

ALDEBARAN[®] 360 GRAD FLEX LED SERIES

The innovation of mobile light against light pollution

NO ENERGY LOSS . NO LOSS OF LIGHT . 100% ENERGY EFFICIENCY . 100% ENVIRONMENTALLY SOUND



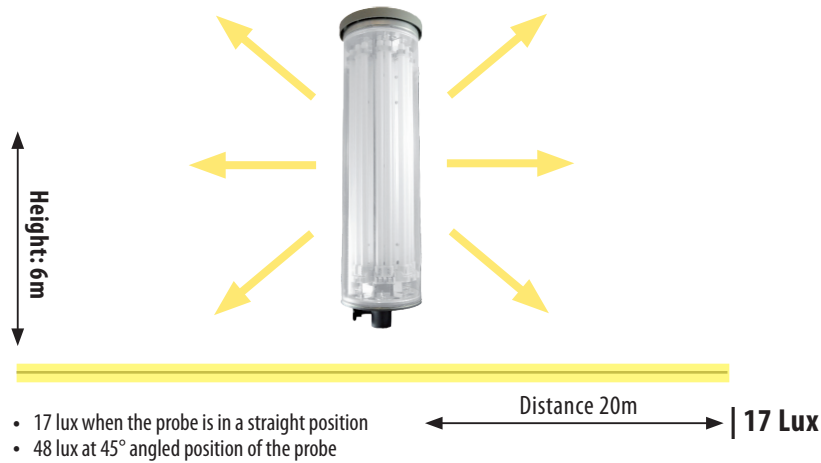
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Professional

Lighting Solutions

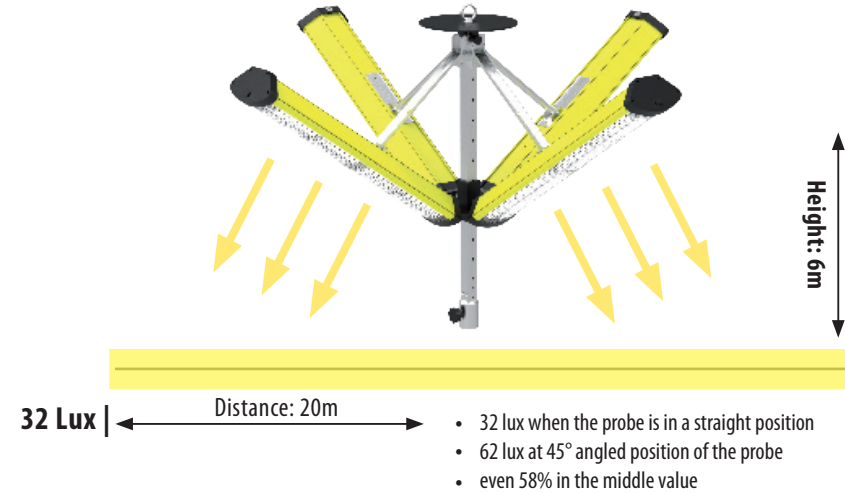
LIGHT MEASUREMENT UNDER REAL CONDITIONS - CONVENTIONAL ALL-ROUND LUMINAIRE COMPARED TO THE ALDEBARAN® 360 GRAD FLEX SERIES

CONVENTIONAL ALL-ROUND LUMINAIRE



VS.

ALDEBARAN® 360 GRAD FLEX



WITHOUT SETOLITE LIGHT-DIRECTING TECHNOLOGY



- Up to 50% light loss due to stray light
- Up to 50% more energy needed to illuminate the same area compared to ALDEBARAN® 360 GRAD FLEX products

WITH SETOLITE LIGHT-DIRECTING TECHNOLOGY



- Flexible light where needed
- Energy saving potential used
- Light pollution avoided
- Environment protected

PREFACE LIGHT POLLUTION

Today, in our night-time measurement, we want to demonstrate the clear advantages of our **ALDEBRAN® 360 GRAD FLEX LED** compared to cylindrically shaped luminaires. For this reason, we have added pictures from our nightly drone flight on the following pages. From a height of 50 meters above the project you will see the clear advantages.

BUT FIRST WE WOULD LIKE TO POINT OUT SOME PHYSICAL FACTS:

Basically, an LED has a beam angle of 120°. That means LEDs that are mounted vertically and thus parallel to the cylinder emit around 50% of the light upwards. This light is therefore not available and radiates into the sky (see illustration page 6). This effect is called light pollution.

ADDITIONAL INFO:

The UNESCO, IAN (International Astronomical Union) and CIE (International Commission on Illumination) have already created a comprehensive program of measures in 2007. In addition to the waste of energy, light pollution also has dramatic consequences for our ecosystem and living beings.

For this reason, SETOLITE has developed the ALDEBRAN® 360 GRAD FLEX LED system and divided the cylinder into four arms, which can be opened and adjusted to different angles by means of a patented system.

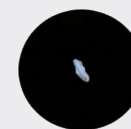


Read more under:
www.wikipedia.com, keyword light pollution

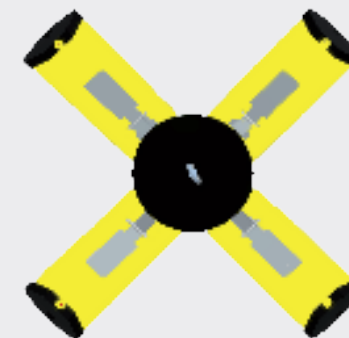
This achieves the following effect, as proven by the drone flight and the aerial photographs

- // There is no more light lost in the atmosphere
- // You actively protect the environment with this luminaire. This means that the light you lose in the cylindrical design must now be measurable (at least 50%) on the ground, that is available on the surface to be illuminated.
- // No energy is wasted as no light is lost.
- // The eight-way adjustment of the luminaire allows you to distribute the angle of inclination from approx. 18° to 90°, thus varying the light intensity on the floor, ie the work surface.

ALDEBRAN® 360 GRAD FLEX LED 960
closed



ALDEBRAN® 360 GRAD FLEX LED 960
unfolded

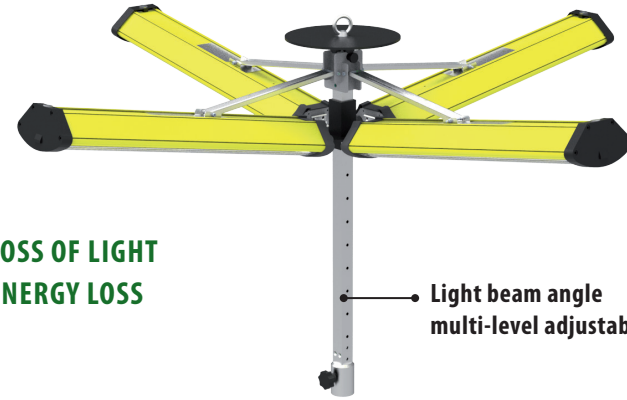


ALDEBARAN® GRAD FLEX LED



50% LIGHT LOSS
50% ENERGY LOSS

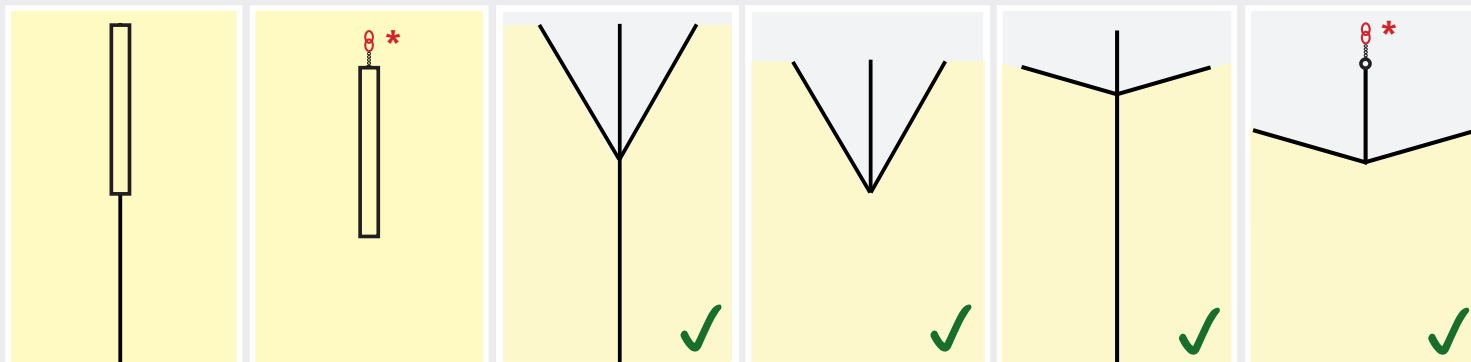
VS.



NO LOSS OF LIGHT
NO ENERGY LOSS

Light beam angle
multi-level adjustable

Different orientations possible



*Note: Suspended operation is only permitted in conjunction with the optional accessory (Item no.:1410926011).

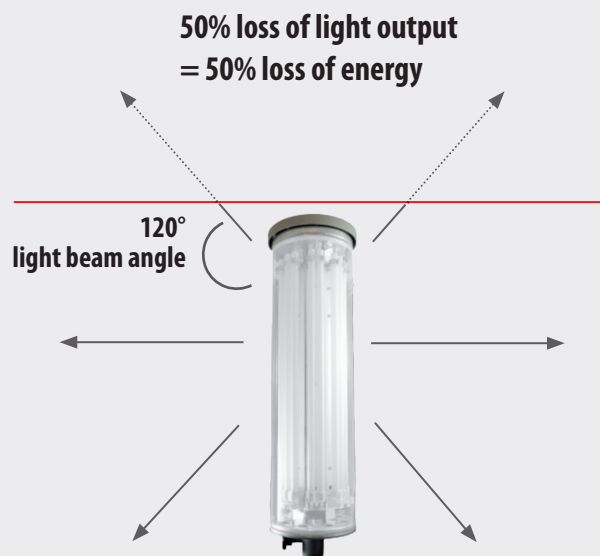
TOP VIEW ON A CLOSED LIGHT - CLEAR LIGHT LOSS VISIBLE



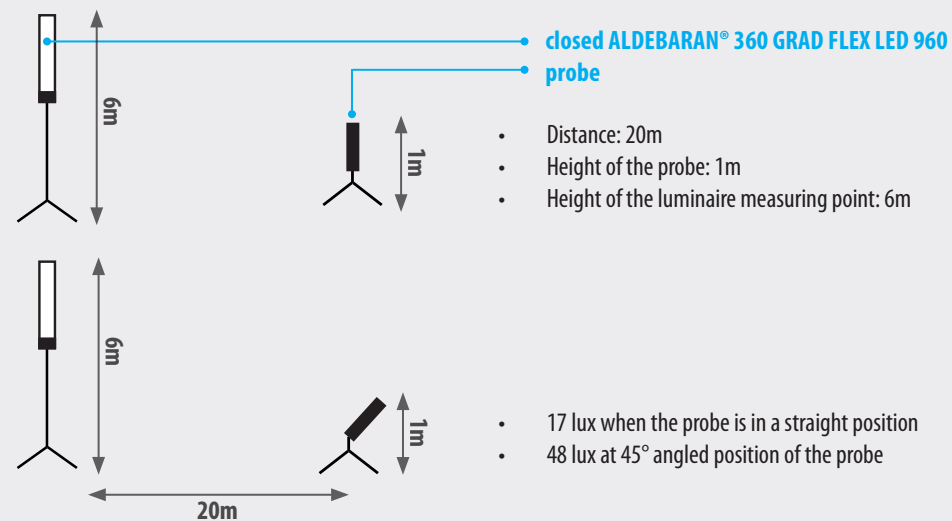
Extremely bright cone of light with the lamp closed.
Unfortunately in the wrong direction



Probe



Representation of the light measurement



TOP VIEW OF AN UNFOLDED LIGHT

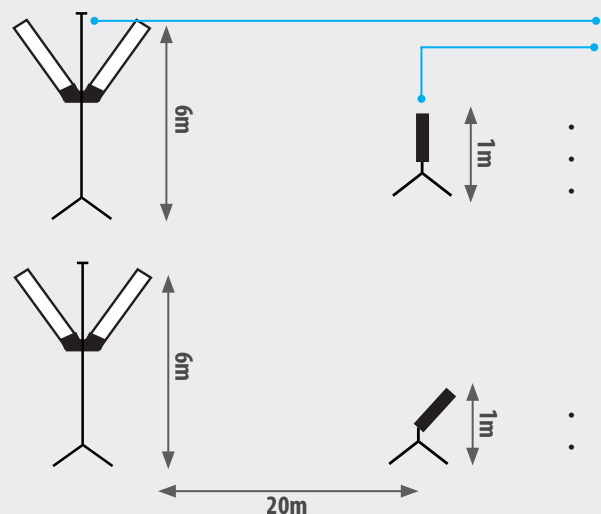
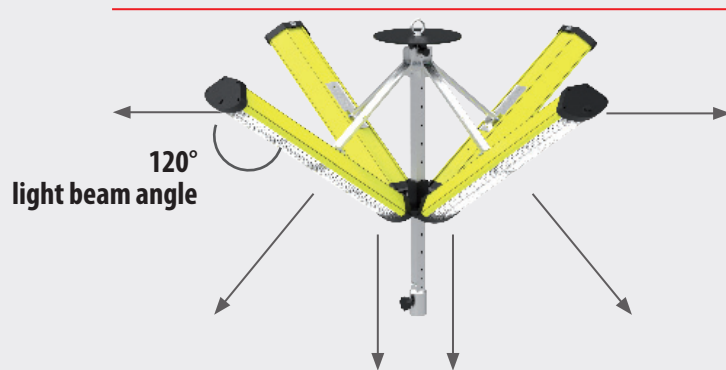
If we look at both pictures in comparison one recognizes directly that the illuminated area with the right, unfolded luminaire is nearly twice as large as with the closed, pictured left luminaire. The results also showed that we get 58% more light through the folded arms of the luminaire.

The aerial photographs from a height of 50m illustrate once again the principle described below. Due to the LED angle of 120°, 50% of the used light output and energy go unused into the atmosphere. This can also be recognized by the extremely bright light cone directly above the closed lamp. Exactly this light is light pollution.



Representation of the light measurement

no loss of light output
= no loss of energy



unfolded ALDEBARAN® 360 GRAD FLEX LED 960 probe

- Distance: 20m
- Height of the probe: 1m
- Height of the luminaire measuring point: 6m

- 17 lux when the probe is in a straight position
- 48 lux at 45° angled position of the probe

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