

Application Inspiration

Office LED Lighting

Project: Sony Centre Berlin Photographer: Alexander Weckmer Licht und Mediensysteme GmbH

PHILIPS

sense and simplicity

Important information

before using this quick reference guide



Audi, Neckarsulm, Germany

This Application Inspiration Guide has been created to give some suggestions for developing an LED lighting proposal – taking into account most areas that may have to be lit within an office environment.

Light has a profound effect on how we feel and plays a vital role in creating a healthy workplace. Daylight controls our natural biorhythms, influences our mood and creates a sense of wellbeing. But daylight alone is not sufficient in most offices, artificial light is also needed to produce the right light levels.

Inadequate lighting affects employees' wellbeing and can also result in eye strain, fatigue and poor performance, particularly in roles involving problem solving and concentration, which can be a major cause for concern for your clients.

Our solutions can help people stay connected with the world outside the office walls, boosting vitality and improving performance.

We have made three lighting designs suggestions for each typical office space – all of them utilising state of the art LED solutions.

These example lighting design solutions come in three levels, standard, advanced and premium – offering flexibility for you and your client.

Standard design offers functional lighting to meet office norms and lighting standards, whilst offering a degree of energy savings compared to conventional office lighting.

Advanced design offers all the benefits of Standard design, with an enhanced level of style and comfort through LED lighting.

Premium design showcases the ultimate LED applications for companies who really wish to enhance their brand image, identity and environment.

In addition to these suggested lighting schemes for each area, we have included other solutions in the appendices as follows:

Controls: add flexibility to all areas and maximise savings by employing a lighting management strategy using lighting controls. Create ambience and colour scenes to stimulate mood, reduce energy consumption and carbon emissions and increase comfort for staff – all through the power of controls. See further information on controls solutions in the appendices.

Luminous Textile: bring spaces alive with this revolutionary product. Make a statement in any area by creating a 'live' feature wall – stimulate creativity, enhance branding or simply allow flexibility within spaces. To find out more about Luminous Textile, see more information in the appendices.

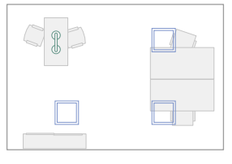
All the lighting design suggestions featured in this brochure are based on the European Lighting Standard for Indoor Workplaces EN 12464-1 and calculated on a ceiling height of 2.8m.

For each area within the guide, we have created:

Isolux diagram showing the luminous distribution per room suggestion

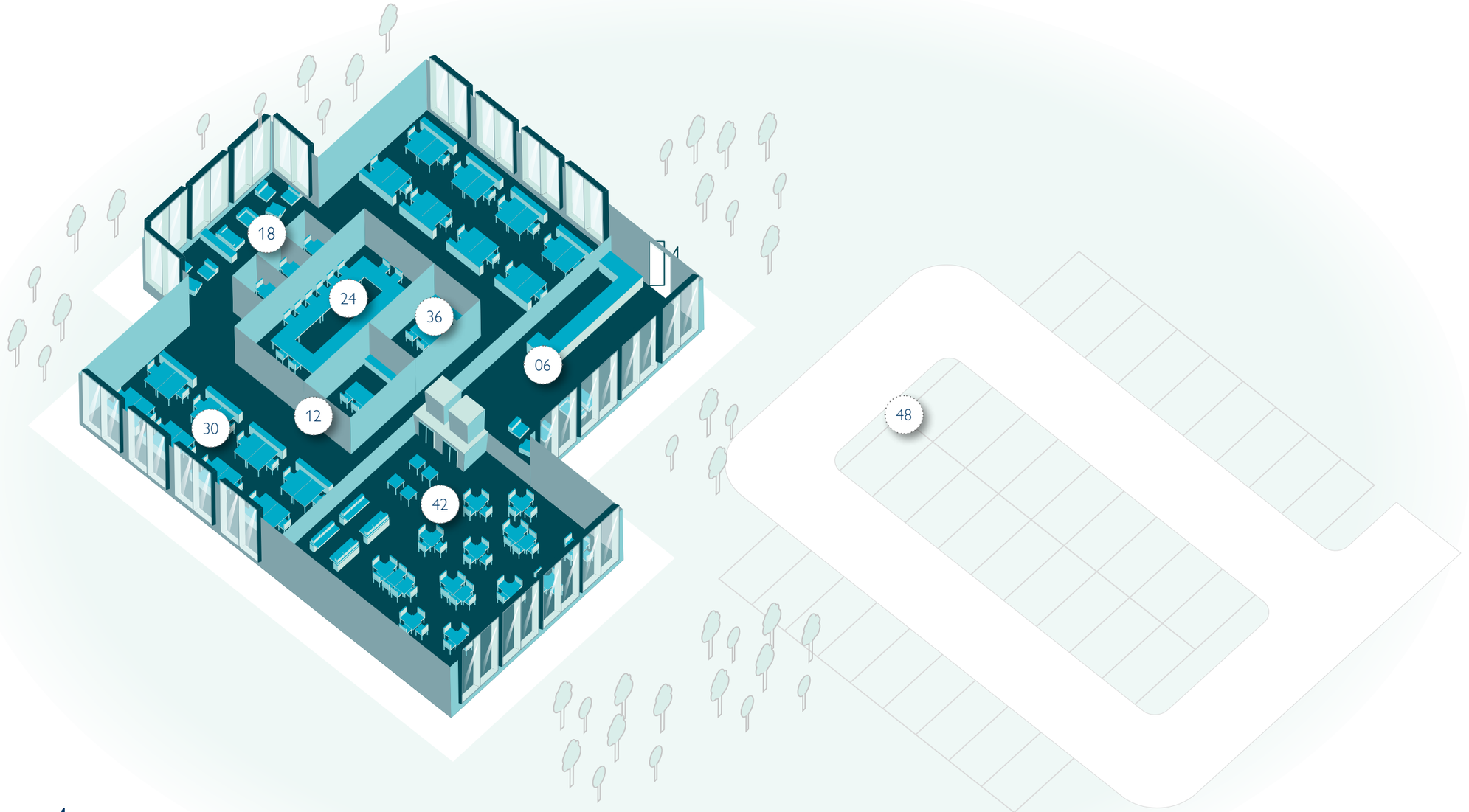


Plan view detailing luminaire positioning and room layout



Product selection description key and e-cat reference





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Menzis, Groningen, the Netherlands

Reception

If your clients want to impress, the office reception is the place to start. Visitors will make decisions about your client's company based on their initial reaction. It goes without saying that the atmosphere should be welcoming, but it should also reflect the way they do business. Lighting can help set the mood perfectly – from fun and funky to cool and corporate, enhancing the expectations of clients and customers. It also creates the right welcome for staff.

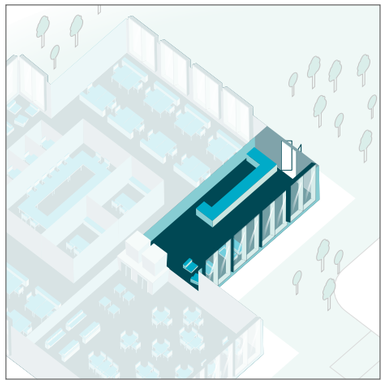
Create ambience

From the moment visitors walk into a client's reception area, you can create appeal with attractive, dynamic lighting that will enhance their expectations. From dramatic, vibrant schemes that reflect corporate colours to soft ambience designed to soothe the senses, we have the right solution for every style of office.

With a combination of our dynamic lighting solutions and intuitive controls you can create a fluid ambience that reacts to natural light levels. Colourful accents can guide visitors to the reception desk or make seating areas more inviting. Add to that intelligent controls and your clients can enjoy welcome savings too.



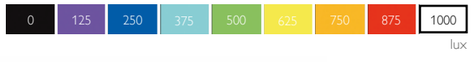
AB Group, Orzinuovi, Italy

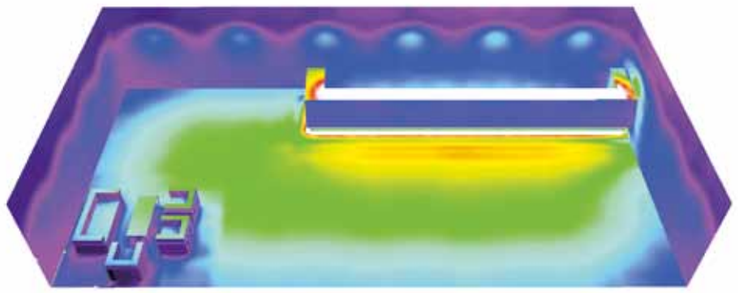


Reception **Standard**

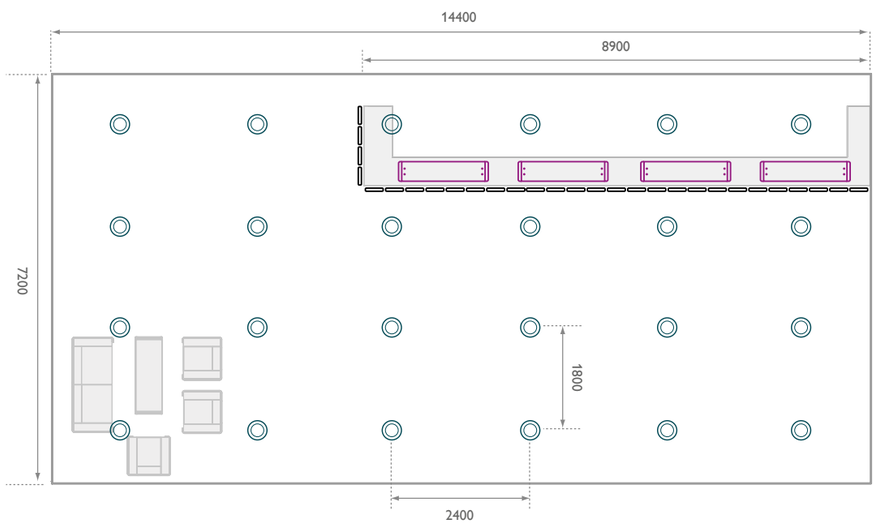
Our Standard setup uses LED downlights for the general lighting and puts additional focus on the reception desk by using pendant luminaires and a white cove at floor level.

Isolux diagram





Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



eWCove MX PowerCore® (white)
Along underside of reception desk

- A maintenance free, cost effective, dimmable, high-luminance cove system
- Highly versatile, end to end locking connectors for continuous streams of light to achieve curves on more complex geometries
- Capable of 180° rotation
- Can be installed into mounting clips or continuous profile track





LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering
- Easy to install with a long lifetime
- Full dimming capabilities



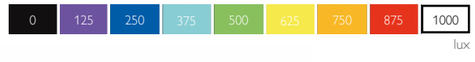
SmartForm LED
Suspended above reception desk

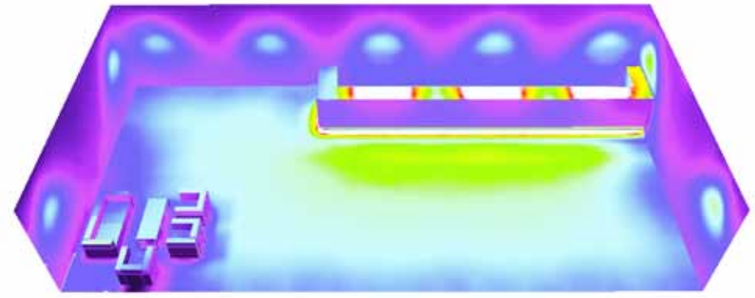
- Fresh and modern design – very slim housing, only 47mm deep
- State-of-the-art LED lighting – saving energy
- High-efficiency optical covers, offering inspiring light effects
- Possibility to add lighting controls – increase the energy savings by presence and daylight control

Reception **Advanced**

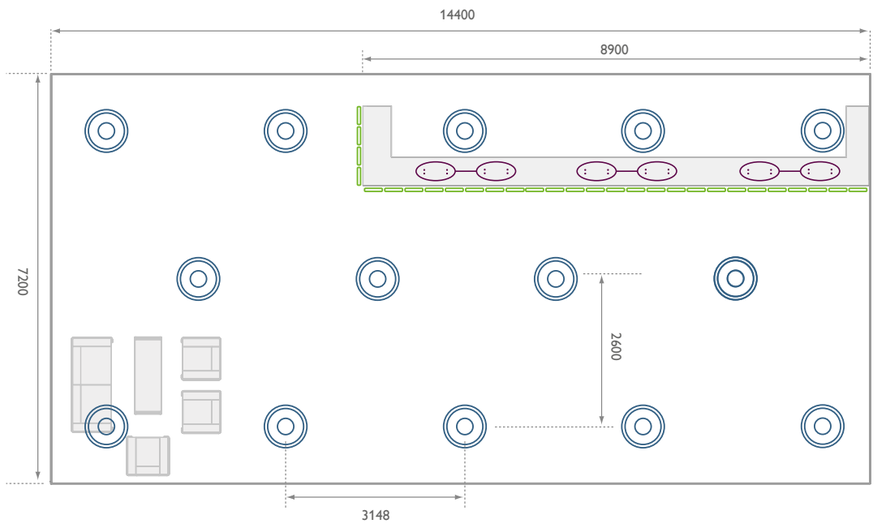
A step on from the Standard setup – Advanced uses more inspiring luminaires for both general and reception desk lighting. A personal touch and flexibility to change ambience is added by using colored cove lighting.

Isolux diagram





Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



iColorCove MX PowerCore® (colour)
Along underside of reception desk

- Dynamic RGB lighting effects suited for alcove, accent areas and tight spaces
- End to end mounting for continuous mounting streams of light to achieve curves or more complex geometries
- High intensity luminaire
- Capable of 180° rotation in 10° increments





DayZone Round
Recessed, general lighting

- Indoor recessed LED luminaire for general illumination
- Helps meet sustainability criteria
- Full dimming capabilities
- Inspiring design & light effect
- High visual comfort
- Energy efficient
- Additional energy saving up to 50% in combination with controls



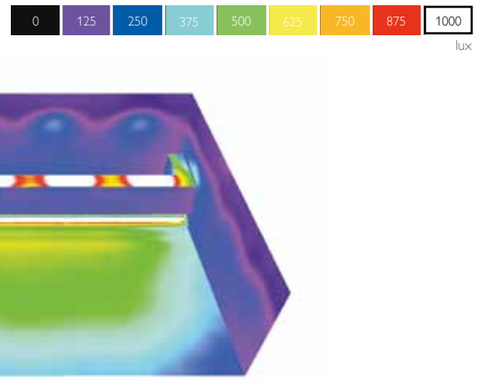
LumiStone
Suspended above reception desk

- Most energy efficient office-norm compliant suspended LED luminaire
- Inspiring design with elliptical modules

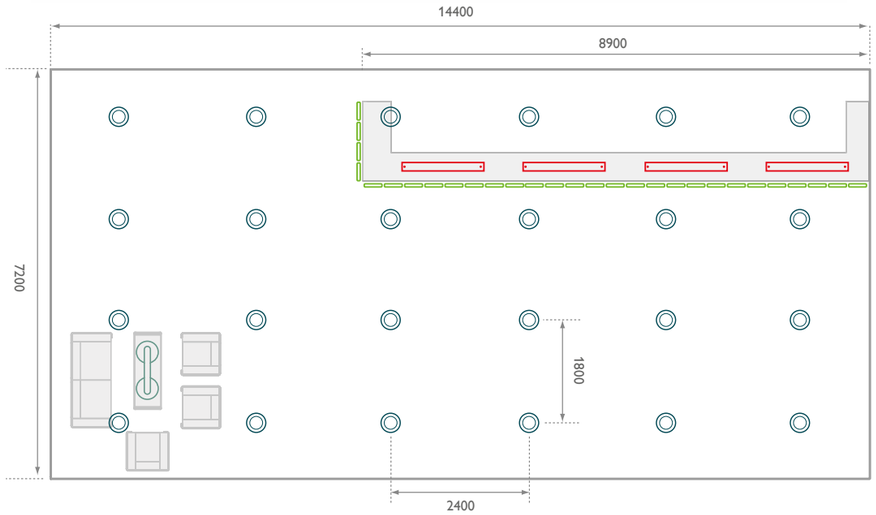
Reception **Premium**

Our Premium design uses aspects from both the Standard and Advanced design, but also uses sleek pendant luminaires for the reception desk and adds additional thin luminaires above the seating area.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



iColorCove MX PowerCore® (colour)
Along underside of reception desk

- Dynamic RGB lighting effects suited for alcove, accent areas and tight spaces
- End to end mounting for continuous mounting streams of light to achieve curves or more complex geometries
- High intensity luminaire
- Capable of 180° rotation in 10° increments



LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering.
- Easy to install with a long lifetime
- Full dimming capabilities



Celino LED
Suspended above reception desk

- Offers comparable light output to TL-5 luminaires with 28W lamps
- Available in 3000K and 4000K
- Range includes Surface and Suspended versions
- All versions DALI dimmable



DaySign Pendant Twin
Suspended above seating area

- Super thin
- Non glaring light emitting surface
- High Light Output – (50W halogen)
- For general and accent lighting





Cas Sombroek, Volendam, the Netherlands

Corridors

Areas in the office that are occupied the least can often waste energy. Our intelligent solutions make corridors and circulation areas feel bright and safe. Compatible with dimming possibilities and presence detection to switch off lighting when it's not needed, they save our planet's precious resources too.

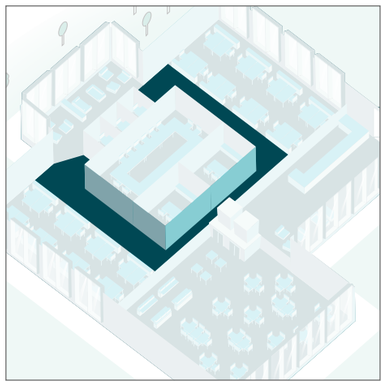
Save energy with light

Corridors are the vital network inside offices that guide people around the building. They can also work as functional spaces, displaying information or artwork to enhance a company's image. But if the lighting stays on when no one is around, your client could be wasting energy for much of the day. And when you consider that lighting accounts for 40% of all electricity use in office buildings, that's a lot of energy to waste.

Our sustainable lighting solutions are a highly-efficient way to keep corridors safe and well lit whenever they're needed. Dimmable LuxSpace luminaires save energy and create ambience. Intelligent sensors like OccuSwitch turn the light off when it's not needed. Sparkling accent lights add the finishing touches, highlighting architectural features and putting artwork in the spotlight.



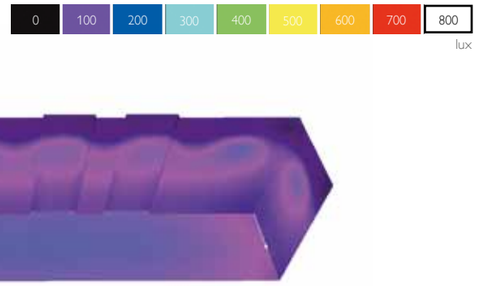
AB Group, Orzinuovi, Italy



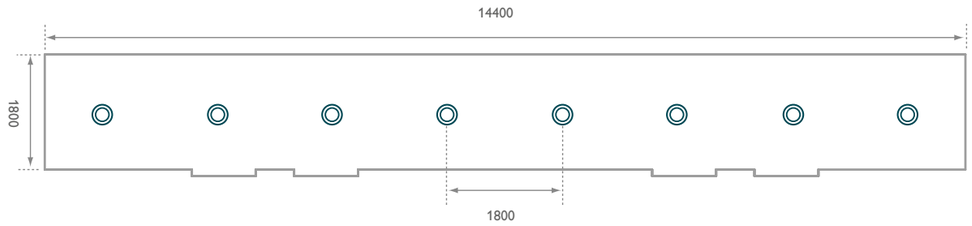
Corridors **Standard**

Our Standard setup using LED downlights on the central axis of the corridor.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



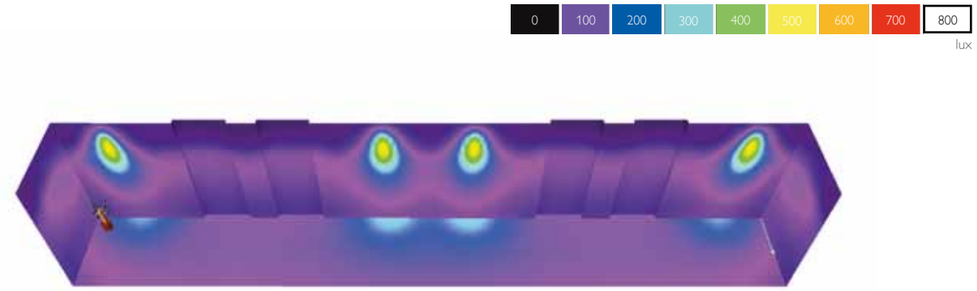
LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering.
- Easy to install with a long lifetime
- Full dimming capabilities

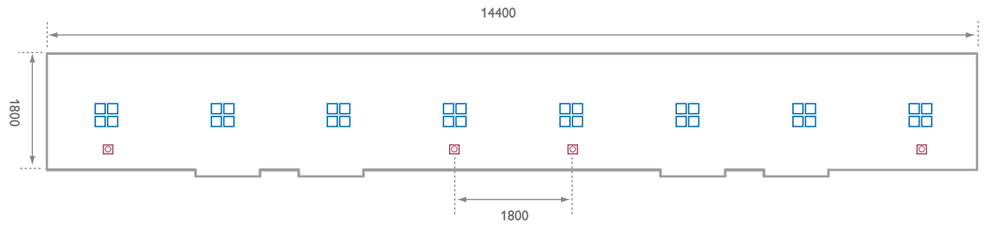
Corridors **Advanced**

Advanced uses the same principle for general lighting as the Standard design but with a more innovative look and feel. Additionally spots have been added to provide accents.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



PowerBalance Mini
Recessed, general lighting

- Offers substantial energy saving compared to TL-5 luminaires of a similar output
- Most energy efficient office-norm compliant LED luminaire
- Allowing for significant operational cost savings
- Office norm compliant
- Additional energy saving up to 50% in combination with controls



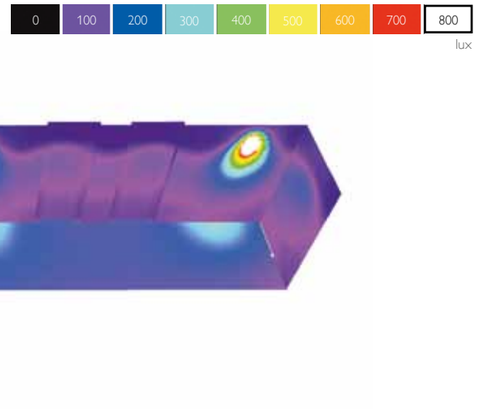
TurnRound Spot
Aimed at wall

- Substantial energy saving compared to standard halogens
- Compact design for improved flexibility
- Fixed and adjustable versions
- Excellent alternative to 50W low voltage halogen, giving comparable light quality
- Long life for low maintenance

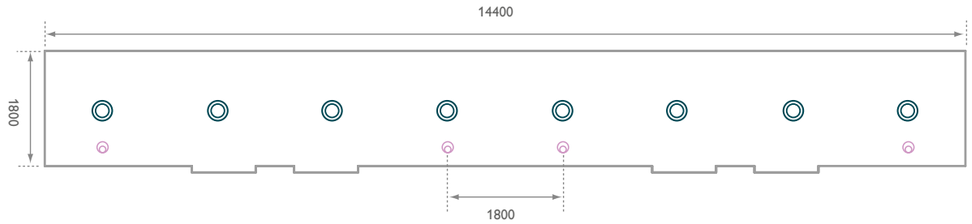
Corridors **Premium**

Our Premium solution is based on design elements from both Standard and Advanced designs, but uses high end spots to further 'shape' the area.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering.
- Easy to install with a long lifetime
- Full dimming capabilities



StyliD Spot
Aimed at wall

- Full flexible solution with replaceable covers and bezel
- Natural light source appearance due to reflector-LED technology
- Significant energy saving
- No lamp replacement needed due to long lifetime of the product



Menzis, Groningen, the Netherlands



Baker Street, London, United Kingdom

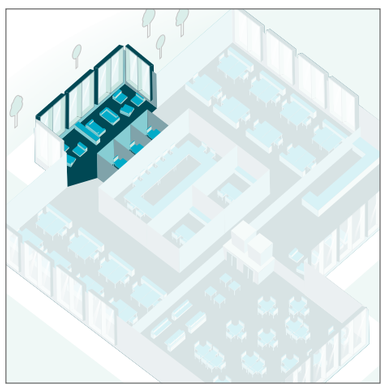
Breakout area

Informal areas with comfortable furnishings and relaxing ambiences are now an integral part of the modern office. Creating a place where people can have some quiet time, or talk with colleagues without needing a formal meeting room, improves office life and enhances well-being.

Relaxing minds

Well designed break out spaces can have a positive effect on how people feel at work. Lighting is a powerful way to influence their emotions. By combining good quality lighting with dimming possibilities and glare control to soothe tired eyes and relax busy minds. Add accents that create pools of light over seating areas and tables where staff get together and socialise. Break out solutions that create a totally relaxing ambience to rejuvenate and inspire.





Breakout area **Standard**

In our Standard solution LED downlight is used for both general lighting and more contrast lighting on the seating area. Several small spots have been added to highlight the separation furniture.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



eWCove MX PowerCore® (white)
Along ceiling of back wall

- A maintenance free, cost effective, dimmable, high-luminance cove system
- Highly versatile, end to end locking connectors for continuous streams of light to achieve curves on more complex geometries
- Capable of 180° rotation
- Can be installed into mounting clips or continuous profile track



LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering
- Easy to install with a long lifetime
- Full dimming capabilities



Zadora LED Spot
Aimed down

- Up to 85% energy savings
- Available in simple kit format for easy installation
- Fixed and adjustable versions
- Flexibility to change lamps by means of spring fasteners
- Featuring MASTER LEDspot GU10 7W for improved cost of ownership compared to a 50W halogen
- Long life for low maintenance

Breakout area **Advanced**

Advanced uses the same general lighting as our Standard design, but with more inspiring elliptical pendant luminaires to light the seating area.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



iColorCove MX PowerCore℠ (colour)
Along ceiling of back wall

- Dynamic RGB lighting effects suited for alcove, accent areas and tight spaces
- End to end mounting for continuous mounting streams of light to achieve curves or more complex geometries
- High intensity luminaire
- Capable of 180° rotation in 10° increments



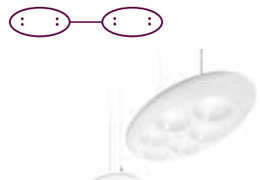
LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
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TurnRound Spot
Aimed at wall

- Substantial energy saving compared to standard halogens
- Compact design for improved flexibility
- Fixed and adjustable versions
- Excellent alternative to 50W low voltage halogen, giving comparable light quality
- Long life for low maintenance



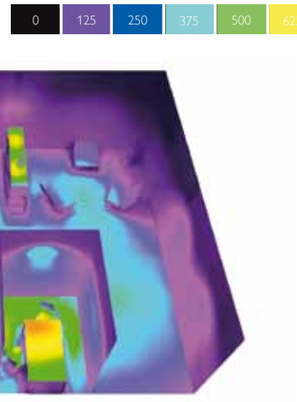
LumiStone
Suspended above seating area

- Most energy efficient office-norm compliant suspended LED luminaire
- Inspiring design with elliptical modules

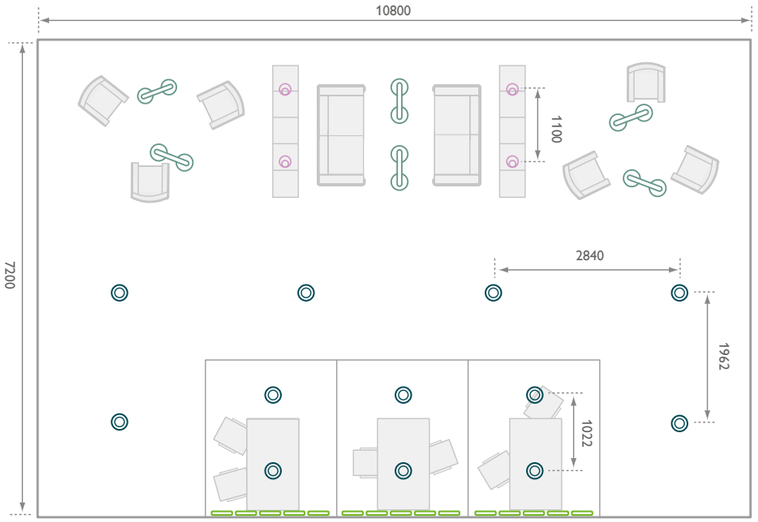
Breakout area **Premium**

With Premium, general lighting is similar to the Advanced and Standard versions but adds more focus on the seating area by the use of multiple thin pendant luminaires and high-end spots.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



iColorCove MX PowerCore® (colour)
Along ceiling of back wall

- Dynamic RGB lighting effects suited for alcove, accent areas and tight spaces
- End to end mounting for continuous mounting streams of light to achieve curves or more complex geometries
- High intensity luminaire
- Capable of 180° rotation in 10° increments



LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering.
- Easy to install with a long lifetime
- Full dimming capabilities



DaySign Pendant Twin
Suspended above seating area

- Super thin
- Non glaring light emitting surface
- High Light Output – (50W halogen)
- For general and accent lighting



StyliD Spot
Aimed at wall

- Full flexible solution with replaceable covers and bezel
- Natural light source appearance due to reflector-LED technology
- Significant energy saving
- No lamp replacement needed due to long lifetime of the product



Philips building, Eindhoven, the Netherlands



Pentagon Design, Helsinki
Photographer: Tomi Nuotsalo

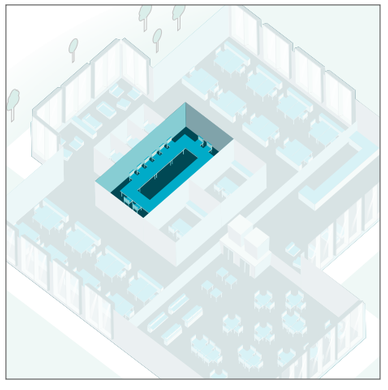
Meeting room

Lighting has a profound effect on the way people feel. Tailor the lighting to suit the agenda and your client's meeting rooms become far more effective spaces. Light can enhance well-being, create excitement or provide an air of concentration. Our innovative solutions take lighting to new levels of sophistication, with clever features that bring out the best in your client's meeting rooms and the people who use them.

Create attention

No two meetings are ever the same, so it's vital that the lighting in your client's meeting rooms are designed for maximum flexibility and visual comfort. A high output with no glare works best for collaborative sessions that need to stay productive. Informal presentations are best delivered in a softer ambience that relaxes and calms. Our lighting solutions are designed to bring every meeting to life. Our next generation LEDs can create a crisp, sparkling and warm white light that will energise the whole room. And we also have brilliant ways to use colour changing effects for accents and alcoves, so you can tune the lighting to suit the mood. By using our Philips Dynalite controls meeting room solution, all of this can be steered with a very simple touchscreen.

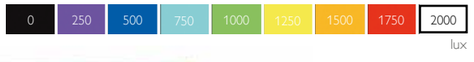


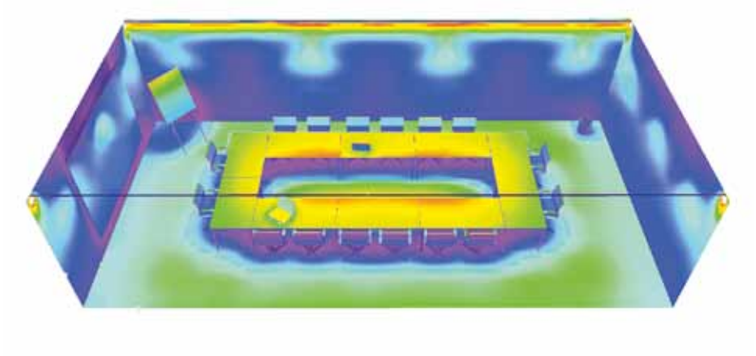


Meeting room **Standard**

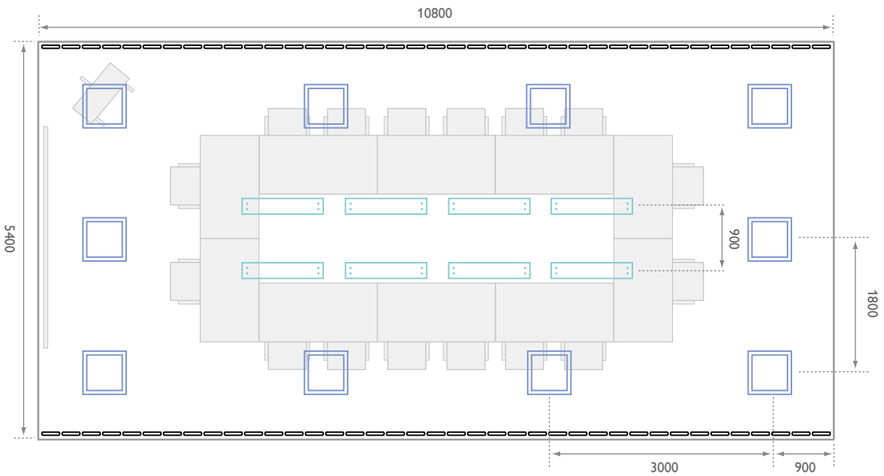
Rectangular pendant luminaires above the meeting table with recessed square luminaires providing the general lighting. White cove lighting is used on the long walls to provide good background lighting.

Isolux diagram





Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used





eWCove MX PowerCore® (white)
Along ceiling

- A maintenance free, cost effective, dimmable, high-luminance cove system
- Highly versatile, end to end locking connectors for continuous streams of light to achieve curves on more complex geometries
- Capable of 180° rotation
- Can be installed into mounting clips or continuous profile track



Smartform LED Recessed
Recessed, general lighting

- Energy saving
- Inspiring light effects
- Highly versatile family
- Office-norm compliant





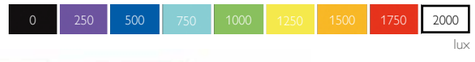
Arano LED
Suspended above table

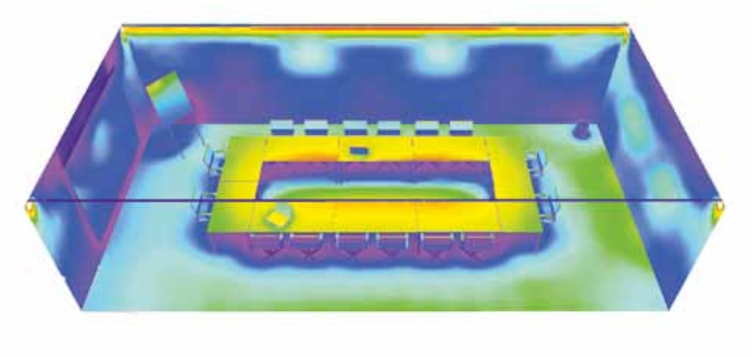
- Offers comparable light output to TL-5 luminaires with 28W lamps
- Available in 3000K and 4000K
- Range includes surface and suspended versions

Meeting room **Advanced**

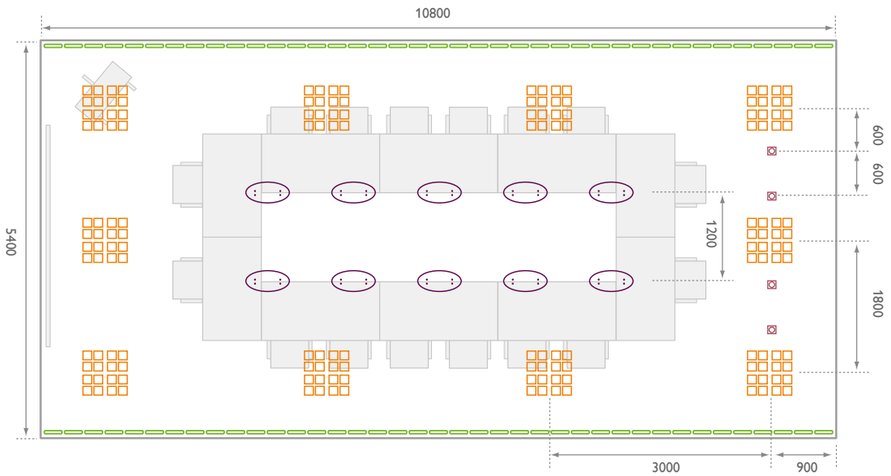
Advanced uses innovative recessed and pendant luminaires with additional spots to create additional highlights. Instead of white, colored cove lighting has been added to provide more flexibility in scene setting.

Isolux diagram





Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used





iColorCove MX PowerCore® (colour)
Along ceiling

- Dynamic RGB lighting effects suited for alcove, accent areas and tight spaces
- End to end mounting for continuous mounting streams of light to achieve curves or more complex geometries
- High intensity luminaire
- Capable of 180° rotation in 10° increments





PowerBalance
Recessed, general lighting

- Offers substantial energy saving compared to TL-5 luminaires of a similar output
- Most energy efficient office-norm compliant LED luminaire
- Allowing for significant cost savings
- Office norm compliant
- Additional energy saving up to 50% in combination with controls



TurnRound Spot
Aimed at wall

- Substantial energy saving compared to standard halogens
- Compact design for improved flexibility
- Fixed and adjustable versions
- Excellent alternative to 50W low voltage halogen, giving comparable light quality
- Long life for low maintenance



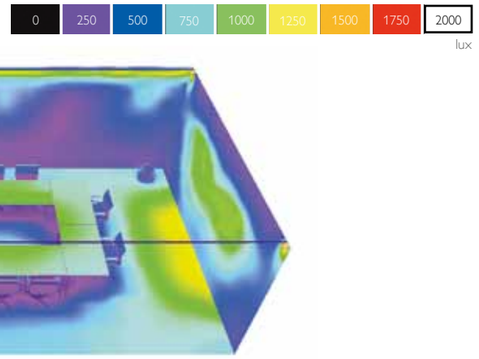
LumiStone
Suspended above table

- Most energy efficient office-norm compliant suspended LED luminaire
- Inspiring design with elliptical modules

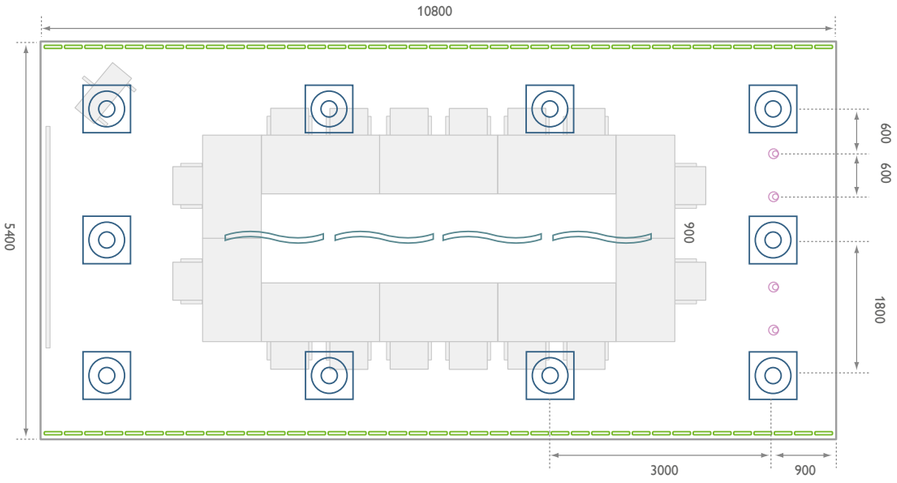
Meeting room **Premium**

Premium is based on the Advanced design but with high end suspended luminaires to further enhance the look and feel of the space.

Isolux diagram



Plan view



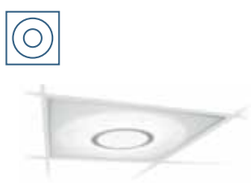
Scale: **1:50**
All dimensions in millimetres

Luminaires used



iColorCove MX PowerCore® (colour)
Along ceiling

- Dynamic RGB lighting effects suited for alcove, accent areas and tight spaces
- End to end mounting for continuous mounting streams of light to achieve curves or more complex geometries
- High intensity luminaire
- Capable of 180° rotation in 10° increments



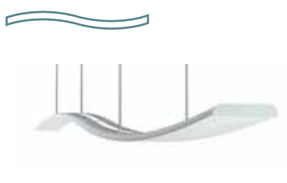
DayZone Square
Recessed, general lighting

- Indoor recessed LED luminaire for general illumination
- Helps meet sustainability criteria
- Full dimming capabilities
- Inspiring design & light effect
- High visual comfort
- Energy efficient
- Additional energy saving up to 50% in combination with controls



StyliD Spot
Aimed at wall

- Full flexible solution with replaceable covers and bezel
- Natural light source appearance due to reflector-LED technology
- Significant energy saving
- No lamp replacement needed due to long lifetime of the product

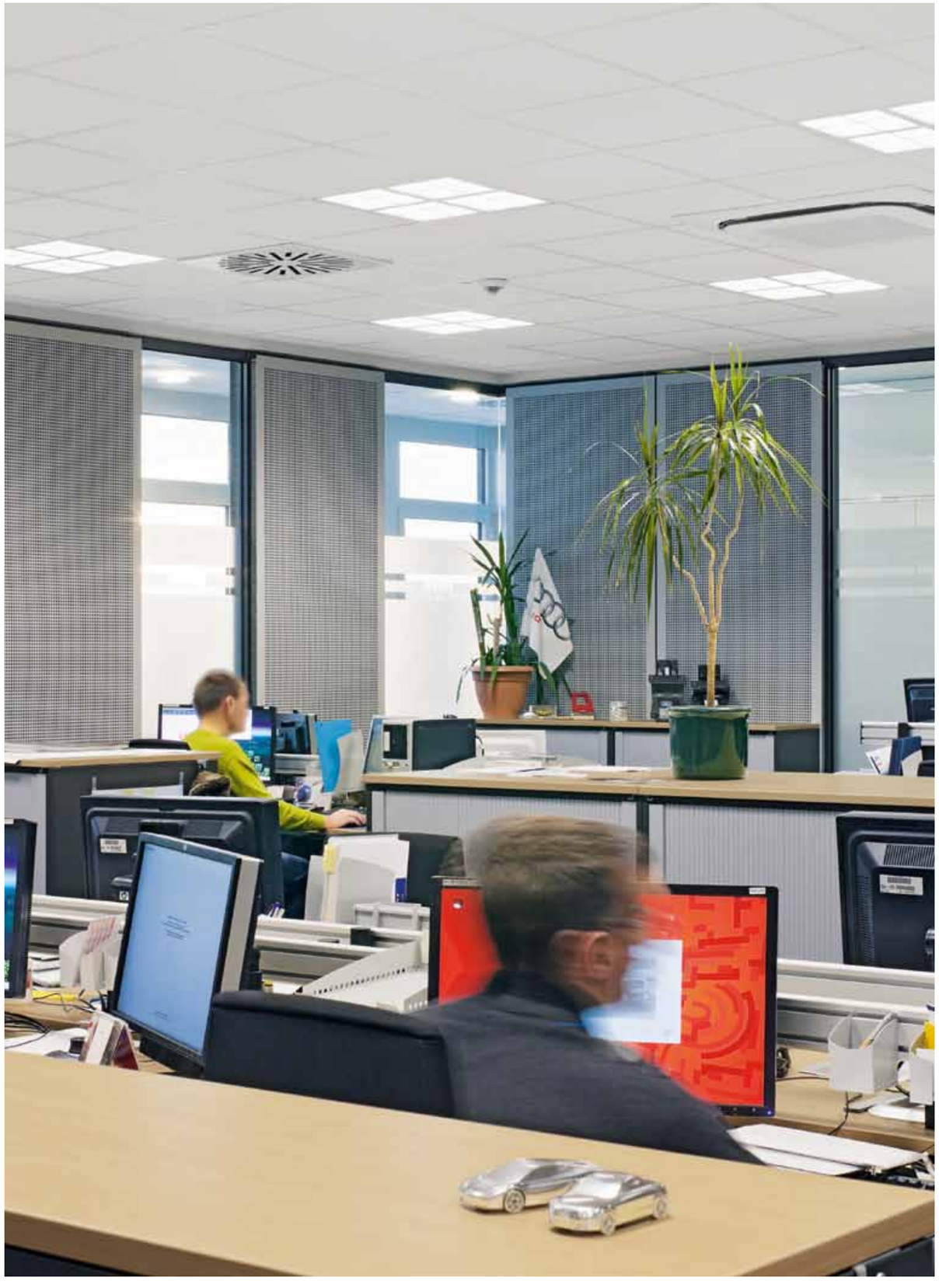


DayWave
Suspended above table

- The essence of total LED form freedom
- A beautiful sleek design suitable for continuous suspended mounting
- Delivering uniform lighting for high visual comfort
- Available in dynamic colour temperature changing version
- Optional curve up and curve down design



Cas Sombroek, Volendam, the Netherlands



Audi, Neckarsulm, Germany

Open plan office

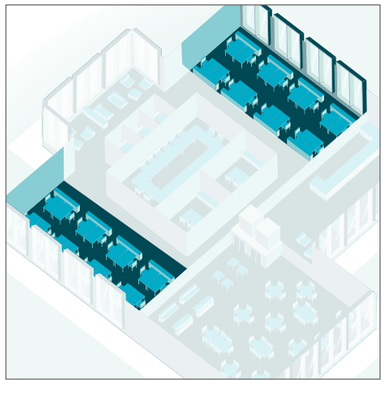
Open plan offices are dynamic spaces where people need to carry out a wide variety of different tasks. Lighting can create a comfortable ambience by combining functional lighting with inspiring light effects. Add individual controls and the light can be personalised at each desk. So whatever your client's staff are working on, business is a pleasure.

Feel better, work better

As our ways of working become more intuitive, so should our office space. Good lighting that's tailored to individual tasks helps staff to work more effectively during the day. Our solutions shine with impressive visual comfort, glare control and colour consistency, to create the most comfortable office ambience. And when people feel better, they work better too. Solutions like DayZone combine an aesthetically striking appearance with a quality of light that respects all office norms. Add intuitive controls like OccuSwitch DALI for occupancy detection or daylight dimming, to give flexibility whilst maintaining comfort for any office space. All at the same time as saving up to 75% in energy so your client can feel better about their impact on the planet.



John Deere, Mannheim and Bruchsal, Germany

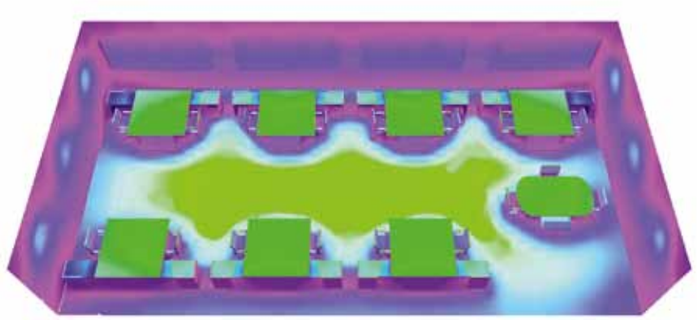


Open plan office **Standard**

Standard office design using efficient office compliant square recessed LED luminaires.

Isolux diagram





Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used

Smartform LED Recessed
Recessed, general lighting

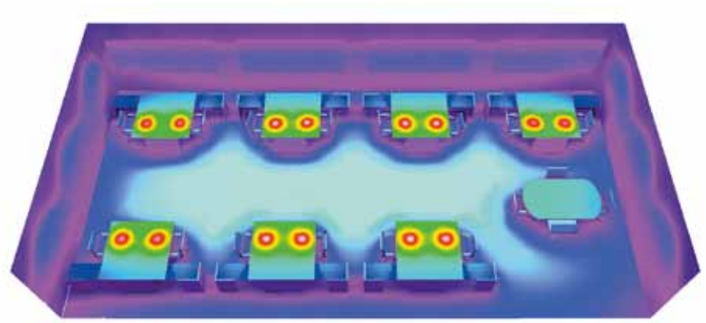
- Energy saving
- Inspiring light effects
- Highly versatile family
- Office-norm compliant

Open plan office **Advanced**

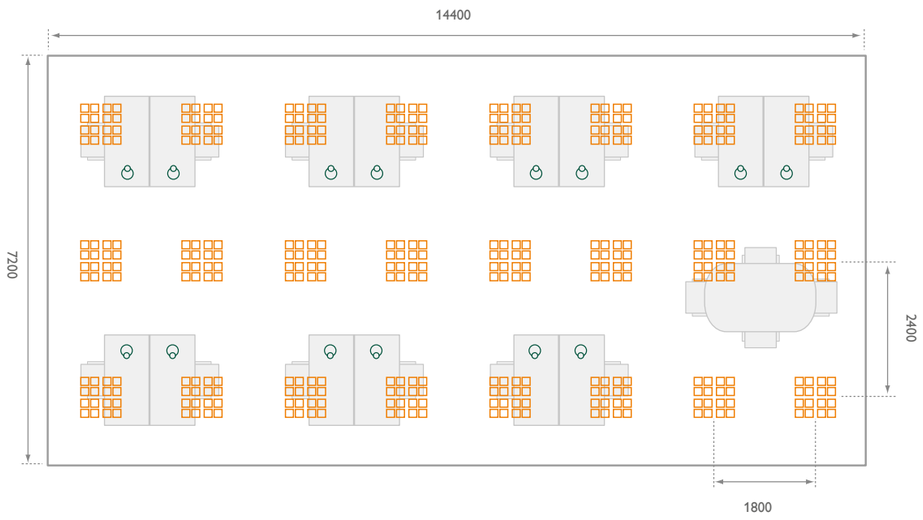
The Advanced layout recommends a highly efficient LED recessed luminaire for general Illumination with additional desk lighting for added flexibility.

Isolux diagram





Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used

PowerBalance
Recessed, general lighting

- Offers substantial energy saving compared to TL-5 luminaires of a similar output
- Most energy efficient office-norm compliant LED luminaire
- Allowing for significant cost savings
- Office norm compliant
- Additional energy saving up to 50% in combination with controls



Taskflex
Desklight

- Adjustable height up to 80 cm
- Wide range of movement – two spring loaded arms allow for easy positioning of the head above the task area enabling the base to be placed far out of the way without instability
- Plug-and-play – movable design
- Long lifetime up to 50,000 hours
- Power consumption 8W
- Diffuse light is cut off at a minimum angle for glare free, comfortable light

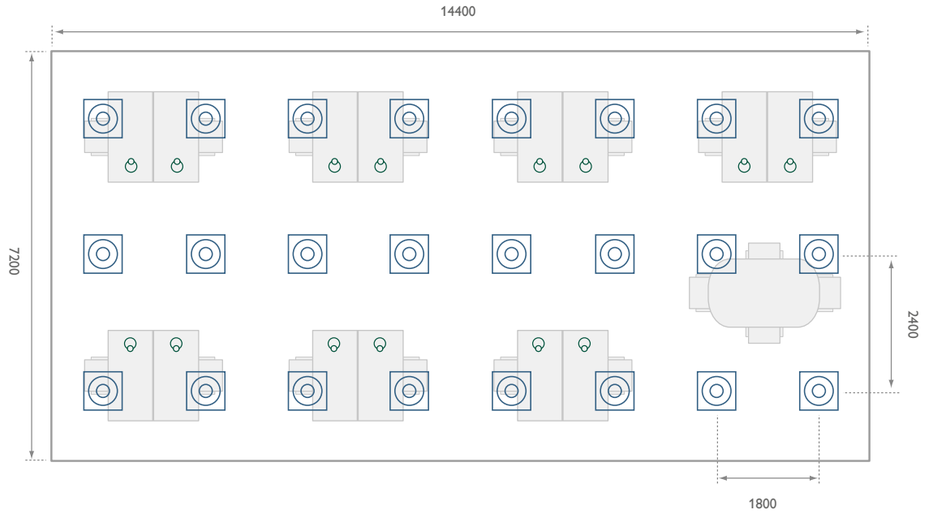
Open plan office **Premium**

Our Premium solution uses the same layout and design as in Advanced but enhancing the look and feel of the room by using inspiring high end luminaires.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

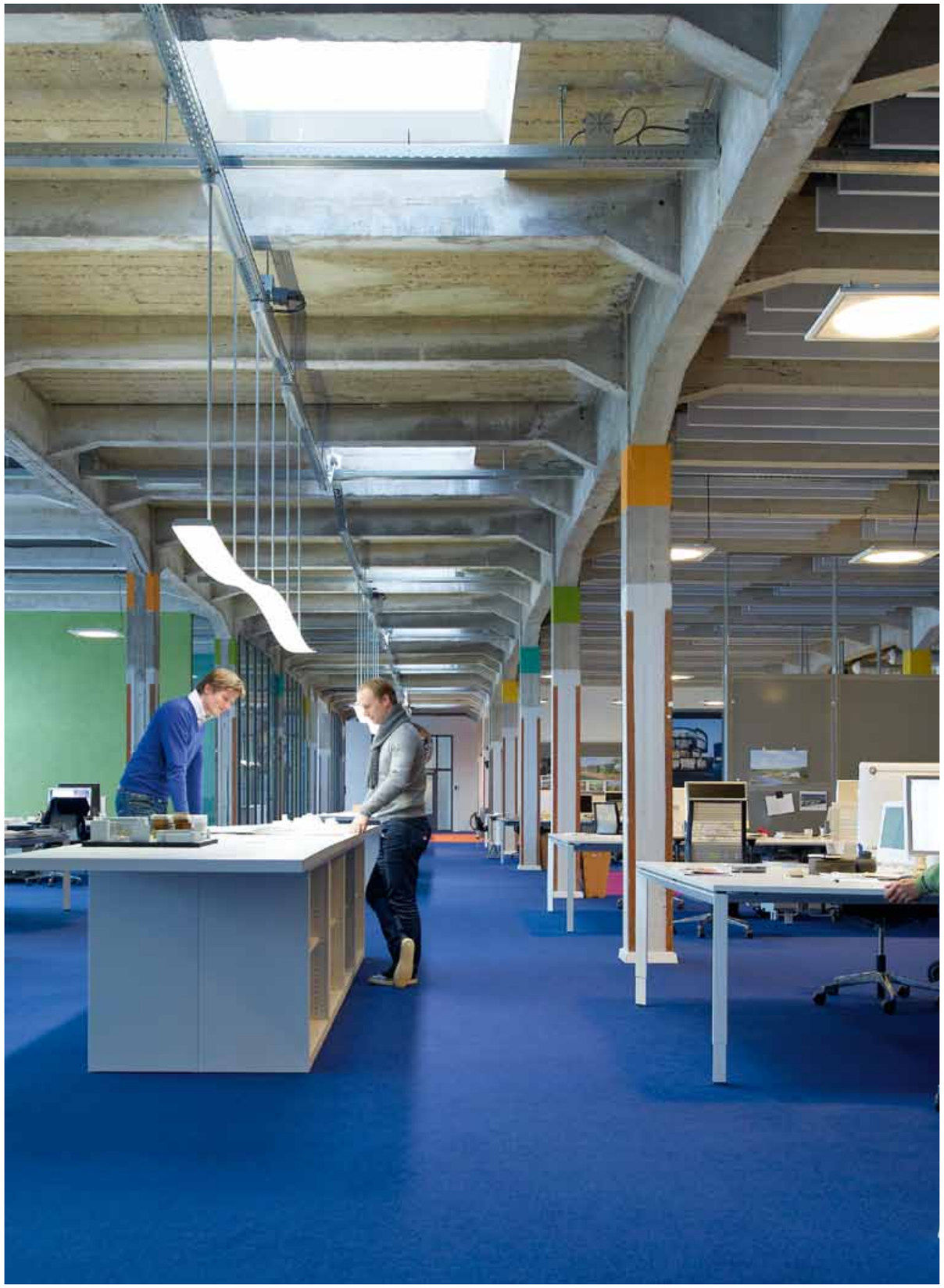
Luminaires used

DayZone Square
Recessed, general lighting

- Indoor recessed LED luminaire for general illumination
- Helps meet sustainability criteria
- Full dimming capabilities
- Inspiring design & light effect
- High visual comfort
- Energy efficient
- Additional energy saving up to 50% in combination with controls

Taskflex
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- Plug-and-play – movable design
- Long lifetime up to 50,000 hours
- Power consumption 8W
- Diffuse light is cut off at a minimum angle for glare free, comfortable light



RAU Architects, Amsterdam, the Netherlands



Audi, Neckarsulm, Germany

Cell office

Cell offices and internal rooms provide welcome peace and quiet from busy office life. But sometimes they have only limited natural light and leave people feeling out of touch with the world outside the office walls. The right lighting dynamics can help to produce a comfortable working ambience and create a sense of well-being.

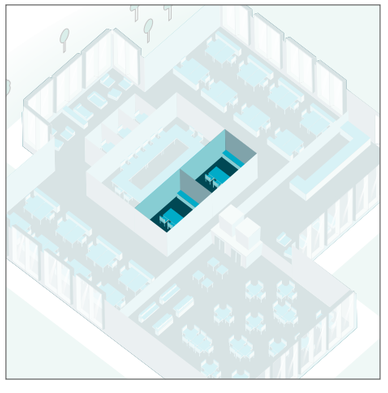
Attractive savings

Private offices and internal spaces require lighting more often, to create the same bright ambience as rooms that are flooded with natural light. But that doesn't mean the solution has to look harsh or artificial. Some of the most inspirational luminaire designs provide light with the highest levels of visual comfort. They also offer the possibility of dimming for even more calming ambiences.

And it needn't cost companies the earth, because more lighting doesn't have to mean more wasted energy. With clever controls to switch lights off when no one's around, your clients can still save on energy bills without cutting corners on office ambience. Suddenly lighting internal cell offices looks far more attractive.



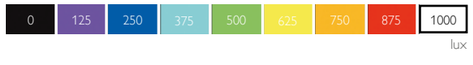
Cas Sombroek, Volendam, the Netherlands



Cell office **Standard**

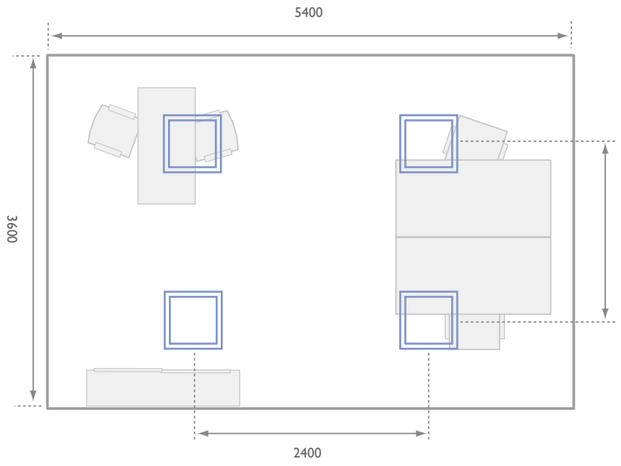
The Standard design uses four square recessed luminaires to provide functional lighting.

Isolux diagram





Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



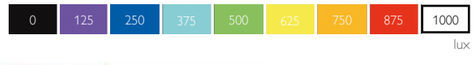
Smartform LED Recessed
Recessed, general lighting

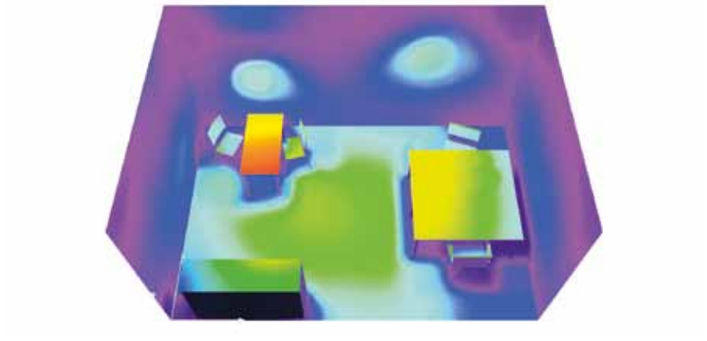
- Energy saving
- Inspiring light effects
- Highly versatile family
- Office-norm compliant

Cell office **Advanced**

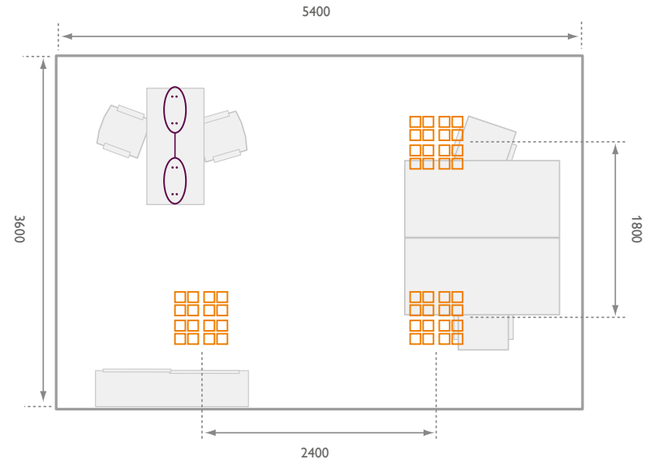
Advanced has the same layout as the Standard design, but with more innovative luminaires and a dedicated suspended luminaire for the meeting table.

Isolux diagram





Plan view



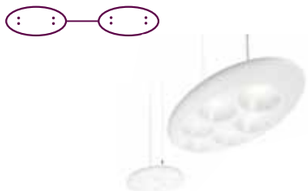
Scale: **1:50**
All dimensions in millimetres

Luminaires used



PowerBalance
Recessed, general lighting

- Offers substantial energy saving compared to TL-5 luminaires of a similar output
- Most energy efficient office-norm compliant LED luminaire
- Allowing for significant cost savings
- Office norm compliant
- Additional energy saving up to 50% in combination with controls



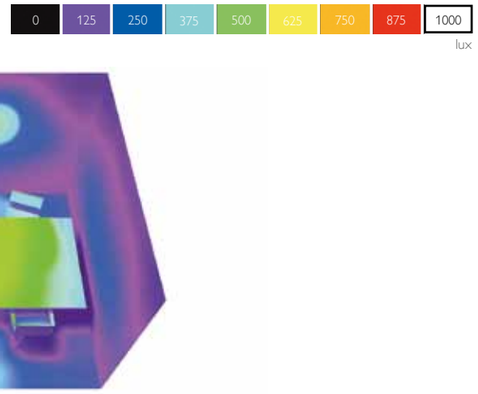
LumiStone
Suspended above table

- Most energy efficient office-norm compliant suspended LED luminaire
- Inspiring design with elliptical modules

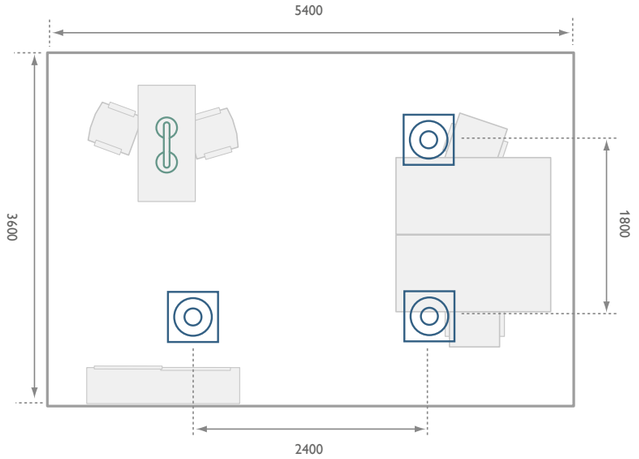
Cell office **Premium**

With Premium the general layout of the design remains the same, however the look and feel is enhanced by using high end and inspiring luminaires.

Isolux diagram



Plan view



Scale: **1:50**
All dimensions in millimetres

Luminaires used



DayZone Square
Recessed, general lighting

- Indoor recessed LED luminaire for general illumination
- Helps meet sustainability criteria
- Full dimming capabilities
- Inspiring design & light effect
- High visual comfort
- Energy efficient
- Additional energy saving up to 50% in combination with controls



DaySign Pendant Twin
Suspended above table

- Super thin
- Non glaring light emitting surface
- High Light Output – (50W halogen)
- For general and accent lighting





Grolsch, Enschede, the Netherlands

Restaurant

Creating the right ambience is crucial in restaurants where people come to unwind, socialise, take a break from their working day or simply go to enjoy the experience.

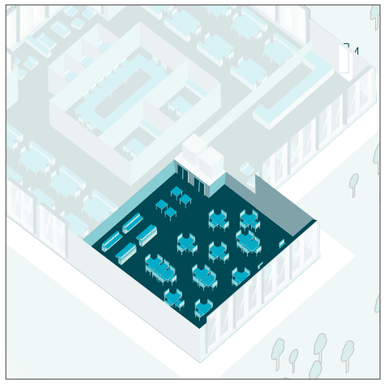
Table theatre

Our lighting solutions will allow your restaurant clients to create an ideal atmosphere at any time of the day. One that is functional, as well as stimulating and refreshing during the day, but also flexible enough to be able to change to something that's more intimate and laid-back at night – customer events for example. By clever use of dimming and coloured lighting, anything is possible. Whether day or night, choosing the right lighting solution will determine whether employees or customers are genuinely comfortable and relaxed in your client's restaurant environment.

Effective lighting will help you create an inviting and hospitable atmosphere suitable for any use – a truly multi functional space, designed to delight customers.



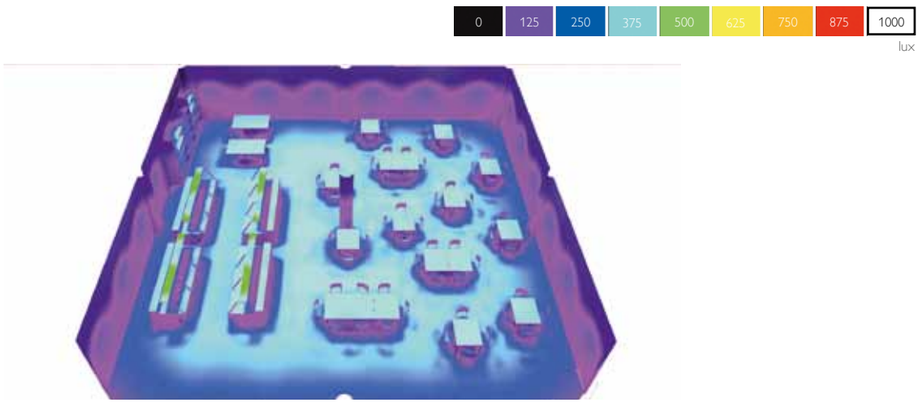
Menzis, Groningen, the Netherlands



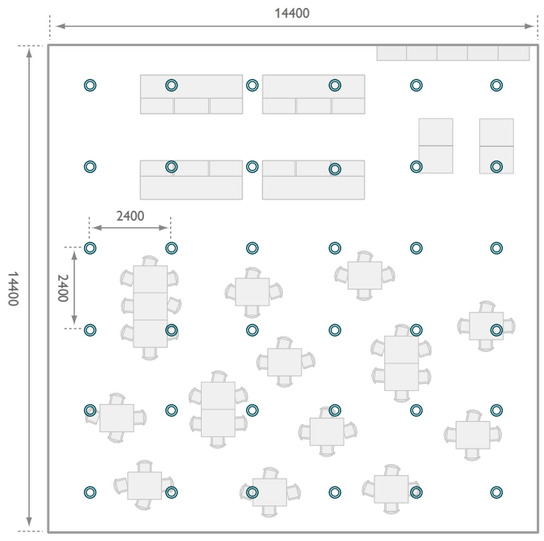
Restaurant **Standard**

Our Standard general lighting solution is provided by LED downlights.

Isolux diagram



Plan view



Scale: **1:100**
All dimensions in millimetres

Luminaires used



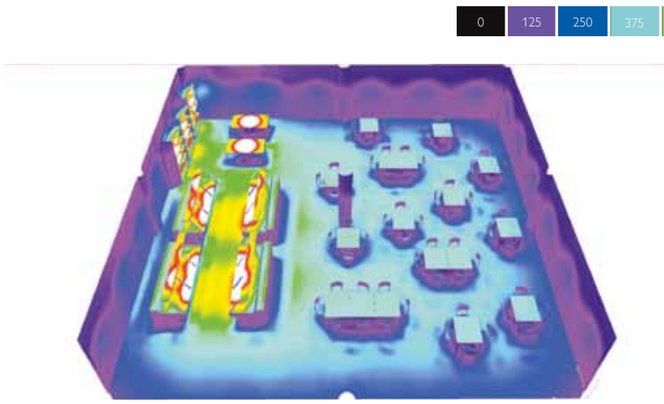
LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering.
- Easy to install with a long lifetime
- Full dimming capabilities

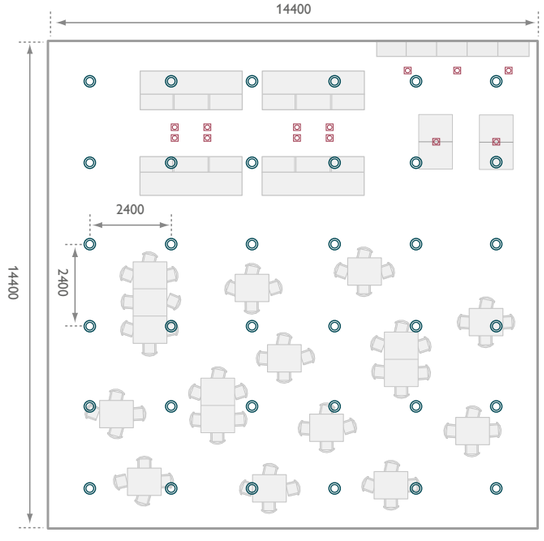
Restaurant **Advanced**

Advanced general lighting is similar to the Standard design but with additional spots to put more focus on the shelves and food.

Isolux diagram



Plan view



Scale: **1:100**
All dimensions in millimetres

Luminaires used



LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering.
- Easy to install with a long lifetime
- Full dimming capabilities



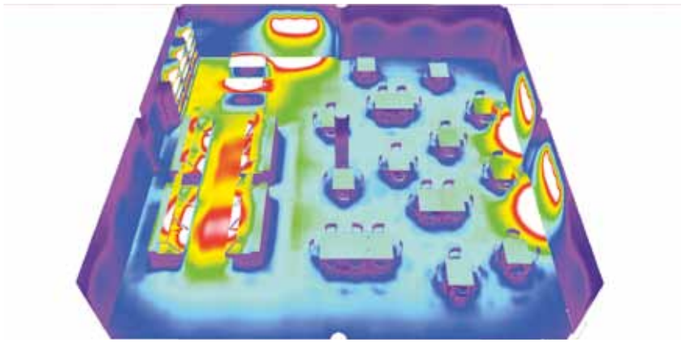
TurnRound Spot
Aimed at shelves

- Substantial energy saving compared to standard halogens
- Compact design for improved flexibility
- Fixed and adjustable versions
- Excellent alternative to 50W low voltage halogen, giving comparable light quality
- Long life for low maintenance

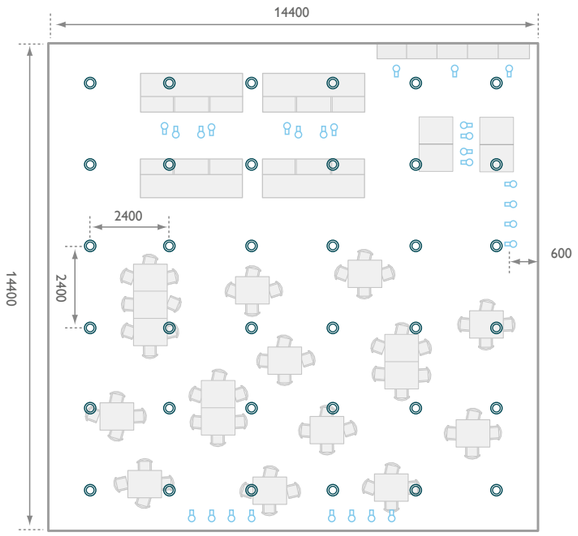
Restaurant **Premium**

General lighting is similar to the other designs, however using high end spots on a track to increase flexibility of the installation. Additional spots have been added throughout the room to create accents and enhance the atmosphere.

Isolux diagram



Plan view



Scale: **1:100**
All dimensions in millimetres

Luminaires used



LuxSpace
Recessed, general lighting

- Replacement for conventional downlight applications using CFL or halogen equivalents
- Delivers consistent light output, stable colour performance and high colour rendering.
- Easy to install with a long lifetime
- Full dimming capabilities

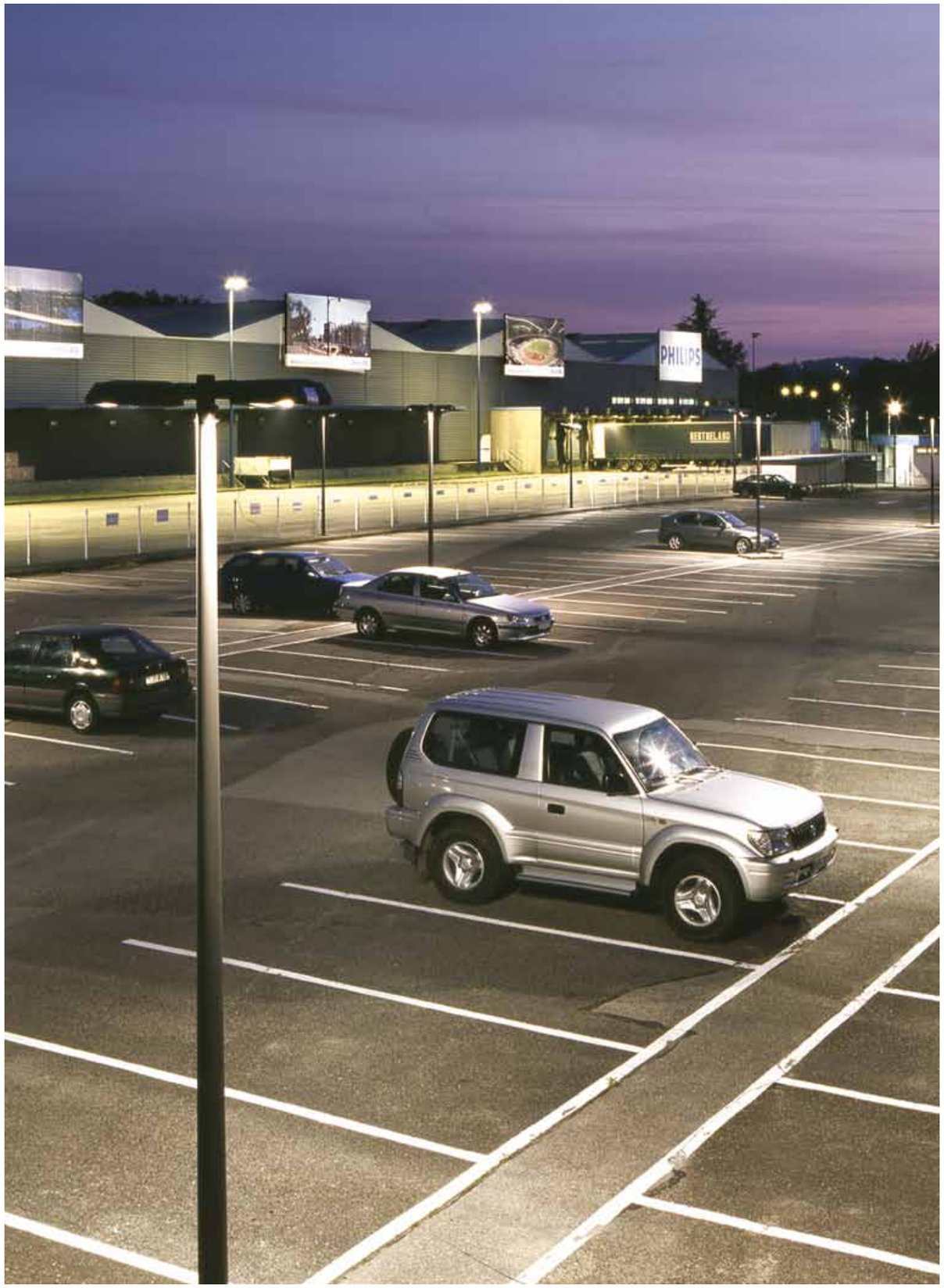


StyliD on Track
Aimed at shelves and for example posters/banners

- Full flexible solution with replaceable covers and bezel
- Natural light source appearance due to reflector-LED technology
- Significant energy saving
- No lamp replacement needed due to long lifetime of the product



Menzis, Groningen, the Netherlands



Outdoor

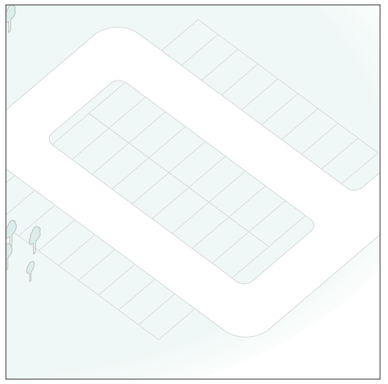
Lighting parking areas effectively is essential to make them feel safe and welcoming. But parking zones that require lighting 24 hours a day can waste precious energy. Making sustainable, energy efficient choices will have a big impact on your client's energy bills and the least impact on the planet.

Bright ideas for parking

Welcome visitors and employees to parking facilities by creating bright spaces with good visibility and no pockets of shade. Our solutions can help your clients save energy and enhance their green credentials. And with serviceable light engines you can upgrade to future LEDs without having to replace the entire luminaire. Our waterproof Pacific LED provides high quality white light with excellent beam control to minimise glare, an important factor in applications like parking garages. The robust design is quick and easy to install and can be mounted individually or in line to aid guidance.

Lighting can be programmed to switch on and off at dusk and dawn. By using sensors, your system can adjust light levels to meet variable light conditions and by employing motion sensors, it can sense people approaching and brighten lighting instantly in response, before returning to a 'dimmed' setting – especially useful in off-peak hours.

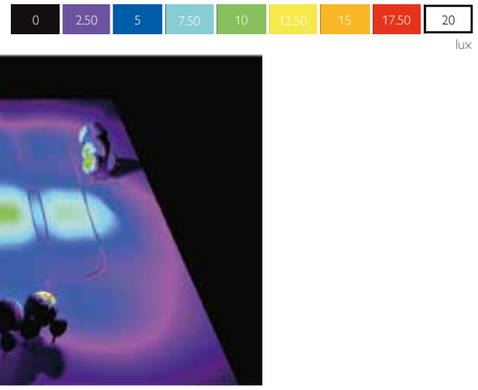


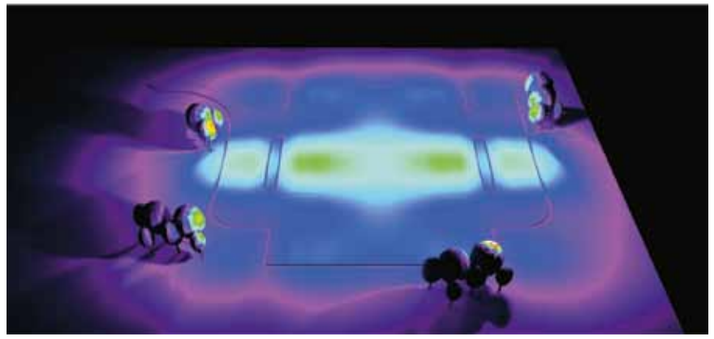


Outdoor **Standard**

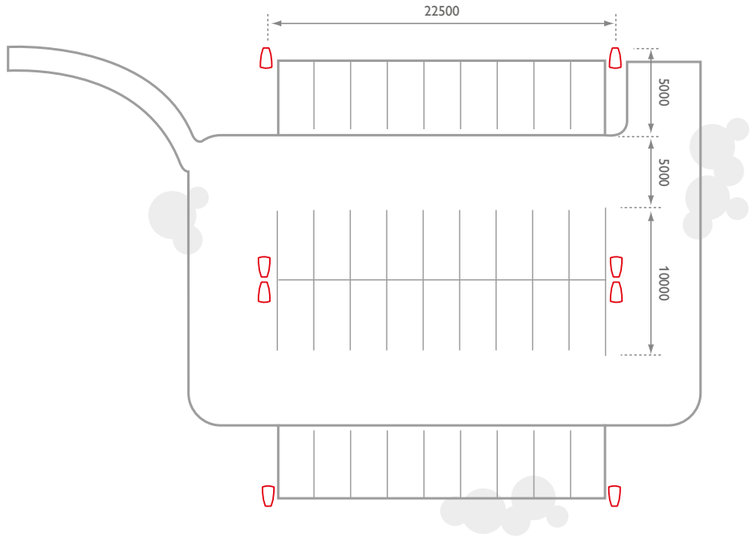
Our Standard setup uses Fortimo based luminaires on an 8 metre mast.

Isolux diagram





Plan view



Scale: **1:200**
All dimensions in millimetres

Luminaires used



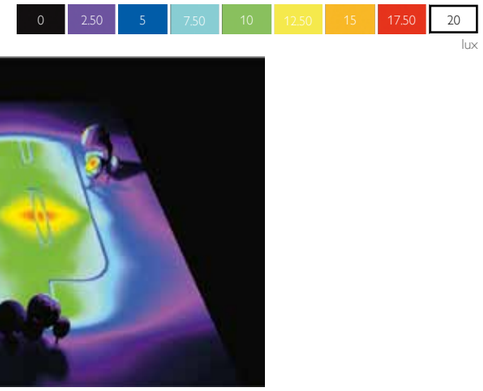
Koffer² Fortimo
In and around the car park

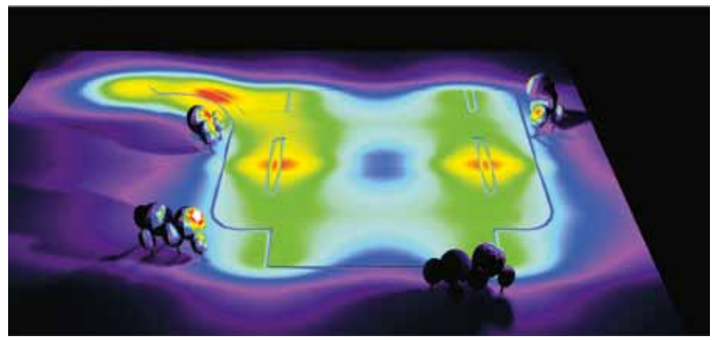
- Stylish with minimalist design
- Choice of 3000K and 4000K colour temperatures
- Housing in high pressure die cast aluminium coating
- Energy efficiency and very low maintenance
- Easy to upgrade LED modules

Outdoor **Advanced**

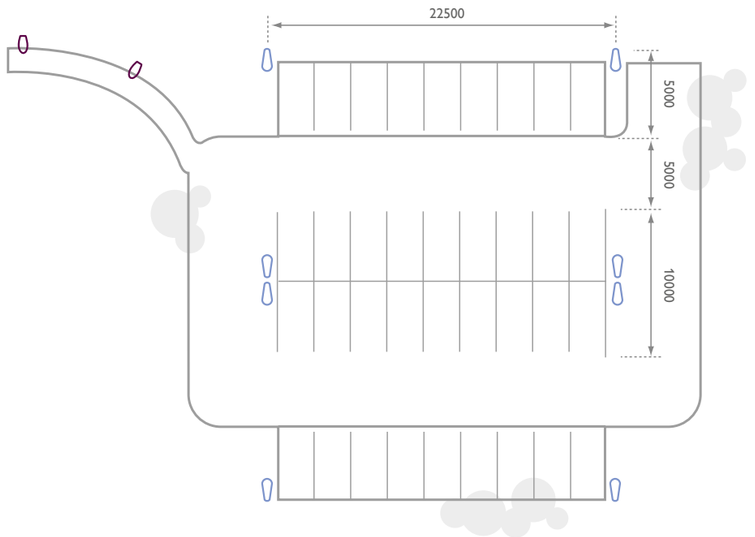
The same setup as Standard design but with advanced luminaires and additional luminaires to light pathways, mounted on 6 metre masts.

Isolux diagram





Plan view



Scale: **1:200**
All dimensions in millimetres

Luminaires used



Mini Iridium LED
Along foot path

- Low cost of ownership
- Superior optics
- Dimming and telemanagement capability
- Ease of installation and maintenances



Iridium² LED (medium)
In and around the car park

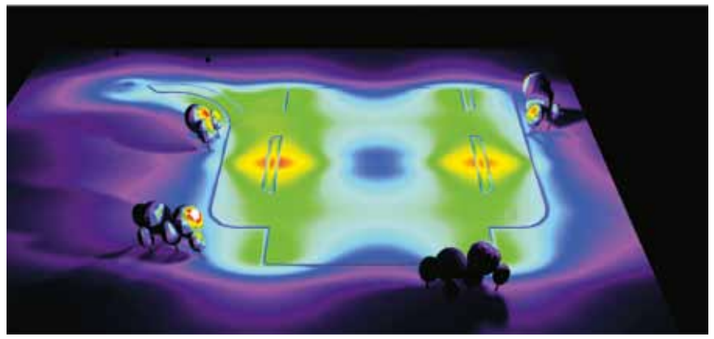
- Aesthetical design
- Easy maintenance with simple tools
- Easy to upgrade with LED technology improvements
- LEDGINE LED technology
- Electronic drivers

Outdoor **Premium**

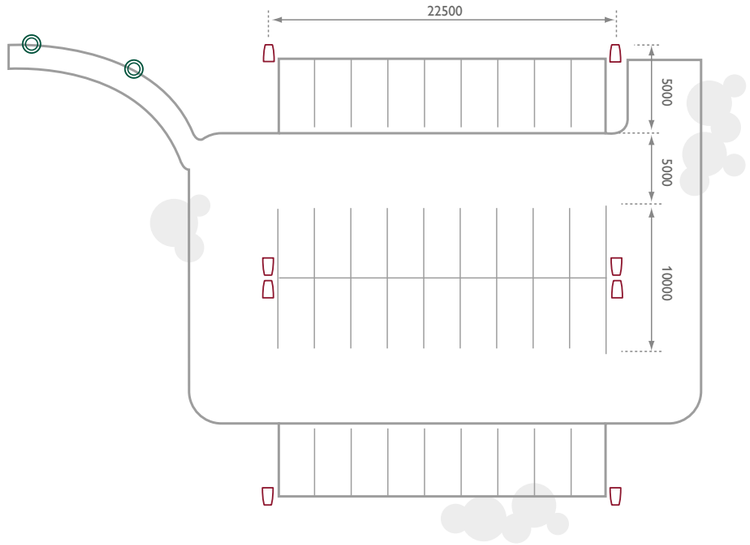
Premium is similar in setup to the Advanced design but using high end luminaires and attractive post top luminaires mounted on 5 metre masts.

Isolux diagram





Plan view



Scale: **1:200**
All dimensions in millimetres

Luminaires used



CitySpirit Cone
Along foot path

- Features a geometrical design and transparent day time appearance
- Blends clean, simple design and high importance
- Direct replacement to HID solutions without compromising space, mounting height or light quality



SpeedStar (medium size)
In and around the car park

- Super thin
- Non glaring light emitting surface
- High Light Output – (50W halogen)
- For general and accent lighting



Controls

Intelligent systems – helping LED lighting work smarter







Philips is synonymous with the creation of sophisticated, reliable and energy-efficient lighting control solutions. We offer a wide portfolio of products, each one aligned to work with our innovative LED solutions – giving you the ability to create inviting, highly functional and impressive office environments.

Our approach includes a focus on energy-efficient methods of creating and supporting aesthetic lighting schemes both inside and out. Harnessing the energy-saving potential of lighting control systems and returning the cost savings to your client is our strength. By implementing a range of energy management strategies, such as presence sensing, zoning, daylight harvesting, dimming and time-based control, users can optimise energy use, while maintaining comfort levels and maximising cost savings.

Already known for their long life and energy savings, harnessing the power of intelligent, programmable control systems helps make efficient LED lighting technology even better. Here we highlight three product options, starting from standard simple 'plug and play' solutions through to premium fully scalable, integrated networked solutions for both indoor and outdoor use.

The goal with controls – to have the right amount of light on only when and where it's needed, to reduce carbon emissions and energy, create ambience and increase your clients' employee comfort. Savings of up to 30% can be achieved by simply turning the lights off in unoccupied areas.

Standard – OccuSwitch



Energy Reduction through Stand Alone Presence and Daylight Control

Our starting point – a simple to install and use device, designed to work with any luminaire type.

OccuSwitch DALI optimises energy savings by using intelligent daylight controls. It is a combined sensor and controller, which will dim and switch the lights in a room or area upon occupancy and according to the available daylight. With options for local override, parallel operation and network links to building management systems. It is easy to install, requires limited, if any commissioning.

OccuSwitch Wireless is the perfect solution. A wireless sensor can be placed anywhere required, easily and quickly. When the system detects appropriate levels of light, the luminaires will be dimmed or even switched off, saving up to 55% energy. It dims lights in vacant areas instead of switching them off, creating a comfortable environment that always feels safe to work in.

All OccuSwitch family members have automatic movement detectors that switch lights on and off for you – intelligent solutions that detect the slightest movement and are quick and easy to install, so your client can start saving, from the moment they are installed.

Advanced – ToBeTouched



Stand Alone Scene Setting

The ToBeTouched range consists of intuitive user interfaces designed to promote user interactivity with the system and luminaires, allowing users to fit the mood to the occasion. There is a ToBeTouched interface for almost every luminaire or controller. This product answers the need for stand-alone with no commissioning. The ToBeTouched range currently comprises four models. These range from a simple on/off switch and a version with dimming to a cool/warm-white controller and a full-colour model.

Features and benefits include the choice of an infinite variety of colours with one touch, thanks to the user-friendly colour ring, exciting design, ease of installation and customisation, effectively 'plug and play', a glowing light ring, providing feedback with light, DMX-DALI and RC5-IR compliance, four different models and presence detection compatibility with the ToBeTouched DALI model.

Changing the colour and intensity of lighting is simple, via the iconic style and ease of interaction of the colour ring ToBeTouched system. System options offer the ability to dial in infinite colour combinations through the RGB colour wheel, or a selection of white light settings.

Premium – Dynalite



Enhanced Control

Dynalite lighting control systems allow building owners to create inviting, highly functional office environments – ones that stimulate productivity and optimise energy use, while permitting users to tailor work areas to specific tasks and accommodate future layout and occupancy changes. By implementing intelligent systems that ensure lighting is only activated when and where it is required, building owners can optimise environmental performance and minimise operating and maintenance costs.

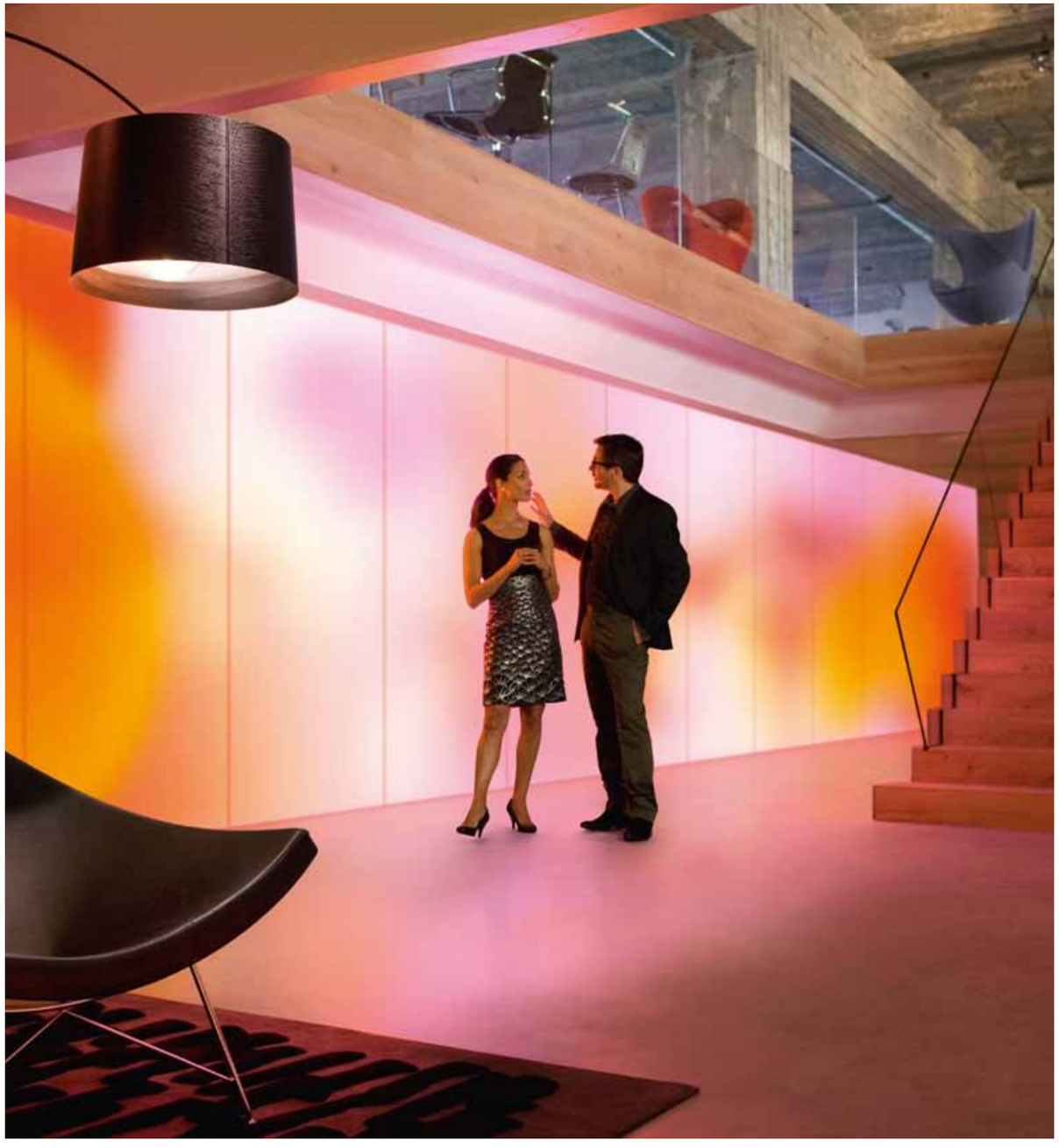
Advanced scene setting and energy reduction is all possible through our intelligent Dynalite control system. Pre-programme multi media lighting scenes for meeting rooms, create ambience to stimulate debate in meeting rooms or relax in break out areas. Dynalite is also the ideal solution to help enhance your clients brand image in reception areas.

By integrating our systems with building management systems (BMS) and incorporating third-party control elements, building stakeholders can further enhance energy savings and earn credit points across differing regional and country energy rating systems. To accommodate 'building churn' – where tenancies change, staff numbers fluctuate and office activities vary – Philips Dynalite adopts a scalable approach. By ensuring lighting and energy-management systems can accommodate this re-configuration of the office space, building owners can avoid wasteful and intrusive lighting refurbishments and extend the lifetime of their system.

Luminous Textile

Bring spaces alive

Luminous Textile is an easy-fit system that integrates LED modules within acoustic textile panels to show dynamic content and soften sound. Multiple panels can be arranged in numerous ways to bring each space alive from one huge mood wall to individual panels scattered across a wall.









Luminous Textile

- **Freedom of design**
- **Maximum 18 modules, standard or customised**
- **Pixel pitch:** 60 mm
- **Panel Thickness:** 130 mm (120 mm for panel, 10 mm for mounting)
- **Min. & max. size per standard panel:** Min. size 1.20m x 0.72m (increasing with steps of 1.20m x 0.36m) to max. size 1.20m x 6.48m
- **Min. & max.weight per panel:** Min. weight15kg for smallest panel to max. weight 67kg for biggest panel
- **Power usage:** Min. usage 60W for smallest panel to max. usage 450W for biggest panel
- **Front fabric:** Kvadrat textile (7 textures, upto 8 colors per texture)
- **Number of mounting points:** Mountable with bolts and magnets for precise mounting per panel. Number of mounting points depend on panel size
- **Number of panels connected:** Unlimited number of panels. Master > slaves, connected via router
- **IP rating:** Indoor only (IP20)
- **Operating temperature range:** 5-35°C / 41-95 °F
- **Operating max relative humidity range:** 95% (non condensing)
- **Input voltage:** 100-240 V AC 50/60 Hz
- **Acoustic properties:** Depending on textile, from ISO 11654 Category D and better
- **Light output:** Depending on choice of frontfabric. Example "Toto 102" (white color) is max. 120 cd / m2
- **Content included:** Access to standard content included, premium content subscriptions & customised content possible
- **Content management:** Content management software included in price
- **System integration:** Yes, via KiNet

Top tips for specifying LED's

Standardising the performance criteria for LED luminaires

The rise of LED lighting is driving a significant transformation of our lighting industry – offering flexibility, creativity, programmability and energy efficiency.

But standards vary tremendously. In recent years the lighting market has been flooded by a vast number of new and unproven entrants. Some making claims about their products' performance that don't stand up to scrutiny, while established manufacturers stand by their track records. Who to believe? As things stand, it can be difficult to know who to trust to deliver on their promises, which potentially undermines the whole LED lighting industry.

A CELMA guiding paper published in November 2011 aims to help bring clarity by introducing a universal set of quality criteria described in two IEC/PAS documents. As a user of LED luminaires it is important to apply the same set of standardised, comparable quality criteria when evaluating manufacturers' claims. LED luminaire specifications should always be measured against these.

There are three elements that can be standardised: technical definitions, measurement methods and limiting values. The IEC/PAS performance requirement documents describe the definition of quality criteria and the way to measure them. This means you will now be able to judge claims on an equal, like-for-like basis – creating a 'level playing field' that truly serves the interests of end-users, specifiers, designers and manufacturers.







The IEC/PAS documents suggest the following list of quality criteria to be considered when evaluating manufacturer's claims:

a) Rated input power
b) Rated luminous flux
c) LED luminaire efficacy
d) Luminous intensity distribution
e) Photometric code
f) Correlated Colour Temperature (CCT)
g) Rated Colour Rendering Index (CRI)
h) Rated chromaticity co-ordinate values both initial and maintained
i) Lumen maintenance code
j) Rated life (in h) of the LED module and the associated rated lumen maintenance (Lx)
k) Failure fraction (Fy), corresponding to the rated life of the LED module in the luminaire
l) Ambient temperature (tq) for a luminaire.

A brief summary of the different quality criteria:

a) **Rated input power**
The rated input power shows the amount of energy consumed by a luminaire, including its power supply. It is expressed in watts.

b) **Rated luminous flux**
It corresponds to the light emitted by the luminaire which is expressed in lumen (unit of light output). It is expressed in lumens.

c) **LED luminaire efficacy**
The measured initial luminous flux divided by the measured initial input power of the same individual LED luminaire. It is expressed in lumens per watt.

d) **Luminous intensity distribution**
The spatial distribution of the luminous flux graphically depicted in a luminous intensity distribution curve, which is usually expressed in a polar coordinate diagram representing the light intensity as a function of angle about a light source. It is expressed in cd = lm × sr-1.

e) **Photometric code**
A six digit photometric code that displays the important 'quality of light' parameters: CRI, CCT, chromaticity co-ordinates and luminous flux.

f) **Rated Colour Rendering Index (CRI)**
The colour rendering of a LED module giving white light is the effect on the color appearance of objects by conscious or subconscious comparison with their color appearance under a reference illuminant.

g) **Correlated Colour Temperature (CCT)**
The colour temperature of a LED module giving white light is determined by comparing the light emitted by the LED module with light of an ideal black-body radiator at the given temperature. It is expressed in Kelvin.

h) **Rated chromaticity co-ordinate values** both initial and maintained.
The behaviour of the chromaticity co-ordinates of a LED module expressed in two measurement results of both initial and maintained chromaticity co-ordinates.

i) **Lumen maintenance code**
The measured initial luminous flux (initial value) is normalised to 100% and used as the first data point for determining the LED module life. The maintained luminous flux (maintained value) is measured at 25 % of rated life time up to a maximum of 6.000 hours and expressed as percentage of the initial value. The maintained value determines the lumen maintenance code.

j) **Rated life** of the LED module and the associated rated lumen maintenance (Lx).
The length of time during which a population of LED modules provides more than the claimed percentage (x) of the initial luminous flux always published in combination with the failure fraction. It is expressed in hours.

k) **Failure fraction** (Fy), corresponding to the rated life of the LED module in the luminaire.
The percentage (y) of a number of LED modules of the same type at their rated life designates the percentage (fraction) of failures. This failure fraction expresses the combined effect of all components of a module including mechanical, as far as the light output is concerned. The effect of the LED could either be less light than claimed or no light at all.

l) **Ambient temperature** (tq) for a luminaire.
The ambient temperature around the luminaire related to the specified performance. For a given performance claim the ambient temperature (tq) is a fixed value. It is possible to specify performance claims at different ambient temperatures. It is expressed in degrees Celsius.

Note: please be aware that you have to make sure that the tq shall be in accordance with the actual application where the LED luminaire will be used.

For more information see: 'Apples and pears – a CELMA guiding paper: why standardisation of performance criteria for LED luminaries is important'.



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