



Acorn

The start of something **BIG**



Thorlux



AN INTRODUCTION TO

Acorn

Combining innovative technology and environmentally conscious design, Acorn is at the forefront of sustainability in exterior lighting.

By optimising energy efficiency and prioritising sustainable materials, Acorn demonstrates Thorlux Lighting's commitment to sustainability by achieving a minimal carbon footprint throughout its entire lifecycle.

Acorn has achieved an industry-leading TM66 score of 3.1 which has been verified as the highest published score of any luminaire under the LIA/CIBSE certification scheme TSD-012 to date.

Acorn exemplifies the supreme performance expected of Thorlux luminaires with an efficiency of up to 182.8 luminaire lumens per circuit watt, minimising energy consumption and operational carbon while maximising light output. The LEDs are highly efficient and boast a 100,000-hour rated life, reducing the need for frequent replacements and decreasing electronic waste.



Top of luminaire



Applications





Eco-conscious product construction

Acorn has been engineered to redefine sustainability benchmarks, starting with its construction techniques. Every component is crafted with a commitment to environmental responsibility and carefully selected to ensure minimal ecological impact throughout its lifecycle.



European oak housing

- Sourced from PEFC certified European forests
- Crafted from strips of laminate wood, utilising European oak that might otherwise be overlooked for traditional furniture applications
- Highly durable material that can withstand exposure to extreme weather conditions, and will achieve a life in excess of 20 years

Gear tray made from >90% recycled aluminium sheet

- Less heating processes and no mining
- Unpainted, simplifying the recycling process
- Made in EU

LED module

- Up to 182.8 luminaire lumens per circuit watt
- Made in EU

Highly efficient PMMA optics

- Impact resistance rating of IK07



100% post-industrial recycled polycarbonate gear enclosure

- IP66 rating provides high degree of protection and durability
- Using recycled material made from industrial waste
- Made in Britain

Super efficient driver

- Circuit optimisation with up to 92% efficiency
- Made in the EU

>90% Recycled aluminium mounting post

- Less heating processes and no mining
- Made in EU

SmartScan external sensor

- Monitors energy usage
- Daily energy and carbon saving reporting
- Made in Britain

Protecting the darkness

Thorlux is committed to reducing obtrusive light and light trespass, protecting the night sky from light pollution.

Light pollution is the artificial increase in outdoor light levels caused by human activities.

Research shows that poorly selected, planned, or installed Artificial Light At Night (ALAN) can disrupt wildlife, impact human health, waste money and energy, contribute to climate change, and block our view of the universe.

The 2700K colour temperature versions of the Acorn luminaire have achieved DarkSky approval; by selecting these models, you are helping reduce the effect of ALAN. At 0° tilt, these luminaires produce no upward light.

When used with the SmartScan system to control luminaire output levels with presence detection, all Acorn models provide minimal impact on the environment they are illuminating.



**No upward
light**



**DarkSky
approved**

*2700K version with 0° tilt



**SmartScan
controls**



**Less impact
on environment**

► Find out more at darksky.org and www.thorlux.com/smartsan



Certified by DarkSky.org





Embracing sustainable materials

Why wood?

Wood has less embodied carbon (CO₂e/kg) than cast aluminium. It is also a renewable resource, requiring less energy-intensive processes to be transformed into a usable material. It therefore contributes less to the overall embodied carbon footprint of a luminaire when used in place of a cast aluminium body.

Trees are regrown through sustainable harvesting programmes. Responsible forestry practices involve replanting trees and managing the harvesting process to ensure a continuous and sustainable wood supply. Participating in sustainable harvesting programmes helps maintain the balance between consumption and regeneration, ensuring that the use of wood does not irreversibly deplete forests.

Wood is proven to have both longevity and durability, reducing the frequency of replacements, and contributing to a lower environmental impact over the product's life cycle.

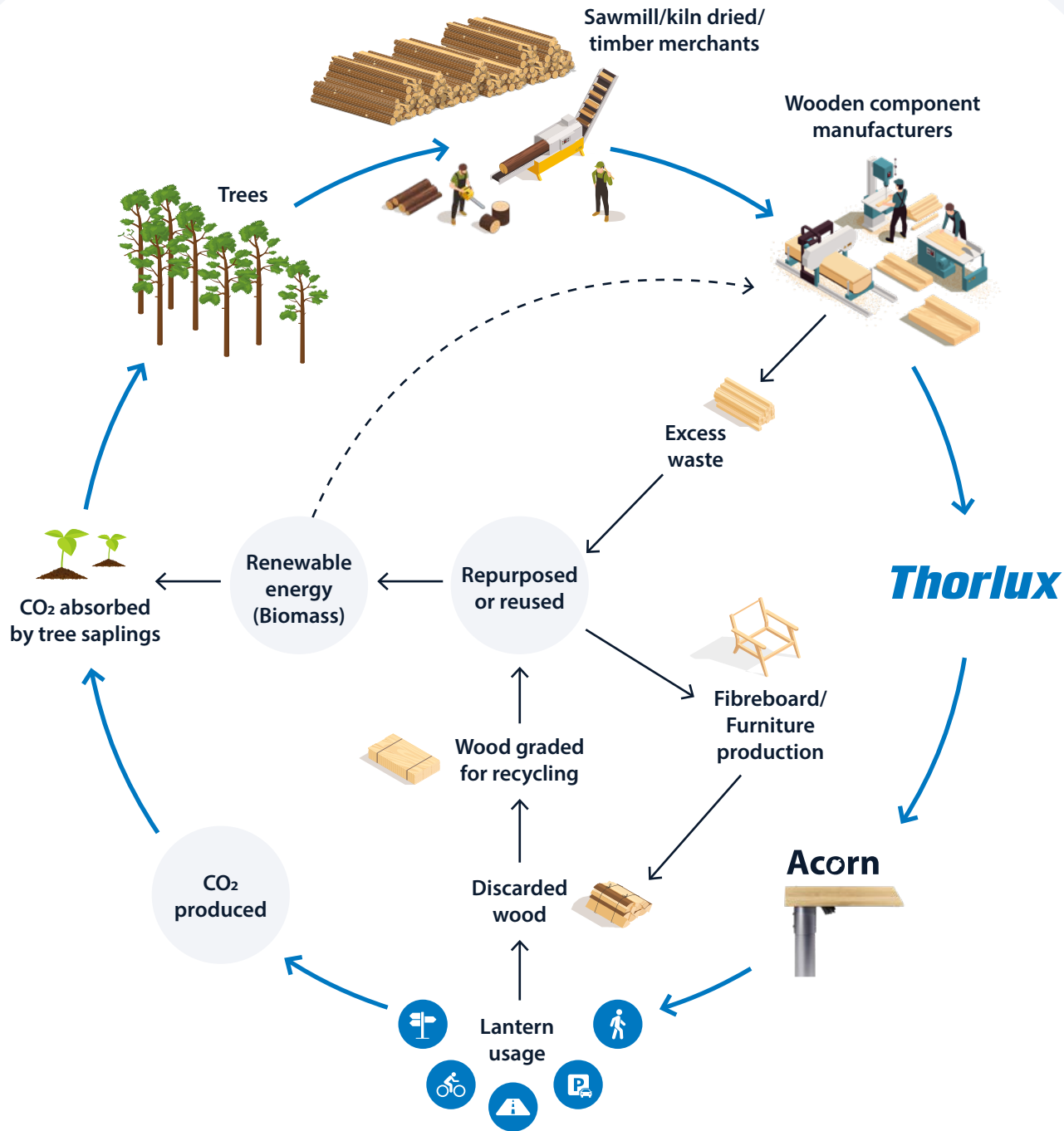
Does this contribute to deforestation?

The European oak forests are monitored and regulated by the Programme for the Endorsement of Forest Certification (PEFC).

PEFC is an international non-profit organisation that promotes sustainable forest management through certification.

This certification assures that the harvest of European oak complies with strict environmental and social standards, helping to prevent deforestation and supporting responsible forestry practices.

Engineered to minimise the environmental impact



Thorlux

Acorn

Highly recyclable components at end of life

A long term solution with a sustainable future

Thorlux Lighting, as part of the FW Thorpe Group of companies, is committed to minimising the environmental impact of its activities across all operations.

The FW Thorpe Group of companies has been officially recognised as being carbon neutral, with systems of reduction, measurement and certified offsetting in

place, since 2012. Third-party assessment provides independent assurance of the Group's long-standing sustainability commitment across all its operations worldwide. Being carbon neutral means that FW Thorpe Plc offsets the carbon dioxide emissions it generates (scopes 1 and 2 of the Greenhouse Gas Protocol) through its business activities.

FW Thorpe Plc is a carbon-neutral company through a combination of measures. Company-wide initiatives such as energy use minimisation, self-generation of renewable energy through solar photovoltaic (PV) units, and procurement of renewable energy have

reduced the Group's carbon footprint, whilst trees in the Group's award-winning carbon offsetting afforestation project absorb the remaining carbon dioxide produced.

In 2022, FW Thorpe initiated a process to calculate its complete carbon footprint, including upstream and downstream activities such as supplier and customer relationships. The Group has set a target of achieving net zero greenhouse gas emissions by 2040 across Scopes 1, 2 and 3, from a 2021 base year. The Science Based Targets Initiative (SBTi) validated the Group's plan in 2024 under the Net Zero Standard.

For more information on our SBTi commitments, please visit:

www.thorlux.co.uk/news/net-zero-validated





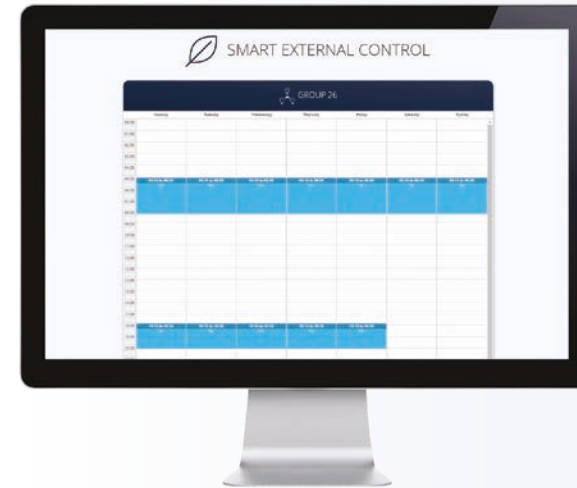
Take control of your lighting

Integrated, intelligent lighting management that maximises energy savings for external applications through movement detection and daylight switching, with timed override via the SmartScan Website.

Users can set luminaires to dim to a lower level or turn off completely when no presence detected, reducing the environmental impact of lighting.

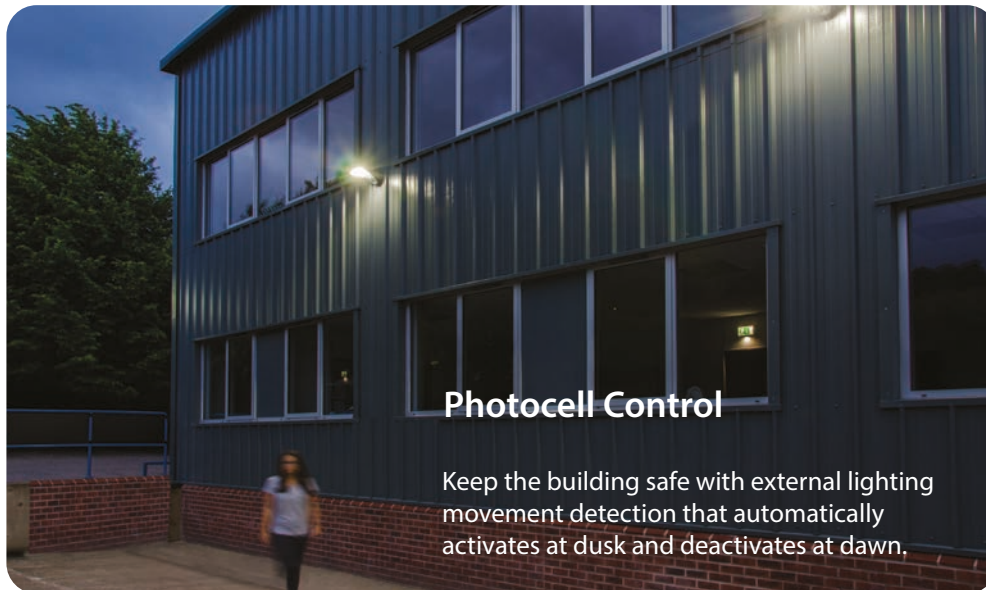


Visit the **SmartScan** webpage to find out more



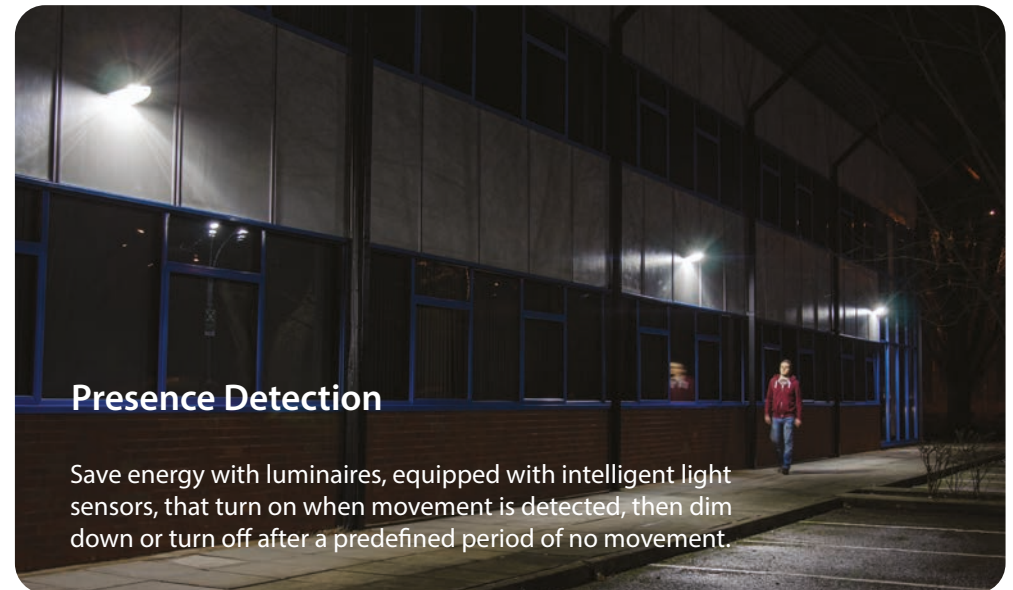
Lighting Time Control

Enjoy flexible external lighting options with the ability to select automatic movement detection or set the lighting to turn on or off between set times.



Photocell Control

Keep the building safe with external lighting movement detection that automatically activates at dusk and deactivates at dawn.



Presence Detection

Save energy with luminaires, equipped with intelligent light sensors, that turn on when movement is detected, then dim down or turn off after a predefined period of no movement.



Luminaire Status Monitoring

One convenient, central location to view the health status of the whole lighting installation, groups of luminaires or even an individual component within a luminaire.

Energy Usage Monitoring

An interactive dashboard makes keeping track of your energy usage easy. Data is available for the entire installation, each area and each luminaire.

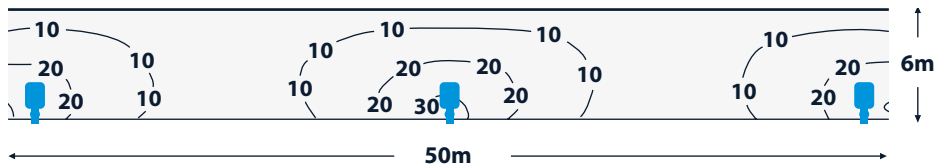


Device Management

Eliminating the need for programming locally, this powerful tool allows building managers to change luminaire parameters on the SmartScan website, massively simplifying customisation of the system.



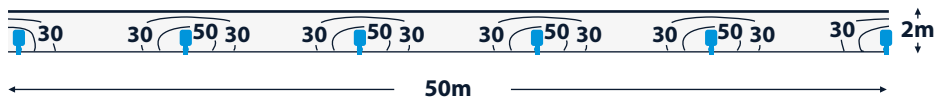
Typical spacing guide



Roadway distribution

27W / 6m mounting height 25m spacing

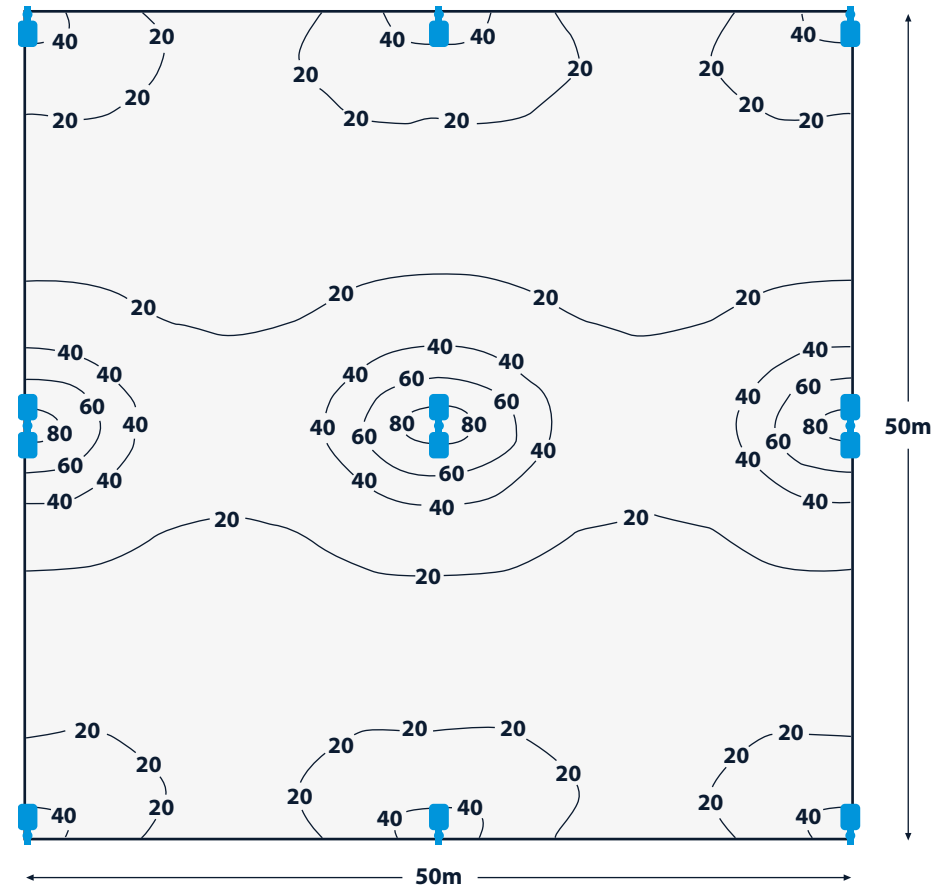
Average illuminance = 12 lux / Uniformity = 0.506



Cycle path distribution

9W / 2m mounting height 10m spacing

Average illuminance = 35 lux / Uniformity = 0.422



Area distribution

55W / 6m mounting height 25 x 25m spacing

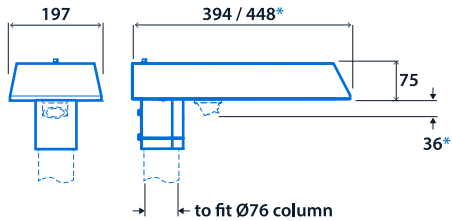
Average illuminance = 24 lux / Uniformity = 0.57



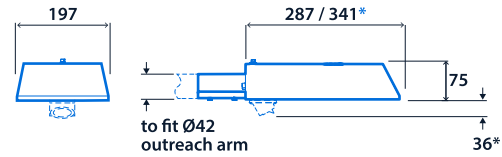
Acorn

DIMENSIONS

9W / 27W versions Vertical column top

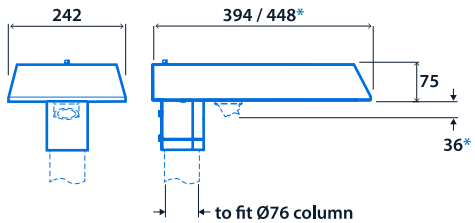


Horizontal outreach arm

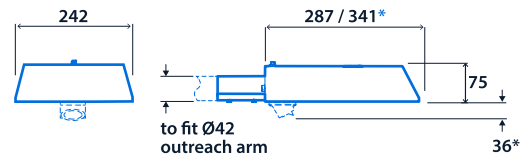


55W versions

Vertical column top



Horizontal outreach arm



*SmartScan External version only

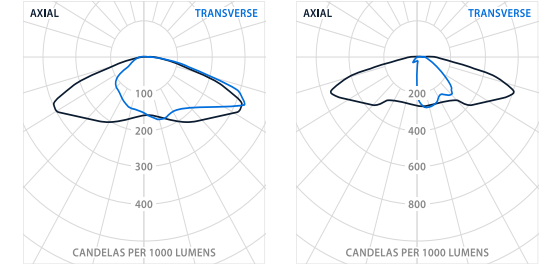
CONFIGURATOR

PRODUCT CODE	WATTAGE	MOUNTING	DISTRIBUTION	COLOUR TEMPERATURE	CONTROL TYPE
AC Acorn	09 09W	V Vertical 76mm column top	A2 Area	2 2700K	S SmartScan
	27 27W	H Horizontal 42mm outreach arm	R5 Roadway	4 4000K	L Non-dimming
	55 55W				P Photocell

E.g. AC09VA22S

AC Acorn	09 09W	V Vertical 76mm column top	A2 Area	2 2700K	S SmartScan
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PHOTOMETRIC GUIDE



AREA DISTRIBUTION 2700K

Luminaire Lumen Output:
9W = 1825
27W = 5000
55W = 10055

4000K

Luminaire Lumen Output:
9W = 1990
27W = 5450
55W = 10965

ROADWAY DISTRIBUTION 2700K

Luminaire Lumen Output:
9W = 1740
27W = 4775
55W = 9600

4000K

Luminaire Lumen Output:
9W = 1900
27W = 5205
55W = 10470

Horizontal outreach arm



Vertical column top



WEIGHTS

WATTAGE	APPROX. kg
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9W / 27W	2.5
55W	4.2

SMARTSCAN

Add 0.6kg to weight listed

HIGHLY SUSTAINABLE EXTERIOR FLOOD LIGHT

IP66 IP65 SMART VERSION IK07 UK CA CE LED

WINDAGE - 0.021 m² SmartScan: 0.035 m²

SPECIFICATION

- Programme for the Endorsement of Forest Certification (PEFC) certified European oak body
- 100% industrial recycled polycarbonate gear enclosure
- >90% recycled aluminium gear tray and mounting brackets with raw finish
- Industry leading TM66 score of 3.1 - LIA/CIBSE certification scheme TSD-012 verified
- DarkSky approved (2700K versions at 0° tilt only)
- High-efficiency sealed acrylic lenses
- Area or roadway optical distributions
- Integral high-efficiency driver
- Extremely efficient and long system life up to 100,000 hours
- Smart External versions with intelligent lighting control for use up to 8 metres mounting height
- SmartScan wireless technology removes the need for control cabling. Ideal for retrofit
- Fitted with 6m lead
- Column top 76mm as standard
- Outreach arm 42mm as standard
- Wall mounting bracket accessory
- Wide range of mounting options
- Photocell option
- Fitted with 2700K or 4000K LEDs (other colour temperatures available to special order)

ACCESSORIES

DESCRIPTION	CAT. No.
Acorn front or rear baffle (9W and 27W)	AC 20646
Acorn front or rear baffle (55W)	AC 20647
Acorn side baffle – SmartScan versions only	AC 20648
Acorn side baffle – non-SmartScan versions only	AC 20649

LED CHARACTERISTICS

CRI	70+
COLOUR TEMPERATURE	2700K
RATED LIFE (HOURS)	100K - L90/B10
PROTECTION	-
DRIVER EFFICIENCY	>85%
REPLACEABLE	YES
POWER FACTOR	>0.9

LL/CW 167.6

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

LED CHARACTERISTICS

CRI	70+
COLOUR TEMPERATURE	4000K
RATED LIFE (HOURS)	100K - L90/B10
PROTECTION	-
DRIVER EFFICIENCY	>85%
REPLACEABLE	YES
POWER FACTOR	>0.9

LL/CW 182.8

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



SmartScan Configurations



Find out more at www.thorlux.com/smartscan

SmartScan version



Acorn

Specification

- Stepped tubular galvanised steel columns, to BS EN 40-2:2004
- Mounting accessories are hot dip galvanised to BS EN ISO 1461:2009
- Supplied with wooden baseboard for mounting cable connection accessories
- Accessories are easily fixed with stainless steel grub screws and have an internal stop to ensure cable exit

UK Delivery

Columns are delivered to site at a pre-arranged time. An off-loading service is not included and it is the responsibility of the client (or client's agent) for the safe undertaking of this requirement. A fork lift truck is recommended to minimise manual handling.

Range

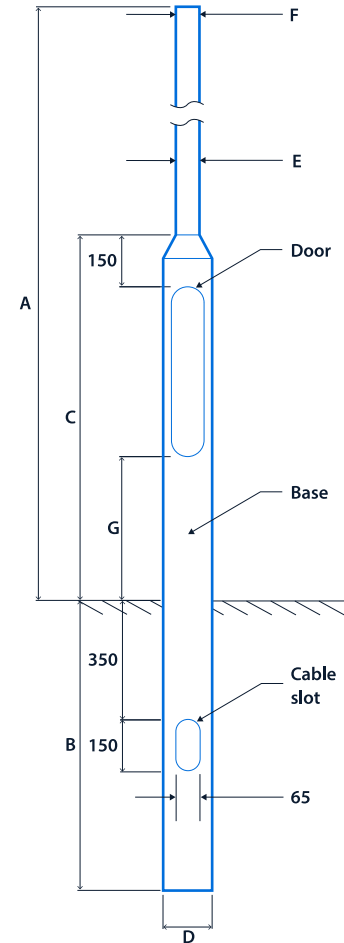
NOMINAL HEIGHT A	CAT. No.	PLANTING DEPTH B	BASE HEIGHT C	DOOR HEIGHT D	DOOR DIMENSIONS E F		BASE DIAMETER G	SHAFT DIAMETER H	APPROX. kg	BASEBOARD SIZE
Single and twin luminaire column										
4m	FC4	800	925	300	500	100	140	76	33	89 (w) x 500 (h)
5m	FC5	800	925	300	500	100	140	76	40	89 (w) x 500 (h)
6m	FC6	1000	925	300	500	100	140	76	44	89 (w) x 500 (h)
8m	FC8	1200	1200	400	600	115	168	114 ▲	100	89 (w) x 600 (h)
10m	FC10	1500	1300	500	600	115	168	114 ▲	142	89 (w) x 600 (h)
12m	FC12/101	1700	1800	1000	600	115	192	140 ■	226	89 (w) x 600 (h)

▲ Reduced at top to 89mm ■ Reduced at top to 101mm

Non-standard columns

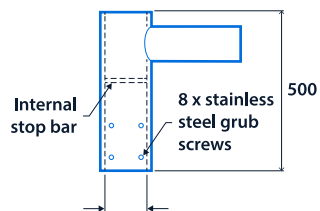
The following additional options are available on request:

- **3 and 4 way crossarms** - please ask us to confirm column suitability regarding head weight and windage.
- **Tubular steel columns with additional T-wash and matt black primer paint finish** - specify using suffix **PR** after column reference e.g. **FC5/PR/POT-89R**.
- **Flange plate mounted columns** - specify using suffix **FL** after column reference e.g. **FC5/FL/POT-89R**.
- **Mid/base hinged columns** - contact our Technical Department for further information



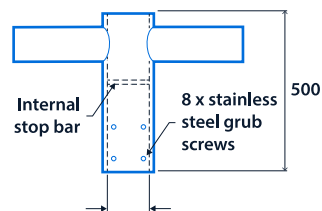
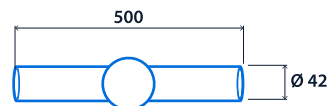
Column accessories

Single outreach arm



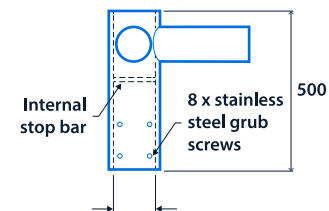
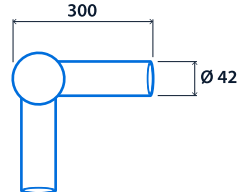
AC20630 to fit on to $\varnothing 76$
 AC20631 to fit on to $\varnothing 89$
 AC20632 to fit on to $\varnothing 101$
 AC20633 to fit on to $\varnothing 114$

Twin outreach arm 180°



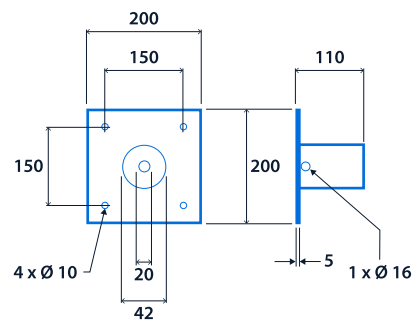
AC20635 to fit on to $\varnothing 76$
 AC20636 to fit on to $\varnothing 89$
 AC20637 to fit on to $\varnothing 101$
 AC20638 to fit on to $\varnothing 114$

Twin outreach arm 90°

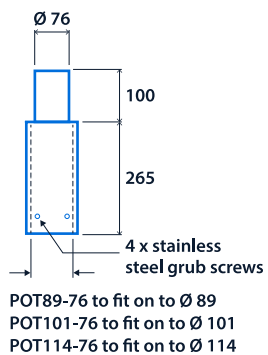


AC20640 to fit on to $\varnothing 76$
 AC20641 to fit on to $\varnothing 89$
 AC20642 to fit on to $\varnothing 101$
 AC20643 to fit on to $\varnothing 114$

Wall mounting bracket AC 20644



Column adaptors



Ordering information

	SINGLE COLUMN MOUNT	SINGLE OUTREACH ARM	TWIN OUTREACH ARM 180°	TWIN OUTREACH ARM 90°
Mounting Height	Column Adaptor	Column Bracket	Column Bracket	Column Bracket
4m	FC4	FC4 AC 20630	FC4 AC 20635	FC4 AC 20640
5m	FC5	FC5 AC 20630	FC5 AC 20635	FC5 AC 20640
6m	FC6	FC6 AC 20630	FC6 AC 20635	FC6 AC 20640
8m	FC8 POT 101-76	FC8 AC 20632	FC8 AC 20637	FC8 AC 20642
10m	FC10 POT 101-76	FC10 AC 20632	FC10 AC 20637	FC10 AC 20642



Designers, manufacturers and suppliers
of professional lighting systems

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ARCHITECTURAL LUMINAIRES
HEALTHCARE LUMINAIRES
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RETAIL AND DISPLAY LUMINAIRES
CONTROLS AND SYSTEMS

A DIVISION OF F.W. THORPE PLC

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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