

T U N N E L
I O M M E F F

TUNNEL revives the classic functional form into a charming new style with an incurved enhancement. With this design flair comes great functionality. **TUNNEL** exceeds the typical levels of output and efficacy, and delivers on specification capabilities. Alternatives are provided for nearly every component, allowing designers to configure a luminaire designed precisely to the needs of the space. **TUNNEL**'s luxurious finishes and smooth lines create a stylish luminaire that doesn't compromise on performance.



Bespoke

Build a luminaire specifically suited to the space requirements. Designers are presented with several options for each component, including light output, light distribution, controlling system and brand, and even a mounting canopy finish that can be different from the body finish.

Optical Control

Batwing: The batwing provides wider light coverage allowing you to use fewer fixtures in a general lighting application. For workplanes, the wide beam makes for an effective task light.

Asymmetric: Use the asymmetric optic when you need the light to be skewed for specific functions such as perimeter lighting and wall washing. Illuminating the corners of a space is an effective way to create a feeling of spaciousness.

Frosted Diffuser: The frosted acrylic lens sits flush with the edge of the housing and provides soft diffused light while maintaining maximum efficiency.

Higher Efficacy

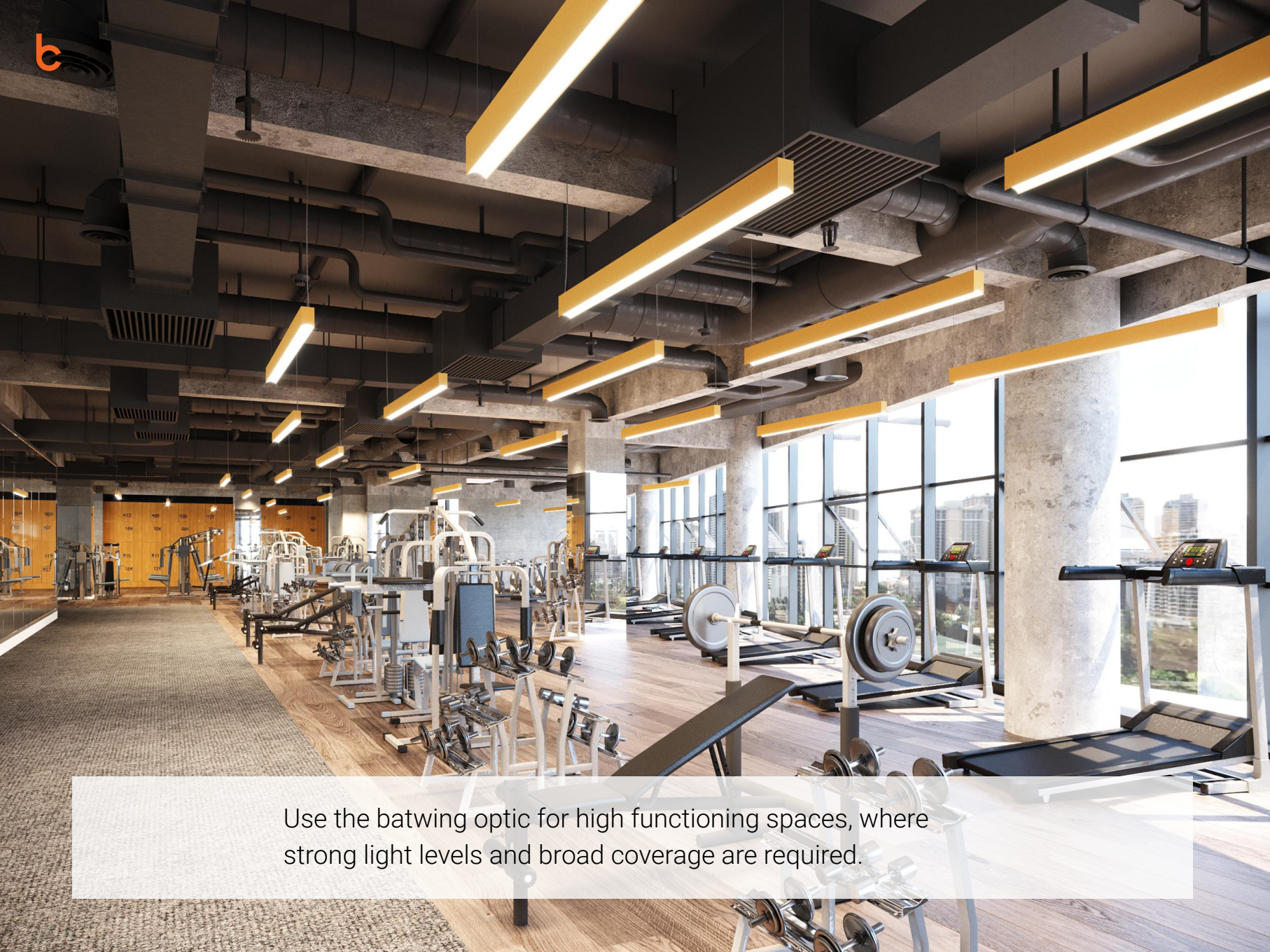
Tunnel delivers up to 134 lumens per watt, exceeding industry standards. Designers can select the lumen package most appropriate for the desired effect without over- or under-lighting.

Finishes

12 finishes are available to adapt to various color schemes. They were selected based on their versatility to a variety of color schemes. Metallic sheens balance out the functional form of the TUNNEL with elegance. The wood finishes will ground the space with a feeling of warmth.

Circadian Syncing

Shape healthy work environments with biologically effective lighting, using BIOS SkyBlue™ Technology combined with Beta-Calco's CRI 90+ LEDs.

A wide-angle photograph of a modern gym interior. The space is characterized by its industrial aesthetic, with exposed concrete beams and pipes on the ceiling. Long, rectangular batwing optic light fixtures are suspended from the ceiling, providing bright, even illumination. The gym is equipped with various exercise machines, including treadmills, weight benches, and free weights. Large windows on the right side offer a view of a city skyline. The floor is made of light-colored wood, and the overall atmosphere is clean and functional.

Use the batwing optic for high functioning spaces, where strong light levels and broad coverage are required.



Power over Ethernet (PoE) is a technical standard whereby electrical power is transmitted over a hard internet connection via ethernet cables instead of electrical wiring. The technology allows intelligent buildings to fully integrate and centrally control building devices such as alarm systems, security cameras, telephones, printers, and LED lighting. Beta-Calco offers a full line up of PoE enabled luminaires for your PoE infrastructure.

BENEFITS of PoE

CONVENIENCE

Ethernet can transmit both power and data which facilitates the integration of multiple devices including LED luminaires into the network infrastructure. This allows lighting fixtures to be installed where main power is not available and take advantage of the pre-existing network. Centralized control and administration makes troubleshooting and power management easier.

COST EFFECTIVENESS

PoE presents cost savings in the time, equipment, and labour involved in installing electrical power. Troubleshooting luminaires does not require a qualified electrician and is managed by the network. The convenience of network accessibility means that lighting can be installed where it is too difficult, thus costly, to install power lines.

FLEXIBILITY

The scalability of network technology provides the flexibility of installing lighting anywhere in a building. Expanding the number of luminaires in a space is significantly easier, as well as repositioning should the architecture change during construction. The flexibility to reposition fixtures provides ease of adapting the lighting to changes in space layout.

SIMPLICITY

Installation of network connections is much simpler than electrical. The absence of electrical wires means a more organized wiring closet, making troubleshooting of connections more efficient. Central administration of PoE makes power and energy management easier and more effective.



BIOS SkyBlue® Circadian Lighting Technology

Le Louvre features BIOS SkyBlue™ Technology which is designed to provide the specific circadian stimulus to improve overall sleep quality, recovery during the night and overall feelings of well-being. The non-visual light signals that stimulate our circadian system have peak intensity in the “sky blue” region. BIOS SkyBlue technology shifts the peak LED spectral intensity (460 nm) to align better with the peak response of circadian stimulus. Also note the enhanced deep-red (near 660 nm) spectrum.

BIOS lighting provides industry-leading LED solutions that give designers the tools they need, contributing toward satisfying Circadian Lighting Design Feature 54 under the WELL Building Standard V1 and Feature L03 under the WELL Building Standard V2. BIOS SkyBlue® circadian lighting technology outperforms all traditional phosphor-converted white LEDs on the market and offers the highest melanopic to photopic lux ratio (m/p ratio) for a given color temperature. With this high m/p ratio, BIOS is also to provide the increased melanopic content at color temperatures that designers prefer and that clients have come to expect.

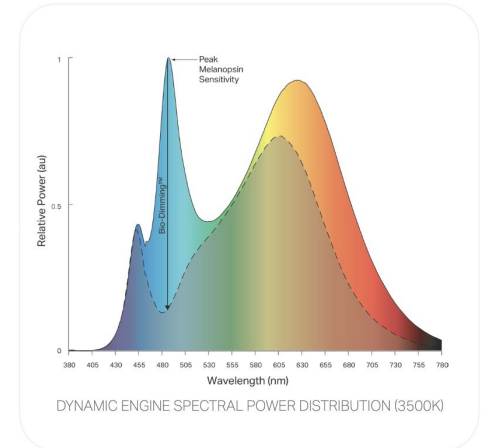
WELL for Light

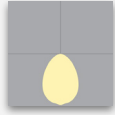
The WELL building standard focuses on light quality in several realms. Three categories are directly attributable to the construction and features of a luminaire. In WELL V1, Feature 54 addresses Circadian Lighting, Feature 55 deals with Glare Control and Feature 58 takes aim at Color Quality. In WELL V2, Feature L03 deals with Circadian Lighting, Feature L04 addresses Glare Control, and Feature L07 takes aim at Electric Light Quality.

When BIOS LEDs are selected, Le Louvre meets Feature 54, L03, 55 and L07 respectively. With Tunnel’s unique ultra low UGR diffuser design and controlled optics, Features 55 and L04 are met. Further, Features 58 and L07 are met when Beta Calco’s ultra-high performance 90CRI chips are selected.

LED Chips

All fixtures have been tested in accordance with IESNA LM-79 and all LEDs have been tested in accordance with IESNA LM-80-08. Our high performance LED chips in conjunction with the unique luminaire design allow for very precise thermal control resulting in an exceedingly long life.





Frosted Diffuser:

Frosted acrylic resin minimizes visual defects: finger prints, scratches, smudges exceptional light transmission.



Batwing:

Wider light coverage with 120° beam fewer fixtures required effective as a task light or ambient light.

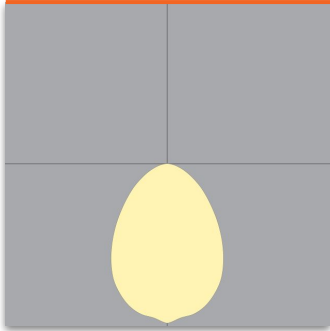


Asymmetric:

Skewed light for specific functions use for perimeter lighting and wall washing. create a feeling of spaciousness.



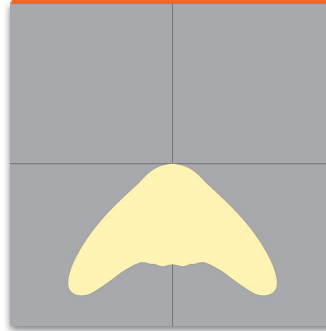
DIRECT DIFFUSED (DD3)



LUMENS/FT

1400
1200
1000
800
600
400
200

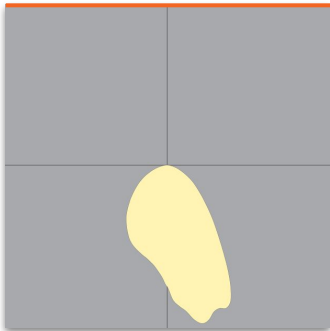
DIRECT BATWING (DD2)



LUMENS/FT

1400
1200
1000
800
600
400
200

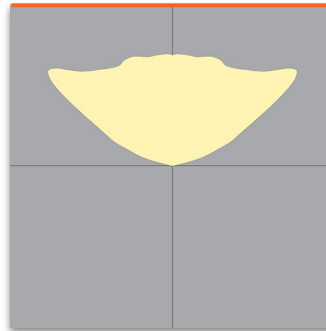
DIRECT ASSYM (DD1)



LUMENS/FT

1400
1200
1000
800
600
400
200

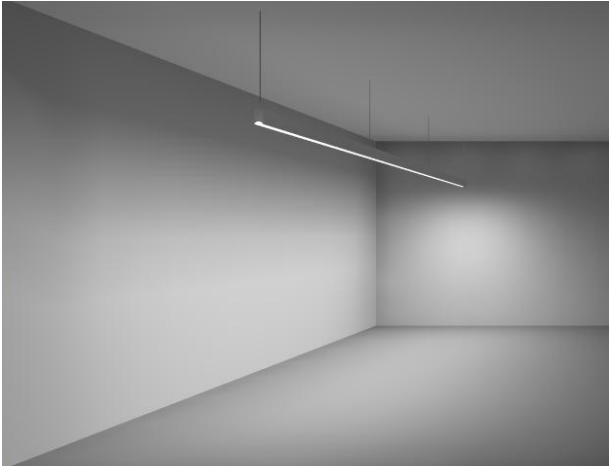
INDIRECT BATWING



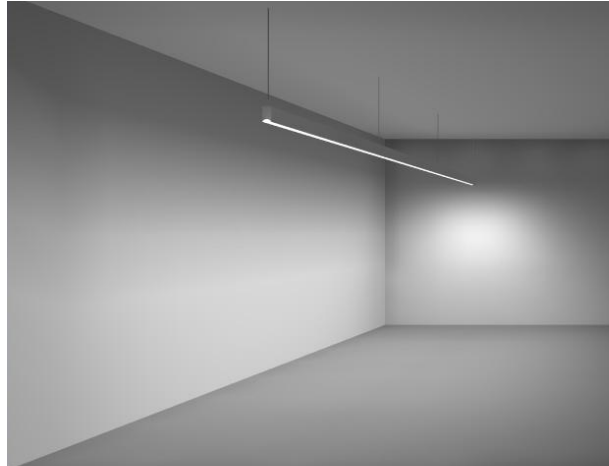
LUMENS/FT

1650
1400
1200
1000
800
600
400
200

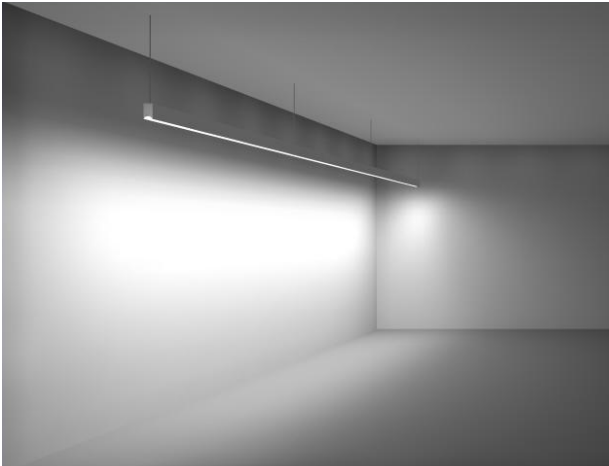
BASED ON: 10FT CEILING AND 2FT SUSPENSION DROP



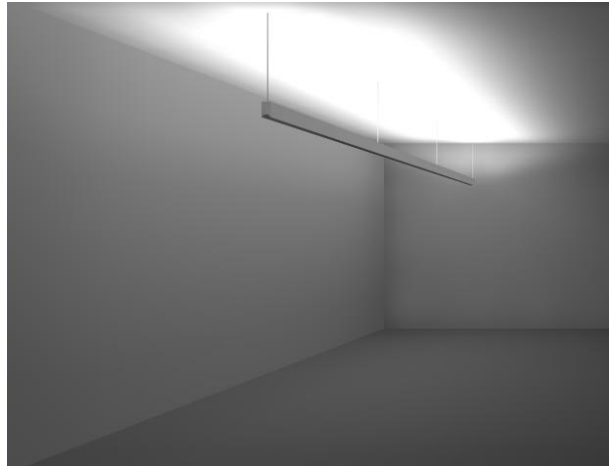
FROSTED DIFFUSER (5ft from the wall)



BATWING - DOWNLIGHT (5ft from the wall)



ASYMMETRIC (2.5ft from the wall)



BATWING - UPLIGHT (5ft from the wall)

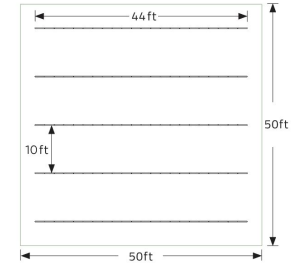
b USE CASE SCENARIOS

SUSPENDED

- OPEN PLAN OFFICE SPACE**

Diffused light Diffuser option with 200 lms/ft direct and 400 lms/ft indirect

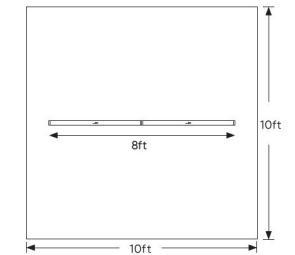
Room size:	50' x 50'	Workplane 30" above finished floor (fc level)	48
Ceiling height:	10'	Workplane uniformity max to min	1.1:1
Luminaire mounting height:	8' 5"	Ceiling uniformity max to min	6.5:1
Reflectances:	80/50/20	UGR average	<12
Light loss factor:	1.0	Watt sq/ft	0.36



- SINGLE OFFICE SPACE**

Diffused light Diffuser with 400 lms/ft direct and 200 lms/ft indirect

Room size:	10' x 10'	Workplane 30" above finished floor (fc level)	33
Ceiling height:	10'	Ceiling uniformity max to min	3.1:1
Luminaire mounting height:	8' 5"	UGR average	<12
Reflectances:	80/50/20	Watt sq/ft	0.35
Light loss factor:	1.0		

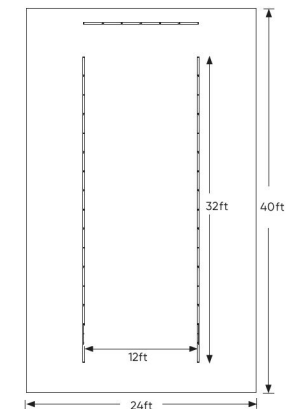


- CLASSROOM SPACE**

Batwing option over desks with 400 lms/ft direct and 400 lms/ft indirect - 32 ft length




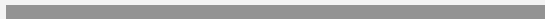
White-Board: Asymmetric lens with 400 lms/ft direct - 12ft length

Room size:	24' x 40'	Workplane 30" above finished floor (fc level)	49
Ceiling height:	10'	Workplane uniformity max to min	1.5:1
Luminaire mounting height:	8' 5"	Average illuminance on White-board wall	41
Reflectances:	80/50/20	Ceiling uniformity max to min	5.1:1
Light loss factor:	1.0	UGR average	<16
		Watt sq/ft	0.42

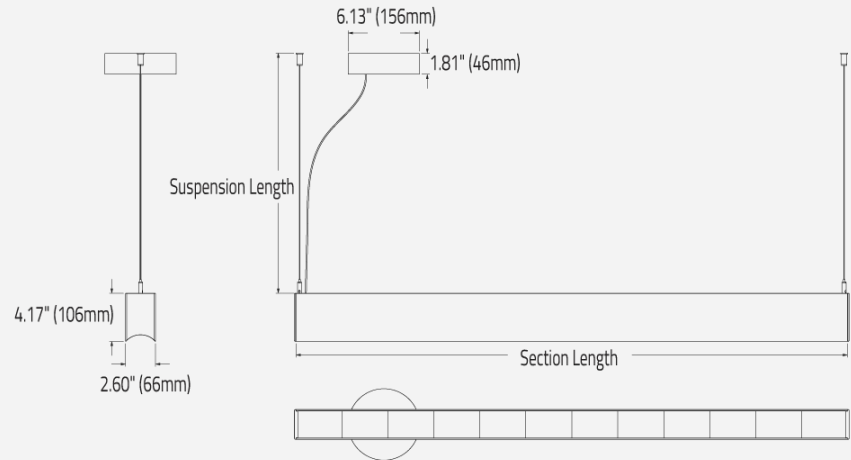


b MAXIMUM LENGTH
(PER SECTION)



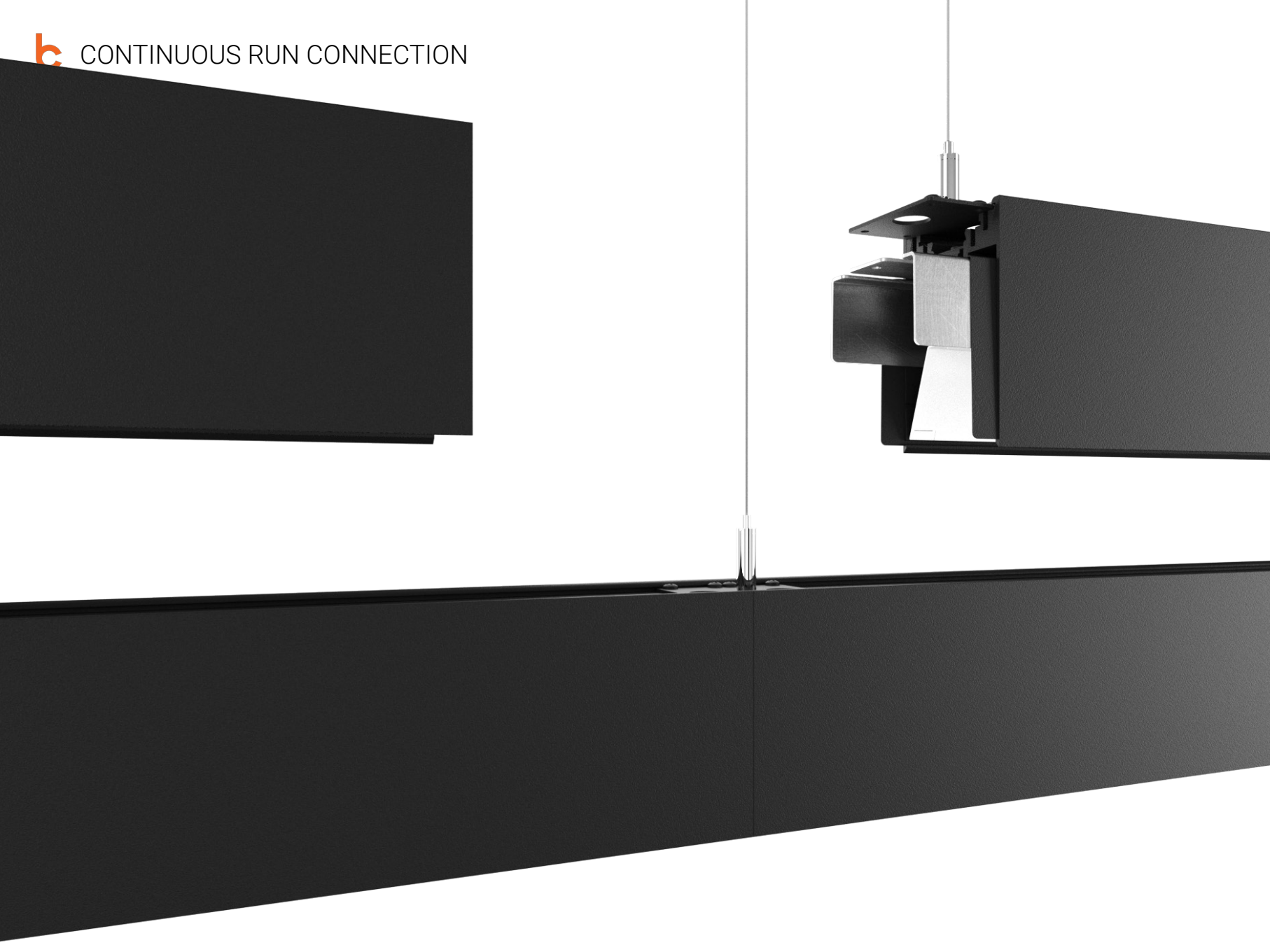
- 4 FT (1220mm) 
- 6 FT (1829mm) 
- 8 FT (2438mm) 
- 12 FT (3658mm) 

For 6 inch increments, consult factory.



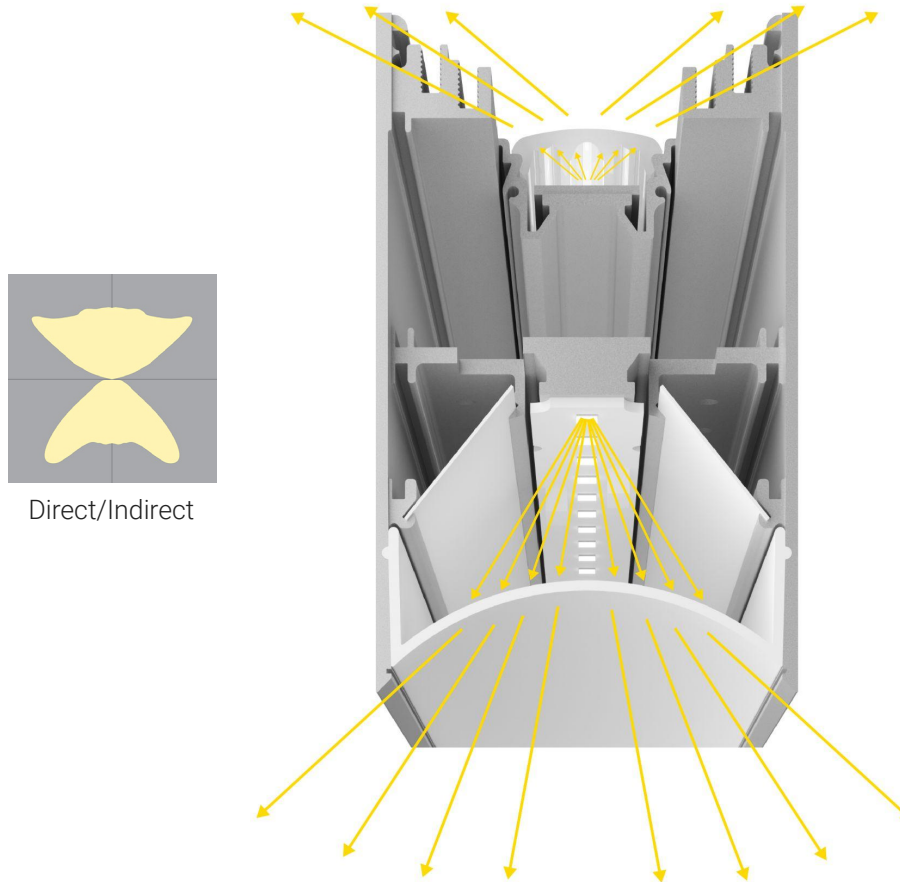
TUNNEL can also be configured as a continuous run up to 50' with a single line voltage cable. Start with a minimum length of 4 ft, and increase in increments of 6".

b CONTINUOUS RUN CONNECTION



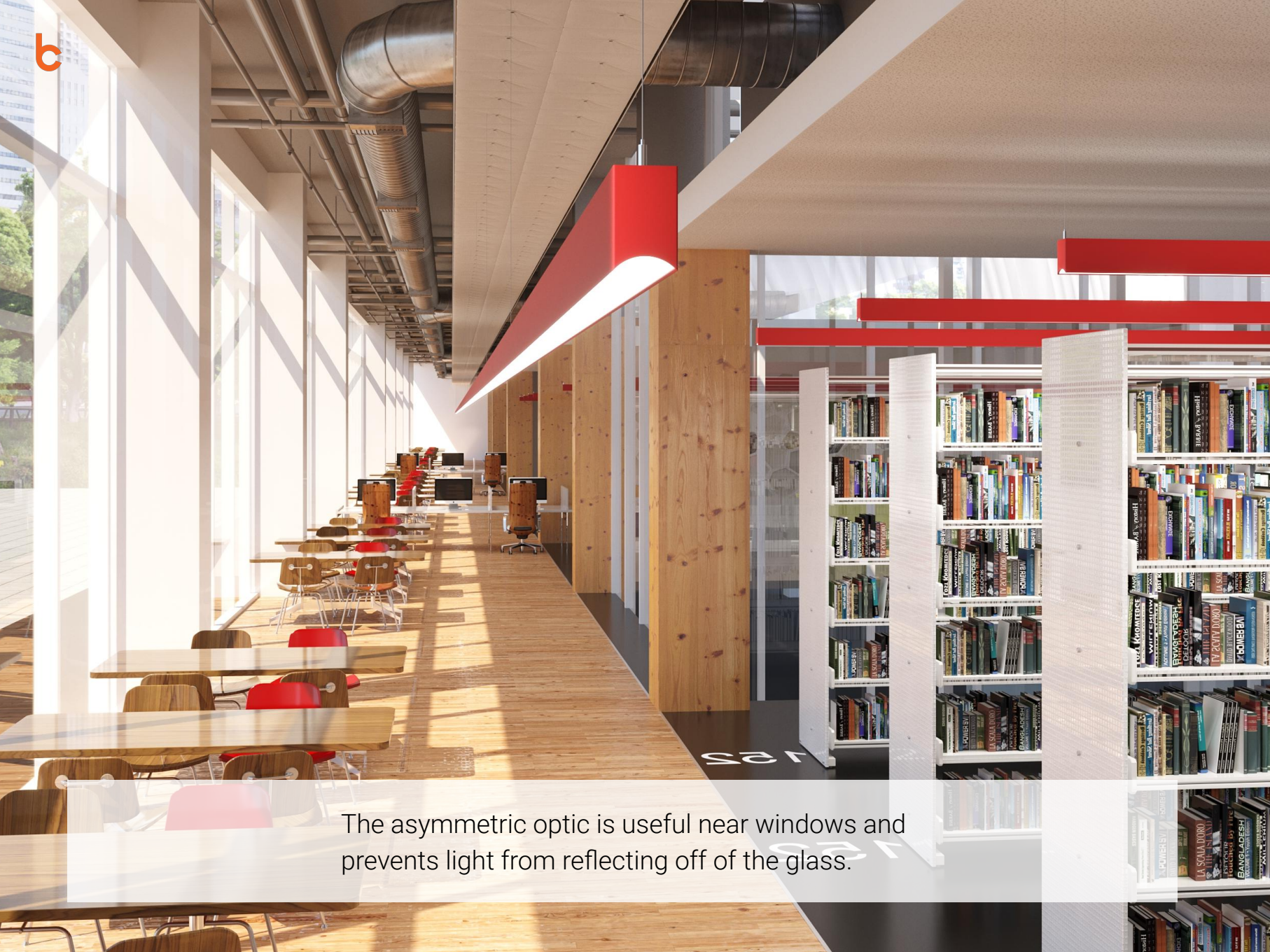
b LIGHT DISTRIBUTION PATTERN
SUSPENDED

High efficiency custom lens provides **batwing distribution** with minimal losses

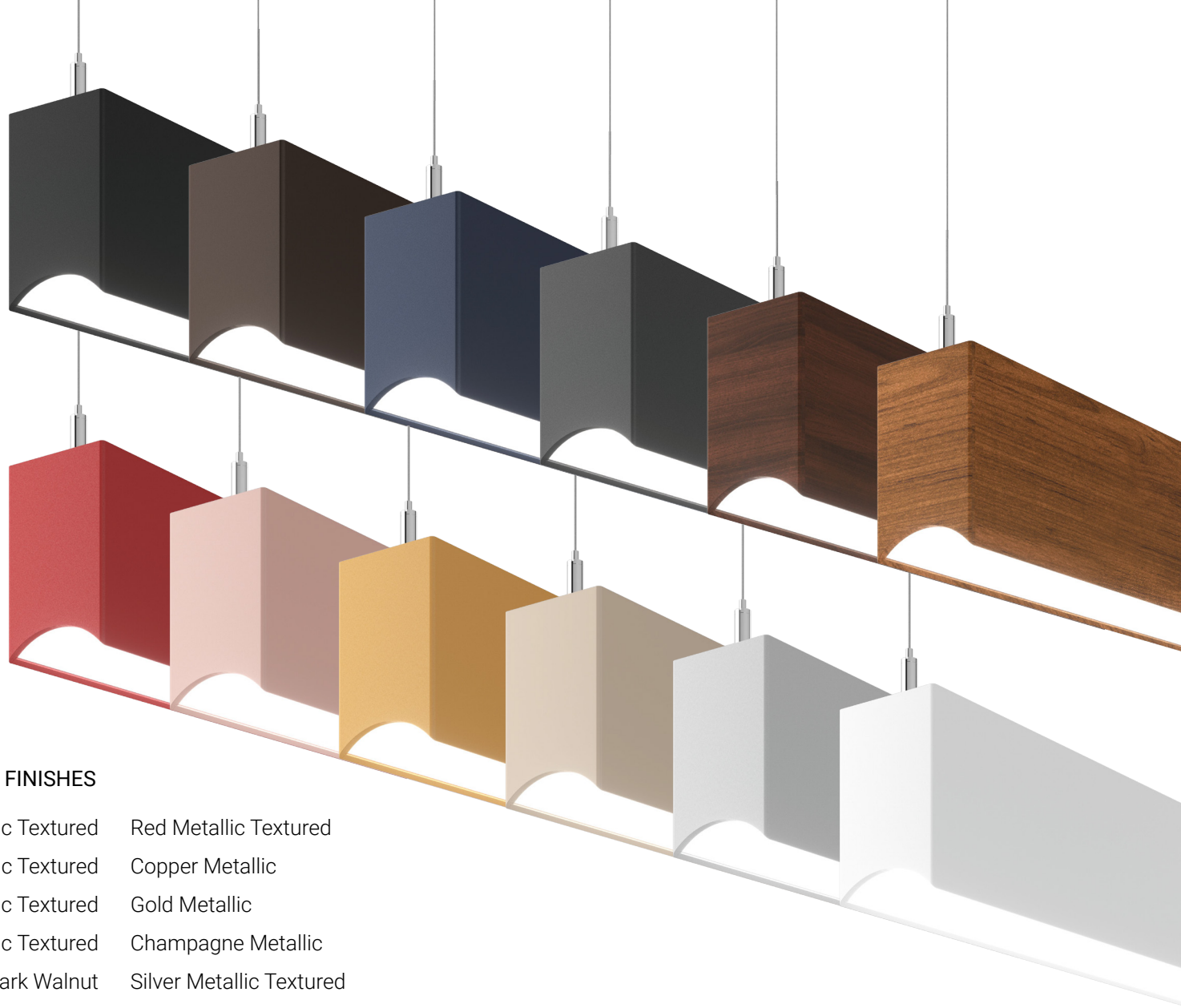


Injection molded diffuser provides precise optical control limiting glare from the luminaire





The asymmetric optic is useful near windows and prevents light from reflecting off of the glass.



12 FINISHES

- | | |
|---------------------------------|--------------------------|
| Black Metallic Textured | Red Metallic Textured |
| Bronze Metallic Textured | Copper Metallic |
| Midnight Blue Metallic Textured | Gold Metallic |
| Charcoal Metallic Textured | Champagne Metallic |
| Wood Grain - Dark Walnut | Silver Metallic Textured |
| Wood Grain - Light Cherry | White |

b INDIRECT VIEW

The **Blackout Plate** blocks light from illuminating unflattering ceiling areas such as ductwork. Available in one foot sections and can easily slide across the top of the fixture to the area you want to block off.



USE **INDIRECT** LIGHT TO
CREATE **SPACIOUSNESS**



No Sensor



Enlighted



Osram Encelium



Philips

IN-CANOPY SENSORS

- Enlighted
- Osram Encelium
- Philips

COMPATIBLE CONTROL SYSTEMS

- Acuity nLight
- Cooper
- Crestron
- Enlighted
- Hubble
- Leviton Intellect
- Lutron Vive
- Osram Encelium
- Philips Easysense
- Wattstopper

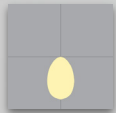
Beta-Calco lights are compatible with a variety of control protocols and brands.

b TUNNEL - RECESSED





TUNNEL has a variety of optics to choose from with several lumen package options, to distribute the appropriate amount of light in a space.



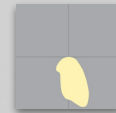
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Batwing:

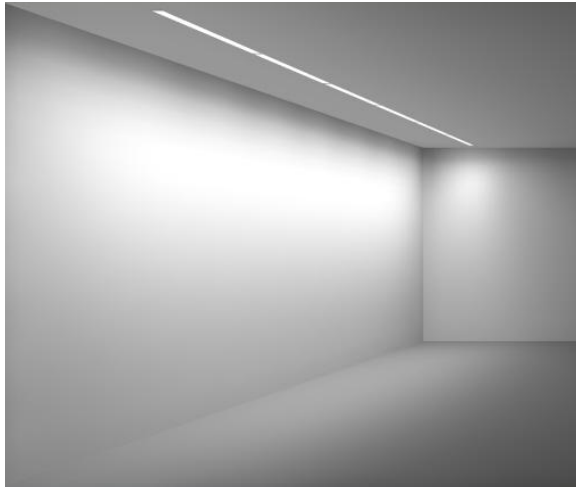
Wider light coverage with 120° beam fewer fixtures required effective as a task light or ambient light.



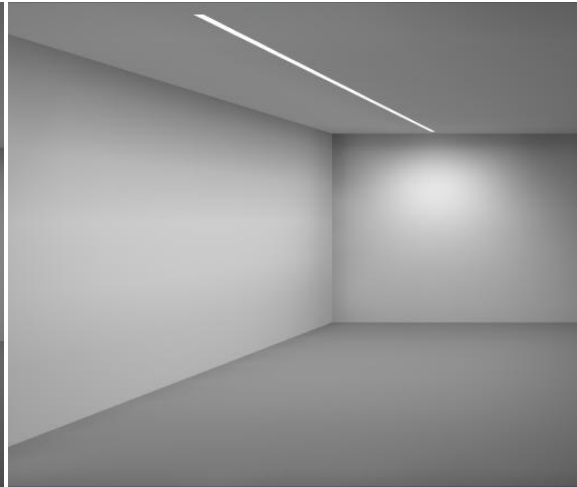
Asymmetric:

Skewed light for specific functions use for perimeter lighting and wall washing. create a feeling of spaciousness.

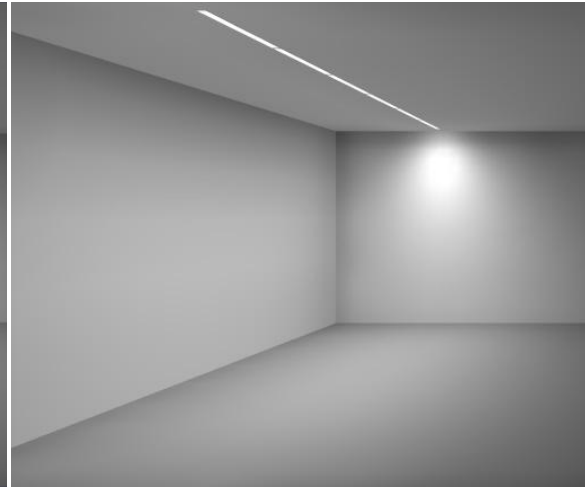
BASED ON: 9FT CEILING HEIGHT



ASYMMETRIC
(2.5ft from the wall)



BATWING
(5ft from the wall)



FROSTED DIFFUSER
(5ft from the wall)



About **Beta-Calco** with a company history dating back to 1941, Beta-Calco is a North American lighting manufacturer that has championed producing luminaires with a European design flare, utilizing the most recently developed light sources.

Our craftsmanship produces the highest quality luminaires where aesthetic design and technical performance complement and enhance the environments in which our products are featured.

In close partnership with architects, lighting designers and engineers, we have established ourselves as one of the key suppliers of architectural and decorative commercial lighting in the markets we serve.

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