BalancedCare™ by axis | Healthcare Lighting without Compromise

Since our founding in 1991, Axis Lighting has always been a family-owned company, with an emphasis on people. Our diversity translates into architectural designs that transcend the ordinary and performance that exceeds the norm. We've taken our balanced approach to lighting into the healthcare market to provide solutions that not only function properly, but also provide beautiful, timeless design for all users of the space.

Form meeting function – it's in our DNA.

BalancedCare™

CONTENTS

The BalancedCare™ Approach

Design for healthcare has been a tale of two extremes – offering either functional but institutional appearance, or extremely decorative forms while ignoring cleanability and other critical standards. The BalancedCare™ family by Axis Lighting ties it all together. BalancedCare provides lighting for wellness without trade-offs, offering patent-pending BeWell™ performance optics for both visual comfort and functionality, along with features that promote infection control and equipment compatibility. Finally – a product offering that addresses **ALL** the requirements of today's complex healthcare environment.

BalancedCare™ Pillars

WELLNESS

The built environment can have a positive effect on the overall state of a person's physical and emotional wellbeing. With a focus on patient and staff wellness, thoughtfully configured lighting that balances both visual and circadian needs, as well as links to nature, promotes healing outcomes.

ARCHITECTURAL FORM

BalancedCare luminaires provide timeless, stylized forms concealing sophisticated technologies that complement and enhance today's architecture. Sleek, low profile styles replace mundane, institutional looks of the past and elevate healthcare lighting design to today's standards.

FUNCTIONAL OPTICS & VISUAL COMFORT

BeWell light guide technology provides multiple precise distribution options to deliver the many layers of light required in healthcare environments, as well as glare-free comfortable lighting that supports the visual tasks of staff while enhancing the overall wellbeing of patients.

INTELLIGENT CONTROL

BalancedCare is an intuitive 'controls-agnostic' collection with intelligent patient bed control compatibility, as well as wireless and POE; and spectral programmability provided by tunable white and BIOS SkyBlue® technologies. We partner with industry-recognized controls suppliers for integration into any building automation system.

INFECTION CONTROL & PERFORMANCE

BalancedCare products are constructed of materials and finishes that withstand hospital cleaning protocols, standing up to the most stringent infection control requirements. They meet functional and application-specific industry listings such as UL, ADA, Ingress Protection (IP) and National Sanitation Foundation (NSF) standards.

EASE OF MAINTENANCE

Smooth, non-corrosive surfaces can withstand the harsh cleaning protocols necessary to minimize risk of hospital-acquired infections (HAIs). Room-side access to drivers and components facilitates maintenance efforts, reduces costs, and prolongs sustainability of luminaire systems.

BalancedCare™ TECHNOLOGIES

BalancedCare by Axis Lighting creates the required balance between innovation and patient/healthcare worker wellness. This is achieved by combining BeWell Optics™, BeWell Controls™ and BeSealed™ luminaire construction in the next generation of healthcare solutions.

BeWell light guide optics provides glare-free, comfortable lighting that supports the visual tasks of staff, and enhances the overall wellbeing of patients.

BeWell Controls is an intuitive, "controls-agnostic" approach with intelligent patient bed control compatibility, as well as wireless and POE; and spectral programmability provided by tunable white and BIOS SkyBlue® technologies.

BeSealed ties it all together with product design features that support easy maintenance and cleanability, that meet the most rigorous independent listings in the industry.

BeWell™ OPTICS

BeWell™ TECHNOLOGIES

BeSealed™ CONSTRUCTION

BeWell™ CONTROLS

Providing Multidimensional Distribution and Immersive Illumination

Precisely coded and aligned molecules in the light guide shape LED output, from individual points of light, in all three dimensions. The science is complicated. The result is easy – controlled distribution that puts light only where you need it. Direct, indirect, asymmetric or a combination with high efficacy performance, no matter the distribution.

Visual comfort takes on a whole new meaning. Instead of reflected glare, the unique light guide produces comfortably diffuse illumination for a more natural appearance. It matters most when placed in line of sight, like a bed light directly above the patient. That's where comfort is put to the test.

Innovative Optical System Directs Light Where It's Needed — Comfortably

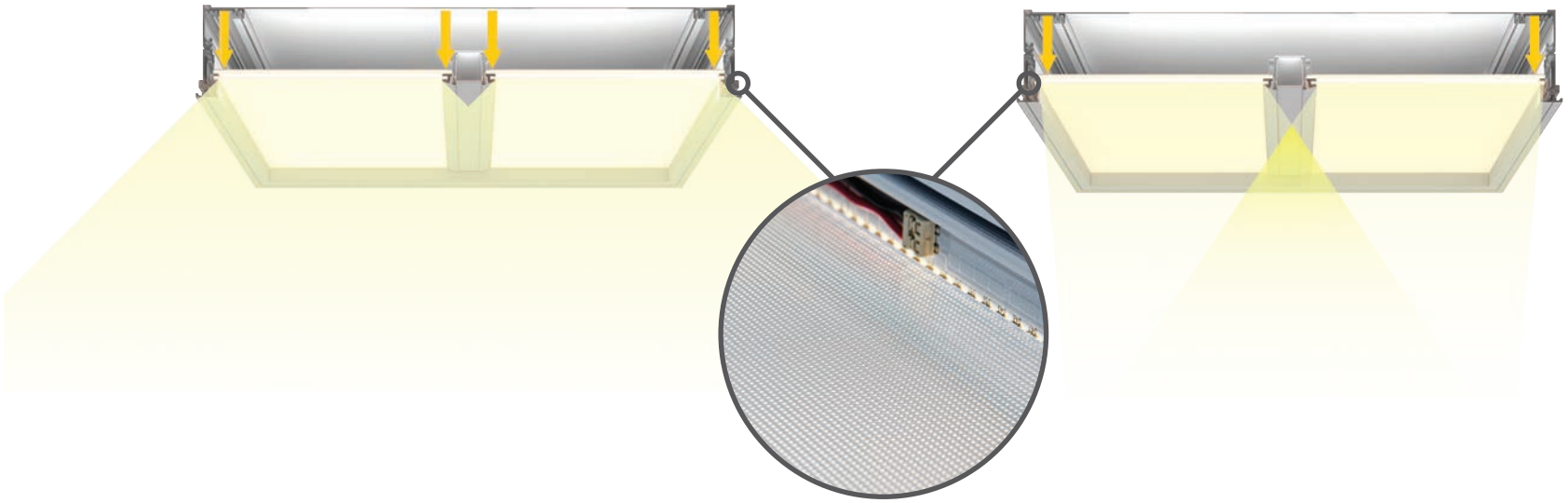
BeWell Optics delivers lighting that promotes a healing environment. BeWell is a patent pending, materials-based technology that uses molecular optics to direct - not reflect - light. The result is amazingly uniform distribution, without glare, shadowing, or pixelation. BeWell provides better visual acuity for tasks, and softer, healing visual comfort in the space.

AMBIENT

BeWell Optics replaces traditional segmented reflectors to disperse the light uniformly across the entire lens.

EXAM

In the same luminaire, BeWell optics balances concentrated higher intensity light for examination with softer ambient light.



SEALED LIGHT GUIDE

Unique patent pending sealed light guide design, optimized for optics, infection control and multi-function controllability

BeWell Optics

GENERAL AMBIENT

READING

EXAM

NIGHT CHECK

MULTIPLE LIGHT DISTRIBUTION OPTIONS

Light guide technology with precision optics allows multiple distributions within the same luminaire dedicated to ambient, exam and reading functions

UNIFORMITY

BeWell Optics provides uniformly diffuse light without streaks, hot spots or shadows

HEALTHCARE LIGHTING WITHOUT THE HARSHNESS

Light-emitting area is comfortable to view, even in direct line of sight, as over a patient bed

EFFECTIVE, EFFICIENT, AND EFFICACIOUS

Better visual acuity means more effective care with high efficacy performance for all distributions

CIRCADIAN-SUPPORTIVE LIGHT

Intensity, spectrum and multi-directional distribution can be tailored to deliver light comfortably to the patient's eye, where that light cue is then transmitted to the body's master clock for circadian regulation

No more segmented reflectors in clunky housings... just beautiful, seamless optics switching between functions

General Ambient - a base layer of light for general conversation and circulation around the patient bed, which the patient can control from their remote pillow speaker or staff can control from a wall switch; light level and spectrum can be tailored to provide circadian stimulus

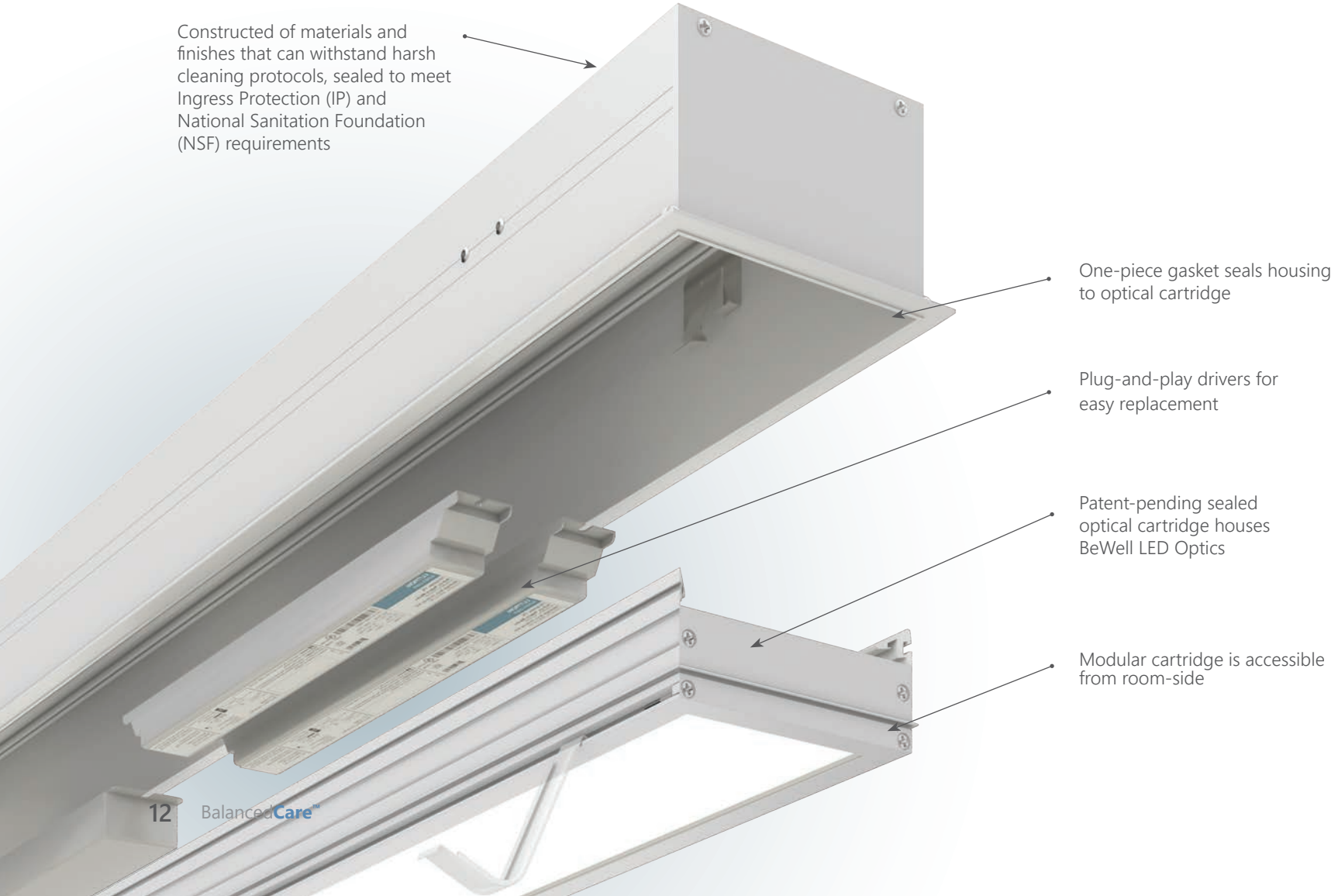
Exam - adds asymmetric beams of light to the ambient layer, delivering a higher intensity of uniformly distributed, high color rendering light onto the bed, to allow examination of the patient from head to toe; staff can control from wall switch at headwall and entry

BeSealed Construction

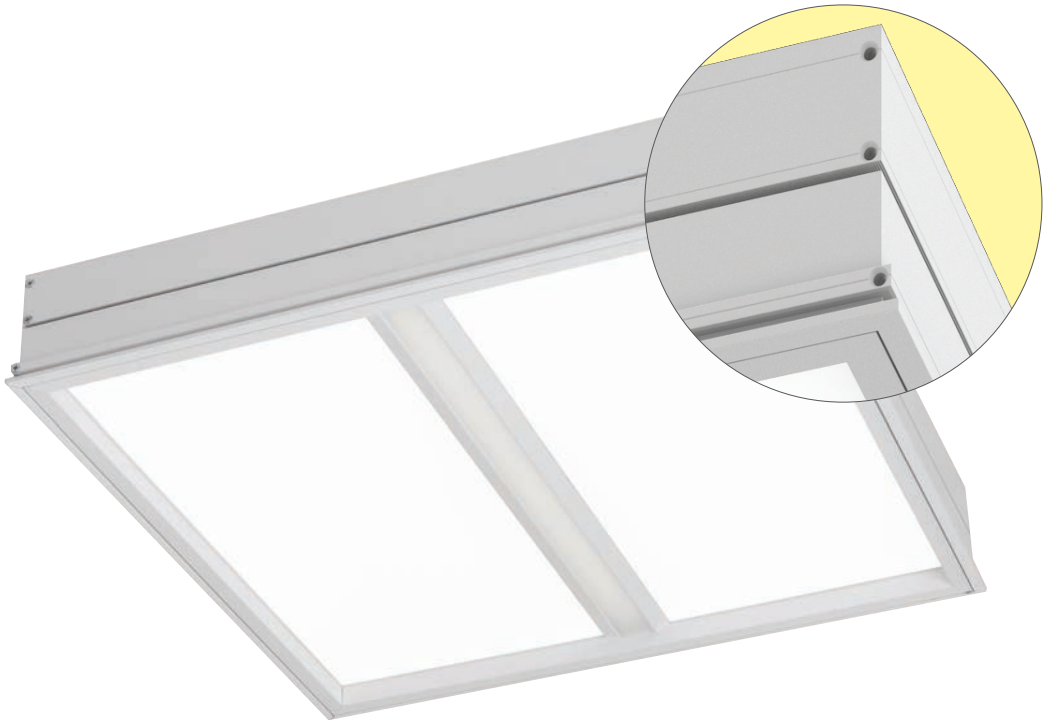
All BalancedCare luminaires feature BeSealed design attributes that enable easier maintenance, less costly construction, updated lighting technology, and engineered features that support today's stringent infection control standards. BeSealed is the BalancedCare total mechanical solution.

BeSealed™ CONSTRUCTION

IP64 NSF2



BalancedCare lightweight sealed housing technology eliminates complex and costly welded housing construction



Extruded aluminium housing maximizes LED heat dissipation to ensure cool operation and long life

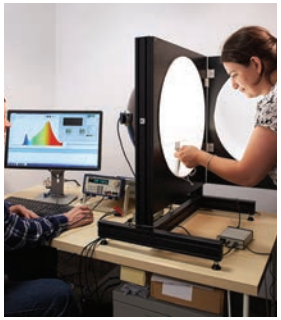
LENS TOOL

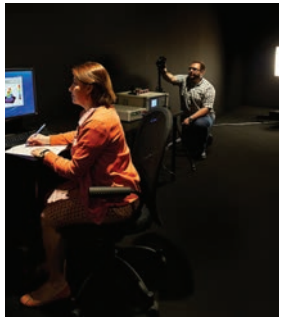
The lens tool seamlessly pulls the doorframe away from the housing and provides easy access to the internal electrical cartridge

TORSION SPRINGS

Torsion springs secure the doorframe to the housing, and ensure a tight seal without the use of exposed fasteners for aesthetics and cleanability

BeWell Controls





When designing around BalancedCare luminaires, you get the support of Axis Lighting's robust electrical team of professional engineers who work towards proper integration and performance of control systems. Axis is agnostic with respect to controls and has partnered with industry recognized controls suppliers to support integrated lighting within healthcare environments, ranging from the nurse call system to the entire facility.

Successful lighting for healthcare includes the entire system — not only luminaires and controls — but also the physical switches and digital interfaces for the wide variety of building occupants. BeWell Controls supports the design team's controls intent, while advocating for maximum flexibility and friendly usability for patients and medical staff.

Long active on many of the healthcare and controls industry committees, our recognized domain experts are very familiar with research and best practices, which enables us to work with specialized healthcare design teams and adds value that consistently improves project outcomes for our customers.

Our in-house innovation specialists will help deliver everything from standard 0-10V dimming and code compliance to cutting edge Power Over Ethernet (POE) systems. Whether it's advanced IOT sensing for people and asset tracking, color technology for health and wellbeing, or other new use cases, the BalancedCare team understands and supports the complex healthcare environment.

BeWell™
CONTROLS

WIRELESS PoE

Healthcare facilities are heavily regulated and undergo continuous maintenance, inspection and recertification to ensure 24/7 operation. BalancedCare luminaires can be integrated into the overall building automation network, allowing facilities managers to schedule lighting and other systems according to usage requirements, which is one way to simultaneously reduce costs and reduce a facility's carbon footprint.

BeWell Technologies

Many of the BalancedCare products are available with Axis' Axitune color tunable technology, which provides spectral tuning and integration into an intelligent connected lighting system. The Axitune tunable color is a 4-channel system using DMX controls that delivers full spectrum light using five colors (royal blue, cyan, lime green, amber and red). Users can tailor brightness, CCT, saturation and hue to their desired preferences while maintaining great color consistency (<2 Standard Deviation Color Matching (SDCM). Please consult the factory for product compatibility with Axitune Color Tuning technology.

BeWell™ TECHNOLOGIES

Axitune

Axis Cove Perfekt ceiling luminaires shown with Axitune color tuning.

Dynamic white lighting allows for tailored color mixing resulting in a wide range of CCTs to meet user's changing needs and preferences. These systems offer visual comfort for all occupants, enable critical task performance for staff, and support both staff and patients' circadian entrainment. The 2-channel systems allow users to independently adjust CCT and brightness to their desired effect, and dim along a constant linear dimming curve to 1%. Internal color mixing and proprietary BeWell Optics ensures the best in color uniformity and consistency. Please consult the factory for product compatibility with Axitune Tunable White technology.

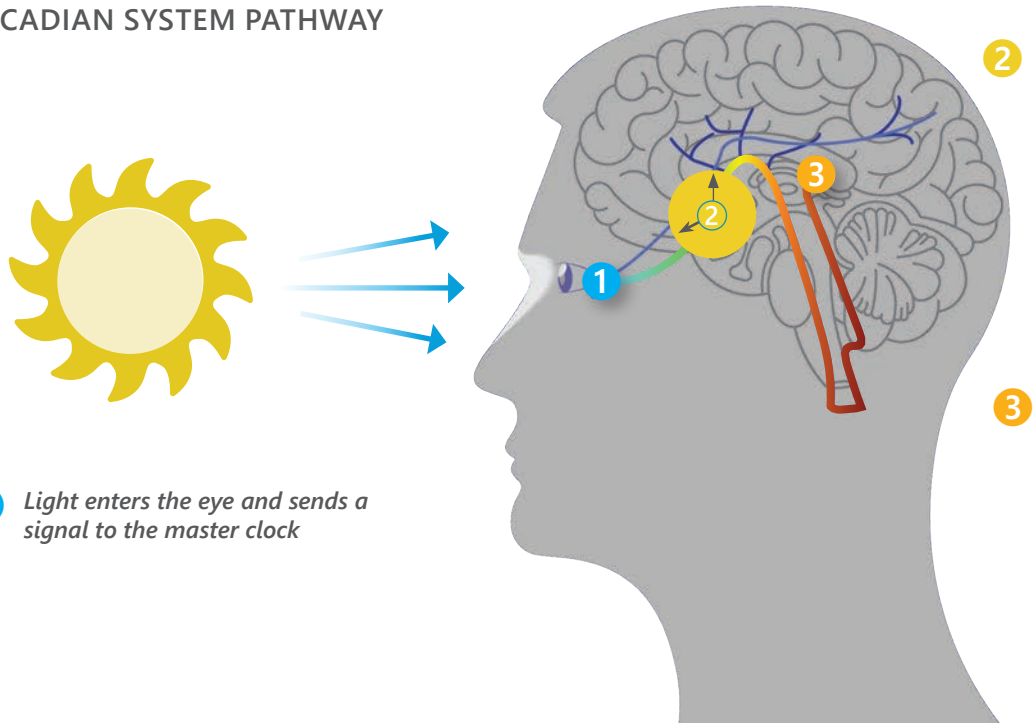
TUNABLE WHITE

CCT Range	Ordering Code	Available CRI
2700K to 5000K	**TW2750**	80 or 90
2700K to 6500K	**TW2765**	80 or 90

Circadian System - How Does It Work?

While we might be able to see well under moderate to low light levels, those levels will not be sufficient to entrain our circadian system! Healthy circadian rhythms require strong light and dark signals, which help to promote healthy sleep patterns - and contribute to overall wellness.

CIRCADIAN SYSTEM PATHWAY



1 *Light enters the eye and sends a signal to the master clock*

2 *Master clock receives that light signal and it resets itself for the next 24 hours, triggering the start of a variety of biological processes, including essential hormone production*

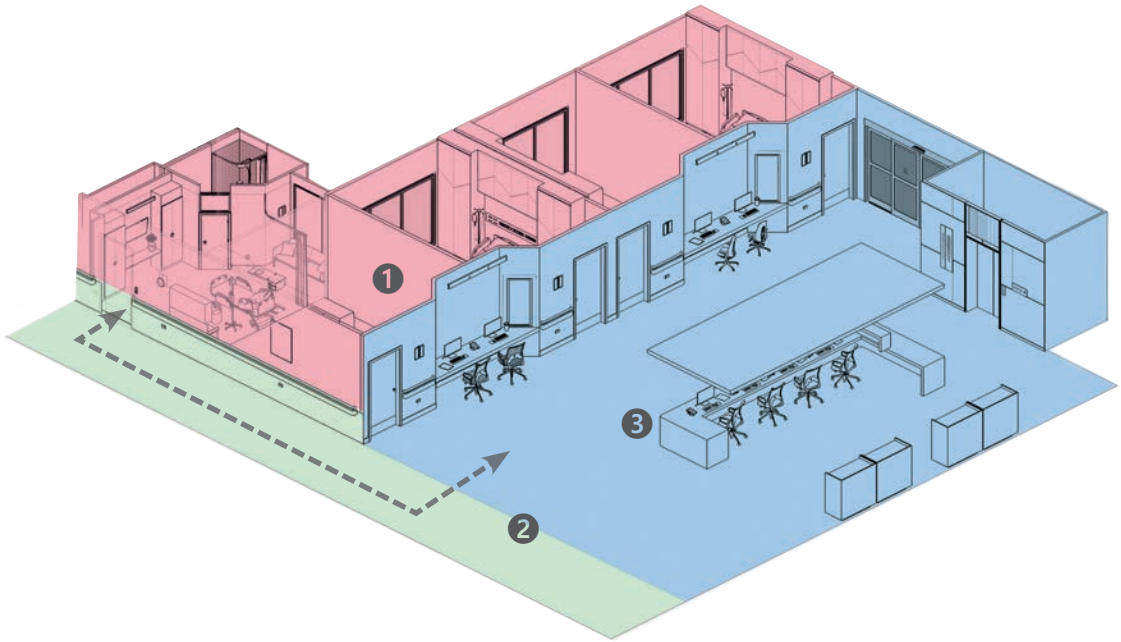
3 *Pineal Gland – site of melatonin production, the hormone that promotes sleep, whose levels rise as it senses darkness*

CIRCADIAN VS VISUAL SYSTEM

The circadian system, part of the non-visual system, processes and responds to light differently than the visual system. The visual system does not care about quantity or spectrum - it is stimulated by the faintest glimmer of light. The circadian system, however, requires higher light levels and longer exposure time as a stimulus - and It is also most sensitive to short 'blue' wavelengths.

The hospital ecosystem: balancing circadian health with visual needs

For the diverse populations within a hospital - patients, staff and families - lighting systems should be able to deliver optimal light levels and spectrum at the right time of day for circadian regulation, as well as provide appropriate light levels to complete critical visual tasks.



1 PATIENT ROOM

- High stimulus by day - patient benefits from bright light environment, exposure to daylight, cool spectrum preferred but not required, early to mid-morning
- Low stimulus at night - dim light environment, warm spectrum preferred, two hours before bedtime
- Staff controls light for critical visual tasks as needed

2 CORRIDORS

- Transition zone between patient rooms and nurses' station
- Reduce light level from day to night, while maintaining safe passage

3 NURSES' STATION

- High stimulus by day - staff benefits from bright light environment, exposure to daylight, cool spectrum preferred but not required, early morning through late afternoon
- Low stimulus at night - lower light levels, avoid cool spectrum - except when alerting boost is needed
- Maintain light levels for visual tasks as needed

WHAT MATTERS?

Light level at the eye - sufficient light to stimulate the circadian system is most important

Spectrum - it is most sensitive to 'sky blue' wavelengths in the 460-480 nm range; daylight is great!

Duration - light is processed over time, so exposure to target light levels for at least two hours early morning achieves a stimulus effect

Time of day - bright light/high stimulus early morning; low light levels/reduced stimulus evening - follows nature's lead!

Personal Light history - every person has a different 'threshold', or sensitivity to light, depending on their typical daily exposure

Circadian lighting is at the heart of health and wellness in hospital environments.

It's simple – the circadian system requires more light and longer processing time than the visual system. We now have the knowledge and tools to provide appropriate lighting for both, creating a balance between light needed for critical visual tasks with light needed to entrain, or synchronize, the human body to the 24-hour day – and maintain healthy circadian rhythms.

Lighting that does not provide strong light/dark cues from day to night can lead to circadian disruption, which results in poor sleep, delirium, and greater risk of serious illnesses such as cancer, diabetes, and heart disease. There is no upside to circadian disruption.

Circadian lighting is not about a single luminaire, or an isolated area. It considers the lighted environment as a whole.

***Patient room** lighting should provide high daytime stimulus and low nighttime stimulus, sending the appropriate light/dark signal to the body's master clock to maintain its natural 24-hour biological cycle; darkness activates a rise in melatonin levels, the hormone that promotes good sleep—and good sleep can lead to quicker recovery.*

Patient Room – patients are not only affected by their room and bathroom lighting; since they view the corridor and nurses' station from their bed, they are also affected by light that spills into their room during the night. If this overall lighting is static and monotonous – with no distinction between day and night, as is often the case in hospitals – then delirium can set in.

Is it 3am or 3pm? *Lighting that does not provide distinction between bright days and dark nights, especially without a view to daylight, diminishes the strong light cue needed to activate and maintain healthy circadian rhythms.*

Corridors – typically transition zones between patient rooms and nurses' stations. Their lighting should balance the daytime and nighttime conditions of both. Consider that spill light into patient rooms from corridors is often the only 'nightlight' that patients see at night when bright white light should be avoided.

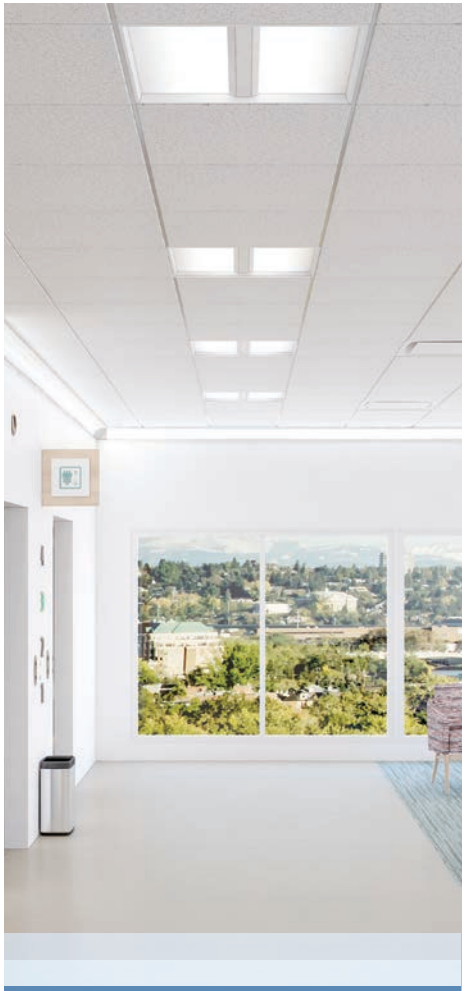
The corridor is the bridge between patient rooms and nurses' stations. If light levels are reduced by 50% evenings and nighttime, yet still maintain safe light levels for passage, it will minimize the effect of spill light into patient rooms, which can be so disruptive to good sleep.

Nurses' Stations – nurses may alternate day and night shifts, and night shifts can be rotating or permanent – erratic schedules that easily disrupt circadian rhythms over time. Since adjacent corridor lighting also affects their environment, lighting systems should allow nurses control over spectrum, intensity and time of day, to suit their personal needs and schedule.

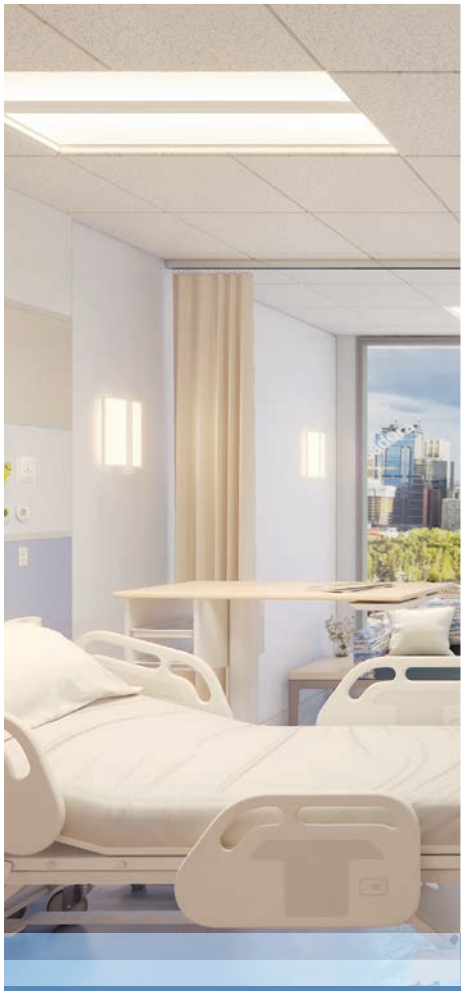
Getting the right light to feel alert during the day, plus a short 'alerting boost' during a night shift may help performance and also affect circadian rhythms; research has shown that either 'blue' or 'red' spectrum will alert, but blue will alter circadian rhythms while red will not-giving nurses the ability to maintain their routine day schedule.*

* *M.G. Figueiro and D. Pedler, Red light: A novel, non-pharmacological intervention to promote alertness in shift workers, Journal of Safety Research, http://doi. org/10.1016/j/jsr.2020.06.003*

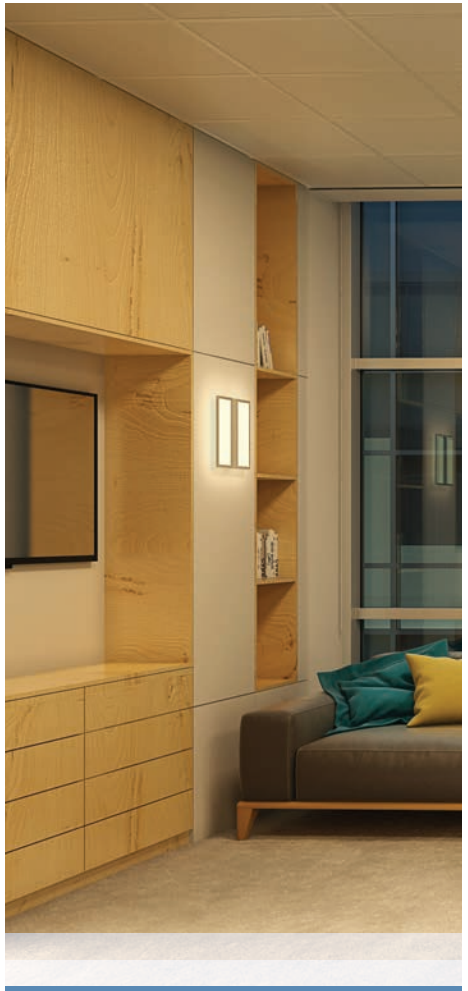
* *Figueiro et al., Biol Res Nurs. 2016 Jan; 18(1):90-100. Light at Night and Measures of Alertness and Performance: Implications for Shift Workers*



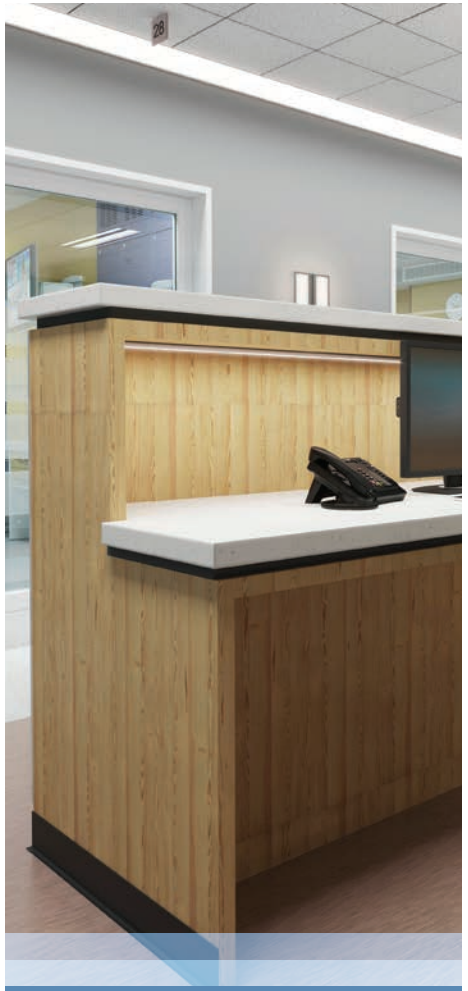
GENERAL AMBIENT



MULTI FUNCTION OVERBED

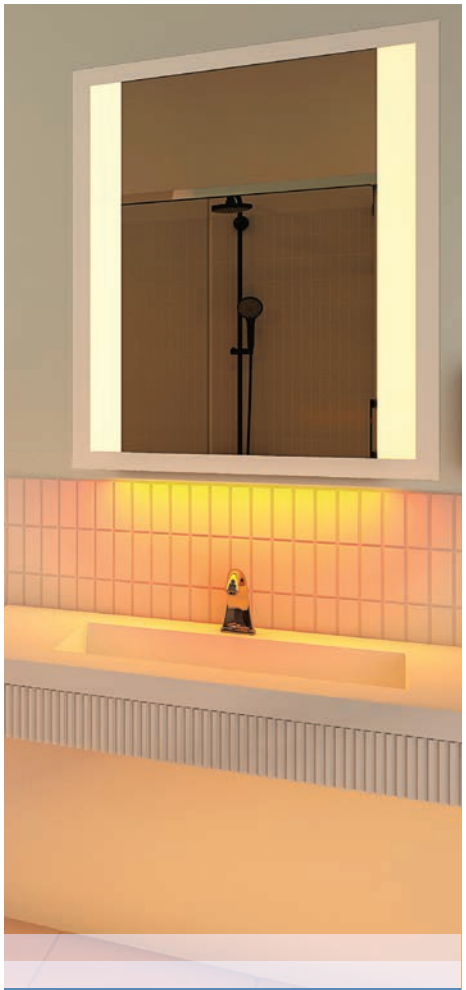


SCONCES

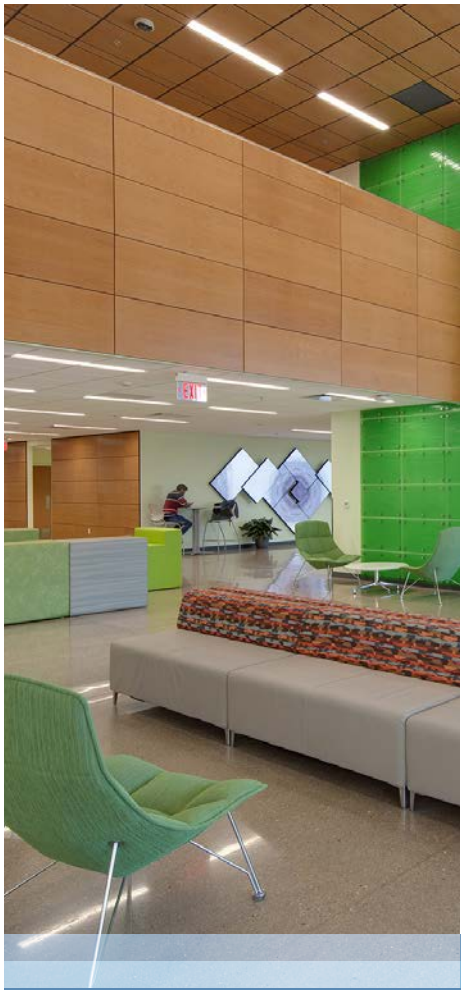


UNDERCABINET

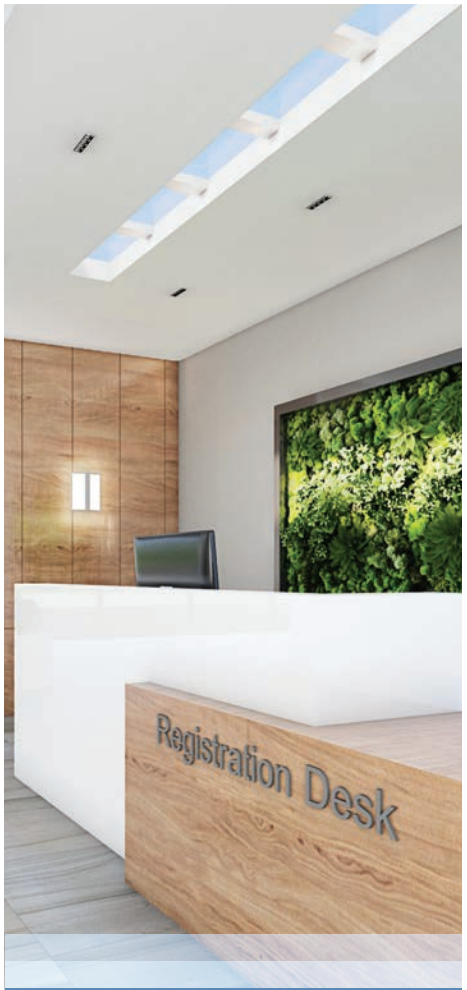
STEPLIGHTS



VANITY MIRRORS



COMPLEMENTARY PRODUCTS



COELUX®

MULTI-FUNCTION OVERBED BCMF24 SHOWN

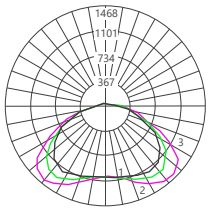
Multi-Function Overbed

Recessed 2'×2' or 2'×4' overbed luminaires with ambient, exam, and fixed angle reading. Axis Lighting's BeWell™ Optics delivers glare-free visual comfort with multi-functionality embedded into the light guide. These cleanable optics provide optimal illumination for examination and other medical tasks with soothing ambient illumination throughout the patient room.

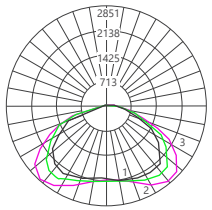
- BeWell™ light guide transitions from soft ambient to high powered exam to deliver multi-functional optics without segmented compartments, transition lines, or pixelation
- Reading light option: 3000K – 4000K
- Ambient and exam CCTs: 3000K – 4000K
- Tunable white and BIOS also available for ambient mode
- Modular optical chamber easily accessible with lens tool
- Low profile design, housing only 4" deep
- Compatible with common pillow speaker controls

Reading Light Option

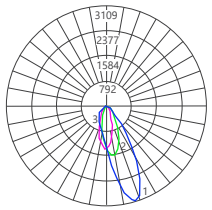
BCMF22



AMBIENT



EXAM



READING

BeWell™ OPTICS · BeWell™ CONTROLS · BeSealed™ CONSTRUCTION · IP64 · CCEA · NSF2 · bios · PoE · Axitune · c UL us

Patent Pending

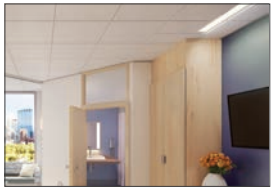
BCMF24

MULTI-FUNCTION ASYMMETRIC OVERBED BCASY2 SHOWN

Multi-Function Asymmetric Overbed

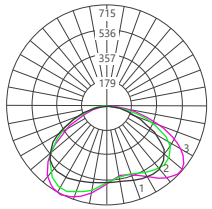
The recessed multi-function 6"×48" asymmetric luminaires mount on either side of the bed, which leaves the center ceiling clear for lift rails and other essential equipment. The BeWell™ Optics transition between ambient and exam functions seamlessly for the most comfortable, shadow-free illumination.

- BeWell™ Optic uses light guide technology for superior quality of light
- Three functional modes: ambient, exam, and reading
- Reading light option: 3000K – 4000K
- Ambient and exam CCTs: 3000K – 4000K. Tunable white available
- Mounts offset from bed to eliminate shadows & clear center ceiling
- Low profile design, housing only 3 3/4" deep
- Compatible with common pillow speaker controls
- Sealed, seamless construction provides smooth surface for cleanability
- Sold in pairs. Single luminaire 6"×48" available

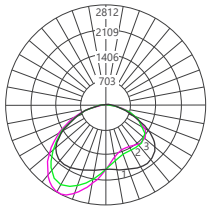


Single BCASY1 throws light asymmetrically into room

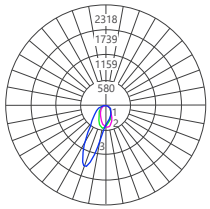
Reading light option



AMBIENT



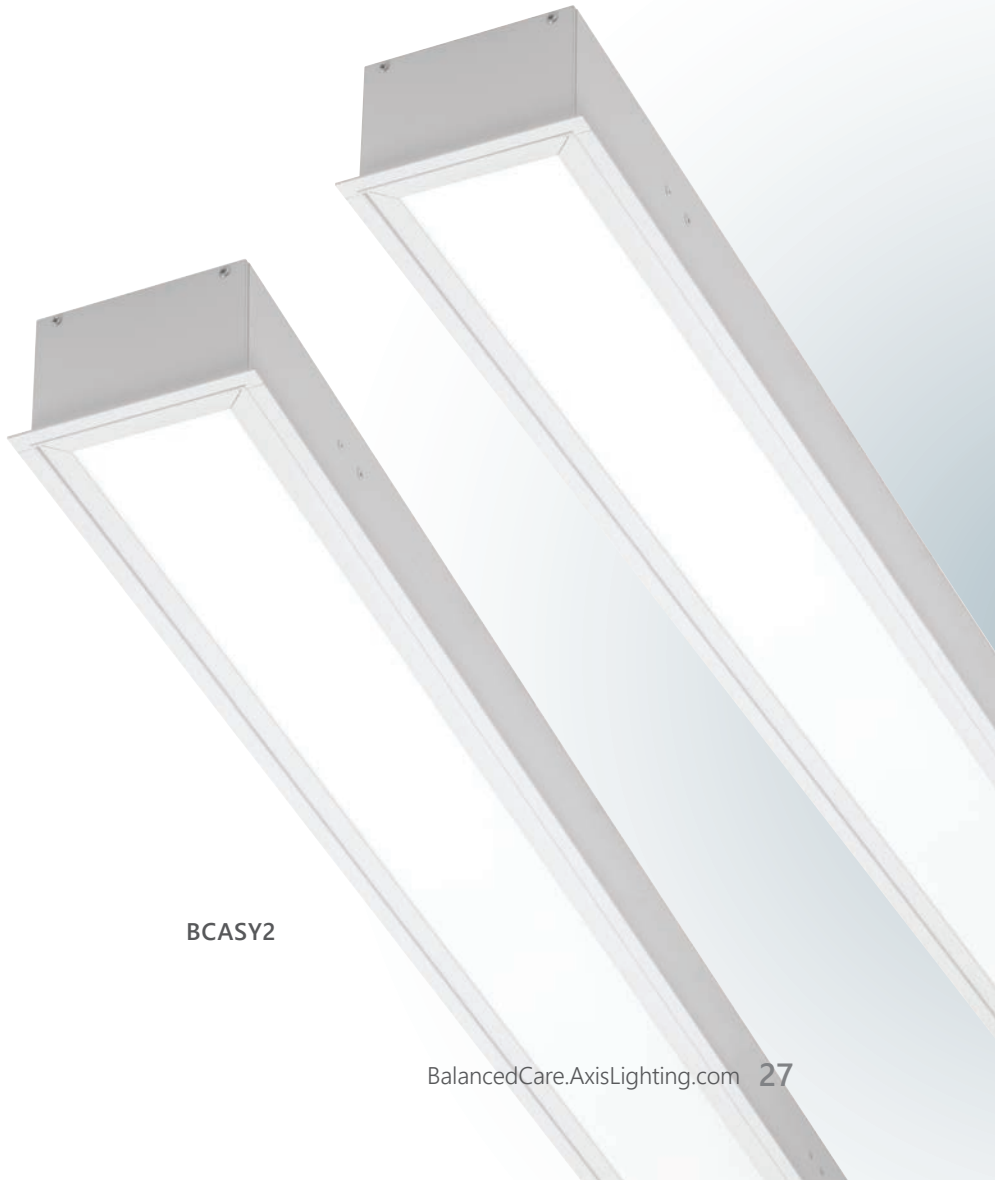
EXAM



READING

BeWell OPTICS · BeWell CONTROLS · BeSealed CONSTRUCTION · IP64 · CCEA · NSF2 · PoE · Axitune · c UL us

Patent Pending



BCASY2

CLOSED BOOK SCONCE BCSC SHOWN

Sconces

Architectural sconces complement ambient lighting in the corridor, and often provide low-level lighting when daytime transitions to evening. BalancedCare Lighting offers three decorative designs in multiple sizes for scalability, with integral nightlight option to aid navigation. Additionally, each luminaire is low profile to meet ADA requirements, and features BeSealed Construction for cleanability.

- Designed with comfortable BeWell Optics providing ambient lighting and wall glow
- Amber nightlight option to aid navigation
- Detachable backplate for quick-disconnect and room-side access to driver
- Horizontal or vertical orientation, surface mounting in multiple lengths and widths
- Shallow depth (Open Book - 1 7/8", Box - 2", Closed Book - 2 5/8")
- BIOS and tunable white available in select sizes

BOX
BCSB

CLOSED BOOK
BCSC

Low profile (less than 3")
ADA compliant

OPEN BOOK
BCSO

Patent Pending

OPEN BOOK SCONCES BCSO SHOWN

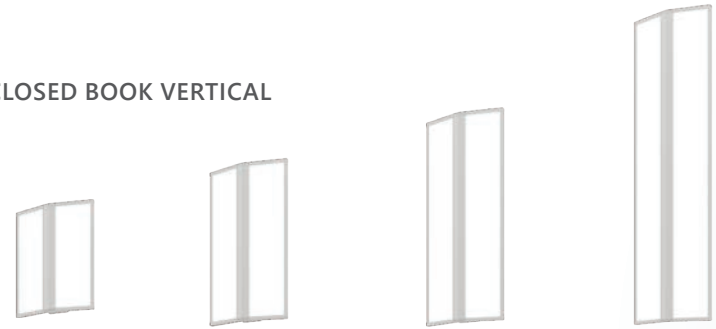
All BalancedCare sconces are available in 4 lengths - 12", 18', 24" and 36" in both vertical and horizontal orientations.
Nightlight available in vertical orientation only.

BOX VERTICAL

12" 18" 24" 36"

BOX HORIZONTAL EXAMPLE

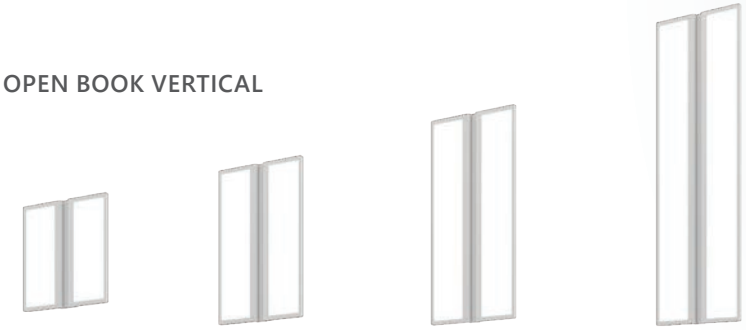
CLOSED BOOK VERTICAL



12" 18" 24" 36"

CLOSED BOOK HORIZONTAL EXAMPLE

OPEN BOOK VERTICAL



12" 18" 24" 36"

OPEN BOOK HORIZONTAL EXAMPLE

UNDERCABINET BCUC SHOWN

Undercabinet

The BalancedCare™ undercabinet series features state-of-the-art hand motion technology to enable touch-free dimming, which supports infection control standards. This wafer thin design with BeWell lightguide technology features sharp cutoff distribution and enables user selection of white LED color temperatures from 2700K-4000K.

- Wafer-thin - less than 0.5" profile in 6 lengths: 10", 16", 23", 30", 36", and 42"
- Four-position selectable CCT or static CCT
- Available CCTs: 2700K, 3000K, 3500K, 4000K
- Touch-free dimming for infection control
- Available with interconnect and power cordset accessories
- Non-ferrous construction

Sensor-enabled touch-free dimming

UNDERCABINET
BCUC

Wafer thin - less than 0.5" profile

Linking connectors in 6", 12", and 24" lengths

Power cordset

Joiner link for continuous runs

Patent Pending

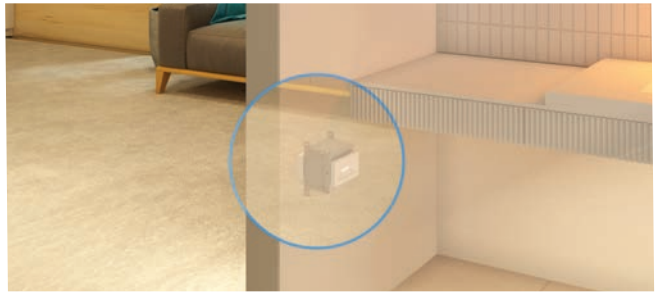
RECTANGULAR HORIZONTAL STEPLIGHTS BCSRH SHOWN

Steplights

BalancedCare™ Steplights provide safe navigation through the patient room, bathroom, corridors and other common areas. Durable in design, they are available in multiple styles and optional white (2700-4000K), amber or blue LED.

- Rectangular and oval faceplates, horizontal and vertical mounting
- Steplights mount to a standard junction box
- 90° cutoff obstructs light trespass
- Multiple LED choices: White 2700 - 4000K, Amber or Blue
- Activation by photocell sensor
- Pre-set light level can be adjusted up or down during installation
- Semi-recessed; faceplates extend only $^{5}/_{8}$" off wall
- Soft contoured design prevents dust collection and is easy to clean

OVAL
BCSOH / BCSOV



Thru wall option

White LED:
2700-4000K

Amber LED

Blue LED

RECTANGULAR
BCSRH / BCSRV

BeWell OPTICS BeWell CONTROLS BeSealed CONSTRUCTION IP64 ADA NSF2 c UL us

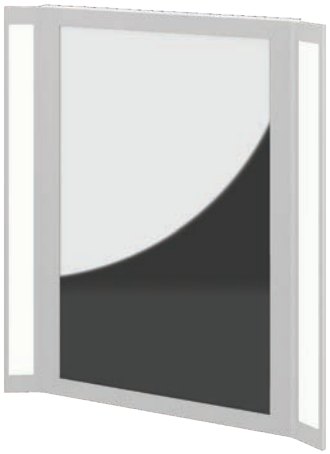
Patent Pending

FLAT VANITY MIRROR BCVF SHOWN

Vanity Mirror

Available in either a contemporary flat or beveled design, the BalancedCare™ Vanity mirror integrates vertical LED lighting, which improves facial modeling for grooming. The mirror has an optional amber nightlight for patient safety, and also tilts at a 5° angle to enable visibility for patients in wheelchairs.

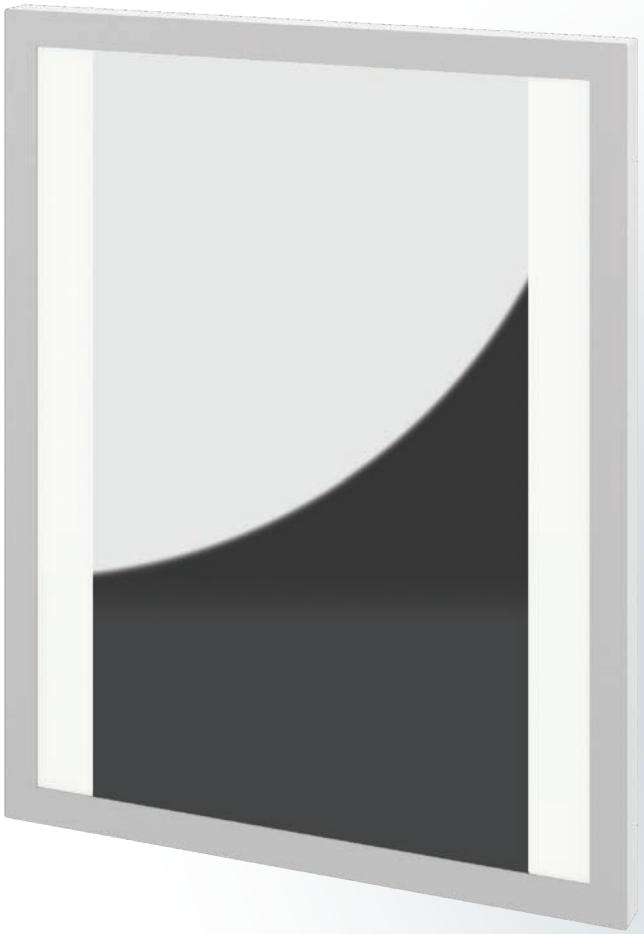
- Shallow depth, surface-mount with beveled or flat edges
- Integral shadow-free vertical BeWell Optics for superior facial modeling
- LED lighting with high color-rendering (90 CRI), as well as red rendering (R9>50) for skin tones
- Fixed 5° tilt adjustment available for ADA accessibility
- Optional sensor-enabled amber or white (2700K-4000K) nightlight



BEVELED MIRROR
BCVB

Optional 5° tilt

Angled light panels direct light towards face for shadow free illumination.
Mirror Depth= 1 ¼" (32mm)



FLAT MIRROR
BCVF

Patent Pending

ELLE WALL-TO-CEILING CORNER MOUNT SHOWN

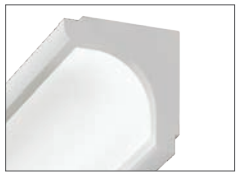
ELLE

The all new Elle corner mount is made with wall-to-ceiling applications in mind. In a busy circulation area like a corridor, the Elle tucks quietly into the corner where ceiling meets wall, asymmetrically directing comfortable light into the corridor and protecting patients on gurneys and wheelchairs from typical harsh glare. With its patent-pending curved design, Elle evokes organic flow and incorporates BeWell CLS Optics to service a multitude of applications. Its curved design facilitates cleaning and is designed for durability, especially when mounted vertically in high traffic areas.

- Curved illuminated surface enabled by patent-pending BeWell CLS light guide technology
- InstaHinge™ wall-to-ceiling corner mounting mechanism for easy installation and access
- Hairline joiner for continuously illuminated runs
- Integral Axis mini constant current driver, 0-10V dimming standard
- Individual lengths up to 8'

ENDCAP OPTIONS

Step



Flat

InstaHinge™ on track 90° rotating mechanism secures fixture along ceiling line

Patent-pending concave luminaire design results in an unobtrusive clean line down the corridor

ELLE
ELSC

Patent Pending

FLEXIBLE AMBIENT BCFA22 SHOWN

Flexible Ambient

Employing BeWell™ light guide technology, this series delivers multiple light distributions with glare-free visual comfort. The center strip can be illuminated or left blank, or customized with accents, Mikrolite downlights or decorative louvers. Available in 1'×1', 1'×4', 2'×2' and 2'×4' dimensions.

- BeWell™ light guide directs light from each point source, eliminating transition lines, pixelation, and shadows
- General diffuse and wide distributions available
- Modular optical chamber with room-side access
- Controls and sensor ready
- Optional integration of MikroLite™ recessed downlights or Stencil™ surface accents (1'×4', 2'×2', 2'× 4')
- Low profile design, housing only 4" deep
- Available CCTs: 3000K, 3500K, 4000K
- Tunable white and BIOS also available

BCFA11
(1'×1')

BCFA14
(1'×4')

BCFA22
(2'×2')

BCFA24
(2'×4')

BCASY2

Patent Pending

Flexible Ambient Options

The Flexible Ambient Series is available with multiple options to enhance design. The center strip can be left blank or illuminated, to add an extra boost of ambient light. Mikrolite downlights are also available in various configurable lengths and multiple beam spread offerings, while stylish accents can field rotate 359° to add a spot of light where desired. The louver allows higher lumen outputs in a visually comfortable package.

Flexible Ambient provides general ambient lighting with adjustable accents to highlight signage and add extra dimension in an elevator lobby.

ILLUMINATED CENTER STRIP

BLANK CENTER STRIP

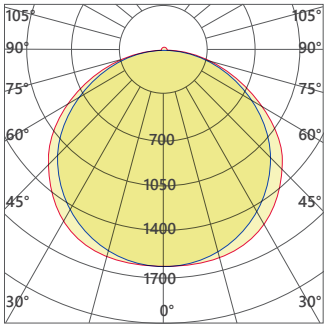
MIKROLITE

LOUVERED

ACCENTS

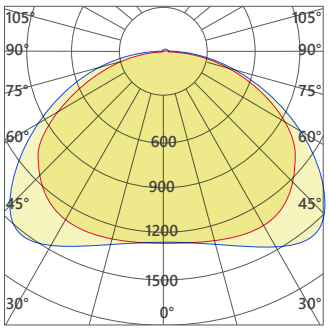
Flexible Ambient Distributions

The Flexible Ambient family takes ambient lighting to a whole new level. Its two distinct distributions — general diffuse and wide — allow spacing flexibility between luminaires, depending on ceiling height and application. The general diffuse distribution is suitable for lower or standard height ceilings, such as waiting areas, offices or nurses' stations; the wide distribution can be spaced farther apart for higher ceilings in areas such as lobbies, dining areas or atria.



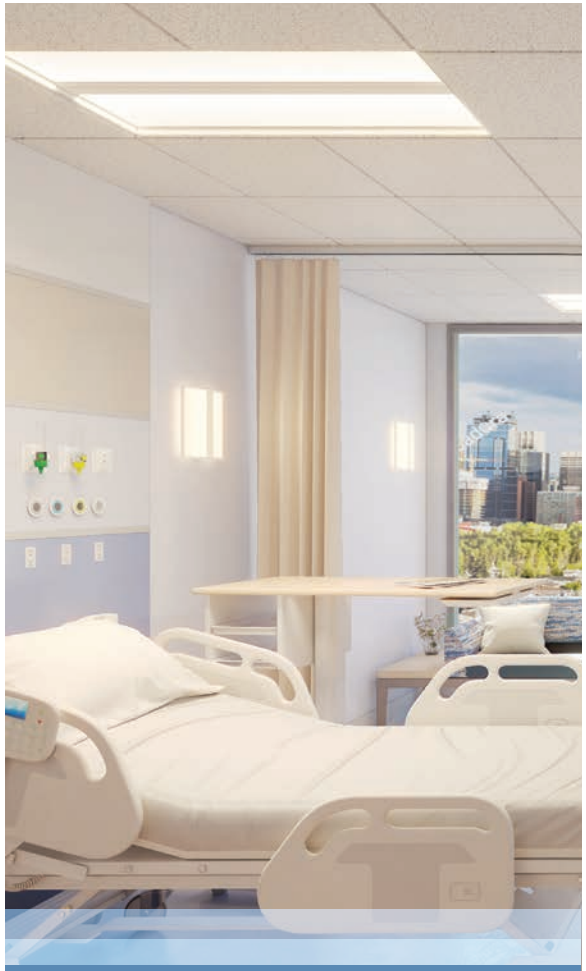
GENERAL DIFFUSE

For standard ceilings at 8' to 9' height, such as this nurses' station with floating ceiling,integrating luminaires with general diffuse distribution, at a closer spacing, provides uniformity and visual comfort for ambient lighting throughout busy days and nights.

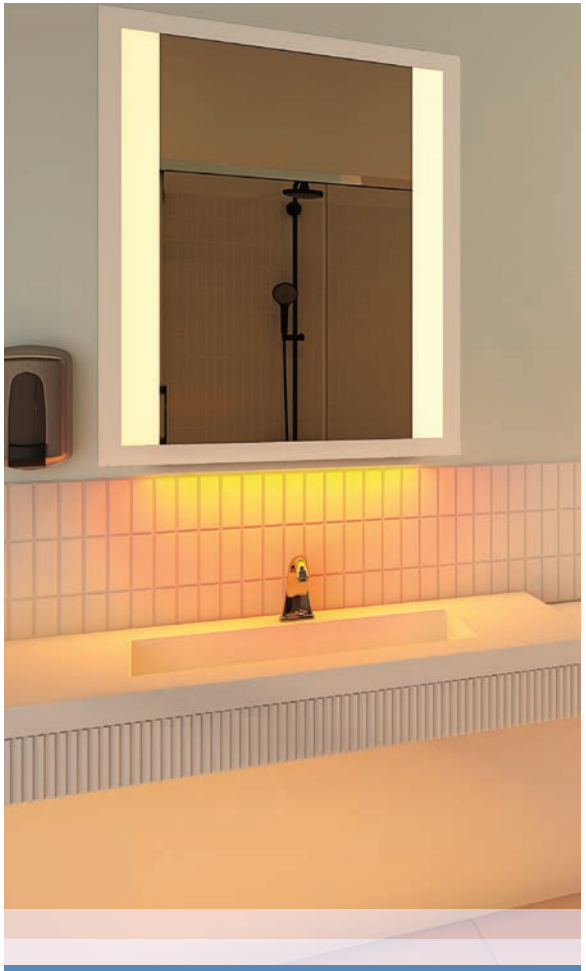


WIDE

For 12' to 15' ceilings, the wider distribution luminaires can be placed farther apart, acting as a quiet backdrop to guest activity or architectural details. They provide uniform, shadow-free lighting for areas such as waiting rooms, lobbies or atria.

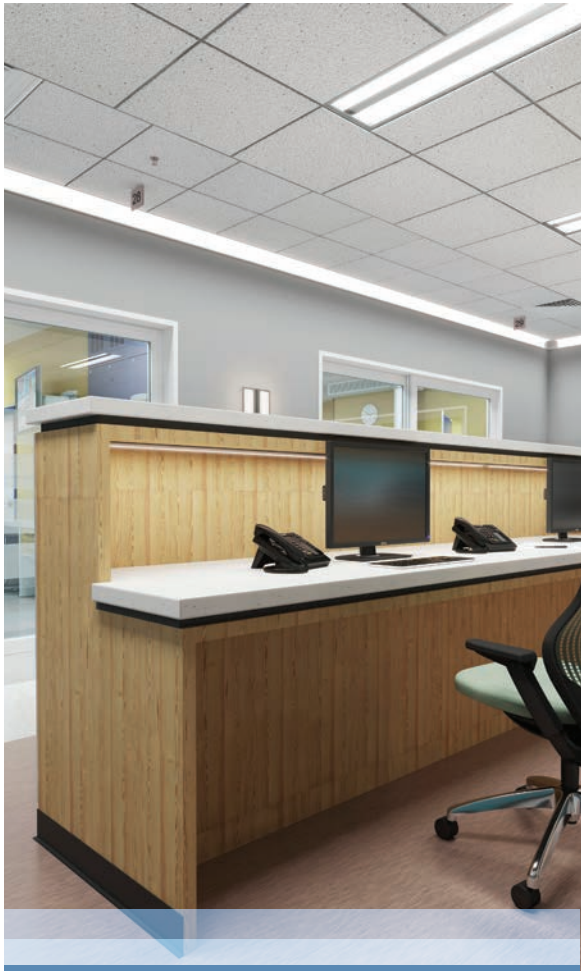


PATIENT ROOM



PATIENT BATHROOM

CORRIDORS



NURSES' STATION

WAITING ROOM

OTHER COMMON AREAS


PULL
PULL

BalancedCare™ PATIENT ROOM

The patient room is multi-layered, demanding various lighting requirements for both the patient and staff. The lighting goal for the patient is to create a visually comfortable, glare-free environment that provides a natural 24-hour sequence of light for better sleep quality, safer navigation and overall healing. The lighting goal for the staff is the ability to perform multiple tasks under the proper lighting for the best care of the patient. Because of these objectives, healing environments should incorporate multiple options. From general ambient to exam, steplight to task functions — along with the sophistication of personal lighting control for patient comfort, and tailored solutions from white light to color tuning options for circadian entrainment — BalancedCare™ by Axis brings it all together.

Patient Room

WELLNESS

Today's patient room challenges the most thoughtful designs: provide a welcoming, relaxed environment that promotes a sense of wellbeing, while equipping it to perform the most critical tasks and adhere to the most stringent standards. Lighting is the element that connects people to this environment – it affects performance, recovery, emotions and state of mind.

FUNCTIONAL OPTICS & VISUAL COMFORT

Glare-free lighting is of paramount importance in a nurse's ability to function without distraction, and to a patient's comfort and satisfaction for the duration of their stay. BeWell™ Optics enhances both patient and staff experience by providing seamless visual comfort with smooth transitions between functions. Combined with BeWell™ Controls, you have a layered system approach designed to work in concert with each other.

INTELLIGENT CONTROL

Since patient room lighting is multifunctional due to the various tasks performed in these spaces, proper control of these functions is critical. BeWell™ Controls will ensure seamless integration between the lighting, control devices and users. Luminaires can also be sensor-ready to enable behaviors that not only enhance patient and staff experience, and improve quality of care, but serve to improve hospital efficiency as well.

ARCHITECTURAL FORM

Sleek, low profile architectural forms that blend into the healing environment are a refreshing change from the mundane and institutional looks of many healthcare products today; they conceal the sophisticated features and state-of-the-art performance these luminaires provide.

INFECTION CONTROL & PERFORMANCE

Sealed housings and optical media prevent transference of pathogens from patient room to plenum to help reduce risk of healthcare associated infections (HAIs). Ingress Protection (IP) ratings determine that fixtures are sealed against contaminants and the National Sanitation Foundation (NSF2) ratings assure cleanability. Look for the performance icons associated with each product

BeSealed™ CONSTRUCTION

EASE OF MAINTENANCE

Smooth, non-corrosive surfaces can withstand the harsh cleaning protocols necessary to minimize risk of healthcare associated infections (HAIs). Room-side access to drivers and components facilitates maintenance efforts, reduces costs, and prolongs sustainability of luminaire systems.

Lighting Requirements

Today's patient rooms may convert from acute care to critical care in a matter of minutes. Lighting must accommodate diverse needs from enabling a nurse to evaluate a patient's condition by their skin coloration to assisting a surgeon who rushes in to perform an emergency procedure.

OVERBED GENERAL AMBIENT

Ambient – diffuse lighting for general conversation and movement around the patient bed, recommendation is 100-200 lux at floor for area surrounding bed, 4:1 avg:min uniformity.

OVERBED EXAM

Exam – requires excellent color rendering to evaluate a patient's condition; sufficiently high, uniform light levels focused on the bed area for examination of patients from head to foot. Provides recommended 500-1000 lux at 36" Above Finished Floor (AFF), 2:1 avg:min uniformity.

OVERBED READING

Reading – focused light onto a 45° incline plane, recommendation is 400-800 lux on horizontal when patient is in elevated reading position, 3:1 avg; min uniformity.

NIGHT CHECK

Night check – light levels dimmed low enough for staff to check on patients during the night without waking them from sleep, recommendation is 30 lux at 36" Above Finished Floor (AFF).

Supplementary Lighting

Distinct functional modes deliver high quality lighting for a complex environment: These functions work independently or together to deliver light levels and distributions that align with recommended practice, designed to suit both patient and staff needs.

STEPLIGHT

Reducing the risk of falls is one of the highest priorities in patient rooms. Low level steplights help patients safely navigate from bed to bathroom at night. Mounted at 18" Above Finished Floor (AFF), with 90° cutoff to minimize glare, they provide recommended low level illuminance of 4 lux.

UNDERCABINET

Provides adjustable illuminance levels for day or night, selectable correlated color temperature (CCT), and touch-free controls for ease of operation and infection prevention. Recommended 500 lux, 3:1 avg:min uniformity on workplane.

DECORATIVE SCONCE

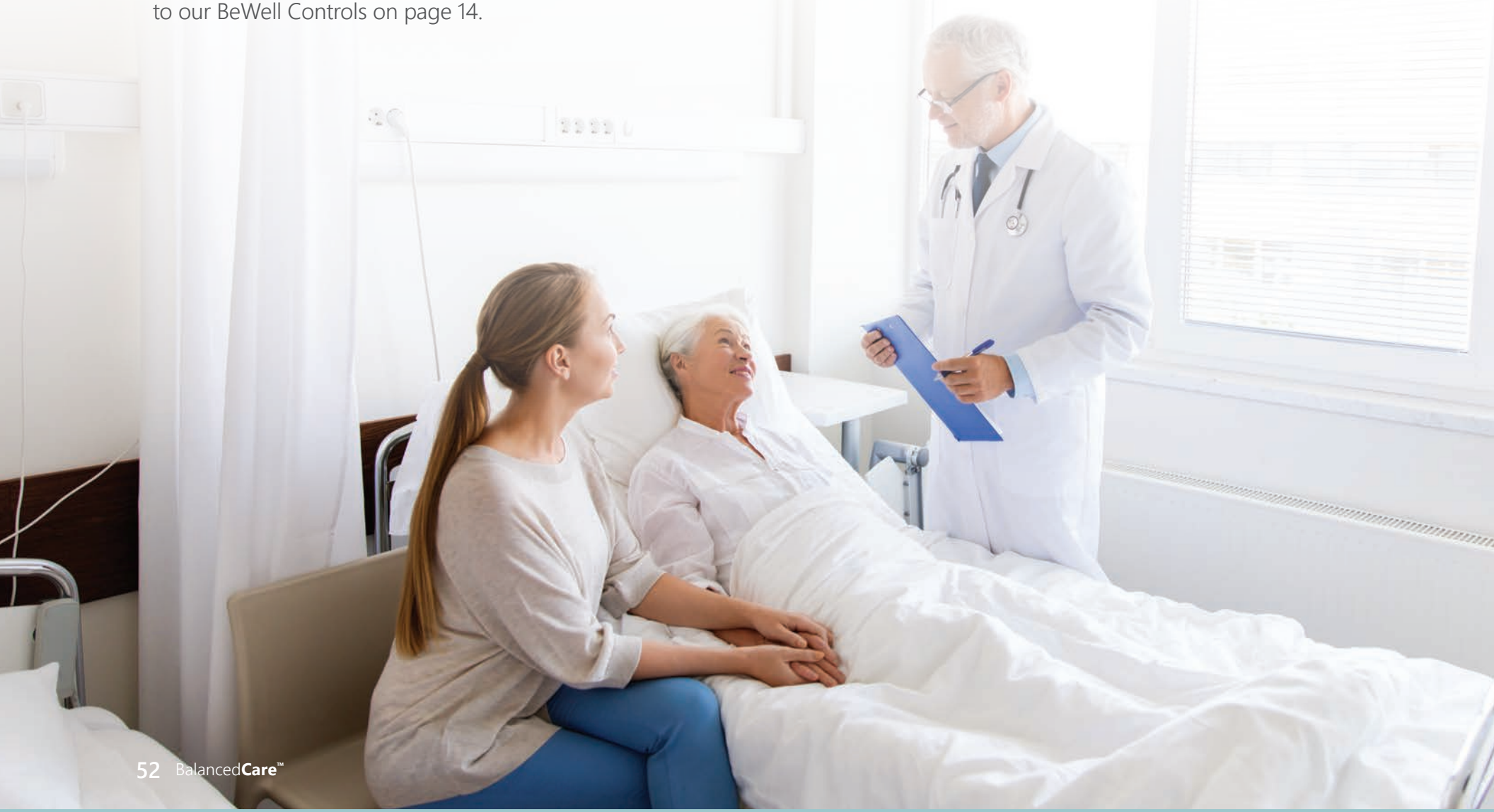
Slim, soft-glow decorative sconces provide a soothing aesthetic, project less than 3" from the wall for ADA compliance and include an integral amber nightlight. They contribute to general ambient illuminance in any location.

OVERBED GENERAL AMBIENT

Families or visitors may spend an hour or overnight, Diffuse, glare-free lighting provides an atmosphere for conversation, casual seating, reading or working on a laptop; contributes to recommended 300 lux at 30" AFF, 3:1 avg:min uniformity.

Patient Room

Since patient room lighting is multi-functional due to the various tasks performed in these spaces, proper control of these functions is critical. BalancedCare luminaires with BeWell Controls will ensure seamless integration between the lighting, control devices and users. Luminaires can also be sensor-ready to enable behaviors that not only enhance patient and staff experience, but serve to improve hospital efficiency as well. For additional information on Axis' overall controls platform and tunable white options, please refer to our BeWell Controls on page 14.



REGO TABLET*

LOW VOLTAGE CONTROLLER**

PILLOW SPEAKER*

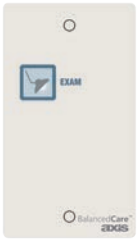
From patient-controlled pillow speakers that communicate with nurse call systems, to wall switches controlled by the care providers, Axis has partnered with trusted industry leaders to tie the patient room into the overall healthcare operating system.

*Supplied by Curbell

**Integral to recessed luminaires

WALL SWITCH OPTIONS:

BCWS1



BCWS2

BCWS3

BCWS4

BCWS5

BCWS6

Multi-Function Overbed

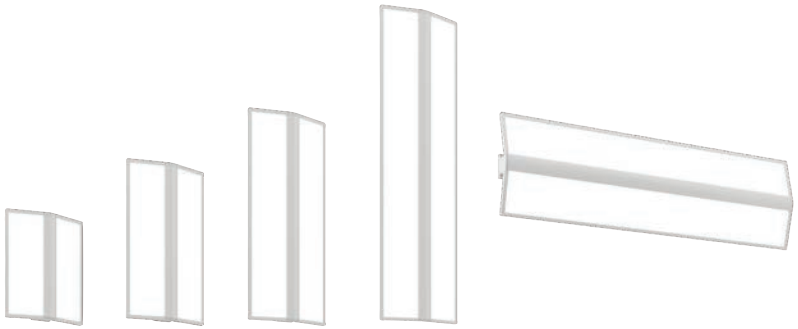
MULTI-FUNCTION OVERBED

BCMF22 (2'×2') BCMF24 (2'×4')

Multi-Function Asymmetric Duo

MULTI-FUNCTION ASYMMETRIC DUO
BCASY2

Sconces



BOX
BCSB

CLOSED BOOK
BCSC

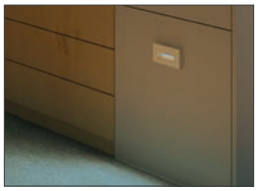
OPEN BOOK
BCSO

Four lengths - 12", 18", 24" and 36" - are available for each family. Luminaires can also be mounted horizontally

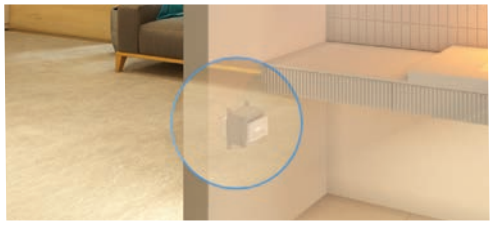
Steplights

White LED:
2700-4000K

Amber LED



Blue LED



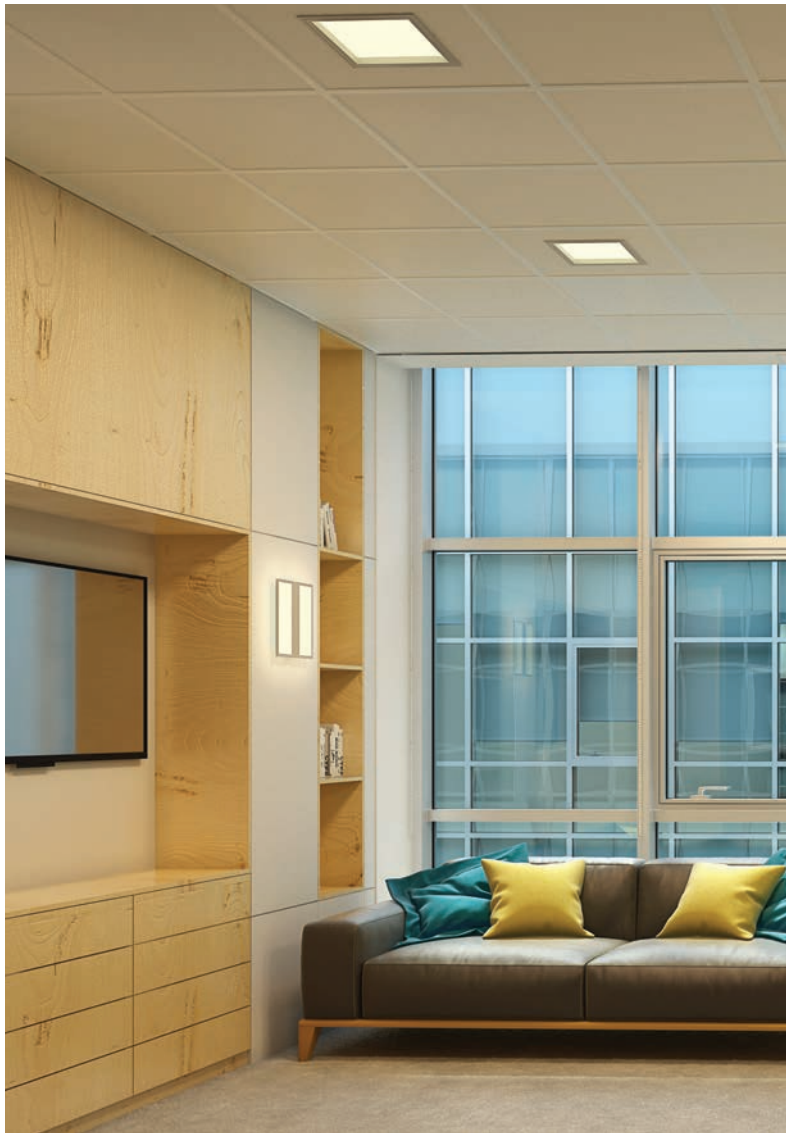
Thru wall option

RECTANGULAR
BCSRV / BCSRH

OVAL
BCSOV / BCSOH

BeWell OPTICS · BeWell CONTROLS · BeSealed CONSTRUCTION · IP64 · ADA · NSF2 · c UL us

Flexible Ambient



FLEXIBLE AMBIENT
BCFA
1'×1', 1'×4', 2'×2', 2'×4'

Flexible Ambient is available with Stencil surface accessories.

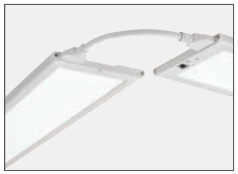
Undercabinet

UNDERCABINET

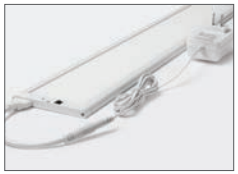
BCUC

Six lengths: 10", 16", 23", 30", 36", and 42"

Wafer thin - less than 0.5" profile



Linking connectors in 6", 12", and 24" lengths



Power cordset

Joiner link for continuous runs

Balanced**Care**™
PATIENT BATHROOM

Providing safe patient navigation to and from the patient bathroom to prevent dangerous falls is a critical concern. Steplights placed outside the bathroom balance the need for safe navigation while avoiding circadian disruption. Like the patient room, the lighting in the bathroom is also multi-functional. These spaces benefit from modern, hospitality-driven designs with enhanced functionality, such as sconces with integral nightlights and vanity mirrors with high vertical illumination. Balanced**Care**™ by Axis brings it all together.

Patient Bathroom

WELLNESS

Reducing the risk of falls is of the highest priority in patient bathrooms. Safe maneuverability from vanity to toilet area, often assisted by staff, is improved by uniform, shadow-free illumination. In addition to effective lighting in patient bathrooms, BalancedCare addresses safety and infection control concerns for overall wellness.

FUNCTIONAL OPTICS & VISUAL COMFORT

BeWell™ Optics optimizes light distribution, comfortably directing light where needed for patient bathroom needs. High vertical light levels at the vanity – without shadowing – improve facial modeling for patients of all ages. Glare-free lighting is important for both patient comfort and safety while tending to hygiene, as well as a nurse's ability to effectively assist. Low level amber nightlighting introduces a layer of safety without disturbing patients' sleep patterns.

INTELLIGENT CONTROL

BeWell™ Controls encapsulates everything from wall switches to sensors in patient bathrooms, to provide safety and enhance the patient and staff experience. Sensor-enabled nightlighting from the vanity mirror guides a patient from bed to bath without reaching for a wall switch or being disturbed by harsh white light. Bathroom light turns on simultaneously with overbed exam light to facilitate patient evaluation. Convenience and safety are prioritized.

ARCHITECTURAL FORM

Sleek, low profile architectural forms that blend into the healing environment are a refreshing change from the mundane and institutional looks of many healthcare products today; they conceal the sophisticated features and state-of-the-art performance these luminaires provide.

INFECTION CONTROL & PERFORMANCE

Sink basins, showers and commodes introduce opportunities for bacteria and viruses to propagate. BalancedCare luminaires feature sealed housings and optical media, along with smooth, corrosion resistant surfaces for ease of cleanability. Ingress Protection ratings determine that fixtures are sealed against contaminants and moisture in these areas, and NSF2 ratings assure cleanability. Look for the performance icons associated with each product.

BeSealed™ CONSTRUCTION

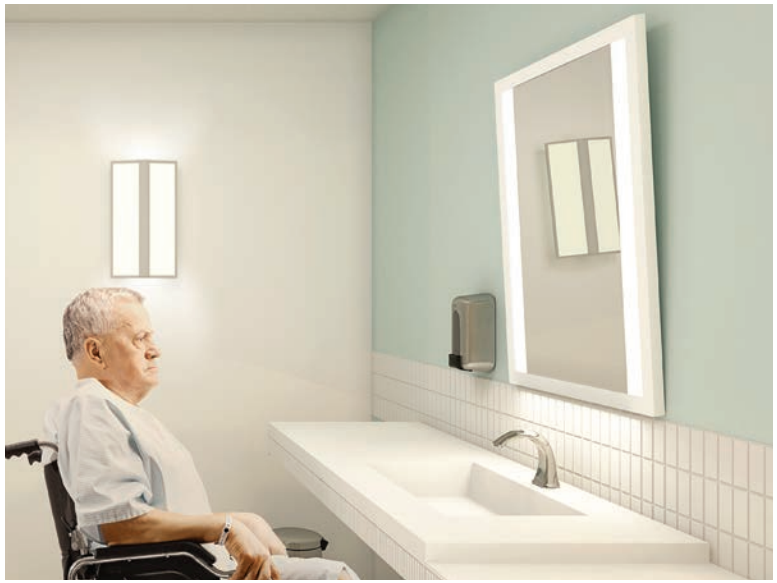
EASE OF MAINTENANCE

Smooth, non-corrosive surfaces can withstand the harsh cleaning protocols necessary to minimize risk of healthcare associated infections (HAIs). Roomside access to drivers and components facilitates maintenance efforts, reduces costs, and prolongs life of luminaire systems.

Lighting Requirements

Distinct functional modes deliver high quality lighting for a complex environment: These functions work independently or together to deliver light levels and distributions that align with recommended practice, designed to suit both patient and staff needs.

MIRROR



Integrally illuminated vanity mirror, flat or beveled, with color rendering and illuminance levels to enhance facial modeling or to evaluate skin tones for patients of all ages and abilities. Mirror has 5° tilt option for wheelchair viewing angle; provides recommended 400 lux vertically from 36" to 60" at vanity's edge.

NIGHTLIGHT

Sensor-enabled white or amber nightlight (590 nm) provides safe entry into bathroom without having to fumble for a switch. Turning on a bright white light could prevent patient from returning to sleep and disrupt circadian rhythms; provides the recommended 60 lux on vanity surface.

Supplementary Requirements

Distinct functional modes deliver high quality lighting for a complex environment: These functions work independently or together to deliver light levels and distributions that align with recommended practice, designed to suit both patient and staff needs.

STEPLIGHT

Low level steplights help patients safely navigate from bed to bathroom at night. Mounted at 18" Above Finished Floor (AFF), with 90° cutoff to minimize glare, they provide recommended low level illuminance of 4 lux.

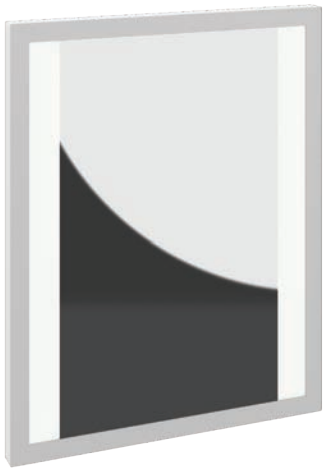
GENERAL AMBIENT

Layers of light are especially important in a patient bathroom; recessed ceiling mounted luminaires and/or sconces help fill the volume of space with shadow-free lighting to provide the recommended 100 lux at floor, 2:1 avg:min uniformity.

SCONCE

Slim, soft-glow decorative sconces provide a soothing aesthetic, project less than 3" from the wall for ADA compliance and include an integral amber nightlight. They contribute to general ambient lighting.

Vanity Mirror



FLAT
BCVF

BEVELED
BCVB

Flexible Ambient

FLEXIBLE AMBIENT
BCFA11 (1'×1') BCFA14 (1'×4')

Steplights

RECTANGULAR
BCSRV / BCSRH

OVAL
BCSOV / BCSOH


EXIT

BalancedCare™ CORRIDORS

Hospital corridors are high-volume circulation spaces used by nurses, doctors, patients and visitors alike. Maintaining uniform, glare-free light levels is important for fall prevention measures, wayfinding, and also a consideration for patients wheeled on a gurney or in a wheelchair. Typically, functional asymmetrical lighting is preferred with complementary decorative sconces and steplights to help layer the lighting down the corridor. Luminaires need to be easy to service with access from below, and durable enough to withstand potential impacts within these congested areas. BalancedCare™ by Axis brings it all together.

Corridor Lighting

WELLNESS

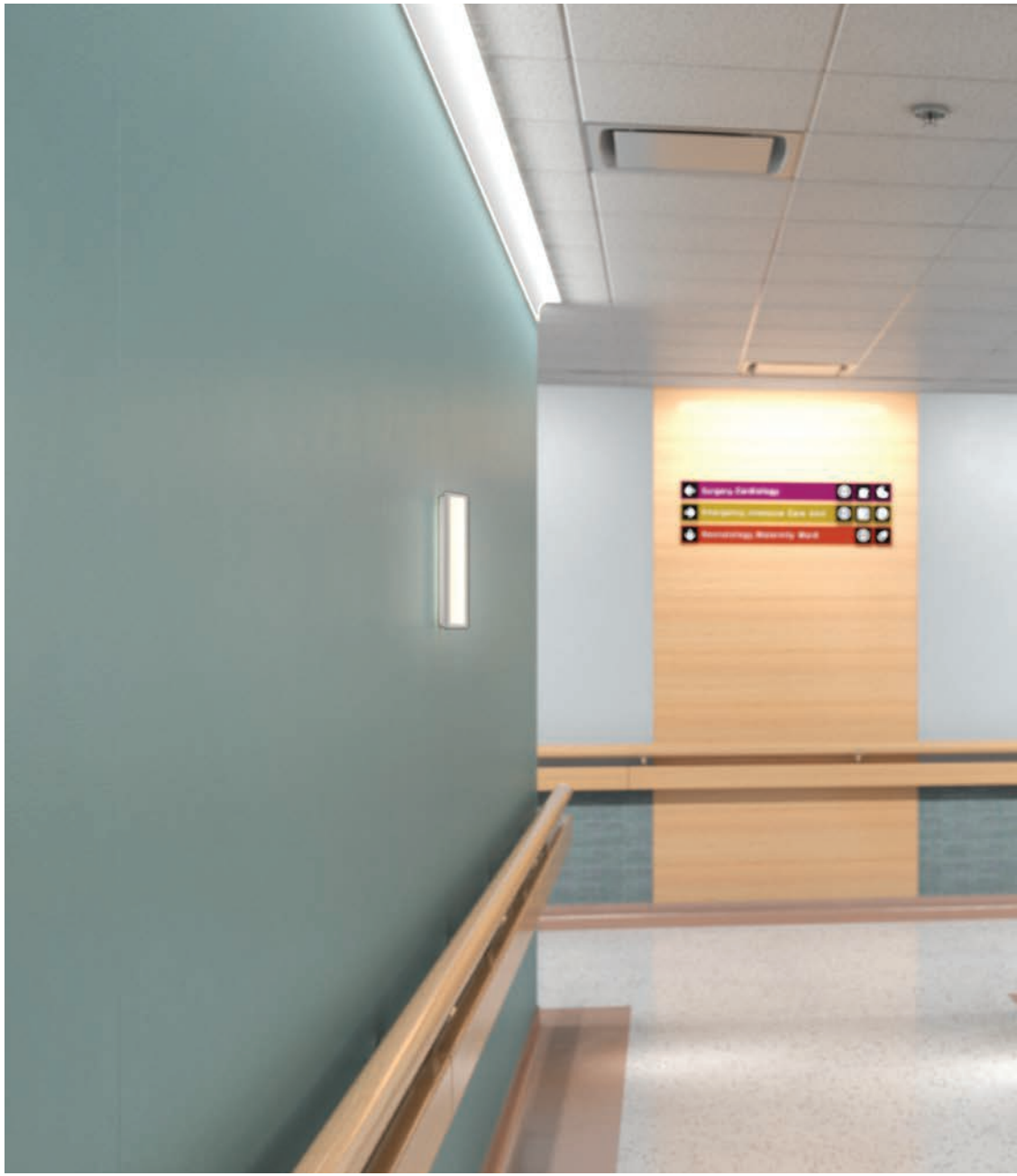
A holistic approach to lighting extends to all areas of patient and guest circulation. Lighting that is welcoming,and clearly defines wayfinding, creates a positive, less stressful experience for family and friends when seeking a specific destination within complex hospital environments.

FUNCTIONAL OPTICS & VISUAL COMFORT

Hospital corridors pulse with congestion and activity 24 hours a day. BeWell™ Optics delivers light that can be directed where needed without causing uncomfortable glare for patients viewing it from any angle; or for staff and visitors as they move from one zone to another. Balancing layers of light from multiple low profile luminaires and directions creates a discrete yet effective backdrop to active corridors.

INTELLIGENT CONTROL

BalancedCare luminaires can integrate 24-hour corridor operation into the building's lighting control system, and customize programming to coordinate with adjacent zones. It can also include sensing options to track equipment and staff, and monitor room usage to optimize space utilization. Layered with BeWell™ Optics, they simplify healthcare solutions.



ARCHITECTURAL FORM

Let lighting be your guide. Sleek, linear architectural forms 'follow' the corridor to reinforce the sense of passage and movement. Slim wall sconces complement ambient lighting, provide night lighting, and visually add identity to the diversity of corridors in a complex hospital system.

INFECTION CONTROL & PEFORMANCE

Transfer of bacteria and pathogens do not exclude corridors. Smooth, non-corrosive luminaire surfaces can withstand the harsh cleaning protocols necessary to minimize risk of healthcare associated infections (HAIs). BalancedCare corridor luminaires have been tested and certified with the appropriate listings for these applications, ADA-compliant sconces among them. Look for the performance icons associated with each product.

BeSealed™ CONSTRUCTION

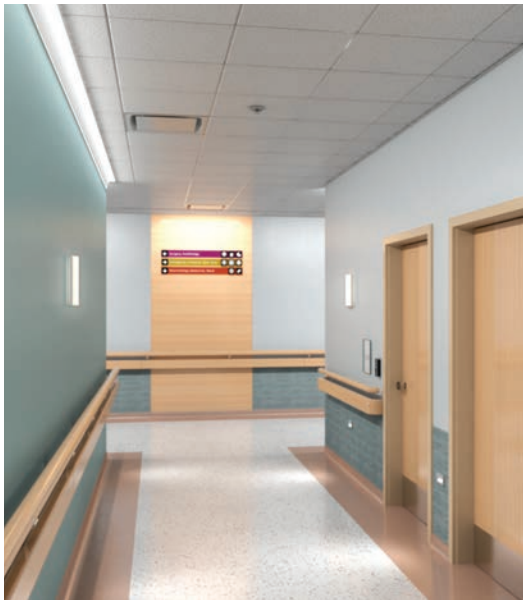
EASE OF MAINTENANCE

In these high congestion areas, easy-to-clean surfaces and room-side access to drivers and components facilitates maintenance efforts, reduces costs, and prolongs life of luminaire systems. The ability to remove a component cartridge and replace it without disruption to traffic flow and daily activities is especially valued.

Lighting Requirements

Distinct functional modes deliver high quality lighting for a complex environment: These functions work independently or together to deliver light levels and distributions that align with recommended practice, designed to suit both patient and staff needs.

GENERAL AMBIENT

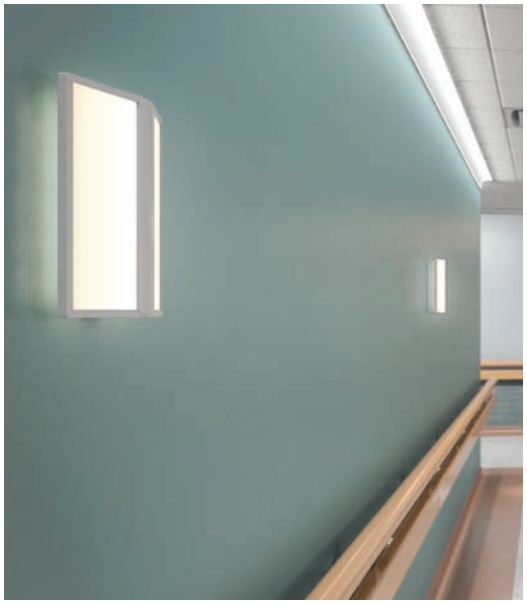


Sleek, architecturally integrated perimeter lighting provides glare-free passage from any vantage point, as well as recommended light levels for patient corridors of 100 lux day, 50 lux night, 2:1 avg:min uniformity.

STEPLIGHT

With choices in color of light and faceplate style, these low profile steplights provide a visible rhythm of light for navigation, 90° cutoff to minimize glare, mounted at 18" Above Finished Floor (AFF) to provide low recommended light level of 4 lux.

SCONCES



Slim, soft-glow decorative sconces provide a soothing aesthetic, project less than 3" from the wall for ADA compliance and include an integral amber nightlight. They contribute to recommended light levels, at floor, of 100 lux day, 50 lux night.

Decentralized Nurses' Station

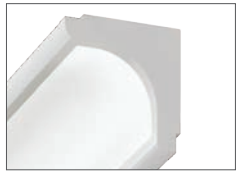
Complex lighting needs require flexible lighting systems with simple controls and glare-free optics. Nestled between two patient rooms, these nurses' stations allow nurses to give more personal attention to fewer patients at a time. They need clear visibility into the room, without veiling reflections on windows or monitors, personal control over the lighting at their station for visual tasks and circadian regulation, and overriding control in case a patient is in distress.

ELLE

ELLE
ELSC

ENDCAP OPTIONS

Step



Flat

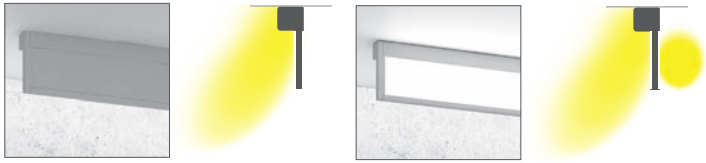
InstaHinge™ on track 90° rotating mechanism secures fixture along ceiling line

Patent-pending concave luminaire design results in an unobtrusive clean line down the corridor

Pose

POSE TASK
PSBC

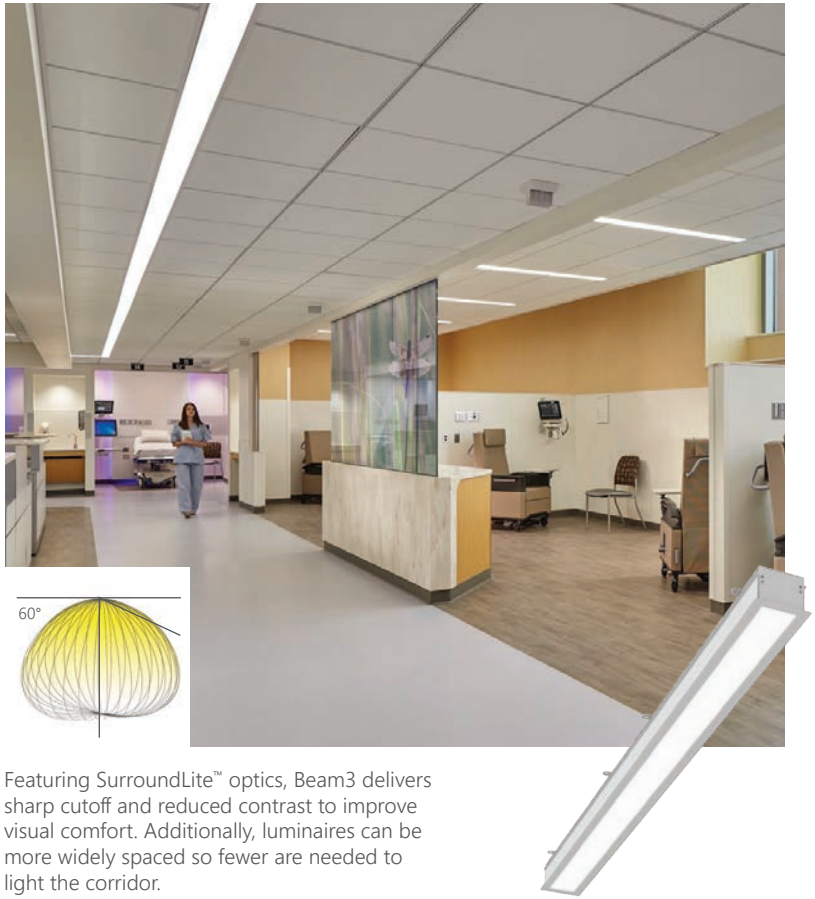
TWO OPTICS + TWO SIDES



One illuminated side

Two illuminated sides

Beam 3 SurroundLite™



Featuring SurroundLite™ optics, Beam3 delivers sharp cutoff and reduced contrast to improve visual comfort. Additionally, luminaires can be more widely spaced so fewer are needed to light the corridor.

Create clean, seamless runs that are easier to install with this quality press-in acrylic lens that will not crinkle or bow. Available in lengths up to 48'

RECESSED BEAM 3
B3RLED

Cove Perfekt™

COVE CEILING
CC

COVE WALL
CCW

Sconces

BOX
BCSB

CLOSED BOOK
BCSC

OPEN BOOK
BCSO

Steplights

RECTANGULAR
BCSRV / BCSRH

OVAL
BCSOV / BCSOH


28
29

Balanced**Care**™
NURSES' STATION

Nurses' stations hold prominence both as destination and hub of life-giving information. They often work in coordination with adjacent corridors, requiring similar solutions for safe navigation.
Increased daytime ambient light levels, reduced nighttime levels and low-illuminance steplights help staff safely circulate from zone to zone – nurses' station to corridor to patient room. Lighting should also support the visual and non-visual needs of nurses of all ages, who work an inordinate number of hours and defy normal 24-hour schedules. Balanced**Care**™ by Axis brings it all together.

Nurses' Station

WELLNESS

Nurses' schedules are erratic – day shift, permanent night shift, rotating night shift – causing circadian disruption and dips in alertness. Spectrally tunable task lighting, views to nature, sufficient contrast on monitors – a lighting system tailored to personal schedules and visual needs can provide balance to their days, nights and overall health and wellbeing. Private spaces dedicated to personal light therapy, or perhaps just meditation, offer refuge and an outlet to release the emotions of difficult days.

FUNCTIONAL OPTICS & VISUAL COMFORT

Layers of light may never be more important than in nurses' stations. When eyes need to adapt to screen brightness then jump to tedious visual tasks such as reading scribbled prescriptions or notes on paper, eye fatigue sets in. Luminaire optics that spread light uniformly and without glare help balance a space as busy and complex as a nurses' station; they mitigate discomfort, prevent washout on monitors, and enliven a hub of information and caregiving. They are BeWell™ Optics.

INTELLIGENT CONTROL

Patient controlled pillow speakers that relay to the nurses' station, or automatic 24-hour programs with manual overrides for ambient lighting, give nurses the control they need for their station, as well as for patient rooms and corridors within their zone. Sensors that provide asset tracking to easily locate equipment save time and energy, and improve hospital efficiency.

ARCHITECTURAL FORM

Linear forms that disappear into walls and ceilings, including task lighting that blends into partitions, provide lighting with purpose, not distraction. A departure from the traditional, these luminaires exude a positive energy and clean aesthetic particularly suited to today's hospital environments.

INFECTION CONTROL & PERFORMANCE

BeSealed™ CONSTRUCTION

During these times of meticulous precautionary measures, BalancedCare's smooth, noncorrosive luminaire surfaces can withstand the harsh cleaning protocols necessary to minimize risk of healthcare associated infections (HAIs). BalancedCare luminaires have been tested and certified with the appropriate listings for these applications. Look for the performance icons associated with each product.

EASE OF MAINTENANCE

Areas as active and populated as nurses' stations do not allow time for maintenance interruptions, Easy-to-clean surfaces and room-side access to drivers and components facilitates maintenance efforts, reduces costs, and prolongs life of luminaire systems.

Lighting Requirements

The nurses' station is an opportunity for the lighting to shine and guide – a beacon at a potentially confusing crossroad of corridors leading to different destinations. Distinct functional modes deliver high quality lighting for this complex environment: These functions work independently or together to deliver light levels and distributions that align with recommended practice, designed to suit both patient and staff needs.

GENERAL AMBIENT

Volumetric distribution via BeWell Optics provides a comfortable backdrop for visual tasks and prevents washout or veiling reflections on monitors. Minimum of 300 lux day, 100 lux night, at floor, 3:1 avg:min uniformity.

COVE

Visually comfortable, shadow-free lighting with architectural distinction accentuates linear runs such as corridors and facilitates easy passage from zone to zone.

UNDERCABINET

Task lighting that does not diminish screen contrast, provides adjustable illuminance levels for day or night, offers selectable correlated color temperature (CCT) - and touch-free controls for ease of operation and infection prevention. Recommended 500 lux, 3:1 avg:min uniformity on workplane.

Supplementary Requirements

Visible from corridors and patient rooms, nurses' station lighting should complement the corridor lighting yet elevate its prominence both as destination and hub of life-giving information. Its lighting should also support the visual and non-visual needs of nurses spanning all ages, who work an inordinate number of hours and defy normal 24-hour schedules.

PERIMETER

Sleek, linear architectural forms enhance and delineate its perimeter, making it visible from any direction. This layer of visually comfortable, shadow-free lighting, contributes to recommended light levels of 400 lux day, 300 lux night, at floor.

SCONCES

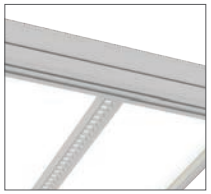
Slim, soft-glow decorative sconces provide a soothing aesthetic, project less than 3" from the wall for ADA compliance and include an integral amber nightlight. They contribute to recommended light levels of 100 lux day, 50 lux night, at floor.

STEPLIGHT

With choices in color of light and faceplate style, these slim steplights provide a visible rhythm of light for navigation. Mounted at 18" Above Finished Floor (AFF), with 90° cutoff to minimize glare, they provide recommended low level illumination of 4 lux.

Flexible Ambient

FLEXIBLE AMBIENT
BCFA
1'×1', 1'×4', 2'×2', 2'×4'



Flexible Ambient is available with Stencil surface accessories.

Sconces

BOX
BCSB

CLOSED BOOK
BCSC

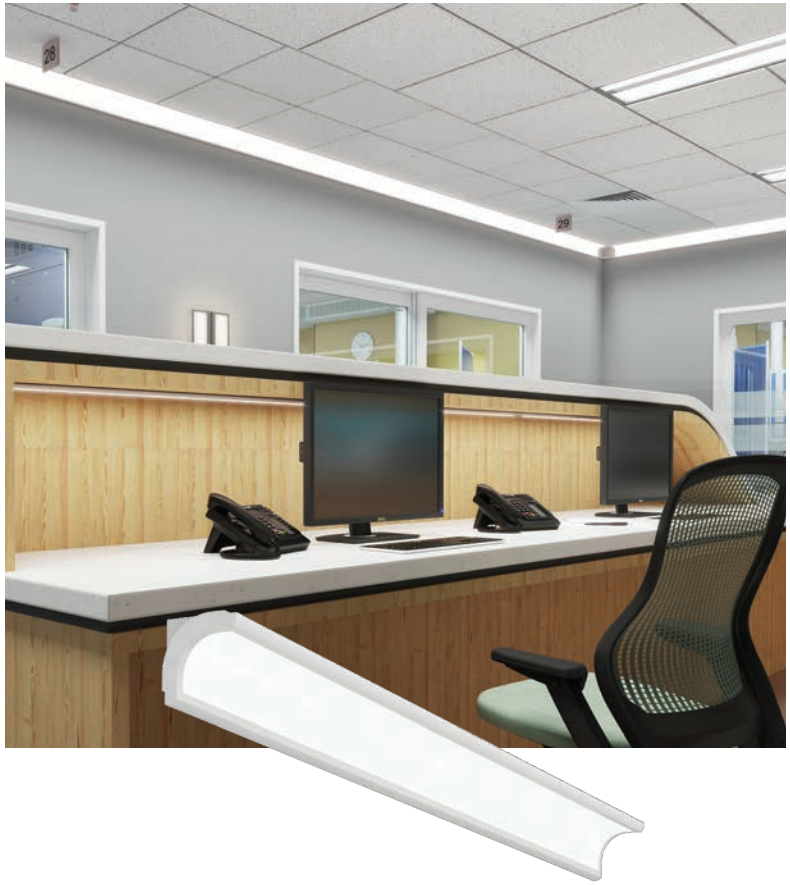
OPEN BOOK
BCSO

Steplights

RECTANGULAR
BCSRV / BCSRH

OVAL
BCSOV / BCSOH

Elle

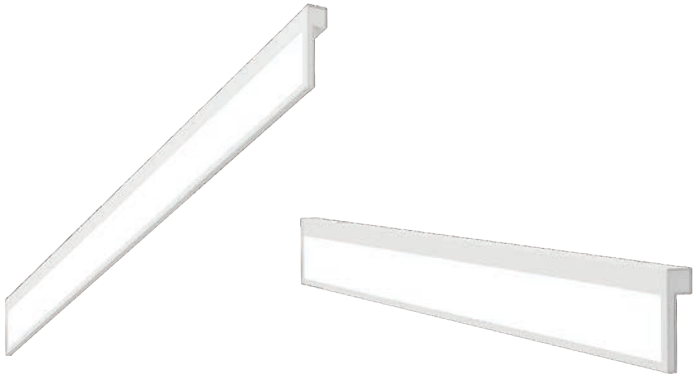


ELLE
ELSC

Undercabinet

UNDERCABINET
BCUC
Six lengths: 10", 16", 23", 30", 36", and 42"

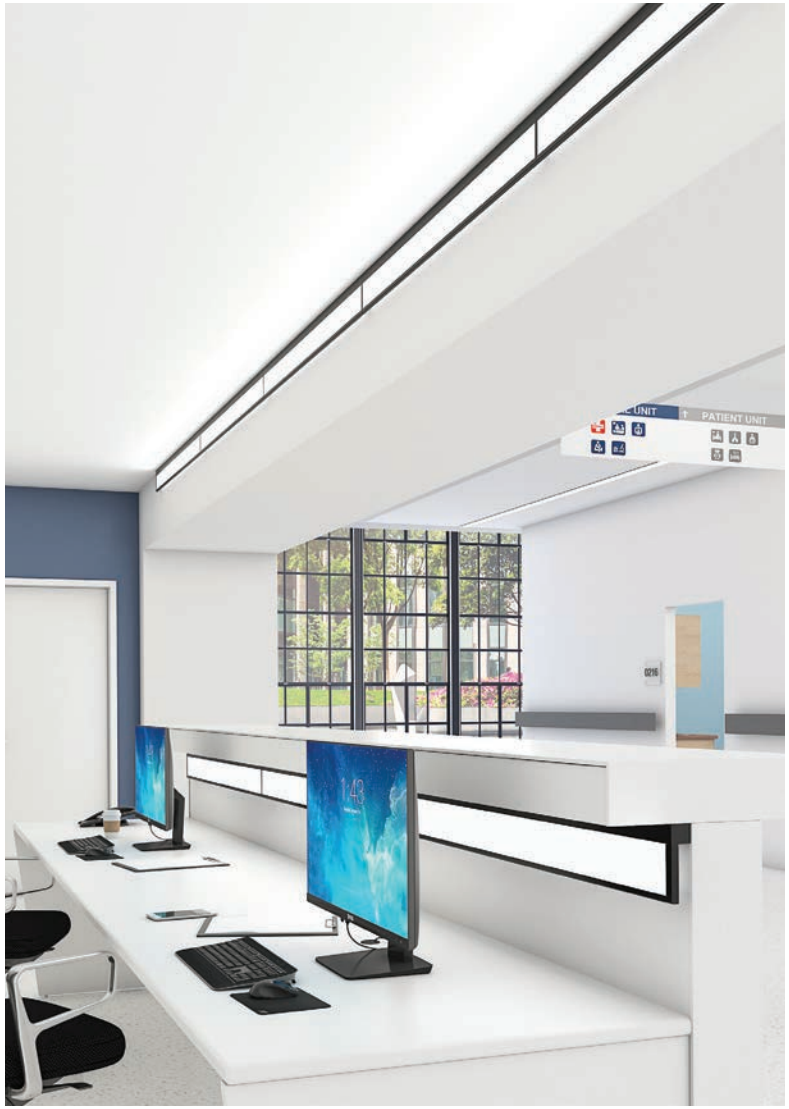
Pose



POSE TASK
PSBC

GENERAL AMBIENT **TASK**

Getting the right light to feel alert during the day, plus a short 'alerting boost' during a night shift may help performance and also affect circadian rhythms; either 'blue' or 'red' spectrum will alert, but blue will alter circadian rhythms while red will not - giving nurses the ability to maintain their routine day schedule.



BalancedCare™
COMMON AREAS

Waiting rooms, lobbies, reception and check-in areas, cafeterias, gift shops, general corridors – the many common areas throughout a hospital complete its anatomy. Lighting for these areas conveys a hospital's strength and vibrancy. It contributes to the value that patients, families and staff perceive upon entering for the first time or staying longer due to stressful circumstances. Lighting for these environments should both soothe and energize – help reduce stress factors, exude cleanliness and efficiency, and consistently reinforce the hospital 'brand' through a fresh, attractive aesthetic. BalancedCare™ by Axis brings it all together.

WELLNESS

Lighting is the connector, the element linking the many common areas throughout a hospital. Luminaire designs adapt to the varying personalities of spaces – ranging from lobbies that need to make that first uplifting impression, to small patient waiting rooms that call for a sense of calm, to large cafeterias that energize and keep people moving.

FUNCTIONAL OPTICS & VISUAL COMFORT

BeWell™ Optics provides a variety of distributions to support visual comfort in common areas. Lighting that clearly delineates transitions from one area to another supports wayfinding, as does well illuminated signage. Balancing layers of direct and indirect light improves the perception of spaces, from a focal point such as reception desks, to waiting rooms and general corridors. It also reduces glare and visual discomfort, adding to personal comfort – which may ease some of the anxiety associated with seeking or waiting for news or information.

CONTROLS

BalancedCare luminaires can integrate into a 24-hour automated system that can control all lighting functionality throughout the facility. Appropriate light levels and spectral content extends to the many types of waiting areas, physician and nurse lounges, and dining areas that are open 24 hours for those working irregular shifts – and whose circadian rhythms are vulnerable to disruption.

ARCHITECTURAL FORM

Today's modern LED sources deserve modern lower-profile design. Diffuse ambient lighting and asymmetric distributions can be layered in sleek architectural form factors, providing uniform, shadow-free lighting for ease of visibility and circulation. Accent lighting provides contrast for signage or facial modeling. All elements benefit from thoughtful up-to-date luminaire design.

INFECTION CONTROL & PERFORMANCE

Lighting in common areas demands low profile designs that are easy to clean and stand up to a hospital's cleaning protocols. Sealed housings and optical media prevent transference of pathogens from room side to plenum to help reduce risk of healthcare associated infections (HAIs). Luminaires are tested to meet the appropriate performance requirements for these spaces.

BeSealed™ CONSTRUCTION

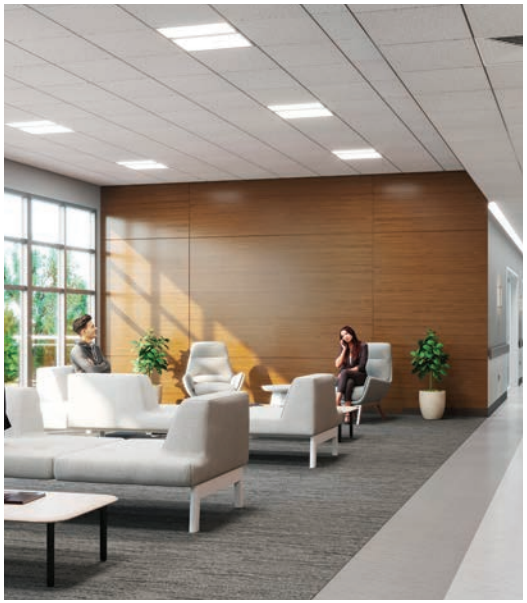
EASE OF MAINTENANCE

Smooth, non-corrosive surfaces can withstand the harsh cleaning protocols necessary to minimize risk of healthcare associated infections (HAIs). Room-side access to drivers and components facilitates maintenance efforts, reduces costs, and prolongs life of luminaire systems.

Lighting Requirements

Distinct functional modes deliver high quality lighting for a complex environment: These functions work independently or together to deliver light levels and distributions that align with recommended practice, designed to suit both patient and staff needs.

GENERAL AMBIENT



Crisp, minimalist overhead lighting is a quiet guest in a waiting area, balancing daylight with comfort for reading or conversing; 300 lux at 30" Above Finished Floor (AFF), with 4:1 avg:min uniformity.

COVE

Linear forms integrated into the architecture guide and direct people moving from general corridors to all zones throughout a hospital - without glare or shadows; 100 lux at floor, 2:1 avg:min uniformity.

PERIMETER

Graze, wallwash or perimeter lighting adds interest and provides a soothing layer of light in an otherwise stressful environment, while contributing to the recommended light levels for circulation of 100 lux at floor, 2:1 avg:min uniformity.

Supplementary Requirements

Distinct functional modes deliver high quality lighting for a complex environment: These functions work independently or together to deliver light levels and distributions that align with recommended practice, designed to suit both patient and staff needs.

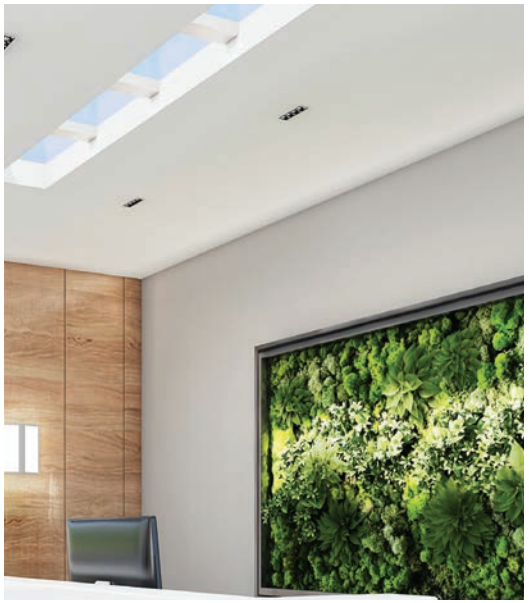
SCONCES

Slim, soft-glow decorative sconces add warmth to a waiting area and identity to a reception desk. They contribute to recommended light levels, at floor, of 100 lux day, 50 lux night.

STEPLIGHT

With choices in color of light and faceplate style, these slim steplights provide a visible rhythm of light for navigation. Mounted at 18" Above Finished Floor (AFF), with 90° cutoff to minimize glare, they provide recommend low level illumination of 4 lux.

BIOPHILIC



CoeLux® provides a unique connection with the exterior, bringing the restorative effect of natural light into a waiting room or any interior space without access to windows; it helps create a calm, soothing environment for visitors and staff alike.

General Ambient

Employing BeWell™ light guide technology, this series delivers multiple light distributions with glare-free visual comfort. Customize the center strip of the housing with color, texture, backlit pattern, or accent lighting. Available in 1'×1', 1'×4', 2'×2' and 2'×4' housings.

FLEXIBLE AMBIENT

BCFA

1'×1', 1'×4', 2'×2', 2'×4'

Flexible Ambient is available with Stencil surface accessories.

Sconces

BOX
BCSB

CLOSED BOOK
BCSC

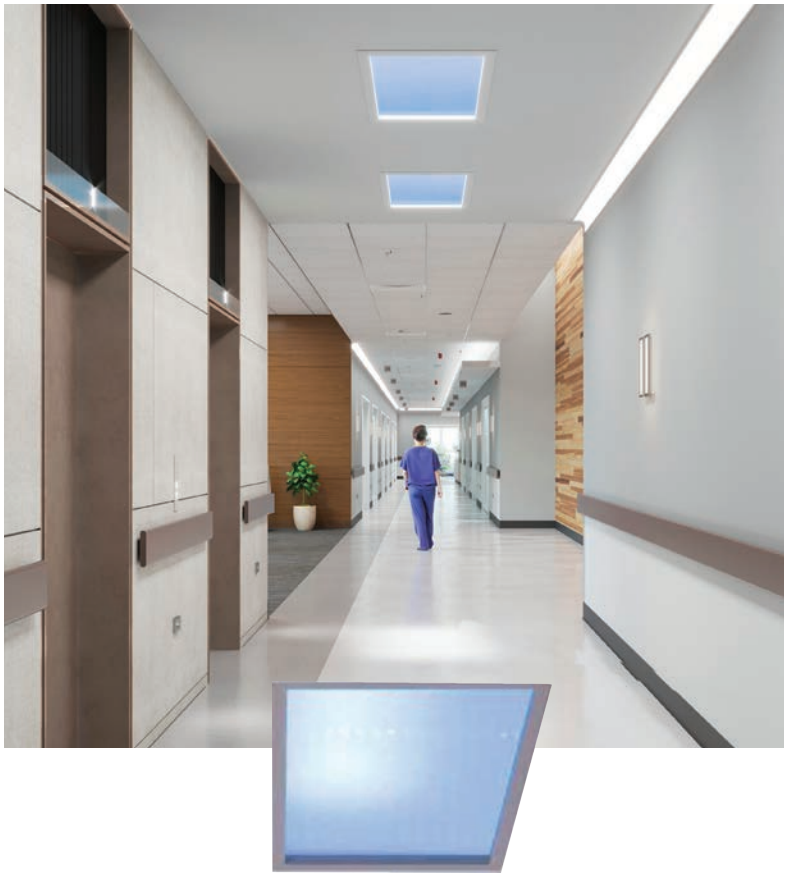
OPEN BOOK
BCSO

Cove Perfekt™

COVE CEILING
CC

COVE WALL
CCW

CoeLux



COELUX
HT/LS

Elle

ELLE
ELSC

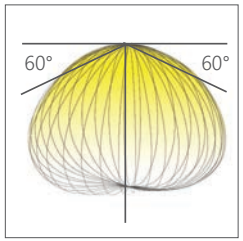
Pose Task Light

POSE TASK
PSBC

Getting the right light to feel alert during the day, plus a short 'alerting boost' during a night shift may help performance and also affect circadian rhythms; either 'blue' or 'red' spectrum will alert, but blue will alter circadian rhythms while red will not - giving nurses the ability to maintain their routine day schedule.

Beam 3 SurroundLite™

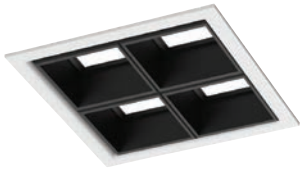
RECESSED BEAM 3
B3RLED



Featuring SurroundLite™ optics, Beam3 delivers sharp cutoff and reduced contrast to improve visual comfort. Additionally, luminaires can be more widely spaced so fewer are needed to light the corridor.

Create clean, seamless runs that are easier to install with this quality press-in acrylic lens that will not crinkle or bow. Available in lengths up to 48'

MikroLite™ Pixel



2 × 2 Cell

1 × 4 Cell

1 × 8 Cell

PIXEL
PIMLR

MikroLite 1.5" Pixel downlights are equally suited for general lighting and high-ceiling applications. These small-scale recessed downlights are available in 4-and 8-cell linear forms, as well as 4-cell square forms.


Neonatal Intensive
Care Unit

CoeLux®

Research has shown that biophilic design – bringing the outdoors into interior design – can create a positive experience for patient and staff alike, in both care and recovery. CoeLux transforms the experience of indoor illumination by precisely creating the look and feel of blue skies on a sunny day. By streaming the illusion of daylight anywhere inside a healthcare environment, CoeLux creates a natural, soothing environment and promotes a general sense of wellbeing.

CoeLux

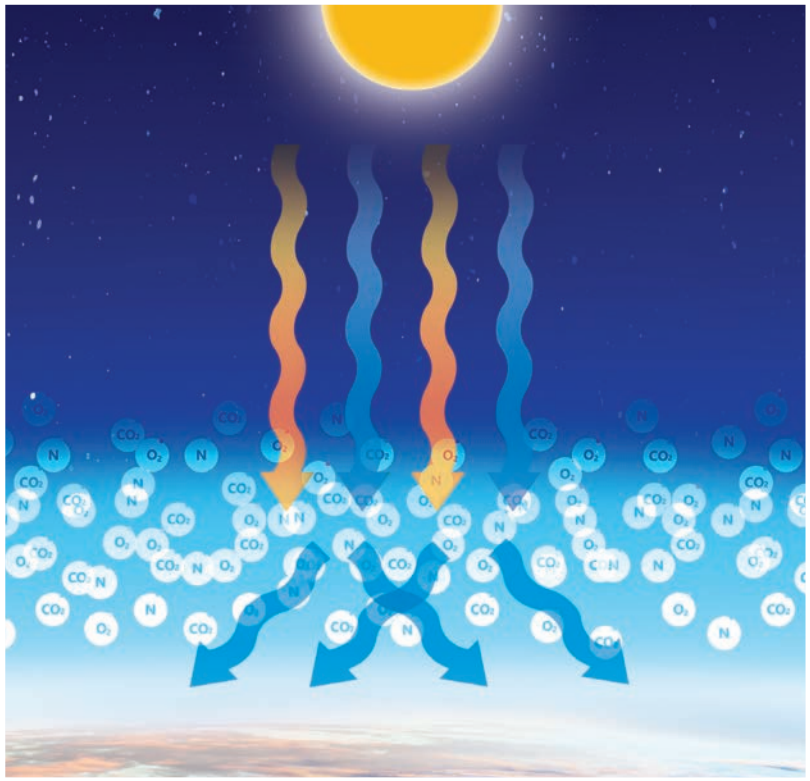
Evidence indicates natural light and views have restorative effects on people both physiologically and psychologically. Bringing biophilia, the inherent human inclination to connect with nature, into healthcare facility design can result in restorative environments that promote accelerated healing and can help decrease stress levels in patients.

Similarly, studies have shown that bringing a sense of natural daylight into a nurses' station has improved alertness and mood restoration effects for hard-working staff. It can also soothe anxious family members and friends in a waiting area.

CoeLux offers a visual connection with the outside, bringing the sky into the interior space. The separation between inside and outside disappears as the illusion of infinite depth is created and the immediacy of the sky is brought into the building.

CoeLux provides a unique connection with the exterior, creating a subliminal transition to the sky in an elevator lobby. Placing CoeLux in a cathedral ceiling further accentuates the volume and creates a sense of awe.

The natural sunny blue sky from the CoeLux fixture brightens a waiting room and helps create a calm, soothing environment for visitors.



The earth's atmosphere is 29 miles deep, consisting of oxygen, carbon dioxide and nitrogen molecules. The blue color of the sky is caused by the scattering of sunlight off the molecules of the atmosphere. Referred to as Rayleigh scattering, it is more effective at short wavelengths, or the blue end of the visible spectrum.

CoeLux's patented nanoparticle optical system replicates the physics behind the Rayleigh Effect, and delivers the physical effects of daylight. CoeLux uses LEDs to create the full spectrum of sunlight and mimics the seemingly infinite distance between sun and sky.

CoeLux LS

Channeling natural light, CoeLux LS Series transforms occupant well-being, instilling positive feelings linked to being outdoors – including visual comfort, mood, and anxiety. In the LS family, the sun appears to follow along the length of the skylight. The infinite sun allows for a seamless linear arrangement of luminaires, immersing the user in the full experience and maintaining the illusion of a real skylight. The LS is available with skylight openings that measure approximately 1' × 4' in an approximately 2' × 4' frame using a specialized CoeLux mounting system.

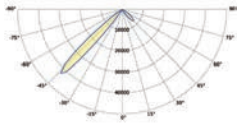
- Beam angle 45°
- Sun appearance: Visible slightly frosted. Sky appearance: Clear
- Drivers: 0-10V or DALI integral. Dimming 100% to 0.1%
- Lumens: 3300lm/ft
- Transmitted beam CCT 4800K
- Infinite sky CCT 15,000K

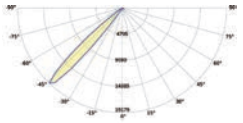
Recommendation: Direct the spotlight on a wall to maximize vertical illuminance

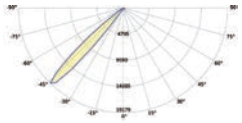
AXLS-ICE

AXLS-MATTE

AXLS-ARRAY







AXLS-Ice produces a 45° beam and a sliver of light in the opposite direction. This feature makes the sun visible from various angles, which is ideal for spaces requiring more lively light. The AXLS-Matte and AXLS-Array both create a single 45° sliver of light. The sun reflects off the matte white frame to ensure superior visual comfort.

Suitable for shallow depth ceilings (9.8"), CoeLux HT Series allows great design freedom. It can be installed in different compositions and the subtle design of the frame facilitates the creation of semi-continuous windows, creating the perception of large portions of sky. The optical design helps to create the sun perceived at infinite distance. The observer, moving in space, will have the impression that the sun is always positioned above his head.

- Beam angle 0° (zenithal)
- Sun appearance: Visible slightly frosted. Sky appearance: Clear
- Driver: DALI remote. Dimming 100% to 40%
- Lumens: 5800
- Transmitted beam CCT 5300K
- Infinite sky CCT 10,000K

Recommendation: Common areas where high horizontal illuminance is desired

SUN PERCEPTION

- Sun peaks through slightly frosted sky
- Infinite sun overhead allows for a seamless array of fixtures
- Sun appears to emanate from the same source of viewing angle
- Size of the sun increases with increasing installation height

Listings and Technologies

ADA Compliant — objects projecting from walls (e.g., sconces) shall protrude no more than 4" into walks, halls, corridors, passageways or aisles

CCEA Approved — The City of Chicago Environmental Air (CCEA) rating ensures that the luminaire is inherently airtight. Wiring and/or branch circuit terminations are sealed off and gasketed from the plenum air space. This listing ensures that the luminaire is sealed to limit air flow from the room side to the plenum.

Damp — Denotes that the luminaire is UL Listed for Damp Locations. A damp location is normally or periodically subject to condensation of moisture in, on, or adjacent to the electrical components of a luminaire.

IC — Insulated Contact (IC) rated recessed luminaires can be used in a ceiling that is insulated without running the risk of overheating.

IP64 — UL Certified IP64 per IEC 60598 ensures that the enclosure is dust-tight and protected against splashing water without any harmful effects.

NSF2 — denotes that the luminaire has been evaluated for corrosion resistance, cleanability and the ability of exposed material to withstand normal wear. This supports the infection control standards established by healthcare.

UL/CUL Listed — All BalancedCare luminaires have been tested to be in compliance with Underwriter's Laboratory (UL) performance standards. UL is a world leader in product safety testing and certification.

BeWell™ Optics — BeWell is a patent-pending, materials-based lightguide technology that uses molecular optics to direct light. These highly efficient optics are multi-functional, available in direct, indirect, asymmetric or a combination to deliver high performance, comfortable illumination.

BeSealed™ Construction — Design attributes that enable easier maintenance, less costly construction, updated lighting technology, and engineered features that support today's stringent infection control standards.

BeWell™ Technologies — BeWell Technologies encompasses BalancedCare controls (which includes patient controls, wireless and POE), Axitune tunable white and color tuning systems, and BIOS SkyBlue.

BeWell™ Controls — BeWell Controls takes a systems approach to ensure seamless integration between the luminaires, sensors, control devices and users. It includes all elements of a facility's controls system, supporting Axis' agnostic approach to provide comprehensive systems support.

POE — Power over Ethernet (POE) delivers both lighting power and data transfer on one low-voltage wire, and enables communication with multiple building systems using Ethernet protocol, along with many types of sensors. All BalancedCare luminaires are UL Listed 2108 for POE compatibility.

Axitune Tunable White — Tunable white technology enables the user to independently control both color temperature and intensity of light within a given application. This provides the ability to change the color of light from warm to neutral to cool in appearance, over time, based on the needs of the occupant or the space. See page 16 for additional information.

BIOS® — Axis Lighting is a proud partner with BIOS Lighting. Its SkyBlue® technology creates environments that improve alertness and promote better sleep, health and well-being. BIOS is available in BalancedCare overbed luminaires.

Ratings Explained

EXAMPLE

IP64 DEGREES OF PROTECTION INDICATED BY THE FIRST CHARACTERISTIC NUMERAL

Numeral	Short Description	Brief details of objects which will be "excluded"from the enclosure
0	Non-protected	No special protection
1	Protected against solid objects greater than 50 mm	A large surface of the body, such as a hand (but no protection against deliberate access). Solid objects exceeding 50 mm in diameter.
2	Protected against solid objects greater than 12 mm	Fingers or similar objects not exceeding 80 mm in diameter. Solid objects exceeding 12 mm in diameter.
3	Protected against solid objects greater than 2.5 mm	Tools, wires, etc., of diameter or thickness greater than 2.5 mm Solid objects exceeding 2.5 mm in diameter.
4	Protected against solid objects greater than 1.0 mm	Wires or strips of thickness greater than 1.0 mm. Solid objects exceeding 1.0 mm in diameter.
5	Dust-protected	Ingress of dust is not totally prevented but dust does not enter in sufficient quantity to interfere with satisfactory operation of the equipment.
6	**Dust-tight**	**No ingress of dust**

EXAMPLE

IP64 DEGREES OF PROTECTION INDICATED BY THE SECOND CHARACTERISTIC NUMERAL

Numeral	Short Description	Brief details of objects which will be "excluded" from the enclosure
0	Non-protected	No special protection
1	Protected against dripping water	Dripping water (vertically falling drops) shall have no harmful effect.
2	Protected against dripping water	Vertically dripping water shall have no harmful effect when the enclosure is tilted at any angle up to 15° from its normal position.
3	Protected against spraying water	Water falling as a spray at an angle up to 60° from the vertical shall have no harmful effect.
4	**Protected against splashing water**	**Water splashed against the enclosure from any direction shall have no harmful effect.**
5	Protected against water jets	Water projected by a nozzle against the enclosure from any direction shall have no harmful effects.
6	Protected against heavy seas	Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities.
7	Protected against the effects of immersion	Ingress of water in a harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time.
8	Protected against submersion	The equipment is suitable for continuous submersion in water under conditions which shall be specified by the manufacturer.

SOLUTIONS DESIGNED TO SIMPLIFY CIRCADIAN LIGHTING IN EVERYDAY APPLICATIONS

BIOS SkyBlue® for Healthcare

Life is all about contrast, perhaps none as important as light and dark, day and night.

As humans, we have evolved with blue sky and daylight as natural cues to keep our body clocks aligned with the 24-hour day. This healthy contrast between daylight and darkness allows our circadian rhythms to function as designed.

Even though this natural lighting cycle is healthy, hospital lighting typically feels anything but natural. BIOS SkyBlue® uses technology to bridge the gap, stimulating circadian response while maintaining the appearance of white light in familiar correlated color temperatures (CCTs).

WHAT YOU DON'T SEE CAN HELP YOU

Benefits of Natural Light without Compromised Light Quality

To the naked eye, the white light produced by a BalancedCare™ luminaire with SkyBlue option may appear identical to the white light from traditional LEDs, but the actual spectrum is different – it delivers greater melanopic content, which contributes to higher melanopic to photopic (m/p) ratios, higher equivalent melanopic lux (EML) and circadian stimulus (CS) – current circadian lighting metrics.

A broad range of Axis luminaires seamlessly integrate SkyBlue technology to enable creation of environments that improve alertness and promote better sleep, health and well-being. For additional Axis lighting featuring BIOS SkyBlue technology, please visit www.axislighting.com

BCFA
BalancedCare Flexible Ambient Overbed

BCSB/BCSC/BCSO
Sconces

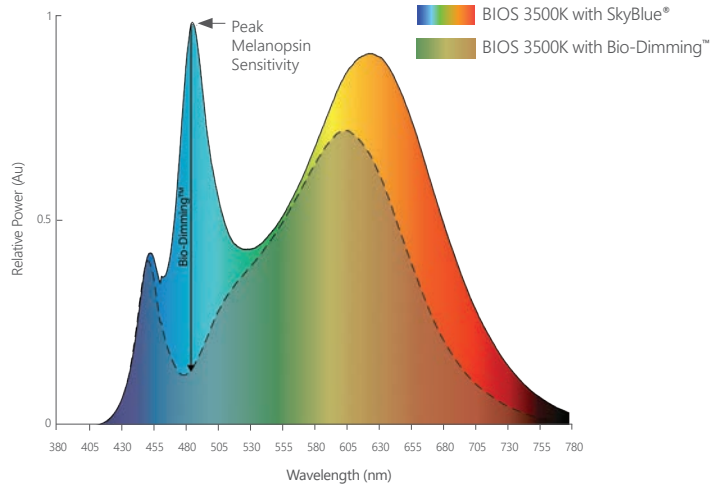
BCMF*
BalancedCare Multi-Function Overbed

*Ambient Mode Only

BIOS DYNAMIC SOLUTION FOR 24-HOUR FACILITIES

Better sleep by night, improved alertness by day

BIOS 3500K Dynamic Engine Spectral Power Distribution



Dimmer Settings With Bio-Dimming™ *

DIMMER SETTINGS*	BIOS SKYBLUE*	LIGHT OUTPUT		
100% (FULL ON)	100%	100%	BIO-DIMMING™	BIOS SkyBlue maintained for maximum circadian Impact. Light output remains relatively constant.
99%-51%	100%-0%	100%-90%		
50%	NO BIOS	90%	INTENSITY DIMMING	BIOS SkyBlue removed to provide minimal circadian impact. Light output dims down linearly.
49%-0%	NO BIOS	LINEAR DIMMING		

* Also compatable with push button dimmers

BIOS dynamic light engines use easy-to-program Bio-Dimming™ to provide full SkyBlue® content during the day and allow SkyBlue® to be removed in the evening while light levels remain constant. Once SkyBlue is reduced then light levels can be changed.

Functional white light with healthy impact

- Maintains appearance of white light while invisibly delivering a spectrum with greater melanopic content
- Peaks at 490 nanometers (nm) to target melanopsin, the light-sensitive protein contained in our non-visual photoreceptors

Static solution supports proper daytime circadian stimulus

- The static spectrum delivers a steady but invisible blue-light boost to white light throughout the day, in choice of 3000K, 3500K or 4000K

Dynamic solution for 24-hour facilities

- Supports daytime circadian stimulus, reduces nighttime stimulus
- Skin color in its true light
- CRI > 80; R9 > 75 at each correlated color temperature, because color rendering is so important in healthcare

The controls you know

- Uses any single channel LED driver with 0-10V dimming interface

CIRCADIAN LIGHTING METRICS

Circadian Stimulus (CS), Equivalent Melanopic Lux (EML), and Melanopic Equivalent Daylight Illuminance (MEDI)

Metrics have been developed as tools to enable lighting professionals to create environments that promote alertness by day and good sleep at night – prime examples of circadian rhythms, or biological processes that repeat every 24 hours.

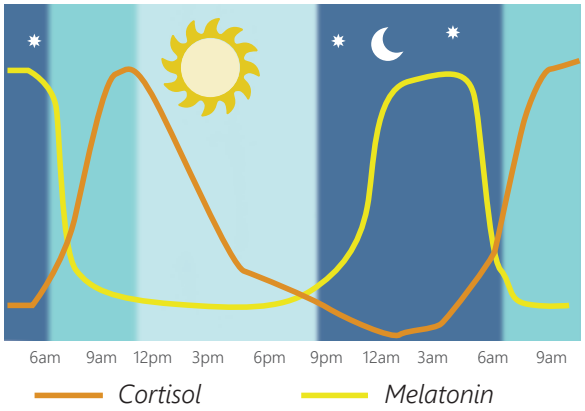
This becomes especially important in hospitals where schedules are erratic, where support of circadian health can also improve overall health and wellbeing.

Key elements to entrain – or synchronize – humans' biological clocks to the light/dark cycles of the 24-hour day are amount, spectrum, length of exposure, time of day, distribution, and personal light history – one's sensitivity to light.

Research has shown that these elements, when delivered in the right combination, can improve sleep quality, reduce agitation, depression, and fatigue for patients, caregiving staff, and families in hospital environments. These positive effects can last beyond a patient's discharge or after a night shift nurse leaves to go home.

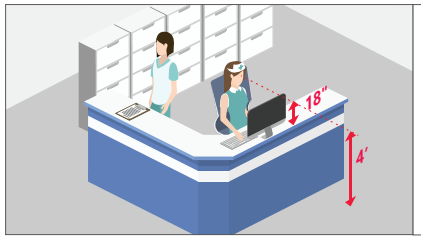
Delivering the right light at the right time of day helps avoid circadian disruption, which can cause poor sleep but also increase risk of serious illnesses such as cancer, heart disease and delirium.

Recently discovered photoreceptors in the human eye – photosensitive retinal ganglion cells or ipRGCs– contain the protein melanopsin, which is highly sensitive to 460-480 nm blue wavelengths. When stimulated by light, ipRGCs send a signal to the body's master clock, telling it to reset its cycle for the next 24 hours. That signal triggers a variety of biological processes, including essential production of hormones such as melatonin and cortisol.



Importance of light/dark signal:

Cortisol rises with the early light of day, keeping us awake and alert. Melatonin is suppressed by light during the day, but rises as darkness sets in to promote sleep.



ALL CIRCADIAN METRIC CALCULATIONS REQUIRE

Spectral power distribution **(SPD)** of light sources; correlated color temperature **(CCT) is not an accurate measure**

Light measured on the **vertical plane at eye level,** either 4'-0" Above Finished Floor (AFF) or 18" above the workplane, for adjustable height desks

CS characterizes the human response to light in terms of melatonin. EML and MEDI characterize a light source's effectiveness at stimulating melanopsin.

The three are not interchangeable, and each tells a different story – but any of them will indicate if one is on the right path to effective circadian lighting design, depending on the application.

Each metric provides its own calculation tool and counts toward achieving points in the **WELL Building Standard,** v1 or v2, in the **Circadian Lighting Design** category.

CS

- Factors in contribution of all five photoreceptors, along with amount and spectrum to assess circadian stimulation
- It estimates the percentage of melatonin a person will suppress after one-hour exposure to a light source during the day, which in turn affects that person's melatonin levels at night
- Robust melatonin levels may result in better sleep, improved mood, performance, and feelings of alertness
- High CS of >0.3 recommended for early morning, reducing to <0.1 in the evening
- *https://www.lrc.rpi.edu/cscalculator/*

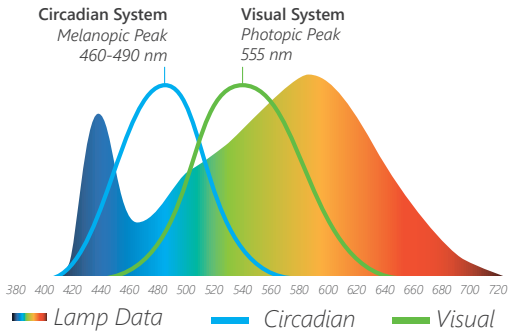
EML

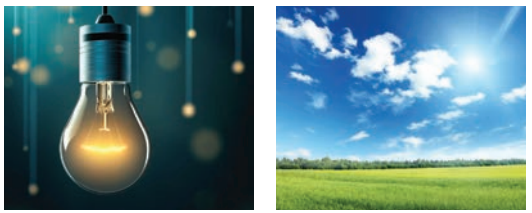
- Introduces the unit 'melanopic lux' as a measure of light's effect on stimulating the circadian system compared to the visual system
- It is a two-part calculation involving the melanopic to photopic (M/P) ratio and lilluminance at the eye (Ev)
- The M/P ratio formula converts visual response to circadian response based on the SPD of one (or more) light sources
- It will indicate whether light source A is better or worse than light source B, of equal energy, at stimulating melanopsin
- ***EML = M/P ratio x Ev (vertical illuminance)***
- *https://standard.wellcertified.com/tables > Table L1: Melanopic Ratio > IWBI link to spreadsheet*

MEDI

- Factors in contribution of all five photoreceptors to determine how the ipRGCs respond to light compared to rods and cones
- Like EML, it is a two-part calculation requiring the melanopic daylight efficacy ratio (m-DER) and illuminance at the eye (Ev)
- M-DER compares a light source's ability to stimulate melanopsin to that of standard daylight
- ***MEDI = m-DER x Ev (vertical illuminance)***
- *https://balancedcare.axislighting.staging.mxo.website/wp-content/uploads/2020/09/CIE-S-026-alpha-opic-Toolbox.xlsx*

Image by Lighting Research Center





Illuminance Tables

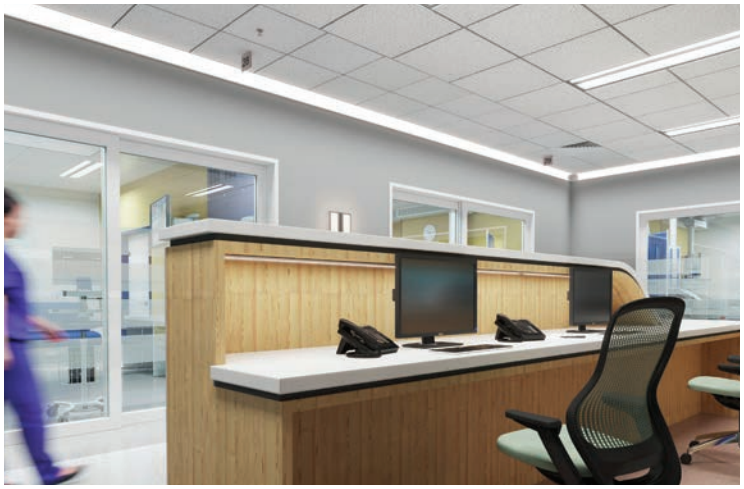
Patient Room		Illuminance (Lux)		Uniformity
Task	Notes	Horizontal (Eh)	Vertical Ev)	Avg:Min
Ambient	E_h At Floor - To Cover 3ft Border Surrounding Bed	100-200		4 to 1
	E_v At 5' Aff*		20-40	
Exam	E_h on bed at 3' AFF	500-1000		2 to 1
	E_v at 4' AFF		200-400	
Reading	E_h and E_v at lap area on bed at 3' AFF	400-800	100-200	3 to 1
Night Check	E_h at 3' AFF; E_v at 4' AFF	30-60	6 to 12	4 to 1
Nightlight	at floor	2 to 4	N/A	
Medical Service	E_h at 3' AFF; E_v at 4'AFF	500	300	3 to 1
Guest Area Sitting	E_h and E_v at 2'-6" AFF	150-300	50-100	3 to 1

Patient Bathroom		Illuminance (Lux)		Uniformity
Task	Notes	Horizontal (Eh)	Vertical (Ev)	Avg:Min
General Ambient	E_h at floor; E_v at 3' to 5' AFF*	50-100	30-60	2 to 1
Vanity	E_h at 3' AFF	150-300		2 to 1
	E_v at 3' to 5' AFF at sink edge		200-400	
Nightlight	E_h at floor; E_v at 3' to 5' AFF	50-100	30-60	
Shower	E_h at floor; E_v at 3' to 5' AFF	100-200	50-100	2 to 1

To convert lux to footcandles, divide lux value by 10.7

Illuminance levels listed in the charts above represent recommended industry standards for ages ranging from 25 to > 65

*AFF = Above Finished Floor



Corridors		Illuminance (Lux)		Uniformity
Task	Notes	Horizontal (Eh)	Vertical Ev)	Avg:Min
General Corridors	E_h at floor; E_v at 5' AFF*	100-200	30-60	2 to 1
Patient Corridors				
Day	E_h at floor; E_v at 5' AFF	100-200	50-100	2 to 1
Night	E_h at floor; E_v at 5' AFF	50-100	20-40	2 to 1

Nurses' Station		Illuminance (Lux)		Uniformity
Task	Notes	Horizontal (Eh)	Vertical Ev)	Avg:Min
Workplane	E_h at 2'-6" AFF*	500-1000	200-400	2 to 1
Work Station				
Day	E_h at floor; E_v at 5' AFF	300-600	200-400	3 to 1
Night	E_h at floor; E_v at 5' AFF	100-200	40-80	3 to 1

Common Areas		Illuminance (Lux)		Uniformity
Task	Notes	Horizontal (Eh)	Vertical Ev)	Avg:Min
General Corridors	E_h at floor; E_v at 5' AFF*	100-200	30-60	2 to 1
Lobby				
Day	E_h at floor; E_v at 5' AFF	400-800	75-150	4 to 1
Night	E_h at floor; E_v at 5' AFF	200-400	30-60	4 to 1
Reading/Waiting Areas	E_h and E_v at 2'-6" AFF	300-600	150-300	4 to 1
Reception Desk	E_h at 3'-6" AFF; E_v at 5' AFF	300-600	100-200	4 to 1
Waiting Rooms				
Day	E_h at floor; E_v at 4' AFF	200-80	15-30	4 to 1
Night	E_h at floor; E_v at 4' AFF	100-80	15-30	4 to 1

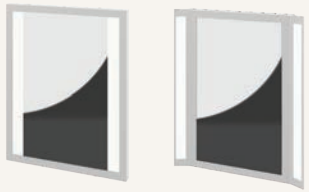
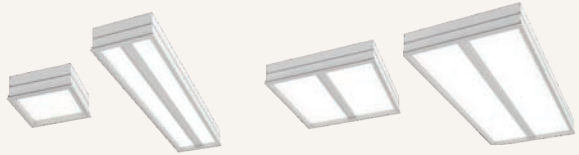
Illuminance levels listed in the charts above represent recommended industry standards for ages ranging from 25 to > 65

*AFF = Above Finished Floor

To convert lux to footcandles, divide lux value by 10.7

BalancedCare Product Matrix

PRODUCT	APPLICATION					LISTINGS	PAGE
	Patient Room	Patient Bathroom	Corridors	Nurses' Station	Common Areas		
MULTI-FUNCTION OVERBED   BCMF22 (2'×2') BCMF24 (2'×4')	✓					CCEA IP64 NSF2 cULus	24-25
MULTI-FUNCTION ASYMMETRIC OVERBED   BCASY2 (6"×48")	✓					CCEA IP64 NSF2 cULus	26-27
SCONCES    BCSB BCSC BCSO	✓	✓	✓	✓	✓	IP64 NSF2 cULus	28-31

PRODUCT	APPLICATION					LISTINGS	PAGE
	Patient Room	Patient Bathroom	Corridors	Nurses' Station	Common Area		
UNDERCABINET  BCUC	✓	✓		✓		NSF2, DAMP, cULus	32-33
STEPLIGHTS  BCSRV BCSRH BCSOV BCSOH	✓	✓	✓	✓	✓	IP64, NSF2, cULus	34-35
VANITY MIRROR  BCVF BCVB		✓				NSF2, cULus	36-37
FLEXIBLE AMBIENT  BCFA11 (1'×1') BCFA14 (1'×4') BCFA22 (2'×2') BCFA24 (2'×4')	✓	✓	✓	✓	✓	CCEA, IP64, NSF2, cULus	39-43

For complementary products see www.axislighting.com

Complementary Product Matrix

PRODUCT	APPLICATION					LISTINGS	PAGE
	Patient Room	Patient Bathroom	Corridors	Nurses' Station	Common Areas		
BEAM 3 SURROUNDLITE 			✓		✓	CCEA, DAMP, IC	76, 98
COELUX 			✓		✓	c UL us	96, 100-105
COVE 			✓	✓	✓	CCEA, c UL us	76, 95
ELLE 			✓	✓	✓	DAMP	38-39
MIKROLITE PIXEL 			✓	✓	✓	c UL us	99
POSE 			✓	✓	✓	DAMP	75, 87, 97


Registration Desk

BalancedCare™
by axis

2505 Senkus St.
Lasalle, QC H8N 2X8
Canada
Toll Free: 1 800 263-AXIS (2947)
Tel.: 514 948-6272
Fax: 514 948-6271
BalancedCare.AxisLighting.com