

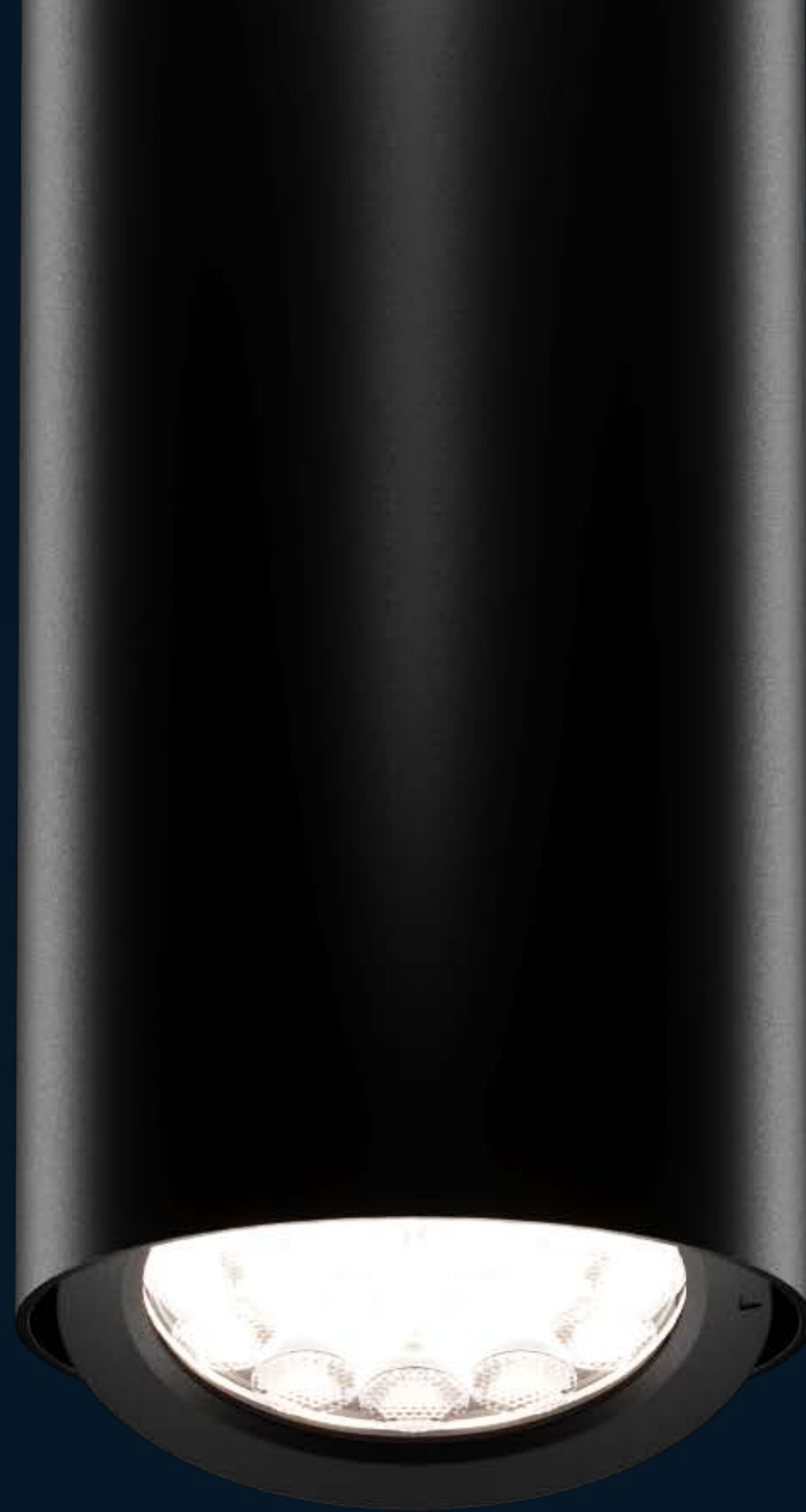


# CYLINDER

CYLINDER EX™

FLUID™

CYLINDER INTERIOR





CYLINDER

# INTRODUCTION

CYLINDER EX™ and FLUID™ advance exterior lighting utility with precision-engineered adjustable optics, meticulously designed to focus light on critical areas like pathways and challenging installation spots. This functionality not only bolsters safety by illuminating essential zones but also enriches the scenic impact. Featuring a gimbal with a +/- 30° tilting range that locks at 10° increments, allowing for precise angling, the collection incorporates ten advanced optics utilizing three LED technologies—Multi-Lens Array, Chip on Board (COB), and Area Optics—to tackle diverse lighting challenges. This series also features Dark Sky Friendly models that minimize light pollution and preserve the natural nighttime environment. Models for the interior environment are also available, broadening the applicability of the gimbal optic.

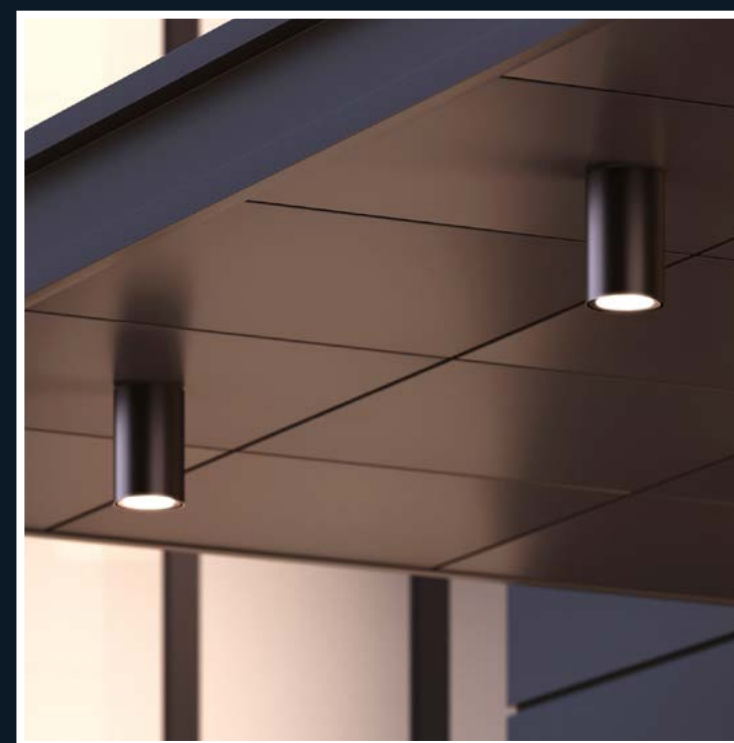




# EXTERIOR



WALL



CEILING



STEM



FLUID

# INTERIOR



CEILING



STEM





# FEATURES

## PRECISION ANGLED ILLUMINATION

Benefit from unmatched directional control with a gimbal that pivots  $\pm 30^\circ$ , locks at  $10^\circ$  increments, and rotates  $180^\circ$  for strategic positioning and light distribution in complex spaces.

## ADVANCED OPTIC TECHNOLOGIES

Harness the power of cutting-edge optics, including Multi-Lens Array (MLA), Chip on Board (COB), and Area Lighting Distribution, meticulously designed to tackle a wide range of lighting challenges with utmost precision.

## MOUNTING FLEXIBILITY

Multiple mounting configurations facilitate straightforward installations by allowing easy adaptation to various design specifications. A conduit accessory box facilitates seamless electrical integration for external wire routing.

## DARK SKY AND TURTLE FRIENDLY

Prioritizing environmental responsibility, this collection minimizes light pollution and skyglow when opting for a direct, downward-facing light paired with 3000K or less. For coastal areas, a Turtle Friendly option is available, ensuring safe and eco-friendly illumination for wildlife.

## BEST-IN-CLASS LUMEN EFFICACY

Achieve unmatched performance with up to 125 LPW, ideal for continuously operated applications. Innovative thermal management enhances durability, minimizes energy waste, and reduces operational costs, all while providing high-quality illumination.

## ROBUST FINISH OPTIONS

Select from a variety of finishes that provide durability and resistance to environmental conditions, ensuring long-term performance and reliability.



# CYLINDER EX

Engineered for precision in exterior lighting applications, the CYLINDER EX™ series features advanced optics and a gimbal mechanism that tilts  $\pm 30^\circ$ , locks at  $10^\circ$  increments, and offers a  $180^\circ$  rotation on ceiling and stem mounts, enabling targeted illumination. With Dark Sky Friendly features, CYLINDER EX™ reduces light pollution while enhancing outdoor safety and aesthetics. Optimize exterior spaces with a lighting solution designed for efficiency and environmental responsibility.





# TECHNICAL SPECIFICATIONS

## Lumen Packages:

Direct: 2000 LMS, 3000 LMS, 4000 LMS

Indirect: 2000 LMS, 3000 LMS

## CCT:

2700K, 3000K, 3500K, 4000K

Amber (590nm) in 30° beam angle

## CRI:

80+

## Beam Angles:

Type II, III, IV

Type V (15°, 30°, 50°, 70°)

3° (uplight only)

## BUG Rating (Direct Light):

Type II, III, IV: B1-U0-G1

Type V: B3-U0-G0

## Adjustability:

+/- 30° tilt, increments of 10° (anti-vandal tool supplied)

180° rotation (ceiling and stem mount only)

## IP Rating:

IP 66

## Dimming:

0-10V Dimming to 1.0%

- Standard operating temperature

- Arctic - Operates at temperatures down to -30°C (-22°F)

- Desert - Operates at temperatures up to +50°C (+122°F)

DALI Dimming to 1.0%

- Standard operating temperature





# Aesthetic Bracket Styles for Architectural Integration

Tailored to meet diverse aesthetic and installation needs, CYLINDER EX is offered with three distinct bracket styles.

Classic Standard



Narrow Standard



Narrow Full



Classic Standard



Narrow Standard

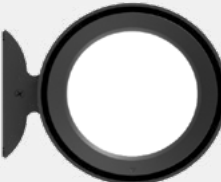


Narrow Full



### Classic Bracket:

Ideal for standard 4-inch electrical boxes, this bracket provides a robust and clean installation, ensuring stability with a traditional appearance.



### Narrow Full Bracket:

Extending the full length of the cylinder, this bracket is specifically designed for a 2" by 4" switch box, creating a unified, sleek look, perfect for modern spaces seeking seamless integration.



### Narrow Standard Bracket:

Also designed for a 2" by 4" switch box, the Narrow Standard bracket offers a more subtle impact with a delicate profile, ideal for spaces where a streamlined appearance is preferred.





# OPTICS IN FOCUS



CHIP ON BOARD (COB)

COB LEDs are designed for applications where high-quality, uniform light is essential. This technology integrates multiple LED chips into a single lighting module, creating a compact and efficient light source with minimal glare. COB LEDs are particularly suitable for ambient illumination, ideal for lighting up facades, enhancing landscapes, and illuminating exterior patios and public areas with consistent, natural light.



Multi-Lens Array (MLA)

Ideal for precision-focused tasks, MLA technology leverages multiple small lenses to control and direct light with exceptional accuracy. This targeted illumination is especially effective for exterior applications requiring concentrated light spots, such as accentuating architectural features, illuminating multistory buildings, or enhancing security areas. MLA's beam angles make it highly adaptable to specialized lighting needs.



AREA LIGHTING OPTICS

Lighting design flexibility is maximized with our IES distribution optics (Type II, III, and IV), ensuring optimal light distribution and efficiency tailored to specific needs. These optics provide broad, homogeneous illumination, crucial for improving safety and functionality. By reducing the number of fixtures required, our luminaires align with energy efficiency standards and minimize light pollution, precisely directing light to improve the comfort and safety of any environment.



# BEAM ANGLES

MLA

COB

15°

30°

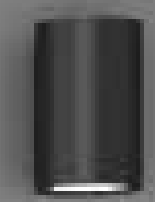
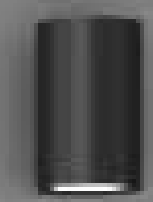
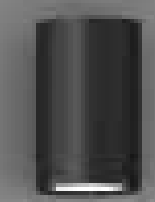
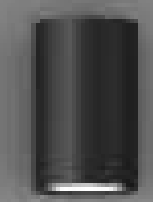
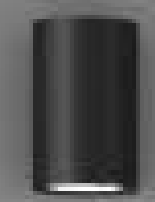
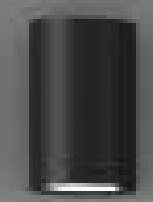
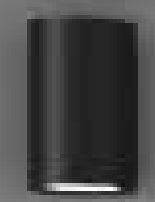
50°

70°

15°

30°

50°





CYLINDER EX

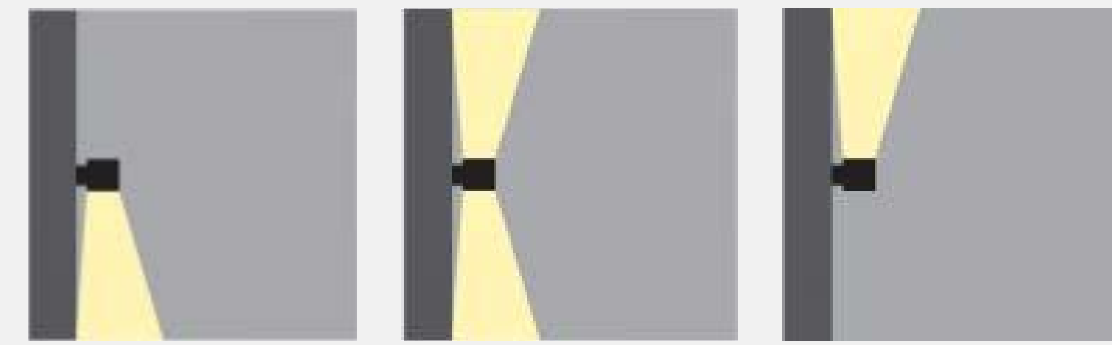
WALL







# LIGHT DISTRIBUTION



Downlight    Up/Down    Uplight



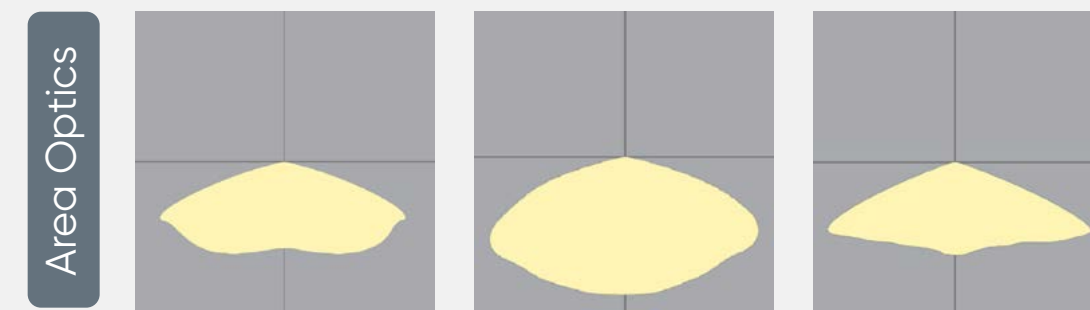
COB

15°    30°    50°



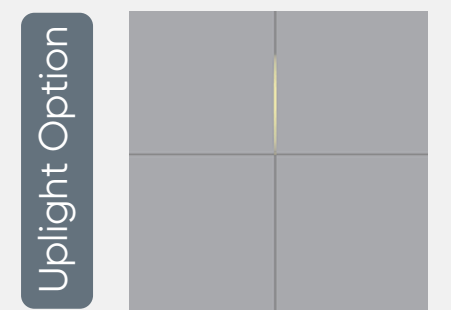
MLA

15°    30°    50°    70°



Area Optics

Type II    Type III    Type IV



Uplight Option

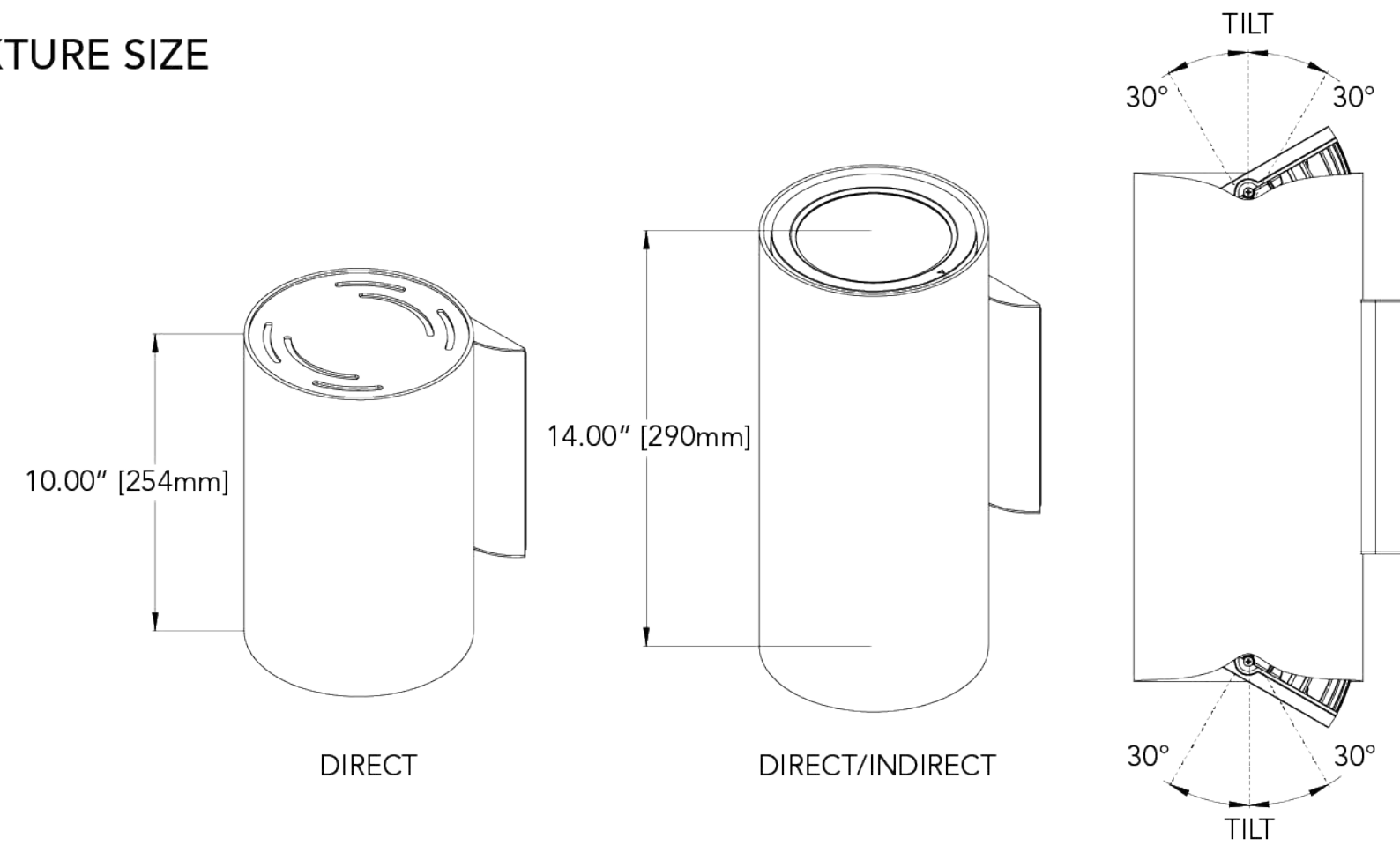
3°

Illuminate architectural features while enhancing visibility and safety on adjacent sidewalks, pathways, or parking lots. Harness the versatility of multiple light distributions to target specific tasks without overlighting while ensuring minimal light spill.

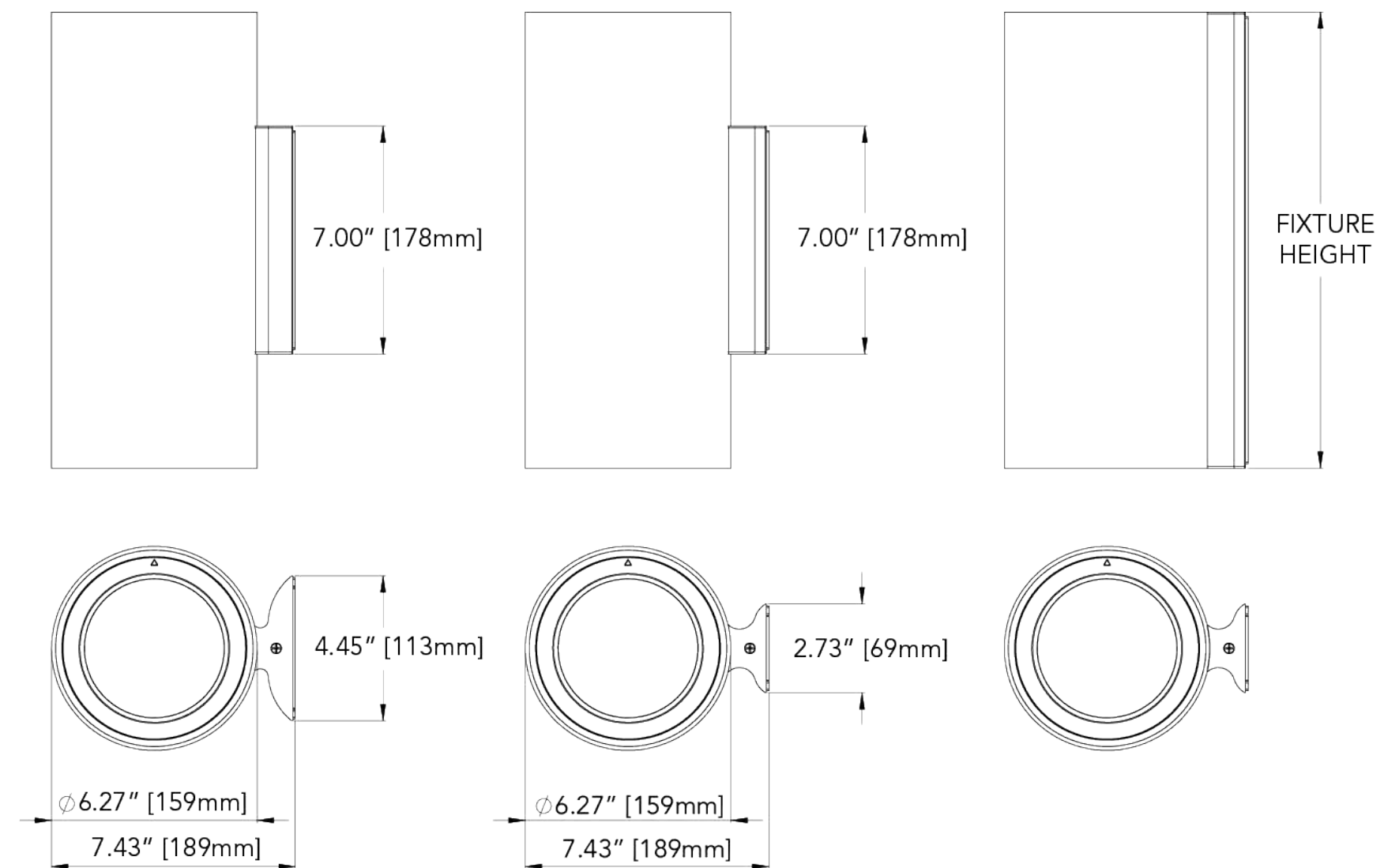


# DIMENSIONS

## FIXTURE SIZE



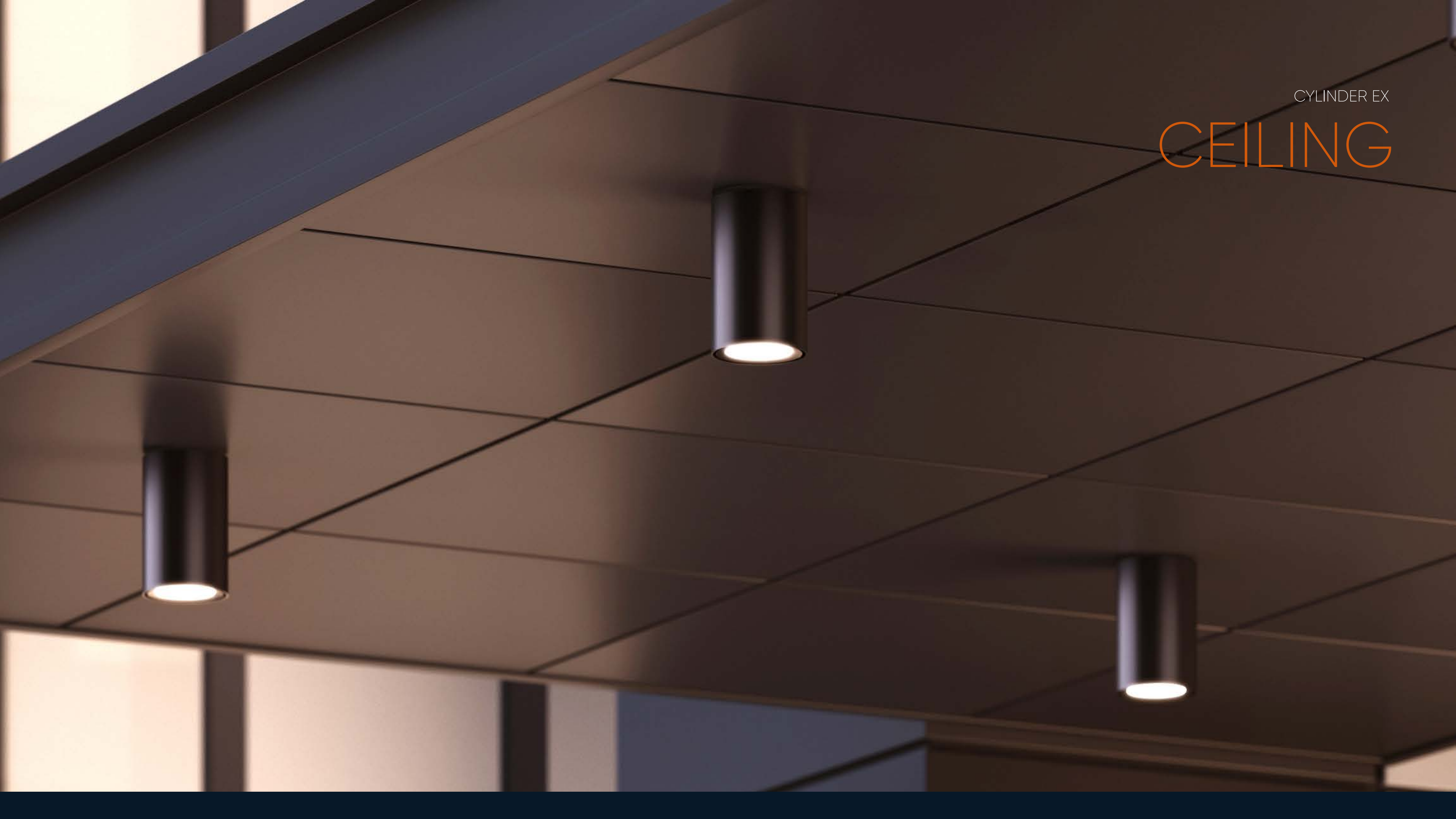
## WALL MOUNTS





CYLINDER EX

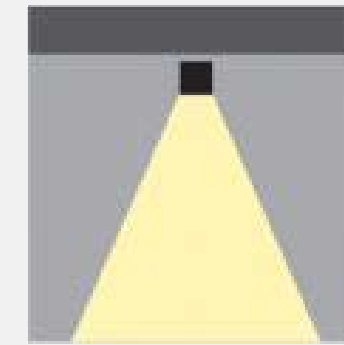
# CEILING







# LIGHT DISTRIBUTION

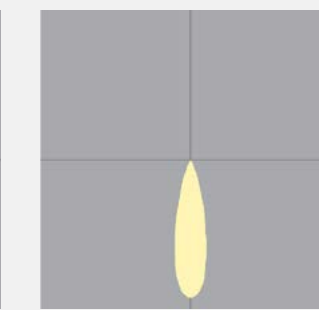


Direct

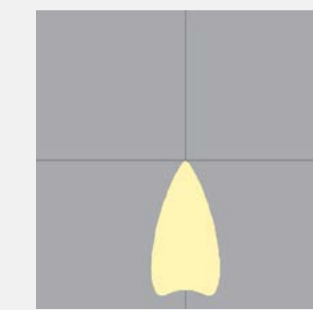
COB



15°



30°

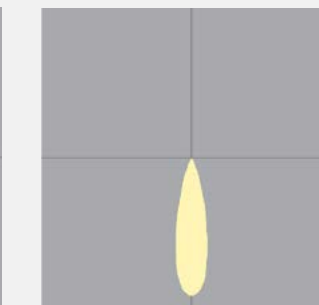


50°

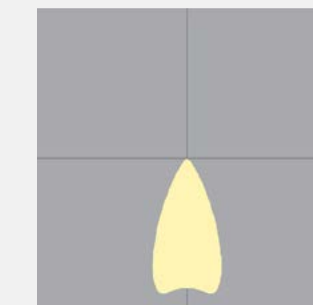
MLA



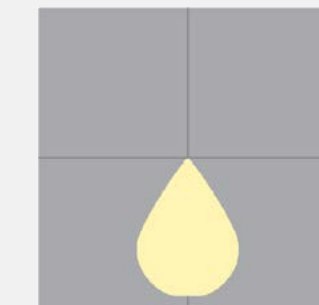
15°



30°



50°



70°

Choose from a variety of beam options to create the perfect lighting ambiance for exterior areas such as entranceways.

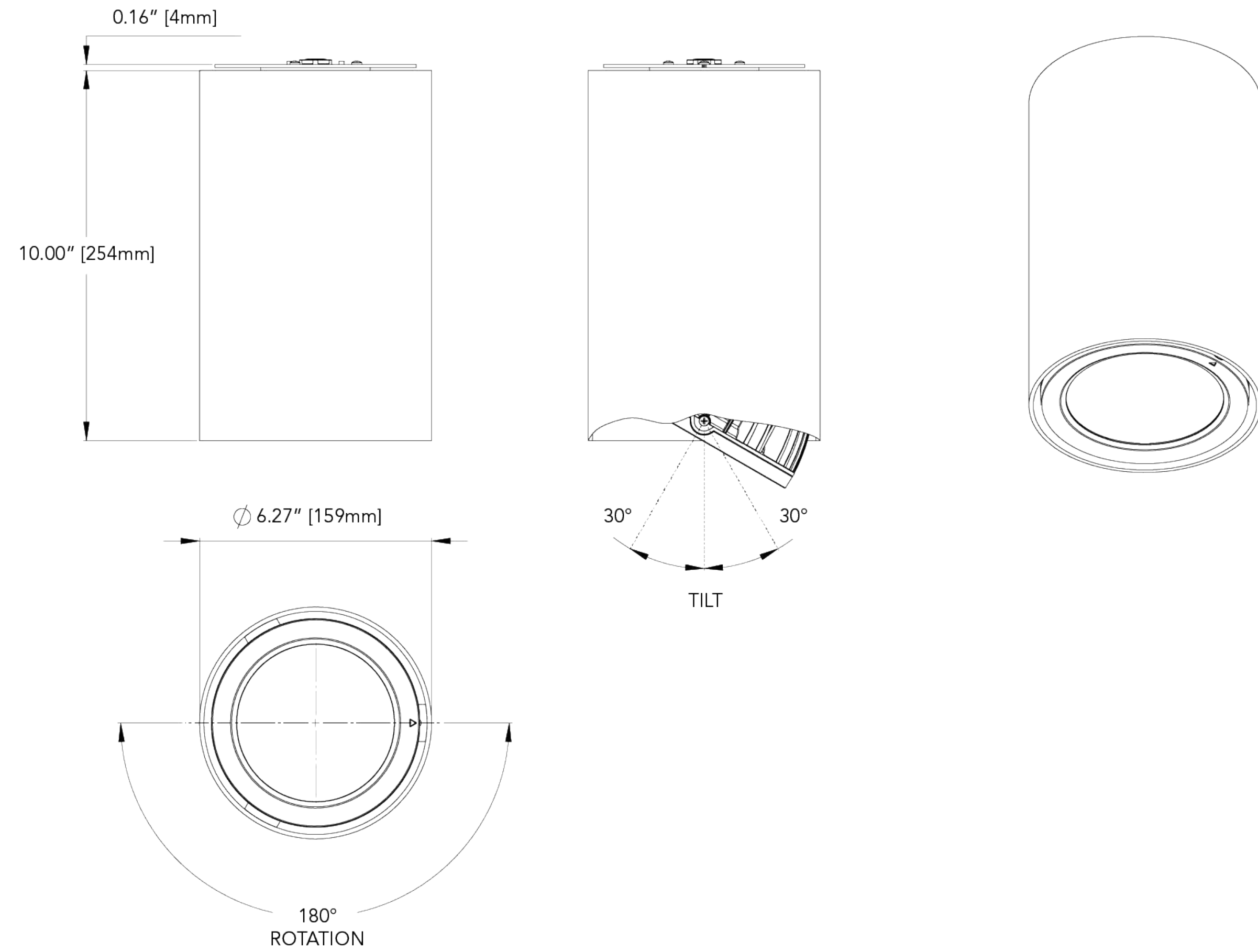




The CYLINDER EX™ ceiling and stem mount options deliver robust illumination with a practical edge for professional settings. Its 180° rotational capability allows full 360° directional targeting, ensuring complete coverage and precise lighting control in any environment.



# DIMENSIONS







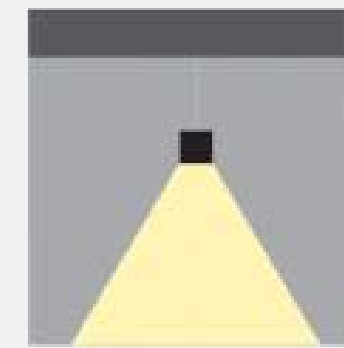
CYLINDER EX

STEM



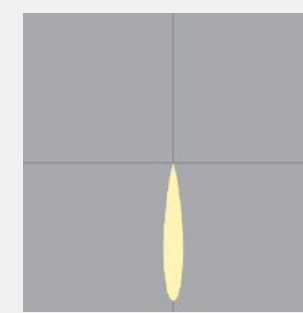


# LIGHT DISTRIBUTION

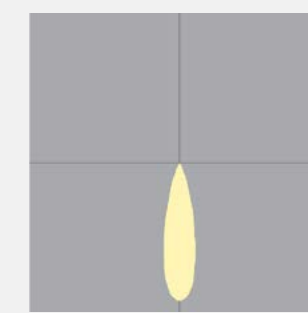


Direct

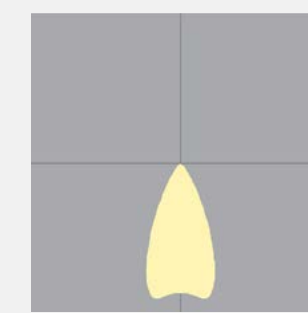
COB



15°



30°

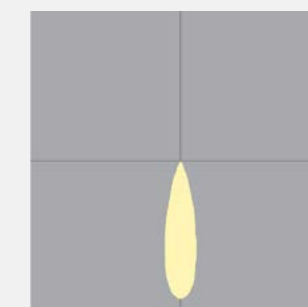


50°

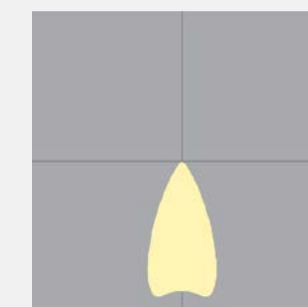
MLA



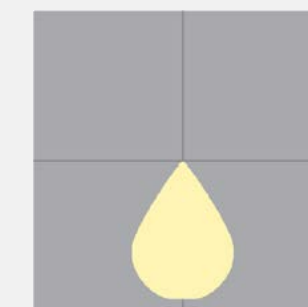
15°



30°



50°

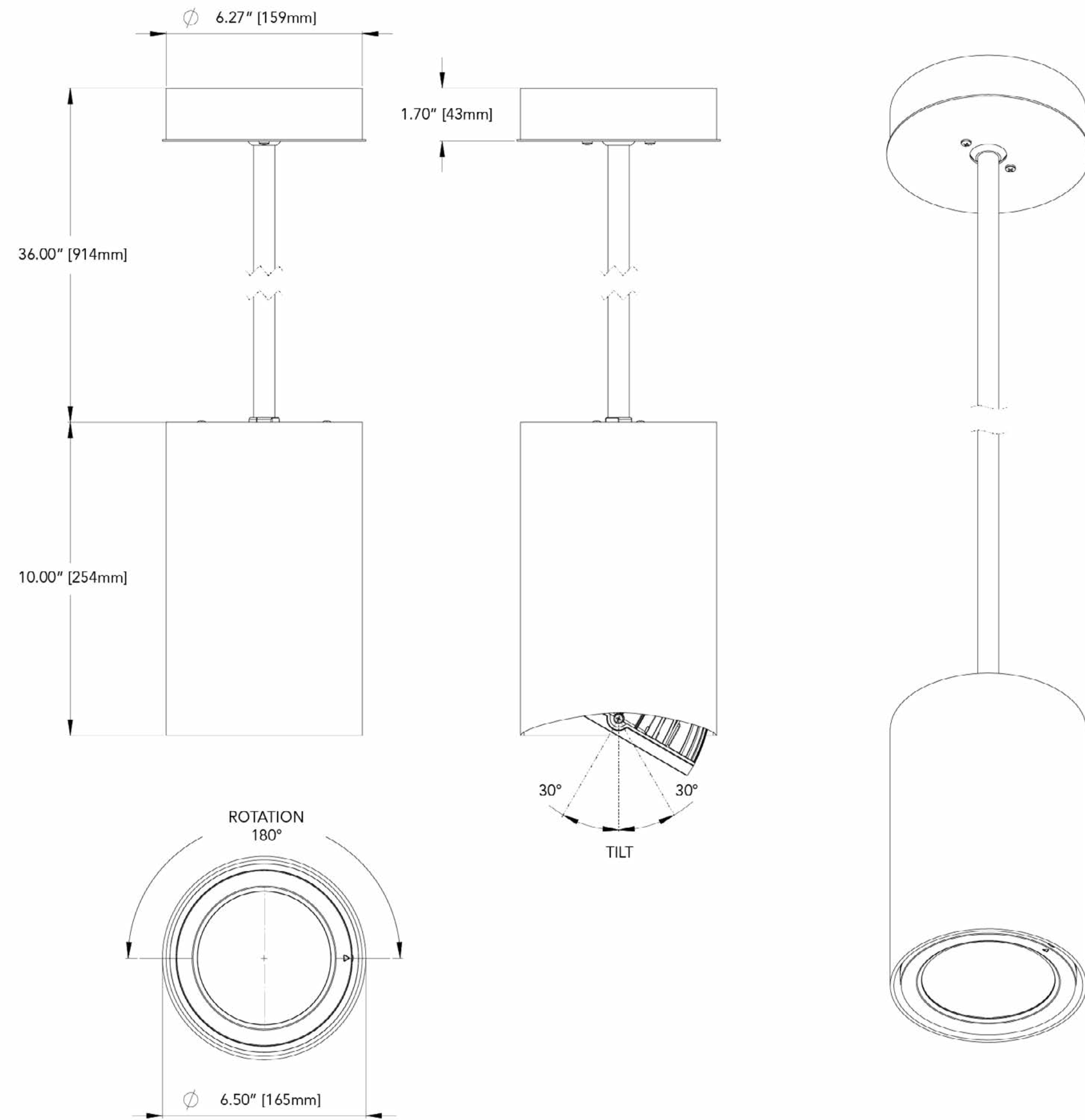


70°

Tailor beam angles to highlight architectural elements, landscape focal points, or outdoor signage with accuracy.



# DIMENSIONS





CYLINDER EX

# CONDUIT CONNECT BOX



For installations that involve conduit wire routing, a conduit accessory box is available for ceiling and stem mounts, and for wall mounts using the Classic bracket. This component allows for easy integration, whether installed before or after placing the conduit, ensuring a streamlined and professional aesthetic.



# FINISHES

- Black Metallic Textured
- Bronze Metallic Textured
- Charcoal Metallic Textured
- Silver Metallic Textured
- White
- Wood Grain - Light Cherry
- Wood Grain - Dark Walnut

The CYLINDER collection is constructed from high-quality aluminum alloys, ensuring robustness and durability. The die-cast parts are made using A360 aluminum alloy, known for its excellent fluidity and pressure tightness. They are then e-coated or powder-coated to enhance their resistance to environmental elements. Additionally, our extruded aluminum components are constructed from 6063 aluminum alloy - recognized for its superior finish and strength - and are coated in-house to ensure consistent quality control.





# FLUID

Distinguished by its wall-mount design, FLUID™ adds sophistication to the cylinder style. Its signature tapered form merges effortlessly with the architecture, providing a natural extension to the wall while ensuring precise illumination. Like the CYLINDER EX™ series, FLUID™ features a gimbal that tilts  $\pm 30^\circ$  and locks at  $10^\circ$  increments for targeted lighting; utilizes ten advanced optic technologies with Multi-Lens Array (MLA), Chip on Board (COB), and Area Lighting Optics; and offers a Dark Sky Friendly option to minimize light pollution and protect the nocturnal environment.







**Elevated Aesthetic**

FLUID's precision taper embodies sleek functionality, merging with modern exteriors, that recedes into the architecture for a distinguished, unobtrusive profile.



# Matching Technology with Purpose

Each technology offers unique benefits tailored to specific lighting applications, ensuring optimal performance, efficiency, and adaptability across a diverse range of environments.



CHIP ON BOARD (COB)



MULTI-LENS ARRAY (MLA)

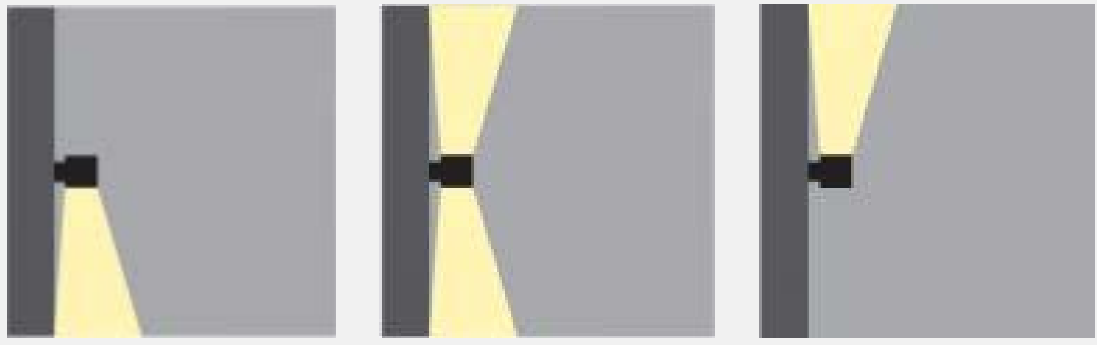


AREA LIGHTING OPTICS

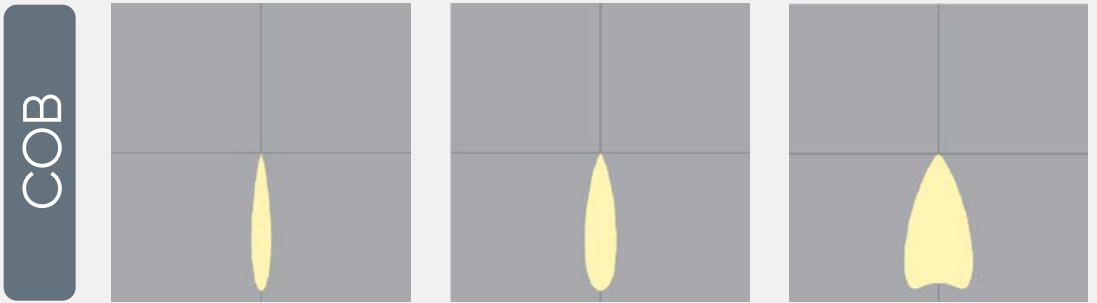




# LIGHT DISTRIBUTION



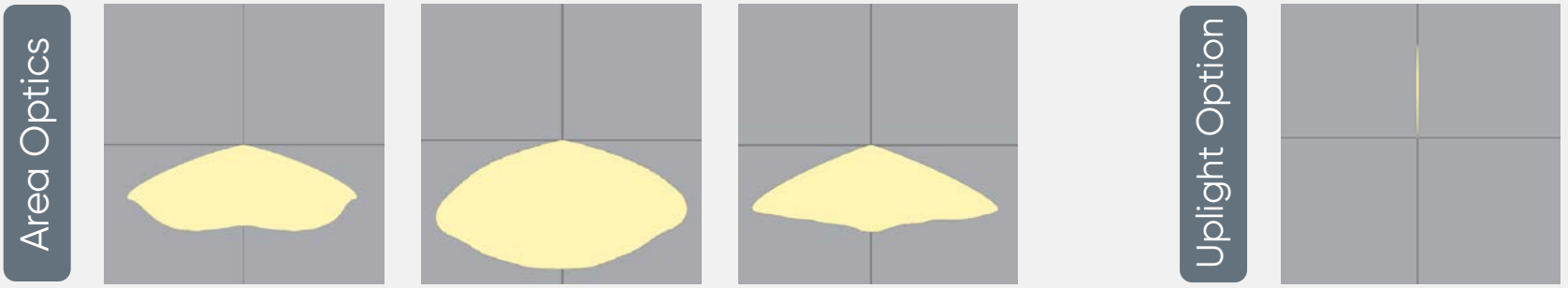
Downlight    Up/Down    Uplight



15°    30°    50°



15°    30°    50°    70°

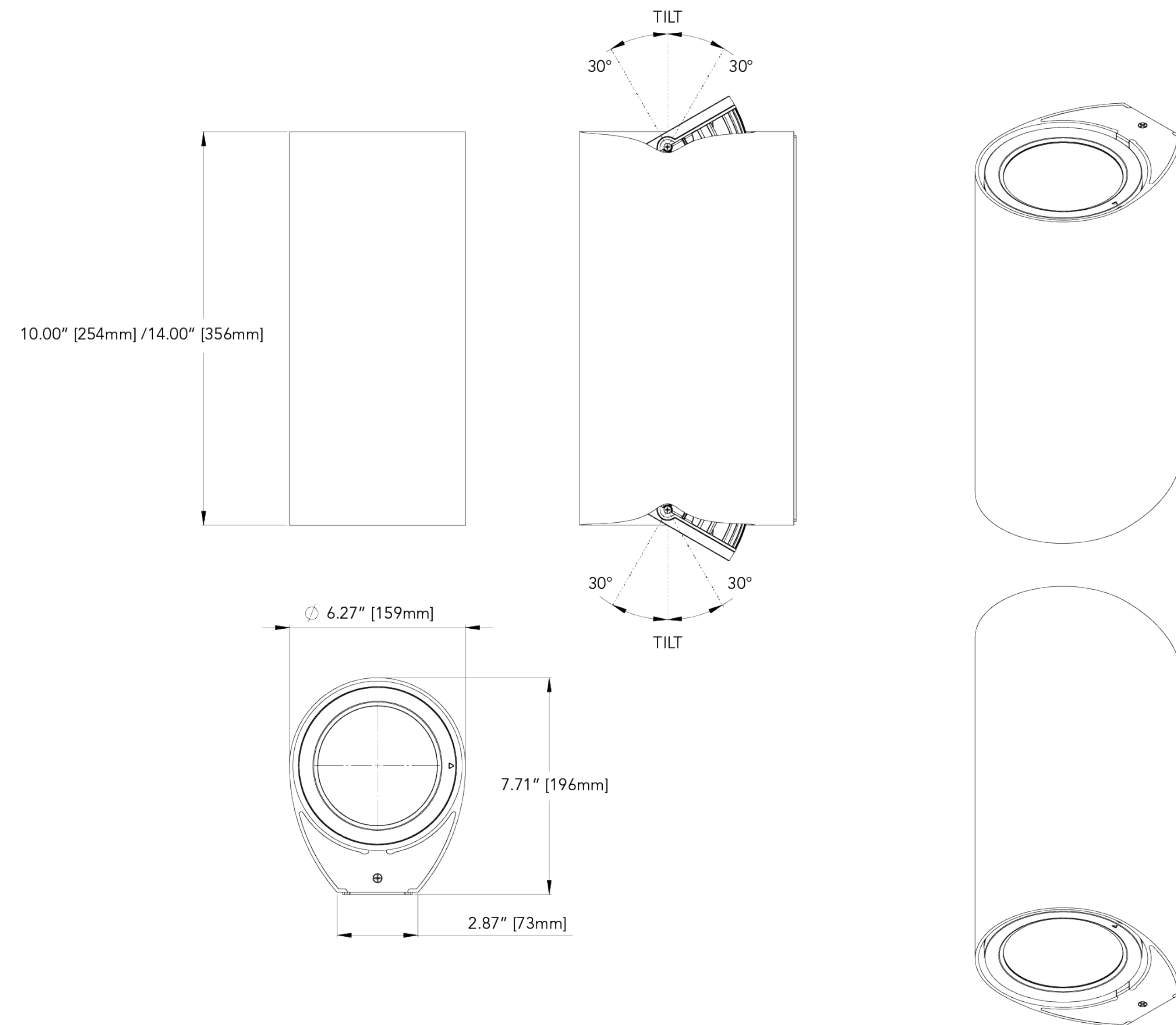


Type II    Type III    Type IV    Uplight Option    3°

Illuminate outdoor spaces with fixtures seamlessly integrated into architectural elements, effectively lighting walkways and enhancing the building's facade. Utilize versatile optics for practical lighting solutions, ensuring precise illumination without wasteful overlighting or unnecessary light spill.



# DIMENSIONS







# Embrace the Night

## with Dark Sky Friendly Lighting

In our increasingly urbanized world, the beauty of the night sky has become obscured by light pollution. However, a growing movement called Dark Sky aims to reclaim the splendor of the night by reducing light pollution and promoting responsible lighting practices. Dark Sky advocates for the use of lighting products that minimize light pollution, protect wildlife and ecosystems, and enhance human health.





1

### FULLY SHIELDED

Select models with direct downward-facing lighting to effectively reduce sky glow and light trespass. This approach helps preserve the natural darkness of the night sky and minimizes the impact on surrounding environments.

2

### LIGHT INTENSITY AND DIRECTION

Our advanced optics are designed to deliver the right amount of brightness for specific needs without unnecessary light spill. With adjustable directional capabilities, our lights focus illumination precisely where it is needed, improving efficiency and minimizing energy use and glare.

3

### COLOR TEMPERATURE

Opt for a CCT of 3000K or less to align with Dark Sky standards. This choice helps reduce the light's impact on wildlife and preserves the natural nighttime environment by emulating the soft glow of moonlight.





A sea turtle is seen from behind, walking on a sandy beach towards the ocean. The sun is setting on the horizon, creating a vibrant orange and yellow glow. A faint rainbow is visible in the sky above the ocean. The overall scene is serene and natural.

# Guiding the Path for Survival with Turtle Friendly Lighting for Endangered Species

Artificial lighting near coastlines can disrupt the natural behaviors of sea turtles, particularly hatchlings that rely on moonlight to navigate to the ocean. Bright, broad-spectrum lights can disorient them, leading to a higher risk of predation and decreased survival rates. By using lighting solutions that minimize blue and green light emissions, we can help ensure that these vulnerable species are guided safely to the sea, supporting their conservation and the broader ecosystem.

## **KEEP IT LOW**

Bright lights can disorient turtles and other wildlife, so keeping light intensity low is crucial. The CYLINDER EX™ and FLUID™ series offer amber LEDs that provide an even lower-intensity option that suits turtle habitats. This ensures safety and functionality while protecting sensitive species and providing sufficient illumination for both surroundings and wildlife.

## **KEEP IT LONG**

Unlike standard LEDs, which emit a broad spectrum of light, our Turtle Friendly luminaires are designed with amber LEDs that emit light with a narrow spectral distribution. They focus on longer wavelengths of at least 560nm, which is less disruptive to turtle behaviour. Reducing blue and green light helps prevent disorientation in hatchlings that rely on natural moonlight for navigation.

## **KEEP IT SHIELDED**

Light trespass can be a significant concern in turtle nesting areas. The CYLINDER EX™ and FLUID™ series feature fully shielded fixtures with directional optics that optimize light control. These Turtle Friendly luminaires ensure the light stays focused downward and minimize light spill beyond the intended zone. Preventing upward light spill creates a more natural environment for nesting and hatchling navigation.





# CYLINDER INTERIOR

The CYLINDER for interior spaces, available in ceiling and stem mount options, features a simple design equipped with a gimbal for precise directional control. This functionality is enhanced by advanced optics, allowing for tailored light distribution across various commercial settings. The straightforward design focuses on performance rather than aesthetics, making it a powerful tool for creating diverse lighting scenes in professional environments.



**Seamless Design, No Visible Screws**  
With no visible hardware, The CYLINDER series becomes almost indistinguishable from its surroundings, maintaining the aesthetic continuity of the space.





CYLINDER INTERIOR

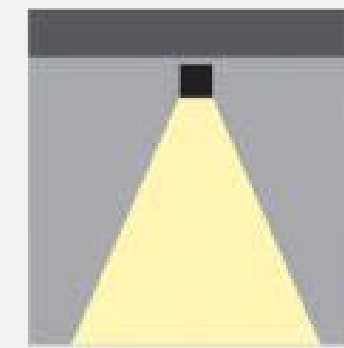
# CEILING







# LIGHT DISTRIBUTION

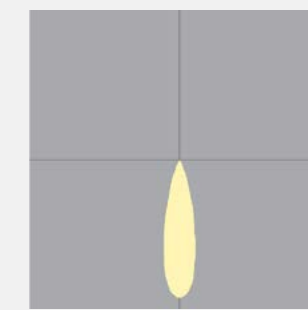


Direct

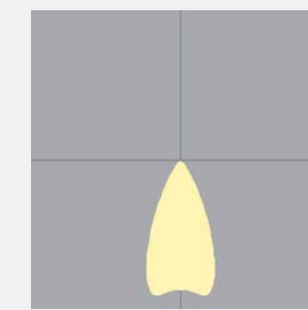
COB



15°

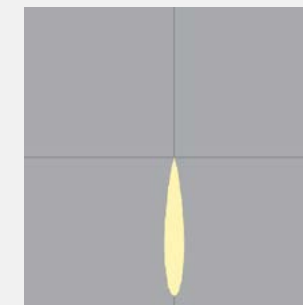


30°

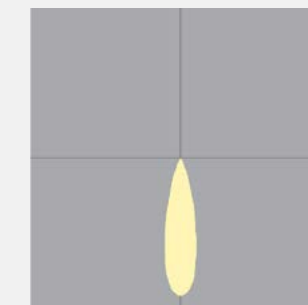


50°

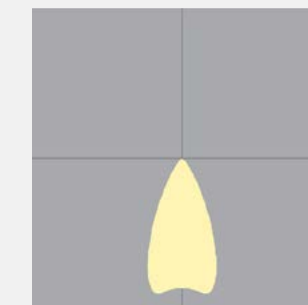
MLA



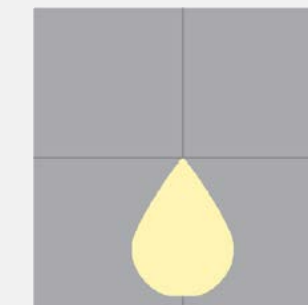
15°



30°



50°

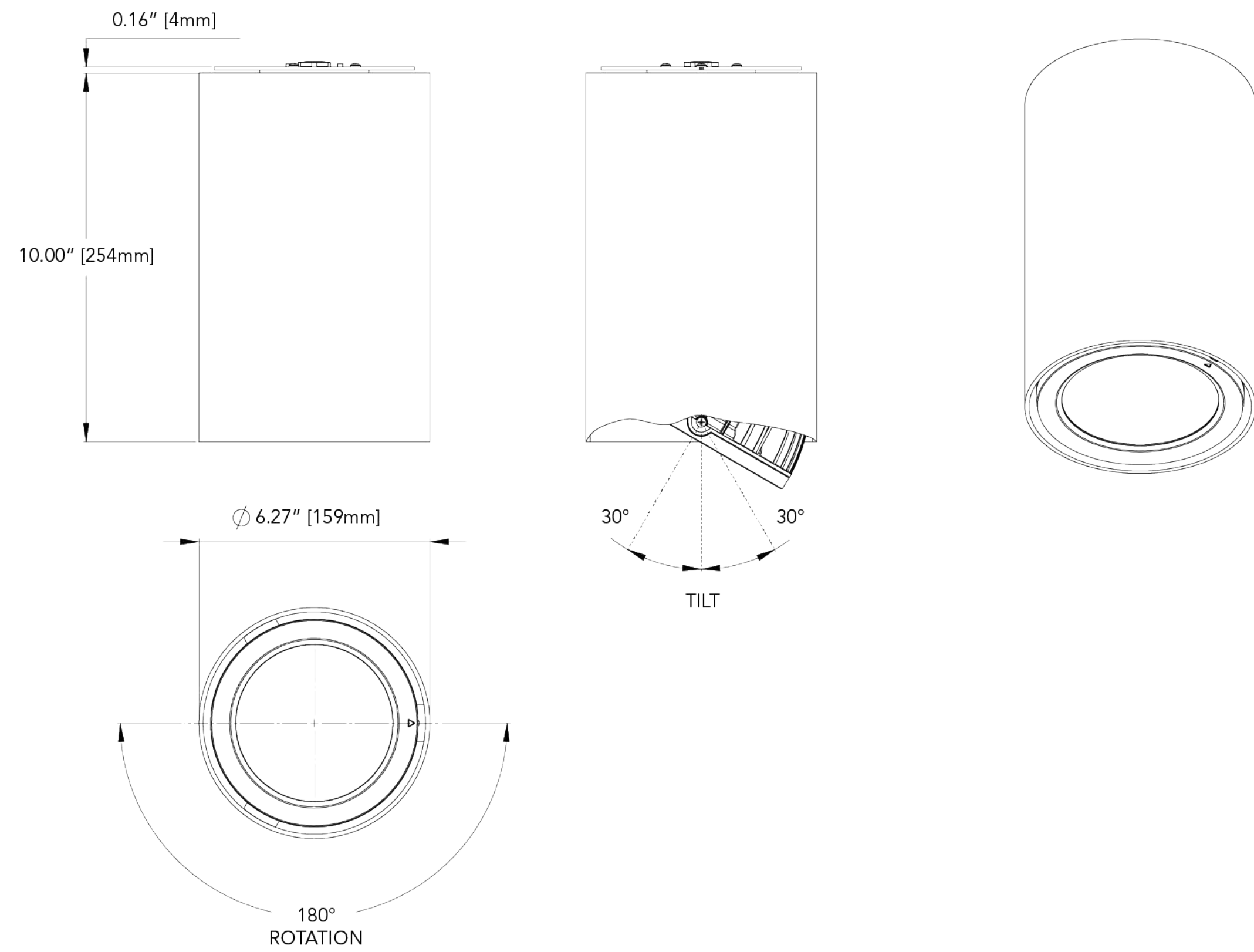


70°

Illuminate interiors with focused beams, ideal for accentuating artwork or creating task-oriented environments.



# DIMENSIONS







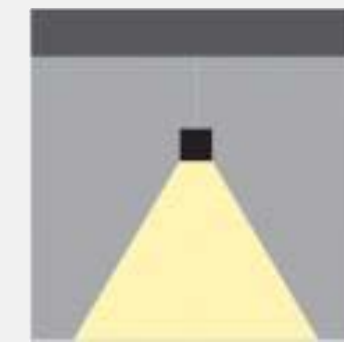
CYLINDER INTERIOR

STEM





# LIGHT DISTRIBUTION

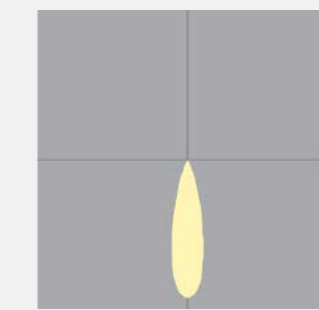


Direct

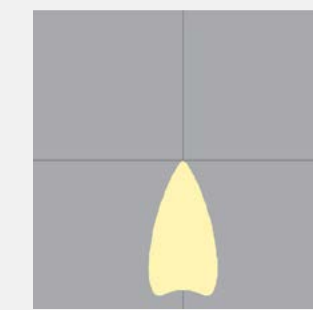
COB



15°



30°

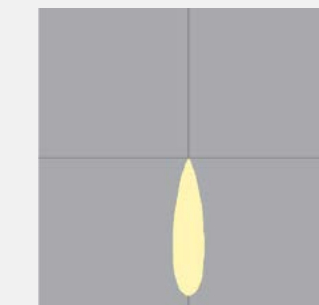


50°

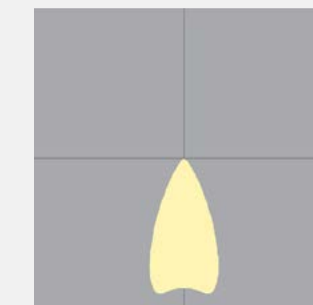
MLA



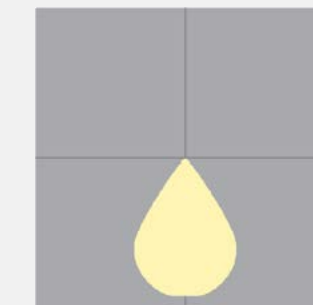
15°



30°



50°

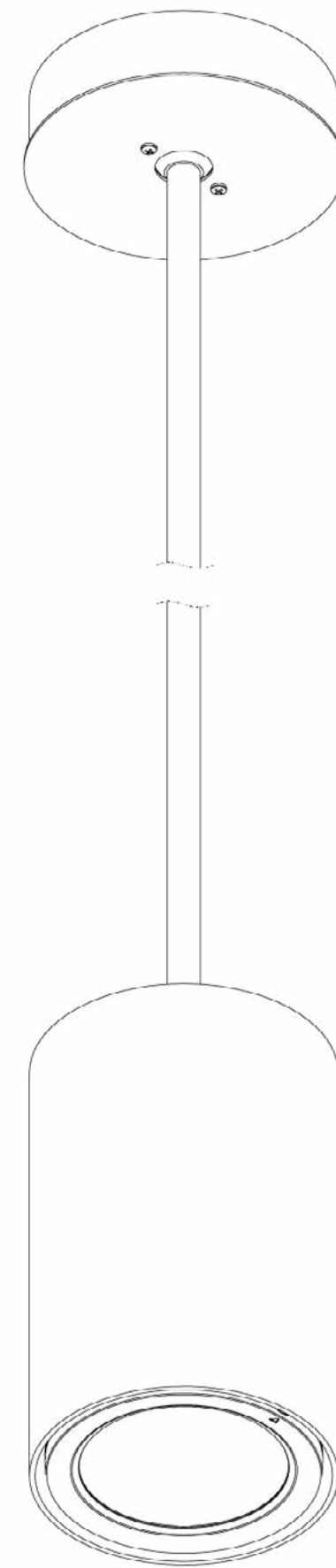
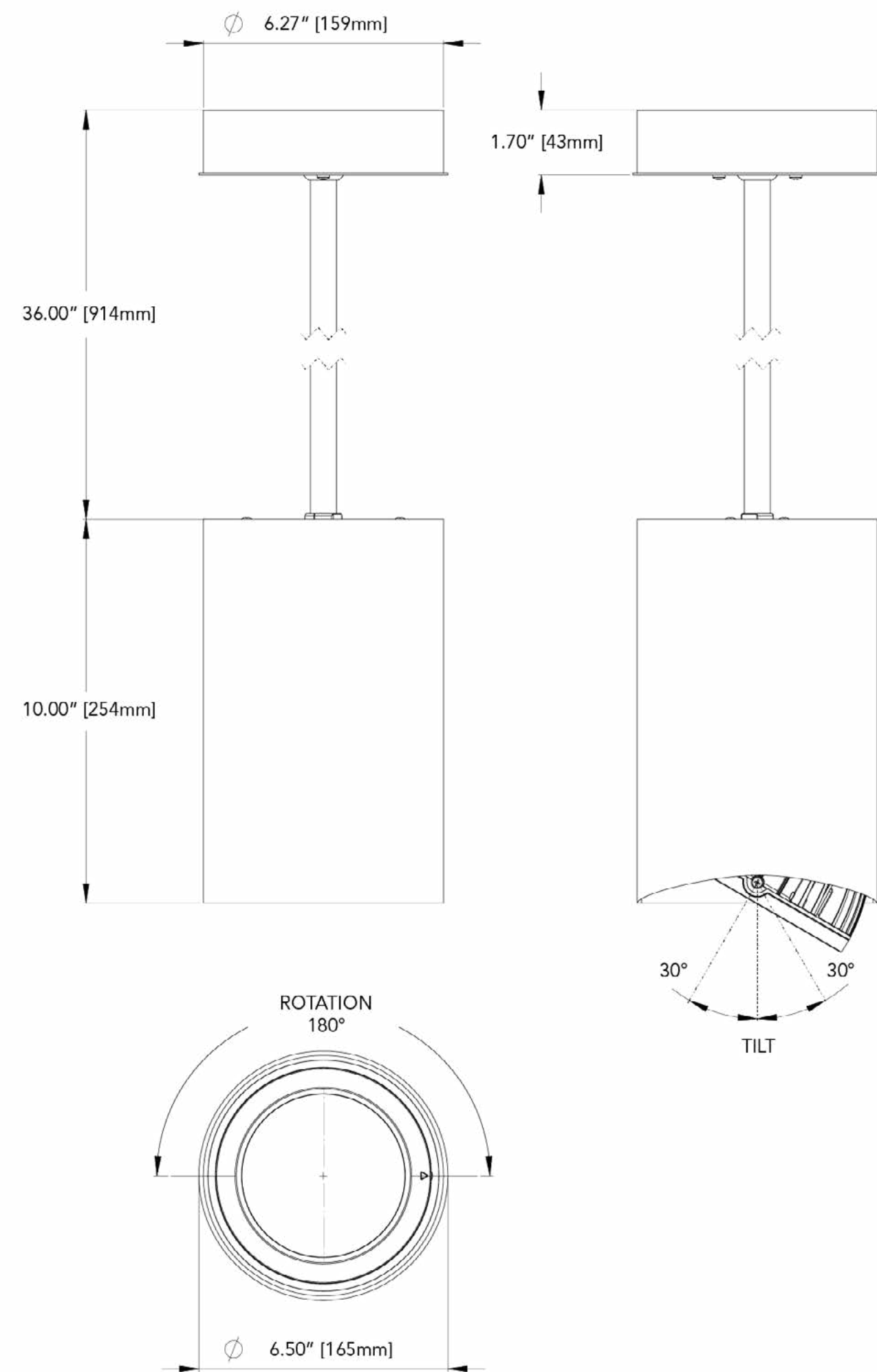


70°

Optimize lighting for conference rooms, galleries, or versatile retail layouts, ensuring comfort and visibility.



# DIMENSIONS







## BETACALCO

Since 1941, we have held a passion for designing cutting-edge professional lighting that changes how spaces are illuminated while upholding the enduring principles of quality and craftsmanship.

Our objective is to work in lockstep with our clients by developing innovative products that meet their variegated design needs and comply with the latest energy and construction standards. Furthermore, our manufacturing infrastructure allows us to scale products and satisfy niche design requirements.

We use leading-edge wellness technologies including BIOS, Tunable White, and Dim to Warm; and employ open-source connectivity to intelligent control systems, including Power over Ethernet.

Our customer-centric approach to service and product design is the basis of our reputation and how we have become a key lighting supplier across the globe.

[betacalco.com](https://betacalco.com)

[sales@betacalco.com](mailto:sales@betacalco.com)

