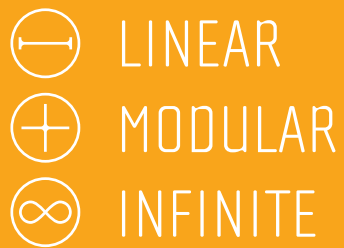


# MARS NANO

The invisible **linear** downlight

**LED LINEAR**<sup>TM</sup>  
lighting solutions

Member of the  
Fagerhult Group



# MARS NANO

## INVISIBLY BRIGHT!

- For decades, the common perception of a downlight has remained a single light source confined in a round or square form for accent or general lighting applications. LED Linear™ introduces the concept of linear downlighting with precise beam spread while keeping the source invisible.
- The NanoRay technology came to light adding flexibility and accuracy in beam shaping while offering a sleek finish by eliminating direct view of the LEDs.
- The LED Linear™ Tj Away® technology made it possible to deliver high lumen output out of a slim enclosure with optimized heat management.
- The result is MARS NANO, an invisible linear downlight scalable up to 13ft. with small form factor to fulfill tight plenum space requirements and UGR < 13. Moreover, its optical and finish options make it an all-rounder for all common downlight applications.

# KEY FEATURES

## INVISIBLY LIGHT!

MARS NANO offers visual comfort while keeping the actual light source out of sight. The elegant louver minimizes the glare in order to set the accent on the illuminated scene. The light is aimed where it is desired while setting a lit environment that appears to be fixture-free.



Targeted illumination light for museums and art galleries

# KEY FEATURES

## MODULAR

The luminaire is freely scalable up to 13ft. with a lumen output ranging from 120 lm/ft to 1,000 lm/ft and a wide range of color temperatures. This allows total freedom of creativity for lighting designers and architects.

### Colors

Black profile with black louver



Silver profile with black louver



White profile with black louver



White profile with white louver



# KEY FEATURES

## SMALL FORM FACTOR

The small form factor of MARS NANO Recessed in combination with pre-installed mounting spring enables discrete integration in suspended ceiling with limited plenum space. The ceiling and pendant variants benefit from LED Linear™ LEDs Click technology for an intuitive mounting. Overall MARS NANO has installation options to suit any building setup.



# TECHNICAL DATA

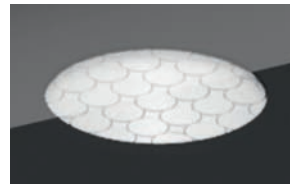
- Lumen output ranging between 120 lm/ft – 1,000 lm/ft
- Color temperatures available between 2,200 K – 5,000 K
- Efficacy up to 94 lm/W
- UGR < 13
- Optics: 15°, 25°, 40°, 65°
- CRI: Up to 95
- Lifetime 60,000 h L80/B10
- Available in Static White and Tunable White

MARS NANO offers high flexibility for lighting designers and architects, making its implementation possible in any architectural concept.

# LIGHTING INNOVATIONS

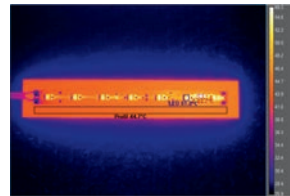
**Nano Ray**

In order to guarantee homogeneous light and limited color over angle, the LED Linear™ NanoRay technology was developed. It enables the design of complex optical system with minimal dimensions achieving results only previously possible using large optics. These nanoscale lenses provide an accurate beam control and no direct view to the LEDs.



**TjAway® Thermal Management**

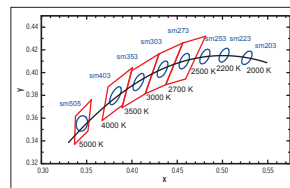
MARS NANO embeds the LED Linear™ Tj Away® technology which provides optimal heat dissipation of the LED to the housing profile. This enables the miniaturization of the luminaire's footprint while ensuring an extended lifetime compared to conventional LED technologies.



Experimental setup: 12 W/ft LED tape with thin flexible PCB mounted on flat aluminum plate LED temperature does not exceed 60°C (140°F).

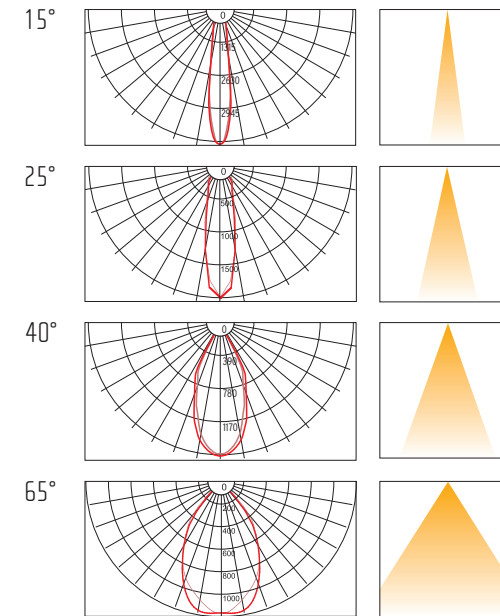
**One Bin Only**

Color consistency plays a key role as much as homogeneity in any linear lighting application. To ensure an outstanding quality of the light, LED Linear™ introduced One Bin Only which ensures that all LEDs used in our luminaires are picked from one bin centered on the target CCT within a 3 step MacAdams Ellipse. They are used to determine visual color deviations and indicate differences in light color of individual LEDs. Three step MacAdam ensures a color variation unnoticeable by the human eye and therefore an optimal lighting quality.



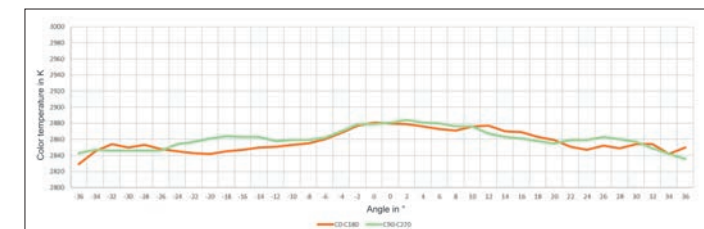
Black Body Curve —  
LED Linear™ Binning —  
ANSI Binning —

# OPTICS



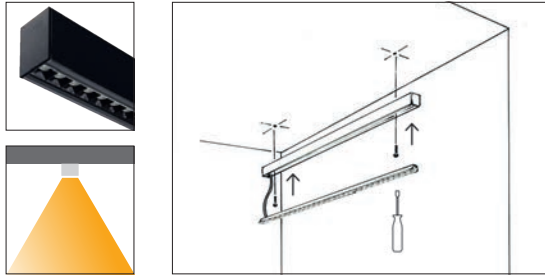
# COLOR OVER ANGLE

To keep the lighting scene as homogeneous and consistent as possible, it is mandatory to keep a minimal change of correlated color temperature (CCT) over all lines of sight. The NanoRay technology enables an accurate control of the light in order to minimize changes of CCT over the entire light scene. As shown in the graph, the consistency of light color is remarkably high over the entire beam spread.

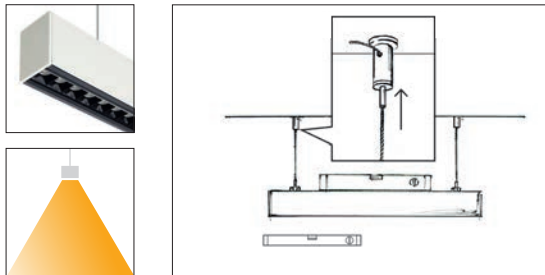


# MOUNTING OPTIONS

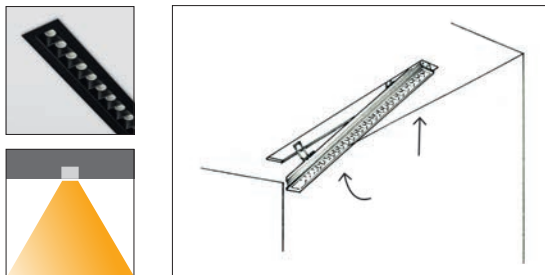
## Surface-mounted



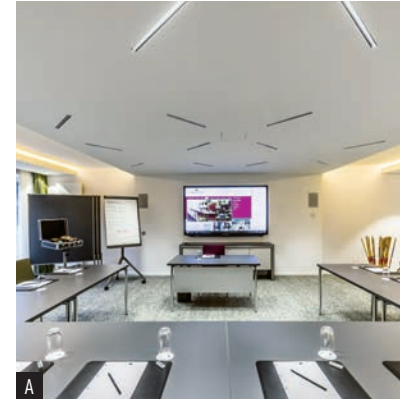
## Pendant



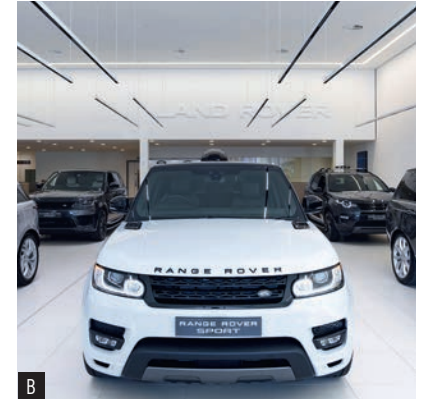
## Recessed



# REFERENCES



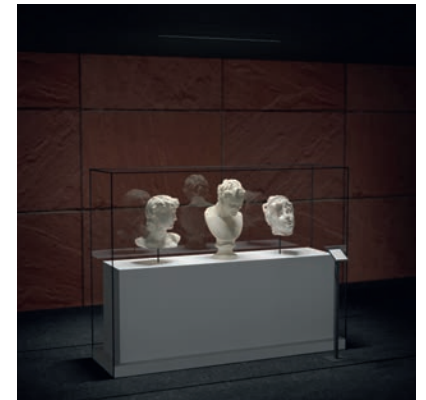
Illumination over horizontal surfaces in offices and conference rooms



Precise and invisible light for showrooms and cinemas



Accurate and homogeneous general lighting



Targeted illumination for museums and art galleries

A | Photo: toneteam

B | Photo: Jonathan Taylor, Cloud9 Photos

# LED LINEAR™

lighting solutions

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