# BUILDING AWARENESS AND EDUCATION

ARCHITECTURAL RECESSED LIGHTING



Our mission is to help people fall in love with great lighting.

Through outreach, education and most importantly visual representations of great lighting, we will build awareness and make great architectural lighting a sought-after component of any new construction or remodeling project.

Where light is placed, at what relative intensities, and in what direction, has a significant impact on visibility, visual comfort, aesthetics, task performance, safety, mood, satisfaction, and social interaction.

Layering light is critical. Not lighting something is as impactful as lighting something. Contrast creates visual interest and depth.

While a luminaire "form" is important to aesthetically compliment the interior design of a space, luminaire performance is equally or more important because it impacts the entirety of the space.

Lighting tells a story about the space.

Is a retail store focused on discounts or high-end products?

Is a restaurant selling fast food or a fine dining experience?

Is a home cookie-cutter or custom tailored to a client's discerning and changing needs?



# QUIET CEILING

The human eye is naturally drawn to the brightest objects in a space. Quiet Ceiling refers to the ability of a light fixture to illuminate a space without calling attention to itself. Unlike recessed cans, Tech Lighting architectural downlights recess the light source well above the ceiling plane which minimizes glare and visual discomfort and allows the eye to focus on the prettiest objects in the interior of the room.

### QUIET CEILING



TECH LIGHTING 3" ADJUSTABLE DOWNLIGHT



TECH LIGHTING PRODUCT 3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM LED SPECIFICATIONS 90CRI, 3000K / 25° OPTIC FLOOR PLAN SPECIFICATIONS CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER

ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER

COMMODITY 4" EYEBALL DOWNLIGHT



# APERTURE SIZE

Aperture size refers to the nominal size of the ceiling cut-out. Tech Lighting's architectural recessed downlights are much smaller in appearance relative to large aperture commodity cans. 3 inch is our most popular size and works well with virtually any residential ceiling height. It balances a minimalist look with a multitude of options and functionality. 2 inch provides an even more minimalist approach, but is slightly more limited in terms of light output and options. 4 inch is best suited for ceiling heights above fifteen feet and is more common in commercial settings.

#### APERTURE SIZE



2" SQUARE, FLANGELESS, BEVEL



#### TECH LIGHTING PRODUCT

2" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM 3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM 4" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM

#### LED SPECIFICATIONS

90CRI, 3000K / 20° OPTIC 90CRI, 3000K / 25° OPTIC 90CRI, 3000K / 25° OPTIC

### FLOOR PLAN SPECIFICATIONS

CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER



4" SQUARE, FLANGELESS, BEVEL

# ADJUSTABILITY

Adjustability is one of the most critical components that differentiates an 'Architectural' recessed downlight from a commodity 'can'. Adjustability allows the homeowner to create layers of light and highlight key elements in the space or at specific task surfaces like a kitchen counter or desk. Aiming the light at specific focal points establishes contrast which creates interest and depth. We call it 'Painting the Space in Light'.

### ADJUSTABILITY



OFF



TECH LIGHTING PRODUCT

3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM

LED SPECIFICATIONS 90CRI, 3000K / 25° OPTIC FLOOR PLAN SPECIFICATIONS CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER



COMMODITY 5" FIXED DOWNLIGHT

# TILT

Light can be aimed higher or lower through the vertical Tilt adjustment. A broader tilt range provides greater flexibility to direct light closer to the ceiling. This is particularly useful for smaller focal points or shorter ceiling heights where artwork is more likely to be mounted closer to the ceiling.

TILT



0 DEGREE

10 DEGREE TILT

20 DEGREE TILT

30 DEGREE TILT

TECH LIGHTING PRODUCT

3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM

LED SPECIFICATIONS 90CRI, 3000K / 25° OPTIC FLOOR PLAN SPECIFICATIONS CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER



40 DEGREE TILT

# ROTATION

Light can be aimed left or right through the horizontal Rotation adjustment. This allows light to be placed exactly where it is needed even if the light fixture itself is not centered relative to the focal point. Optimum rotation is 360° ensuring there are not any 'dead' spots that cannot be illuminated. Like Tilt, Rotation allows the light to adapt to the changing needs of the space.

### ROTATION



LEFT ROTATION

CENTER

TECH LIGHTING PRODUCT

3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM

LED SPECIFICATIONS 90CRI, 3000K / 25° OPTIC FLOOR PLAN SPECIFICATIONS CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER



RIGHT ROTATION

# WALL WASH

A Wall Wash fixture creates a uniform flood of light with minimal hot spots, scalloping or shadows. A good wall wash should illuminate a wall from ceiling to floor with as much consistency as possible. Wall wash fixtures can help illuminate large art or multiple smaller pieces in the same space – for example, a photo gallery – and help call attention to architectural details like fireplaces or wall hangings without a specific focal point.

When multiple wall wash fixtures are used, they should be spaced equally from each other and the wall. Tech Lighting 3" ELEMENT has two wall wash options. The dedicated wall wash fixture is rigorously designed for the optimal performance. The wall wash trim can also be used to convert an adjustable fixture.

WALL WASH



OFF

3" WALL WASH HOUSING AND SQUARE WALL WASH TRIM

3" ADJUSTABLE HOUSING AND SQUARE BEVEL TRIM

#### TECH LIGHTING PRODUCT

3" SQUARE WALL WASH HOUSING | FLANGELESS, WALL WASH TRIM 3" SQUARE ADJUSTABLE HOUSING FLANGELESS, BEVEL TRIM

3" SQUARE, ADJUSTABLE HOUSING FLANGELESS, WALL WASH TRIM

90CRI, 3000K 90CRI, 3000K / 40° OPTIC 90CRI, 3000K / 40° OPTIC

LED SPECIFICATIONS

#### FLOOR PLAN SPECIFICATIONS

CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER DOWNLIGHT DISTANCE FROM EACH OTHER: 28" ON CENTER

#### ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER



3" ADJUSTABLE HOUSING AND SQUARE WALL WASH TRIM

# BEAM SPREAD

Beam Spread refers to the width and shape of the beam of light. A narrower beam concentrates light and creates high levels of contrast relative to the surrounding areas. Narrower beam spreads are best suited for smaller focal points or higher ceilings where the focal point may be further away from the light source. Wider beam spreads create more diffuse light and are best suited to cover larger areas such as bigger paintings or where higher contrast is not desirable.

### BEAM SPREAD



10 DEGREE OPTIC

25 DEGREE OPTIC

40 DEGREE OPTIC

#### TECH LIGHTING PRODUCT

3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM

LED SPECIFICATIONS 90CRI, 3000K / VARIOUS OPTICS FLOOR PLAN SPECIFICATIONS CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER



60 DEGREE OPTIC

# COLOR TEMPERATURE

Color Temperature refers to the relative appearance of a white light source measured in degrees Kelvin. Color temperature preferences are quite personal. The two most popular color temperatures in residential applications are 2700K and 3000K. 2700K can feel warm and inviting and is more similar to traditional incandescent. 2700K works well with warmer tones and is particularly nice in bedrooms and living rooms. Some people prefer 3000K which offers a slightly 'crisper' white more similar to halogen. 3000K may be better suited for kitchens, laundry rooms, bathrooms, closets and home offices. Tech Lighting's Tunable White options allow homeowners to select different color temperatures for different spaces or at different times of day.

### COLOR TEMPERATURE



OFF



1800K











3000K

3500K

4000K

#### TECH LIGHTING PRODUCT

3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM

#### LED SPECIFICATIONS 90CRI, VARIOUS COLOR TEMPERATURES / 25° OPTIC

FLOOR PLAN SPECIFICATIONS CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D



2700K



5000K

# DIMMING

Quality Dimming is critical because it saves energy and sets the right mood. When an entire space is dimmed to low light levels, architectural recessed lighting makes the focal points 'pop' even more. When we communicate dimming percentage, we are not referring to the percent movement of the dimmer. We are referring to the percent of light relative to full light output. For example, if a light fixture dims down to 2%, that means it dims down to 2% of full light output. However, the human eye perceives low-light differently, so even though it is only 2%, the human eye perceives it as roughly 20%. That is why low-level dimming performance is important.

Most LEDs are considered 'static white'. Unlike incandescent or halogen, their color temperature remains the same as they dim. Warm Dim allows LEDs to warm in color temperature as they dim – more similar to incandescent. This is not inherently better than static white, but some people prefer the warmer look particularly at night when they are more likely to dim the lights.

### DIMMING

STATIC WHITE







WARM DIM







#### TECH LIGHTING PRODUCT

3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM 3" SQUARE ADJUSTABLE HOUSING | FLANGLESS, BEVEL TRIM LED SPECIFICATIONS 90 CRI, 3000K / 25° OPTIC 90 CRI, 3000-1800K WARM DIM / 25° OPTIC DIMMER SPECIFICATIONS LUTRON MACL-153M LUTRON MACL-153M FLOOR PLAN SPECIFICATIONS CEILING HEIGHT: 9' DOWNLIGHT DISTANCE FROM WALL: 32" ON CENTER





ARTWORK SPECIFICATIONS DIMENSIONS: 37" H x 37" W x 1.5" D HANGING MEASUREMENT: 64" FROM FLOOR ON CENTER

# TRIMS

Trims are the portion of the downlight that are visible from below the ceiling. Architectural downlight trims should be rugged in construction while minimalist in appearance. Most of the selections pertaining to trims come down to personal preference – Shape, Style, Finish. Most customers select White trims which harmonize with many ceiling colors and are field-paintable to compliment a specific ceiling paint.

Flangeless trims sit completely flush with the ceiling plane and are the ultimate in 'Architectural' lighting because they truly become part of the architecture with their very minimalist appearance.

While many customers prefer the No Lens option because it minimizes the visible light at the ceiling plane, other customers prefer a Lens because it closes off the view into the housing and puts a bit of light at the ceiling. Customers may elect to utilize our Trim Reflectors in conjunction with the No Lens option to further reduce visibility inside the housing.

### TRIMS/REFLECTORS

TRIMS



3" SQUARE, FLANGELESS, BEVEL



3" SQUARE, FLANGED, BEVEL



3" ROUND, FLANGELESS, BEVEL



3" SQUARE, FLANGELESS, FLAT



3" SQUARE, FLANGED, FLAT



3" ROUND, FLANGELESS, FLAT

REFLECTORS



3" SQUARE, FLANGELESS, BEVEL SHOWN WITH NO REFLECTOR



3" SQUARE, FLANGELESS, BEVEL SHOWN WITH BLACK, NON-SLOTTED REFLECTOR



3" SQUARE, FLANGELESS, BEVEL SHOWN WITH GOLD, NON-SLOTTED REFLECTOR



3" ROUND, FLANGED, BEVEL



3" ROUND, FLANGED, FLAT



3" SQUARE, FLANGELESS, BEVEL SHOWN WITH SILVER, NON-SLOTTED REFLECTOR