
# Flexbeam

## Suspended narrow profile linear luminaires with acoustic attenuation

MADE IN THE UK

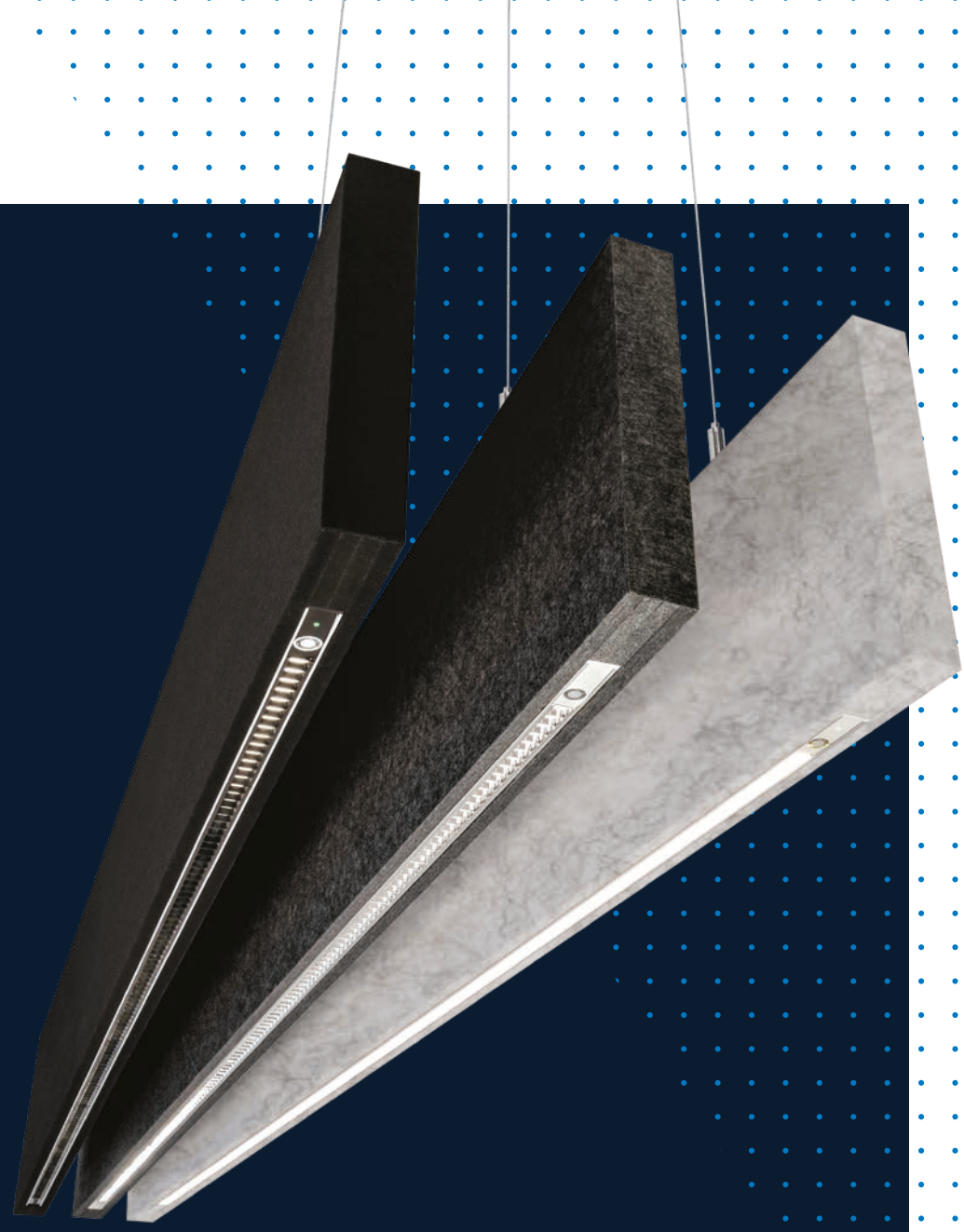
Thorlux Lighting

# Introduction

Flexbeam combines high performance low glare lighting with a luminaire body that provides acoustic attenuation designed to absorb unwanted reverberation and echo. Ideal for environments where audio clarity and efficient, well-controlled lighting is required.

Flexbeam incorporates nanoprism optical control with a range of glare reducing reflectors, allowing luminaire brightness to match the needs of the user for optimum comfort. By combining two important functions, Flexbeam can create minimalist designs for a variety of applications.

Versions of Flexbeam without integrated lighting are also available which can be tailored to the specific needs of your project.



# Control your glare

Flexbeam is available with a choice of three optics which provide different levels of glare control. This allows the brightness of the luminaire to be matched with the needs of the users or space.

## Black

Ultra low glare optic with black louvre finish for the ultimate control of light. Ideal for applications where luminaire brightness is undesirable or mood/ ambience is important.

**Typical glare rating**

UGR <11

## Metallised

Low glare optics with metallised louvre finish for high performance and efficacy. Ideal for applications such as offices, teaching spaces or any area where glare is a concern.

**Typical glare rating**

UGR <13

## White

High performance white louvre for efficiency and vibrancy. Ideal for general purpose applications where luminaire brightness is of minimal concern.

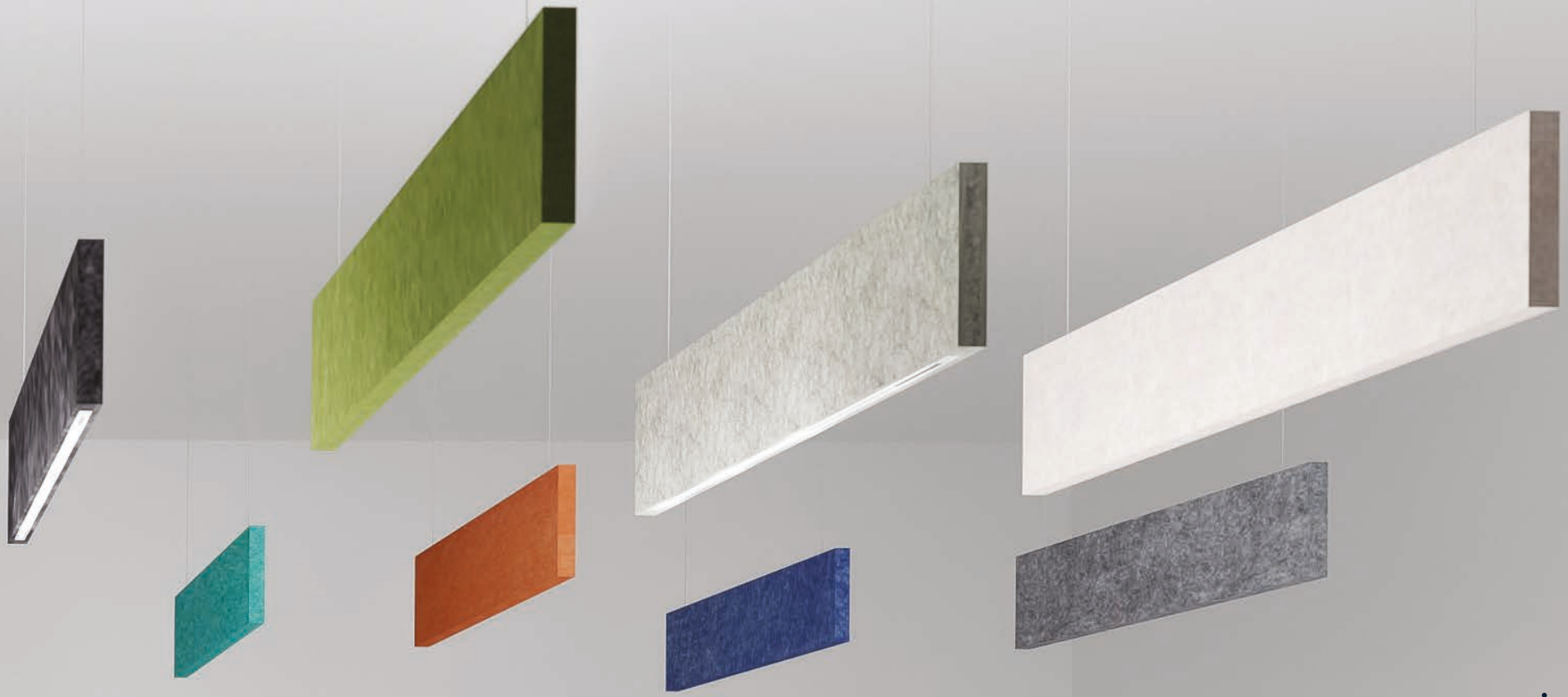
**Typical glare rating**

UGR <22

# Add a splash of colour

Flexbeam is available in marble white, charcoal grey and black finishes as standard, however a wide variety of other colours are available to special order. Make your project stand out with a bold and vibrant Flexbeam colour.

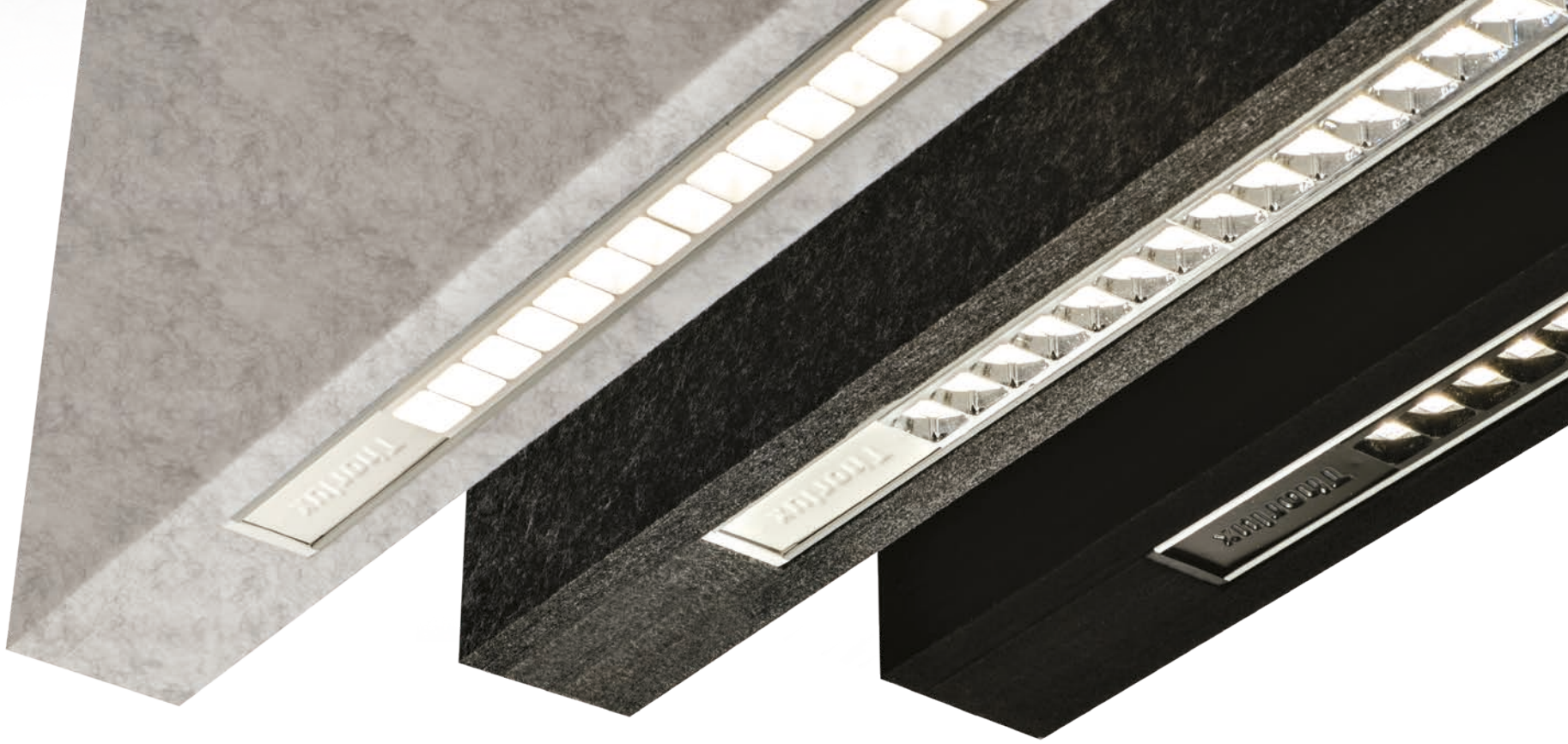
Standard colours



## Colours available to special order

| | | | | | |
|---|---|---|---|---|---|
| Cherry Red | Deep Blue | Yellow | Midnight Blue | White | Sand |
| Teal | Fuzzy Green | Orange | Soft Blue | Opal | Slate Grey |

# Flexbeam is made from over 47 recycled plastic bottles



# Performance, but not at the cost of the environment

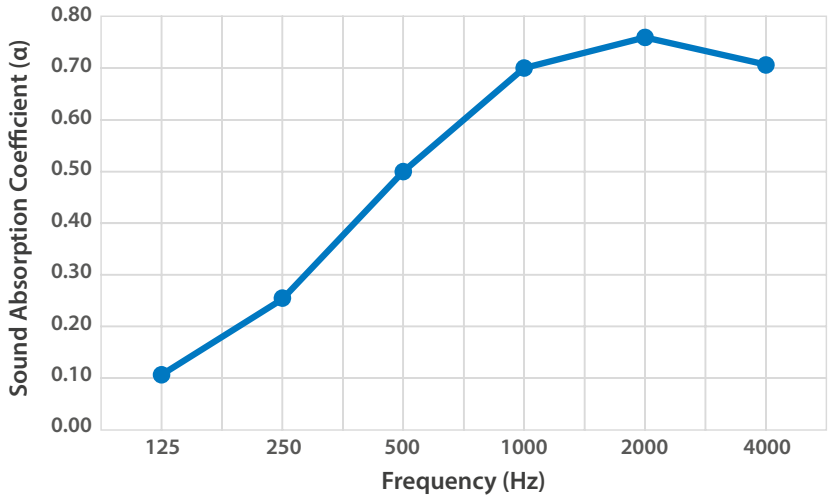
The Flexbeam sound absorbing body is manufactured from 65% recycled PET (polyethylene terephthalate) with over 47 recycled plastic bottles used in every baffle. Not only that, it is 100% recyclable at the end of life. The high quality components give Flexbeam a rated life of 100,000 hours L80/B10 ensuring a long and reliable lifetime, reducing the need for replacements and/or maintenance.

# Acoustic absorption performance

The acoustic performance of Flexbeam has been independently tested at the University of Salford, Manchester. Acoustic performance is measured as the rate of reverberation decay over a specific time period; the faster the sound decays, the lower the reverberation time and the better the acoustic properties of the space.

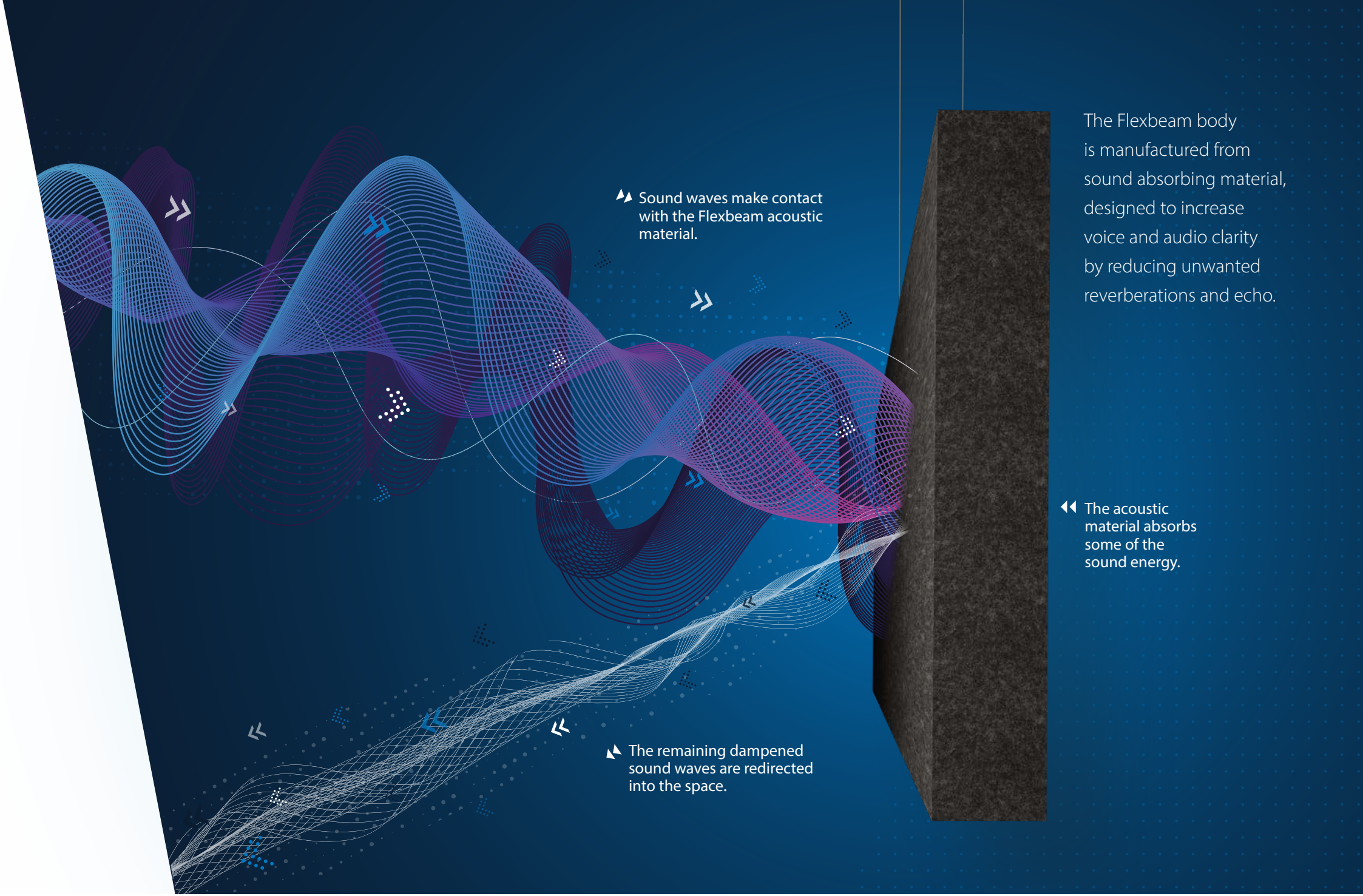
Sound Absorption Coefficient (α)

*Data based on a spacing of 450mm*




Flexbeam has been acoustically tested in accordance with BS EN ISO 354 for its equivalent sound absorption coefficient.

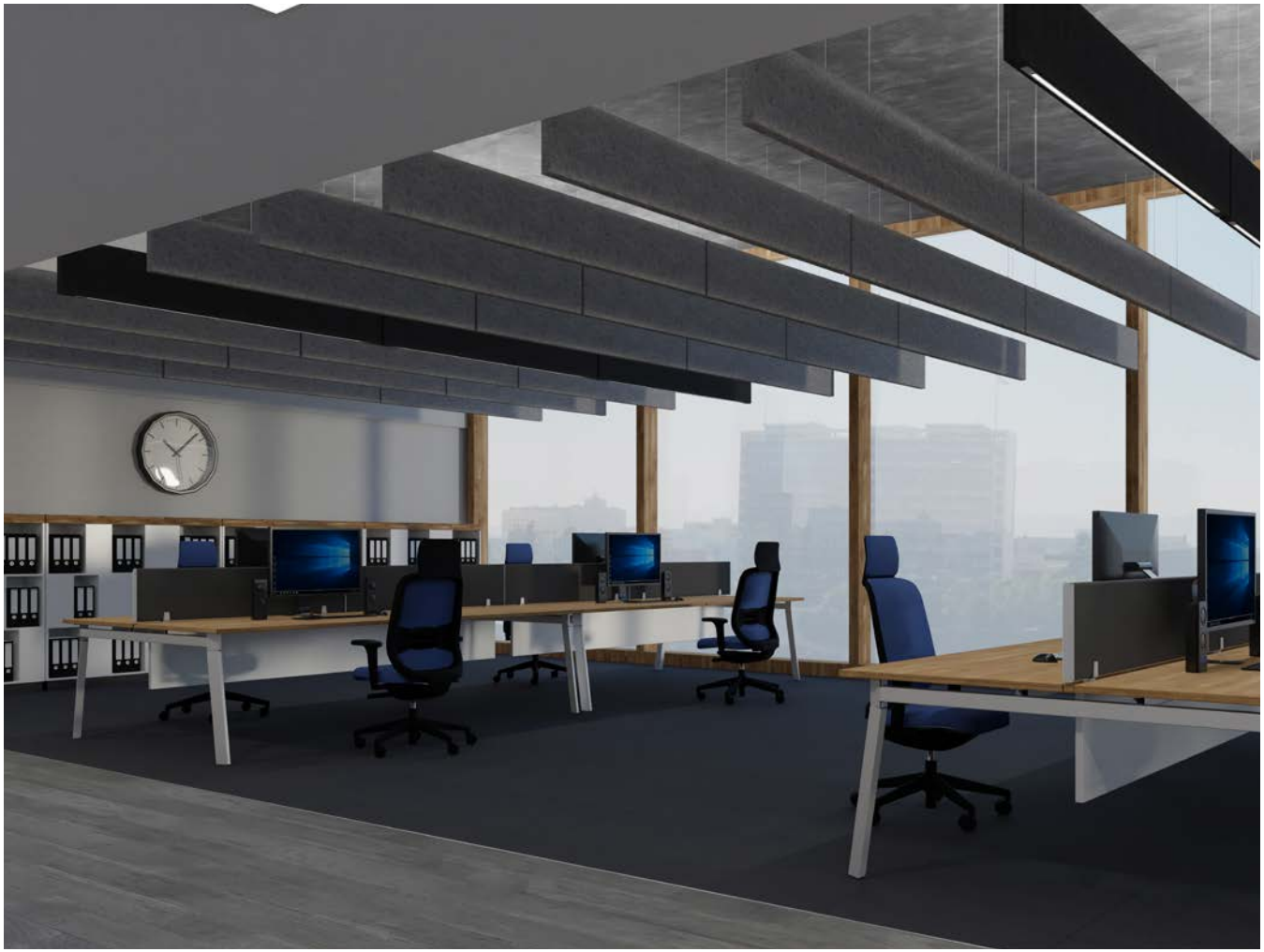
More detailed acoustic data for the Flexbeam is available upon request from our Technical Department.


Sound waves make contact with the Flexbeam acoustic material.
The Flexbeam body is manufactured from sound absorbing material, designed to increase voice and audio clarity by reducing unwanted reverberations and echo.
The acoustic material absorbs some of the sound energy.
The remaining dampened sound waves are redirected into the space.

# Sound solution

The Flexbeam is designed to create an acoustic ceiling. Our experts can combine the acoustic and lighting design to create a complete coherent solution for your specific requirements.

Luminaire layouts can limit the available locations for acoustic ceiling material and vice-versa. By combining the two functions together, a Flexbeam solution can be used to declutter the ceiling and reduce the overall cost of the installation.



EXAMPLE

# Office

This office space has a floor area of 48m$^2$ and has been treated with 8 Flexbeam luminaires resulting in a reverberation time of 1.17 Tmf.

No additional acoustic material is required. The Flexbeam luminaire provides all the acoustic attenuation. This results in a clearer ceiling.

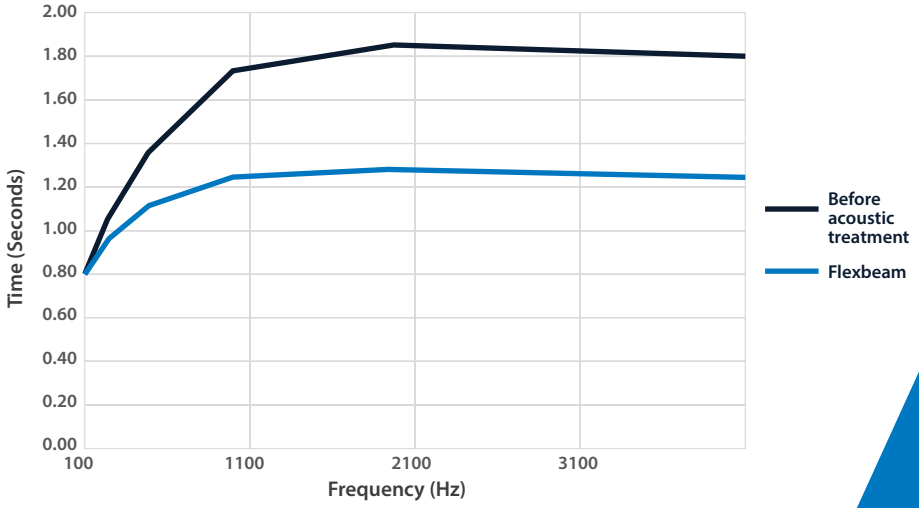
Target RT – 1.2 Tmf (BB93 for refurb buildings*)

Result RT – 1.17 Tmf

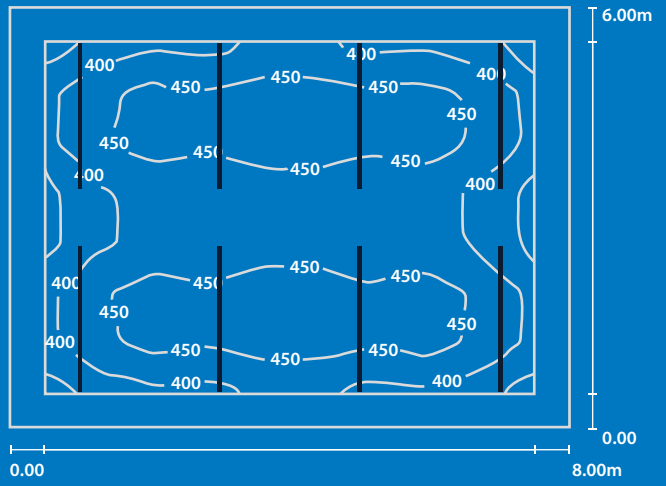
Furniture not included. Reverberation time will decrease further with furniture.

** Reverberation time taken as guidance from BB93*

RT = Reverberation Time (Seconds)
Tmf = Mid-frequency Reverberation Time




## Lighting calculation




Average light level – 435lux, Uniformity – 0.777, Glare <10

Ceiling height 3.2m, mounting height 2.7m

Calculation uses the metallised reflector version with uplight.

Part number: FM27LWHMS

EXAMPLE

# Secondary School Classroom

This secondary school classroom has a floor area of 60m² and has been treated with 9 Flexbeam luminaires and 12 plain Flexbeam baffles resulting in a reverberation time of 0.99 Tmf.

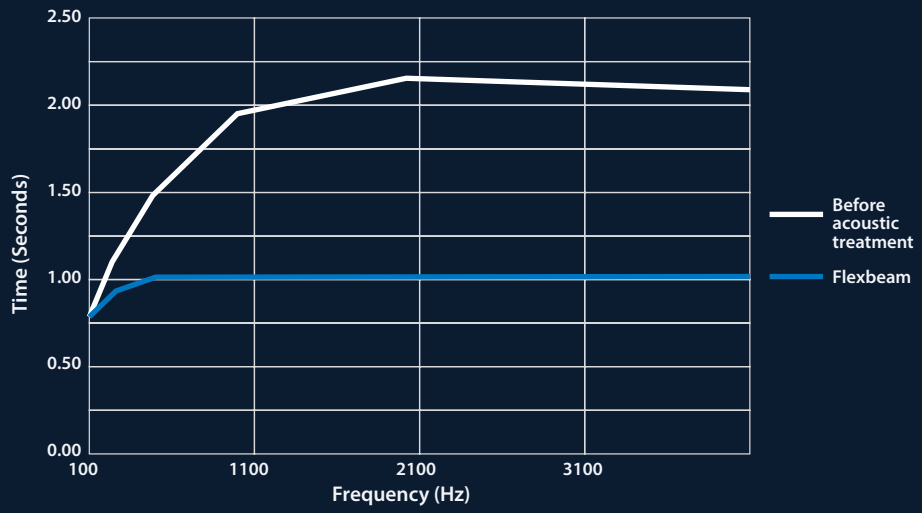
Target RT – 1 Tmf (BB93 for refurb buildings*)

Result RT – 0.99 Tmf

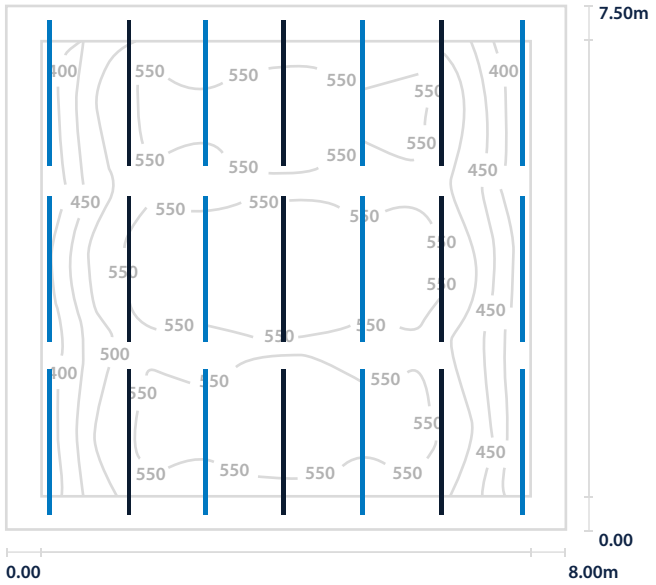
Furniture not included. Reverberation time will decrease further with furniture.

** Reverberation time taken as guidance from BB93*

RT = Reverberation Time (Seconds)
Tmf = Mid-frequency Reverberation Time




## Lighting calculation




Average light level – 528lux, Uniformity – 0.756, Glare <10

Ceiling height 3.1m, mounting height 2.7m

Calculation uses the metallised reflector, downlight only version.

Part number:
FM28LGYMS

= Flexbeam Luminaire
= Flexbeam Baffle

EXAMPLE

# Large Meeting Room

Meeting rooms can vary in size and shape and can often require a creative lighting solution. This large meeting room has a floor area of 28m² and has been treated with 4 Flexbeam luminaires and 11 plain Flexbeam baffles resulting in a reverberation time of 0.80 Tmf.

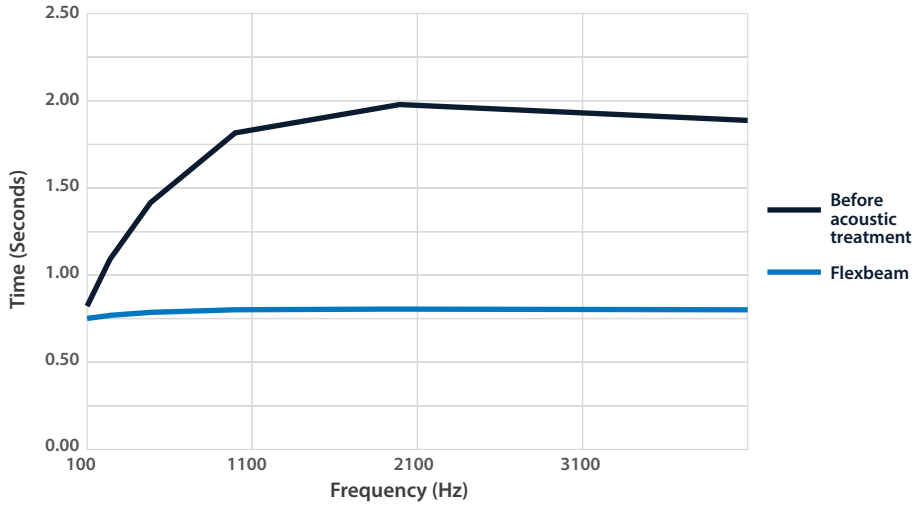
Target RT – 0.80 Tmf (BB93 for refurb buildings*)

Result RT – 0.80 Tmf

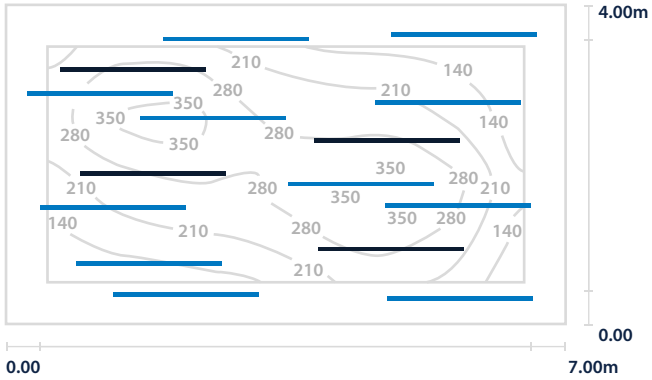
Furniture not included. Reverberation time will decrease further with furniture.

** Reverberation time taken as guidance from BB93*

RT = Reverberation Time (Seconds)
Tmf = Mid-frequency Reverberation Time




## Lighting calculation




Task light level - 307lux,
Uniformity - 0.737,
Glare <10

Ceiling height 3.4m,
mounting height 2.9m

Calculation uses the black reflector, downlight only version.

Part number:
FM18LBLBS

= Flexbeam Luminaire
= Flexbeam Baffle

# Take control of your lighting.

## Lighting Management & Emergency Monitoring.

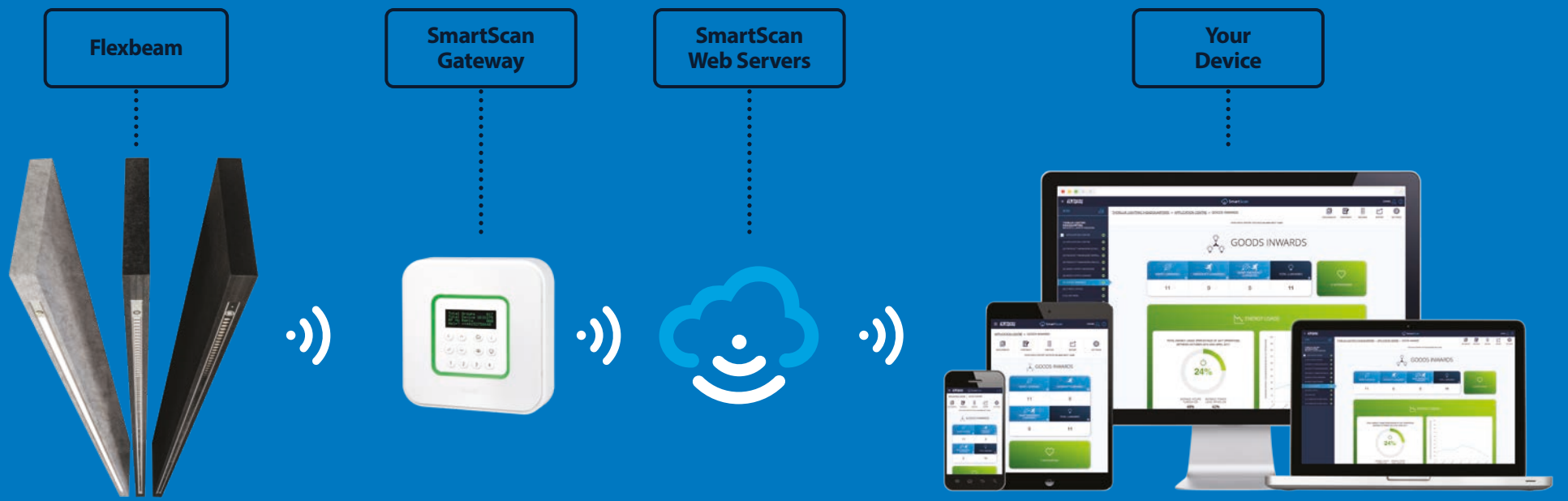
Flexbeam is available with SmartScan, a revolutionary wireless lighting control system that allows users to monitor their energy performance data and complete operational information for all SmartScan standard and emergency luminaires.

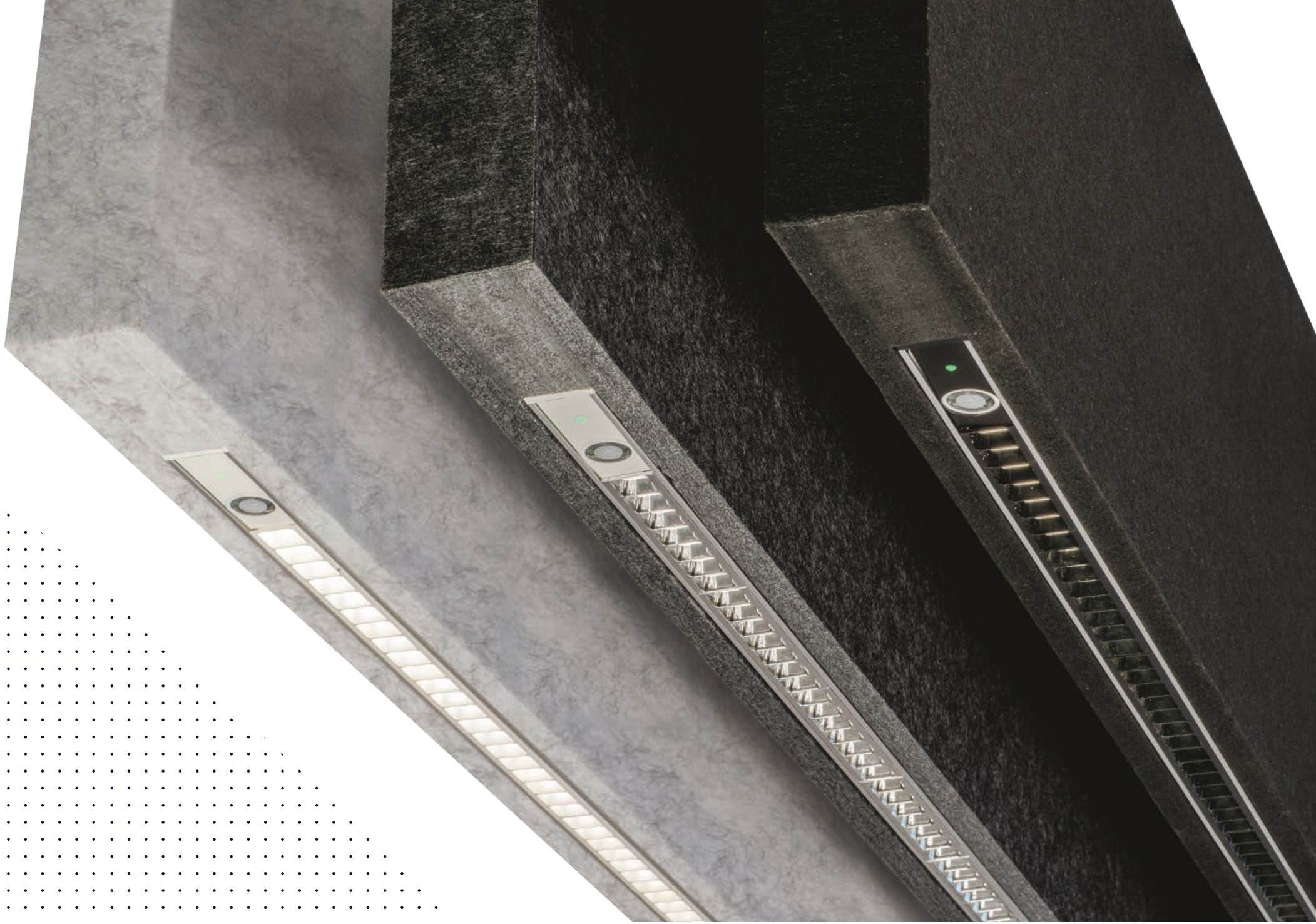
Information is displayed on the SmartScan website which can be accessed from anywhere using a computer, laptop, tablet or smart-phone.

The clear graphical user interface provides an overview of the whole site, through to the performance and operation of an individual luminaire.

Find out more at
**www.thorlux.com/smartscan**

or scan the QR code





# Range

SUSPENDED NARROW PROFILE LINEAR LUMINAIRES WITH ACOUSTIC ATTENUATION

IP20 UKCA CE LED

## SPECIFICATION

- Steel frame and gear housing
- High performance sound absorbing, fire-retardant, polyester fibre outer body
- Choice of marble white, charcoal grey or black finish as standard. Other colours available to special order.
- Extruded aluminium light engine
- Custom optical system combining a reflector, collimator and nanoprism lens for each LED
- Black 'invisible' light source, metalised low glare or white reflector options
- Versions with optional uplight component
- Supplied with easily adjustable 3m wire suspensions and fitted 3.5m clear supply lead
- Low glare optics for EN12464-1 / LG7 (<1500 cd/m$^2$ @ 65°)
- Fitted with 4000K LEDs

**SmartScan Configurations**

Find out more at **www.thorlux.com/smartscan**

## LUMINAIRE CONFIGURATOR

| EMERGENCY TYPE ◆ | PRODUCT CODE | WATTAGE | LENGTH | COLOUR | REFLECTOR | CONTROL TYPE |
|---|---|---|---|---|---|---|
| Without Uplight | | | | | | |
| **W** SmartScan* | **FM** Flexbeam | **18** 18W | **L** 2100 | **WH** Marble White | **W** White | **S** SmartScan |
| **T** AutoTest** | | **28** 28W | | **GY** Charcoal Grey | **M** Metallised | **D** Smart |
| **E** Emergency** | | | | **BL** Black | **B** Black | **A** Dimming (DALI) |
| | | | | | | **L** Non-dimming |
| With Uplight | | | | | | |
| **W** SmartScan* | **FM** Flexbeam | **27** 27W | **L** 2100 | **WH** Marble White | **W** White | **S** SmartScan |
| **T** AutoTest** | | **45** 45W | | **GY** Charcoal Grey | **M** Metallised | **D** Smart |
| **E** Emergency ** | | | | **BL** Black | **B** Black | **A** Dimming (DALI) |
| | | | | | | **L** Non-dimming |

**E.g. WFM27LGYWS**

| | | | | | | |
|---|---|---|---|---|---|---|
| **W** SmartScan | **FM** Flexbeam | **27** 27W | **L** 2100 | **GY** Charcoal Grey | **W** White | **S** SmartScan |

◆ Optional, leave blank if emergency is not required

* **Only** available with **S** Control Type ** **Not** available with **S** Control Type

## PLAIN BAFFLE RANGE

| LENGTH | COLOUR | CAT No. |
|---|---|---|
| 2100 | Marble White | FM 20059 |
| 2100 | Charcoal Grey | FM 20060 |
| 2100 | Black | FM 20061 |

## LED CHARACTERISTICS

| | |
|---|---|
| CRI | **80+** |
| COLOUR TEMPERATURE | **4000K** |
| RATED LIFE (HOURS) | **100K - L80/B10** |
| PROTECTION | **-** |
| DRIVER EFFICIENCY | **>85%** |
| REPLACEABLE | **NO** |
| POWER FACTOR | **>0.93** |
| LL/CW | **123.3** |

For LED characteristics explanation see **www.thorlux.com/led-guide**

## WEIGHTS

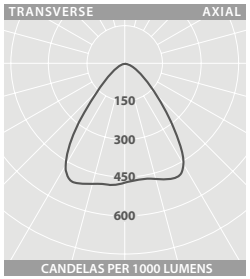
| VERSION | APPROX. kg |
|---|---|
| Without Uplight | 6.6 |
| With Uplight | 7.0 |

**EMERGENCY**
Add 0.3kg to weight listed.

**SMARTSCAN**
Add 0.1kg to weight listed.

# Range

## PHOTOMETRIC GUIDE

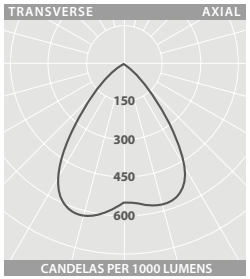



### WHITE

Luminaire Lumen Output:

Without Uplight
18W = 2500 lm
28W = 3665 lm

With Uplight
27W = 3540 lm
45W = 5490 lm

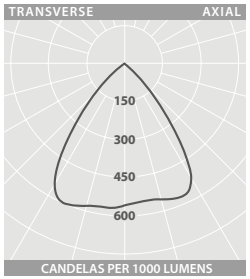



### METALLISED

Luminaire Lumen Output:

Without Uplight
18W = 2590 lm
28W = 3795 lm

With Uplight
27W = 3645 lm
45W = 5580 lm



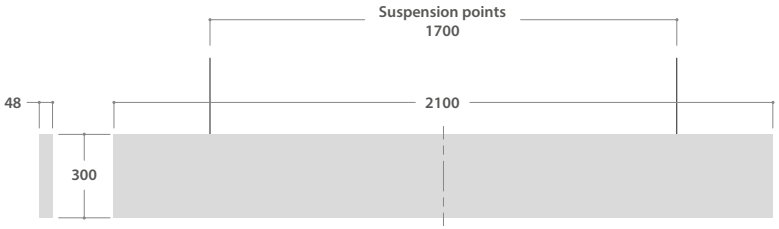

### BLACK

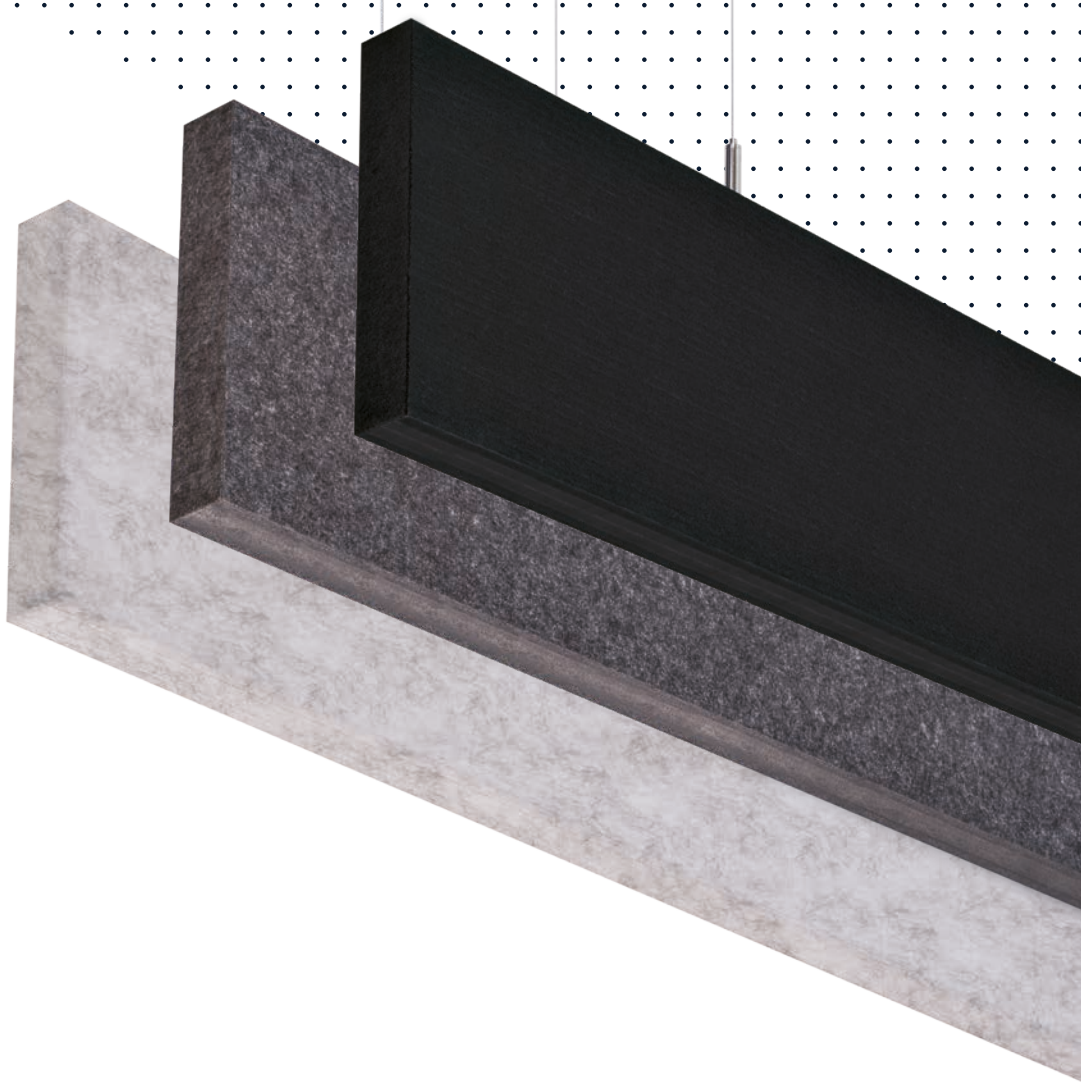
Luminaire Lumen Output:

Without Uplight
18W = 1850 lm
28W = 2715 lm

With Uplight
27W = 2920 lm
45W = 4490 lm

## DIMENSIONS



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**Thorlux Carbon Offsetting Project: www.thorlux.com/trees**

The information given in this catalogue is typical and must not be interpreted as a guarantee of individual product performance and/or characteristics. We reserve the right to alter specifications and designs without prior notice.


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bsi ISO 9001 Quality Management Systems CERTIFIED ISO 14001 Environmental Management CERTIFIED ISO 45001 Occupational Health and Safety Management CERTIFIED
FM 10913 EMS 532104 OHS 704131

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PN 3757A May. 21