## **RECESSED**









#### **DESCRIPTION**

Vega is an efficient architectural LED troffer with a distinctive luminous shielding that features a median textured optic. Using advanced LED engines, Vega provides highly efficient illumination and offers

comprehensive ceiling, electrical, and controls options in 2x2, 1x4, and 2x4 sizes. See separate spec sheets for other available mountings.

| PROJECT:                   |  |
|----------------------------|--|
| APPROVED BY:<br>SIGNATURE: |  |

| TYPE | QTY |
|------|-----|





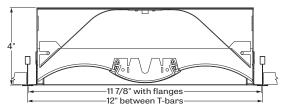
### **ORDER GUIDE**

| VEGR         | 14                | МТО            | HLO         | LED               |                   |                                       |                   |                        |
|--------------|-------------------|----------------|-------------|-------------------|-------------------|---------------------------------------|-------------------|------------------------|
| LUMINAIRE ID | SIZE              | CENTER OPTICS  | SIDE OPTICS | LIGHT SOURCE      | CRI               | LUMEN PACKAGES                        | COLOR TEMP.       | VOLTAGE                |
| VEGR - vega  | <b>14</b> - 1'x4' | MTO - Median   | HLO - High- | <b>LED</b> - high | <b>80</b> - 80CRI | 2300 - min. low output 2300lm         | <b>27</b> - 2700k | <b>120</b> - 120V      |
| recessed     |                   | Textured Optic | Efficiency  | performance       | <b>90</b> - 90CRI | <b>3200</b> - medium output 3200lm    | <b>30</b> - 3000k | <b>277</b> - 277V      |
|              |                   |                | Lambertian  | LED               |                   | <b>4200</b> - max. high output 4200lm | <b>35</b> - 3500k | UNV - 120V-277V        |
|              |                   |                | Optic       |                   |                   | #### - other required Im              | <b>40</b> - 4000k | <b>347</b> - 347V (not |
|              |                   |                |             |                   |                   |                                       |                   | available with Lutron) |

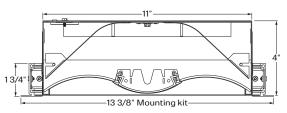
| DRIVER                              | ELECTRICAL                   | MOUNTING                     | FINISH                 | CONTROLS                             | OPTIONS             |
|-------------------------------------|------------------------------|------------------------------|------------------------|--------------------------------------|---------------------|
| <b>D1</b> - 1% dimming 0-10V        | 1-1 circuit                  | <b>TG9</b> - tegular 9/16"   | <b>W</b> - matte white | STANDALONE CONTROLS                  | FU - fuse           |
| DA - Dali                           | +EB - emergency battery pack | <b>TG15</b> - tegular 15/16" | CF# - custom           | OMS - Onboard Occupancy              | FWC - flexible whip |
| LTEA2W - Lutron 1% - 2 wire FF 120V | +GTD### - generator transfer | <b>TB9</b> - t-bar 9/16"     | finish specify         | ODS - Onboard Daylight               | cable (6' std)      |
| LDE1 - Lutron Hi-lume 1% Eco        | device, 120V or 277V         | <b>TB15</b> - t-bar 15/16"   | RAL#                   | OCS - Onboard Occupancy & Daylight   | CP - Chicago Plenum |
| LDE5 - Lutron 5% EcoSystem          |                              | ST - screw slot t-bar        |                        | CONNECTED CONTROLS                   | CU - custom         |
|                                     |                              | <b>DF</b> - drywall kit      |                        | CCS() - LU-Lutron, EN-Enlighted,     |                     |
|                                     |                              |                              |                        | OS-Osram, CR-Crestron.               |                     |
|                                     |                              |                              |                        | To specify see information on page 5 |                     |

See page 4 for ordering code detailed information

## **CROSS SECTION**



TB9 - t-bar 9/16



**DF** - drywall kit

## **OPTICS**



**HLO Side optics** - High-Efficiency Lambertian **MTO Center optics** - Median Textured Optic

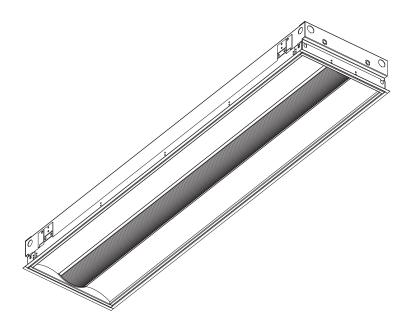
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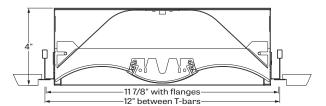


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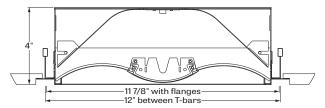




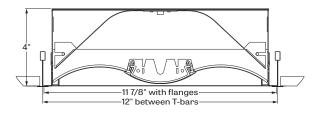
**VEGA** - TG9 - tegular 9/16"



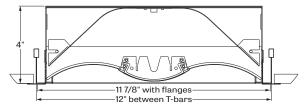
VEGA - TG15 - tegular 15/16"



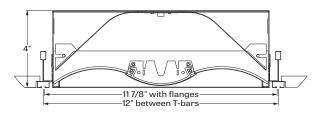
**VEGA** - TB9 - t-bar 9/16"



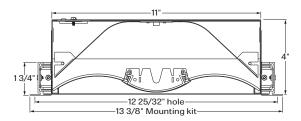
**VEGA** - TB15 - t-bar 15/16"



VEGA - ST- screw slot t-bar



 ${f VEGA}$  - DW- drywall kit





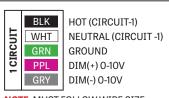
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## **ELECTRICAL CIRCUITS**

#### **DIMMING 0-10V -**

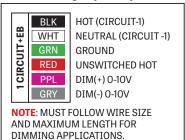
1 Circuit



NOTE: MUST FOLLOW WIRE SIZE AND MAXIMUM LENGTH FOR DIMMING APPLICATIONS.

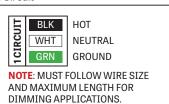
#### **DIMMING 0-10V -**

1 Circuit + Emergency Battery



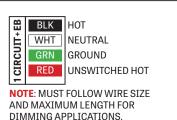
#### LUTRON 1% 2-wire FF 120V -

1 Circuit



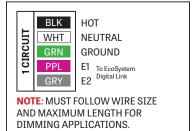
#### LUTRON 1% 2-wire FF 120V -

1 Circuit + Emergency Battery



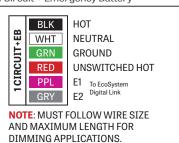
#### LUTRON LDE11%/LDE55% EcoSystem -

1 Circuit



### LUTRON LDE11%/LDE55% EcoSystem-

1 Circuit + Emergency Battery





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#### OPTICS

**CENTER LENS - MEDIAN TEXTURED OPTIC (MTO)** - Median Textured Optic (MTO) shielding consisting of ribbed diffusing center element.

SIDE LENS - HIGH EFFICIENCY LAMBERTIAN OPTIC (HLO) - Curved sides of diffusing 0.075" thick acrylic with 90% transmission and good source obscuration. Luminaire brightness is controlled by the flux-to-shielding area ratio in addition to offering a gentle gradient from center to edge.

### **LIGHT SOURCE - LED**

Custom array of mid-flux LED's are mounted directly to the housing for optimal thermal performance. Available in 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<br>Lumens | Efficacy<br>LPW |
|---------------|------------|-------|-----------------------------|-----------------|
| low output    | 4000K      | 23    | 2300                        | 99              |
| medium output | 4000K      | 33    | 3200                        | 98              |
| high output   | 4000K      | 43    | 4200                        | 98              |

#### **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% (specify 2-wire, or Ecosystem Dim-to-Off), Lutron 5-Series (5% Ecosystem), DMX (RDM compatible) and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

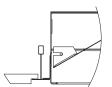
## **EMERGENCY**

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**

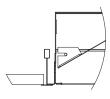
Recess mount into exposed or concealed T-Bar or Tegular grid ceiling





TG9 - tegular 9/16'

**TG15** - tegular 15/16





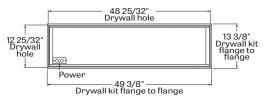
TB9 - t-bar 9/16'

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.

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August 1, 2019



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#### **CONTROLS**

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

#### STANDALONE CONTROLS

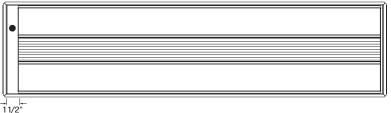
An integrated standalone sensor controls the luminaire in which it is installed. Depending on the length, more than one sensor may be necessary and may control the entire luminaire, or just a section of it. These controls operate independently. Unless otherwise agreed, location and functionality of the sensor within the luminaire are selected by LumenWerx.

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.



Location of an Onboard control

### 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\*, Enlighted, Osram ENCELIUM, Acuity nLight, Crestron 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 controls@lumenwerx.com 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.

\* Lumenwerx offers a Lutron Vive-Enabled fixture option using either the DFCSJ-OEM-OCC (OCS Option) or DFCSJ-OEM-RF (wireless only, no sensor) Integral Fixture Modules and a DALI or EcoSystem LED driver based on customer dimming requirements.

Please contact our controls department at controls@lumenwerx.com for further assistance.

#### CONSTRUCTION

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

 $\label{eq:constraint} \textbf{Reflectors} - \text{Cold rolled steel 0.030" thick precisely die formed, 95\% reflective matte white painted.}$ 

**Interior brackets** - Die formed cold rolled sheet steel 20 gauge thick.

**Center basket** - Extruded Aluminum 0.07" nominal, matte white and lens made in clear PMMA precisely formed into optical micro-structures forms.

**Side lenses** - Frost impact acrylic lens 88% transmissive.

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

#### **WEIGHT**

**Vega 1x4** - 17.18lbs.+3.08 lbs. (drywall kit) - 7.8kg+1.4kg (drywall kit)

## **CERTIFICATIONS**

**ETL** - Rated for Indoor Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

**DLC** - Testing to DLC requirements, for this product, have been completed by an Accredited Laboratory and certified by DLC.

**Lighting facts** - testing products and reporting performance results according to industry standards.

**Chicago plenum** - City of Chicago Approved (CCEA) **IC rated** - suitable for direct contact with insulation.

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| 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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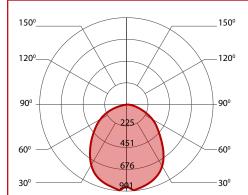
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## 2300 LUMEN AT 80CRI - LOW OUTPUT

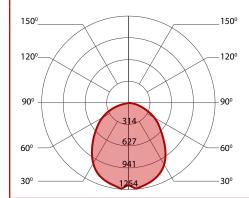


#### **PERFORMANCE**

| LED output | Color<br>Temp | Watts | Nominal<br>Delivered Lumens | Efficacy<br>LPW |
|------------|---------------|-------|-----------------------------|-----------------|
| low output | 2700K         | 25.5  | 2300                        | 91              |
| low output | 3000K         | 25    | 2300                        | 93              |
| low output | 3500K         | 24    | 2300                        | 96              |
| low output | 4000K         | 23    | 2300                        | 99              |



## 3200 LUMEN AT 80CRI - MEDIUM OUTPUT

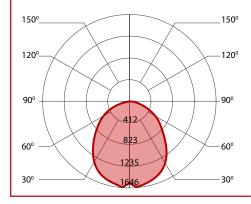


#### **PERFORMANCE**

| LED output    | Color<br>Temp | Watts | Nominal<br>Delivered Lumens | Efficacy<br>LPW |
|---------------|---------------|-------|-----------------------------|-----------------|
| medium output | 2700K         | 35.5  | 3200                        | 90              |
| medium output | 3000K         | 35    | 3200                        | 92              |
| medium output | 3500K         | 34    | 3200                        | 95              |
| medium output | 4000K         | 33    | 3200                        | 98              |



## 4200 LUMEN AT 80CRI - HIGH OUTPUT



#### **PERFORMANCE**

| LED output  | Color<br>Temp | Watts | Nominal<br>Delivered Lumens | Efficacy<br>LPW |
|-------------|---------------|-------|-----------------------------|-----------------|
| high output | 2700K         | 46.5  | 4200                        | 90              |
| high output | 3000K         | 46    | 4200                        | 92              |
| high output | 3500K         | 44    | 4200                        | 95              |
| high output | 4000K         | 43    | 4200                        | 98              |



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