



# CAVERN STAIRWELL

PRODUCT  
OVERVIEW



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## FEATURES

- Available in 2ft and 4ft lengths with a 7.5" width to cover existing footprints, requiring no repainting.
- Cavern (CV) features a .060" aluminum body with a post-paint finish and tamper-resistant screws, while the Cavern Lite (CVL) offers a .040" pre-painted enamel body.
- Designed for wall or ceiling installations, with ADA compliance for accessibility.
- Features high efficacy up to 157 lm/W, offering 3500K, 4000K, or 5000K CCT, >80 CRI, and calculated L70 >100,000 hours for long-lasting illumination.
- Includes optional ultrasonic sensor for maximum sensing range
- DLC® Premium qualified, ETL listed for dry and damp locations, and backed by a 5-year standard warranty.

## DIGITAL NAVIGATION

Explore the spec sheet through the links below

[ORDERING GUIDE](#) [LED SYSTEMS INFO](#) [CONTROLS](#) [LINE DRAWINGS](#) [PHOTOMETRIC DATA](#)



## SUITABLE APPLICATIONS

- Education
- Healthcare
- Commercial Office
- Multifamily
- Hotel & Resort
- Storage Facility
- Retail

## CERTIFICATIONS



## SPECIFICATIONS

### CONSTRUCTION

Stairwell fixture designed for rigidity, durability, ease of installation while achieving maximum performance and improved aesthetics. 7.5" width construction luminaire for robust design. Cavern (CV) is designed with .060" aluminum body, decorative and vandal resistant .200" 6061 machined aluminum end caps, .500" threaded end plugs and baked on enamel powdercoat finish. Cavern Lite (CVL) is designed with .040" full aluminum body, end knockouts, and baked on pre-painted enamel finish. Tamper proof screw option available on Cavern (CV). Available in white (std.) with custom finishes available.

### ELECTRICAL

Class 2 LED light engine for high efficacy and long life. Calculated L70 > 100,000hrs. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10% - 100%). Optional battery backups and generator transfer device available to meet critical life safety lighting requirements.

### INSTALLATION

Designed for a variety of stairwell solutions including ceiling and wall mounting. Knockouts located on back and each side of fixture for electrical access. Threaded end cap HUBs standard on Cavern (CV). Tamper proof screw option available on Cavern (CV).

### OPTICS

High transmission extruded impact resistant PMMA frosted acrylic lens for durability and LED glare reduction. Vandal resistant lens design on Cavern (CV) only serviceable when removing end cap. Toolless field removable lens design on Cavern Lite (CVL) for easy access to driver channel for installation and maintenance.

### CONTROLS

Factory Installed Advanced and Basic integral occupancy sensors available. Fully control light levels for both occupied and unoccupied areas with high/low user selectable bi-level dimming options to meet critical life safety lighting requirements. Ultrasonic sensors provide for maximum sensing range and energy efficiency. Advanced controls available for grouping capabilities. See controls page for more detail (pg. 3).

### CERTIFICATIONS

ETL Listed to US and Canadian safety standards. Suitable for damp locations. American Recovery and Reinvestment Act Funding Compliant. BAA Compliant. ADA Compliant Luminaire. Title 24 Compliant with sensor option; see local ordinance for qualification information. DLC Premium Listed Product, Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

### WARRANTY

5 Year Warranty Standard; 10 Year Warranty Optional ([Terms and Conditions apply](#)).



**ORDERING GUIDE**

PART # Example: CV2-2L-U-40-FRAL-WHP-TPS-NURO

| SERIES   | LUMENS   | DRIVER     | CCT  | LENS                    | FINISH   | TAMPER PROOF  |
|--|--|------------|--|-------------------------|--|---|
| CV2 Cavern 2ft<br>CVL2 Cavern Lite 2ft<br>CV4 Cavern 4ft<br>CVL4 Cavern Lite 4ft | 2L 2,000 lm<br>3L 3,000 lm<br>3L 3,000 lm<br>4L 4,000 lm<br>5L 5,000 lm<br>6L 6,000 lm | U 120-277V | 50 5000K<br>40 4000K<br>35 3500K<br>30 3000K | FRAL Frosted<br>Acrylic | WHP White Paint (std.)<br>RALxxxx <sup>4</sup> Custom Paint<br>(xxxx = 4 Digit RAL#) | BLANK None<br>TPS <sup>3</sup> Tamper Proof<br>Screws |

| ALT DRIVER  | EMERGENCY  | CONTROLS OPTIONS   |  |
|---|--|--|--|
| BLANK None<br>SR <sup>5</sup> Sensor<br>Ready Driver<br>DD <sup>6,9,10,11</sup> Dual Driver<br>DR <sup>5</sup> DALI Ready<br>Driver<br>BLD <sup>5,6,7,9,10</sup> Bi-Level<br>Dimming<br>Driver (2<br>hot leads) | BLANK None<br>EM5 <sup>6</sup> 5W LED Battery Backup<br>EM5/HE <sup>6</sup> 5W LED Battery Backup<br>CEC Title 20 Compliant<br>EM7 <sup>6</sup> 7W LED Battery Backup<br>EM7/HE <sup>6</sup> 7W LED Battery Backup<br>CEC Title 20 Compliant<br>EM10 <sup>6</sup> 10W LED Battery Backup<br>EM10/HE <sup>6</sup> 10W LED Battery Backup<br>CEC Title 20 Compliant<br>EM12 <sup>6</sup> 12W LED Battery Backup<br>GTD Generator Transfer Device | BASIC  | ADVANCED   |
|   |  | BLANK None<br>FIOS On/Off PIR Occupancy Sensor<br>BDxx Preset Bi-Level Dimming Ultrasonic<br>Occupancy Sensor (xx=%)<br>USB User Selectable Bi-Level Dimming<br>Ultrasonic Occupancy Sensor<br>USB/HL User Selectable High/Low Dimming<br>Ultrasonic Occupancy Sensor<br>PC 120-277V Photocell | BLANK None<br>NURO <sup>8</sup> NUROAir Integrated Bluetooth<br>Groupable Sensor<br>VDO <sup>2</sup> Lutron Vive DFCSJ-OEM-OCC<br>(Daylight & Occupancy)<br>VRF <sup>2</sup> Lutron Vive DFCSJ-OEM-RF (RF Only)<br>AWNR <sup>2</sup> Lutron Athena Wireless Node RF only<br>AWNS <sup>2</sup> Lutron Athena Wireless Node with<br>Sensor |

| STEP DOWN  | METAL CONDUIT   | WARRANTY                     |
|--|---|------------------------------|
| BLANK None<br>SD347 <sup>1</sup> 347V<br>Step Down<br>Transformer<br>SD480 <sup>1</sup> 480V<br>Step Down<br>Transformer | BLANK None<br>MC6/3W 6FT MC Cable w/ 3 leads to power<br>—non-dimming function<br>MC6/4W 6FT MC Cable w/ 3 leads to power<br>and 1 lead to battery backup<br>—non-dimming function<br>MC6/5W 6FT MC Cable w/ 3 leads to power<br>and 2 leads to dimming<br>MC6/6W 6FT MC Cable w/ 3 leads to power,<br>2 leads to dimming & 1 lead<br>to battery backup | BLANK 5 Year<br>10YR 10 Year |

| SHIP WITH ACCESSORIES  |  |
|------------------------|--|
| NURO-SW-3B-BA-BL-WP-V1 | NUROAir Bluetooth 3-Key Wireless Battery Powered Wall Switch           |
| NURO-SW-5B-BA-BL-WP-V1 | NUROAir Bluetooth 5-Key Wireless Battery Powered Wall Switch           |
| NURO-SW-7B-AC-BL-WP-V1 | NUROAir Bluetooth 7-Key Line Voltage (AC 120-277V) Powered Wall Switch |

**FOOTNOTES**

- <sup>1</sup>Does not qualify for DLC
- <sup>2</sup>Must be used with SR Driver
- <sup>3</sup>Available on Cavern (CV) version only
- <sup>4</sup>Contact factory for available options
- <sup>5</sup>Not compatible with any Basic Control Options
- <sup>6</sup>Not compatible with stepdown options
- <sup>7</sup>Will not work with the stepdowns or sensors
- <sup>8</sup>Easily Controlled via Mobile Phone with Bluetooth App
- <sup>9</sup>Not compatible with GTD
- <sup>10</sup>Not compatible with 3 or 5-wire metal conduit
- <sup>11</sup>When combined with sensors, the sensor will control only half of the fixture

**LED SYSTEMS INFO**

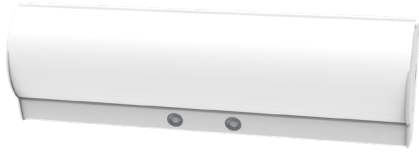
| LED SYSTEMS INFO <sup>1</sup> | 3000K        |          | 3500K    |          | 4000K    |          | 5000K    |          | Watts <sup>2</sup> | CRI | Ambient<br>Temp Range | DLC     | Replaces |
|-------------------------------|--------------|----------|----------|----------|----------|----------|----------|----------|--------------------|-----|-----------------------|---------|----------|
|                               | Part Numbers | Lumens   | Efficacy | Lumens   | Efficacy | Lumens   | Efficacy | Lumens   |                    |     |                       |         |          |
| CV(L)2-2L-U-XX-FRAL-WHP       | 2,121 lm     | 135 lm/W | 2,199 lm | 140 lm/W | 2,327 lm | 145 lm/W | 2,377 lm | 148 lm/W | 16W                | >80 | -4°F-125°F            | Premium | 1T8      |
| CV(L)2-3L-U-XX-FRAL-WHP       | 3,050 lm     | 141 lm/W | 3,103 lm | 143 lm/W | 3,233 lm | 150 lm/W | 3,246 lm | 150 lm/W | 22W                |     |                       |         | 2T8      |
| CV(L)4-3L-U-XX-FRAL-WHP       | 3,182 lm     | 145 lm/W | 3,237 lm | 147 lm/W | 3,373 lm | 154 lm/W | 3,445 lm | 157 lm/W | 22W                |     |                       |         | 1T8      |
| CV(L)4-4L-U-XX-FRAL-WHP       | 3,876 lm     | 142 lm/W | 3,943 lm | 145 lm/W | 4,109 lm | 151 lm/W | 4,197 lm | 154 lm/W | 27W                |     |                       |         | 2T8      |
| CV(L)4-5L-U-XX-FRAL-WHP       | 4,965 lm     | 137 lm/W | 5,051 lm | 139 lm/W | 5,263 lm | 145 lm/W | 5,375 lm | 148 lm/W | 36W                |     |                       |         | 3T8      |
| CV(L)4-6L-U-XX-FRAL-WHP       | 5,365 lm     | 124 lm/W | 5,452 lm | 128 lm/W | 5,661 lm | 133 lm/W | 6,079 lm | 143 lm/W | 43W                |     |                       |         | 2T5      |

<sup>1</sup>Values are nominal, see IES file for more detail  
<sup>2</sup>Electrical data at 25C (77F). Actual wattage may differ by +/-10%.



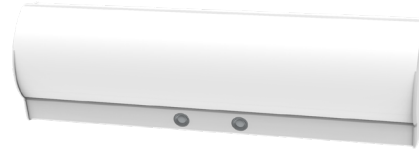
# CAVERN STAIRWELL

## TWO HOUSING SPECIFICATIONS



### CAVERN (CV)

- .060" Aluminum Body
- Cast Aluminum End Plates
- Post Paint Finish
- Tamper Resistant Design
- Ideal for front of house stairwells



### CAVERN LITE (CVL)

- .040" Aluminum Body
- Baked on Pre-Paint Enamel
- Economical solution without loss of performance
- Ideal for back of house stairwells

## CONTROLS OPTIONS

### BASIC

#### BDxx

Factory Set Bi-Level Dimming Ultrasonic Sensor. Fixtures with this option come with a 0-10V sensor and driver set to dim down to the number indicated in "xx" portion of the part number, when in an unoccupied mode. For example, BD25, would have the fixture dim down to 25% lumen output when unoccupied and go to 100% when motion is detected. Ultrasonic sensors provide for maximum sensing range and energy efficiency. Available at 10%/25%/50% selections. Sensor installed within the body of the fixture.

#### FIOS

Standard on/off motion sensor that provides 360° detection of motion from 8 to 20 ft mounting heights. Sensor integral to fixture. End Mount installed.

#### USB

User Selectable Bi-Level Dimming Ultrasonic Sensor. Fixtures with this option come with a 0-10V sensor & driver along with an integrated control to allow the end user to select how low the fixture will dim when in unoccupied mode. Once motion is detected the fixture will light up to 100% light output. Ultrasonic sensors provide maximum sensing range and energy efficiency. Sensor installed within the body of the fixture. Utilizes Bluetooth connectivity with IOS and Android app integration to set controls. Sensor installed within body of fixture.

#### USB/HL

User Selectable Bi-Level Dimming Ultrasonic Sensor is for both high and low output control. Allows user to control how far the fixture dims down when the sensor is in unoccupied mode and allows user to select how bright fixture becomes when in occupied mode. Ultrasonic sensors provide for maximum sensing range and energy efficiency. Utilizes Bluetooth connectivity with IOS and Android app integration to set controls. Sensor installed within body of fixture.

### ADVANCED

#### NUROAir by ILLUMUS

##### NURO

NUROAir Integrated Bluetooth Sensor is the optimal groupable controls lighting solution. With main features such as PIR Motion Sensing, Occupancy/Vacancy, Bi-Level Dimming and Daylight Harvesting - this flexibility makes the NUROAir Integrated Sensor ideal for tailoring lighting to specific space needs, optimizing both ambiance and efficiency. The NUROAir App, available for download on iOS and Google Play Store, offers a user-friendly interface for automatic or manual customization of your space. Through the app, users can configure sensor settings such as the Light Output, CCT, Hold Time, Standby Time/Level, High/Low End Trim, Background Light Level, Set Schedules, and Control Lighting Groups or Zones, all from a mobile or tablet device. Manual control is also available with a range of compatible wireless & wired wall switch options.



POWERED BY ILLUMUS BRANDS



Click Here or Scan Code to Learn More About

NUROAir Bluetooth Controls



### LUTRON

#### VDO

Vive DFCSJ-OEM-OCC integral fixture control sensor with daylight & occupancy. Vive provides intuitive programming allowing for maximum flexibility with wireless communication & sensing as desired. Provided with factory installed components only. Lutron system provided by others. Sensor must be used in conjunction with Pico Switch/Dimmer. Cannot be used in conjunction with mechanical on/off power switch. Contact factory for more information



#### VRF

Vive DFCSJ-OEM-RF integral fixture control with Radio Frequency (RF) communication. Vive provides intuitive programming allowing for maximum flexibility with wireless communication as desired. Provided with factory installed components only. Lutron system provided by others. Sensor must be used in conjunction with Pico Switch/Dimmer. Cannot be used in conjunction with mechanical on/off power switch. Contact factory for more information.



#### ANWR

Athena wireless node is a radio frequency (RF) device that enables simple, digital control of individual light fixtures in an Athena control system. Enables individual wireless control of each fixture in an Athena control system. Accommodates zone and control changes without rewiring. All drivers on the link are controlled as a single zone. Provided with factory installed components only. Lutron Athena system provided by others.



#### AWNS

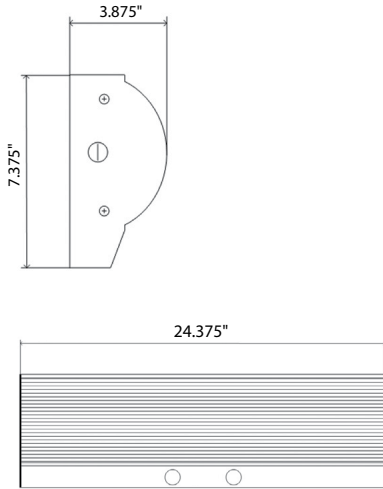
Athena wireless node with a sensor that enables simple, digital control of individual light fixtures in an Athena control system. Provides wireless control of the fixture and includes a passive infrared (PIR) sensor for occupancy and a daylight sensor. Enables individual wireless control of each fixture in an Athena control system. Accommodates zone and control changes without rewiring. All drivers on the link are controlled as a single zone. Provided with factory installed components only. Lutron Athena system provided by others.



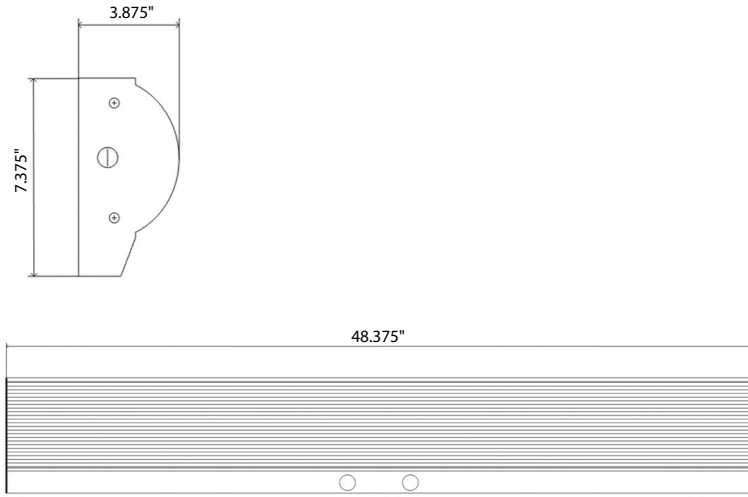


**LINE DRAWINGS**

**2FT**



**4FT**

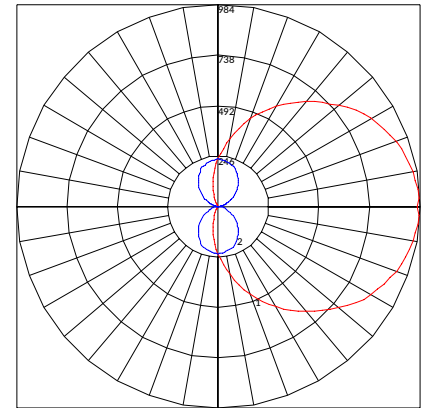


**PHOTOMETRIC DATA**

| LUMINAIRE DATA      |  |
|---------------------|--|
| Part Number         | CV2-3L-U-40-FRAL                                 |
| Description         | Cavern Stairwell, 3,000 lm, frosted acrylic lens |
| Fixture Lumens (lm) | 3,233 lm   |
| Wattage (W)         | 22 W   |
| Efficacy (lm/W)     | 150 lm/W   |
| Mounting            | Recessed   |
| Spacing Criteria    | 0° = 1.18, 90° = 1.32                            |

| ZONAL LUMEN SUMMARY |             |           |
|---------------------|-------------|-----------|
| Zone                | Lumens (lm) | % Fixture |
| 0° - 40°            | 348         | 11%       |
| 0° - 60°            | 772         | 24%       |
| 0° - 90°            | 1,617       | 50%       |
| 90° - 180°          | 1,617       | 50%       |
| 0° - 180°           | 3,234       | 100%      |

**CANDELA PLOT**

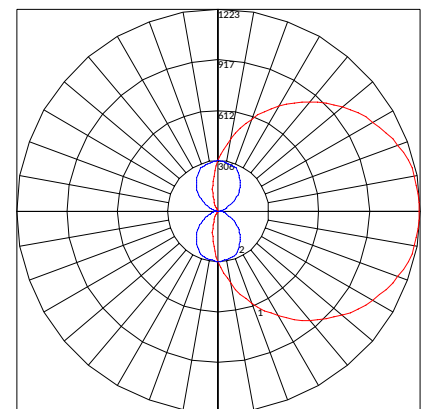


Maximum Candela = 984.19 Located At Horizontal Angle = 85, Vertical Angle = 87.5  
# 1 - Vertical Plane Through Horizontal Angles (85 - 265) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (0 - 180)

| LUMINAIRE DATA      |  |
|---------------------|--|
| Part Number         | CV4-4L-U-40-FRAL                                 |
| Description         | Cavern Stairwell, 4,000 lm, frosted acrylic lens |
| Fixture Lumens (lm) | 4,109 lm   |
| Wattage (W)         | 27 W   |
| Efficacy (lm/W)     | 151 lm/W   |
| Mounting            | Recessed   |
| Spacing Criteria    | 0° = 1.19, 90° = 1.33                            |

| ZONAL LUMEN SUMMARY |             |           |
|---------------------|-------------|-----------|
| Zone                | Lumens (lm) | % Fixture |
| 0° - 40°            | 460         | 11%       |
| 0° - 60°            | 1,004       | 24%       |
| 0° - 90°            | 2,055       | 50%       |
| 90° - 180°          | 2,055       | 50%       |
| 0° - 180°           | 4,110       | 100%      |

**CANDELA PLOT**



Maximum Candela = 1223 Located At Horizontal Angle = 90, Vertical Angle = 87.5  
# 1 - Vertical Plane Through Horizontal Angles (85 - 270) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (0 - 180)



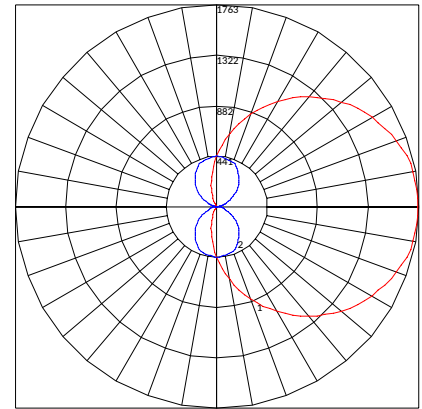
# CAVERN STAIRWELL

## PHOTOMETRIC DATA (Continued)

| LUMINAIRE DATA      |  |
|---------------------|--|
| Part Number         | CV4-6L-U-40-FRAL                                 |
| Description         | Cavern Stairwell, 6,000 lm, frosted acrylic lens |
| Fixture Lumens (lm) | 5,952 lm   |
| Wattage (W)         | 42 W   |
| Efficacy (lm/W)     | 144 lm/W   |
| Mounting            | Recessed   |
| Spacing Criteria    | 0° = 1.2, 90° = 1.33                             |

| ZONAL LUMEN SUMMARY |             |           |
|---------------------|-------------|-----------|
| Zone                | Lumens (lm) | % Fixture |
| 0° - 40°            | 664         | 11%       |
| 0° - 60°            | 1,453       | 24%       |
| 0° - 90°            | 2,977       | 50%       |
| 90° - 180°          | 2,977       | 50%       |
| 0° - 180°           | 5,954       | 100%      |

### CANDELA PLOT



Maximum Candela = 1763 Located At Horizontal Angle = 90, Vertical Angle = 87.5  
 # 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd)  
 # 2 - Vertical Plane Through Horizontal Angles (0 - 180)