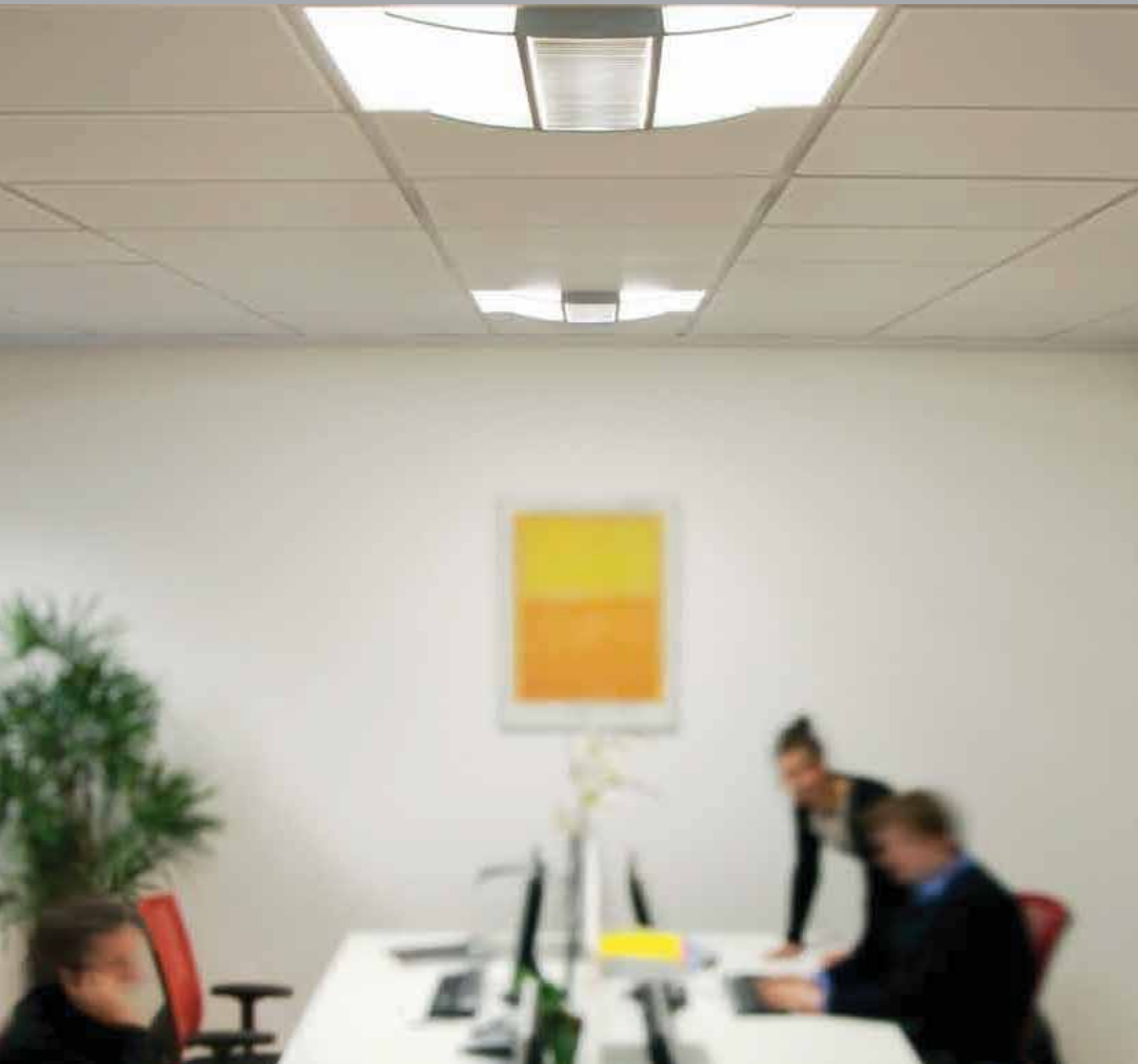


THORN



Menlo³

Lighting to the power of three





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Today's lighting designers face increasing challenges from new guidelines, energy restrictions, ceiling types and installation practices. The powerful Menlo³ range enables you to comply with all of these requirements easily, giving you back the freedom to create high quality, creative and attractive lighting schemes.

Menlo³ - lighting to the power of 3



Its design has been influenced by extensive research into what users look for in a dual component luminaire*. The result is a product which meets the top 3 needs:

1. Good photometric performance tailored via three optics (p.8)

2. Good visual aesthetics across all three geometric shapes (p.10)



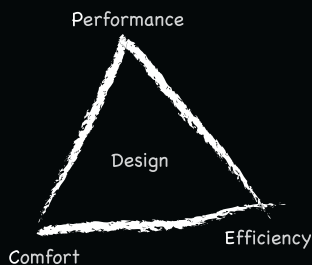
3. Choice and flexibility of range including three mounting options (p.15)

Menlo³ satisfies all 3 of these requirements and more, making it the clear choice in a range of office, education and commercial applications.

*Customer comments from focus group are used throughout this brochure anonymously.



“It's got to be *high quality*, it's got to be *high performance*, it's got to look good and it doesn't need to look the same as everything else...”



Performance

The 'Performance' component of PEC addresses the visual effectiveness of the lighting scheme in performing the required task, wherever that may be. Menlo³'s comprehensive range allows schemes to be tailored to a particular task or remain flexible enough to accommodate variability.

Thorn's PEC philosophy for Office Lighting

Successful modern office developments give equal importance to financial, environmental and social concerns and good office lighting design makes an important contribution to an economic and productive working environment, being linked to 15% reductions in absenteeism and 3-20% increases in productivity (Source: BCO/CABE)

Menlo³ fully embodies Thorn's PEC approach to office lighting, marrying user **comfort** and **performance** with scheme **efficiency**. Sophisticated materials and optical design make building efficiency targets easy to achieve, enabling designers to focus on personal and environmental factors that affect employees.

With a wide choice of optics, mounting options and styling, Menlo³ not only provides appropriate task lighting but also creates a stimulating and pleasant lit working environment for people. This holistic approach all adds up to reduced absenteeism and staff turnover, increased satisfaction and productivity and ultimately lower costs.

Saving money, and the planet

It is generally assumed that being green costs money. Menlo³ is an example of how truly sustainable product design is concerned with minimising the use of materials, resources and energy which collectively reduces costs over time.

It starts with efficient light sources such as T16 lamps or LED technology that produce high values of lumens/watt. It is then essential that the maximum amount of useful light is produced by minimising losses within the fitting and directing it to where it is required. The sophisticated optical design of Menlo³ achieves light output ratios as high as 86% and luminaire efficacy up to 62 luminaire lumens per circuit watt (lm/W). These efficiencies result in fewer fittings to light the space, using less raw materials and resources and reducing installation and operating costs.

We then add highly efficient electronics and lighting management technology. Moving from conventional magnetic technology to electronic ballasts and T16 lamps can give an energy reduction of up to 40%. Menlo³ offers DSI or DALI dimmable gear as standard, which when linked with presence and daylight detection can achieve energy savings over 70% (Source: CELMA).

Innovation in product design is matched with equally innovative manufacturing techniques such as deep drawing the shallow 70mm depth body and producing the mini-vane louvre in one piece. All of this contributes to reduced materials, wastage, energy use and CO₂ emissions for a truly sustainable luminaire.

The EU Directive on the Energy Performance of Buildings (EPB) contains a range of provisions aimed at improving energy performance of residential and non-residential buildings.

Although the EPBD must be implemented by each EU Member State, the method of implementation is up to individual countries, such as the Part L of the UK Building Regulations.

Approved Document Part L requires that for office, industrial and storage areas luminaire performance shall be at least 55 luminaire lm/W and other types of spaces require a performance of at least 55 lamp lumens per circuit watt.

Menlo³ ensures future proofing of design by most of the variants exceeding 55 luminaire lm/W and all variants exceeding 55 lamp lumens per circuit watt.

Furthermore with the inclusion into Part L2A of the controls factor already used in Part L2B, all Menlo³ luminaires will comply with Part L requirements when used in conjunction with lighting controls.

Efficiency

Truly 'efficient' lighting not only reduces direct energy consumption but also minimises wasted light and resources and addresses the broader concerns of sustainability and environmental impact. Menlo³'s highly efficient photometric performance is achieved via a product design that minimises material usage and reduces installation time and effort.

Comfort

The 'Comfort' component of PEC addresses the physiological and psychological needs of people and recognises the proven role of light in influencing mood, stimulation and wellness, very important in offices where an individual worker can spend over 1800hrs per year. Menlo³'s light quality and unique styling gives designers the freedom to create visually stimulating and inspiring office spaces.



High-tech lighting for the high-tech office

The ubiquitous computer screen, the LCD or Plasma display screens seen in meeting rooms and receptions areas, and other hand-held gadgets: all require sensitive lighting to prevent reflections from obscuring information, especially those with high gloss finishes. A key requirement is the control of surface brightness on light fittings within the field of view of the display screen.

Menlo³ uses precision optics and state of the art diffusing and reflecting materials to provide a range of glare control options that avoid the disability glare of luminaire reflections in all types of display screen equipment. This prevents the user from having to constantly adjust their view to see around screen reflections, thus eliminating frustration and reducing fatigue, particularly for intensive computer screen users.

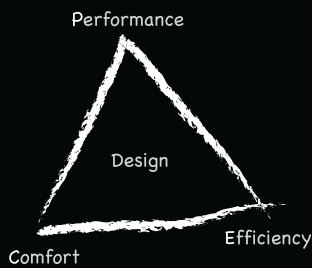
Lighting Guides 3 and 7 from the Society of Light and Lighting recommend that for modern display screen technology using modern (positive polarity) software luminaires with a maximum luminance of 1500 cd/m² should be used.

These limits are expected to be increased to 3000 cd/m² in the imminent update to 'BS EN 12464-1: 2002 Lighting of Workplaces - Part 1: Indoor workplaces' to reflect improvements in display screen technology, as is already the case in ISO9241-307.

Menlo³ with its selection of optical controllers provides a variety of maximum luminance values, allowing flexible design that accommodates a wide variety of DSE types and usage within an area.

Glare options

	Recessed						Semi-Recessed						Surface			Circular	
	Louvre		Diffuser		MPT		Louvre		Diffuser		MPT		Louvre	Diffuser	MPT	Diffuser	LED
Luminance Limit Required	1x55W	2x24W	1x55W	2x24W	1x55W	2x24W	1x55W	2x24W	1x55W	2x24W	1x55W	2x24W	1x54W	1x54W	1x54W	4x14W	LED
<1000 cd/m ²	•	•															
<1500 cd/m ²	•	•									•	•	•				
<2000 cd/m ²	•	•					•				•	•	•	•			
<3000 cd/m ²	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•



Performance

The 'Performance' component of PEC addresses the visual effectiveness of the lighting scheme in performing the required task, wherever that may be. Menlo³'s comprehensive range allows schemes to be tailored to a particular task or remain flexible enough to accommodate variability.



Task light for today's multi-taskers

Office work traditionally involved working with paper on flat horizontal desks. Now computer screens, flip charts, white boards and vertical storage systems proliferate. The various visual tasks are on differing working planes and the work which the eyes are now expected to perform is different, more complex and more demanding.

Menlo³'s photometric design embraces this modern office, where the task or person may be anywhere in the room. A broad light distribution delivers controlled and uniform horizontal illumination across the space. A strong component of vertical distribution reveals details and enables discrimination in vertical task situations, demonstrated by average levels of cylindrical illuminance of over 200 lux. An effective balance of direct and indirect diffused light from the dual component design gives excellent modelling that is neither too harsh nor too flat. This helps people and objects to be more easily discerned in a complex, noisy and fast-moving environment and facilitates face-to-face communication.

The benefits are unmistakable. If we can see the task clearly fewer errors are made, less time is consumed, eyestrain and fatigue are reduced, resulting in higher productivity. Menlo³ achieves this in a highly efficient way providing effective all-round illumination of the office from one highly attractive and efficient luminaire type.

BS EN 12464-1: 2002 Lighting of Workplaces - Part 1: Indoor workplaces is currently being updated and will include recommendations on cylindrical illuminance (ECyl) and modelling index (MI).

ECyl is a convenient way to measure vertical illuminance through 360° to assess all-round task visibility. By delivering Cylindrical illuminances levels of over 200 Lux we can ensure that faces or vertical task surfaces are well lit where ever they are and in which ever direction they point.

Furthermore, by ensuring a Modelling index of over 0.3 we can enhance face-to-face communication by lighting facial features clearly and pleasantly.

Menlo³ has therefore been designed to produce excellent levels of cylindrical illuminance and modelling.

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People are our most important asset

The success of an organisation can be measured in no small part by the mood of its workforce and this in turn is influenced by their surroundings. A basic or poorly maintained work environment with utility lighting can decrease moral, increase staff turnover and is bad business sense.

Conversely, staff in a quality workplace with an ambience that inspires feel valued and are proud to be part of the organisation. Motivation intensifies, loyalty develops, productivity increases, reputation is enhanced, profits are generated.

Menlo³ is a statement of lighting excellence. Innovative optics such as mini-vane louvres and micro-prism diffusers ensure workers have a glare-free and comfortable view throughout the office. The unique twin light chamber softens and smoothes the brightness transition across the luminaire, minimising uncomfortable sharp changes in contrast. A perfect blend of direct/indirect light models faces pleasantly.

Menlo³ is also a lifestyle statement for the workplace. Its soft light and quality styling helps create a pleasant and visually interesting lit environment, from its semi-recessed or surface mounted versions that provide uplifting illumination of the ceiling and walls to the recessed version with its softly glowing light chambers that lift the ceiling brightness without breaking the ceiling line (see page 8).

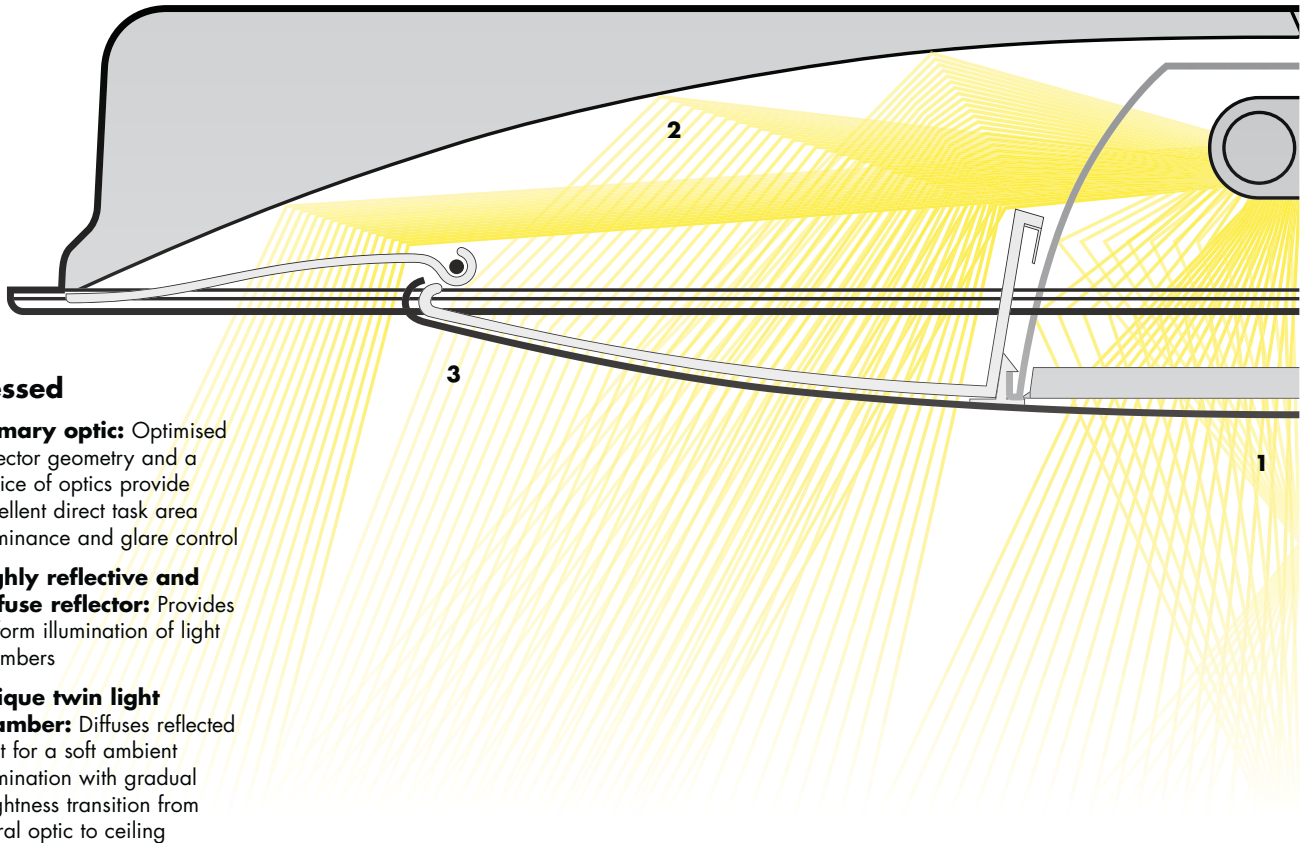


Traditional window design used 'splayed reveals' to soften the transition from bright daylight to the dimmer light levels within the room.

Menlo³ recognises the benefits of this technique and provides a soft luminance transition across the light fitting, softening the brightness transition from fixture to ceiling (see page 12).

Outstanding photometrics

Our research identified photometric excellence as the primary consideration in office luminaire selection. The sophisticated optical design of Menlo³ delivers with style and imagination and can be uniquely tailored to its environment.



Recessed

- 1. Primary optic:** Optimised reflector geometry and a choice of optics provide excellent direct task area illuminance and glare control
- 2. Highly reflective and diffuse reflector:** Provides uniform illumination of light chambers
- 3. Unique twin light chamber:** Diffuses reflected light for a soft ambient illumination with gradual brightness transition from central optic to ceiling

The recessed Menlo³ with its unique twin light chamber gives a bright ceiling impression while retaining clean ceiling lines. Low glare directional illuminance and diffused ambient illumination provide optimal visual effectiveness for the task and excellent facial modelling. The central optic provides optimum thermal conditions for efficient light output and uses precision internal reflectors to control light flow into the surrounding chambers. This creates a soft luminance transition across the luminaire, minimising eye strain caused by sudden changes in brightness. Discreet optical windows in the endcap allow a soft drift of light onto the ceiling to further soften the contrast between ceiling and luminaire.

A fully recessed Menlo³ Circular offers an alternative aesthetic.

Optics

Three optics are offered to meet the exact requirements for efficiency, glare control and aesthetics.

1. Minivane louvre

Using the highest reflectance aluminium, Miro Silver®, in an innovative design combines efficiency with very low luminances and minimises direct lamp view to avoid disability glare and minimise 'eyebrow' glare of traditional louvres.



2. Opal Diffuser

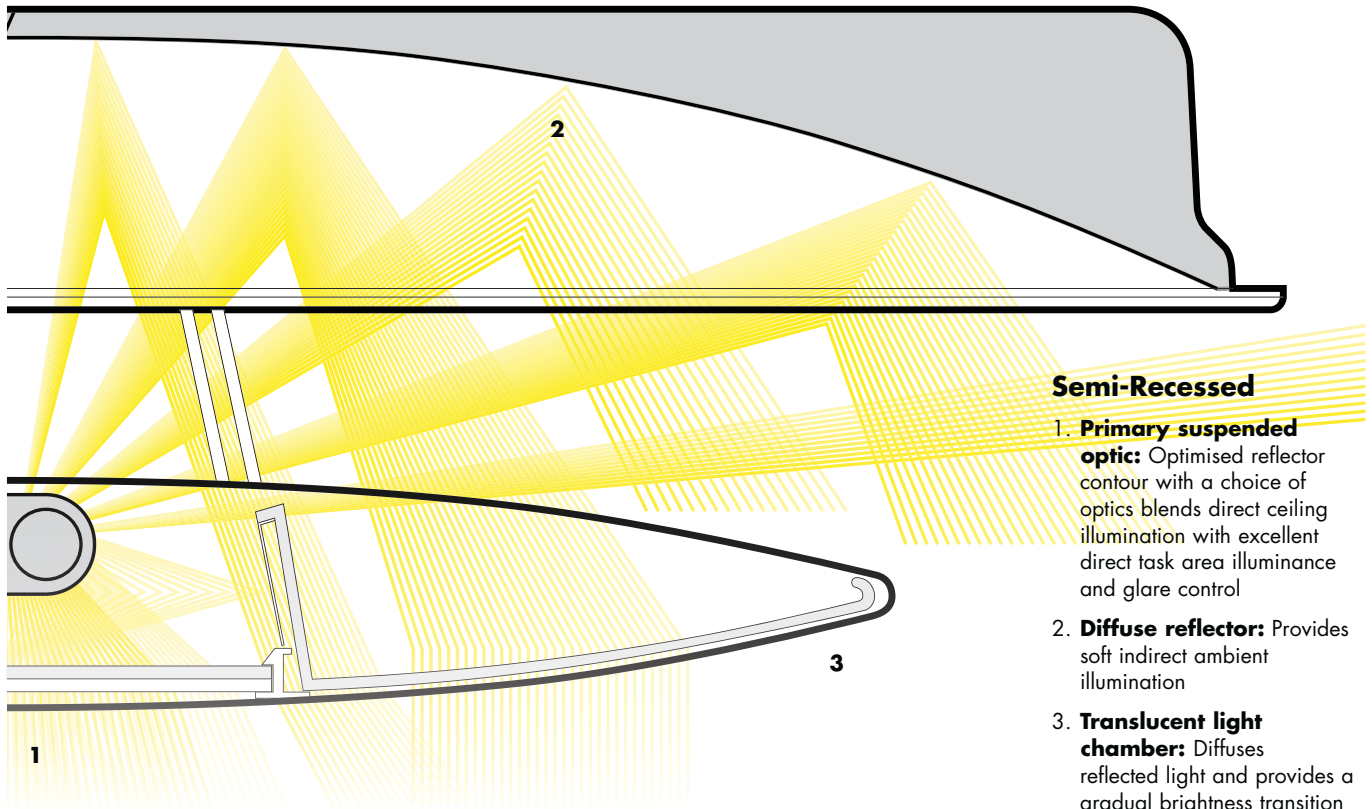
High purity PMMA diffuser pearl material diffuses the lamp image and delivers extremely high optical efficiency for maximum light output within recommended luminance limits for modern visual display screens.



3. Micro-Prism Technology (MPT) Diffuser

The Micro-prism geometry reduces disability glare at low angles whilst minimising impact on luminaire efficiency, and combines with a diffusing pearl layer to create a highly comfortable and diffused lamp image at any viewing angle.





Semi-Recessed

1. **Primary suspended optic:** Optimised reflector contour with a choice of optics blends direct ceiling illumination with excellent direct task area illuminance and glare control
2. **Diffuse reflector:** Provides soft indirect ambient illumination
3. **Translucent light chamber:** Diffuses reflected light and provides a gradual brightness transition from central optic

Overview of Photometric Performance:

Recessed	2x24W T16			1x55W TC-L Amalgam*		
	LOR	Glare	Efficacy	LOR	Glare	Efficacy
Louvre	78%	807cd/sqm	56lm/W	69%	925cd/sqm	55lm/W
Diffuser	86%	2673cd/sqm	62lm/W	77%	3313cd/sqm	61lm/W
MPT	78%	2483cd/sqm	56lm/W	73%	3141cd/sqm	58lm/W

Semi Recessed	2x24W T16			1x55W TC-L Amalgam*		
	LOR	Glare	Efficacy	LOR	Glare	Efficacy
Louvre	80%	2075cd/sqm	58lm/W	77%	2341cd/sqm	61lm/W
Diffuser	86%	2090cd/sqm	62lm/W	78%	2522cd/sqm	62lm/W
MPT	80%	1491cd/sqm	58lm/W	73%	2152cd/sqm	58lm/W

Surface	1x54W T16		
	LOR	Glare	Efficacy
Louvre	72%	1117cd/sqm	55lm/W
Diffuser	80%	1475cd/sqm	61lm/W
MPT	74%	1742cd/sqm	57lm/W

* Amalgam lamp recommended for optimum Light Output (will be 2-3% lower with standard TC-L)

Where direct illumination of the ceiling and walls is required, the semi-recessed Menlo³ provides completely balanced illumination of all room surfaces for a truly uplifting lit environment. A blend of low glare direct illuminance and indirect illuminance delivers comfortable and even task illumination, whilst optimised internal reflectors deliver 30% of the task illuminance level on the ceiling and 50% on the walls. The discreetly suspended light chamber appears to float in space and allows 360° even ceiling illumination.

The surface mounted Menlo³ employs the same principles in an alternative geometric form.

Aesthetic quality

With its soft glow and pure, clean lines Menlo³ can complement and add to the style and ambience of its surroundings



Curves are simple and pure, textures are soft, matt or satin and the overall effect exudes quality.

The 3 geometric shapes and mounting options allow the same aesthetic styling to complement the architecture and ambience of different spaces.



For subtle architectural integration the recessed version's unique twin light chamber blends seamlessly into the ceiling line, whilst the sleek suspended optic of the semi-recessed version floats discretely beneath a very shallow coffer.

For a more striking presence the bold lines of the surface version or the unique spherical aesthetic of the circular version make a strong design statement.

“It's got to blend in, have a clean line.”

“I personally prefer something which is drop down and does something more to the ceiling. It makes a feature.”

“What we like to see are things which are properly designed from the ground up, with optics which are specifically designed.”



“It should speak of quality. It should look like it has been crafted with care”

Considerable attention has been paid to the construction quality and material finish of Menlo³. The unique shallow body is deep drawn in one piece from pre-painted steel to give superior strength and corner quality with no joins or sharp edges. High quality and robust cast aluminium endcaps add definition and strength to the soft curves of the diffusers.

Optics have been chosen not only for photometric performance but also a choice of appearance and lit effect. The unique mini-vane louvre design provides a precise modern alternative to conventional louvres, whilst modern micro-prism and diffuser optics provide a softer lit appearance and blurring of the lamp image.

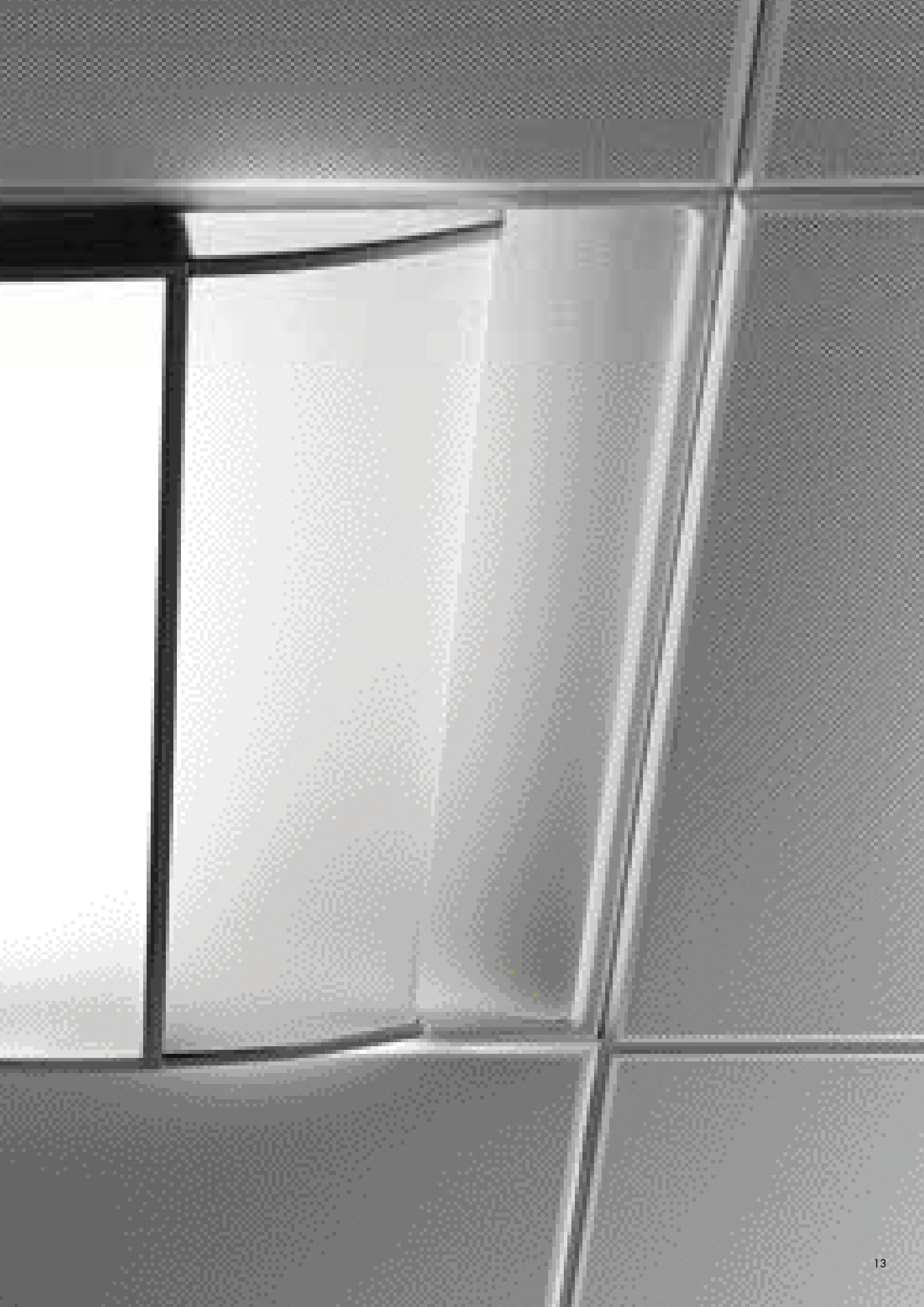




Luminance transition

Traditional window design used 'splayed reveals' to soften the transition from bright daylight to the dimmer light levels within the room.





Menlo³ brings the benefits of this traditional architectural technique to the modern office. Its unique twin light chamber creates a gradual 'luminance' transition across the luminaire, softening the contrast from fixture to ceiling and reducing eyestrain.









Choice - range overview





Mounting - Recessed				
Lamp options	Optics			
	Louvre	Diffuser	MPT	Circular
				
1X55W TC-L	x	x	x	
2X24W T16	x	x	x	
4X14W T16				x
58W LED				x

Mounting - Semi-Recessed			
Lamp options	Optics		
	Louvre	Diffuser	MPT
			
1X55W TC-L	x	x	x
2X24W T16	x	x	x

Mounting - Surface			
Lamp options	Optics		
	Louvre	Diffuser	MPT
			
1X54W T16	x	x	x

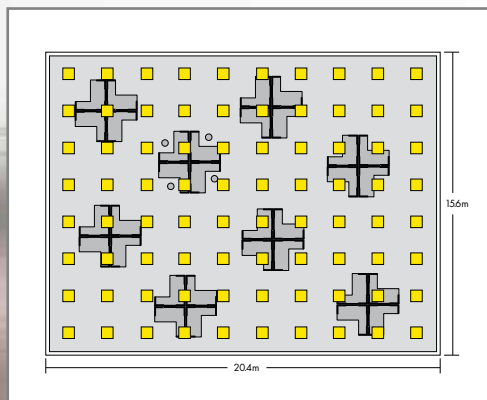
Menlo³ is available in a wide choice of optics and mounting combinations, but certain versions have been optimised for particular performance characteristics, as the following pages demonstrate with examples.

Menlo³ Recessed with louvre

Low on glare, high on style



“Keep it simple, but something different”



Provides the lowest luminance at 65° without compromising on light output or style

- Crisp, modern mini-vane louvre provides efficient direct illumination with excellent lamp shielding
- Unique twin light chamber gives soft, diffused indirect illumination and creates ceiling brightness for an uplifting ambience
- Very low luminance (below 1000cd/m² at the critical 65° angle) prevents veiling reflections even in glare sensitive screens
- Batwing light distribution gives a coherent flow of light across the space to make it visually easier to understand
- Miro Silver[®] louvre material produces high LOR, up to 78%, and luminaire efficacy, up to 56 luminaire lm/W

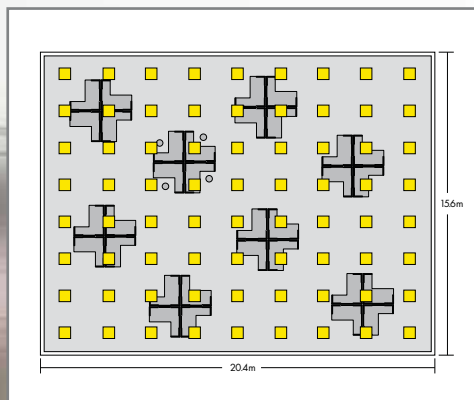
Recessed Menlo³ also available with diffuser or MPT optics for even higher efficiency and lamp obscurity or an alternative aesthetic.

Menlo³ Recessed with diffuser

Efficiency and simplicity



“The look should be clean”



Provides the highest light output in a pure minimal aesthetic

- Sleek minimal design with unique twin light chamber that smoothes the brightness transition across the luminaire
- Central diffuser provides extremely efficient direct illumination with no direct lamp view and acceptable luminance for modern matt screens (less than 3000cd/m²)
- Glowing light chamber gives soft, diffused indirect illumination and creates ceiling brightness for an uplifting ambience
- Broad distribution and up to 86% LOR allows uniform room illumination from minimal luminaires with outstanding efficacy of up to 62 luminaire lm/W
- Gives excellent levels of cylindrical illumination and modelling for easier detection of detail in vertical tasks and face to face communication

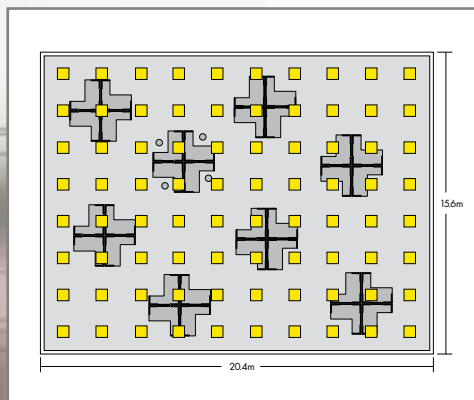
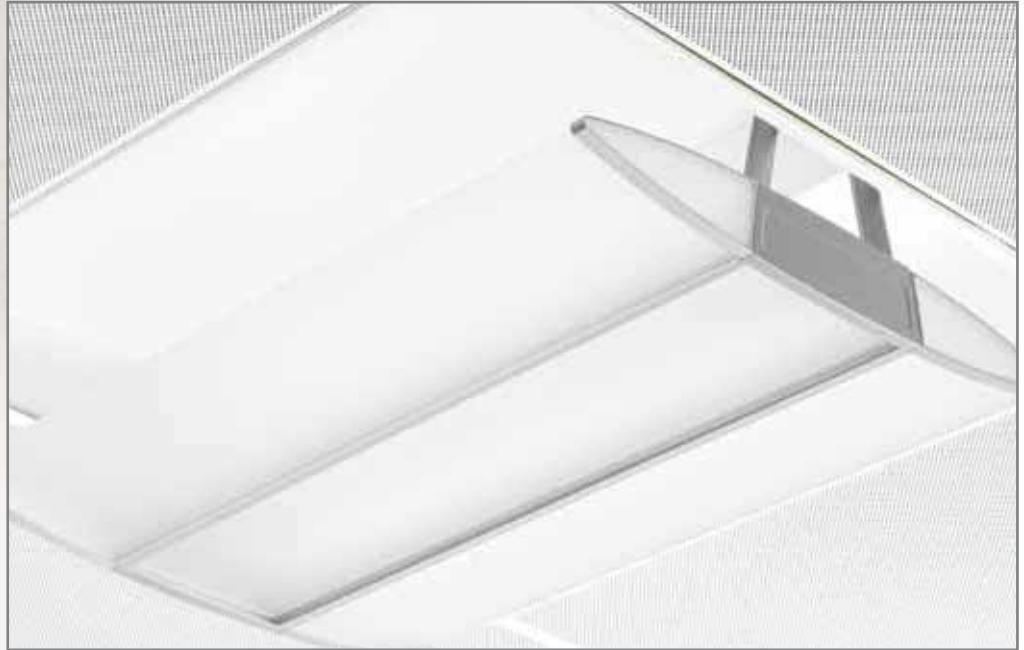
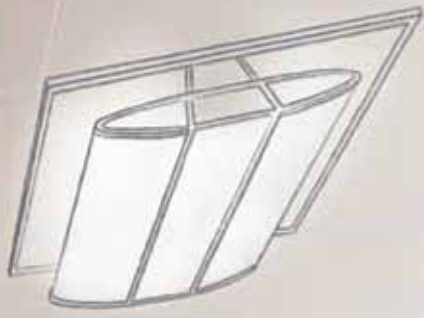
Recessed Menlo³ also available with louvre or MPT optics for even lower glare or an alternative aesthetic.

Menlo³ Semi-Recessed with MPT

Purely balanced lighting



“We want to get light onto surfaces, not just downwards”



Provides efficient illumination of all surfaces from one easily installed luminaire type

- Discreetly suspended sleek optic appears to float in space, allowing 360° ceiling illumination with minimal shadowing
- Delivers 30% of task area illuminance onto the ceiling and 50% onto the walls to produce an uplifting environment
- Central Micro-prism optic ensures a soft, comfortable lamp image at any viewing angle with up to 80% LOR and efficacy (up to 62 luminaire lm/W)
- Evenly lit coffer provides soft indirect illumination with controlled luminance (below 1500cd/m²)
- Gives excellent levels of cylindrical illumination and modelling for easier detection of detail in vertical tasks and face to face communication

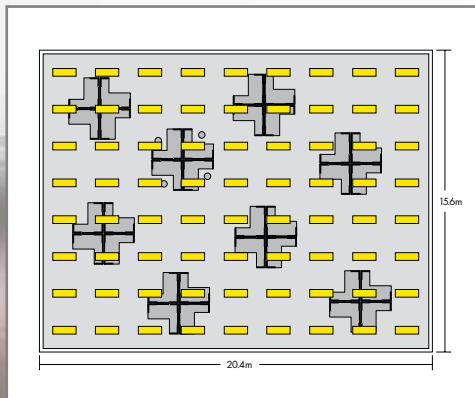
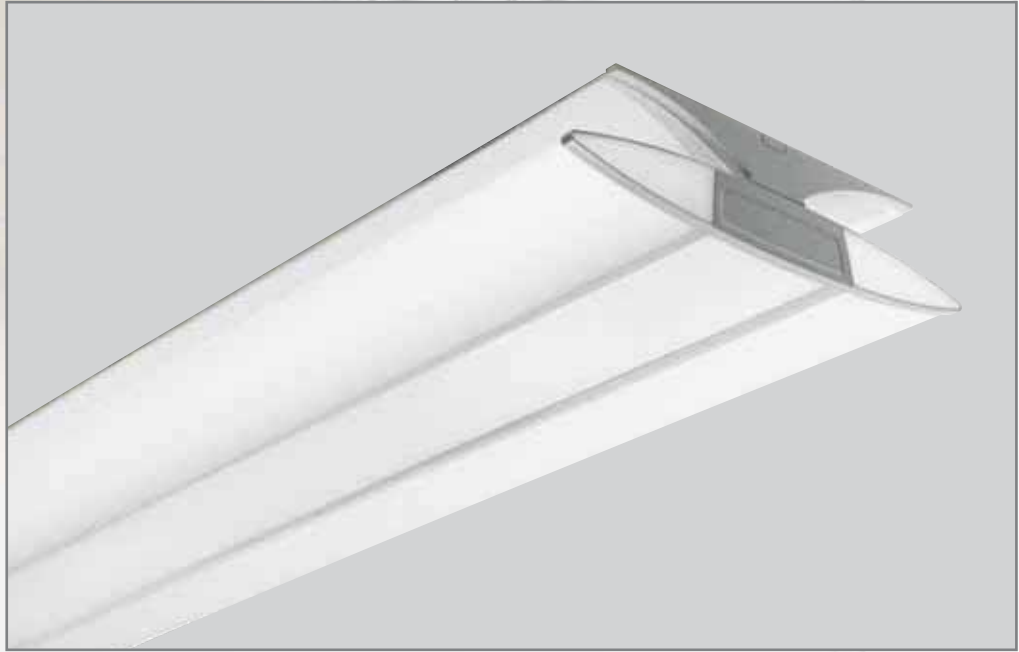
Semi-recessed Menlo³ also available with louvre or diffuser optics for even higher efficiency or an alternative aesthetic.

Menlo³ Surface

Striking and sublime



“You may want to stand out or blend in, it depends”



The same lighting techniques and styling recreated in an alternative mounting method and geometry

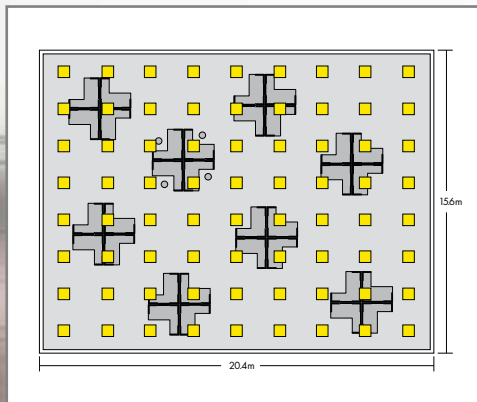
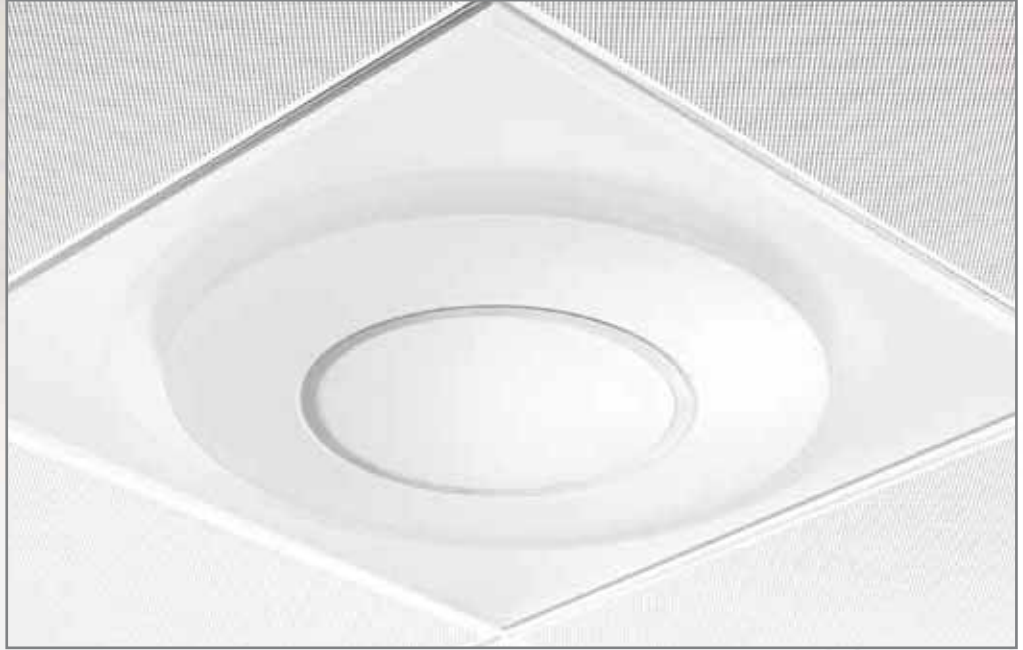
- Sleek rectangular optic combines glare-free directional illuminance with soft ceiling and ambient illumination
- Delivers 30% of task area illuminance onto the ceiling and 50% onto the walls to produce an uplifting environment
- Upper light chamber diffuses indirect illumination for a very controlled luminance at 65° (below 1500cd/m²)
- High performance materials provide LOR up to 80% and luminaire efficacy up to 61 luminaire lm/W
- Available with central louvre, diffuser or MPT optics for differing preferences in efficiency, glare control and aesthetics.

Menlo³ Circular

Dare to be different



“Forget what you are doing now, forget what everyone else is doing now and start with a clean piece of paper, and come up with something which is different”



Takes the concept full circle for a totally alternative aesthetic

- Spherical central diffuser and surrounding light chamber subtly introduces a circular geometry into the ceiling plane for visual interest
- High performance diffuser materials cleverly conceal T16 linear lamps or high performing LEDs to deliver a highly efficient LOR with a uniform lit appearance

Menlo³ makes life as easy as possible for those involved in designing, specifying, realising and managing a quality office lighting scheme

Easy to Control

The demand for flexibility and energy efficiency has made lighting controls an integral part of the modern office, so Menlo³ has control options to suit all types and sizes of application. This makes it easier to create a lit environment that is performing, efficient and comfortable.

**Performance
Providing the best visual effectiveness**

The ability to dim and create lighting scenes gives flexibility, ensuring that the lighting is appropriate to the task and user, wherever they may be.

**Efficiency
Conserving energy and effort**

Presence and daylight linking conserve energy by ensuring unnecessary lighting is turned off. Constant illuminance control via look down sensors can maintain the correct light level throughout the maintenance cycle, which saves the energy that conventional systems waste by initially overlighting the space

**Comfort
Giving people satisfaction and stimulation**

Personalised light, via dimming or scene setting allows the ambience of the space to be altered to suit the user or varied over time, creating a more satisfactory and stimulating environment.

Dimmable luminaire options:

The Menlo³ range offers 3 types of dimmable luminaire to suit differing specifications, so that it can be used with any of Thorn's lighting control packages:

	SensaDigital	SensaModular	SensaLink	SensaAdvanced
Description	A first step to comfort and energy saving for controlling individual or a small group of luminaires with SensaDigital	For single room applications requiring scene setting, daylight and presence linking	A linked management system for larger projects requiring scene setting, daylight and presence linking and infra-red control using built-in sensors connected via a BUS	A lighting management system for larger projects and those requiring greater levels of comfort
Menlo³ with Integrated Mini-Sensor HFL Option (HFS) Intelligent luminaire with discreet built-in presence/daylight/infra-red detector	Use standalone or as master luminaire controlling up to 3 HFD Menlo ³ luminaires	N/A	Use as master controlling up to 3 HFD Menlo ³ luminaires and group via a BUS connection to other HFL luminaires	N/A
Menlo³ with dimmable DSI Ballast HFD Option Controllable luminaire to be used with DSI control packages	Use as a slave luminaire controlled by HFL/HFS master	Use with compatible external sensor/controller	Use as a slave luminaire controlled by HFL master	Use with compatible external sensor/controller
Menlo³ with dimmable DALI Ballast HFX Option Controllable luminaire to be used with DALI control packages	N/A	Use with compatible external sensor/controller	N/A	Use with compatible external sensor/controller



Menlo³ with integrated Mini Sensor



Infra-red handheld controller



Easy emergency lighting



Open area emergency lighting has to provide sufficient light to avoid panic in an emergency or mains failure. If this feature is integrated into the chosen office luminaires, rather than using separate emergency bulkheads, this naturally improves the interior design whilst reducing installation cost and complexity.

Menlo³ is available with discreetly integrated emergency lighting from a highly efficient LED light source which makes it easy to integrate emergency lighting into the office scheme.

Easy to calculate

The Emergency LED is non-maintained, self-contained and only illuminates in an emergency. It therefore has no maintenance factor or ballast lumen factor to calculate, making it easy to calculate luminaire spacings, which are very broad due to the high lumen output. See table below.

Easy to test and maintain

Emergency lighting is worthless if it's not properly maintained. As the LED only operates in a power failure and has a very long life it provides safer, more reliable emergency lighting with no reliance on lamp replacement.

Because of its importance there are stringent legal requirements to regularly inspect, test and maintain emergency lighting, which can be costly and time consuming.

The LED E3TX emergency versions of Menlo³ incorporate SelfTest and Addressable Test functionality in a single fitting. E3TX luminaires operate as SelfTest when stand-alone and become addressable when connected to Explorer project or Explorer Vision.

Both options make it easy to maintain a fully functional emergency lighting scheme:

Automatic Self Testing

An intelligent diagnostic processor in the luminaire automatically tests the emergency functions at intervals compliant with European legislation. A bi-colour LED indicator on the luminaire indicates the test results, allowing easy and early detection of faults. Easy to install and requiring no additional cabling, SelfTest provides simple, cost-effective and reliable standalone automatic testing.

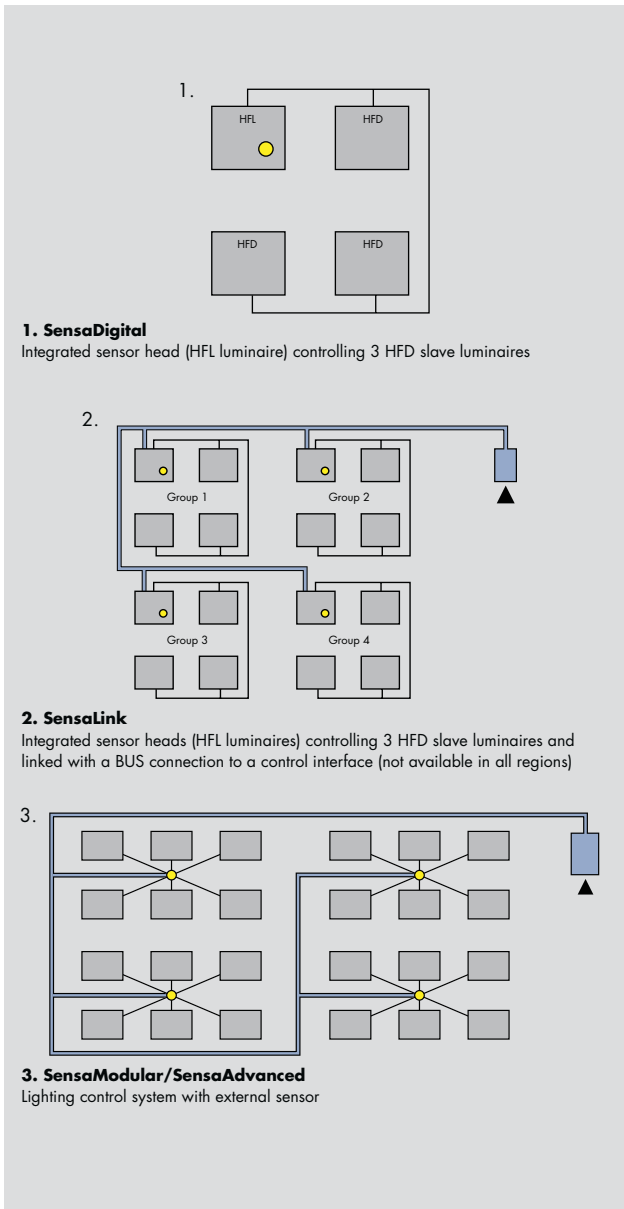
Addressable Testing

Every emergency luminaire is connected to an intelligent local controller that automatically tests and stores the full results. This may be an Explorer Project Controller for up to 256 emergency fittings or a standard computer using Explorer Vision for larger applications. This offers ultimate convenience by identifying the precise nature and location of faults and removing the need for manual testing or paperwork.

Emergency luminaire spacing comparison for 0.5 lux open area:

	Maintenance Factor	BLF	Mounting height	Centre to end		Between centres	
				Trans	Axial	Trans	Axial
Menlo³ with LED emergency	1	1	2.5	2.55	2.50	8.65	8.60
			3	2.60	2.60	9.15	9.10
Menlo³ R 2x24W with standard Emergency*	0.8	0.15	2.5	2.60	2.55	6.45	6.45
			3	2.90	2.85	7.20	7.20
Menlo³ R 1x55W with standard Emergency*	0.8	0.075	2.5	2.65	2.65	6.70	6.65
			3	3.00	2.95	7.45	7.40

*These versions are not available, data for comparison only.



Making life easy - installation

Menlo³ has been purposely designed to make installation quicker and easier than other dual component luminaires, whether laying in or installing from below into suspended ceilings, by incorporating the following features:



1.



2.



3.



4.



5.






6.

1. Supplied fully assembled in one box with external connector for fast electrical connection
2. Supplied complete with unique mini-wedge suspension brackets for mounting from below
3. Brackets are fitted externally via the adjacent tile so there is no need to disassemble and reassemble the fitting
4. Lamps are easily accessed via removable central optic
5. Central optic can be conveniently suspended via retention tags
6. Supplied with protective film covering the optic to minimise cleaning at installation

Ceiling compatibility

Menlo³ is compatible with most suspended ceiling systems. Please refer to the table below for a quick guide to compatibility:

It is always advisable to check ceiling and product dimensions and drawings to ensure compatibility, particularly for non-standard ceilings. For additional guidance on these or any ceiling types not listed, please contact your local representative. Please note that the maximum grid runner height is 55mm if using mini-wedge brackets. See installation sheet for details.

Luminaire	Menlo ³ R	Menlo ³ SR	Menlo ³ C
			
Dimensions (mm)	597x597	597x597	597x597
Ceiling Type:			
Exposed Tee Grids			
15mm lay in	A	A	A
24mm lay in	A	A	A
15mm pull up	B	B	B
24mm pull up	B	B	B
Concealed Fix Grids			
Armstrong Orcal 1800	D	D	D
Armstrong Orcal 3000 Q	C	C	C
Armstrong Orcal 3000 S	B	B	B
SAS 120	D	D	D
SAS 150	C	C	C
SAS Alugrid 15/08	B	B	B
SAS Alugrid 15/16	B	B	B
SAS Alugrid 15/19	B	B	B
SAS Alugrid 25/16	B	B	B
Burgess Clip in	D	D	D
Burgess A Bar	B	B	B
Plasterboard Ceilings	E	E	E

Key

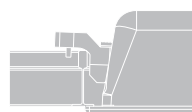
- A** Yes - No additional fixings required
- B** Yes - Mini-wedges required (supplied)
- C** Yes - But product will sit higher than tile
- D** Yes - but only if half spring T option available
- E** Yes - But Plasterboard version required



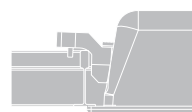
15mm lay-in



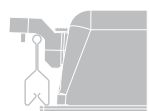
24mm lay-in



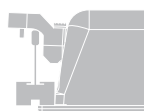
15mm pull-up



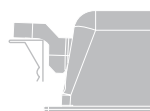
24mm pull-up



Orcal 3000/SAS 150



SAS Alugrid

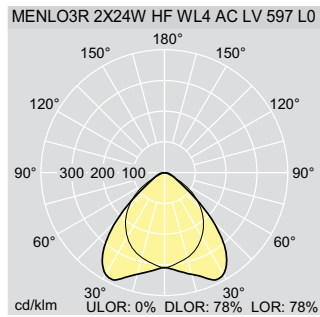


Half spring T
[SAS 120/Orcal 1800/Burgess Clip in]

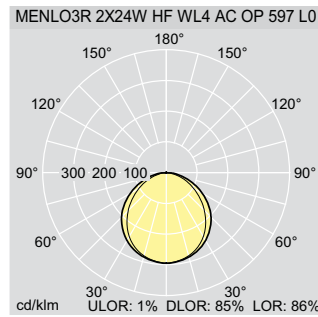
Recessed version



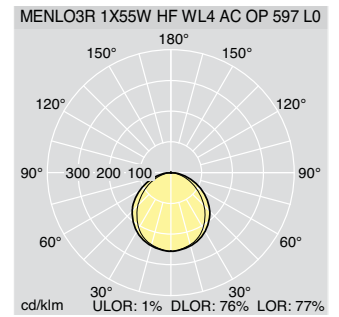
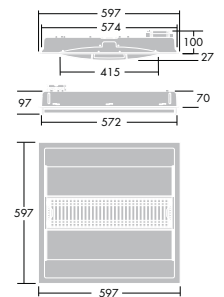
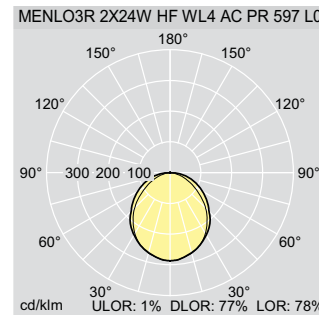
Louvre version



Opal diffuser version



MPT diffuser version



Lamps

☰ 24W T16 (FDH)
Linear fluorescent. Cap: G5
☰ 55W TC-L (FSD) Compact
fluorescent. Cap: 2G11

Materials/Finish

Body: Deep drawn steel
pre-painted white: RAL 9010
End caps: Die-cast aluminium,
powder coated silver: RAL 9006
Light Chamber/Wings: Extruded
high-purity acrylic (PMMA)
diffuser pearl material.
Louvre: Aluminium in Satinbrite
finish.
Diffuser: high purity acrylic
(PMMA) diffuser pearl material.
MPT diffuser:
Microprismatic and high purity
acrylic (PMMA) diffuser pearl
material.

Installation/Mounting

Supplied fully assembled with
protective film for quick, easy
and clean installation. Suitable
for lay-in installation into 15mm
or 24mm exposed tee ceilings.
Unique 'wedge' brackets
(included) are fitted externally via
adjacent tile opening to allow pull
up installation into most exposed
tee or concealed grid ceilings
without opening the luminaire.
Alternative versions also
available with internally fitted
wedge brackets for pull up
installation into plasterboard
ceilings. Electrical connection is
quick and easy via externally
mounted connector on back of
body. Central optic is easily
removed and replaced by hand
for lamp access.

Specification

To specify state: Recessed
mounted luminaire with shallow
70mm deep drawn body for
24W T16 linear or 55W TC-L
compact fluorescent lamps with
unique diffusing pearl twin light
chamber and central mini-vane
louvre/MPT diffuser/opal diffuser
for direct/indirect lighting
performance. Suitable for lay-in
into exposed tee grids or for pull
up into concealed grids or
plasterboard ceilings with unique
'mini-wedge' brackets and
external electrical connection.
Fixed output or digital dimmable
control gear with 3 hour self/
addressable test integral LED
emergency versions and option
for integral sensor head.
As Thorn Menlo³ Recessed.

Standards

Designed and manufactured
to comply with EN 60598
Emergency versions with
EN 60598 2.22
⊕ Class I Electrical
650° glow wire
IK03
IP20
⚡ F CE

Ordering Guide Lamp(s) to be ordered separately

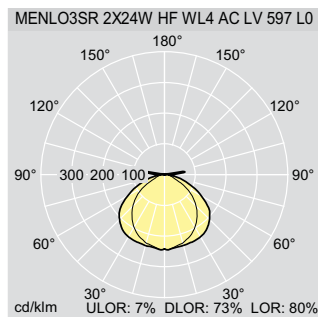
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MENLO3R 1X55W HF WL4 AC PR 597 L0	FSD	2G11	5.3	96534964
MENLO3R 1X55W HF WL4 AC OP 597 L0	FSD	2G11	5.1	96534965
MENLO3R 2X24W HF WL4 AC LV 597 L0	FDH	G5	5.0	96534966
MENLO3R 2X24W HF WL4 AC PR 597 L0	FDH	G5	5.3	96534967
MENLO3R 2X24W HF WL4 AC OP 597 L0	FDH	G5	5.1	96534968
High Frequency Digital Dimmable DSI				
MENLO3R 1X55W HFD WL6 AC LV 597 L0	FSD	2G11	5.0	96534969
MENLO3R 1X55W HFD WL6 AC PR 597 L0	FSD	2G11	5.3	96534970
MENLO3R 1X55W HFD WL6 AC OP 597 L0	FSD	2G11	5.1	96534971
MENLO3R 2X24W HFD WL6 AC LV 597 L0	FDH	G5	5.0	96534972
MENLO3R 2X24W HFD WL6 AC PR 597 L0	FDH	G5	5.3	96534973
MENLO3R 2X24W HFD WL6 AC OP 597 L0	FDH	G5	5.1	96534974
High Frequency Digital Dimmable DALI				
MENLO3R 1X55W HFX WL6 AC LV 597 L0	FSD	2G11	5.0	96534975
MENLO3R 1X55W HFX WL6 AC PR 597 L0	FSD	2G11	5.3	96534976
MENLO3R 1X55W HFX WL6 AC OP 597 L0	FSD	2G11	5.1	96534977
MENLO3R 2X24W HFX WL6 AC LV 597 L0	FDH	G5	5.0	96534978
MENLO3R 2X24W HFX WL6 AC PR 597 L0	FDH	G5	5.3	96534979
MENLO3R 2X24W HFX WL6 AC OP 597 L0	FDH	G5	5.1	96534980
High Frequency LED Emergency				
MENLO3R 1X55W HF E3TX WL4 AC LV 597 L0	FSD	2G11	5.2	96534981
MENLO3R 1X55W HF E3TX WL4 AC PR 597 L0	FSD	2G11	5.5	96534982
MENLO3R 1X55W HF E3TX WL4 AC OP 597 L0	FSD	2G11	5.3	96534983
MENLO3R 2X24W HF E3TX WL4 AC LV 597 L0	FDH	G5	5.2	96534984
MENLO3R 2X24W HF E3TX WL4 AC PR 597 L0	FDH	G5	5.5	96534985
MENLO3R 2X24W HF E3TX WL4 AC OP 597 L0	FDH	G5	5.3	96534986
High Frequency Digital Dimmable DSI LED Emergency				
MENLO3R 1X55W HFD E3TX WL6 AC LV 597 L0	FSD	2G11	5.2	96534987
MENLO3R 1X55W HFD E3TX WL6 AC PR 597 L0	FSD	2G11	5.5	96534988
MENLO3R 1X55W HFD E3TX WL6 AC OP 597 L0	FSD	2G11	5.3	96534989
MENLO3R 2X24W HFD E3TX WL6 AC LV 597 L0	FDH	G5	5.2	96534990
MENLO3R 2X24W HFD E3TX WL6 AC PR 597 L0	FDH	G5	5.5	96534991
MENLO3R 2X24W HFD E3TX WL6 AC OP 597 L0	FDH	G5	5.3	96534992
High Frequency Digital Dimmable DALI LED Emergency				
MENLO3R 1X55W HFX E3TX WL6 AC LV 597 L0	FSD	2G11	5.2	96534993
MENLO3R 1X55W HFX E3TX WL6 AC PR 597 L0	FSD	2G11	5.5	96534994
MENLO3R 1X55W HFX E3TX WL6 AC OP 597 L0	FSD	2G11	5.3	96534995
MENLO3R 2X24W HFX E3TX WL6 AC LV 597 L0	FDH	G5	5.2	96534996
MENLO3R 2X24W HFX E3TX WL6 AC PR 597 L0	FDH	G5	5.5	96534997
MENLO3R 2X24W HFX E3TX WL6 AC OP 597 L0	FDH	G5	5.3	96534998

HF - High Frequency, HFD - High Frequency Digital Dimmable DSI, HFX - High Frequency Digital Dimmable DALI, E3TX - 3 Hour SelfTest or Addressable Test LED Emergency, AC - Acrylic (PMMA) TP(b), LV - Mini-vane Louvre, PR - Micro-prism diffuser, OP - Opal diffuser, WL4 - Wieland GST connector 4 pole plug, WL6 - Wieland GST connector 6 pole T-piece, Versions with integral mini-sensa available on request. Polycarbonate TP(a) versions and plasterboard ceiling versions also available on request.

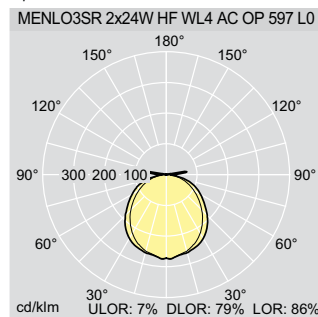
Semi-recessed version



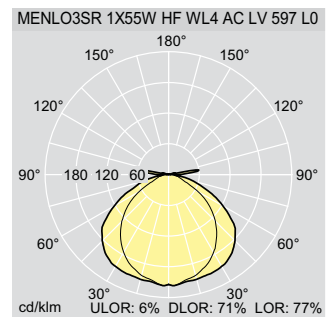
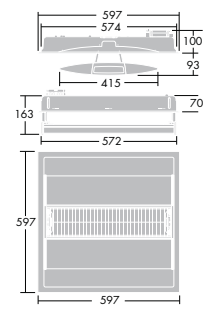
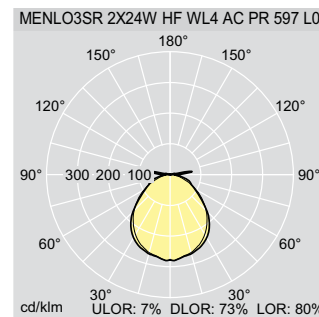
Louvre version



Opal diffuser version



MPT diffuser version



Lamps

⇨ 24W T16 (FDH) Linear fluorescent. Cap: G5
 ≡ 55W TC-L (FSD) Compact fluorescent. Cap 2G11

Materials/Finish

Body: Deep drawn steel pre-painted white: RAL 9010
 End caps: Die-cast aluminium, powder coated silver: RAL 9006
 Light Chamber/Wings: Extruded high-purity acrylic (PMMA) diffuser pearl material.
 Louvre: Aluminium in satinbrite finish.
 Diffuser: high purity acrylic (PMMA) diffuser pearl material.
 MPT diffuser: Microprismatic and high purity acrylic (PMMA) diffuser pearl material.
 Suspension arms: Injection - moulded silver polycarbonate

Installation/Mounting

Supplied fully assembled with protective film for quick, easy and clean installation. Suitable for lay-in installation into 15mm or 24mm exposed tee ceilings. Unique 'wedge' brackets (included) are fitted externally via adjacent tile opening to allow pull up installation into most exposed tee or concealed grid ceilings without opening the luminaire. Alternative versions also available with internally fitted wedge brackets for pull up installation into plasterboard ceilings. Electrical connection is quick and easy via externally mounted connector on back of body. Central optic is easily removed and replaced by hand for lamp access.

Standards

Designed and manufactured to comply with EN 60598
 Emergency versions with EN 60598 2.22
 ⚡ Class I Electrical
 650° glow wire
 IK03
 IP20
 ⚡ FCE

Specification

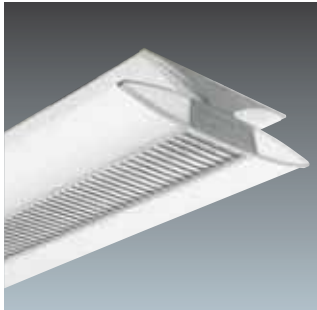
To specify state: Recessed mounted luminaire with shallow 70mm deep drawn body for 24W T16 linear or 55W TC-L compact fluorescent lamps with 90mm suspended diffuser pearl optic and central mini-vane louvre/MPT diffuser/opal diffuser for direct/indirect lighting performance that delivers 50% of horizontal working plane illuminance on walls and 30% on ceilings. Suitable for lay-in into exposed tee grids or for pull up into concealed grids or plasterboard ceilings with unique "mini-wedge" brackets and external electrical connection. Fixed output or digital dimmable control gear with 3 hour self/addressable test integral LED emergency versions and option for integral sensor head.
 As Thorn Menlo³ Semi-recessed.

Ordering Guide Lamp(s) to be ordered separately

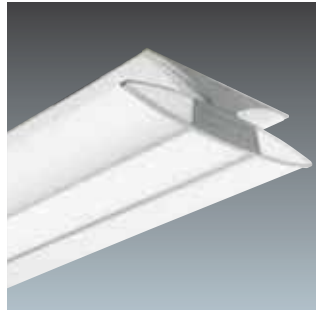
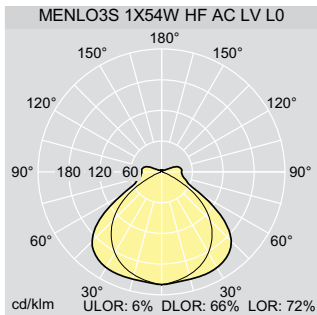
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High Frequency				
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MENLO3SR 1X55W HF WL4 AC PR 597 L0	FSD	2G11	5.3	96535000
MENLO3SR 1X55W HF WL4 AC OP 597 L0	FSD	2G11	5.1	96535001
MENLO3SR 2X24W HF WL4 AC LV 597 L0	FDH	G5	5.0	96535002
MENLO3SR 2X24W HF WL4 AC PR 597 L0	FDH	G5	5.3	96535003
MENLO3SR 2X24W HF WL4 AC OP 597 L0	FDH	G5	5.1	96535004
High Frequency Digital Dimmable DSI				
MENLO3SR 1X55W HFD WL6 AC LV 597 L0	FSD	2G11	5.0	96535005
MENLO3SR 1X55W HFD WL6 AC PR 597 L0	FSD	2G11	5.3	96535006
MENLO3SR 1X55W HFD WL6 AC OP 597 L0	FSD	2G11	5.1	96535007
MENLO3SR 2X24W HFD WL6 AC LV 597 L0	FDH	G5	5.0	96535008
MENLO3SR 2X24W HFD WL6 AC PR 597 L0	FDH	G5	5.3	96535009
MENLO3SR 2X24W HFD WL6 AC OP 597 L0	FDH	G5	5.1	96535010
High Frequency Digital Dimmable DALI				
MENLO3SR 1X55W HFX WL6 AC LV 597 L0	FSD	2G11	5.0	96535011
MENLO3SR 1X55W HFX WL6 AC PR 597 L0	FSD	2G11	5.3	96535012
MENLO3SR 1X55W HFX WL6 AC OP 597 L0	FSD	2G11	5.1	96535013
MENLO3SR 2X24W HFX WL6 AC LV 597 L0	FDH	G5	5.0	96535014
MENLO3SR 2X24W HFX WL6 AC PR 597 L0	FDH	G5	5.3	96535015
MENLO3SR 2X24W HFX WL6 AC OP 597 L0	FDH	G5	5.1	96535016
High Frequency LED Emergency				
MENLO3SR 1X55W HF E3TX WL4 AC LV 597 L0	FSD	2G11	5.2	96535017
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MENLO3SR 1X55W HF E3TX WL4 AC OP 597 L0	FSD	2G11	5.3	96535019
MENLO3SR 2X24W HF E3TX WL4 AC LV 597 L0	FDH	G5	5.2	96535020
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MENLO3SR 2X24W HF E3TX WL4 AC OP 597 L0	FDH	G5	5.3	96535022
High Frequency Digital Dimmable DSI LED Emergency				
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MENLO3SR 1X55W HFD E3TX WL6 AC OP 597 L0	FSD	2G11	5.3	96535025
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MENLO3SR 2X24W HFD E3TX WL6 AC PR 597 L0	FDH	G5	5.5	96535027
MENLO3SR 2X24W HFD E3TX WL6 AC OP 597 L0	FDH	G5	5.3	96535028
High Frequency Digital Dimmable DALI LED Emergency				
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MENLO3SR 1X55W HFX E3TX WL6 AC OP 597 L0	FSD	2G11	5.3	96535031
MENLO3SR 2X24W HFX E3TX WL6 AC LV 597 L0	FDH	G5	5.2	96535032
MENLO3SR 2X24W HFX E3TX WL6 AC PR 597 L0	FDH	G5	5.5	96535033
MENLO3SR 2X24W HFX E3TX WL6 AC OP 597 L0	FDH	G5	5.3	96535034

HF - High Frequency, HFD - High Frequency Digital Dimmable DSI, HFX - High Frequency Digital Dimmable DALI, E3TX - 3 Hour SelfTest or Addressable Test LED Emergency, AC - Acrylic (PMMA) TP(b), LV - Mini-vane Louvre, PR - Micro-prism diffuser, OP - Opal diffuser, WL4 - Wieland GST connector 4 pole plug, WL6 - Wieland GST connector 6 pole T-piece, Versions with integral mini-sensa or air handling capability available on request. Polycarbonate TP(a) versions and plasterboard ceiling versions also available on request.

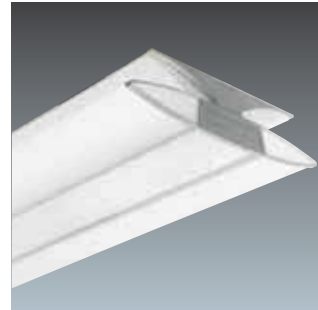
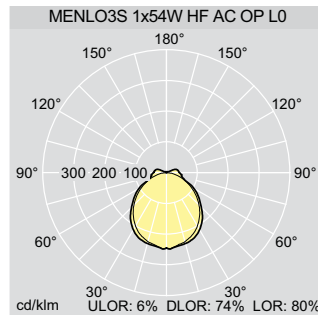
Surface version



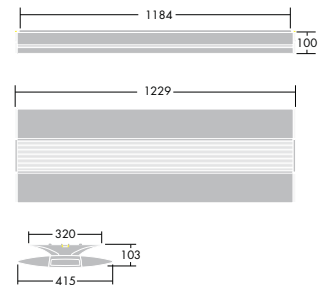
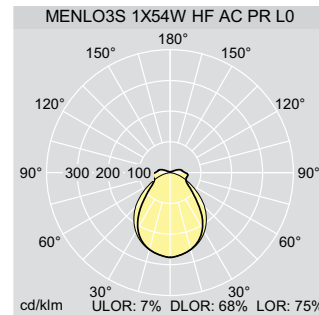
Louvre version



Opal diffuser version



MPT diffuser version



Lamps

⇒ 54W T16 (FDH) Linear fluorescent. Cap: G5

Materials/Finish

Housing: Pre-painted sheet steel.
End caps: Die-cast aluminium, powder coated silver: RAL 9006
Light Chamber/Wings: Extruded high-purity acrylic (PMMA) diffuser pearl material.
Louvre: Aluminium in satinbrite finish.
Diffuser: high purity acrylic (PMMA) diffuser pearl material.
MPT diffuser: Microprismatic and high purity acrylic (PMMA) diffuser pearl material.

Installation/Mounting

Suitable for surface mounting onto solid ceiling. Optic and light chamber are removed using turnbuckles to allow gear tray to be fixed to ceiling via 2 screw fastenings. Electrical connection to be made via terminal block before reattaching light chamber and optic. Central optic is easily removed and replaced by hand for lamp access.

Can also be integrated into 300X1200mm suspended ceiling grids using suspended mounting kit (to be ordered separately).

Standards

Designed and manufactured to comply with EN 60598
Emergency versions with EN 60598 2.22
⊕ Class I Electrical
650° glow wire
IK03
IP20



Specification

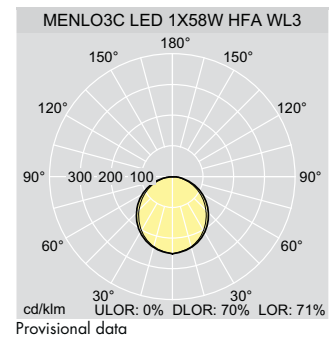
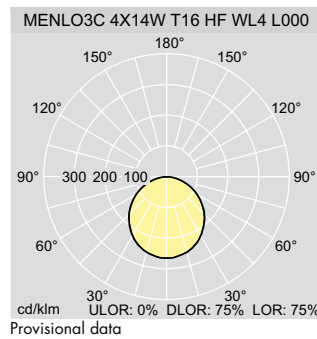
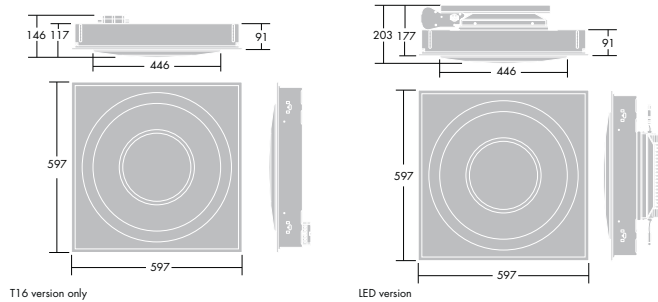
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Suitable for surface mounting onto solid ceilings or integrating into suspended ceiling grids using optional accessories.
Fixed output or digital dimmable control gear with 3 hour self/addressable test integral LED emergency versions and option for integral sensor head.
As Thorn Menlo³ Surface.

Ordering Guide Lamp(s) to be ordered separately

Description	Icos Code	Socket	Weight (Kg)	SAP Code
High Frequency				
MENLO3S 1X54W HF AC LV L0	FDH	G5	7.0	96238973
MENLO3S 1X54W HF AC PR L0	FDH	G5	7.6	96238974
MENLO3S 1X54W HF AC OP L0	FDH	G5	7.3	96238975
High Frequency Digital Dimmable DSI				
MENLO3S 1X54W HFD AC LV L0	FDH	G5	7.0	96238976
MENLO3S 1X54W HFD AC PR L0	FDH	G5	7.6	96238977
MENLO3S 1X54W HFD AC OP L0	FDH	G5	7.3	96238978
High Frequency Digital Dimmable DALI				
MENLO3S 1X54W HFX AC LV L0	FDH	G5	7	96238979
MENLO3S 1X54W HFX AC PR L0	FDH	G5	7.6	96238980
MENLO3S 1X54W HFX AC OP L0	FDH	G5	7.3	96238981
High Frequency LED Emergency				
MENLO3S 1X54W HF E3TX AC LV L0	FDH	G5	7.2	96238982
MENLO3S 1X54W HF E3TX AC PR L0	FDH	G5	7.6	96238983
MENLO3S 1X54W HF E3TX AC OP L0	FDH	G5	7.5	96238984
High Frequency Digital Dimmable DSI LED Emergency				
MENLO3S 1X54W HFD E3TX AC LV L0	FDH	G5	7.2	96238985
MENLO3S 1X54W HFD E3TX AC PR L0	FDH	G5	7.6	96238986
MENLO3S 1X54W HFD E3TX AC OP L0	FDH	G5	7.5	96238987
High Frequency Digital Dimmable DALI LED Emergency				
MENLO3S 1X54W HFX E3TX AC LV L0	FDH	G5	7.2	96238988
MENLO3S 1X54W HFX E3TX AC PR L0	FDH	G5	7.6	96238989
MENLO3S 1X54W HFX E3TX AC OP L0	FDH	G5	7.5	96238990
Accessory				
MENLO3S SUSPENDED MOUNTING KIT				96239180

HF - High Frequency, HFX - High Frequency Digital Dimmable DALI, E3TX - 3 Hour SelfTest or Addressable Test LED Emergency, AC - Acrylic (PMMA) TP(b), LV - Mini-vane Louvre, PR - Micro-prism diffuser, OP - Opal diffuser
Versions with integral mini-sensa available on request.
Polycarbonate TP(a) versions also available on request.

Circular recessed version



Lamps

⇒ 14W T16 (FDH) Linear fluorescent. Cap: G5
 ☑ 58W LED (3500K)

Materials/Finish

Body: White pre-painted steel.
 Light Chamber/circular diffuser: Vacuum-formed opalised polycarbonate.

Installation/Mounting

Supplied fully assembled with protective film for quick, easy and clean installation. Suitable for lay-in installation into 15mm or 24mm exposed tee ceilings. Unique 'wedge' brackets (included) are fitted externally via adjacent tile opening to allow pull up installation into most exposed tee or concealed grid ceilings without opening the luminaire. Alternative versions also available with internally fitted wedge brackets for pull up installation into plasterboard ceilings. Electrical connection is quick and easy via externally mounted connector on back of body. Optic is easily removed and replaced by hand for lamp access. LED version suitable for lay-in only.

Standards

Designed and manufactured to comply with EN 60598
 Emergency versions with EN 60598 2.22
 Ⓛ Class I Electrical
 850° glow wire
 IK03
 IP20

Specification

T16 versions:
 To specify state: Recessed mounted luminaire for 14W T16 linear fluorescent lamps with unique 'floating' circular diffuser and light chamber. Suitable for lay-in into exposed tee grids or for pull up into concealed grids or plasterboard ceilings with unique 'mini-wedge' brackets and external electrical connection. Fixed output or digital dimmable control gear with 3 hour self/addressable test integral LED emergency versions and option for integral sensor head.

LED version:

To specify state: Recessed mounted luminaire for 58W LED light source with unique 'floating' circular diffuser and light chamber. Suitable for lay-in into exposed tee grids with external electrical connection. Analogue dimmable control gear. As Thorn Menlo³ Circular.

Ordering Guide Lamp(s) to be ordered separately except LED version.
 *This version will be available August 2010.

Description	Ilcos Code	Socket	Weight (Kg)	SAP Code
High Frequency				
MENLO3C 4X14W T16 HF WL4 L000	FDH	G5	4.6	96239170
High Frequency Digital Dimmable DSI				
MENLO3C 4X14W T16 HFD WL6 L000	FDH	G5	4.7	96239171
High Frequency Digital Dimmable DALI				
MENLO3C 4X14W T16 HFX WL6 L000	FDH	G5	4.7	96239172
High Frequency LED Emergency				
MENLO3C 4X14W T16 HF WL4 E3TX L000	FDH	G5	4.8	96239173
High Frequency Digital Dimmable DSI LED Emergency				
MENLO3C 4X14W T16 HFD WL6 E3TX L000	FDH	G5	4.9	96239174
High Frequency Digital Dimmable DALI LED Emergency				
MENLO3C 4X14W T16 HFX WL6 E3TX L000	FDH	G5	4.9	96239175
LED version				
MENLO3C LED 1X58W HFA WL3			8.7	96239179

HF - High Frequency, HFD - High Frequency Digital Dimmable DSI, HFX - High Frequency Digital Dimmable DALI, HFA - High Frequency Analogue Dimmable, E3TX - 3 Hour Selftest or Addressable Test LED Emergency, WL4 - Wieland GST connector 4 pole plug, WL6 - Wieland GST connector 6 pole T-piece, Plasterboard ceiling versions also available on request for T16 version. Versions with integral mini-sensa available on request.

THORN

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