

# CAVA T 2x2 LED

RECESSED



Grid ceiling



Drywall ceiling

## DESCRIPTION

Cava T provides a pleasant canopy of gentle luminescence that brightens everyday work spaces as well as special areas. Cava T is available in 1x4 and 2x2 modules for a variety of ceiling conditions.

Cava T is an ideal vehicle for ChromaWerx color tuning in education, office, and healthcare applications where modular recessed luminaires are used.

PROJECT: \_\_\_\_\_

TYPE: \_\_\_\_\_

NOTES: \_\_\_\_\_

IC RATED



**SENSORS**  
For latest information on sensors, click [here](#).



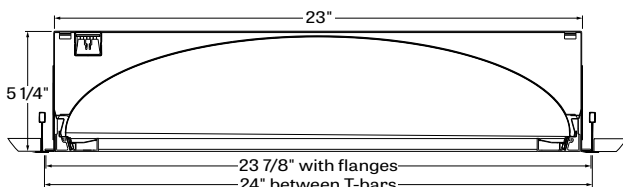
up to 118 lm/w performance

## ORDER GUIDE

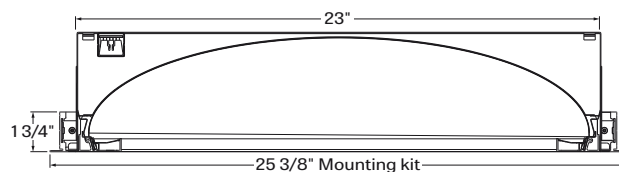
| CATR  | 22         | RLO                           | SW   |                          |  |  |   |
|---|------------|-------------------------------|--|--------------------------|--|--|---|
| LUMINAIRE ID  | SIZE       | OPTIC                         | LIGHT SOURCE   | CRI                      | LUMEN PACKAGES   | COLOR TEMP.  | VOLTAGE   |
| CATR - Cava T recessed  | 22 - 2'x2' | RLO - Reduced Luminance Optic | SW - Static white  | 80 - 80CRI<br>90 - 90CRI | 2500 - min. low output 2500lm<br>3500 - medium output 3500lm<br>4500 - high output 4500lm<br>5000 - max. ultra high output 5000lm<br>#### - other required lm/ft | 27 - 2700k<br>30 - 3000k<br>35 - 3500k<br>40 - 4000k   | 120 - 120V<br>277 - 277V<br>UNV - 120V-277V<br>347 <sup>1</sup> - 347V<br><sup>1</sup> Available with D1 driver only. |
| <b>DRIVER</b>   |            |                               | <b>ELECTRICAL</b>  |                          | <b>MOUNTING</b>  |  | <b>W</b>  |
| D1 - 1% 0-10V<br>DA <sup>2</sup> - DALI<br>LDE1 <sup>2</sup> - Lutron Hi-lume 1% Eco<br><sup>2</sup> On-site commissioning is required.   |            |                               | 1 - 1 circuit<br>+EB - emergency battery pack<br>+GTD### - generator transfer device, 120V or 277V   |                          | TG9 - tegular 9/16"<br>TG15 - tegular 15/16"<br>TB9 - t-bar 9/16"<br>TB15 - t-bar 15/16"<br>ST - screw slot t-bar<br>DF - drywall kit                            |  | W - matte white   |
| <b>CONTROL</b> <sup>3</sup>   |            |                               |  |                          |  | <b>OPTIONS</b>   |   |
| <b>STANDALONE CONTROLS</b> <sup>4,5</sup><br>Specify the quantity (#) of sensors per fixture.<br>#OMS <sup>6</sup> - Onboard Occupancy<br>#OMS## <sup>7</sup> - Onboard Occupancy with bi-level dimming<br>#ODS - Onboard Daylight<br>#OCS - Onboard Occupancy & Daylight |            |                               | <b>CONNECTED CONTROLS</b> <sup>8</sup><br>LU - Lutron<br>AWN <sup>R</sup> - Lutron Athena Wireless Node RF Only<br>AWN <sup>S</sup> - Lutron Athena Wireless Node Sensor<br>ENC - Encelium |                          |  | WL - Cooper Wavelinx<br>AN - Acuity nLight<br>CA - Casambi<br>LG - Legrand   |   |
| NA - None   |            |                               |  |                          |  | FU120 - Fuse 120V<br>FU277 - Fuse 277V<br>FWC - flexible whip cable (6' std)<br>CP - Chicago Plenum<br>CU - custom |   |
| <sup>3</sup> Standalone and connected control options cannot be combined.   |            |                               | <sup>6</sup> Fixture turns off when no occupancy.  |                          |  |  |   |
| <sup>4</sup> Available with D1 driver and 1 circuit options only.   |            |                               | <sup>7</sup> Fixture dims to specified light level % (##).   |                          |  |  |   |
| <sup>5</sup> Minimum 4' per zone. Provide control zone length.  |            |                               | <sup>8</sup> Consult factory for connected controls.   |                          |  |  |   |

See page 3 for ordering code detailed information

## CROSS SECTION



CATR - Cava T t-bar 9/16



CATR - Cava T drywall

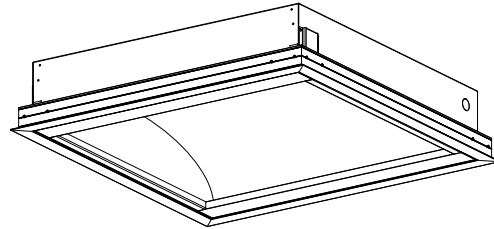
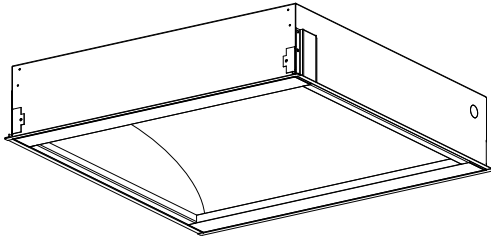


# CAVA T 2x2 LED

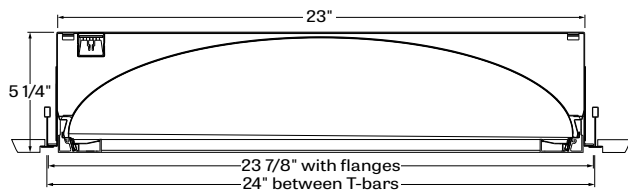
RECESSED



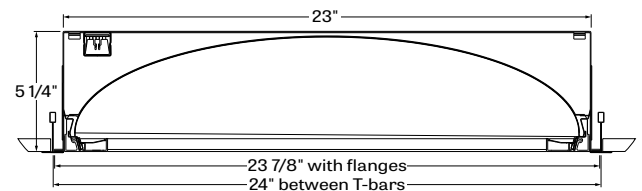
## CAVA T



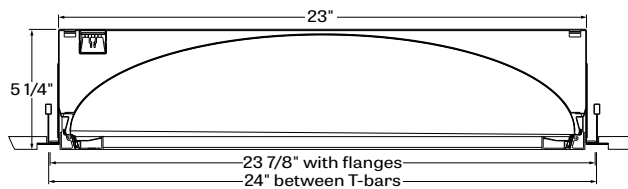
**CAVA T- TG9 - tegular 9/16"**



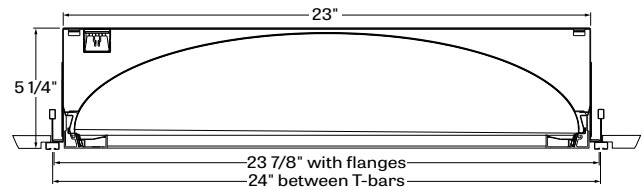
**CAVA T-- TB15 - t-bar 15/16"**



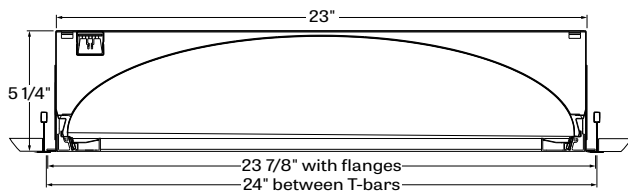
**CAVA T-- TG15 - tegular 15/16"**



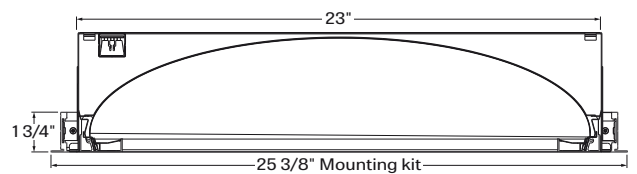
**CAVA T-- ST- screw slot t-bar**



**CAVA T-- TB9 - t-bar 9/16"**



**CAVA T-- DW- drywall kit**



# CAVA T 2x2 LED

RECESSED



## OPTIC

**REDUCED LUMINANCE OPTIC (RLO)** - Reduced Luminance Optic (RLO) consists of indirect-mounted LED arrays illuminating a vaulted reflector with a matte white finish greater than 95% reflectivity. The ultra-shallow arrays in RLO completely conceal the light source while evenly distributing brightness over the entire surface of the cavity using a combination of multiple reflective bounces and a very high diffuse reflectivity. Compared to diffusing optics, RLO reduces luminaire brightness due to the visible interior surface being larger than the aperture.

## LIGHT SOURCE - LED

Custom array of mid-flux LED's are mounted directly to the housing for optimal thermal performance. Available in 2700K, 3000K, 3500K, and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs operated at reduced drive current to optimize efficacy and lumen maintenance.

All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

| LED output        | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|-------------------|------------|-------|--------------------------|--------------|
| low output        | 4000K      | 21    | 2500                     | 118          |
| medium output     | 4000K      | 30.5  | 3500                     | 114          |
| high output       | 4000K      | 41    | 4500                     | 110          |
| ultra high output | 4000K      | 46.5  | 5000                     | 107          |

## ELECTRICAL

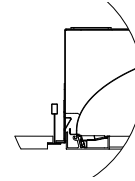
Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency > 84%, PF > 0.9, THD < 20%. Other specifiable options include Lutron Hi-Lume 1% Eco and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

## EMERGENCY

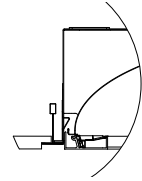
Factory installed long life high temperature recyclable Ni-Cad battery pack with test switch and charge indicator, minimum of 90 minutes operation, up to 1300 lumens (25°C) emergency lighting output. Recharge time of 24 hours.

## MOUNTING OPTIONS

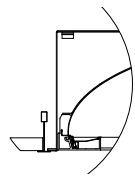
Recess mount into exposed or concealed T-Bar or Tegular grid ceiling



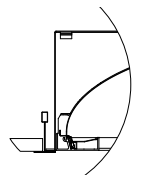
TG9 - tegular 9/16"



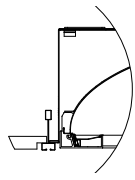
TG15 - tegular 15/16"



TB9 - t-bar 9/16"

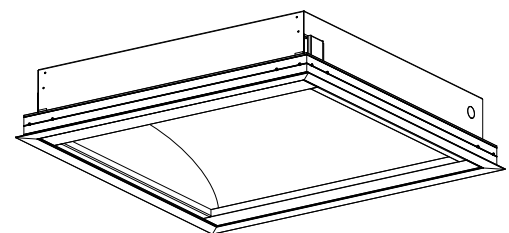
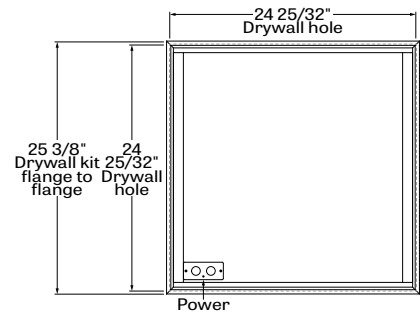


TB15 - t-bar 15/16"



ST - screw slot t-bar

A separate kit for mounting fixtures into drywall ceilings



DF - drywall kit

## FINISH

**Interior reflectors** - 95% reflective, matte white powder coating

**Exterior** - matte white powder coating.

Custom finish is also available.

## CONTROLS

Lumenwerx offers several options for integrating occupancy and daylight harvesting controls in our luminaires.

For latest information on sensors, click [here](#).



### Standalone controls

An integrated standalone sensor controls the luminaire in which it is installed.

Depending on the length, more than one sensor may be necessary and may control the entire luminaire, or just a section of it. These controls operate independently.

Unless otherwise agreed, sensor location, blank size, and functionality of the sensor within the luminaire are selected by Lumenwerx. See client drawings for details.

Three types are available:

**OMS:** An integral Passive InfraRed (PIR) sensor turns luminaires on and off automatically with field-adjustable time out period. No wall control is used.

Coverage pattern for large motion has a 12' diameter with the sensor mounted 8' above the floor; for small motion, the pattern has an 8' diameter. Typically, one sensor is required for every 10' of a continuous luminaire run.

**ODS:** An integral, daylight harvesting sensor with closed-loop operation dims the luminaire in which it is installed in order to compensate for available daylight. The sensor measures the combination of daylight and luminaire light reflected from horizontal surfaces below the luminaire. Initial onsite calibration is required via the use of provided remote control.

**OCS:** Both an occupancy and a daylight sensor are installed in the luminaire.

### Connected controls

With connected controls, sensors or nodes installed in the luminaire form part of a larger control system infrastructure from manufacturers such as: Lutron, Encelium, Cooper Wavelinx, Acuity nLight, Casambi, Legrand, and others. These connected controls allow for a scalable system providing features like occupancy and daylight control, manual control, scheduling and configuration of various zones and scenes. Energy reporting and system monitoring are also possible. Specific capabilities depend on the control system being used.

Lumenwerx installs the components (sensors, nodes, power packs, etc) which may be supplied to us by a third party, or procured directly by Lumenwerx, depending on the control system manufacturer.

Lumenwerx is solely responsible for the installation of specified components; the controls manufacturer is responsible for performance of the control system.

To indicate a Lumenwerx luminaire with connected controls, identify the specific onsite control system to be integrated into the luminaires using the ordering code. Due to the diversity of components, you must contact factory to assure complete compatibility with intended control system and to fully specify the luminaire.

Complete control specifications, sensor/node/power pack layout, and narrative for the control system are required for Lumenwerx to create shop drawings and submittals.

## CONSTRUCTION

**Housing** - Die formed cold rolled sheet steel 20 gauge thick, matte white powder coating

**Main reflector** - Extruded Aluminum (0.019" thickness), 98% reflective matte white painted.

**Internal reflectors** - 95% reflective semi-specular extruded Aluminum (0.020" thickness).

**Door end-plates** - Die formed cold rolled sheet steel 16 gauge thick, matte white powder coating.

**Door sides** - Extruded Aluminum (0.060" nominal thickness)

**Internal brackets** - Die formed cold rolled sheet steel 22 gauge thick.

**Drywall kit** - Extruded Aluminum 0.07" nominal, matte white powder coating.

## WEIGHT

**Cava T 2x2:** 19.06 lbs. - 8.65 kg

## CERTIFICATIONS

**ETL** - Rated for indoor dry/damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

**Chicago plenum** - City of Chicago Approved (CCEA)

**IC rated** - suitable for direct contact with insulation.

## WARRANTY

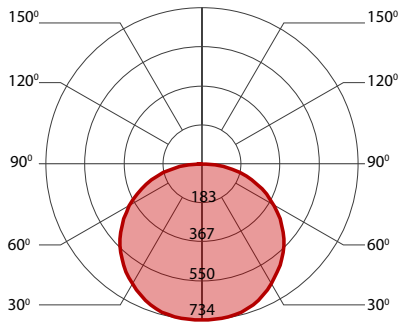
LumenWerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. LumenWerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.

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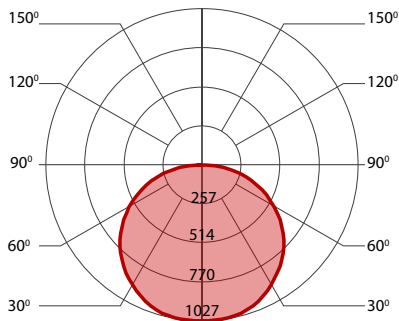
## 2500 LUMEN AT 80CRI - LOW OUTPUT



### PERFORMANCE

| LED output | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|------------|------------|-------|--------------------------|--------------|
| low output | 2700K      | 23    | 2500                     | 108          |
| low output | 3000K      | 22.5  | 2500                     | 111          |
| low output | 3500K      | 21.5  | 2500                     | 115          |
| low output | 4000K      | 21    | 2500                     | 118          |

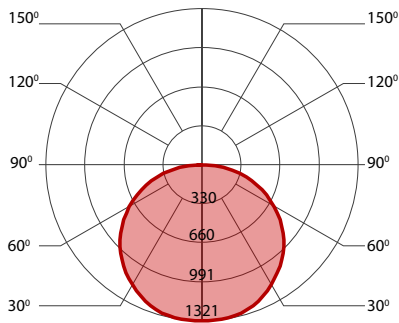
## 3500 LUMEN AT 80CRI - MEDIUM OUTPUT



### PERFORMANCE

| LED output    | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|---------------|------------|-------|--------------------------|--------------|
| medium output | 2700K      | 33.5  | 3500                     | 104          |
| medium output | 3000K      | 32.5  | 3500                     | 107          |
| medium output | 3500K      | 32    | 3500                     | 110          |
| medium output | 4000K      | 30.5  | 3500                     | 114          |

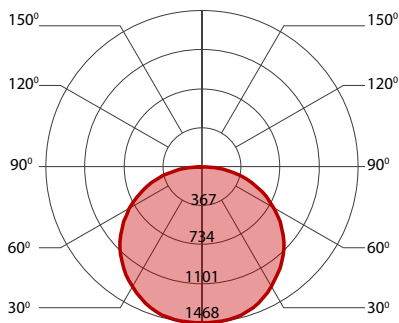
## 4500 LUMEN AT 80CRI - HIGH OUTPUT



### PERFORMANCE

| LED output  | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|-------------|------------|-------|--------------------------|--------------|
| high output | 2700K      | 44.5  | 4500                     | 101          |
| high output | 3000K      | 43.5  | 4500                     | 104          |
| high output | 3500K      | 42    | 4500                     | 107          |
| high output | 4000K      | 41    | 4500                     | 110          |

## 5000 LUMEN AT 80CRI - ULTRA HIGH OUTPUT



### PERFORMANCE

| LED output        | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|-------------------|------------|-------|--------------------------|--------------|
| ultra high output | 2700K      | 51    | 5000                     | 98           |
| ultra high output | 3000K      | 50    | 5000                     | 100          |
| ultra high output | 3500K      | 48.5  | 5000                     | 103          |
| ultra high output | 4000K      | 46.5  | 5000                     | 107          |