



Best Practices for Healthcare Lighting  
**Intensive Care Unit**



**SCOTT**

Regional Sales Manager, Central



**CHRIS**

VP Sales & Marketing



**CHAD**

National Sales Manager

# Kirlin's Key Focus Areas

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# A Legacy in Healthcare Lighting



**1970s**

Kirlin developed the recessed motorized exam light with Dr. DeBakey



**1980s**

Kirlin provided non-ferromagnetic lighting for the world's first MRIs

# A Legacy in Healthcare Lighting



**Today**

Kirlin lighting is trusted by 19 of the U.S. News's Top 20 Honor Roll hospitals

# Areas of Expertise

LOBBY/  
ATRIUM

OR &  
HYBRID OR

CATH  
LAB

MRI

PATIENT  
ROOM

ICU

NICU

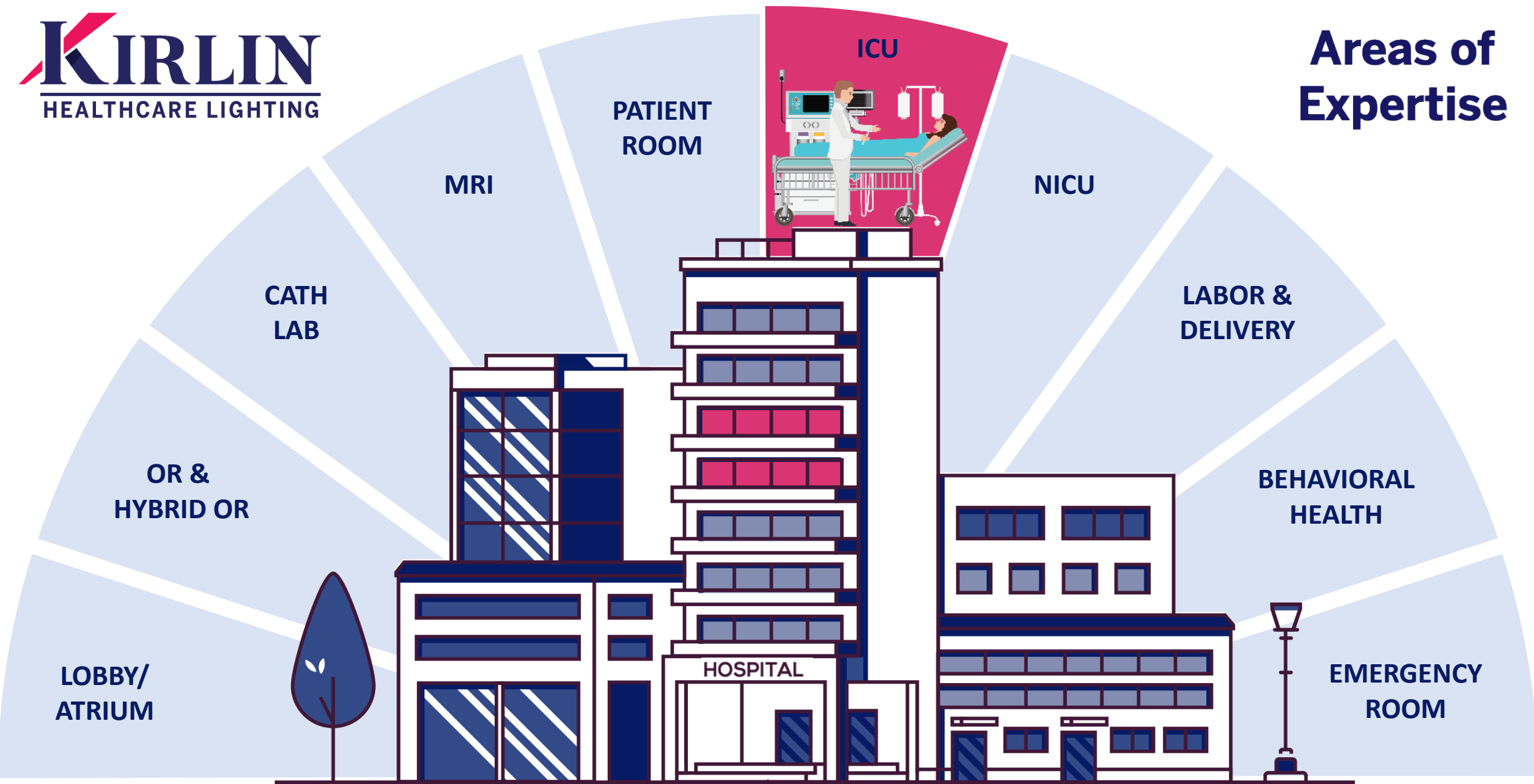
LABOR &  
DELIVERY

BEHAVIORAL  
HEALTH

EMERGENCY  
ROOM



HOSPITAL



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ROOM

HOSPITAL



# What is the Intensive Care Unit?



You might hear:

**“The area of the hospital dedicated to the most critically ill patients.”**

We prefer to say:

**“The department for patients who need ventilators, blood pressure support, cutting edge treatments, and close monitoring.”**

# Who is Admitted to the ICU?



- **Patients facing lung issues**
- **Patients with cardiac problems**
- **Patients with serious infections**
- **Patients who require close monitoring**



# What are the Common Types of ICU?



## MICU

Medical Intensive Care Unit



## Neuro-ICU

Neurological Intensive Care Unit



## SICU

Surgical Intensive Care Unit



## PICU

Pediatric Intensive Care Unit



## CCU

Cardiac Care Unit



## NICU

Neonatal Intensive Care Unit

# Types of ICU



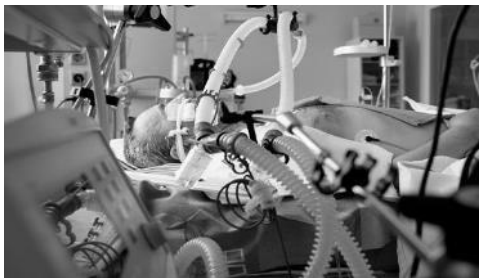
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Kirlin Best Practices: 1/15/21

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# Three Major Trends Affecting ICU Design Today

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**1**

**Lines are Blurring between Patient Room, ICU, and Operating Room**

**2**

**The World is Recognizing the Importance of Sleep in the ICU**

**3**

**The COVID-19 Pandemic is Changing ICU Operating Procedures**

# 1. Lines are Blurring

“Conventional” Hospital Design:



## Patient Room

- Purpose-built for lower risk patients
- Space for family built into room design, extensive visitor hours
- Private restrooms and showers in each patient room



## ICU

- Dedicated rooms with sophisticated equipment
- Limited surgical procedures in the ICU
- No bathrooms or showers
- Very limited visitor hours



## Operating Room

- Most surgical procedures happen in the OR
- Sterile environment required for ultimate infection control

# 1. Lines are Blurring

Modern Expectations and Features of an ICU:



**ICU**

Dedicated rooms with sophisticated equipment

## Patient Room Features

- Addition of “family zone” and open visiting hours
- Addition of restrooms and open showers to aid with recovery

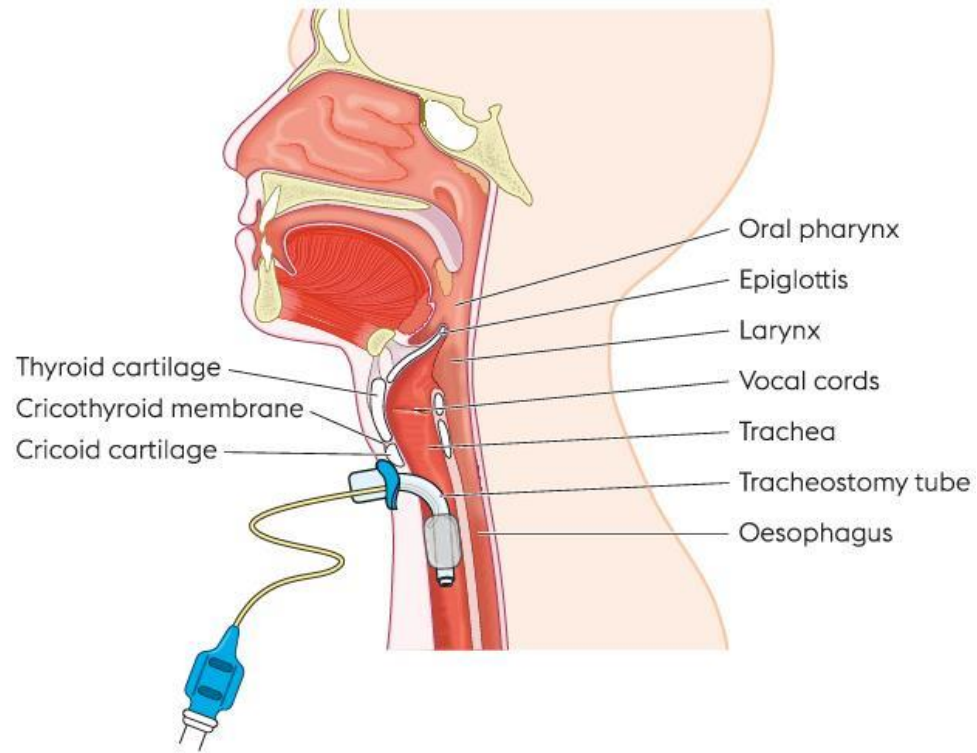
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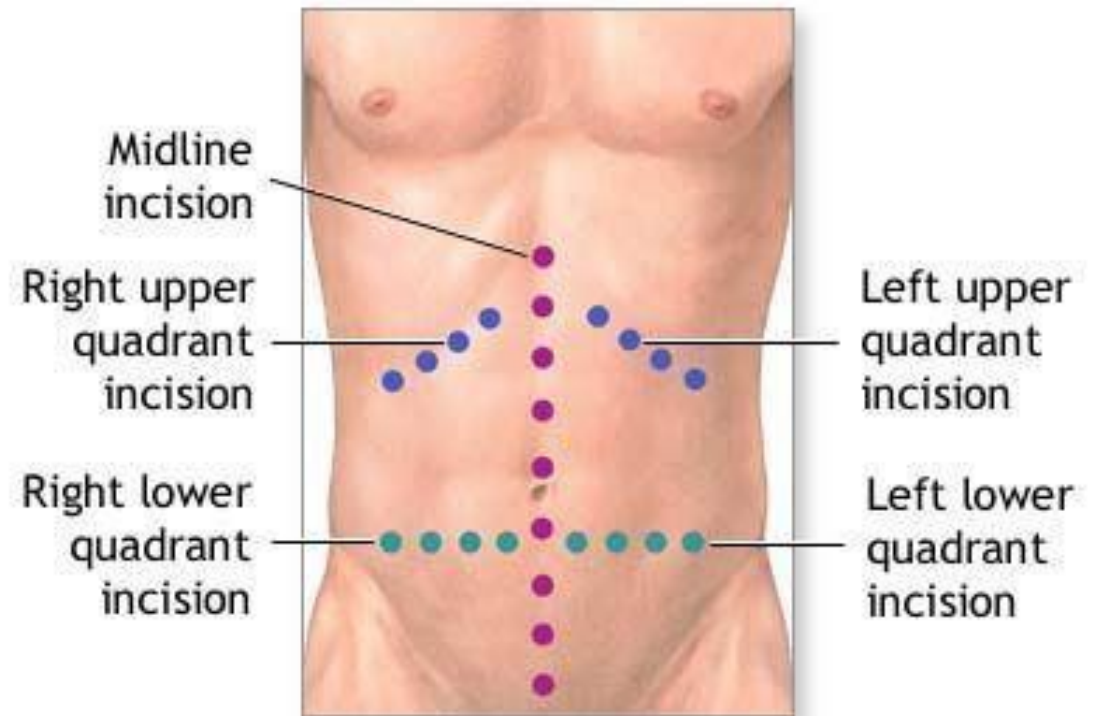


# 1. Lines are Blurring

Increasingly Common ICU Procedures:



**Percutaneous Tracheostomy**



**Laparotomy**

## 2. The Value of a Good Night's Sleep

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### **Sleep deprivation in the ICU has been linked to:**

- Poor pulmonary outcomes
- Abnormal immune function
- Dysregulated endocrine function
- ICU delirium

## 2. The Value of a Good Night's Sleep

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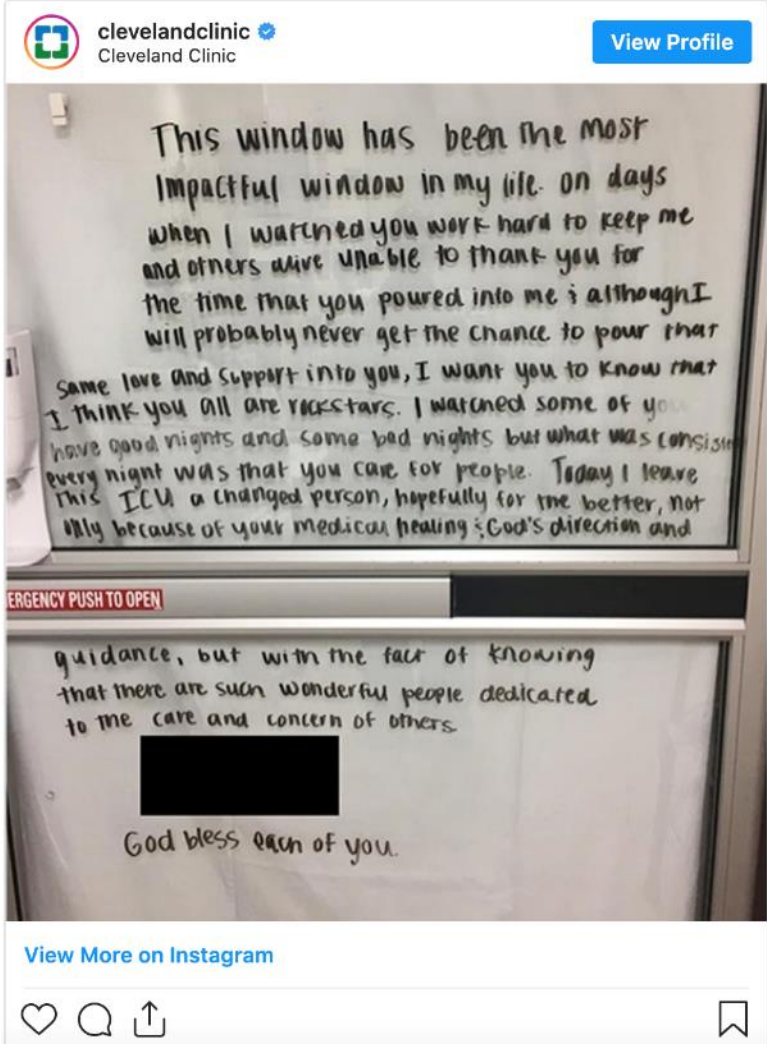


### **Sleep Promotion in the ICU:**

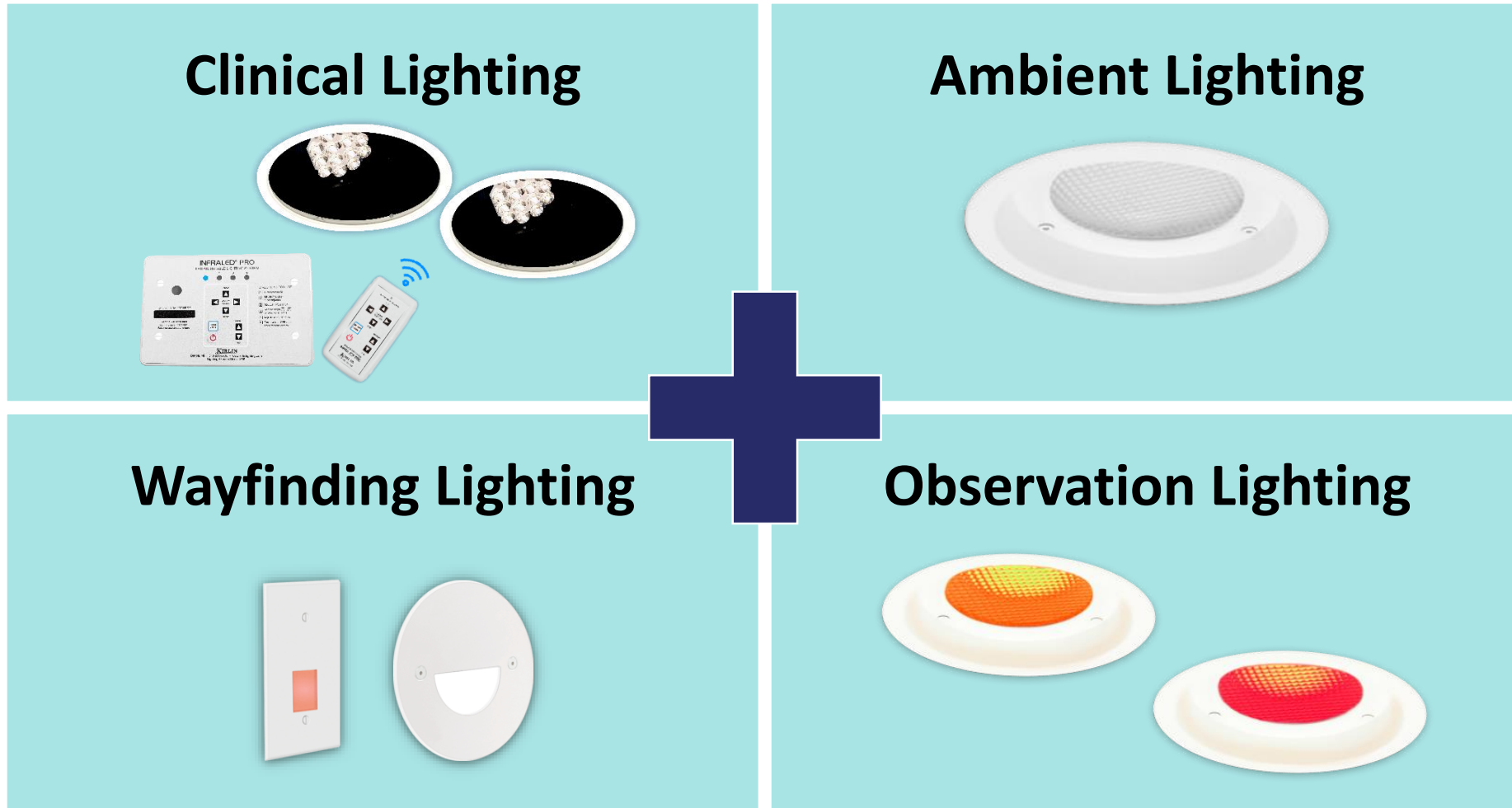
- Judicious use of sleep-disrupting medications
- Noise reduction at night
- **Proper lighting during the day and at night**



# 3. The Lasting Impact of COVID-19



# Best Practices: Lighting the Modern ICU



# Clinical Lighting for Intensive Care



# Clinical Lighting in the ICU

They will have this...



Don't add this...



# PRO 45 and PRO 35: Clinical Lighting for ICU

Kirlin Lighting's INFRALED® PRO 45 and PRO 35 provide ideal lighting for the ICU

## Enhanced Visual Acuity

- 360° rotation and up to 45° tilt for lighting on surgical or visual exam site
- Fully dimmable & remote-adjustable



## A Safer Environment

- Fully recessed
- Sterile and easy to clean



## Improved Patient Comfort

- Replaces imposing boom lights



# INFRALED® PRO: Better than the Boom!

## Boom-Mounted



- Difficult to clean or disinfect
- Often under-powered
- Physical hazard with drift issues

## Portable



- Difficult to clean or disinfect
- Often under-powered
- Impossible to find
- Trip & fall hazard

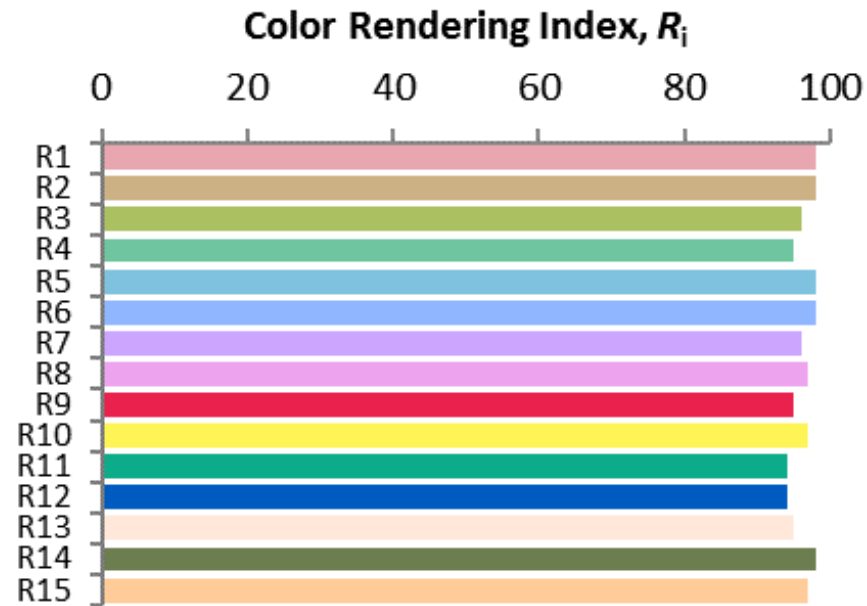
## INFRALED® PRO



- Fully recessed with IP66 trim & anti-microbial finish
- Easy to disinfect (luminaires & controls)
- One touch direction and intensity control

# High CRI in Multiple Chromaticities

The difference is **95 CRI** with ultra-high **R6, R9, R13** and **R15**



## 3 Chromaticities (Color Temperatures)

**3500K**

Mid-White

Labor/Delivery  
NICU

**4100K**

Cool White

ICU  
Cath Lab

**5000K**

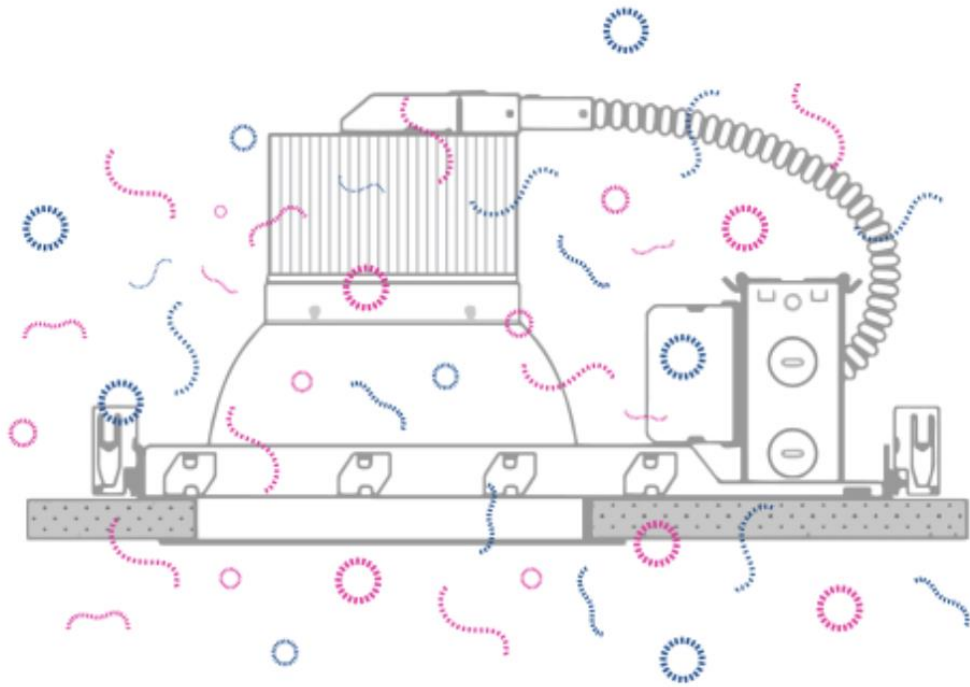
Ultra-Cool White

EP Lab  
Hybrid OR



# Ambient Lighting for Intensive Care

# Infection in the Hospital

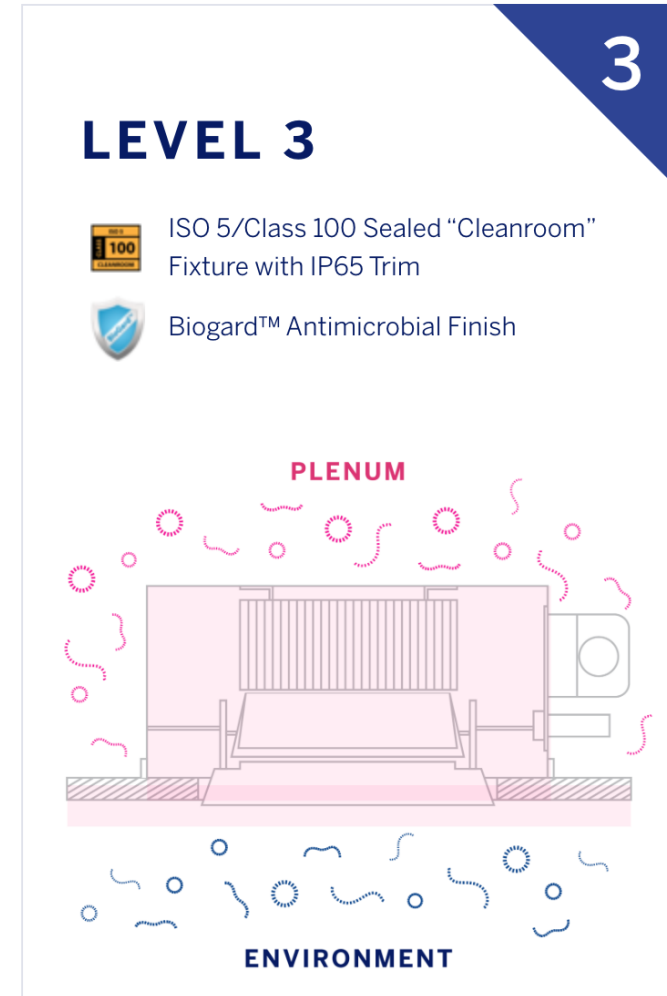
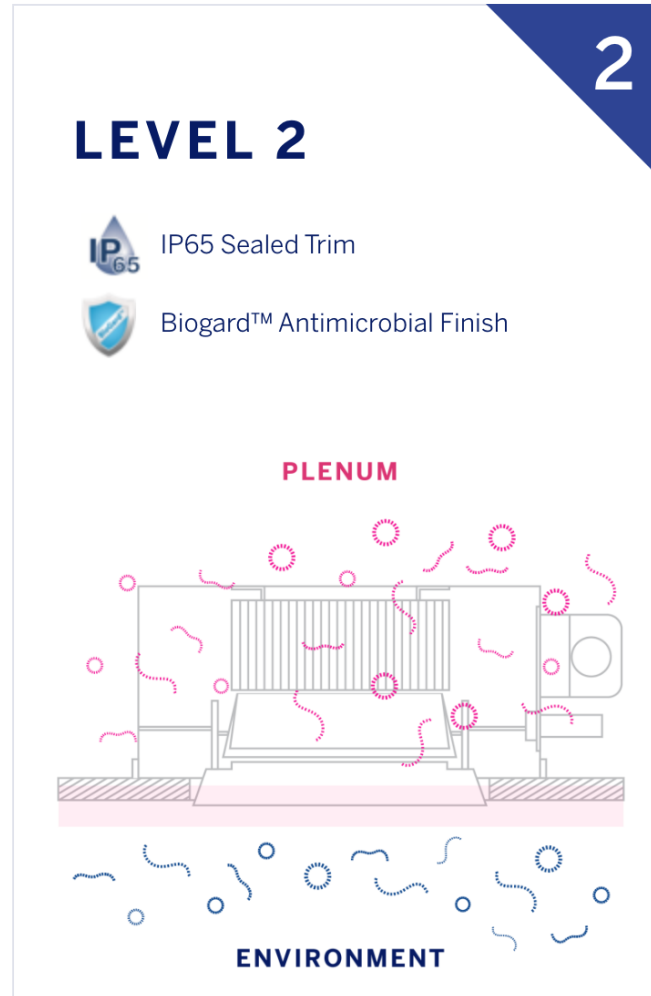
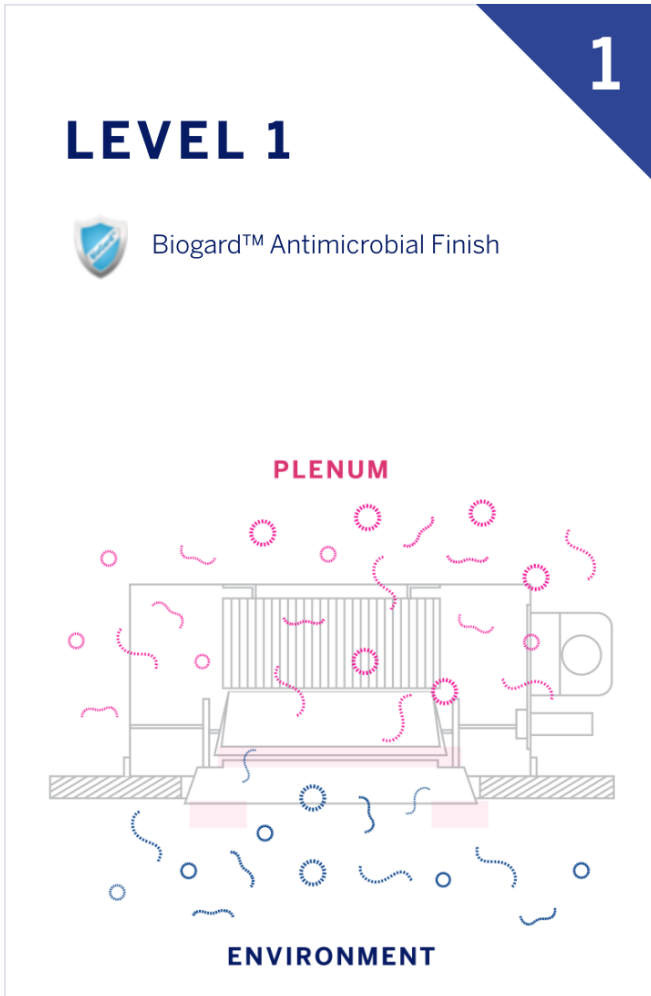


NON-KIRLIN DESIGN

## THE PROBLEM

Without lensing, gasketing, or a sealed housing, pathogens and bacteria from the environment mix freely with pathogens and bacteria from the plenum, increasing the risk of widespread infection throughout the hospital.

# Three Levels of Infection Control



# Kirlin Cleanroom Lighting in the OR: Level 3



**MRR-08835**



BioGard Antimicrobial Finish



IP65 Ingress Protection



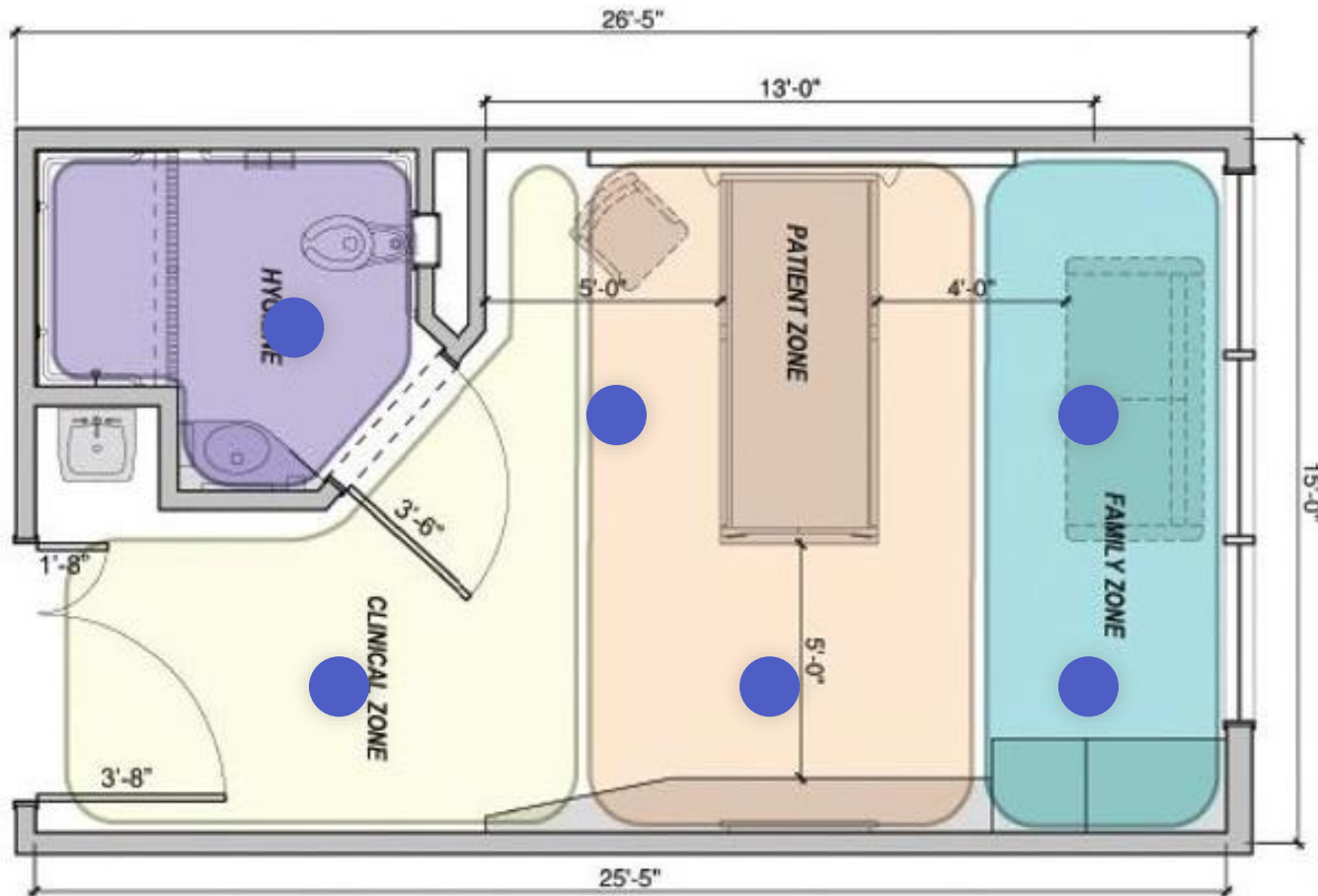
ISO 5 / Class 100 Cleanroom



Color-Specific Wavelengths



# Kirlin Ambient Lighting in the ICU



## ● Ambient Downlights

- Lensed 6" Healthcare Downlight
  - Antimicrobial Finish
  - IP66 and Clean Room Rated
  - Available in Static White or Tunable White



2700 K

3000 K

3500 K

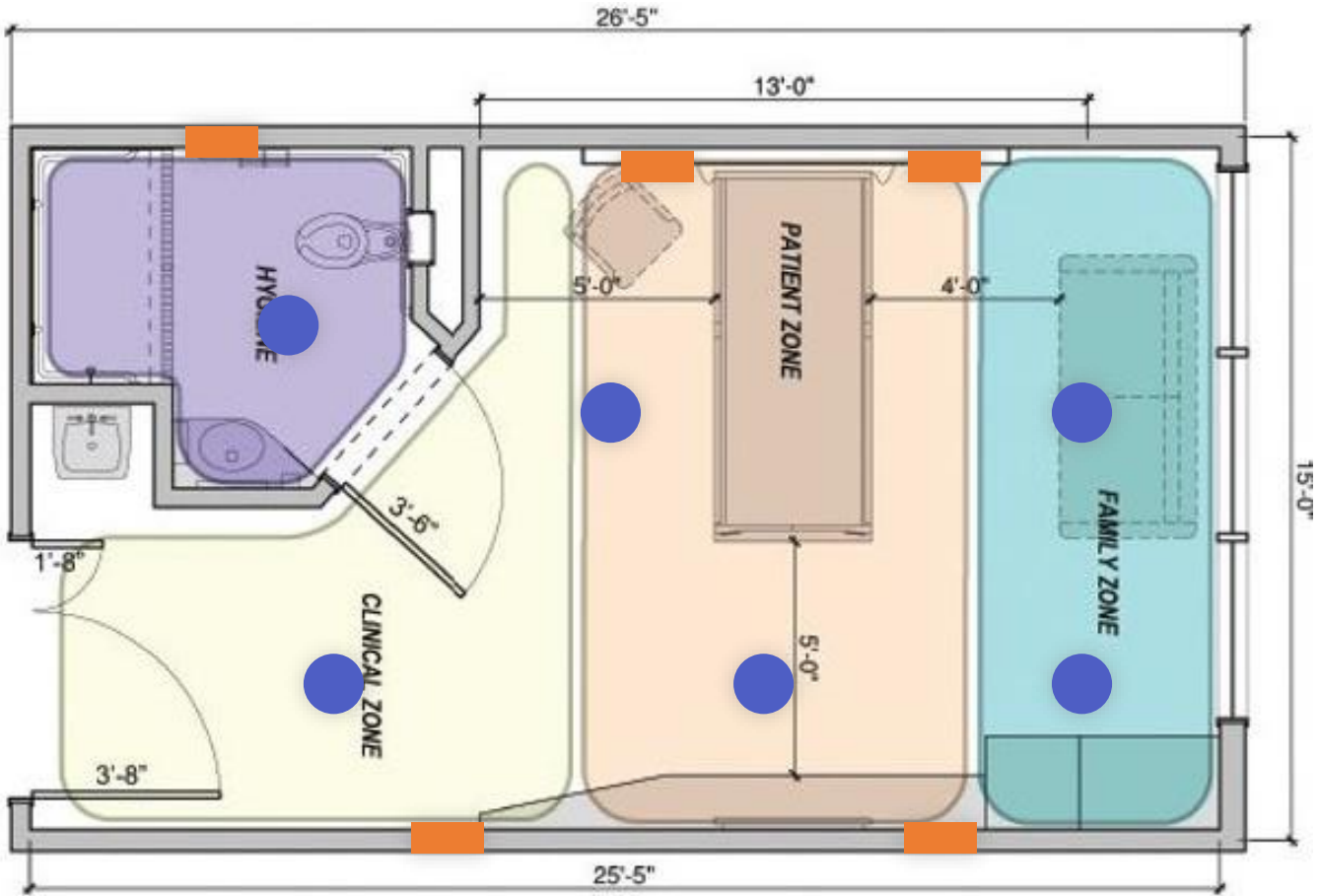
4100 K

5000 K

Tunable White: 2700-6500K

# Wayfinding Lighting for Intensive Care

# Wayfinding in the ICU



● Ambient

■ Wayfinding

- NightLights (including wet-listed), ChartLights



# Observation Lighting for Intensive Care



# Promoting Sleep at Night?



# Sleep-Promoting Features Keep Light Levels Low...



**Switchable Glass**



**Curtains/Shades**

...until the Nurse/Doctor Need to Observe the Patient



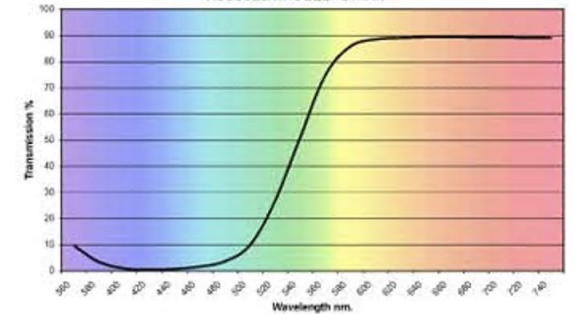


# Kirlin Night-Time Observation Light

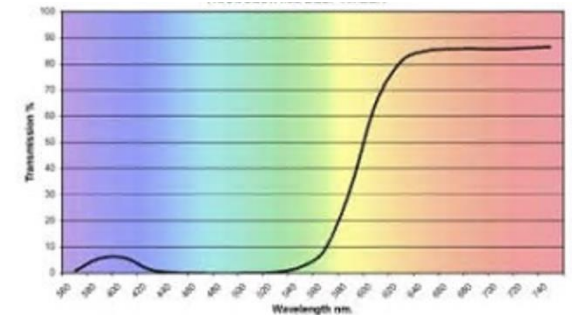
- Circadian-Supporting **Orange/Yellow** or **Orange/Red** suppress blue light
- Switched outside or inside the room
- Enables the nurse or doctor to perform non-disruptive nighttime tasks in the room
- Permits regular assessment of patient's status without entering the room
- IP66 and ISO 5 / Class 100 Clean Room rating optional



**MRV-06864-OYF**



**MRV-06864-ORF**

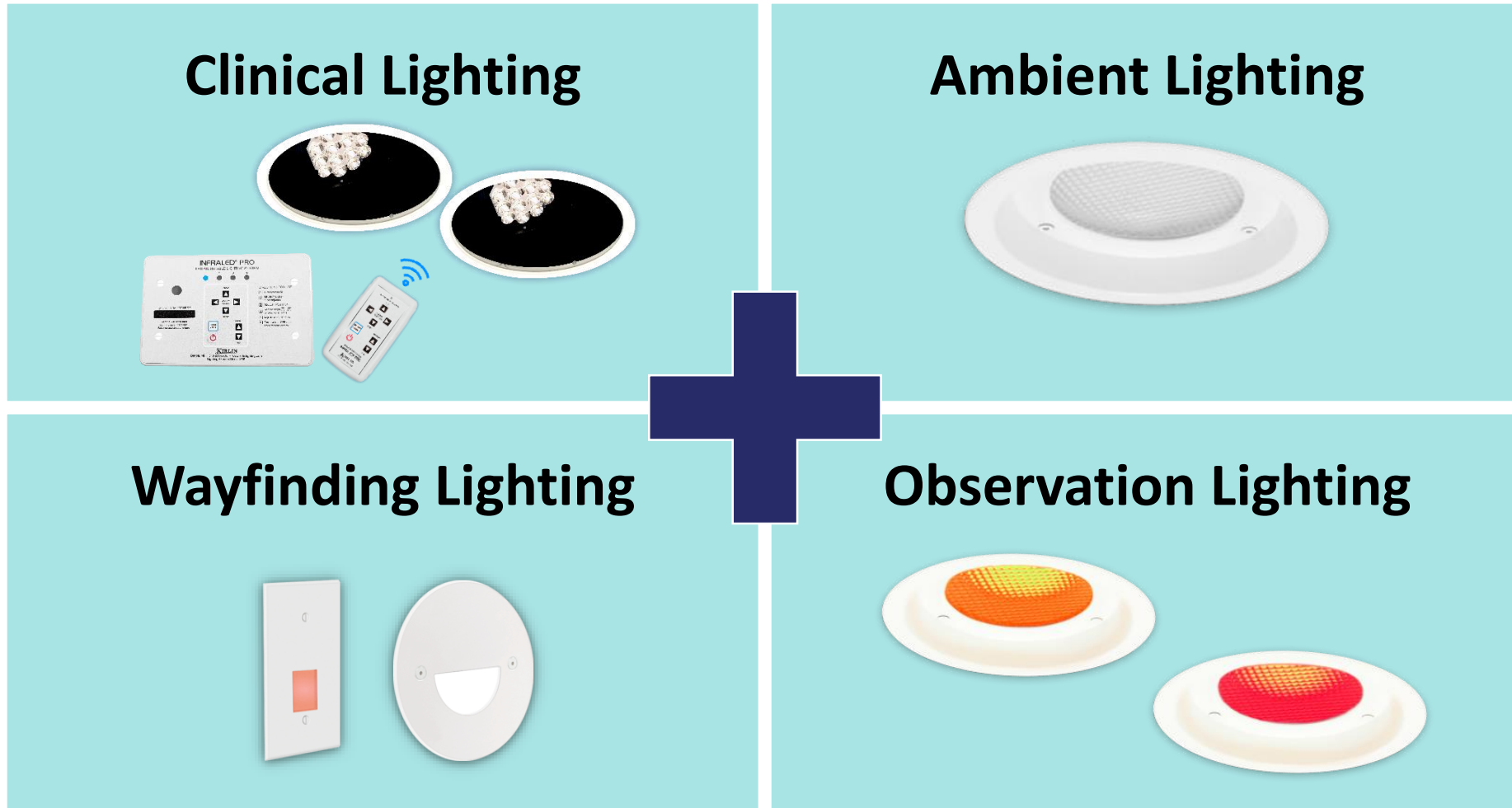




# Kirlin Night-Time Observation Light



# Best Practices: Lighting the Modern ICU



# Join Us Every Month, or On Demand!



# Questions?