

THE ORIGINAL

AURA LONG LIFE NEWS | No 1 | 2008



Aura launches compact fluorescent lamp

*Now available with a guaranteed
life time that is three times
as long as that of standard
products!*

How much can your company save
by using Long Life?

The trade fair Light+Building in
Frankfurt

Our new protection guarantee – a
display of reliability

Meet one of Aura's satisfied
SODINETTE customers

Outdoor lighting – a growing market

Lighting school – colour temperature
& colour reproduction

”The total cost for our customers are lower.”
Martin Malmros, CEO Aura Light International

In January I met with Karl-Henrik Robèrt, the founder of the Natural Step. This internationally recognized science orientated organization is focusing on sustainability.

Karl-Henrik asked me what we do in Aura.

”It is easy, I said; we provide light products which last at the minimum three times as long as equivalent standard light products.”

He got very excited since this is very much inline with the philosophy of sustainability.

”Do your customers actually accept a bigger cost for environmentally sound products” he asked.

”No, I answered, they pay less. The total cost for our customers are lower. We call this *eco lighting economics*.”

Aura is rapidly becoming a global company with subsidiaries all over Europe and in Singapore. We have partners in USA, Canada, Australia and Middle East. We now have over 700 Long Life products and keep expanding the range.

You’re reading the first number of THE ORIGINAL Aura Long Life News, an information channel we use to spread knowledge on how to reduce your total light cost, reduce energy consumption and improve light quality.

We are on a mission to Long Life conversion and ultimately a more sustainable society.

Join the revolution.



How much can your company save?

On our website, www.auralight.com, you can calculate how much money your company can save by using Aura’s Long Life products, as compared to standard fluorescent lamps.

You can also see how much you’ll do for the environment, in terms of reduced carbon emissions and waste.

About Long Life

1. Long Life saves three out of four replacements
We guarantee that Aura Long Life fluorescent lamps combine an extremely long lifetime with high luminous flux. Time after time, long-life fluorescent lamps have proved to be considerably cheaper in the long term.
2. Long Life is environmental friendly
Using Aura Long Life means fewer fluorescent lamps, less material and less transportation. We and our customers can therefore continue to take responsibility for the environment with a clear conscience.
3. Long Life minimises the maintenance costs
Fluorescent lamps with a lifetime four times longer than others mean our customers can schedule group replacements, avoid business interruptions and minimise maintenance costs.
4. Long Life is just one part of our offer
We offer more than just light sources. As a working partner, we willingly take total responsibility and help our customers with everything from product selection and procurement planning to technical support.

History - from Luma to Aura

In 1930 the very first incandescent lamp was manufactured at the Luma plant in Stockholm. It was a success and already during the first season the planned production of 8.000 lamps was doubled.

- Prior to World War II, the export of Swedish incandescent lamps flourished and the Luma lamp appeared in many countries - among them Norway, England and Scotland.
- In 1932 the Norwegian sales company was founded.
- In 1943 mass-production of fluorescent lamps started, and in 1966 a new era began with the launch of the new products TV-sets and appliances.
- In 1970 Luma left Stockholm and moved into new premises in Karlskrona. Our head office and production are still here today.
- In 1980 we obtained a patent for a new cathode design. Ten years later we obtained another patent, this time for the protection layer between glass tube and phosphorous powder. These patents contribute to extending the life of the fluorescent lamp, and are today found in our Long Life Lights products.
- In 1989 the Dutch sales company was established.
- In 1994 Lumalampan received a new name - Aura.
- The Finish sales company was founded.
- 1996 - the German sales company was established.
- 1998 - ISO 9001 Certificate
- In 2000 we extended our activities further, and Poland became part of the Aura family.
- In 2001 we delivered our first order to the US market.
- 2002 - Launch of the first T5 fluorescent lamps on the market: Aura *SUPREME* HE Long Life and Aura T5 *MINIATURE* Long Life
- 2004 - Launch of Aura *ULTIMATE* Long Life, a fluorescent lamp with the worlds longest service life. Launch of Aura *SUPREME* HO Long Life.
- 2005 - Aura Long Life lights 25 years anniversary
- 2006 - the launch of the first Long Life compact fluorescent lamp, Aura *UNIQUE-L* Long Life.
- 2007 - launch of two new products; the first Long Life High pressure sodium lamp, Aura *SODINETTE* Long Life and Aura *TITAN* Long Life.
- Italy and France become a part of the Aura family.
- 2008 - Denmark and Spain become a part of the Aura family.

Welcome to our Long Life World!

light+building

The trade fair Light+Building is the world's biggest innovation platform for lighting, electrical engineering as well as house and building automation. It will take place in Frankfurt, April 6th to 11th.

On this occasion we will present our new products:

Aura *SODINETTE* Long Life High Pressure Sodium Lamps as well as the energy efficient compact lamps Aura *UNIQUE-S* Long Life and Aura *UNIQUE-D* Long Life.

Take the opportunity to get a closer look at our new products and talk about solutions how to decrease your maintenance costs and at the same time contribute to environmental protection and reduction of CO₂ emissions.

If you'd like to fix a meeting there in advance, please contact us. On request we will provide you with a free voucher to the fair. We'd be happy to welcome you to our stand: 4.1 – B50!

Aura launches compact fluorescent lamp



Compact fluorescent lamps become yet another product group within the range of Long Life light sources. Now it is also possible to acquire this type of fluorescent lamp with a guaranteed life time that is three times as long as that of standard products. Thus, the environmental impact is reduced to a third when it comes to production, transportation, waste, etc.

The new products are Aura *UNIQUE-S* Long Life (S = single tube) and Aura *UNIQUE-D* Long Life (D = double tube). They are developed at Aura's Research and Development department in Karlskrona, which created the first Long Life fluorescent lamp back in 1980. As a result of the new products, Aura now has 700 product in the Long Life range.

The newly developed compact fluorescent lamp is mainly used in office environments and as outdoor lighting in warmer countries. They have a life time of at least 24,000 hours, which, in a normal office environment, means that they should last approximately 9 years.

If the fluorescent lamps are being used within a 12 hour cycle with a magnetic ballast (i.e. switched on for 11 hours, then switched off for one hour), *UNIQUE-S* and *UNIQUE-D* have a 10% mortality/failure rate after 24,000 hours. The corresponding figure when using an electronic ballast is 30,000 hours.



Aura's new **UNIQUE-S/-D** is already a success!

IKANO Fastighets AB is a family owned group of companies within the IKEA Group. The company has three areas of operation; retail trade, offices and housing. The total real estate holding is around 315,000 m², divided into 100,000 m² for housing, 155,000 m² for the retail trade and 60,000 m² for offices.

Sören Petersson, Manager for Offices/Operations at IKANO Fastighets AB, how long have you been a customer of Aura?

”We have been using Aura products for some 7-8 years. As we are part of the IKEA Group who have been dealing with Aura for some time, they became the natural choice for us too. When the new **UNIQUE-S/-D** was launched we were immediately interested, as they last for so many hours. We have always been satisfied with Aura's products, so there was no hesitation that we would also choose this product. The sales staff always give us good help and advice, about things like sockets, wattage and whiteness, and it gives us peace of mind of course that we are dealing with a company with such extensive knowledge on light sources.”

How much do you save by using Long Life fluorescent lamps?

”We have not calculated exactly how much we save purely from a financial aspect. But we regard it as a great advantage not having to replace our lamps so often. The actual performance, that it is lit at all times to create a pleasant ambiance, is also very important. The area where we have just switched to **UNIQUE-S/-D** is Ideon Science Park in Lund, where the lamps illuminate a glazed courtyard. It is of the utmost importance that the lighting works and looks attractive.”

Are there any more advantages?

”We will also be more environmentally friendly, which is particularly important. Everyone has to play their part in improving the environment. I usually switch to lower wattage and Long Life lamps everywhere it can be done.”



Sollefteå Municipality, Sweden – one of Aura's satisfied SODINETTE customers!

Sollefteå Municipality has a population of just over 21,000 in its 5,500 km². Not quite half the population live in the built-up area of Sollefteå itself. The municipality has several other urban areas, and Långsele, Näsåker, Ramsele and Junsele are some of the largest. Over the next few years, the municipality plans to change no less than 6,500 light fittings to Aura, in both urban and rural areas.

We asked Anders Bäckman at Sollefteå Municipality's town planning office why they chose Aura Long Life.

“We chose Long Life because the municipality gains financially as the lamps need replacing less often. What's more, the Swedish Road Administration requires that we use a TMA, or Truck Mounted Attenuator, on all roads with a 70

km/h speed limit. The TMA attaches to a large truck driven behind the workers to protect them from other road users. Such vehicles are very expensive to hire, so we try to keep their use to a minimum.”

Why did you choose Aura SODINETTE Long Life?

“It's been specially developed for street lighting and the long life of the lamps is essential for keeping costs down. The long life also means our contractors are not exposed to hazardous conditions quite as often.”

Why did you choose Aura as your supplier?

“Well, Aura promoted this lamp strongly, and we thought that both the lamp and its long life time seemed very good.”

Our new protection guarantee – a display of reliability!

Aura's customers always receive a guarantee assuring them of the Long Life products' unique life time. With Aura *SODINETTE* Long Life, however, a new, additional protection guarantee is being introduced reflecting the new light source's excellence.

“Not only do we promise compensation for the light source, but also for the cost of replacing the light source if the customer experiences a failure rate that exceeds four per cent up to 20 000 hours. We can offer this protection guarantee since Aura *SODINETTE* Long Life is so unbelievably good”, says Mikael Severinsson, the noticeably satisfied Research and Development Manager at Aura. The cost of replacing a light source is specified in the guarantee promise as being € 8 per light source, which, naturally, is expected to entice many to dare to try something new!

Valid for the entire range

Based on a 12 hour switching cycle, the protection guarantee is valid for all versions of Aura *SODINETTE* Long Life,



from 50 - 1,000W and for tubular as well as ellipsoid light sources. However, a magnetic ballast and igniter that are manufactured according to IEC standards must be used in order for the guarantee to apply. The light source should either be powered with a reactor and igniter in an inductive connection or through an electronic connection intended for the installation. Furthermore, the fault of a defective light source should be able to be ascertained in a test in Aura's laboratory at the production facility in Karlskrona. The guarantee is valid from the first day of use and this day must be confirmed by the customer in order for full compensation to be made.

The cost of replacement is considerable

It is well-known that the huge costs for lighting often have to do with the replacing and maintenance work. That is why Aura's Long Life products are so popular – the customers quite simply avoid having to replace light sources as often. “We are accustomed to the guarantee commitment, but it feels additionally good to be able to promise compensation for both the faulty light source and for the cost of replacing the lamp. This means customers feel doubly protected”, says Mikael Severinsson.

Aura *SODINETTE* Long Life

- Light source with high lumen output for street and industrial lighting
- Lasts 48,000 hrs, based on a 12 hr switching cycle according to IEC/EN 60662, which is three times longer than standard light sources
- Low failure rate (2 per cent at 16 000 hrs) thanks to its unique design
- Facilitates cost control and planning of group replacement
- Is available with a colour temperature of 2,100 K

THE ORIGINAL has spoken to Lars Ocklund, an architect at Archidea in Gothenburg, Sweden. Lars works with the planning and installation of lighting.

Outdoor lighting – a growing market

What project are you working on?

“At the moment, I’m working on a project for Gothenburg Town Council, for the Park & Nature Department and the Traffic Office. It’s a project called ‘Safe and Beautiful Town’ that involves renovating the most frequently used pedestrian areas. We use our knowledge of lighting to increase both security and aesthetic appeal.”

What do you need to consider when working with outdoor lighting?

“You have to understand that it’s not just about erecting or replacing lamps. You also need to look at the surrounding areas where you can expand the lighting, natural choices being playgrounds and the like. Façades and other vertical surfaces are also important when it comes to lighting. A holistic perspective, one that includes the surroundings, is essential when light planning. It’s easy to forget, but it’s worth making



that extra effort. It’s also about improving the lighting quality, by which I mean a transition to more natural light.”

“Of course, you also want to extend the lifetimes of the light sources. You lose much of the point of well planned lighting if some of the lamps fail.”

Are there big differences between light planning in rural and urban areas?

“It’s important to create sufficient light to make people feel safe and secure. At the same time, you have to find a balance in how much light is added. In rural areas, you don’t need to add as much light as in town, because in rural areas each light source is more visible as it’s generally darker. In town, you need stronger, more distinct lighting, as you’re competing with illuminated advertising signs and the like.”

In recent years, Aura has worked a great deal with outdoor lighting, in places that include:

>> *Bredäng, a Stockholm suburb*



>> *Munksjö Bridge in Jönköping*





Volvo



Helsinki underground

Some more of our satisfied customers



ClearChannel



Coca-Cola

Why is light warm or cold? How do you choose lighting that brings out the right colours? You will be given the answers at our lighting school!

lighting school

colour temperature & colour reproduction

The eye's colour triangle builds on the International Commission on Illumination CIE Colour System, which is a mathematical model on the eye's ability to perceive colours.

The colour temperature

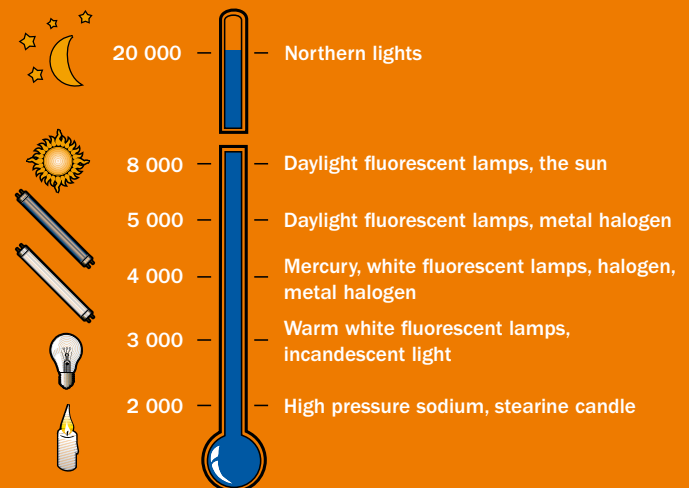
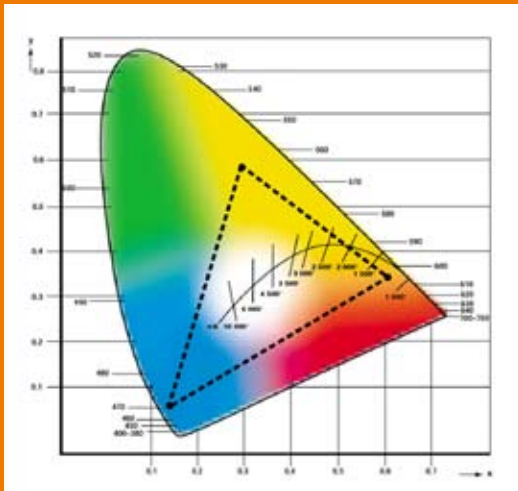
The colour temperature amongst different light sources is measured in the unit, Kelvin (K). The line running through the triangle is known as "the black-body curve" – a reference curve, which theoretically corresponds to an idealistic light source. (Compares the colours of a piece of metal during heating. At first, it becomes red, then yellow, followed by white. If it had not melted, it would have eventually become bright blue). The colour temperature gives an idea about the colour of light and whether it is "warm or cold light". By comparing the idealistic light source to the sample light source using the colour triangle, the colour temperature is determined when the impression is the same. The higher the

colour temperature (K), the bluer the light.

Compare the colour temperature in Kelvin (K) in different light sources. If you are looking to buy fluorescent lamps for a cosy home environment dominated by filament lamps, you should choose suitable fluorescent lamps with a low colour temperature (K). On the other hand, if you are looking for a cold industrial light or a bluish-white light that reinforces the impression of cleanliness in your dental practice, you should choose fluorescent lamps with a high colour temperature (K). People prefer different lights in different climate regions: in the Nordic countries the light should preferably be "warm" and in more southern regions "cool".

Colour reproduction

Colour reproduction amongst fluorescent lamps is measured in Ra. In the reference scale, Ra 100 is the maximum – in other words, exact colour reproduction. The Ra-value is



determined by illuminating eight clear colour samples with the test lamp, or a reference lamp with the equivalent colour temperature, and allowing a mathematical eye to register how well the colours reproduce. A fluorescent lamp with an Ra-value between 90-100 is not always the best choice since high colour reproduction can mean a loss of light of more than 30% compared to an Ra-value between 80-90.

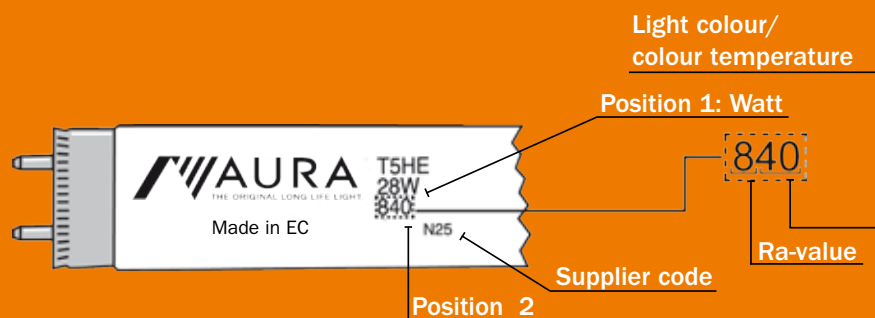
Recommendations

Special full-spectrum fluorescent lamps with a minimum Ra of 90 are used when there are huge demands on colour reproduction, in printing houses for example. The National Board of Occupational Safety and Health advises using full-spectrum fluorescent lamps where people work or live, of which an Ra of 80-90 gives pure and clear colour reproduction. Single-colour fluorescent lamps have an Ra-value of under 70, which increases the risk of inaccurate

colour reproduction. Sodium-vapour lamps have an even lower value, but sometimes it is more important just to be able to see something, rather than be able to distinguish between colours.

Tips and advice

Think about the objective of the lighting. A decision to buy clothing is all too seldom inspired in the changing rooms. The light is harsher there than out in the store. Wise shop owners offer the opportunity to switch between a warm light when trying on an evening dress and a colder, more natural light when trying on a jacket. We often look pale in the bathroom mirror of a hotel room: the cold blue light instils a sense of cleanliness, but is hardly encouraging for a guest prior to going out for the evening. It is also good with a warmer light in office environments: the employees look rosy and fresh. However, a realistic, natural light is required in a spray painting plant.



Here, you can see how to understand a fluorescent lamp's colour reproduction and colour temperature. Using the 840 fluorescent lamp as an example, "8" stands for the Ra-value 80-90 and "40" for 4000 Kelvin (add two zeros). Consequently, Aura Long Life 840 is a full-spectrum fluorescent lamp with very good colour reproduction and white light.

Aura's core competence is to develop, manufacture and sell quality light sources within our unique concept Long Life Lights. The concept holds our patented solutions distinguished by light sources with extra long life. We have been in the light source business for more than 75 years, and our long experience is the basis for our professional performance. Our Long Life products have a functional and quality guarantee, as well as an environmental guarantee. Long Life products are distinguished by extra long life, resulting in low operating costs and a minimal impact on the environment.

For orders and inquiries, welcome to contact us.



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Dale Harvey, Sales rep

- I wanted to move in my career, and I think that there is a large potential in the market where Aura is working.
- I've worked in various lighting markets, with small as well as large companies. I've got a lot of hands-on experience in dealing with different levels.
- My main area will be southern England, where I'll work mostly with the Sodinette product for the street lighting market.



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Paul Haines, Sales rep

- I was attracted to Aura initially because it is a Swedish company. Previously, I was selling into Scandinavia and found the collaboration honest, straightforward and friendly.
- I have worked in sales and marketing for the past 14 years, and I think that I can make a real contribution in this area.
- I prefer to sell products on their merits rather than on their price. The quality and innovation at Aura is very important.



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Malcolm Dryburgh, Sales rep

- I used to work as an agent for Aura in Ireland. I believe that our products are second to none!
- I now look after the Pharmachem industry in Ireland and the UK. I have many years experience in this field as well as in the Oil & Gas Industry.
- I work mainly with the T8 Ultimate range but due to the Irish market I am involved with the whole range of products now.

Karen Godfrey is the Marketing manager with several years of sales administration and marketing experience. She is working mainly in the Gas & Oil sector.

Manda Seymour is the Office manager, with many years experience of day to day accounting and office management. She is working in all the segments with doing the order processing through to invoicing.

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