Correctional LED Luminaires
Proven Solutions to Promote Staff & Inmate Safety
Kenall Correctional Lighting Products: Promoting Security and Safety of Staff and Inmates

Kenall is an acknowledged leader in correctional and behavioral health lighting, thanks to thoughtful design, heavy-gauge materials and compliance with the latest in IES lighting level recommendations. Today, Kenall luminaires provide more than just light: with features such as color tuning and Indigo-Clean™ Technology, they can help to create a space that is cleaner, more comfortable and conducive to staff and inmate safety.

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MightyMac™ – Leading the Way in Best Practices for Correctional Lighting

In order to ensure that correctional facilities always have access to the most appropriate lighting solutions, Kenall regularly reviews and responds to the latest state and federal construction recommendations. Although these entities each develop their own set of specifications, certain criteria have become acknowledged as “Best Practices” for lighting security detention facilities.

Current Correctional Lighting Best Practices

There are two basic housing styles:
• Clamshell
• Hinged-Door
You’ll find the features and benefits of both styles on pages 4-5.

Material Selection: This pertains to both housings and lenses. A chart showing the materials and gauges recommended for different security levels can be found on page 6.

Lighting Levels: Recommended levels of illumination for most security detention facility areas are published in the Illuminating Engineering Society (IES) Handbook. Best practices for cell lighting levels have also been developed by the American Correctional Association (ACA) and the Federal Bureau of Prisons. These recommended cell lighting levels can be found on page 6.
**Best Practice: Clamshell Style**

The clamshell-style housing presents a simple set of solid surfaces that discourage tampering: there are no hinged doors, crevices or exposed hinges to promote vandalism.

Features unique to clamshell housing style:

- Irretrievable blade trap/contraband drop slot
- Internal hinge (2’ or full length)
- Hidden baseplate
- Housing hinges from either side of baseplate
Best Practice: Hinged Door Style

The hinged-door style luminaire uses a rigid steel housing as a foundation for a die-formed, work-hardened steel door, which fully captures the lens and secures it to prevent unauthorized entry.

Features unique to hinged door style:

- Designed to be caulkable (e.g., Pecora Dynapoxy or Sika Dural)
- Full-length, external hinge for ease of servicing
- Cell fixtures feature internal hinges
- Available with knockouts for surface conduit

Vertically adjustable, continuous "Z"-bracket lens retention system is secured to housing with thru-studs - 6" maximum spacing.

Slope-sided design maximizes resistance to physical abuse.

Optional completely concealed hinging prevents fixture tampering.

TIG-welded housing with no post grinding for added strength.

Optional removable power tray with quick disconnects and fixture housing design reduces installation and maintenance time.

Fully recessed fasteners resist gripping/prying and prevent unauthorized fixture entry.
Lighting Levels, Materials & Gauges

Kenall fixtures meet or exceed every security requirement for their intended application. Whether a minimum, medium, maximum, or super-maximum application, our fixtures are engineered to resist everything from the most violent abuse to the cleverest attempts at tampering and concealment.

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Recommended Lighting Levels

These optical systems are specifically engineered to provide Illuminating Engineering Society (IES), American Correctional Association (ACA), and Federal Bureau of Prisons (FBOP) recommended footcandle levels for their intended applications.

<table>
<thead>
<tr>
<th>Recommended Minimum Lighting Levels (Footcandles)</th>
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<td>Application</td>
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<td>Cells</td>
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<td>Cafeterias</td>
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<td>Recreation Areas</td>
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<tr>
<td>Sally Ports</td>
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</tbody>
</table>

* Grooming and desk area only
Security Detention Luminaires At-a-Glance

Ceiling Mount Luminaires

MightyMac™
SSA/SSB/SSC/SSD Series
Surface/Clamshell
Page 24

MightyMac
SDSA Series
Surface/Hinged Door
Page 25

MightyMac
SCA/SCD Series
Surface/Clamshell
Page 26

MightyMac
SDA/SDD Series
Surface/Hinged Door
Page 27

MightyMac
SCT Series
Surface/Clamshell
Page 28

MightyMac
SCH Series
Surface/Clamshell
Page 28

MightyMac
RMCA Series
Recessed Ceiling-Mount
Page 30

MightyMac
RMCD Series
Recessed Ceiling-Mount
Page 30

Millenium™
6" Flush Downlight
Ceiling Mount
Pages 31

Nova™
N524/N548 Series
Surface/Ceiling or Wall Mount
Page 44

Sheriff™
SH5, SH596, SH8, SH12 Series
Surface/Ceiling or Wall Mount
Pages 44

High Abuse
HASEDI Series
Recessed Ceiling-Mount
Pages 45
Wall Mount Luminaires

MightyMac
WCBU
Surface/Clamshell
Page 34

MightyMac
WCB
Surface/Clamshell
Page 34

MightyMac™
WCU
Surface/Clamshell
Page 35

MightyMac
WCH
Surface/Clamshell
Page 35

MightyMac
WCD Series
Surface/Clamshell
Page 36

MightyMac
WCT
Surface/Clamshell
Page 37

MightyMac
RFW Series - Step Light
Recessed Flange
Page 40

Nova™ 1024/1048 Series
Surface/Ceiling or Wall Mount
Page 44

Wall Plate, Exit Signs

MightyMac
WSP/WPP Series - Wall Plates
Surface & Concrete Pour
Page 40

MightyMac
MMEX Series
MightyMac Exit Sign
Wall/Ceiling Mount
Page 40

Millenium™
METSW/METSU/METDU Series
Millenium Metrex Exit Signs
Wall/Ceiling Mount
Pages 40
Cells – Best Practices

Kenall builds luminaires to the most stringent standards, so they can endure the harsh environment of the prison cell.

1. Levels of security
Because inmates are unsupervised for the majority of their in-cell time, cells represent the toughest possible environment for lighting fixtures. This makes this application the primary focus of the correctional lighting industry: luminaires must be able to withstand extreme physical abuse, repeated attempts at entry, concealment and tampering.

To counter these efforts, MightyMac™ luminaires incorporate best practices, including:
• Using fully-recessed fasteners
• Creating irretrievable blade traps
• A choice of 16, 14, or 12-gauge housing construction
• A wide selection of impact-resistant lensing materials and thicknesses

2. Installation and maintenance
Mighty Mac’s modular design minimizes installation and maintenance time: the optional gear tray can be removed with quick disconnects. Maintenance personnel can then replace the gear tray with a spare assembly, and any necessary repairs can be completed in the maintenance shop. This dramatically reduces the amount of time spent in the cell, increasing staff and inmate safety.

3. Recommended light levels

<table>
<thead>
<tr>
<th>Recommending Organization</th>
<th>Area to be lit</th>
<th>Recommended Fc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA</td>
<td>Grooming/desk</td>
<td>20</td>
</tr>
</tbody>
</table>

Kenall offers ceiling-, wall- and corner-mounted fixtures that provide both general and localized cell illumination. Kenall’s optional heavy-gauge mechanical and solid-state electronic switching devices allow inmates to control light output.

4. Housing styles
Two different housing styles are available for cell lighting applications:

Clamshell
• Housing is attached to the baseplate by an internal hinge
• Includes an irretrievable blade trap
• Not designed for use with surface conduit or surface caulking

Hinged Door
• Features a hinged door, providing access to the fixture’s interior
• Protected against tampering by pickproof caulking material (by others)

Recommended luminaires include:

- SSA
- SDSA
- WCBU
- CC
Corridors – Best Practices

Whether your corridor project has a security, suspended, metal pan, or gypsum ceiling, Kenall has a luminaire perfectly suited to your ceiling type.

1. Levels of Security
Since corridors are typically supervised, they do not require the use of maximum-security fixtures. Designed to accommodate a variety of applications, Kenall’s convertible, recessed luminaires can be specified with 16-gauge steel housings, and lenses that range in thickness from .187” to .250”.

2. Installation and Maintenance
Kenall’s convertible luminaires work with most ceiling types, making them ideal for instances when the corridor ceiling design has not been determined, or is expected to change in the future.

3. Recommended Light Levels

<table>
<thead>
<tr>
<th>Recommending Organization</th>
<th>Area to be lit</th>
<th>Recommended Fc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES</td>
<td>Corridor</td>
<td>10-20</td>
</tr>
<tr>
<td>IES</td>
<td>Dayrooms</td>
<td>30-50</td>
</tr>
</tbody>
</table>

4. Aesthetics
Due to the reduced security requirements, many minimum-security facilities may not appear as “institutional” as other correctional facilities. Kenall’s high abuse fixtures may be used to give corridors a more residential feel in those particular applications.
Correctional Lighting Best Practices

Washrooms – Best Practices
Kenall meets challenging washroom lighting requirements with fixtures that are safe, secure, and impervious to the rust and corrosion typically caused by humidity and moisture.

1. Levels of Security
Since light fixtures may be accessible to inmates in unsupervised washrooms, correctional fixtures are recommended. Kenall offers medium- and maximum-security ceiling- and corner-mounted security classification luminaires, both of which deliver unsurpassed quality and durability for washroom applications.

2. Installation and Maintenance
Due to the regular exposure of washroom lighting to moisture, luminaires must be properly designed for use in wet environments. Kenall’s stainless steel correctional fixtures are wet-location listed and resistant to rust and corrosion.

3. Recommended Light Levels

<table>
<thead>
<tr>
<th>Recommending Organization</th>
<th>Area to be lit</th>
<th>Recommended Fc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES</td>
<td>Showers</td>
<td>20</td>
</tr>
<tr>
<td>IES</td>
<td>Mirrors</td>
<td>20</td>
</tr>
</tbody>
</table>

Corner mount fixtures are typically used over mirrors at sink locations, while ceiling-mounted fixtures are typically installed in showers.

4. Housing Styles
Most correctional washroom fixtures use the hinged-door housing. The luminaire is still protected against tampering by pickproof caulking (by others). The hinged-door style is also available with a wet location listing.

5. Aesthetics
Kenall’s recommended washroom fixtures are protected by stainless steel construction and powder-coat finishes, so they won’t suffer from the moisture problems that make other security detention fixtures look old before their time.

Recommended luminaires include:

- SDSA
  Page 25

- SQCA
  Page 29

- ROQA
  Page 31

- CD
  Page 39
Cafeterias – Best Practices

Only Kenall offers maximum-security correctional lighting listed with the National Sanitation Foundation (NSF). Designed for use in food preparation, serving and dining areas, NSF-listed luminaires meet the toughest safety standards, while providing the cleanability necessary for food service applications.

1. Levels of Security
High abuse lighting can be used effectively in high ceiling applications, while security-rated fixtures are necessary for low ceiling areas where lighting may be accessible to inmates.

2. Installation And Maintenance
Kenall’s optional removable gear tray means that any service can be performed in a matter of minutes.

3. Recommended Lighting Levels

<table>
<thead>
<tr>
<th>Recommending Organization</th>
<th>Area to be lit</th>
<th>Recommended Fc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES</td>
<td>Institutional eating areas</td>
<td>15</td>
</tr>
<tr>
<td>IES</td>
<td>Institutional kitchens</td>
<td>50-100</td>
</tr>
</tbody>
</table>

4. Housing Styles
A typical cafeteria uses the hinged-door housing style. This provides quick access to the fixture’s interior, while the luminaire housing remains protected against tampering by pickproof caulking (by others).

Recommended luminaires include:

- SDA
  Page 27

- SDD
  Page 27

- RMCA
  Page 30

- RMCD
  Page 30
**Recreation Areas – Best Practices**

Kenall makes rugged, high-lumen lighting for indoor recreation areas of varying ceiling heights.

1. **Levels Of Security**

   High abuse luminaires can be used in areas with high ceilings, while correctional fixtures are necessary for areas where lighting may be inmate-accessible. In both cases, Kenall offers fixtures that do the job effectively and economically.

2. **Installation And Maintenance**

   Kenall’s fixtures are easy to install and require very little maintenance. Both high abuse and security-grade fixtures are designed with high quality housings for fast, trouble-free installation, as well as impact resistant lenses and long life LEDs that ensure minimal maintenance requirements—especially important considerations in high-ceiling applications where fixture inaccessibility can otherwise be a problem.

3. **Recommended Lighting Levels**

<table>
<thead>
<tr>
<th>Recommending Organization</th>
<th>Area to be lit</th>
<th>Recommended Fc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES</td>
<td>Recreation area</td>
<td>40</td>
</tr>
</tbody>
</table>

4. **Housing Styles**

   Our ceiling mounted security fixtures are available in clamshell and hinged door housing configurations. High abuse fixtures come in a variety of housing shapes and sizes.

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**Recommended luminaires include:**

- SSA
  - Page 24
- SSC
  - Page 24
- RMCD
  - Page 30
- MLHA
  - Page 46
**Best Practices –Sally Ports**

Proper lighting is key to ensuring effective staff performance of important processing area duties. Kenall offers a variety of high abuse and correctional LED lighting solutions to meet the needs of this application.

![Image of a sally port](image)

1. **Levels of Security**
   As they are secured and supervised areas, sally ports are well suited for Kenall’s high performance, high abuse fixtures.

2. **Recommended Lighting Levels**

<table>
<thead>
<tr>
<th>Recommending Organization</th>
<th>Area to be lit</th>
<th>Recommended Fc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES</td>
<td>Sally Port</td>
<td>40</td>
</tr>
</tbody>
</table>

3. **Installation and Maintenance**

   Kenall high abuse lighting is designed for fast installation and easy maintenance. In the highly unlikely event of a failure, all high abuse luminaires are covered by Kenall’s exclusive Peace of Mind Guarantee®.

4. **Housing Styles**

   All of Kenall’s high abuse fixtures are wet location listed: many of these luminaires are sealed and IP-rated against the ingress of dust and moisture as well.

5. **Aesthetics**

   By using only heavy-duty housing materials and high-quality polyurethane powder coating, Kenall luminaires keep their like-new appearance for years – even with minimum maintenance.

**Recommended luminaires include:**

- **SH848**
  - Page 44

- **N1048**
  - Page 44

- **HASEDI**
  - Page 45

- **MLHA**
  - Page 46
Correctional Lighting Best Practices

Exterior (Building-Mounted)

Correctional facilities need to blend in with – and even complement – local architectural environments. That’s why Kenall’s uniquely attractive and durable Millenium™ fixtures are the perfect choice for exterior wall applications.

1. Aesthetics
Exterior light fixtures must blend in with architectural styles, while also eliminating nuisance issues such as light trespass and glare. Kenall offers a complete line of architecturally-pleasing luminaires that are available with features that reduce glare, direct light appropriately and stand up to intentional or accidental breakage.

2. Levels of Security
In order to work effectively night after night, building mounted fixtures need to successfully resist physical abuse and harsh environmental conditions. Kenall’s high abuse fixtures are unsurpassed in their ability to withstand both.

3. Recommended Light Levels
With their advanced optical systems, Kenall luminaires can easily meet exterior illumination requirements – even in widely-spaced layouts – without creating unattractive, uncomfortable glare.

4. Installation and Maintenance
All Kenall high abuse fixtures are designed for easy installation and long life. IP-rated sealed housings mean dirt, bugs, moisture and environmental debris can’t get in. Corrosion-resistant construction, including die-cast, marine-grade aluminum baseplates and stainless steel hardware, protect these luminaires for decades. Also, they are protected by Kenall’s exclusive Peace of Mind Guarantee® against breakage.

Recommended luminaires include:

- FN Series
  Page 47

- FNL Series
  Page 47

- Millennium Series
  Page 48

- H Series
  Page 49
Project: Goose Creek Correctional Center  
Location: Point MacKenzie, AK
The Benefits of Tuning Lighting to Occupant Needs

What Is Tunable White Technology?
Tunable white technology enables personnel 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.

Recent studies on productivity and health suggest that the ability to tune the color temperature of light based on application, event need or occupant preference yields significant benefits.

Kenall combines our white color tuning with dimming to provide even greater flexibility in adjusting the lighting needs of these spaces:

- Cells
- Dayrooms
- Sally Ports
- Control rooms

Controls
The key to achieving the perfect balance of color and intensity is the use of appropriate controls. Kenall offers a choice of 0-10V Dimming or Digital Addressable Lighting Interface (DALI), for more sophisticated capabilities. Both options provide the ability to interface with your choice of building automation systems. For your convenience, Kenall’s tunable white products are compatible with a wide range of controls; from the simpler Pico and EcoSystems® to the more sophisticated Fresco™ system. Consult factory regarding specific controls compatibility.

The Primary Benefit of Tunable Lighting: Circadian Entrainment
Scientific studies have shown that when indoor light mimics the warm-to-cool cycle of natural daylight, people receive a number of benefits, including:

- Keeps staff mentally alert during overnight shifts
- Helps inmates maintain daily circadian rhythms
- Reduces agitation and irritability
Natural Light Simulation

Available Technology Options — Tunable White

- 11:00 am High Energy
- 10:30 am High Alertness
- 7:30 am Melatonin Secretion Stops
- 6:00 am Awake
- 2:00 am Deep Sleep
- 12:00 Midnight
- 12:00 Noon
- 2:00 pm High Focus
- 3:30 pm Alertness
- 5:00 pm Optimum Strength & Cardiovascular Efficiency
- 7:00 pm Relaxation
- 9:00 pm Melatonin Secretion Starts
- 7:30 am Melatonin Secretion Stops
- 9:00 pm Melatonin Secretion Starts

Lights Off

5000K

3500K

3000K

2700K
Exclusive Kenall Option: Indigo-Clean Technology

Protect Staff and Inmates by Adding the Power of Indigo-Clean Disinfection to your Correctional Lighting

Disinfect your correctional environment with Kenall correctional luminaires using Indigo-Clean Technology. The luminaires utilize a safe, state-of-the-art technology to kill harmful bacteria in highly populated environments, such as cells, washrooms, workout areas, dayrooms, infirmaries, corridors and more. These revolutionary LED luminaires combine white ambient light with 405nm Indigo light to provide on-demand environmental disinfection.

Kenall’s correctional luminaires using Indigo-Clean Technology

- Kill harmful bacteria, including Staph*, such as MRSA**, per independent lab test results
- Unlike UV disinfection devices, light is safe for occupants and requires no special technician
- Provides a cleaner, safer environment, even in areas normal cleaning doesn’t reach

*Per independent lab report #SG5-09S16032699. Contact manufacturer for a copy of this report.
**Antimicrobial Activity of a Continuous Visible Light Disinfection System by Rutala, et. al, ID Week 2016

H1N1 complicated by MRSA causing most serious prison illness
Terra Haute Tribune-Star

Lawsuit filed against Allen County [Ohio] Jail
hometownstations.com

MRSA bacteria target crowded places with poor hygiene
USA Today

Prison guard who lost legs because of work-related infections fights 5 years for benefits
hawaiinewsnow.com
Create a Cleaner, Safer Facility with On-Demand Environmental Disinfection

How Indigo-Clean™ Works

Kenall’s correctional luminaires using Indigo-Clean technology combine white, ambient light with 405nm Indigo light to provide on-demand environmental disinfection with the flick of a switch.

- The 405nm light targets bacteria and produces intra-cellular Reactive Oxygen Species (ROS)
- Similar to bleach, these ROS kill the bacteria and prevent it from re-populating the space
- The 405nm emitted from Indigo-Clean Technology reflects off of walls and surfaces

Visible light spectrum showing the active element in Indigo-Clean

Indigo-Clean Technology

ULTRAVIOLET

WAVELENGTH (nm)

HARMFUL

SAFE

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<th>100</th>
<th>254</th>
<th>280</th>
<th>400</th>
<th>405</th>
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<tr>
<td>254 Typical UV-C germicidal wavelength</td>
<td>280 Indigo-Clean germicidal wavelength (405nm)</td>
<td></td>
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</tr>
</tbody>
</table>

Keep Staff and Inmates Safe

Kill Staph*, such as MRSA**

Learn more about on-demand environmental disinfection at www.kenall.com

* per independent lab report #SGS-0916032699
Contact Kenall Lighting for a copy of this report.
Ceiling Mount Luminaires

Project: RSW Regional Jail
Location: Warren County, VA
Specifier: Moseley Architects
Photo supplied by Chris Cunningham Photography
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MightyMac surface mount – hexagonal, triangular 28
MightyMac surface mount – square 29
MightyMac recessed convertible surface mount 30
Millenium™ recessed luminaires and downlights 31
Rugged Clamshell Luminaires Support Safety & Well-Being

Kenall’s MightyMac SSA, SSB, SSC and SSD Series are ceiling mount LED luminaires manufactured to withstand repeated attempts at tampering, vandalism and concealment. The clamshell housings are TIG welded with no post grinding for added strength, and fasteners are fully-recessed, hardened security screws. Applications include cells, dayrooms, cafeterias, restrooms, showers, corridors, sally ports and indoor recreational areas.

SSA Series

SS Series
- Delivered lumen range: 2,611 – 9,689 lm
- Input power: 50 – 99W
- Efficacy: 75 – 99 lm/W
- Completely concealed internal drop slot piano hinge
- Die-formed blade trap (¼” minimum) prevents contraband concealment and unauthorized access
- Indigo-Clean Technology (ICT) and Tunable White options available

Nominal Sizes
SSA: 12” × 24”, 12” × 48”
SSB: 16” × 24”, 16” × 48”
SSC: 20” × 24”, 20” × 48”
SSD: 24” × 24”, 24” × 48”

Lamp Types: LED, T5, T5HO, TB
MightyMac™ Slope-Sided, Surface Mount – Hinged Door

Power-Saving LED Luminaires Keep Every Corner and Niche Bright and Safe
Kenall’s MightyMac SDSA Series are slope-sided LED luminaires with staked and welded external piano hinges. They are made to resist damage and attempts to conceal contraband materials, and are ideal for use in cells, dayrooms, cafeterias, restrooms, showers, corridors, sally ports and indoor recreational areas.

SDSA Series
- Delivered lumen range: 2,438 – 5,730 lm
- Input power: 50 – 73W
- Efficacy: 70 – 80 lm/W
- Optional concealed piano hinge
- Indigo-Clean Technology (ICT) and Tunable White options available

Nominal Sizes
SDSA: 12” x 24”, 12” x 48”
Lamp Types: LED, T5, T5HO, T8
Made for Years of Maintenance-Free Service

Kenall’s MightyMac SCA and SCD Series are ceiling mount, clamshell, LED luminaires with a full-length, continuous, heavy-gauge internal piano hinge. They are designed to withstand repeated attempts at tampering, vandalism and concealment, and are ideal for use in cells, dayrooms, cafeterias, restrooms, showers, corridors, sally ports and indoor recreational areas.

SC Series
- Delivered lumen range: 2,599 – 9,471 lm
- Input power: 49 – 99W
- Efficacy: 77 – 97 lm/W
- Full-length, concealed, internal piano hinge

Nominal Sizes
SCA: 12” × 24”, 12” × 48”
SCD: 24” × 24”, 24” × 48”
Lamp Types: LED, T8
Durable Hinged Door Style Luminaires Offer Security and Location Flexibility

Kenall’s MightyMac SDA and SDD Series are hinged door style, ceiling mount LED luminaires with an external staked and welded door hinge. Like all MightyMac luminaires, they are manufactured to withstand repeated attempts at tampering, vandalism and concealment, and are ideal for use in cells, dayrooms, cafeterias, restrooms, showers, corridors, sally ports and indoor recreational areas.

SDA Series
- Delivered lumen range: 2,855 – 9,365 lm
- Input power: 48 – 101W
- Efficacy: 67 – 94 lm/W
- Staked and welded external piano hinge standard.
  Options for internal hinge and full length internal hinge

SDD Series
- Delivered lumen range: 2,855 – 9,365 lm
- Input power: 48 – 101W
- Efficacy: 67 – 94 lm/W
- Staked and welded external piano hinge standard.
  Options for internal hinge and full length internal hinge

Nominal Sizes
- SDA: 12" × 24", 12" × 48"
- SDD: 24" × 24", 24" × 48"
- Lamp Types: LED, T5, T5HO, T8

www.kenall.com  |  P: 800-4-Kenall  |  F: 262-891-9701  |  10200 55th Street Kenosha, Wisconsin 53144
This product complies with the Buy American Act: manufactured in the United States with more than 50% of the component cost of US origin. It may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details.
Multi-Directional, Multi-Purpose Clamshell Luminaires

Kenall’s MightyMac SCH Series are hexagonal, clamshell, LED luminaires with completely concealed, internal drop-slot piano hinges. They are made to withstand repeated attempts at tampering, vandalism and concealment.

Kenall’s MightyMac SCT Series are triangular, clamshell, LED luminaires with the same sturdy features as the SCH series. Both are made for use in cells, dayrooms, corridors and sally ports.

SCH Series
- Delivered lumen range: 3,704 – 8,214 lm
- Input Power: 47 – 94W
- Efficacy: 78 – 87 lm/W
- Tri-aperture housing
- Completely concealed, internal drop-slot piano hinge

Nominal Sizes: 20” x 24”, 20” x 48”
Lamp types: LED, T8

SCT Series
- Delivered lumen range: 2,630 – 8,628 lm
- Input Power: 49 – 98W
- Efficacy: 79 – 88 lm/W
- Dual-aperture housing
- Completely concealed, internal drop-slot piano hinge

Nominal Sizes: 12” x 24”, 12” x 48”
Lamp types: LED, T8
MightyMac™ Surface Mount – Square

Square LED Luminaires: a Better Fit in Small Spaces
Kenall’s MightyMac SQCA Series are square LED luminaires with completely concealed, internal drop-slot piano hinges. They are made to resist damage and attempts to conceal contraband materials, and are ideal for use in cells, dayrooms, cafeterias and washrooms.

SQCA Series
- Delivered lumen range: 1,711 – 1,897 lm
- Input power: 29W
- Efficacy: 59 – 65 lm/W
- Completely concealed, internal drop-slot piano hinge

Nominal Size: 13” x 13”
Lamp type: LED
MightyMac™ Convertible, Recessed Mount

MightyMac Recessed Luminaires Have Options to Fit Your Facility Needs

Kenall’s MightyMac RMCA and RMCD Series are recessed, LED luminaires with completely concealed internal piano hinges. They are made to resist breakage and breaching. The RMCD offers an Indigo-Clean Technology option to kill harmful bacteria, such as Staph*, including MRSA**. Tunable white technology is also available to control color temperature and intensity of light. Both are ideal for use in cells, dayrooms, cafeterias, restrooms, showers, corridors, sally ports and indoor recreational areas.

---

**RMC_ Series**
- Delivered lumen range: 1,857 – 7,982 lm
- Input Power: 50 – 98W
- Lumens per watt: 51 – 88 lm/W
- Suitable for both grid and flange applications
- Full-length, concealed internal piano hinge
- Indigo Clean Technology (ICT) and Tunable White options available

**Nominal Sizes**
- **RMCA:** 12” × 24”, 12” × 48”
- **RMCD:** 24” × 24”, 24” × 48”
- Lamp types: LED, T8

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* per independent lab report #SGS-0951032699. Contact Kenall Lighting for a copy of this report.
** Antimicrobial Activity of a Continuous Visible Light Disinfection System by Rutala, et. al, ID Week 2016
**MightyMac™ Recessed Mount**

Recessed RQCA Series; Ideal for Small Spaces
This series features a completely-concealed, internal drop-slot piano hinge and security fasteners to protect luminaires from damage due to tampering. UL and CUL listed for damp locations, it is ideal for cells, dayrooms, cafeterias and washrooms.

**Millenium™ Downlights**

Sealed, Flush Lens Downlights, Designed for Performance and Long Life
The Millenium HADL6 flush lens LED downlight features a clear, tamper and vandal-resistant polycarbonate lens. Designed for use in dayrooms, cafeterias, corridors and sally ports, this sealed, modular downlight can also be specified with optional Indigo-Clean Technology to kill harmful bacteria, such as Staph*, including MRSA**.

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**RQCA Series**
- Delivered lumen range: 1,711 – 1,897 lm
- Input Power: 29W
- Efficacy: 59 – 65 lm/W
- Full-length, concealed internal piano hinge

Nominal Size: 12" × 12"
Lamp type: LED

**HADL6 Series**
- Delivered lumen range: 715 – 4,989 lm
- Input Power: 15 – 62W
- Efficacy: 48 – 86 lm/W
- Indigo Clean Technology (ICT) and Tunable White options available

Nominal Size: 6" aperture
Lamp type: LED

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* per independent lab report #SGS-09516032699  Contact Kenall Lighting for a copy of this report.
Wall Mount Luminaires

Project: San Mateo County Maple Street Correctional Center
Location: Redwood City, CA
Specifier: HOK
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MightyMac™ Bull-Nose, Wall Mount

WCB Series: One and Two Aperture Luminaires Built for Challenging Applications

The MightyMac bull-nosed clam shell luminaires are made to resist tampering, and the clamshell design specifically deters contraband concealment. The WCB has a single aperture, whereas the WCBU features two; one for uplight and one for downlight. Ideal for use in cells, behavioral health facilities, infirmaries, restrooms, corridors, and dayrooms. Both luminaires have fewer sharp corners and are ligature resistant to promote inmate safety.

WCB Series
(single aperture)

WCBU Series
(dual aperture)

WCB Series
(wall mount)

WCBU Series
(wall mount)

WCB Series
(surface/clamshell)

WCBU Series
(surface/clamshell)

WCB Series
(9"×11"×29")

WCBU Series
(9"×11"×53")

Lamp Types: LED, T8

Nominal Sizes: 9"×11"×29", 9"×11"×53"

• Delivered lumen range: 5,549 – 6,152 lm
• Input Power: 99W
• Efficacy: 56 – 62 lm/W
• Completely concealed, internal drop-slot piano hinge

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Long Life LEDs Reduce Maintenance
The MightyMac WCU and WCH Series are wall mount luminaires with die-formed blade traps to prevent concealment and access, and are ideal for use in areas such as cells and restrooms.

**MightyMac™ Wall Mount – Clamshell**

**WCH Series**
- Single aperture
- Delivered lumen range: 2,775 – 3,076 lm
- Input Power: 50W
- Efficacy: 56 – 62 lm/W
- Completely concealed, internal drop slot piano hinge

**WCU Series**
- Dual aperture
- Delivered lumen range: 3,751 – 6,152 lm
- Input Power: 99W
- Efficacy: 56 – 62 lm/W
- Completely concealed, internal drop slot piano hinge

**Nominal Sizes**
- **WCH Series**: 9” x 11” x 29”, 9” x 11” x 53”
- **WCU Series**: 7” x 11” x 29”, 7” x 11” x 53”

**Lamp types**
- LED, T8
Smooth Construction with Premium Materials Keep Inmates and Staff Safe

The MightyMac WCD dual-aperture clamshell luminaires are designed with prime grade materials to support staff and inmate safety. The clamshell design specifically deters contraband concealment, and is ideal for use in corridors, cells and restrooms.

MightyMac™ WCD
- Delivered lumen range: 3,548 – 7,869 lm
- Input Power: 49 – 99W
- Efficacy: 72 – 80 lm/W
- Completely concealed, internal drop slot, clevis-style hinge

Nominal Sizes: 7"×17"×27"; 7"×17"×51"
Lamp types: LED, T8

WCD Series
Surface/Clamshell
Tamper-Resistant WCT Series Luminaires Furnish Directed Light

The MightyMac WCT clamshell single-aperture luminaires are made to resist the most aggressive attempts at tampering, and the clamshell design specifically deters contraband concealment. This series is ideal for use in cells, infirmaries and restrooms.

MightyMac™ Single-Aperture, Wall Mount – Clamshell

WCT Series

- Delivered lumen range: 1,601 – 3,475 lm
- Input Power: 30 – 50W
- Efficacy: 53 – 69 lm/W
- Completely concealed, internal drop slot piano hinge

Nominal Sizes: 9” × 11” × 29”, 9” × 11” × 53”

Lamp types: LED, T8

WCT Series
Surface/Clamshell
MightyMac CC Series Offers Options for Healthier Environments

The CC Series is a family of corner mount, clamshell luminaires that are built to withstand tampering and concealment of contraband. These luminaires are now available with Kenall’s exclusive Indigo-Clean™ Technology for on-demand disinfection; specifiers can also select tunable white technology to promote calm behavior and more restful sleep.

CC Series

- Lumen packages: 2,557 – 7,781 lm
- Input Power: 50 – 122W
- Efficacy: 62 – 84 lm/W
- Available with Indigo Clean Technology (ICT) and tunable white technology options
- Completely concealed, internal piano hinge

Nominal Sizes:
9” x 24”; 9” x 48”

Lamp types: LED, T5, T5HO, T8

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**MightMac™ Corner Mount — Hinged Door**

MightyMac CD Series Offers Disinfection, Tunability Options

The CD Series is a family of corner mount, hinged door luminaires that, like the CC Series, are made to stand up to abuse. These luminaires can now be specified with Kenall’s exclusive Indigo-Clean Technology to provide disinfection, or tunable white technology to preserve circadian rhythms.

**CD Series**

- Lumen packages: 2,347 – 7,503 lm
- Input Power: 50 – 124W
- Efficacy: 59 – 77 lm/W
- Available with Indigo Clean Technology (ICT) and tunable white technology options
- Staked and welded external piano hinge

Nominal Sizes: 8” x 24”; 8” x 48”

Lamp types: LED, T5, T5HO, T8
Supporting Products Built with Integrity
Kenall supports every part of the correctional facility with exit signage, step lights and wall plates that use the same high-quality materials and tamper-resistant construction as our other MightyMac product families — so you can count on Kenall, right down to the last detail.

MightyMac MMEX
- Surface mount – wall or ceiling
- 14-gauge cold rolled steel or stainless steel housing
- Indirect red or green LED
- Single and dual-face options

Millenium METSU, METDU, METSW
- Surface mount – wall or ceiling; single-face (METSU) or dual-face (METDU) option
- Wall mount – single face (METSW)
- Indirect red or green LED
- Internal battery backup system
- High impact polycarbonate construction

MightyMac RFW Step Light
- Recessed wall mount – 6” × 9”
- Available in white, red, blue & amber LED
- Polycarbonate lens resists breakage

MightyMac WSP Security Concrete Pour Wall Plate
- Heavy-gauge, prime-grade, cold-rolled or stainless steel cover plate
- Galvanized, pour-in-place back plate
- Single, double or triple gang options

MightyMac WSP Security Surface Wall Plate
- Heavy-gauge, prime-grade, cold-rolled or stainless steel cover plate
- Surface mount
- Single, double or triple gang options
Complementary Products

Project: Desoto County Jail
Location: Hernando, MS
Specifier: ETFC Architects
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Rugged Nova & Sheriff Provide the Peace of Mind® Correctional Facilities Demand

The Nova linear wraparound series are ceiling mounted, LED luminaires. They are made to resist breakage and breaching, and are covered by Kenall’s exclusive Peace of Mind Guarantee® against breakage.

The Sheriff linear wraparound series are ceiling-mounted, LED luminaires for high-abuse applications. They are made to resist vandalism, and are covered by Kenall’s exclusive Peace of Mind Guarantee® against breakage.

N5 & N10 Series
- Delivered lumen range: 1,801 – 9,555 lm
- Input Power: 24 – 99W
- Efficacy: 75 – 108 lm/W
- 16-gauge, cold-rolled steel baseplate with six-point mounting
- UV-stabilized, high-impact polycarbonate lens
- Stainless steel, center-pin Torx® fasteners secure the lens to the baseplate

Nominal Sizes
- N524: 5" × 24"
- N548: 5" × 48"
- N1024: 10" × 24"
- N1048: 10" × 48"
- Lamp Types: LED, T5, T5HO, T8

SH Series
- Delivered lumen range: 4,674 – 10,434 lm
- Input Power: 48 – 95W
- Efficacy: 97 – 113 lm/W
- 16-gauge, cold-rolled steel baseplate with seam-welded end caps
- Prismatic polycarbonate, wraparound lens
- Stainless steel, center-pin Torx® fasteners secure the lens to the baseplate

Nominal Sizes
- SH5: 5" × 24"/36"/48"
- SH8: 8" × 24"/36"/48"
- SH12: 12" × 48"
- SH596: 5" × 96"
- Lamp Types: LED, T5, T5HO, T8, T8HO
IP65 Sealed Luminaires, Designed for Harsh Environments

The HASEDI recessed, inset hinged door series is intended for high abuse areas: its die-formed, heavy-gauge steel or stainless steel hinged door is secured to the housing with tamper-resistant, counter-sunk screws, and a continuous stainless steel piano hinge. The addition of Indigo-Clean™ On-Demand Disinfection Technology kills harmful bacteria, including staph*, such as MRSA**.

**HASEDI Series**
- Delivered lumen range: 4,700 – 15,664 lm
- Input power: 64 – 190W
- Efficacy: 73 – 94 lm/W
- Available with Indigo Clean Technology (ICT)
- Suitable for universal installation into 1” and 1.5” grid and flange (drywall) ceilings
- Doorframe secured to housing with continuous piano hinge

Nominal sizes: 1’ × 4’, 2’ × 2’ or 2’ × 4’
Installation types: Recessed ceiling mount; grid or flange
Lamp type: LED

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* per independent lab report #SGS-09S16032699. Contact Kenall Lighting for a copy of this report.
Sealed Linear Lighting with an Exclusive Peace of Mind Guarantee®

The Millenium Stretch Series offers a high-lumen option for minimum-security areas, including gymnasiums, multipurpose rooms, dayrooms, housing areas and showers. Use as individual fixtures or configure in geometric patterns and runs. Built to withstand repeated impact, these luminaires produce more than 16,000 lumens and include an uplight component, as well as optional Indigo-Clean and tunable white technologies.

MLHA Series

- Delivered lumen range: 2,374 – 16,561 lm
- Input power: 25 – 167W
- Efficacy: 93 – 113 lm/W
- Die-cast and extruded, marine-grade aluminum housing
- Polycarbonate lens for added durability
- Patented modular system; continuous row mounting available
- Embedded motion sensing option available (CA Title 24-compliant)
- Indigo-Clean Technology and tunable white options available

Nominal Sizes: 5”, 8”, 12” widths; 24”, 36”, 48”, 72”, 96” lengths
Installation Types: Surface ceiling, wall corner or optional pendant mount
Lamp Types: LED, T5, T5HO, T8, T8HO

MLHA5  MLHA8  MLHA12
Millenium™ Finite

Versatility in design and function makes Millenium Finite an ideal lighting solution for correctional applications. These luminaires are dark-sky friendly, full-cutoff and reduce energy consumption and waste.

FN Series
- Delivered lumen range: 1,788 – 6,637 lm
- Input power: 20 – 54W
- Efficacy: 89 – 123 Lm/W
- Full cut-off, LED wall-pack with classic design aesthetic
- Type II, III and IV optical distribution options
- Available two-circuit and cold-weather battery pack options

Nominal Sizes:
Installation Type: Surface wall mount
Lamp type: LED

NEW

Millenium™ Finite Linear

This dark-sky friendly, full-cutoff, wall mounted luminaire is offered in a variety of lengths and available in both LED and fluorescent lamp sources. With its ability to withstand harsh environmental conditions, the luminaire provides a durable solution for walkways. A convenient joiner end cap option also makes it well-suited for indoor and outdoor continuous-row applications.

FNL Series
- Delivered lumen range: 1,154 – 6,874 lm
- Input power: 14 – 72W
- Efficacy: 82 – 96 Lm/W
- Extruded aluminum housing with die-cast end caps
- Embedded motion sensing options available (CA Title 24-compliant)
- Configurable as full-cutoff, full-cutoff/continuous row, uplight, uplight/continuous row
- Low temperature operation

Nominal Sizes: 6"W × 1', 2', 3', 4' & 6' lengths
Installation Type: Surface wall mount
Lamp Types: T5, T5HO, T8, LED

This product complies with the Buy American Act; manufactured in the United States with more than 50% of the component cost of US origin. It may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details.
Combining Aesthetics with Durability for Applications Inside and Out

Millenium Rounds, Ovals and Squares are constructed with the finest materials available, ensuring they will maintain their looks and performance for years to come. Available in several configurations and with many optional features, they are covered by Kenall’s exclusive Peace of Mind Guarantee®.

Available Shapes & Housing Styles

M. Series
- Delivered lumen range: 871 – 5,672 lm
- Input power: 13 – 57W
- Efficacy: 63 – 117 lm/W
- Die-cast aluminum backplate
- Polycarbonate lens for added durability
- Embedded motion sensing option available (CA Title 24-compliant)

Nominal Size: 13” and 17” diameters
Installation Types: Surface and wall mount, and semi-recessed (MR only)
Lamp Types: LED
Luminaires for Your Challenging Environments

Kenall’s Millenium Edge is a flat-lens, dark-sky friendly version of the popular Millenium Round Series. Ideal for soffit, low-ceiling or canopy applications, Edge is constructed of environmental and impact-resistant materials, including a marine-grade, aluminum backplate; an UV-resistant, polycarbonate lens and lens base; and stainless-steel fasteners and extruded closed-cell gasketing, ensuring that it will look great for years to come.

**Millenium™ Edge™**

### MR13FFL Series
- Delivered lumen range: 1,111 – 3,206 lm
- Input power: 13 – 29W
- Efficacy: 86 – 111 lm/W
- Marine-grade, die-cast aluminum housing
- Emergency battery backup option available
- Dark-sky friendly

**Nominal Sizes:** 13” or 17”

**Installation Type:** Surface, semi-recessed ceiling or wall mount LED

These virtually indestructible LED luminaires feature marine-grade aluminum backplates, high-impact polycarbonate lenses, and stainless steel fasteners for superior resistance to physical abuse, theft, weathering and corrosion. The luminaires are particularly ideal for use in wet, humid and coastal areas, providing superior lighting performance and long life.

### H Series
- Delivered lumen range: 691 – 5,509 lm
- Input power: 8 – 50W
- Efficacy: 63 – 117 lm/W
- One-piece, powder-coated, marine-grade aluminum backplate
- Injection-molded, UV-resistant polycarbonate diffuser
- Stainless steel, tamper-resistant Torx® fasteners

**Nominal sizes:** 6”×12”, 12”×12”

**Installation Types:** Surface ceiling or wall

**Lamp type:** LED

Kenall’s Millenium Edge is a flat-lens, dark-sky friendly version of the popular Millenium Round Series. Ideal for soffit, low-ceiling or canopy applications, Edge is constructed of environmental and impact-resistant materials, including a marine-grade, aluminum backplate; an UV-resistant, polycarbonate lens and lens base; and stainless-steel fasteners and extruded closed-cell gasketing, ensuring that it will look great for years to come.

**Millenium™ Edge™**

### H Series
- Delivered lumen range: 691 – 5,509 lm
- Input power: 8 – 50W
- Efficacy: 63 – 117 lm/W
- One-piece, powder-coated, marine-grade aluminum backplate
- Injection-molded, UV-resistant polycarbonate diffuser
- Stainless steel, tamper-resistant Torx® fasteners

**Nominal sizes:** 6”×12”, 12”×12”

**Installation Types:** Surface ceiling or wall

**Lamp type:** LED
TD17 Series

- Delivered lumen range: 3,953 – 14,681 lm
- Input power range: 30 – 104W
- Efficacy: 69 – 157 lm/W
- Textured tertiary lens for glare reduction; uplight feature to eliminate “cave effect”
- Variety of distribution options
- TekLink™ Controls compatible: embedded microwave sensor with an industry exclusive Peace of Mind Guarantee®

Nominal Sizes: 17” Diameter, Maximum depth 25.5”
Installation Types: Direct-to-surface, quick-mount, trunnion kit or pendant-mount
Lamp type: LED

Award-Winning Parking Luminaires Designed to Reduce Glare

The Kenall TekDek TD17 Series has a range of lumen packages and is extremely adaptable, thanks to a variety of mounting types and distribution options. While they are frequently found in parking garages—due to their unique low-glare textured lens—they can also be used in other challenging applications.
Low Profile SenScape Provides Uplight and a Wide Range of Lumens
The SenScape™ SPG18 has a slim, aesthetically-pleasing profile for parking structures, canopies and low bay applications. This unique design provides the best lumen-per-watt and uplight combination available with Kenall’s trademark glare control. The IP65/IP66 ratings also protect SenScape from the ingress of dust, dirt, debris and water; a highly desirable feature in parking garage applications.

SPG18 Series
- Delivered lumen range: 3,455 – 11,163 lm
- Input power range: 35 – 103W
- Efficacy: 81 – 132 lm/W
- Standard & enhanced uplight; 100% downlight versions also available
- Optical patterns designed specifically for covered parking, canopy and low bay applications
- TekLink™ Controls compatible: embedded microwave sensor with an industry exclusive Peace of Mind Guarantee®

Nominal Sizes: 18” Diameter, 4.5” depth
Installation Types: Direct-to-surface, quick-mount, trunnion kit or pendant-mount
Lamp Type: LED
**TopDek™, TopDek Post Top™**

Durable, Pole-Mount Luminaires for Your Parking Challenges

Kenall offers a comprehensive series of luminaires to address a variety of area lighting needs — including TopDek™ and TopDek™ Post Top. Like TekDek™, they are compatible with our award-winning TekLink™ lighting control system. When high efficacy, low glare and reduced maintenance are valued, specify this robust series of luminaires.

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**TPDPT Series**

- Delivered lumen range: 7,173 – 34,361 lm
- Input power range: 100 – 408W
- Efficacy: 48 – 114 lm/W
- Die-cast, marine-grade aluminum housing
- Textured acrylic or polycarbonate lens for superior glare control
- Type II, III, IV, V-Narrow Round, and V-Wide Square distributions
- Sealed optics with IESNA full cutoff distribution; flat lens option
- Internal house-side shield reduces wind loading
- 3G tested for vibration per ANSI C136.31
- TekLink™ Controls compatible: embedded microwave sensor with an industry exclusive Peace of Mind Guarantee®

**TPD23 Series**

- Delivered lumen range: 9,424 – 30,443 lm
- Input power: 92 – 300W
- Efficacy: 70 – 109 lm/W
- Die-cast, marine-grade aluminum housing
- Textured acrylic or polycarbonate flat lens for superior glare control
- Type II, III, IV, V-Narrow Round, and V-Wide Square distributions
- Sealed optics with IESNA full cutoff distribution
- Internal house-side shield reduces wind loading
- 3G tested for vibration per ANSI C136.31
- TekLink™ Controls compatible: embedded microwave sensor with an industry exclusive Peace of Mind Guarantee®

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Nominal Size: 26” Diameter
Installation Types: Pole mounted (pole by others)
Lamp type: LED

Nominal Size: 23” Diameter
Installation Types: Pole mounted (pole by others), wall-mount
Lamp type: LED
TekLink™ Lighting Controls

TekLink: A Full Range of Lighting Control Systems
Many of our products are controls compatible, and Kenall offers integrated solutions to suit a variety of budgets.

TL50

Remote Controller Luminaire

System Features
- Embedded sensor
- Motion sensing
- Open loop daylight harvesting
- Settings configurable via remote controller

TL100

Controller Sensor Luminaire

System Features
- Zonal motion sensing
- Centralized luminaire control
- Closed loop daylight harvesting
- One button commissioning

TL1000/TL2000

System Features
- Web based user interface
- Wired and wireless options
- Email and text alerts
- Power monitoring
- Data reporting

Kenall TekLink Control System Overview

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*Patent No: US 20120153840

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Kenall’s luminaires are expertly designed in our state-of-the-art, vertically integrated, static-controlled manufacturing facility in Wisconsin. This enables us to provide tight control over the entire development process from fixture design and engineering to full-fledged metal fabrication, paint, assembly and shipping. We also take great care in sourcing only the highest-quality components to assure optimal product performance.

Our products comply with the Buy American Act: manufactured in the United States with more than 50% of the component cost of US origin.
Warranties

On behalf of our valued customers, Kenall promises to stand behind our luminaires. Our commitment to excellence enables us to offer a variety of product warranties, including the Kenall exclusive Peace of Mind Guarantee, 5-year LED and 10-year limited product warranty. For more detailed, product specific warranty information, please visit our website at www.kenall.com.

Sample Ordering Information

Example: SCA-2-0/0-1-17-IS-1-120-1/B-1)

<table>
<thead>
<tr>
<th>Model</th>
<th>SCA</th>
<th>Nominal Size</th>
<th>Housing/Base Material</th>
<th>Lamp Qty</th>
<th>Lamp Type</th>
<th>Ballast/Driver Type</th>
<th>Ballast Qty</th>
<th>Voltage</th>
<th>Lens (Inner/Outer)</th>
<th>Fasteners</th>
<th>Options</th>
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</thead>
<tbody>
<tr>
<td>SCA</td>
<td>1</td>
<td>12&quot; x 24&quot; (30.48cm x 60.96cm)</td>
<td>14-Ga CRS (Painted White)</td>
<td>1</td>
<td>One</td>
<td>IS</td>
<td>1</td>
<td>120V</td>
<td>120 Volts</td>
<td>1 Torx® Head w/ Center Pin</td>
<td>1 LED Pack</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>12&quot; x 48&quot; (30.48cm x 122cm)</td>
<td>16-Ga CRS (Painted White)</td>
<td>2</td>
<td>Two</td>
<td>RS</td>
<td>2</td>
<td>277V</td>
<td>277 Volts</td>
<td>2 Allen Head w/ Center Pin</td>
<td>1 PEL Pack</td>
</tr>
</tbody>
</table>

Housing/Base Material
0 14-Ga CRS (Painted White)
1 16-Ga CRS (Painted White)
3 14-Ga SS (Painted White)
4 16-Ga SS (Painted White)
6* 14-Ga SS (Brushed)
7* 16-Ga SS (Brushed)
9 12-Ga CRS (Painted White)

Lamp Type
2" (60.96cm) Nominal Length
17 F17T8
4" (122cm) Nominal Length
45L50K 45 Watt 5000K LED (82 CRI)
45L40K 45 Watt 4000K LED (82 CRI)
45L35K 45 Watt 3500K LED (82 CRI)

Ballast/Driver Type
IS Instant Start Electronic <10% THD (T8)
RS Rapid Start Electronic <10% THD (CFL, T8)
SB Specified Ballast
DCC Constant Current Driver

Ballast Quantity
1 One
2 Two

Lens (Inner/Outer)
0 No Lens
1 .125" (.32cm) Prismatic Acrylic
2 .125" (.32cm) Prismatic Polycarbonate
3 .125" (.32cm) Textured Polycarbonate
4 .156" (.40cm) Prismatic Polycarbonate
5 .156" (.40cm) Prismatic Tempered Glass
6 .187" (.47cm) Clear Polycarbonate
7 .187" (.47cm) Clear Tempered Glass
8 .250" (.64cm) Clear Polycarbonate
9 .250" (.64cm) Clear Tempered Glass
10 .375" (.95cm) Clear Polycarbonate
C .375" (.95cm) Clear Tempered Glass
J1 .500" (.127cm) Clear Polycarbonate
P1 .500" (.127cm) Clear Tempered Glass
N1 .750" (.191cm) Clear Tempered Glass
SYM* Symmetric, Diffused DR Acrylic

Fastener
1 Torx® Head w/ Center Pin
2 Allen Head w/ Center Pin

Options
EL* Standard Lumen EL Pack
PEL* High Lumen EL Pack
SEL* Specified EL Pack
DIN LED Night Light w/Light Level Control (100% - 20%)
FS Single Fuse & Holder
RGT Removable Gear Tray
SK Speaker Housing Extension
TN PL Night Light – 5/7/9 Watt (Lamp supplied by other) (120/277V only)
UV Ultraviolet Filter

* n/a as Base Material
# Refer to lens specifications
$ EA w/ LED
† Must be paired with prismatic, textured or diffused lens when ordering LED lamps
* Can only be used with clear outer lens
Fixtures designed for use in correctional settings must satisfy a large number of demanding lighting and environmental requirements. Listings applicable to the correctional luminaires featured in this product selector guide are shown below. Please refer to the ‘Product Universe’ within each section of this guide to determine product specific listings, or visit us on the web at www.kenall.com.

**UL/CUL Listed**—The UL symbol signifies that Underwriter’s Laboratory (UL) has determined that a manufacturer has demonstrated the ability to produce a product complying with UL’s requirements with respect to specific risk, performance under specific conditions, compliance with regulatory codes and specified standards, or any other conditions as determined by UL.

**ETL**—A product bearing the ETL Listed mark is determined to have met the minimum requirements of prescribed product safety standards as certified by a Nationally Recognized Testing Laboratory (NTL). The mark also indicates that the manufacturer’s production site conforms to a range of compliance measures and is subject to periodic follow-up inspections to verify continued conformance.

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

**IP65**—UL Certified IP65 per IEC 60598 ensures that the enclosure is dust-tight and protected against jet streams of water from any direction without any harmful effects.

**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.

**ADA Compliant**—Although ADA is not specific to lighting, it does impact fixture design by creating standards for wall sconce projection space and hanging light clearance. Section 4.4 of the ADA states that "objects projecting from walls with their leading edges between 27" and 80" above the finished floor shall protrude no more than 4" into walks, halls, corridors, passageways or aisles."

**ADA**

**NFPA101**—This National Fire Protection Agency (NFPA) Life Safety Code pertains to egress facilities. The code establishes minimum criteria for the design of egress facilities so as to allow prompt escape of occupants from buildings or, where desirable, into safe areas within buildings.

**DesignLights Consortium** — Kenall’s state-of-the-art photometric lab has passed the most stringent proficiency testing in the industry to become ISO/IEC 17025 accredited. In doing so, we have earned the prestigious credentials for both the Department of Energy’s Lighting Facts® listings and DesignLight Consortium approvals. This accreditation enables us to submit multiple LED listings in multiple colors with the benefit of shortened lead times.

**3G**—3G testing, which is conducted according to ANSI standard C136.31-2010, simulates the dynamic vibratory stresses that transportation luminaires will experience in the field to determine whether they will be able to withstand such stresses during normal installation in their intended application.

**ICT**—Indicates white, ambient Kenall luminaires using Indigo-Clean Technology, which kills harmful bacteria, including Staph, such as MRSA.

**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.
Kenall Sophistication in Testing

All Kenall luminaires are designed, engineered and manufactured to meet designated performance requirements based on rigorous testing criteria. Whether testing for ingress protection, photometric performance or effective thermal management, Kenall is equipped with a state-of-the-art certified safety laboratory, providing the following testing capabilities:

- Certified for safety testing by Underwriters Laboratory and Intertek Laboratories for Incandescent, Fluorescent and HID Luminaires (UL 1598), LED luminaires (UL 8750) Hazardous Locations (UL 844 and Class I Div II), and Emergency Lighting (UL 924).
- Ingress Protection testing (Dust and Water chambers)
- MIL-STD-461F- Conducted electromagnetic interference

- (EMI)Highly Accelerated Stress Screening (-50°C to 150°C Environmental Chamber)
- 25°C and 40°C thermal testing rooms
- ISO/IEC 17025 accredited photometric laboratory— including a Type C goniophotometer and 2-meter integrating sphere with spectroradiometer— providing credentials for the Department of Energy’s Lighting Facts® listings and DesignLights Consortium® approvals.

Integrating Sphere Testing

The integrating sphere is used to measure the total light output of a lamp. It is a high reflectance, highly diffuse spherical chamber, which has been specifically designed to provide an overview of the color properties of the luminaire. Output of the integrating sphere includes the following measurements:

- Total luminous flux
- Spectral power distribution
- Chromaticity coordinates
- Color Rendering Index (CRI)
- Correlated Color Temperature (CCT)

Goniophotometer Testing

According to ANSI/IESNA RP-16-05, a goniophotometer measures the directional light distribution characteristics of a luminaire. The only goniophotometer recognized and approved under IES standards is a Type C.

The goal of a Type C goniophotometer is to measure the luminous intensity of the luminaire from specific angles. Its output includes the following:

- Luminous intensity distribution
- Total luminous flux
- Zonal lumen sums
- Spatial uniformity of color
- An IES file

Once testing is complete and the IES file is received, lighting application software can be used to predict the photometric performance of a luminaire in a particular installation.
Kenall Market Segments

Kenall offers luminaires designed according to industry best practices and certified performance standards in each market segment we serve. From high abuse fixtures with an exclusive ‘Peace of Mind’ Guarantee® against breakage and healthcare fixtures sealed for infection control, to sealed enclosure fixtures that comply with stringent military standards for RFI/EMI and food processing fixtures that carry mission critical NSF, NEMA and IP ratings, our fixtures are designed with your specific needs in mind.

**High Abuse (HA)**

Guaranteed against breakage for the life of the installation.

Main Applications
- Schools & Universities
- Public environments
- Military
- Restrooms & Stairwells

**Healthcare (HC)**

Engineered to the specialized demands of healthcare environments with an attention to cleanability and infection control.

Main Applications
- Patient rooms
- Surgical suites
- MRI
- Labs

**Sealed Enclosure (SE)**

One piece, seam welded enclosures for containment, controlled and sealed spaces.

Main Applications
- Pharmaceutical & Research labs
- Cleanrooms
- Corrosive environments
- Hazardous locations

**Food Processing (FP)**

Sealed, NSF listed, high-efficiency lighting for food processing and preparation.

Main Applications
- Food processing & preparation
- Freezers
- Hosedown environments
- Hazardous locations
Kenall Market Segments

Whether you’re lighting a healthcare facility and need fixtures that support effective infection control and cleanability, or a tunnel, transit platform or parking facility that calls for features like corrosion-, shock- and vibration-resistance, Kenall can help at every turn. For everything from dependable task lighting that requires environmental integrity and versatility, to emergency exit lighting that meets life safety codes, you can depend on Kenall.

**Correctional (COR)**

Leader in heavy gauge, welded enclosures to deter even the most determined attempts to destroy, enter or vandalize.

Main Applications

- Cells
- Common areas
- Behavioral health
- Dayrooms

**Transportation (TR)**

Meeting the specialized demands of transportation related structures for high performance, corrosion resistance and serviceability.

Main Applications

- Tunnel & Underpass
- Platform & Depot
- Parking decks & Surface lots
- Bridges

**Task Lighting (TL)**

High-efficiency LED, modular undercabinet lighting for professional spaces.

Main Applications

- Nurses stations
- Labs/MRI suites
- Military/Government
- University dorms & Administration areas

**Emergency (EE)**

High abuse, extreme environment LED exit and emergency egress lighting.

Main Applications

- Schools & Universities
- Recreational
- Sealed & Correctional environments
- Outdoor/cold weather/extreme conditions