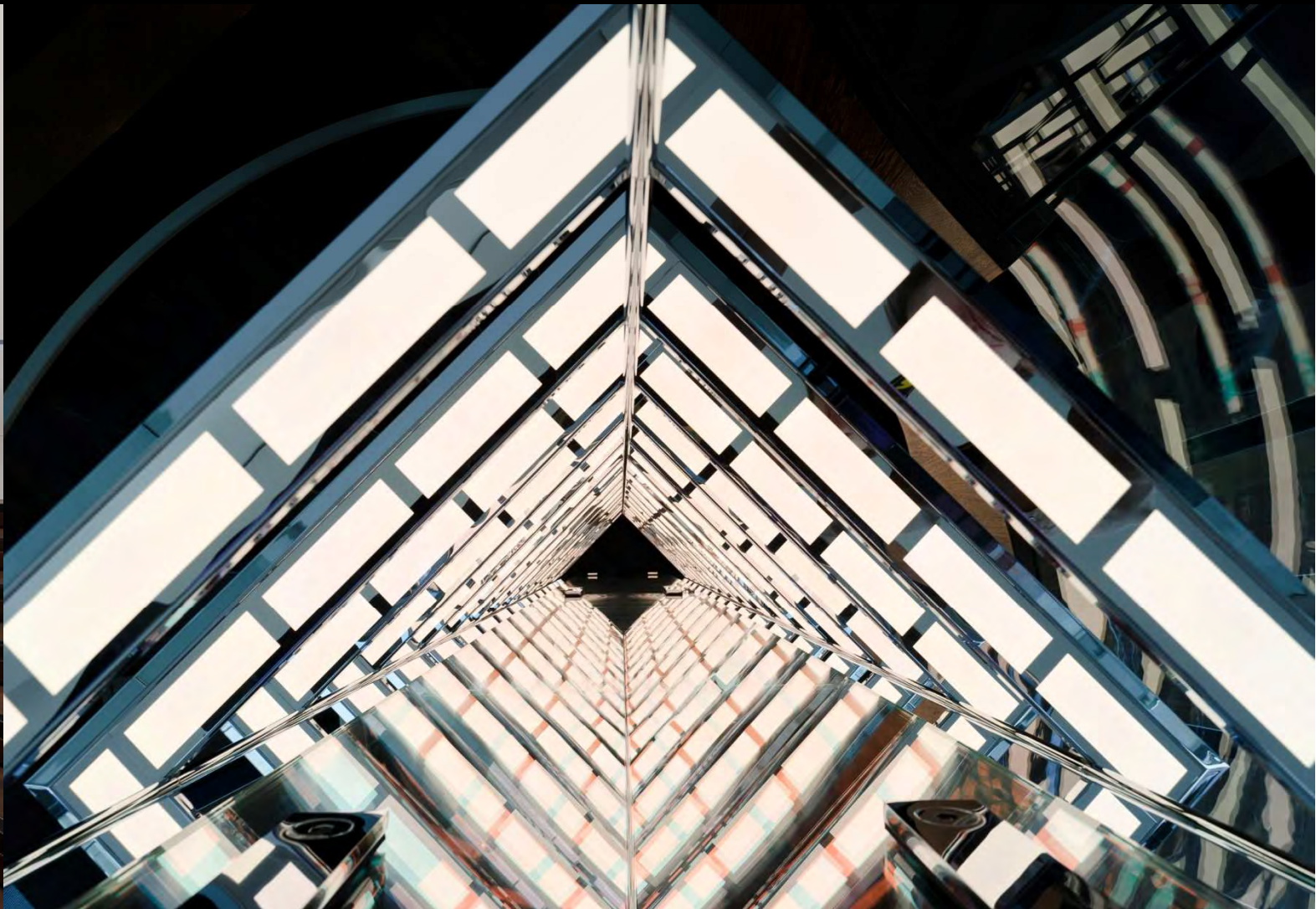
Engulfing the Aston Martin One-77

Jason Bruges Studio



Suspended OLED luminaire

Board room in Berlin



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Philips LivingShapes interactive wall

Light installation the easy way



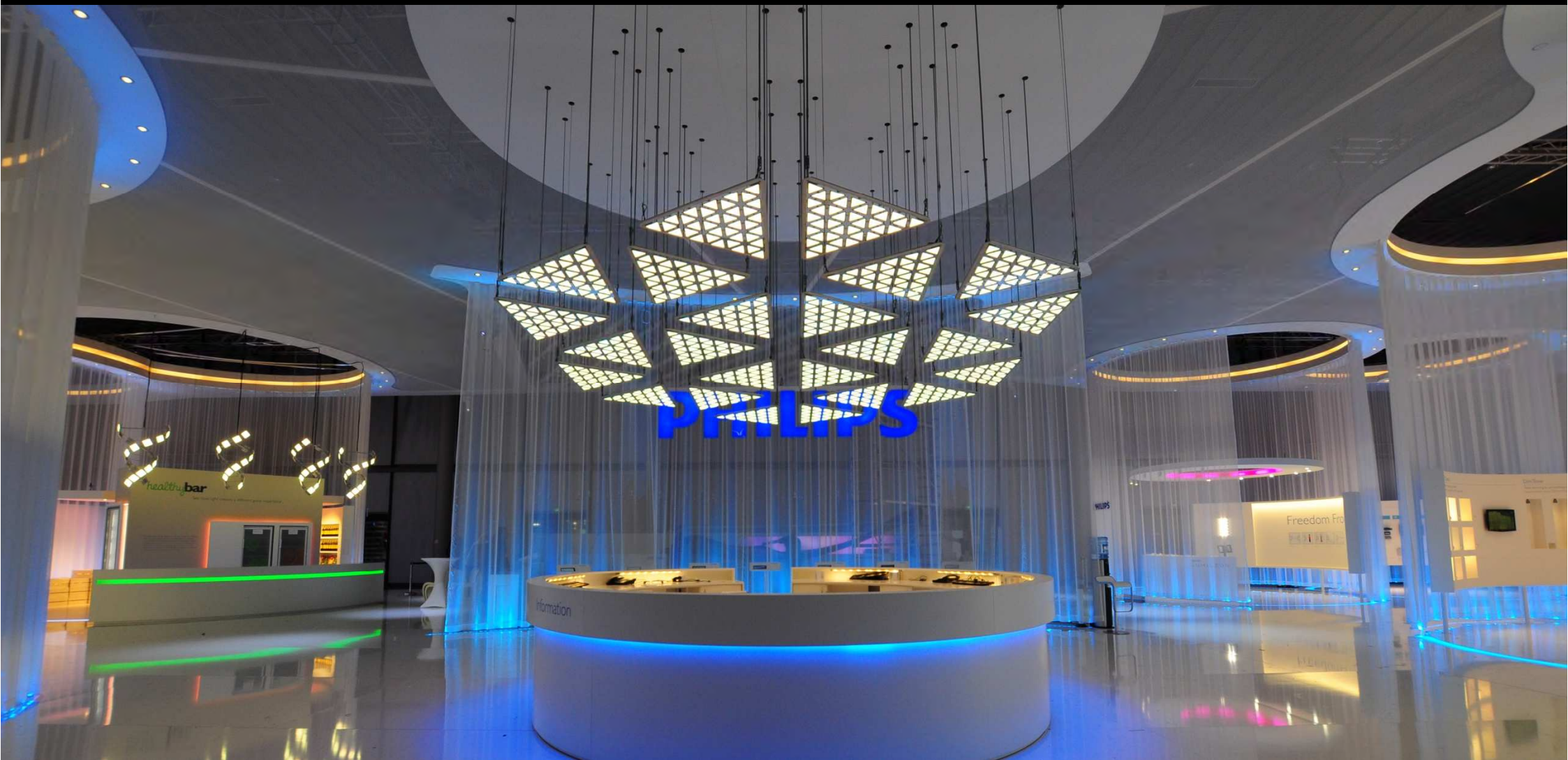
Philips LivingSculpture 3D module system

Adding the third dimension to OLED installations



LivingSculpture kinetic installation

Shaping light in the air



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Victory
Litterity
by novaLED



PHILIPS

Edge

Amanda Leveté

Established & Sons



Flat Lamp
Tom Dixon



The image features two modern, metallic surgical light fixtures from the Philips O'Leaf series. The fixtures are positioned diagonally, with their bright, rectangular light panels glowing. The background is a dark, textured surface. The Philips logo is in the top left, and the product name is centered on the left fixture.

PHILIPS

O'Leaf
Modular
Lighting
Instruments

PHILIPS

Trilux Obliq

Suspended OLED Hybrid Luminaire with round OLED Modules



OLED luminaire GL350 “Helix”

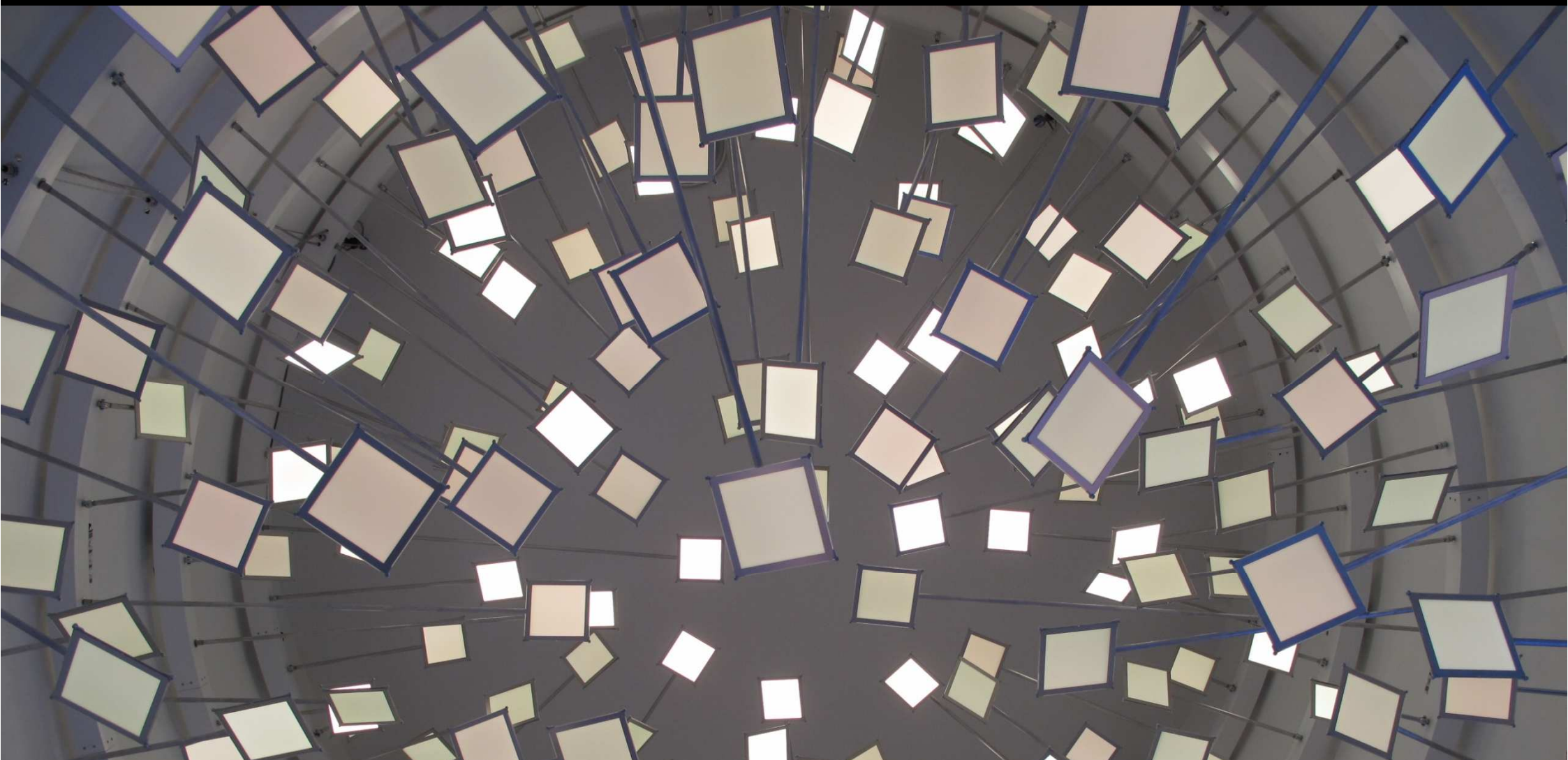
Design concept by Rogier von der Heide



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LivingSculpture GL350 installation

SnowFlakes



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Moorea

Daniel Lorch Industrial Design



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Aradess
Stephen Blackman
for BlackjackLighting



Pixelate

Biot



OLED luminaires at the Audi Forum

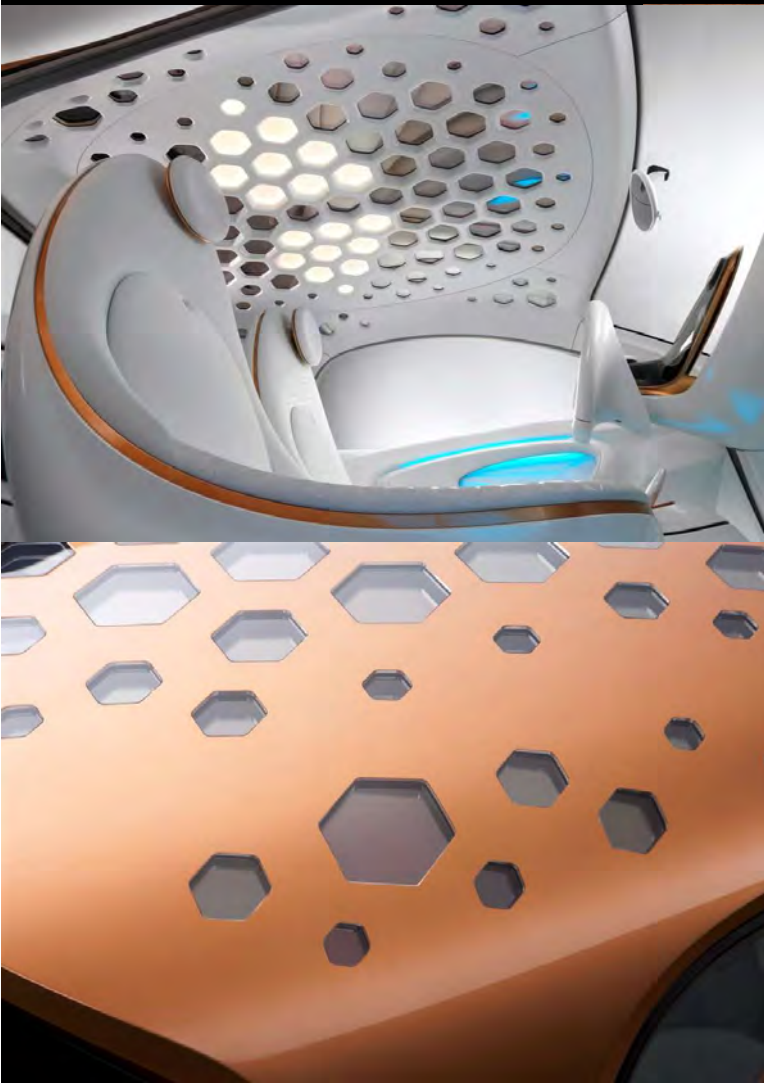
Worldwide first use of OLEDs for functional lighting



PHILIPS

smart forvision

Letting the sun thru the roof



PHILIPS

Audi light concept

The backside of the near future



PHILIPS

Philips LivingShapes interactive mirror

Feel the aura of OLED light



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Thank you!

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Information in this presentation is subject to be updated regularly.

For further inquiries and updated information/data, please get in touch with:

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