

SLIM SurroundLite™

axis

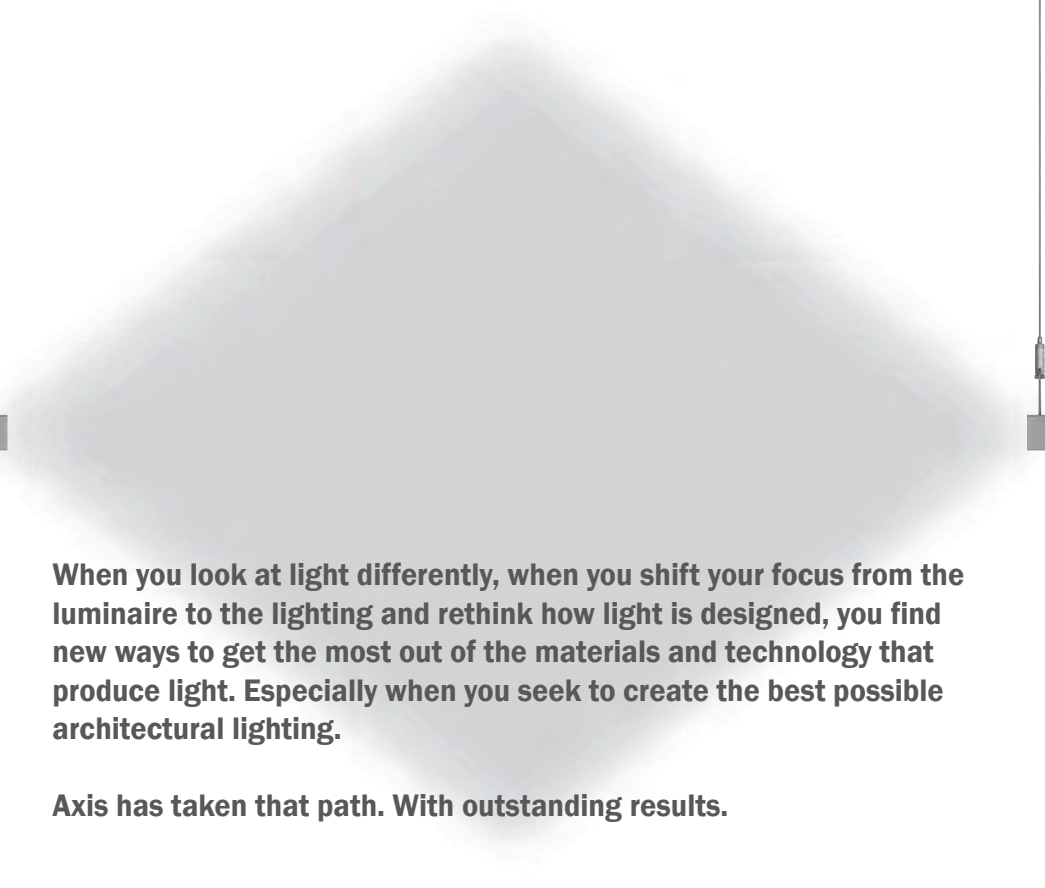
About Axis

Founded in 1991 and still family owned and managed, Axis is an important source for architectural lighting across North America and around the globe. Over the last decade, Axis has exhibited remarkable growth thanks to its

Design Flexibility, Optimal Energy Efficiency and Responsive Customer Care.

On the strength of a broad and expanding product line, and pioneering technology such as SurroundLite, the company has successfully completed lighting projects for high-profile clients including Apple, Chrysler, The Empire State Building, Google, Hyundai, Time Warner and McGill University, among others.

Axis has the drive and the expertise to meet your needs and provide architectural lighting... your way.



When you look at light differently, when you shift your focus from the luminaire to the lighting and rethink how light is designed, you find new ways to get the most out of the materials and technology that produce light. Especially when you seek to create the best possible architectural lighting.

Axis has taken that path. With outstanding results.

Introducing SurroundLite™

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Surround Sound creates a richer audio experience with additional speakers that surround the listener.



SurroundLite creates a richer visual experience with additional light distribution that opens a space and pleases the eye.

SurroundLite™

Adding dimension to LED lighting



There's a feeling you get when you walk into a space... You can't quite put your finger on it because it's all around you. It's uniformly diffuse like natural light but it's coming from the luminaires. It's the special way light is being distributed, integrating well with architectural elements and sweeping the space with wide planes of light in all directions. On the ceiling, in corners, where the walls join the ceiling.

Welcome to SurroundLite, an evolving technology for general/ambient lighting exclusive to Axis, providing new and improved LED lighting tools to the design community.

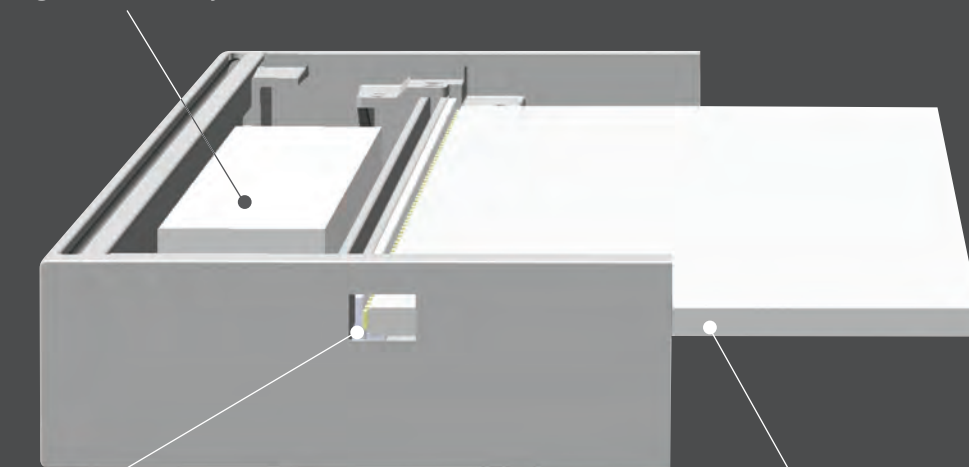
Innovative technology to get much more out of LEDs

Axis SurroundLite is based on the fundamental physics of how light interacts with matter. The specially engineered lightguide is made of precisely coded and aligned molecules that shape LED output in all three dimensions.

A systems approach: The whole is greater than the sum of its parts

Inside luminaires using SurroundLite technology, optics components are specially designed to interact with each other in an optimal manner. Using a systems approach, the lightguide, edge-lit mid-flux LED light engines and integrated driver work together, complementing each other's high-performance features and yielding unsurpassed application effectiveness.

Integral Control-Ready Driver



LED Board

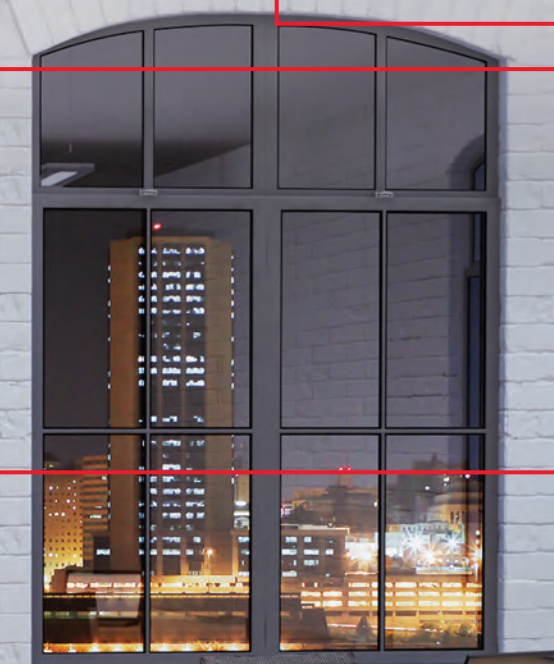
Precision-coupled optics components work in synergy with the lightguide.

Patented Leading-Edge Lightguide

- Materials-based technology using molecular optics
- Creation of diffuse and uniform planes similar to natural light
- Effective batwing distribution with cutoff in all directions
- Elimination of shadowing from dust or bugs
- Up to 8-foot continuous lightguide extrusions available

True Lighting Benefits of **SurroundLite™**

Slim SurroundLite
Wall Mount version
under development





Glare Mitigation

Regressed lens, VL Optic, louvers and lenses yield lower luminance on the luminaire's light-emitting area.

Reduced 'Cave Effect', Increased Perceived Brightness

Wide 3D batwing uplight distribution lights up corners

Lighting at seam between ceiling and wall

3D light distribution from luminaire extremities lights up adjacent spaces and vertical planes

Use of Fewer Luminaires

The 3D nature of light distribution is well suited to checkerboard patterns, reducing the need for continuous rows.

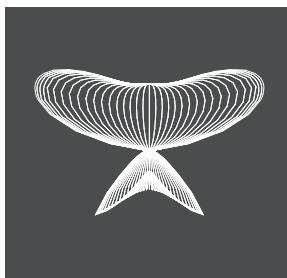
Better Facial Modeling / Facial Recognition

Reflected light from illuminated surfaces within the space results in soft fill light on the vertical plane.

No Streaks or Hot Spots of Light

Axis SurroundLite technology spreads out light uniformly versus Lambertian distributions that put an intensity of light directly above and below the luminaire.

3D Polar Curve (SL 80/20)



SurroundLite spherical 3D light distribution

Key Features

- Wide 3D Distribution
- Visual Comfort
- High Efficiency
- Superior Sustainability.

Average light levels: 27 fc
Power density: 0.69 W/ft²
Semi-Indirect: 80% up 20% down
8ft pendant, 1000 lm/ft

THE LIGHTING MODEL



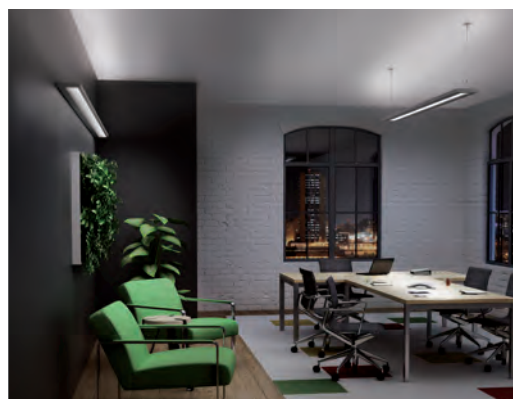
Wide 3D Distribution

One of the biggest challenges in lighting is achieving balanced illumination. With uniform brightness, a space is optically larger. When there are dark areas on the ceiling and near the top of walls – commonly known as the ‘cave effect’ – the room is optically smaller, limiting vision and potentially creating eye fatigue and lowering productivity.

With SurroundLite™ extra-wide, multidimensional light distribution, light is directed in all three planes and sent in every corner of the room. In retail aisles, down distribution provides excellent vertical light on store merchandise. In open-plan offices and libraries, rows can be spaced up to 15 feet on center for optimal power densities. SurroundLite brings the promise of balanced brightness, facilitating lighting design.



With **SurroundLite**



Without **SurroundLite**

Dare to compare

With SurroundLite, precision optics emit light where you need it: corners, at seam between ceiling and wall and on task. Wide spherical 3D distribution also occurs from luminaire extremities, sending light into support areas and adjacent walls.

THE LIGHTING QUALITY

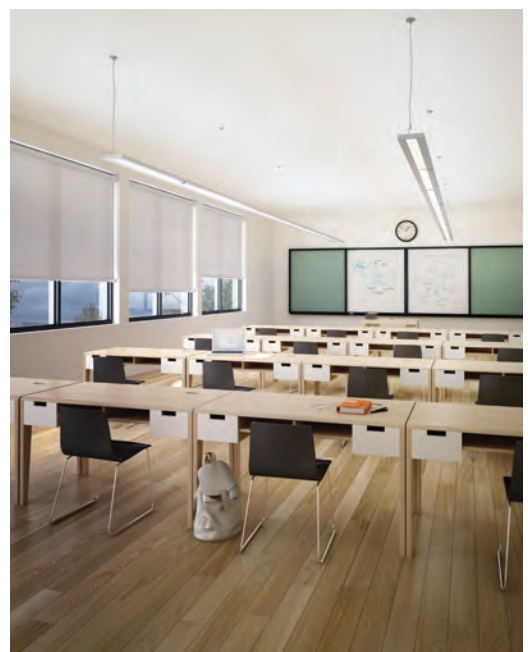


Visual Comfort

By providing balanced illumination, SurroundLite™ creates improved visual comfort for ambient and general lighting applications. The three-dimensional light distribution is pleasant to the eye because of its diffuse characteristics that resemble natural lighting. In addition, the luminaire appearance in itself is appealing, given the uniformly diffuse light-emitting area and the softly lit luminaire extremities.

The highly uniform ceiling brightness opens up a space, illuminates vertical surfaces and invites the eye to explore, which is especially desirable in retail aisle applications. In conference rooms, private offices and open-plan areas, SurroundLite eliminates glare, reduces eye fatigue and supports effective facial recognition.

- Exceptionally uniform brightness on ceiling and on the work plane/task.
- Continuously lit aperture with illuminated luminaire extremities.
- Very diffuse light-emitting area, for a more natural appearance (no head-lamp effect or streaks of light).
- Spherical batwing distribution with cutoff eliminates bright spots directly under luminaire and dark spots between luminaires.
- High transmissivity shielding options available for added visual comfort.



THE LIGHTING PERFORMANCE



High Efficiency

In addition to delivering wide distribution of glare-free, balanced LED light in all three lighting planes, SurroundLite™ technology ensures flexible, energy-efficient lighting design.

Light goes far and wide where you need it with performances reaching 105 LPW (at 3500K). Precision controlled 360-degree spherical distribution and exceptionally wide spacing further reduce the number of luminaires needed in a space without compromising uniformity.

With Axis SurroundLite, you take the guesswork out of designing low-energy quality lighting configurations, whether applications require uplight, downlight or a combination of the two.

- Efficacy up to 105 LPW (at 3500K) no matter the distribution.
- Unsurpassed application effectiveness.
- Extra-wide spacing: up to 15-foot centers.
- Power densities well below ASHRAE 90.1, New York City Building Code and Title 24 requirements.
- Choice of two lumen packages adds flexibility to meet energy requirements.
- SurroundLite compatible with various controls and integrated sensors for added energy savings.
- SurroundLite features optical efficiencies greater than 90% whereas most edge-lit systems offer less than 80%.



BEYOND LIGHTING



Superior Sustainability

What happens to LED luminaires after 50,000 hours of operation? Most will end up in landfills because their LED light engines cannot be replaced or upgraded. Unless they have SurroundLite™ technology inside.

SurroundLite is the product of ecodesign. Not only can luminaires be taken apart upon end of-life for recycling, but they can be updated over the years with easily removable, more advanced LED light engines. In other words, SurroundLite technology helps protect your investment in efficient lighting and preserve design integrity. In addition, because it incorporates LEDs, no mercury or hazardous materials are used in its manufacturing.

- Upgradeable and future-proof field-replaceable LED light engines.
- LED system efficiency to exceed 60,000 hours of service life with 85% lumen maintenance (L85).
- Axis 'Spec-it-Forward' policy, ensuring that customers receive the most up-to-date version of SurroundLite technology based on luminaire delivery date rather than ordering date.
- Worry-free coverage with Axis's 5-year warranty on the LED board and driver.



Net Zero Ready

Efficient lighting is one of the main critical areas for meeting the Living Building Challenge for zero carbon emissions from buildings by 2030, set by the International Living Future Institute. With over 105 LPW (at 3500K) and its potential for less than 0.5 W/ft² power densities, SurroundLite technology is ideally suited to deliver long-lasting savings and help green building managers achieve realistic and cost-effective energy targets.

SLIM SurroundLite™



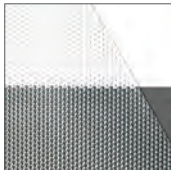
With its stylish, clean lines and ultra-thin 1 3/8" (3.5 cm) profile, Slim SurroundLite brings a contemporary solution for cost-effective quality lighting performance.

Creating beautiful linear visual statements, Slim SurroundLite is a versatile pendant suited to illuminating spaces with high or low ceiling heights, and for lighting concepts with or without daylight contribution.

Slim SurroundLite offers spherical 3D lighting in four different light distributions to maximize application flexibility. The luminaire also comes in two lumen packages: 800 lm or 1,000 lm per foot of lightguide. Select the distribution and lumen output that best meet your target light levels (whether high or low) and lighting design needs.

Shielding Options

Different shielding media provide varying degrees of visual comfort, but also impact luminaire appearance. All shielding options yield a 3D batwing distribution with peak cutoff angle under 60°. The effects of shielding on downlight distributions are as shown:



VL: VL Optic™ provides optimal efficiency and visual comfort with 92% transmission and true 3D narrow batwing distribution with cutoff.



PL: Flat-blade louvers provide high visual comfort when used with higher lumen packages and direct component that is >50%.












SM: Smooth lens provides uniformity on the light-emitting area and yields more light directly below the luminaire.



RE: Regressed reveals the lightguide and results in the widest 3D batwing distribution (suited only for Semi-Indirect product).

Legend

	VL Optic		Open office		Libraries
	IC Controls		Airport		Retail
	Private office		Education		Healthcare

Direct



VL VL Optic

Indirect



NO No shielding

Semi-Direct



VL VL Optic

Semi-Indirect



VL VL Optic



PL Flat-blade louvers



PL Flat-blade louvers



PL Flat-blade louvers



SM Smooth lens



SM Smooth lens



SM Smooth lens



RE Regressed



Direct



Industry first: Shown here with integrated
PL flat-blade louver option in a shallow fixture

Direct



Lighting Profile

Higher light levels on work plane. • Efficient narrow 3D batwing distribution with cutoff • Luminaires spaced closer together to achieve uniformity

Typical Application

Open area or high-ceiling spaces with horizontal tasks requiring good visibility or tasks requiring attention to detail (e.g. lab work)

Task Lighting

Not needed



VL VL Optic

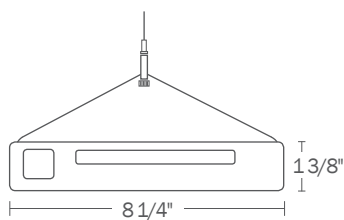


PL Flat-blade louvers

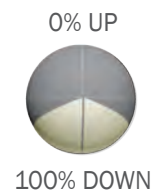
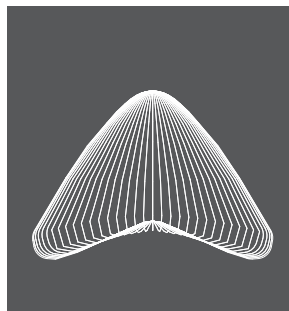


SM Smooth lens

Dimensions



3D Polar Curve (SL 0/100)



Indirect



Shown here with continuous extrusion
without breaks (up to 12ft)

Indirect



Lighting Profile

Lower light levels on work plane • Wide 3D batwing distribution • Luminaires spaced furthest apart (up to 15-foot centers) • Greatest ceiling uniformity

Typical Application

Executive office with strong daylight contribution / Open office areas with low ceilings

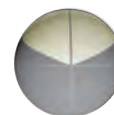
Task Lighting

Recommended



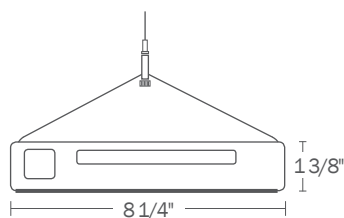
NO No shielding

100% UP

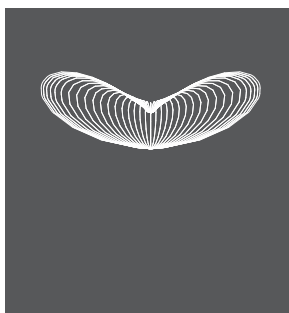


0% DOWN

Dimensions



3D Polar Curve (SL 100/0)



Semi-Direct



Shown here with patented Axis VL Optic for efficient cutoff and mitigated glare in all planes

Semi-Direct



Lighting Profile

Downlight > Uplight • High light levels on work plane • Wide 3D batwing uplight distribution / Narrow 3D batwing downlight with cutoff • Good visual comfort

Typical Application

Private office requiring high light levels, library or open office area without partitions

Task Lighting

Optional



VL VL Optic

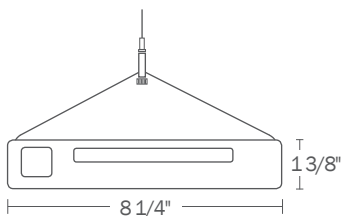


PL Flat-blade louvers

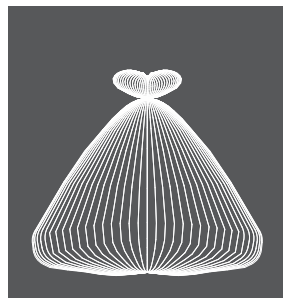


SM Smooth lens

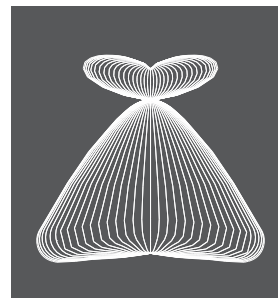
Dimensions



3D Polar Curve (SL 25/75)



3D Polar Curve (SL 35/65)



25% UP



75% DOWN

35% UP



65% DOWN



Semi-Indirect



Industry first: Regressed lens with integral driver and no view of particles through the lightguide

Semi-Indirect



Lighting Profile

Uplight > Downlight • High light levels on work plane • Wide 3D batwing uplight distribution / Narrow 3D batwing downlight with cutoff • Optimal visual comfort

Typical Application

Private offices, open office area without partitions

Task Lighting

Optional



VL VL Optic



PL Flat-blade louvers

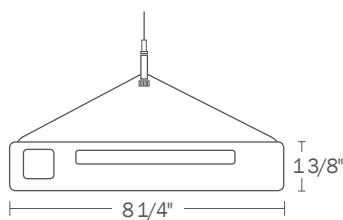


SM Smooth lens

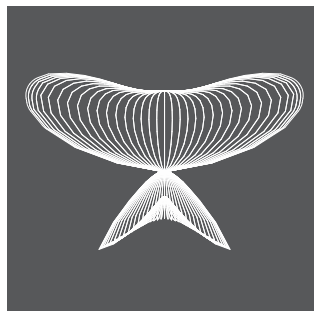


RE Regressed

Dimensions



3D Polar Curve (SL 80/20)



80% UP



20% DOWN





Industry first: Semi-Direct shown here with up to 8ft continuous smooth lens

Slim Family

Specification Guide

SLIM SURROUNDLITE™ PENDANT DIRECT LED

1 PRODUCT ID	2 VERSION	3 LIGHT ENGINE	4 NOM. LUMENS/FT	5 COLOR TEMP.	6 SHIELDING
SLLED pendant led	B3 version 3	SL 0/100 surroundlite 0%up/100%down	1000 1000 lm/ft 800 800 lm/ft	30 3000 K 35 3500 K 40 4000 K	VL VL Optic PL Flat-blade louvers SM Smooth lens
			Consult factory for other lumen packages		

SLIM SURROUNDLITE PENDANT INDIRECT LED

1 PRODUCT ID	2 VERSION	3 LIGHT ENGINE	4 NOM. LUMENS/FT	5 COLOR TEMP.	6 SHIELDING
SLLED pendant led	B3 version 3	SL 100/0 surroundlite 100%up/0%down	1000 1000 lm/ft 800 800 lm/ft	30 3000 K 35 3500 K 40 4000 K	NO No shielding
			Consult factory for other lumen packages		

SLIM SURROUNDLITE PENDANT SEMI - DIRECT LED

1 PRODUCT ID	2 VERSION	3 LIGHT ENGINE	4 NOM. LUMENS/FT	5 COLOR TEMP.	6 SHIELDING
SLLED pendant led	B3 version 3	SL 25/75 surroundlite 25%up/75%down SL 35/65 surroundlite 35%up/65%down	1000 1000 lm/ft 800 800 lm/ft	30 3000 K 35 3500 K 40 4000 K	VL VL Optic PL Flat-blade louvers SM Smooth lens
			Consult factory for other lumen packages		

SLIM SURROUNDLITE PENDANT SEMI - INDIRECT LED

1 PRODUCT ID	2 VERSION	3 LIGHT ENGINE	4 NOM. LUMENS/FT	5 COLOR TEMP.	6 SHIELDING
SLLED pendant led	B3 version 3	SL 80/20 surroundlite 80%up/20%down	1000 1000 lm/ft 800 800 lm/ft	30 3000 K 35 3500 K 40 4000 K	VL VL Optic PL Flat-blade louvers SM Smooth lens RE Regressed
			Consult factory for other lumen packages		

SLIM SURROUNDLITE WALL MOUNT LED - COMING SOON

B3 refers to the current version/generation of LEDs available. As LEDs improve in performance, so too will the version of LEDs used in this and other Axis products (B4, B5, etc). With Axis Spec-It-Forward, you can always specify the latest in LED technology regardless of your project timeline. Consult factory for more details.

SLIM SurroundLite™ Features

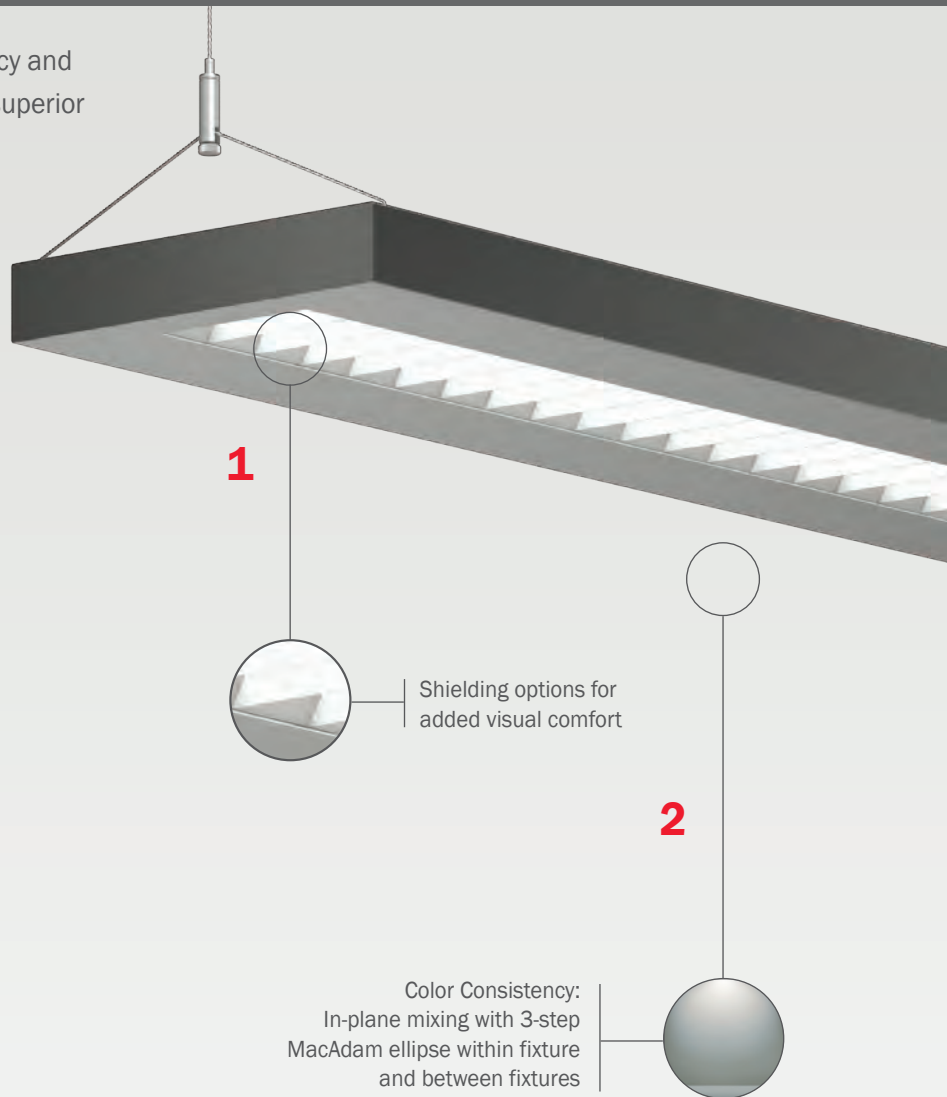
Its minimalist design is big on energy efficiency and visual comfort, and its many options ensure superior lighting design flexibility.

Light Distribution

Spherical 3D batwing distribution with cutoff in all directions. Uniformity on horizontal and vertical planes. 3D lighting from luminaire extremities resulting in wide spacing.

Integrated Driver

Easy access from above. Choice of three drivers: Axis control-ready 0-10V, Lutron or other.



1 - Optics



VL VL Optic



PL Flat-blade
louvers



SM Smooth
lens

2 - Color Temperature



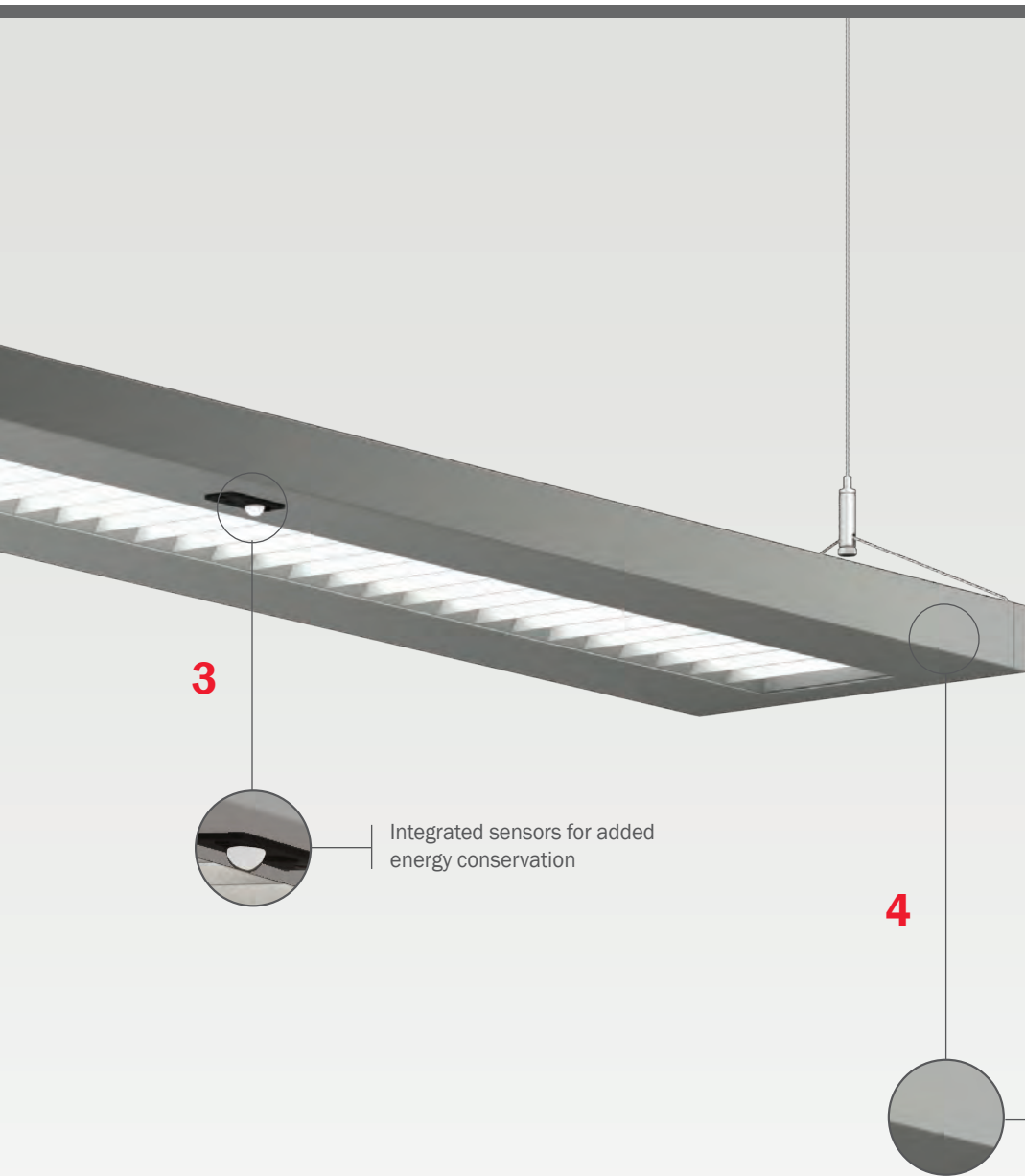
3000K



3500K



4000K



LED system

Up to 105 LPW at 3500K
Proprietary LED engine.
Removable and upgradable
system components.
Minimum 60,000 hours at
L85.

Maintenance

No dust cover needed –
debris / dust on lightguide
not visible from below.

Electrical

Emergency battery pack or
emergency circuit available
120V, 277V, 347V, UNV.

3



Integrated sensors for added
energy conservation

4



Construction:
Aluminum extrusion with
die-cast end caps

3 - IC Controls



DS Daylight
sensor



OS Occupancy
sensor



DOS Daylight &
Occupancy sensor

4 - Finish



AP alum. paint

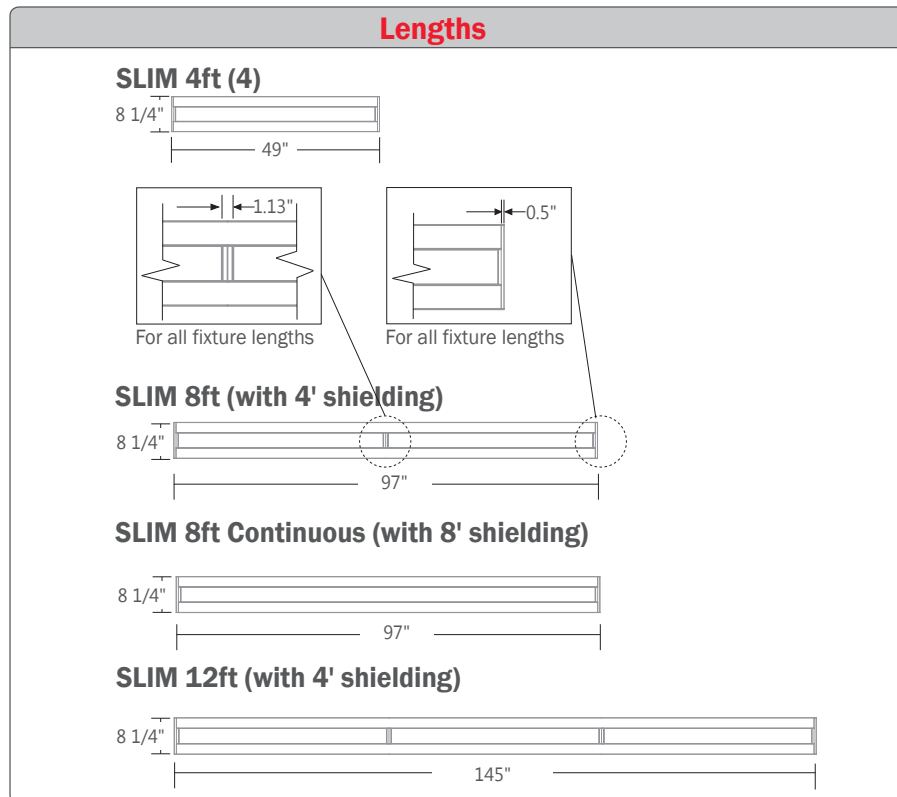
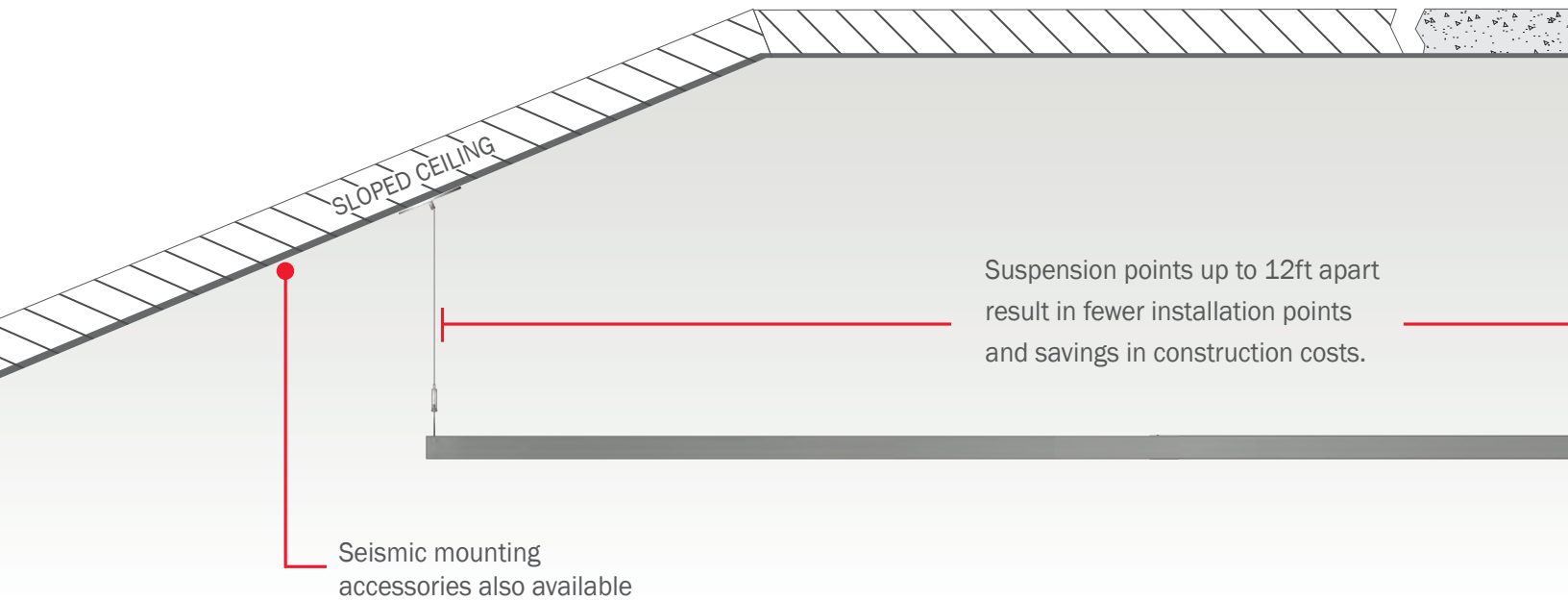


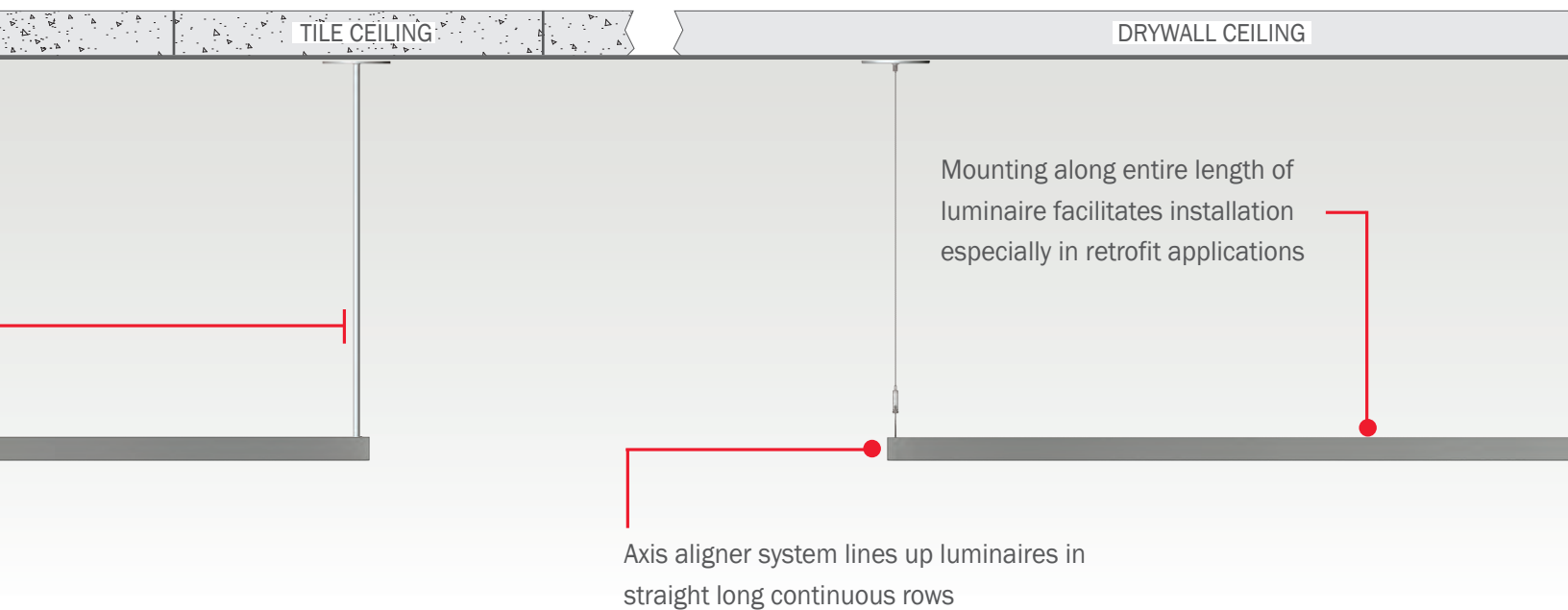
W white



C custom

Mounting & Dimensions

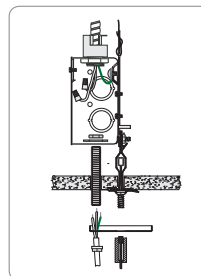




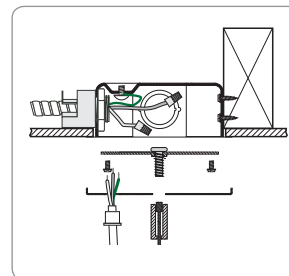
Row Configurations - Mounting Spacing

nominal run size	actual run size	distance between mounting points
4'	49"	48"
8'	97"	96"
8'	97"	96"
12'	145"	144"

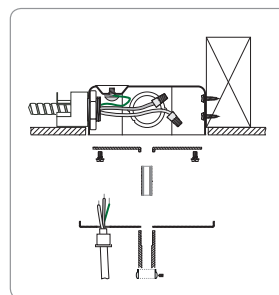
Mounting Options



CT TILE CEILING - ON GRID



CA DRYWALL CEILING



SA STEM MOUNT IN DRYWALL CEILING



Installation sheets for all mounting options are available at:
www.axislighting.com
 under 'Downloads' tab.



Average light levels: 43 fc
Power density: 0.53 W/ft²
Semi-Direct 35% up 65% down,
10ft spacing continuous, 1000 lm/ft

Design Flexibility

Being customer-oriented drives our efforts to meet your most demanding luminaire design needs.

To facilitate the delivery of architecturally detailed luminaires, Axis has developed three manufacturing strategies that feature a “building-block” approach.

Build To Order, Design To Order and Codevelopment projects entail increasing degrees of complexity and custom manufacturing.



Build To Order

These luminaires include numerous standard options as found on product specification sheets.



Design To Order

These luminaires entail slight design adjustments to technical aspects, performance options or housing characteristics.



Codevelopment

These selected projects involve a win-win partnership between you and Axis to design and build a new luminaire based on specific engineering or architectural requirements

Continuous rows:

Average light levels: 47 fc

Power density: 0.58 W/ft²

Semi-Direct: 35% up 65% down

2 x 32ft continuous rows

10ft spacing, 1000 lm/ft



Checkerboard pattern (inset photo):

Average light levels: 35 fc

Power density: 0.44 W/ft²

Semi-Direct: 35% up 65% down

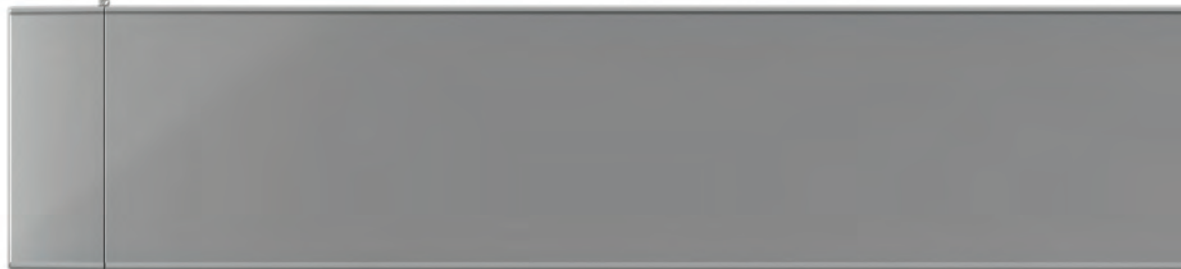
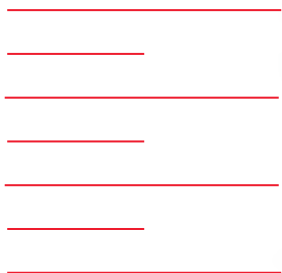
2 rows, 6 luminaires per row

4ft pendant, 1000 lm/ft

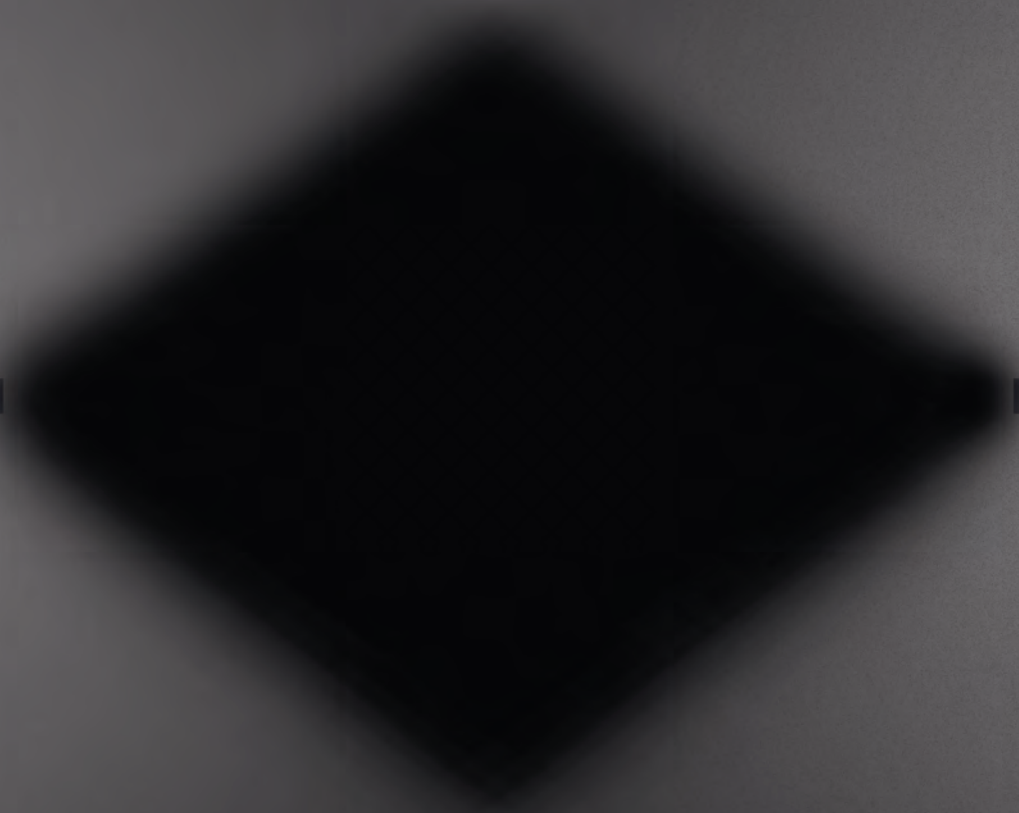


With 7 luminaires per row, this same checkerboard setup will generate 41 fc and a power density of 0.51 W/ft².

1 3/8"



ACTUAL SIZE



Architectural lighting. Your way.



Please consult our website, www.axislighting.com, to determine your local Axis representative.
1.800.263.AXIS - [T] 514.948.6272 - [F] 514.948.6271 - info@axislighting.com

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