

Architectural luminaires that provide the bright, glare-free lighting clinicians need as they assess and treat patients. Soft ambient lighting and targeted reading lights to help patients feel comfortable as they heal. **We believe that lighting** solutions that enhance healthcare facilities don't need to look clinical or institutional.

Our luminaires are suitable for use in various areas of hospitals and healthcare facilities and support the recommendations of the Illumination Engineering Society (IES) as detailed in Recommended Practice: Lighting Hospitals and Healthcare Facilities an American National Standard (ANSI/IES RP-29-20).

In addition to meeting recommended illuminance levels, helping with wayfinding, and making interiors feel welcoming and comfortable, our luminaires also support the stringent maintenance and cleanability requirements of healthcare buildings. Our Connected Solutions program and PoE compatible luminaires enable easy connection to a variety of lighting control systems, helping meet the needs of patients, visitors, and clinical staff.

Discover space-by-space ideas and recommendations in this design guide.

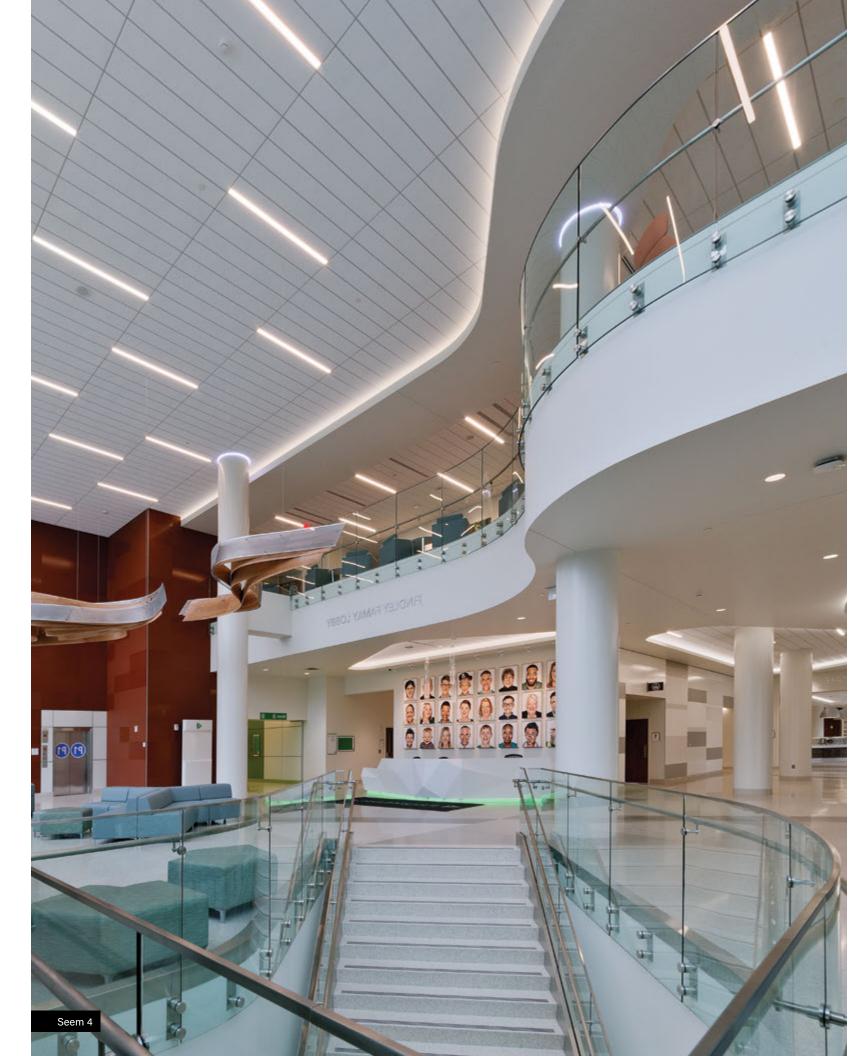


TABLE OF CONTENTS

Circulation Areas

Lobbies and Entrances	2
Corridors	4
Reception Areas	6
Waiting Areas	8
Elevator Lobbies 1	10

PROJECT PROFILE:

Esperanza Health Centers	s	2
		_

Nursing & Patient Care Areas

Patient Rooms	 	 14
Nursing Stations .	 	 20

PROJECT PROFILE:

Inova Loudon Hospital	
•	

Diagnostic & Treatment Areas

Examination and Treatment Rooms	24
Radiology and Imaging	26
Infusion and Therapy Areas	28
Rehabilitation Areas	30
Dental Suites	32

PROJECT PROFILE:

Patient Support Facilities

Clinical Laboratories36
Cafeteria
Technologies40
Ratings 43
Control Systems44

Lobbies and Entrances

Lobbies and entrances convey the first impression of the healthcare facility to visitors. Often expansive, with high ceilings and ample fenestration, they must balance daylight and electric light to facilitate the visual adaptation between outdoor and indoor light levels at all times of the day.

A combination of high lumen outputs recessed luminaires, pendants and suspended linear luminaires, as well as perimeter and cove lighting are often used to create the layers of light that supply ambient lighting, support wayfinding to information desks and reception areas, and enhance the building's architecture.

Cove lighting and wall washer or grazer optics are often an intrinsic part of architectural features, while accent lighting shines a light on the healthcare facility's brand.

"These spaces should be welcoming as people enter, and they should be accommodating and comfortable during waiting periods and as occupants leave the facility."

ANSI/IES RP-29-20 - 8.2.1

SUGGESTED LUMINAIRES



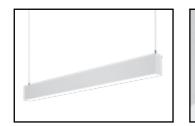
Seem 4 & 6 Recessed



ID+ Downlights



Seem 2 & 4 Perimeter





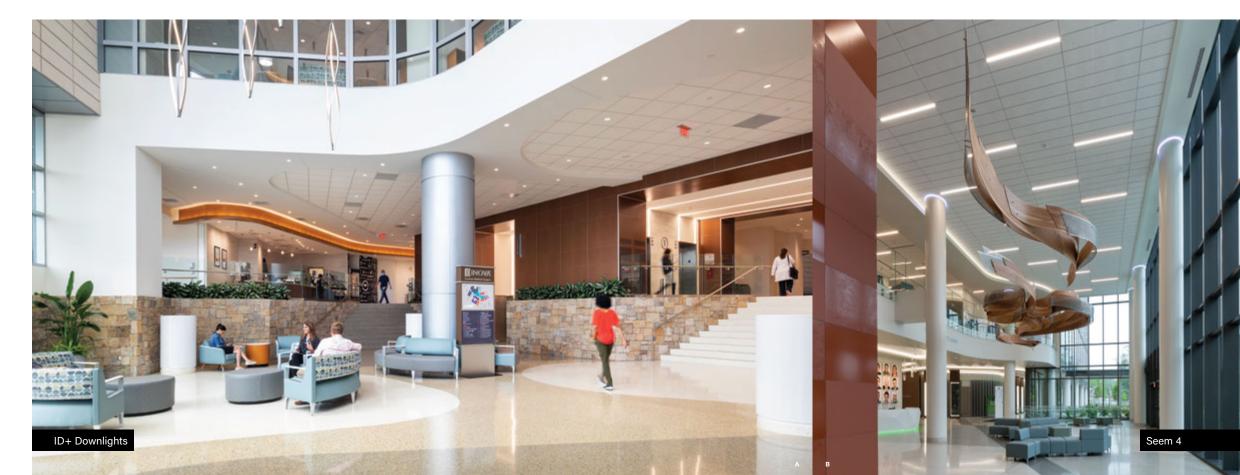
Seem 4 Suspended



Skydome Recessed



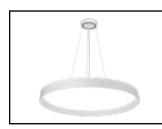
Covert







Covert Lite



Skydome Edge

Facetta

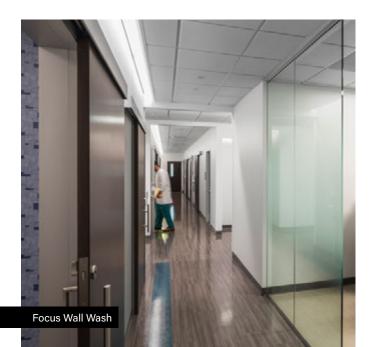


Nivo

Corridors

Corridors are designated as staff, patient, or public based on their location and intended usage. They are long and somewhat narrow spaces, thus creating rhythm with lighting. Highlighting specific areas, such as entrances to treatment areas, or nursing stations, is a desirable lighting strategy. Supporting wayfinding is also essential.

Oftentimes, patients travel in a supine position, or experience lighting from a lower viewpoint, such as when sitting in a wheelchair. Therefore, it is important to select light sources that will fill the space without causing discomfort to someone looking directly at the ceiling or who experiences a different viewing angle. For this reason, recessed perimeter light sources with the appropriate light distribution, architectural troffers with diffuse lighting, as well as wall-mounted linear luminaires are popular solutions.



SUGGESTED LUMINAIRES



Seem 4 & 6 Recessed



Covert

Covert Lite

Seem 2 & 4 Perimeter



Aerion



Equation 2



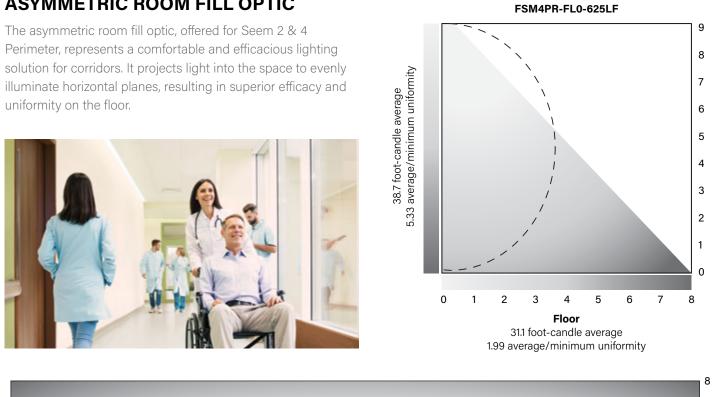
Skydome & Skydome Edge

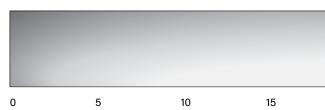
ID+ Downlights

"Designs for general corridors can reinforce the design intent of the facility in many ways. The use of accent lighting to highlight art and feature walls, as well as the inclusion of softer lighting treatments such as wall-mounted sconces, makes the facility feel less institutional for patients and visitors and more restorative for caregivers and staff." ANSI/IES RP-29-20 - 8.2.1

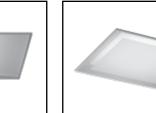
ASYMMETRIC ROOM FILL OPTIC

uniformity on the floor.





Amica 2

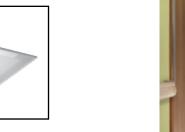




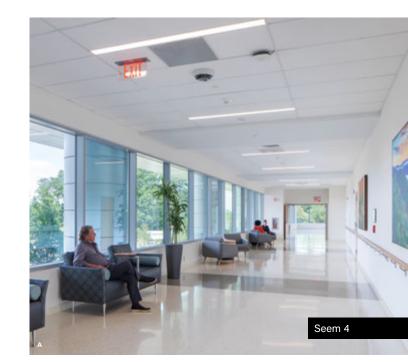




Zephyr





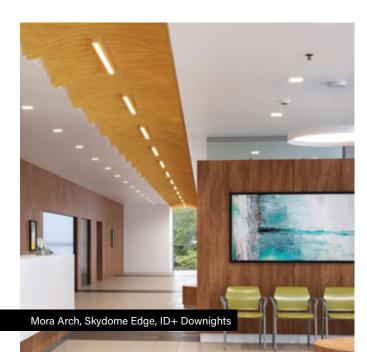




Reception Areas

Reception areas should be inviting for patients and visitors, supporting wayfinding and communicating the desired first impression of the facility. Vertical illumination on feature walls can often serve that purpose, as well as pendants that attract the eye, while subtly delineating the area.

Ambient lighting often needs to balance out natural light sources from the exterior and facilitate the visual adaptation of visitors to the electric light source. Task lighting must also support the role of the staff. Integrated acoustic and lighting systems can be a great option for these open areas, enhancing the interior architecture, supporting wayfinding, and providing a comfortable environment for patients and staff.



SUGGESTED LUMINAIRES



Seem 2 & 4 Recessed



Seem 2 & 4 Suspended



Nivo



Mora



ID+ Cylinders



Seem 2 & 4 Perimeter



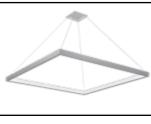
ID+ Downlights





Covert

Covert Lite





Nera Pendant

Skydome Edge



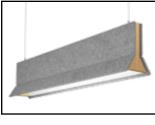


Skydome Recessed

Blume & Zyl

Skydome Pendant

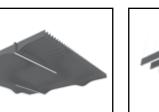




Eave

"These areas are destination points within hospitals."





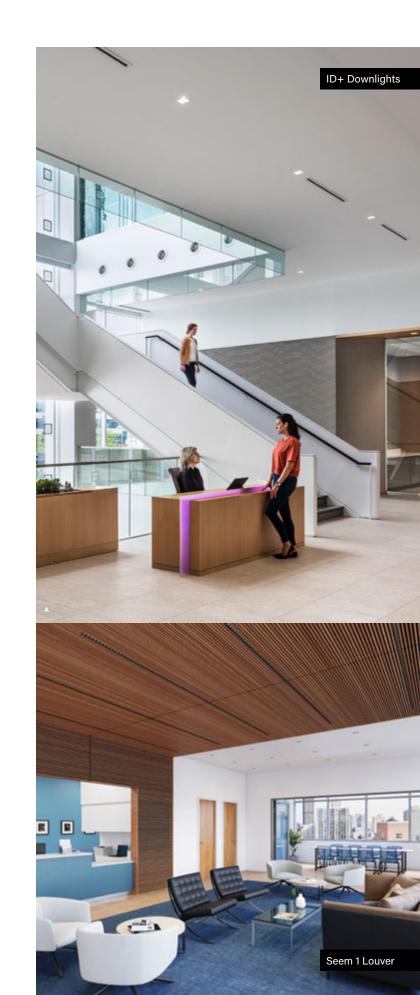






Facetta



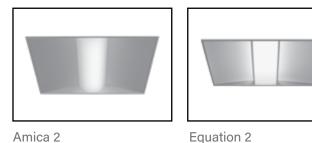


Waiting Areas

Waiting areas are where patients and visitors may spend significant amounts of time. They should be designed in such a way to make patients feel comfortable, minimizing stress and conveying a positive impression of the healthcare facility.

Recessed luminaires that provide diffuse lighting support visual comfort. The selection of unique and innovative options adds playfulness and dynamism to the ceiling plane. Integrated lighting and acoustic solutions can help make these areas feel joyful with pops of color and novel form factors, while also improving the overall comfort of occupants by minimizing noise levels.

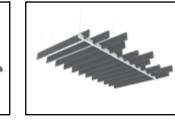
SUGGESTED LUMINAIRES



Amica 2



Mora



AirCore Bridge

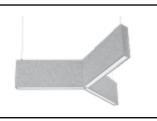
"Lighting helps to achieve a comfortable ambience in waiting rooms, and the use of diffuse layers of light is helpful in reducing veiling reflections from overhead lighting for tasks such as the reading of glossy magazines or backlit tablet devices." ANSI/IES RP-29-20 - 8.2.4

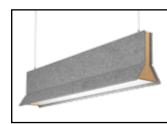




Zephyr

Facetta





Seem 1 Acoustic Trio

Eave





Blume & Zyl

Skydome Edge





Skydome Recessed

Skydome Pendant





Nivo Acoustic





ID+ Cylinders



ID+ Downlights



Elevator Lobbies

Elevator lobbies are characterized as passenger, patient transport, and freight elevators. The lighting scheme should draw patients and visitors to those elevators intended for public use and ensure good visibility and legibility of signage.

Recessed perimeter lighting is often used to create atmosphere and support wayfinding; the soft glow around the elevator lobby naturally draws people towards it. It is also a great choice for patient transport areas, where sufficient levels of illuminance can be achieved without being uncomfortable for patients lying prone and looking directly at the ceiling.



SUGGESTED LUMINAIRES



Seem 2 & 4 Perimeter



Seem 2 & 4 Wall-to-Ceiling





Covert

Nivo



Skydome



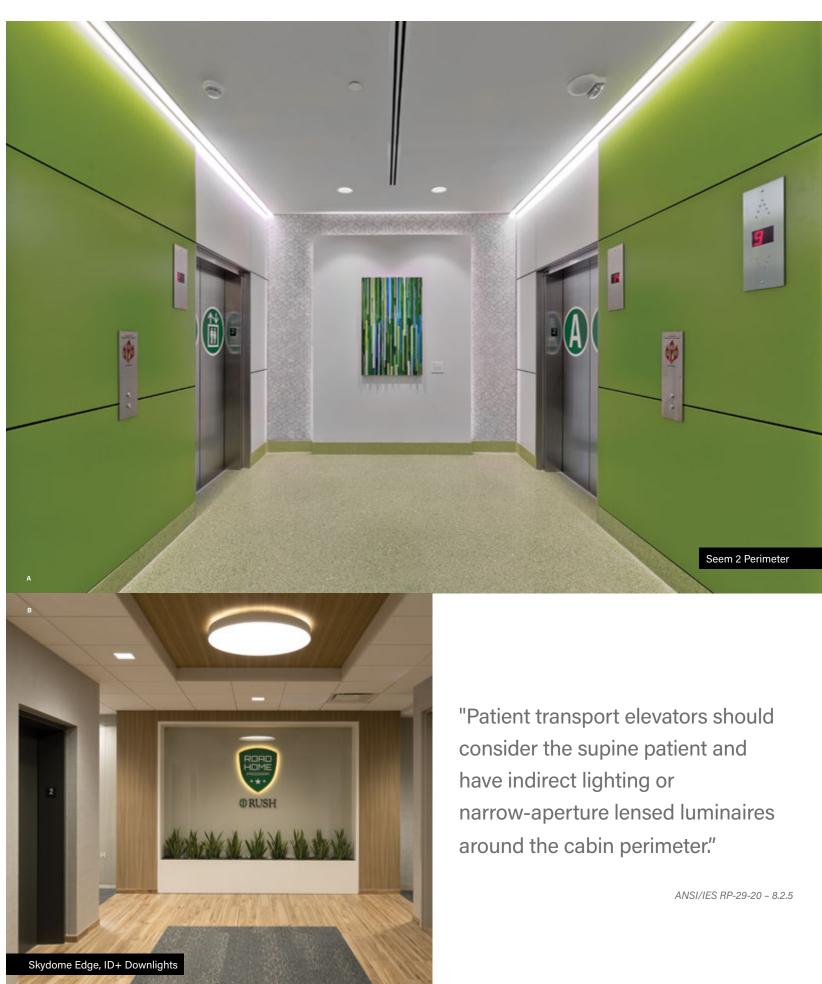
ID+ Downlights



Covert Lite







Esperanza **Health Centers**

A vibrant healthcare, wellness, and community hub

As Esperanza Health Centers sought to build a visual beacon that would represent its mission in the Brighton Park neighborhood of Chicago, it partnered with architectural firm Juan Gabriel Moreno Architects (JGMA), which has a long association with projects designed to positively impact underserved communities.

JGMA designed a striking, angular building with a modern, orange facade, referencing Esperanza's brand colors. The purpose-built facility, that combines healthcare, wellness activities, and a central oasis for the community, is as lively inside as it is outside.

Focal Point donated the luminaires, giving back to a community where several of its employees reside. The team partnered with JGMA to carefully pair each area and function of the new building with luminaires that would create a visually engaging, warm, and comforting environment.

In the lobby, Focus Wall Wash was used to turn a feature wall of natural wood into the central visual touchpoint of the space. Though ceiling surfaces would remain unfinished, the use of ID+ Cylinders shifted perception by adding an element of both design and lighting, "allowing the eye to focus on light rather than exposed dark elements in the space," said JGMA senior project manager, Dan Spore. In adjacent ceiling spaces, ID+ Downlights with a matching aperture size were used to provide a seamlessly coordinated environment.

As in most modern spaces with unfinished ceilings, acoustics were also a concern. Focal Point's Seem 1 Acoustic Unlit helped address noise abatement in waiting areas and corridors without requiring additional changes to the ceiling, while Seem 1 Direct provided striking illumination.

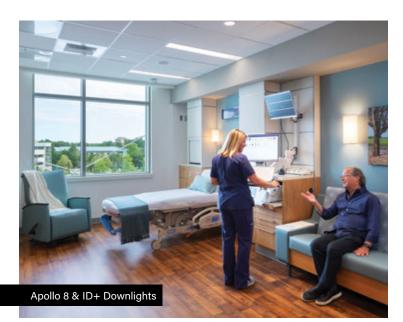
Special care was needed to illuminate therapy rooms, where Skydome luminaires were chosen for their ability to provide diffuse light and a calming environment.

Focal Point lighting and acoustic products acted as a seamless solution throughout, helping the team reach not only the project's technical goals, but its loftier ideas as well. Patients and community members are welcomed in a state-of-the-art, accessible building that not only fosters inclusivity and human comfort, but also sparks pride in the community.

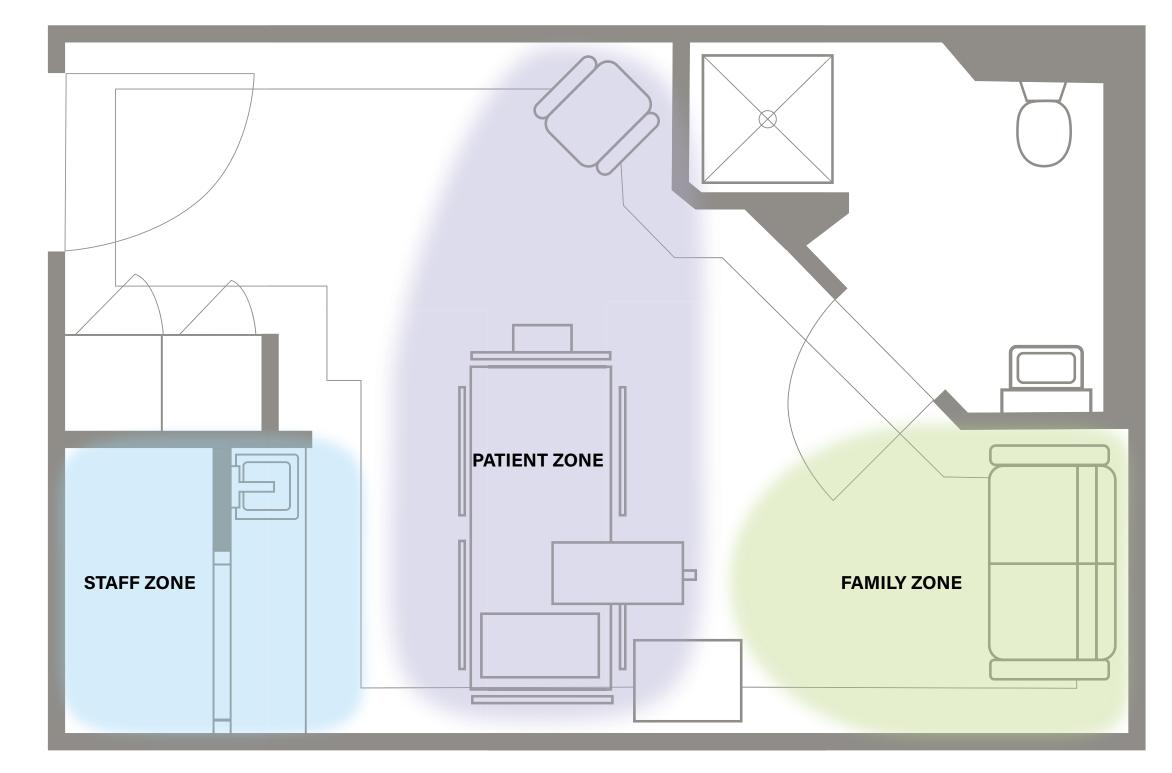


Patient Rooms

Single-bed patient rooms, the norm for new constructions, are comprised of three zones: the patient, caregiver, and family zones. Lighting design needs to specifically address each of these zones, as well as the needs of patients, family members and other visitors, and staff. It is recommended that 24-hour circadian lighting be used, with higher illuminance levels during the day, incorporating daylight whenever possible, and a darker environment for sleep at night with lighting supporting fall prevention. Controllability is paramount, providing patients autonomy while ensuring that clinical staff has easy access to examination level lighting.



"Lighting needs vary for each zone, and care should be taken to offer flexibility of controls for each zone."



STAFF ZONE

This area must provide easy access to controls as well as task lighting to daytime and nightshift clinical staff.

PATIENT ZONE

Lighting controls help patients feel more in control of their environment and maximize comfort.

ANSI/IES RP-29-20 – 8.3.1

FAMILY ZONE

A homey feel and independent luminaire controls help family members and other visitors feel comfortable.

PATIENT ZONE

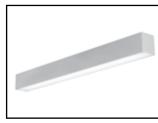
Ambient, reading, and examination light levels must be provided over the patient bed and easily controlled by the patient for the first two, and the clinical staff for the latter. Special attention should be given to minimizing glare for the patient, whether in a supine position, where it would be most acute, or in a seated position. Luminaires should also leave the ceiling unobstructed for curtains or medical equipment that may require to move above the patient bed.





Apollo 8





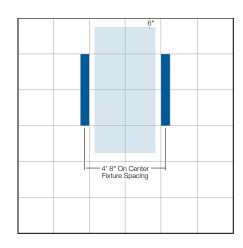
Seem 4 Recessed

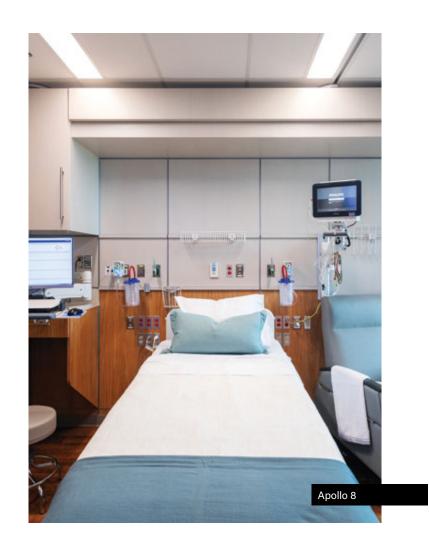
Seem 4 Wall Mount

Zephyr









"It is important to keep in mind that patients should be given control of as many environmental factors as possible. A patient's anxiety is heightened when there is a sense of no longer being in control of a situation. Therefore, providing patients with the ability to control certain aspects of their environment is important."

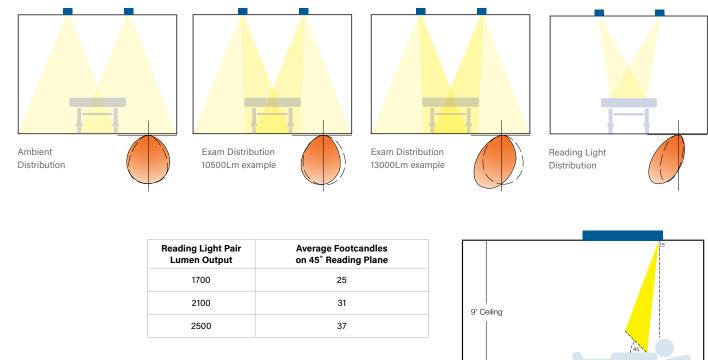
APOLLO 8 PATIENT BED PAIR





Ambient mode

Exam mode



IDEAL PATIENT ROOM

12' x 12' Room | 9' Ceiling | 3' 5" x 7' Bed Spaced 6" from wall | 4' 8" On Center Fixture Spacing

Total Patient Bed Pair	Average Footcandles on Patient Bed Lumen Output Ambient mode Exam mode Exam mode		Average Footcandles in Patient Room
Lumen Output			Ambient mode
10300	20	75	14
10400	30	75	21
10500	40	75	28
11000	20	90	14
12000	30	100	21
13000	40	100	28

Reading Light Pair Lumen Output	Average on 45° Re
1700	
2100	
2500	

ANSI/IES RP-29-20 - 8.3.1



Reading mode

STAFF ZONE

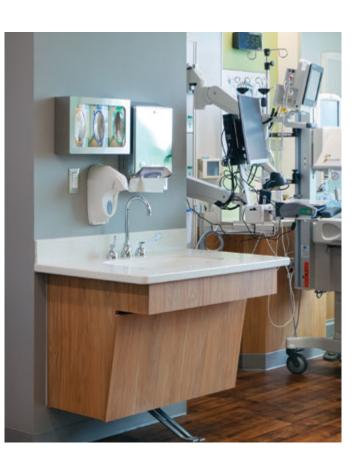
Medical staff requires task illumination for operating equipment or charting, near the patient bed and/or in a dedicated area. Controls should be located by the door and patient bed head so that they can easily be accessed.





ID+ 2.5" Downlights

ID+ 3.5" Downlights



FAMILY ZONE

This zone is used by family members and other visitors, and they should be able to control the lighting in this zone independently from the rest of the ambient lighting in the room. Slightly more decorative luminaires are often used to procure a homelike feel.

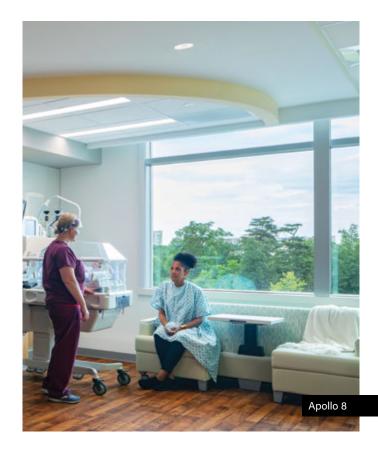




Zephyr

ID+ Downlights





Nursing Stations

Whether centrally located or de-centralized, nursing stations are hubs for staff, patients, and visitors. Thus, they should be easily identifiable while providing a mix of lighting that supports a variety of tasks, often performed on computers, tablets, or other electronic equipment. Balancing near-field and far-field illumination is critical to support nurses' activities that constantly shift from computer work to addressing the needs of patients and visitors.

Layers of light that include ambient recessed sources, such as architectural troffers or downlights, as well as pendants and space-framing accents such as cove lighting help put emphasis on nursing stations.

Circadian lighting is often a consideration for these areas, where the diverging needs of patients with a 24-hour wake/sleep cycle and those of the staff working on eight-hour shifts need to be reconciled.

"Lighting systems should be designed to support the functional task needs of the staff while also being responsive to photobiological (i.e., non-visual lighting) needs."

ANSI/IES RP-29-20 - 8.3.2.2

SUGGESTED LUMINAIRES







Seem 1 Louver



Amica 2



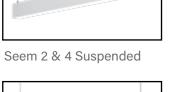


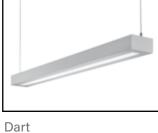






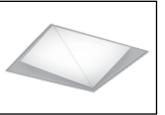




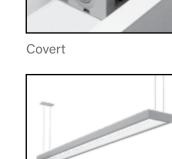




Equation 2





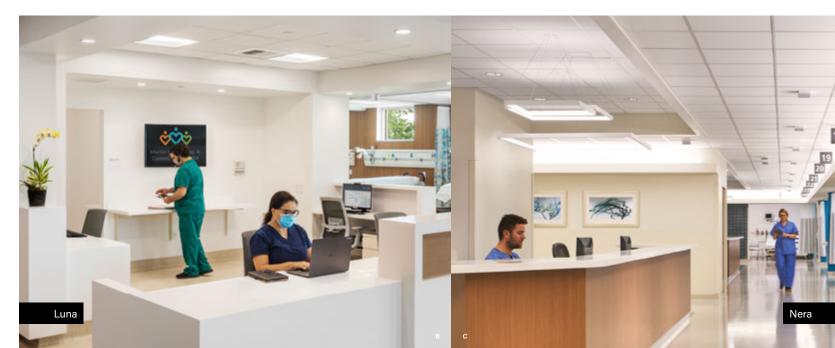








ID+ Downlights







Nera Linear

ID+ Cylinders

Inova Loudon Hospital, North Patient Tower

Promoting healing using integrated technology

Located near Dulles International Airport, the most iconic structure in Loudon County, Virginia, the North Patient Tower of Inova Loudoun Hospital took inspiration from its renowned architecture. The centerpiece of a 10-year strategic facilities master plan, the nine-story bed tower creates an entirely new broad face over the existing complex and, with it, a new image for the hospital.

Large entrance canopies and a connector bridge are composed of repeating steel supports with graceful curving forms and arching cantilevers - important references to the airport that are immediately recognizable to the community. The large expanses of glass also create openness and provide abundant natural light within the facility.

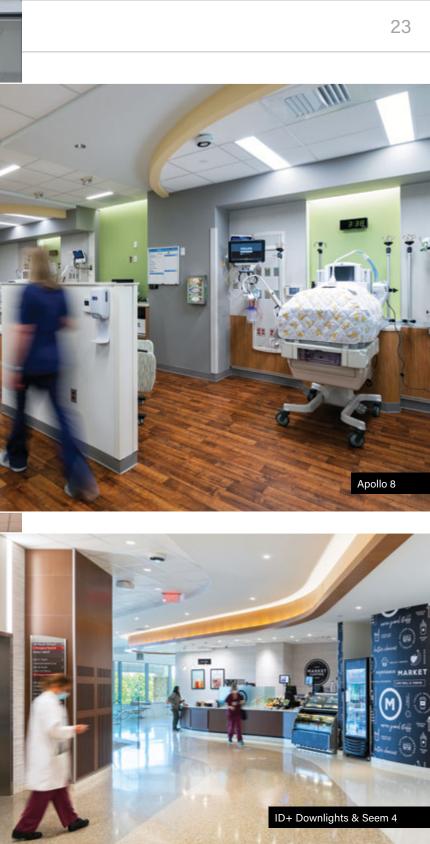
The new tower was built to promote healing with a focus on comfort and autonomy. This was accomplished by incorporating technology throughout the nine-story, 382,000-square-foot project, offering both patients and staff control of their environment.

The tower's first floor supports diagnostic services, laboratories, and a major new main entry and public facilities for the hospital. Most of the remainder of the building is comprised of a variety of new, single-bed inpatient areas. In these areas, low-voltage LED lighting integration creates opportunity for "quiet hours" established by the Inova care teams. During these hours, the building program brings the lights down to a level the nurses have chosen to ease and soften the care environment for patients, families, and staff.

Also, pillow speakers throughout the patient and family zones allow control of the dimmable LED lighting, blinds, and Getwell network access. All patient bed locations contain circadian rhythm color-tuning lighting which will be studied for its effect on patient outcomes. This integrated technology is present throughout the hospital, including within the NICU to allow parents to play and control music for their newborns to hear during their first days of life.

Continuing the mission of the six-bed, Leesburg Hospital founded in 1912, Inova Loudon aims to promote healing for the community, and over 100 years later, this means integrating technology to foster and measure positive patient outcomes.





AWARDS & RECOGNITION

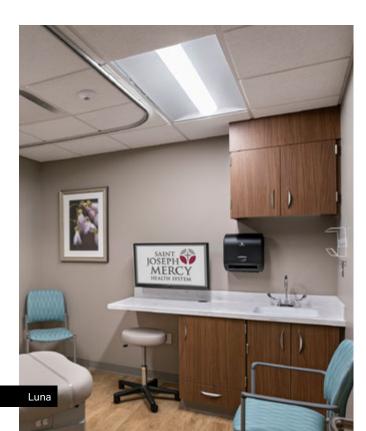
- Illuminating Engineering Society (IES), Award of Merit, 2021
- Illuminating Engineering Society (IES) Philadelphia Section, Certificate of Merit Award – Interior Lighting Design, 2021
- American Council of Engineering Companies, National Recognition Award – Engineering Excellence Awards, 2021
- American Council of Engineering Companies of Virginia, Grand Award – Engineering Excellence Awards, 2021

DIAGNOSTIC AND TREATMENT AREAS

Examination and Treatment Rooms

Lighting in examination and treatment rooms must be highly effective for the clinical staff, requiring high lumen outputs for examination-level lighting as well as proper color rendition for diagnostics. It must also quite literally consider the viewpoint of the patient, often in a supine position, therefore high illuminance must be provided by non-glary light sources.

Controls play a critical role in those spaces, facilitating optimal transition between ambient and examination lighting. Architectural troffers that provide powerful and comfortable illumination, or light sources with deep cut-offs that support ambient and task lighting with various beam spreads are ideal options.



SUGGESTED LUMINAIRES





Amica 2

Apollo 8

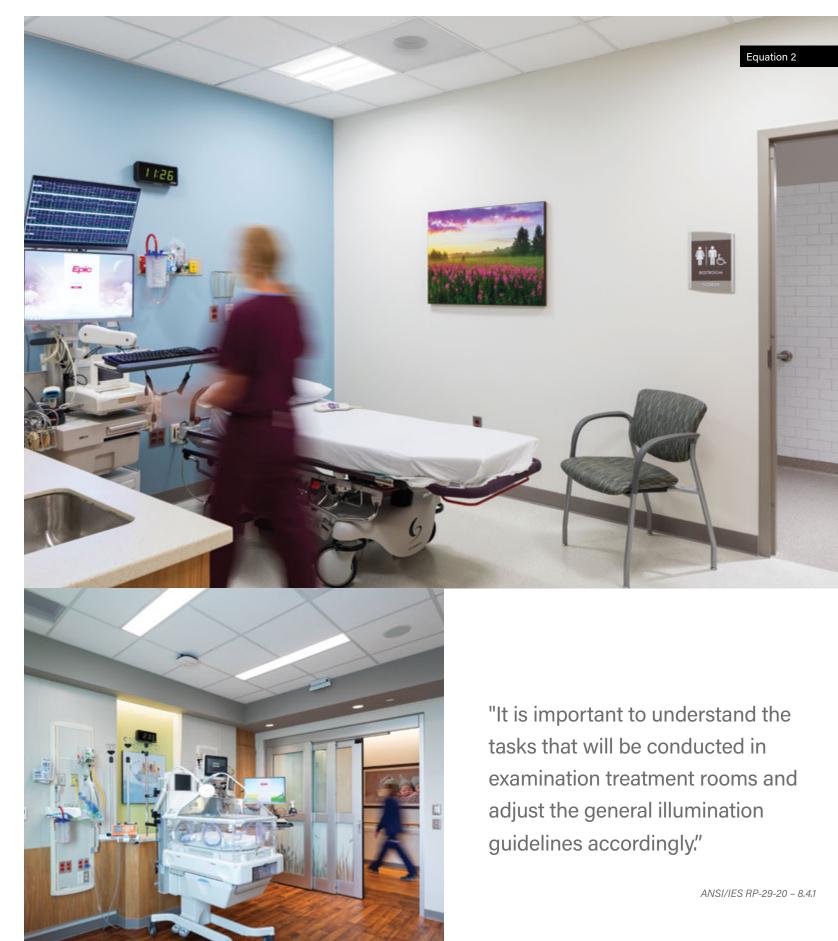






Luna

ID+ 3.5" & 4.5" Downlights



Radiology and Imaging

Radiology and imaging rooms, equipped with large and sometimes noisy equipment, can be intimidating. The lighting scheme should support patient comfort, including providing visual distraction for patients who may often be in a prone position.

Lensed recessed luminaires provide soft, even illumination and free the ceiling for equipment movement. Perimeter lighting is also a good choice to create a glow around the room or provide ambient lighting with asymmetric room fill optics. Downlights with deep cut offs and various beam spreads also support the staff with powerful and focused task lighting.

"Flexibility in the lighting design will enable the varying needs of patient setup and treatment to be met, including providing visual distraction for patients."

ANSI/IES RP-29-20 - 8.4.6

SUGGESTED LUMINAIRES







Skydome Recessed

Seem 2 & 4 Perimeter



ID+ Downlights





Apollo 8





Equation 2

Amica 2







Nivo

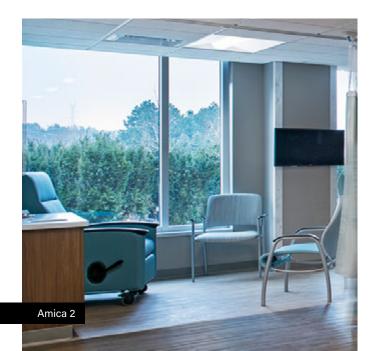
Zephyr

Infusion and Therapy Areas

Patients will often spend lengthy amounts of time in chemotherapy, infusion therapy, or dialysis treatment areas. Thus, it is important to incorporate daylight and outdoor views as much as possible, and to ensure individual controls of task lighting for patients who wish to watch television or read during treatment. These distractions and the ability to control their environment will diminish patient stress and anxiety.

Colorful luminaires or those with novel form factors can contribute to conveying a less clinical feel for recurring visitors. Acoustic lighting also supports dampening sound levels.

Light sources with high color rendering properties should also be selected to help clinical staff detect changes in a patient's skin tone, possibly indicating an adverse reaction to the treatment.



SUGGESTED LUMINAIRES



Seem 2 & 4 Recessed



Apollo 8

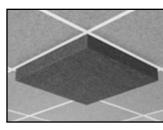


Equation 2

Seem 2 & 4 Perimeter



Luna







Zephyr





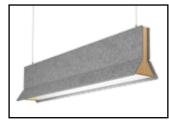
ID+ Downlights





Seem 1 Louver

Seem 1 Acoustic Trio





Eave

Blume & Zyl



"Extreme care should be given to allowing individual patient control of lighting, as well as designing access to natural views and daylight and creating a connection with the outdoors." ... "Lighting should be designed to be flexible in order to meet the various needs of the patients and caregivers."

ANSI/IES RP-29-20 - 8.4.8

Rehabilitation Areas

Lighting in physical therapy, occupational therapy, or other rehabilitation areas must take into consideration impaired mobility of patients, exercise and treatment tables where patients may be in a prone position, and the need to adequately light various equipment. In addition, patients may be required to manipulate small objects. Thus, glare must be minimized, and special attention paid to achieving uniform illuminance on horizontal planes.

Luminaires such as architectural troffers or lensed recessed linear luminaires provide comfortable, even illumination ideally complemented by daylight whenever possible.

"Patients often have balance and body-control issues that can be compounded by floor shadowing. Therefore, great care should be taken to design for consistent illuminance levels throughout the spaces."

SUGGESTED LUMINAIRES







Seem Suspended

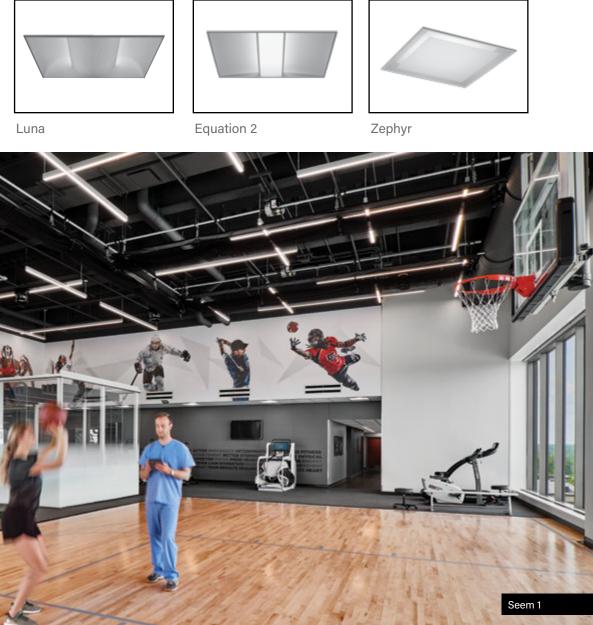






AirCore Bridge





Mora



ANSI/IES RP-29-20 - 8.4.14

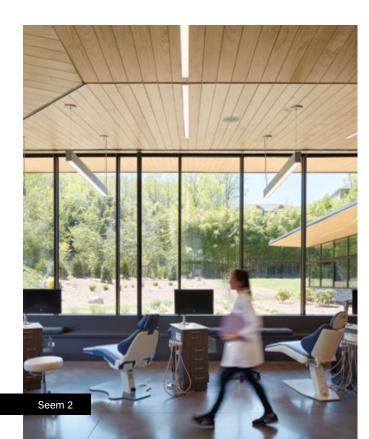




Dental Suites

Color rendering and lighting uniformity are especially important in dental suites, whether the spaces are used for examination, surgery, or as a prosthetics laboratory. It is key for the medical personnel to perceive color with precision, whether it is for matching tooth enamel or to observe changes in tissue coloration. Managing glare in patients' eyes while providing sufficient and uniform lighting between the oral cavity and the instruments is also important.

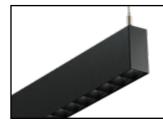
Recessed luminaires such as architectural troffers or linear luminaires, with traditional lenses or novel louvers, are excellent to mitigate glare and they also leave the ceiling unobstructed for equipment to move over the patient.



SUGGESTED LUMINAIRES







Seem 1 Louver



Apollo 8

Luna

Seem 2 & 4 Suspended





Amica 2

Equation 2





Zephyr



Martin Luther King Jr. Community Health

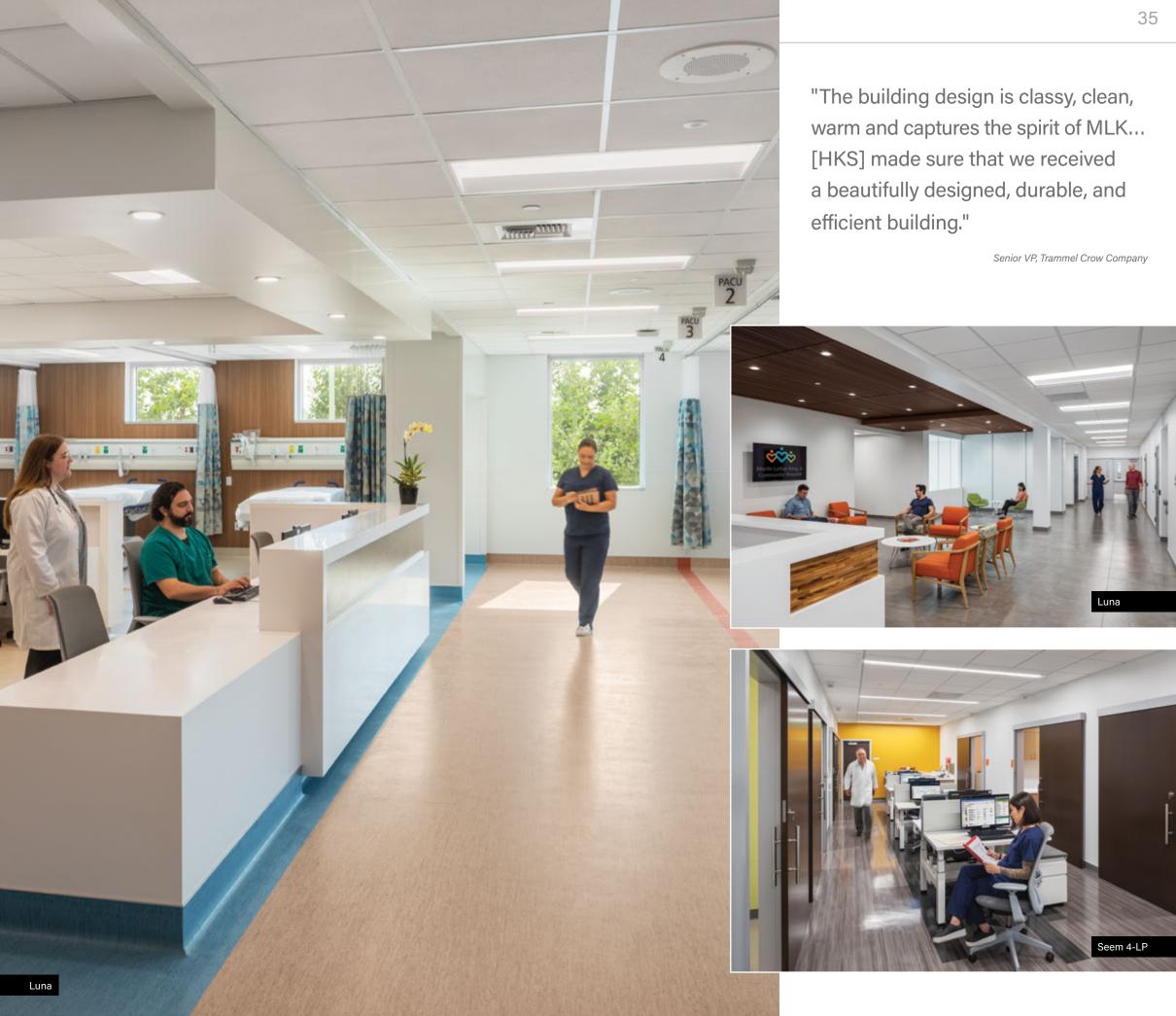
A healthcare oasis for a South LA community

Because of its location in what is considered a medical desert, the MLK Jr. Community Health system wanted HKS to create an outpatient clinic and surgery center that integrates healing with nature and provides an uplifting, dignified and accessible health services option. The overall goal was to give visitors a sense of place and belonging, that they are welcome at any time, not just when they are sick, and that while there, they will be respected and receive high-quality care, an important measure for the nearby South LA residents whose health care needs have long been overlooked.

The 50,000 square-foot, two-story building offers several, important services to the community, including a primary care clinic with exam and procedure rooms, dental, behavioral health, and provider offices, as well as an outpatient ambulatory surgery center. Additional services include a wound care suite and a telehealth program, and a multi-purpose room is used to host MLK Community Health seminars such as high-blood pressure, diabetes, healthy food awareness, and classes for young mothers.

In addition to large windows that allow plenty of light, which helps facilitate healing, the facility is outfitted with several linear luminaires, including Focus Wall Wash, Seem 4 Perimeter and Recessed, as well as Luna troffers, known for their soft, comfortable light.

The historically underserved and diverse Los Angeles area, counting approximately 1 million residents, now benefits from a bright, airy, and modern essential health care oasis.



Clinical Laboratories

Lighting in clinical laboratories serves a functional purpose where it makes working conditions comfortable and ensures the safety of laboratory personnel. As these spaces are not continually occupied, vacancy and occupancy sensors can be used for conserving energy. High obstacles such as cabinets or shelving units need to be taken into consideration when laying out the lighting plan and sensors should provide complete coverage. Color rendition that allows lab personnel to properly view specimens and interpret test results is also important.

Recessed linear luminaires and architectural troffers provide broad ambient lighting and should run parallel to workbenches to minimize shadowing over the worksurface.

SUGGESTED LUMINAIRES





Seem 2, 4, & 6 Recessed

















"The designer should coordinate luminaire locations with those of casework and equipment. Ceiling-mounted luminaires should not be placed above biosafety cabinets or fume hoods. Direct lighting should be placed parallel to the edge of the lab bench in order to mitigate shadows caused by objects within the area."

ANSI/IES RP-29-20 - 8.5.1

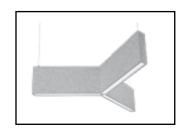
Cafeteria

Cafeterias, cafés, and food service zones are areas of respite for medical and maintenance personnel, as well as a destination where visitors and patients can recharge and relax during visits and between appointments. Streamlined recessed options such as architectural troffers or linear luminaires provide comfortable ambient lighting while integrating into the architecture. More design-forward options such as pendants, linear suspended, or even acoustic luminaires define the space with the added benefits of style, acoustical comfort, and wayfinding.

SUGGESTED LUMINAIRES



Seem 2, 4 & 6 Recessed



Seem 1 Acoustic Trio









Skydome Recessed

Skydome Surface Mount





Equation 2







Skydome Edge





ID+ Cylinders



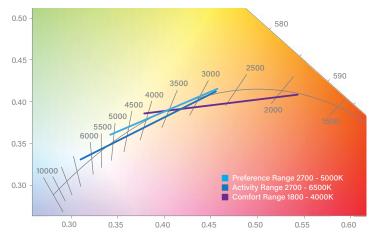
TUNABLE WHITE

Focal Point Tunable White technology enables users to recreate the range of color temperatures offered by natural light throughout the day. It helps reinforce the connection to the environment, providing a light quality that evolves like natural light does throughout the day, supporting circadian rhythms, human activity, mood, alertness, and well-being.

Three CCT ranges provide the flexibility required to suit the needs of each application, each closely following the black body curve of a natural light source. Superior light quality is achieved with a CRI of 90+.

Focal Point's Tunable White technology is easily integrated into any healthcare space thanks to the availability of several drivers compatible with 0-10V, DALI, and Lutron dimming protocols.



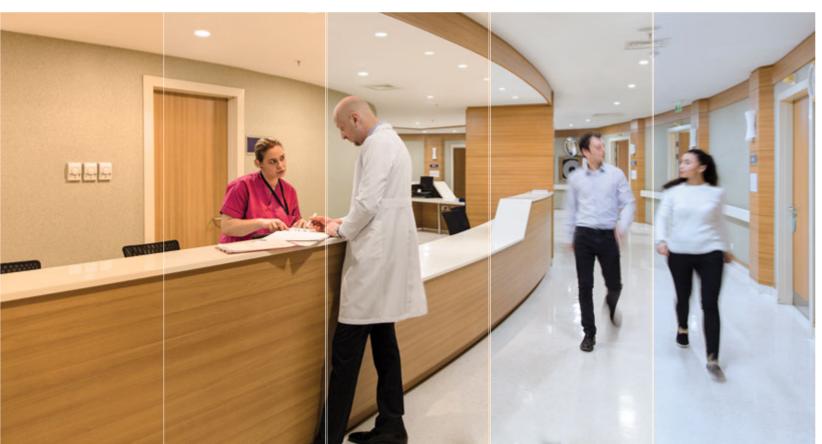


Focal Point Warm Dim technology transforms interior spaces to deliver a comfortable ambient glow, which has a calming and comforting effect on humans.

Two warm dim spectra closely mimic the black body curves of halogen and incandescent light sources, offering dimming options from 3000K to 1800K or 2700K to 1800K, while maintaining a Color Rendering Index of 90+ across the range.

Focal Point's Warm Dim technology is highly versatile and compatible with a variety of dimming protocols, including 0-10V, DALI, and Lutron, making it easy to integrate with the lighting control system of each healthcare facility.

ACTIVITY RANGE

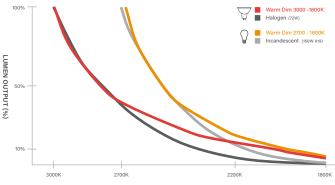


A brand of Liegrand

Unlike other lighting disinfection technologies, Indigo-Clean visible light disinfection technology uses the visible light spectrum, therefore, it is always safe for room occupants— even when performing at the highest level of disinfection.

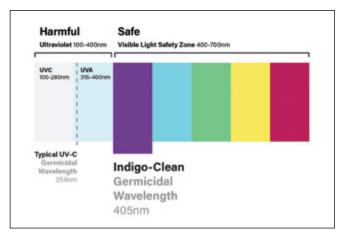
This means the lighting used throughout healthcare facilities can offer the added benefit of fighting viruses and bacteria. Indigo-Clean is safe, continuous, and effective at killing SARS-CoV-2* (the virus that causes COVID-19), Influenza-A*, Staph Aureus** and a list of pathogens that negatively impact health and wellness and rooms can remain occupied with no worries about safety.

*https://www.biorxiv.org/content/10.1101/2021.03.14.435337/1 **Rutala W., Kanamori H., Gergen M., Sickbert-Bennett E., Sexton D., Anderson D., Weber D.J., Antimicrobial Activity of a Continuous Visible Light Disinfection System, ID Week 2016.



CORRELATED COLOR TEMPERATURE (CCT)

0011205	DIMMING PERCENTAGE				
SOURCE	100%	50%	30%	15%	2%
3000 - 1800K	3000K	2800K	2550K	2200K	1800K
2700 - 1800K	2675K	2500K	2350K	2100K	1850K





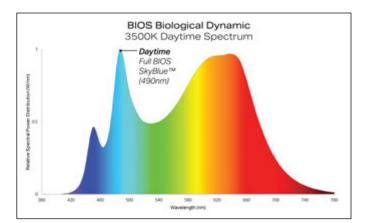


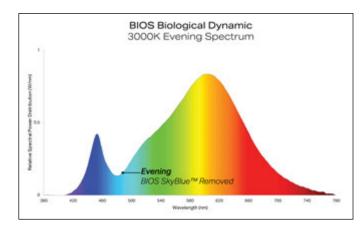
BIOS SkyBlue[™] LED circadian solutions

With the 24-hour nature of healthcare environments, both staff and patients spend an inordinate amount of time indoors without access to important light signals their bodies need, leading to circadian disruption and a variety of health issues. BIOS SkyBlue™ LED Circadian Lighting Solutions promote health and wellness using brilliant, high-quality architectural white light.

With a peak energy emission at 490nm, BIOS SkyBlue offers the highest melanopic ratio at standard color temperatures (3000, 3500K, 4000K) for comfortable and energy efficient illumination that supports healthy circadian rhythms.

BIOS offers four different LED circadian lighting solutions — Biological Static, Biological Dynamic, Biological Tunable, and Biological Dim-to-Warm – each ideal for specific healthcare environments and operating hours. All are compatible with standard dimming protocols and meet the Observation Index (COI) requirements for visual assessment, providing a COI10 of 3.3 at 3500K and a COI10 of 1.5 at 4000K and a R9 of 90+. BIOS illuminated luminaires offer many benefits: they help increase staff productivity, improve medical diagnostics and patient outcomes, and reduce energy costs.





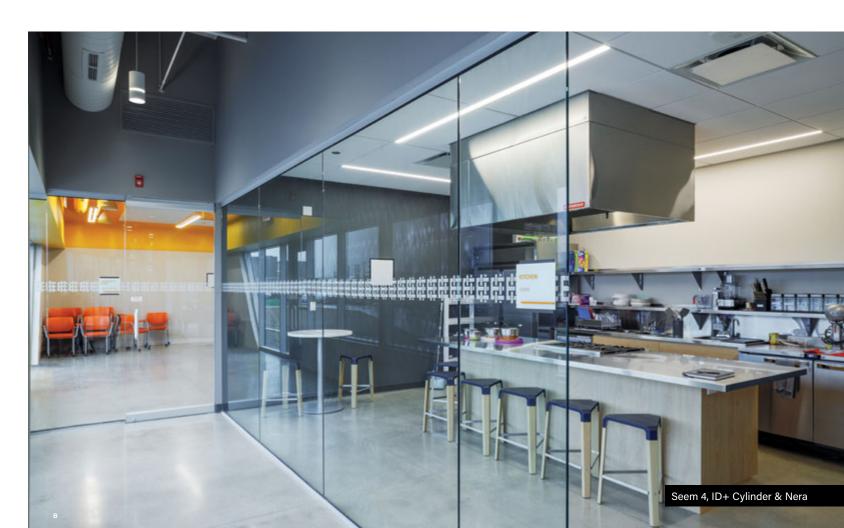
The Underwriters Laboratory (UL) designates as wet location an area in which water and other liquids may drip, splash, or flow on or against the electrical components of the luminaire. Focal Point wet location luminaires are tested to be suitable for use in wet location rated indoor or outdoor environments such as restrooms or outdoor canopies.

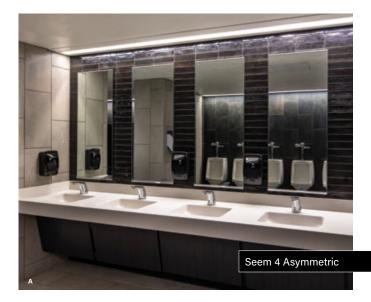
Cyanosis Observation Index (COI)

Cyanosis is the medical term for a bluish color of the skin and the mucous membranes due to an insufficient level of oxygen in the blood. It can be an indicator of serious conditions such as compromised lung or heart function, resulting in lower oxygen levels in the blood. The ability of medical personnel to detect cyanosis can be critical for the well-being of patients. The COI of a light source has been established as the parameter that determines its suitability for visual detection of cyanosis.

To ease the specification of our luminaires in healthcare facilities, Focal Point has calculated the COI of a large portion of our portfolio and has included this information on the cut sheets of several architectural troffers, linear luminaires, downlights, cylinders, and pendants. Look for a note in the LED System section on the back of our cut sheets.









CONNECTED SOLUTIONS

Focal Point Connected Solutions provide flexibility in meeting the needs of healthcare facilities by integrating with several whole building lighting control systems. A variety of sensors, drivers and other components can be specified that allow the luminaires to communicate with wired and wireless networks.

Daylight harvesting, occupancy sensing, integration with HVAC systems, and individual controls enable the monitoring and modulating of light levels and temperature to save energy, reduce costs, and meet the needs of patients, visitors, and staff.

Our multi-partner program allows Connected Solutions enabled luminaires to integrate with several building lighting control systems to meet the needs of each facility.

Benefits include:

- Allow for daylight harvesting, occupancy sensing and/or temperature control
- Integrate with new and existing whole building lighting control systems
- Adapt to individual preferences and needs with scene control functionality
- Increase occupants' comfort and well-being
- Reduce energy consumption and maintenance costs
- Increase safety and security



CURBELL LOW VOLTAGE CONTROLLER

The use of low voltage controls allows for patients to control light levels through a pillow speaker while also providing flexibility for healthcare professionals to control the luminaire from a wall switch. The low voltage controller is designed to operate up to three separate loads for ambient, exam, and reading light levels and step or smooth dimming capabilities are available. Smooth dimming allows for a controlled progression of

light output starting at 100% and dimming down to 1% with a simple push and continuous hold of a button.

Step dimming allows for a controlled progression of light output in four steps with 25% increments: 100%, 75%, 50% and 25% with simple push button functionality.

The low voltage controller accepts a single universal voltage input of 120-277V. Refer to luminaire cut sheets for specification information.

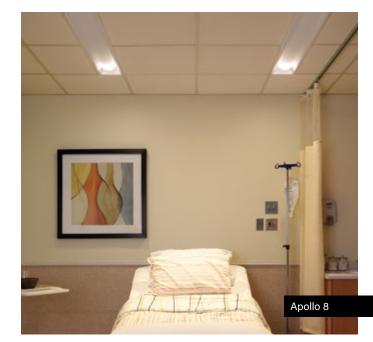


WATTSTOPPER®

Legrand Wattstopper Digital Lighting Management

Legrand's Wattstopper DLM lighting control products allow for the flexibility to create energy-efficient designs to fit into new or existing healthcare settings that enhance the healing environment for patients, families, and providers. Change light levels in patient rooms, or schedule or control lighting in corridors and at nurses' stations to provide adequate lighting for visiting hours and afterhours. Integrate Legrand's shading controls into a lighting control system to improve energy efficiency, take advantage of natural daylight levels, and improve overall interior building aesthetic, creating more pleasant spaces for occupants.





CREDITS

Aurora Healthcare	Medpace Offices
Location: Greenfield, Wisconsin	Location: Cincinnati, Ohio
Architect: HGA	Architect: Gresham Smith
Photographer: John Magnoski	Photographer: Chad Baumer
BC Children's & Women's Teck8	ProMedica Toledo Hospital1, 3-B, 11-A, 36
Acute Care Center	Generations Tower
Location: Vancouver, British Columbia, Canada	Location: Toledo, Ohio
Architect: ZGF	Architect: HKS
Photographer: Ed White	Photographer: Thomas A. Ethington
Blue Ridge Orthodontics	St. Joseph Hospital
Location: Asheville, North Carolina	Location: Ypsilanti, Michigan
Architect: Clark Nexsen	Architect: Harley Ellis Devereaux
Photographer: Mark Herboth	Photographer: John D'Angelo
DeVry University	Rice Energy
Location: Downers Grove, Illinois	Location: Pittsburgh, PA
Architect: VOA Associates	Architect: NEXT Architecture
Photographer: Steve Hall, Hedrich Blessing	Photographer: Denmarsh Photography
Esperanza Healthcare	Rush Oak Brook Outpatient Center
Location: Chicago, Illinois	Location: Oak Brook, Illinois
Architect: Juan Gabriel Moreno Architects (JGMA)	Architect: CannonDesign
Photographer: John Sternisha	Photographer: Craig Dugan
Inova Loudoun HospitalCvr, 2-A, 5-A, 15, 16, 18, 19,	Rush Road Home Intensive Outpatient
North Patient Tower 21-A, 23, 25, 37, 45	Location: Chicago, Illinois
Location: Leesburg, Virginia	Architect: Chicago Design Network
Architect: HDR	Photographer: Scott Shigley
Photographer: HDR	
	University of Cinncinati Locker Room 43-B
Lucile Packard Children's Hospital	Location: Cinncinati, OH
Location: Palo Alto, California	Architect: MSA Design
Architect: HGA Architects and Engineers, Perkins+Will Photographer: Emily Hagopian	Photographer: Tyler Gentry
Martin Luther King Jr	

Community Health Location: Los Angeles, California Architect: HKS Photographer: Lawrence Anderson Studio



FOCAL POINT[®] Bringing It All To Light[®]



©2023 Focal Point, LLC. 4141 S. Pulaski Road, Chicago, IL 60632 | T 773.247.9494 | www.focalpointlights.com.

All rights reserved. "Focal Point", "Blume", "AirCore Bridge", "ID+", "Mora", "Seem", "Skydome", "Skydome Edge", "Bringing It All To Light" and the light-ray graphic are trademarks or registered trademarks of Focal Point, LLC. Indigo-Clean is a registered trademark of Kenall Manufacturing Co., a Legrand company. SkyBlue, BIOS are registered trademarks of Biological Innovations and Optimization Systems, LLC. Visit focalpointlights.com for specifications and other details on our entire Focal Point catalog.