

# THORN

## Sienna

The intelligent choice for balanced office lighting



# Healthier, more productive work environments



Life at work has changed dramatically over the last 20 years, and Thorn Sienna is the intelligent response

Legislative requirements, and the shift from paper based tasks to computerised multi-tasking, have had a radical impact on office lighting. Health and safety codes, and issues such as the need to avoid reflections on PC screens, have tended to drive the development of lighting. For many, the need has been to minimise risk rather than to create a better working environment.

Sienna changes the ground rules. It addresses performance, efficiency and comfort issues as well as health and safety. It helps designers to create interiors that satisfy the needs of people at work, not just the machines they use.

Sienna delivers well balanced lighting that can relieve stressful working conditions, improve productivity and promote healthier working environments. It offers measurable improvements in running costs when compared with previous generations of office lighting.

So, when considering lighting for the needs of tomorrow's education or commercial application, Sienna is the answer.



- Upward light distribution enables luminaires to be mounted close to ceilings without exceeding the maximum brightness guidelines of European legislation. There is limited intrusion into the working environment. The visualisations and product photos illustrate this.



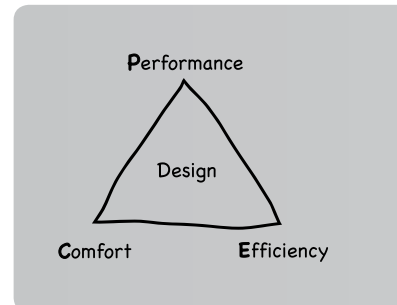
*Close-offset mounting 200mm, with limited intrusion*



*Standard suspension mounting 400mm*

# Performance, efficiency and comfort (PEC) – for a better working day

Sienna evokes Thorn Lighting's PEC programme. PEC is our framework for the delivery of efficient and reliable lighting that also contributes to a healthier and more comfortable work environment:



**Performance:** Providing the best visual effectiveness

**Efficiency:** Minimising the use of energy, CO<sub>2</sub> emissions and waste

**Comfort:** Giving people satisfaction and stimulation

Sienna embodies PEC principles to deliver optimum results in today's demanding office environments.

From its stylish yet practical design and excellent lighting performance to its operating efficiency and ease of installation and maintenance, Sienna is the integrated system for office lighting.

## Performance

### Providing the best visual effectiveness

Good visual effectiveness helps people to concentrate better and work more effectively. Using T16 lamps to achieve excellent colour rendering with an LOR of 80%, Sienna schemes can easily be designed to achieve excellent visual performance in any environment.

Sienna's sophisticated optical design distributes light horizontally and vertically in a 'batwing' pattern that combines good illumination of the work surface with good modelling of human features and objects. Its high contrast rendering also minimises unwanted reflections.

## Efficiency

### Minimising the use of energy

Workplace lighting accounts for up to 20 per cent of European electricity consumption. Sienna addresses concerns over energy efficiency and responds to the standards defined by the Energy Performance of Buildings Directive (EPBD). Its efficient electronic ballast combines with the benefits of high efficiency T16 lamps to give an efficacy score of over 60 luminaire-lumens/circuit Watt.

Luminaire-lumens/circuit Watt is calculated by:

$$\frac{1}{P} \times \text{SUM of (LOR} \times \text{Lamp Flux)}$$

where.....

**P** = total circuit Watts of the luminaire

**L.O.R** = the light output ratio of the luminaire

**Lamp flux** = sum of the initial (100hr) lumen output of all the lamp(s) in the luminaire

Effective use of high lamp lumen packages can also minimise the number of luminaires required to achieve required lighting levels.

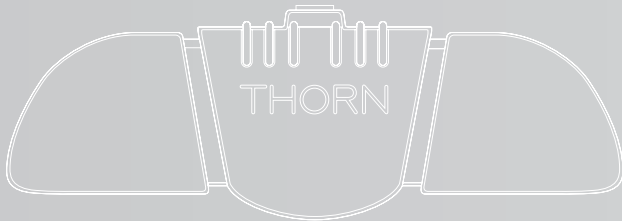
The EPBD also recommends using lighting controls to optimise use of natural light. Most workstations benefit from daylight during the day and Sienna Sensa technology can dramatically reduce energy consumption by providing artificial light only when and where it is needed. The range also includes versions with integrated emergency lighting.

## Lighting controls to suit all applications

For small or simple office lighting schemes, Sienna intelligent luminaires with integrated Sensa detectors can respond to human presence and available light by adjusting output.

In larger applications where central lighting management is preferred, Sienna luminaires are available with digital dimmable ballasts. These can be configured for management via DSI signalling systems and external detector heads. Further information is available from your local Thorn office.





Scale 1:2



### Comfort

#### Giving people satisfaction and stimulation

Sienna ensures optimum light distribution producing an interior that is better aesthetically as well as psychologically to work and play in. It balances up, side and down lighting to illuminate the task, walls and ceiling. It eliminates the 'cave effect' (gloomy ceilings and walls) of traditional direct illumination. The nature of the lighting eliminates sharp shadows from the working surface, enhances the volume of the enclosed space, reveals the human face aiding in communication and reduces the dependence on viewing direction. The result is a more uplifting and stimulating atmosphere which can increase comfort and satisfaction and even reduce absenteeism.

Sienna optics meet the provisions of European standard, which covers display screens, without compromising on the quality of light. Optional automatic or manual lighting controls additionally enable users to choose their preferred lighting levels. With optimum lighting, simple controls, flicker free HF ballasts and excellent architectural integration, Sienna is the intelligent choice for balanced lighting in the office.

### Stylish and simple emergency lighting

European codes specify that emergency lighting is required in all public places to enable a safe exit if the normal lighting fails. In offices, emergency lighting has to provide sufficient light to avoid panic in an emergency.

Sienna emergency lighting options can be integrated into selected office luminaires. This approach improves the appearance of the office while reducing installation cost and complexity. The options support self-contained emergency operation for three hours, allowing full continuity of emergency lighting after an evacuation.

To meet legal requirements for the inspection, test and maintenance of emergency lighting, Sienna's Explorer SelfTest emergency lighting option includes a diagnostic microprocessor. Quick and easy to install without additional cabling, it monitors and automatically tests emergency luminaires at specified intervals, displaying the status of each unit using a two-colour LED. As a result, any problems with battery and lamp health are detected early, without requiring manual inspection.

- Compliant with EN 1838
- Faster than average recharge time of 10-15 hours allows earlier reinstatement of emergency system after full battery discharge
- Three hours operation provides continuity of emergency systems after testing
- Two-colour LED provides clear status indication (red for faults, green for healthy)
- Boost starting gives higher lumen output during the critical switchover phase, ensuring greater visibility of potential danger
- Automatic commissioning without programming saves time and money
- Thorn Explorer Project or Vision versions, where the user can monitor the emergency luminaire status centrally, and record the status as required by the legislative norm, are available on request



## Slim stylish optics, precision light control

Thorn has extended its T16 pedant offer by introducing Sienna – a range of slim linear luminaires for office and educational spaces. Sienna is a pendant luminaire which distributes light for optimum benefits in any office task on the desktop or PC screen. It improves the working environment by combining wall and ceiling illumination with workspace efficiency. Luminaires can be positioned over desks, for cellular offices, or in more regular arrays for open plan environments.

- The balance between uplighting and downlighting (indirect/direct) ensures good illumination of task and people, enhancing face-to-face communication and even video conferencing
- Sienna leverages the benefits of T16 lamps with two custom miniaturised optics which are key to its efficient light distribution
- Optics, manufactured in Miro high purity aluminium, are available in either Satinbrite or Mirrorbrite finish, to complement office décor
- Miro high purity aluminium material, together with high LOR, maximises system efficiency and minimises energy consumption
- T16 lamps combine low lumen depreciation with high frequency control gear to give good light quality and faithful colour reproduction for the most stringent tasks
- Dedicated louvres enable Sienna luminaires to be made as small as possible, limiting intrusion into the office while creating a comfortable environment
- Infra red hand held controllers, or automatic presence detection via Sensa systems, enable users to control their lighting. Lighting can also be preset centrally in Sienna versions with digital ballasts, depending on the configuration required
- Intelligent Sensa versions are available with an integral detector which responds to presence and daylight changes by dimming the light up and down
- Sienna promotes human efficiency and task performance to give employers the flexibility and operating benefits they need, with reduced costs
- Sienna optics meet the 1000cd/m<sup>2</sup> luminance provisions of European standard EN12464-1\* which covers display screens, without compromising on the quality of light
- Available with integral 3 hour emergency and SelfTest as standard, Explorer Project or Vision versions available on request

### Lamps

☛ 28-54W, T16 (FDH) linear fluorescent. Cap:G5

### Materials/Finish

Body: extruded aluminium, satin grey finish  
Endcap: die-cast zinc endcaps painted textured grey  
Louvre: anodised aluminium, Satinbrite or Mirrorbrite finish

### Installation/Mounting

Supplied with 2.6m halogen free cable 3 x 0.75mm<sup>2</sup>, dimming versions 5 x 0.75mm<sup>2</sup>, emergency fixed output and dimming versions, 4 and 6 x 0.75mm<sup>2</sup> respectively Quick-lock wire suspension included for fixing along centre line.

### Standards

Designed and manufactured to comply with EN 60598  
Emergency version with EN 605982.22  
⊕ Class I electrical  
850° fire retardant  
IP20  
Ⓢ Ⓢ Ⓢ

### Specification

To specify state Slim suspended luminaire with miniaturised dedicated louvre optics for 28-54W T16 lamps, digital dimming and Sensa versions, E3 and E3T, with controlled uplight for balanced lit workspaces. As Thorn Sienna.

\* (1500cd/m<sup>2</sup> for 49w and 54w with DSB louvres)

# Ordering guides

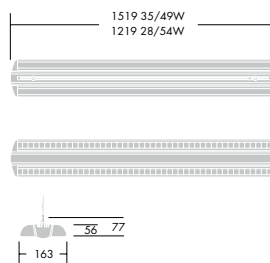
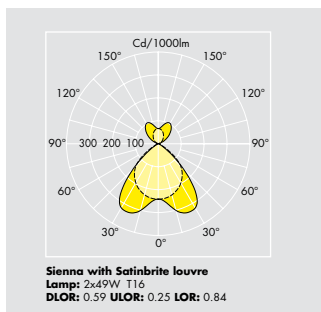
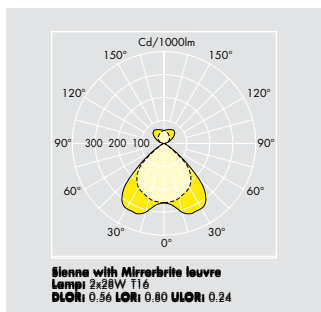
## Photometric data



Mirrorbrite louvre



Satinbrite louvre



### Ordering Guide Supplied complete with lamp

Description	Ilicos Code	Socket	Weight (Kg)	SAP Code
<b>Sienna</b>				
SIENNA 2X28W HF DSB I1830 EUPL	FDH	G5	3.7	96204900
SIENNA 2X35W HF DSB I1830 EUPL	FDH	G5	4.2	96204901
SIENNA 2X54W HF DSB I1830 EUPL	FDH	G5	3.7	96204902
SIENNA 2X28W HF DMB I1840	FDH	G5	3.6	96204807
SIENNA 2X28W HF DSB I1840	FDH	G5	3.6	96204808
SIENNA 2X35W HF DMB I1840	FDH	G5	4.1	96204809
SIENNA 2X35W HF DSB I1840	FDH	G5	4.1	96204810
SIENNA 2X49W HF DMB I1840	FDH	G5	4.1	96204811
SIENNA 2X49W HF DSB I1840	FDH	G5	4.1	96204812
SIENNA 2X54W HF DMB I1840	FDH	G5	3.6	96204813
SIENNA 2X54W HF DSB I1840	FDH	G5	3.6	96204814
<b>Sienna Emergency</b>				
SIENNA 2X28W HF E3 DMB I1840	FDH	G5	4.5	96204815
SIENNA 2X28W HF E3 DSB I1840	FDH	G5	4.5	96205004
SIENNA 2X35W HF E3 DMB I1840	FDH	G5	5.3	96204817
SIENNA 2X35W HF E3 DSB I1840	FDH	G5	5.3	96205005
SIENNA 2X49W HF E3 DMB I1840	FDH	G5	5.3	96204819
SIENNA 2X49W HF E3 DSB I1840	FDH	G5	5.3	96205006
SIENNA 2X54W HF E3 DMB I1840	FDH	G5	4.5	96204821
SIENNA 2X54W HF E3 DSB I1840	FDH	G5	4.5	96205007
<b>Sienna SelfTest Emergency</b>				
SIENNA 2x28W HF E3T DSB I1830	FDH	G5	4.5	96204816
SIENNA 2x35W HF E3T DSB I1830	FDH	G5	5.3	96204818
SIENNA 2x49W HF E3T DSB I1830	FDH	G5	5.3	96204820
SIENNA 2x54W HF E3T DSB I1830	FDH	G5	4.5	96204822
<b>Sienna Digital Dimmable</b>				
SIENNA 2X28W HFD DMB I1840	FDH	G5	3.7	96204823
SIENNA 2X28W HFD DSB I1830	FDH	G5	3.7	96204824
SIENNA 2X28W HFD DSB I1840	FDH	G5	3.7	96205008
SIENNA 2X35W HFD DMB I1840	FDH	G5	4.2	96204825
SIENNA 2X35W HFD DSB I1830	FDH	G5	4.2	96204826
SIENNA 2X35W HFD DSB I1840	FDH	G5	4.4	96205009
SIENNA 2X49W HFD DMB I1840	FDH	G5	4.3	96204827
SIENNA 2X49W HFD DSB I1830	FDH	G5	4.3	96204828
SIENNA 2X49W HFD DSB I1840	FDH	G5	4.3	96205010
SIENNA 2X54W HFD DMB I1840	FDH	G5	3.7	96204829
SIENNA 2X54W HFD DSB I1830	FDH	G5	3.7	96204830
SIENNA 2X54W HFD DSB I1840	FDH	G5	3.7	96205011

Description	Ilicos Code	Socket	Weight (Kg)	SAP Code
<b>Sienna Digital Dimmable Emergency</b>				
SIENNA 2X28W HFD E3 DMB I1840	FDH	G5	4.5	96204831
SIENNA 2X28W HFD E3 DSB I1840	FDH	G5	4.5	96205012
SIENNA 2X35W HFD E3 DMB I1840	FDH	G5	5.3	96204833
SIENNA 2X35W HFD E3 DSB I1840	FDH	G5	5.3	96205013
SIENNA 2X49W HFD E3 DMB I1840	FDH	G5	5.3	96204835
SIENNA 2X49W HFD E3 DSB I1840	FDH	G5	5.3	96205014
SIENNA 2X54W HFD E3 DMB I1840	FDH	G5	4.5	96204837
SIENNA 2X54W HFD E3 DSB I1840	FDH	G5	4.5	96205015
<b>Sienna Digital Dimmable SelfTest Emergency</b>				
SIENNA 2X28W HFD E3T DSB I1830	FDH	G5	4.5	96204832
SIENNA 2X35W HFD E3T DSB I1830	FDH	G5	5.3	96204834
SIENNA 2X49W HFD E3T DSB I1830	FDH	G5	5.3	96204836
SIENNA 2X54W HFD E3T DSB I1830	FDH	G5	4.5	96204838
SIENNA 2X28W HFD E3T DMB I1840	FDH	G5	4.5	96204839
SIENNA 2X28W HFD E3T DSB I1840	FDH	G5	4.5	96204840
SIENNA 2X35W HFD E3T DMB I1840	FDH	G5	5.3	96204841
SIENNA 2X35W HFD E3T DSB I1840	FDH	G5	5.3	96204842
SIENNA 2X35W HFD E3T DMB I1840	FDH	G5	5.3	96204843
SIENNA 2X49W HFD E3T DSB I1840	FDH	G5	5.3	96204844
SIENNA 2X54W HFD E3T DMB I1840	FDH	G5	4.5	96204845
SIENNA 2X54W HFD E3T DSB I1840	FDH	G5	4.5	96204846
<b>Sienna Sensa</b>				
SIENNA 2X28W HFS DMB I1840	FDH	G5	3.7	96204903
SIENNA 2X28W HFS DSB I1840	FDH	G5	3.7	96205096
SIENNA 2X28W HFS DSB I1830	FDH	G5	3.7	96204904
SIENNA 2X35W HFS DMB I1840	FDH	G5	4.2	96204847
SIENNA 2X35W HFS DSB I1840	FDH	G5	4.2	96205097
SIENNA 2X35W HFS DSB I1830	FDH	G5	4.2	96204848
SIENNA 2X49W HFS DMB I1840	FDH	G5	4.2	96204849
SIENNA 2X49W HFS DSB I1840	FDH	G5	4.2	96205098
SIENNA 2X49W HFS DSB I1830	FDH	G5	4.2	96204850
<b>Accessories</b>				
SIENNA PENDANT ROD KIT 200mm				96242832
CEILING KIT DECOR				96193244
HF - High Frequency, HFD - High Frequency Dimmable, HFS - Sensa versions, E3 - Emergency, E3T - Emergency SelfTest, DMB - Mirrorbrite Louvre, DSB - Satinbrite Louvre, EUPL - Europlug, I1840/I830 - supplied with 840/830 lamps				

# THORN

Lighting people and places

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