

## DESCRIPTION

Cruze LED is a specification lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

|                    |  |             |
|--------------------|--|-------------|
| <b>Catalog #</b>   |  | <b>Type</b> |
| <b>Project</b>     |  |             |
| <b>Comments</b>    |  | <b>Date</b> |
| <b>Prepared by</b> |  |             |

## SPECIFICATION FEATURES

### Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience.

### Controls

The Cruze LED is Powered by Fifth Light, with a standard 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Combine with energy saving products like occupancy sensors, daylighting controls and lighting relay panels to maximize energy savings. In addition, the Cruze can include a factory-installed integrated sensor system for occupancy and daylight dimming control and manual control from an optional handheld remote. Or, specify the Digital Addressable Lighting Interface (DALI) drivers, dimmable down to 10%, for use with Fifth Light controls. See ordering information for details on all three options.

### Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a CRI  $\geq$  85. Projected life is 60,000 hours at 89% lumen output. cULus listed. Electronic drivers are available for 120-277V applications.

### Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

### Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

### Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

### Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

### Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to [www.designlights.org](http://www.designlights.org) for details.

### Warranty

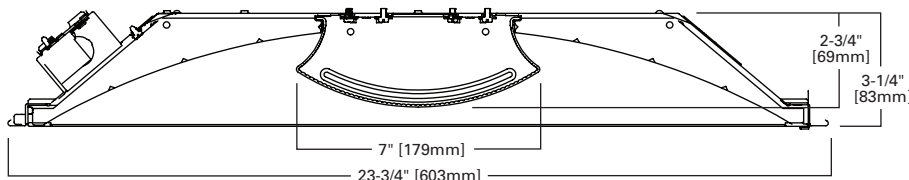
Five year warranty.



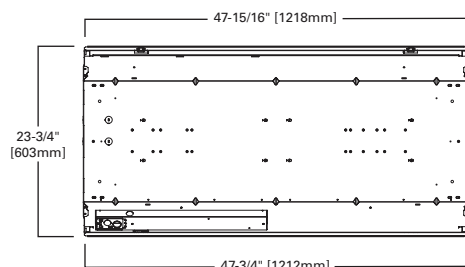
**24CZ  
LED**

**2' X 4' TROFFER LED  
MODULE**

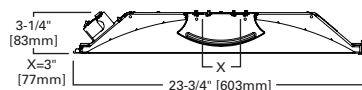
Specification Grade Troffer



## MOUNTING DATA



## LAMP CONFIGURATIONS



## CERTIFICATION DATA

cULus - 1598  
 Damp Location Listed  
 IC Rated  
 LM79/LM80 Compliant  
 ROHS Compliant  
 DesignLights Consortium™ Qualified  
 NOM Compliant

\*See Drywall Frame Kit Accessory in Ordering Information Section

**LINEAR DISCONNECT**

Safe and convenient means of disconnecting power



# TYPE A - 24CZ-LD4-35-UNV-L835-CD1-U 24CZ LED

## ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

| Stock or MTO* | Catalog Logic (Ribbed Lens) | Delivered Lumens | Watts | Efficacy (lm/W) |
|---------------|-----------------------------|------------------|-------|-----------------|
| MTO           | 24CZ-LD4-30-UNV-L830-CD1-U  | 2700             | 25.6  | 110             |
| MTO           | 24CZ-LD4-30-UNV-L835-CD1-U  | 2940             | 24.6  | 120             |
| MTO           | 24CZ-LD4-30-UNV-L840-CD1-U  | 3098             | 24.6  | 126             |
| MTO           | 24CZ-LD4-30-UNV-L850-CD1-U  | 3233             | 24.6  | 132             |
| MTO           | 24CZ-LD4-35-UNV-L830-CD1-U  | 3174             | 29.3  | 108             |
| MTO           | 24CZ-LD4-35-UNV-L835-CD1-U  | 3456             | 29.3  | 118             |
| MTO           | 24CZ-LD4-35-UNV-L840-CD1-U  | 3641             | 29.3  | 124             |
| MTO           | 24CZ-LD4-35-UNV-L850-CD1-U  | 3801             | 29.3  | 130             |
| MTO           | 24CZ-LD4-40-UNV-L830-CD1-U  | 3619             | 33.4  | 108             |
| STOCK         | 24CZ-LD4-40-UNV-L835-CD1-U  | 3941             | 33.4  | 118             |
| STOCK         | 24CZ-LD4-40-UNV-L840-CD1-U  | 4152             | 33.4  | 124             |
| MTO           | 24CZ-LD4-40-UNV-L850-CD1-U  | 4334             | 33.4  | 130             |
| MTO           | 24CZ-LD4-45-UNV-L830-CD1-U  | 4091             | 39.3  | 104             |
| MTO           | 24CZ-LD4-45-UNV-L835-CD1-U  | 4455             | 39.3  | 113             |
| MTO           | 24CZ-LD4-45-UNV-L840-CD1-U  | 4694             | 39.3  | 120             |
| MTO           | 24CZ-LD4-45-UNV-L850-CD1-U  | 4899             | 39.3  | 125             |
| MTO           | 24CZ-LD4-50-UNV-L830-CD1-U  | 4531             | 44.5  | 102             |
| STOCK         | 24CZ-LD4-50-UNV-L835-CD1-U  | 4934             | 44.5  | 111             |
| STOCK         | 24CZ-LD4-50-UNV-L840-CD1-U  | 5199             | 44.5  | 117             |
| MTO           | 24CZ-LD4-50-UNV-L850-CD1-U  | 5426             | 44.5  | 122             |
| MTO           | 24CZ-LD4-55-UNV-L830-CD1-U  | 4989             | 50.2  | 99              |
| MTO           | 24CZ-LD4-55-UNV-L835-CD1-U  | 5433             | 50.2  | 108             |
| MTO           | 24CZ-LD4-55-UNV-L840-CD1-U  | 5724             | 50.2  | 114             |
| MTO           | 24CZ-LD4-55-UNV-L850-CD1-U  | 5975             | 50.2  | 119             |
| MTO           | 24CZ-LD4-60-UNV-L830-CD1-U  | 5529             | 56.2  | 98              |
| MTO           | 24CZ-LD4-60-UNV-L835-CD1-U  | 6021             | 56.2  | 107             |
| MTO           | 24CZ-LD4-60-UNV-L840-CD1-U  | 6344             | 56.2  | 113             |
| MTO           | 24CZ-LD4-60-UNV-L850-CD1-U  | 6621             | 56.2  | 118             |
| MTO           | 24CZ-LD4-65-UNV-L830-CD1-U  | 6003             | 62.0  | 97              |
| MTO           | 24CZ-LD4-65-UNV-L835-CD1-U  | 6537             | 62.0  | 105             |
| MTO           | 24CZ-LD4-65-UNV-L840-CD1-U  | 6888             | 62.0  | 111             |
| MTO           | 24CZ-LD4-65-UNV-L850-CD1-U  | 7189             | 62.0  | 116             |
| MTO           | 24CZ-LD4-70-UNV-L830-CD1-U  | 6502             | 68.8  | 95              |
| MTO           | 24CZ-LD4-70-UNV-L835-CD1-U  | 7080             | 68.8  | 103             |
| MTO           | 24CZ-LD4-70-UNV-L840-CD1-U  | 7460             | 68.8  | 108             |
| MTO           | 24CZ-LD4-70-UNV-L850-CD1-U  | 7786             | 68.8  | 113             |
| MTO           | 24CZ-LD4-75-UNV-L830-CD1-U  | 6890             | 74.5  | 92              |
| MTO           | 24CZ-LD4-75-UNV-L835-CD1-U  | 7503             | 74.5  | 101             |
| MTO           | 24CZ-LD4-75-UNV-L840-CD1-U  | 7905             | 74.5  | 106             |
| MTO           | 24CZ-LD4-75-UNV-L850-CD1-U  | 8251             | 74.5  | 111             |

\*Made to order (MTO) requires a typical four week lead time.

## Standard Efficacy Versions

| Stock or MTO* | Catalog Logic (Ribbed Lens)  | Delivered Lumens | Watts | Efficacy (lm/W) |
|---------------|------------------------------|------------------|-------|-----------------|
| STOCK         | 24CZ-LD4-40SE-UNV-L835-CD1-U | 4022             | 40.2  | 100             |
| STOCK         | 24CZ-LD4-40SE-UNV-L840-CD1-U | 4238             | 40.2  | 105             |
| STOCK         | 24CZ-LD4-50SE-UNV-L835-CD1-U | 5008             | 56.4  | 89              |
| STOCK         | 24CZ-LD4-50SE-UNV-L840-CD1-U | 5361             | 56.4  | 95              |
| MTO           | 24CZ-LD4-60SE-UNV-L835-CD1-U | 6052             | 66.5  | 91              |
| MTO           | 24CZ-LD4-60SE-UNV-L840-CD1-U | 6374             | 66.5  | 96              |
| MTO           | 24CZ-LD4-65SE-UNV-L835-CD1-U | 6518             | 74.2  | 88              |
| MTO           | 24CZ-LD4-65SE-UNV-L840-CD1-U | 6868             | 74.2  | 93              |

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## LUMEN MAINTENANCE

| Ambient Temperature | TM-21 Lumen Maintenance (60,000 hours) | Theoretical L70 (Hours) |
|---------------------|--|-------------------------|
| 25°C                | > 89%                                  | > 201,000               |

# TYPE A - 24CZ-LD4-35-UNV-L835-CD1-U 24CZ LED

## ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

| Stock or MTO* | Catalog Logic (Smooth Lens)  | Delivered Lumens | Watts | Efficacy (lm/W) |
|---------------|------------------------------|------------------|-------|-----------------|
| MTO           | 24CZ-LD4-30-S-UNV-L830-CD1-U | 2760             | 25.6  | 112             |
| MTO           | 24CZ-LD4-30-S-UNV-L835-CD1-U | 3005             | 24.6  | 122             |
| MTO           | 24CZ-LD4-30-S-UNV-L840-CD1-U | 3166             | 24.6  | 129             |
| MTO           | 24CZ-LD4-30-S-UNV-L850-CD1-U | 3305             | 24.6  | 135             |
| MTO           | 24CZ-LD4-35-S-UNV-L830-CD1-U | 3244             | 29.3  | 111             |
| MTO           | 24CZ-LD4-35-S-UNV-L835-CD1-U | 3532             | 29.3  | 121             |
| MTO           | 24CZ-LD4-35-S-UNV-L840-CD1-U | 3722             | 29.3  | 127             |
| MTO           | 24CZ-LD4-35-S-UNV-L850-CD1-U | 3885             | 29.3  | 133             |
| MTO           | 24CZ-LD4-40-S-UNV-L830-CD1-U | 3699             | 33.4  | 111             |
| MTO           | 24CZ-LD4-40-S-UNV-L835-CD1-U | 4028             | 33.4  | 121             |
| MTO           | 24CZ-LD4-40-S-UNV-L840-CD1-U | 4244             | 33.4  | 127             |
| MTO           | 24CZ-LD4-40-S-UNV-L850-CD1-U | 4430             | 33.4  | 133             |
| MTO           | 24CZ-LD4-45-S-UNV-L830-CD1-U | 4182             | 39.3  | 107             |
| MTO           | 24CZ-LD4-45-S-UNV-L835-CD1-U | 4553             | 39.3  | 116             |
| MTO           | 24CZ-LD4-45-S-UNV-L840-CD1-U | 4798             | 39.3  | 122             |
| MTO           | 24CZ-LD4-45-S-UNV-L850-CD1-U | 5007             | 39.3  | 128             |
| MTO           | 24CZ-LD4-50-S-UNV-L830-CD1-U | 4631             | 44.5  | 104             |
| MTO           | 24CZ-LD4-50-S-UNV-L835-CD1-U | 5043             | 44.5  | 113             |
| MTO           | 24CZ-LD4-50-S-UNV-L840-CD1-U | 5314             | 44.5  | 119             |
| MTO           | 24CZ-LD4-50-S-UNV-L850-CD1-U | 5546             | 44.5  | 125             |
| MTO           | 24CZ-LD4-55-S-UNV-L830-CD1-U | 5100             | 50.2  | 102             |
| MTO           | 24CZ-LD4-55-S-UNV-L835-CD1-U | 5553             | 50.2  | 111             |
| MTO           | 24CZ-LD4-55-S-UNV-L840-CD1-U | 5851             | 50.2  | 117             |
| MTO           | 24CZ-LD4-55-S-UNV-L850-CD1-U | 6107             | 50.2  | 122             |
| MTO           | 24CZ-LD4-60-S-UNV-L830-CD1-U | 5652             | 56.2  | 101             |
| MTO           | 24CZ-LD4-60-S-UNV-L835-CD1-U | 6154             | 56.2  | 110             |
| MTO           | 24CZ-LD4-60-S-UNV-L840-CD1-U | 6484             | 56.2  | 115             |
| MTO           | 24CZ-LD4-60-S-UNV-L850-CD1-U | 6768             | 56.2  | 121             |
| MTO           | 24CZ-LD4-65-S-UNV-L830-CD1-U | 6136             | 62.0  | 99              |
| MTO           | 24CZ-LD4-65-S-UNV-L835-CD1-U | 6682             | 62.0  | 108             |
| MTO           | 24CZ-LD4-65-S-UNV-L840-CD1-U | 7040             | 62.0  | 114             |
| MTO           | 24CZ-LD4-65-S-UNV-L850-CD1-U | 7348             | 62.0  | 118             |
| MTO           | 24CZ-LD4-70-S-UNV-L830-CD1-U | 6646             | 68.8  | 97              |
| MTO           | 24CZ-LD4-70-S-UNV-L835-CD1-U | 7237             | 68.8  | 105             |
| MTO           | 24CZ-LD4-70-S-UNV-L840-CD1-U | 7625             | 68.8  | 111             |
| MTO           | 24CZ-LD4-70-S-UNV-L850-CD1-U | 7958             | 68.8  | 116             |
| MTO           | 24CZ-LD4-75-S-UNV-L830-CD1-U | 7043             | 74.5  | 94              |
| MTO           | 24CZ-LD4-75-S-UNV-L835-CD1-U | 7669             | 74.5  | 103             |
| MTO           | 24CZ-LD4-75-S-UNV-L840-CD1-U | 8080             | 74.5  | 108             |
| MTO           | 24CZ-LD4-75-S-UNV-L850-CD1-U | 8433             | 74.5  | 113             |

\*Made to order (MTO) requires a typical four week lead time.

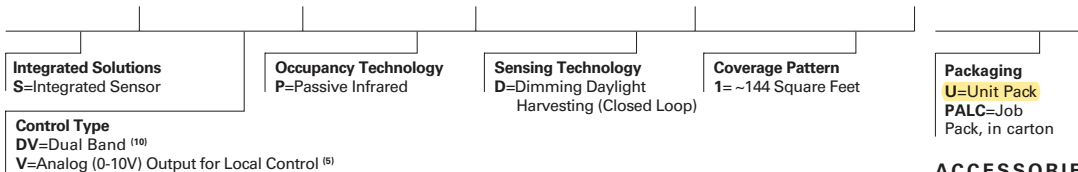
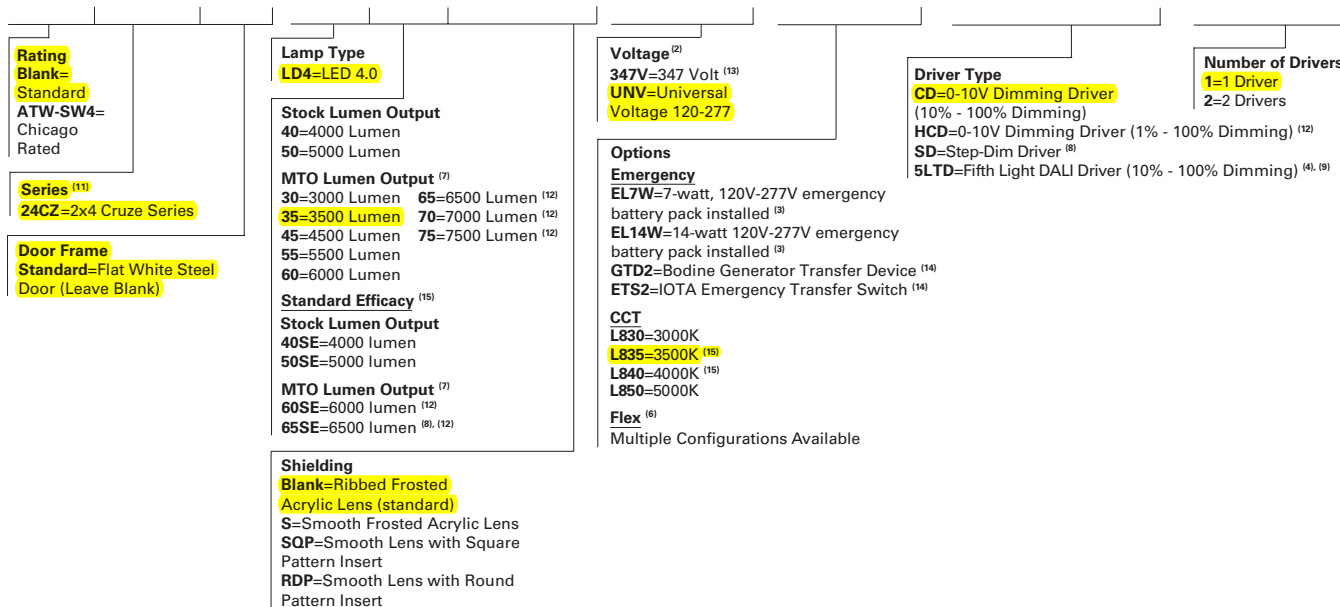
### Standard Efficacy Versions

| Stock or MTO* | Catalog Logic (Smooth Lens)    | Delivered Lumens | Watts | Efficacy (lm/W) |
|---------------|--------------------------------|------------------|-------|-----------------|
| MTO           | 24CZ-LD4-40SE-S-UNV-L835-CD1-U | 4091             | 40.2  | 102             |
| MTO           | 24CZ-LD4-40SE-S-UNV-L840-CD1-U | 4310             | 40.2  | 107             |
| MTO           | 24CZ-LD4-50SE-S-UNV-L835-CD1-U | 5175             | 56.4  | 92              |
| MTO           | 24CZ-LD4-50SE-S-UNV-L840-CD1-U | 5453             | 56.4  | 97              |
| MTO           | 24CZ-LD4-60SE-S-UNV-L835-CD1-U | 6153             | 66.5  | 93              |
| MTO           | 24CZ-LD4-60SE-S-UNV-L840-CD1-U | 6483             | 66.5  | 97              |
| MTO           | 24CZ-LD4-65SE-S-UNV-L835-CD1-U | 6630             | 74.2  | 89              |
| MTO           | 24CZ-LD4-65SE-S-UNV-L840-CD1-U | 6985             | 74.2  | 94              |

\*Made to order (MTO) requires a typical four week lead time.

ORDERING INFORMATION

SAMPLE NUMBER: 24CZ-LD4-45-UNV-L835-CD1-U



ACCESSORIES

- EQ-CLIP-U=T-BAR Safety Earthquake Clips<sup>(1)</sup>
- DF-24-W=2' x 4' Drywall Frame Kit
- SK-24-WS=2' x 4' Shallow Surface Mount Kit
- SK-24-WT=2' x 4' Tall Surface Mount Kit
- DF10P-C=Decorator Dimmer, 0-10V
- SF10P-\_=Decorator Slide Dimmer, 0-10V
- ISHH-01=Programming Remote for Integrated Sensor
- ISHH-02=Personal Control Remote for Integrated Sensor

**NOTES:** <sup>(1)</sup>An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. <sup>(2)</sup>Products also available in non-US voltages and frequencies for international markets. <sup>(3)</sup>With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. <sup>(4)</sup>Must be used in conjunction with a DALI control system. For a complete listing of Fifth Light Technology products and other solutions from Cooper Controls, visit [www.eaton.com/lightingsystems](http://www.eaton.com/lightingsystems). <sup>(5)</sup>Integral sensor works only with "CD" driver and is factory prewired to the driver for stand-alone control. <sup>(6)</sup>Flex does not include dimming leads. Control leads provided by others. <sup>(7)</sup>Made-to-order (MTO) requires a typical four week leadtime. <sup>(8)</sup>Step dim driver option is not available with 3000 and 3500 lumen packages. Two step-dim drivers required for 7000 and 7500 lumen packages and 6500 SE versions. <sup>(9)</sup>Fifth Light (5LTD) driver option is not available with 3000 and 3500 lumen packages. <sup>(10)</sup>Provides blank band on opposite side from sensor band to provide symmetric appearance. <sup>(11)</sup>DesignLights Consortium™ Qualified and classified for DLC Standard (all lumen packages), refer to [www.designlights.org](http://www.designlights.org) for details. <sup>(12)</sup>HCD driver option requires two drivers with 6500, 7000 and 7500 lumen packages. <sup>(13)</sup>347V versions are not available with emergency options. <sup>(14)</sup>Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. <sup>(15)</sup>Standard efficacy versions are only available in 3500K and 4000K CCT.

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

| Catalog No. | Wt.       |
|-------------|-----------|
| 24CZ-LD4-45 | 20.5 lbs. |
| 24CZ-LD4-55 | 20.5 lbs. |

# TYPE A - 24CZ-LD4-35-UNV-L835-CD1-U 24CZ LED

## INTEGRATED SENSOR

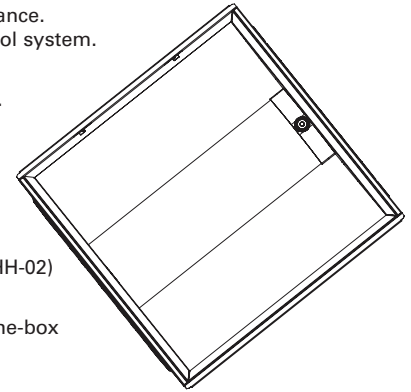
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

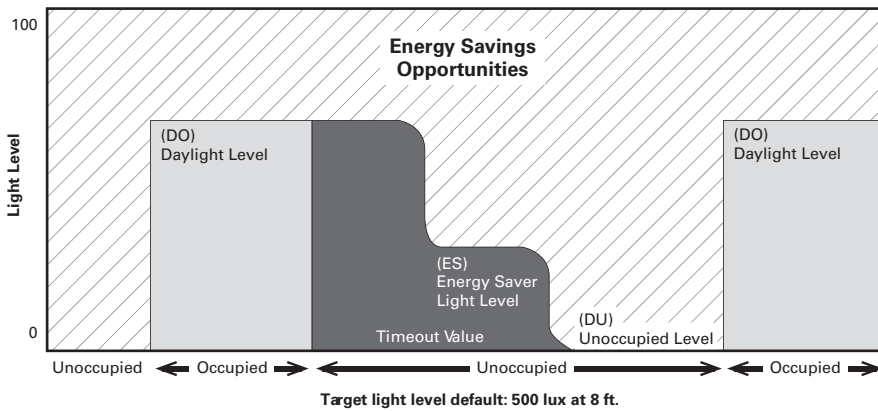
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Cruze with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

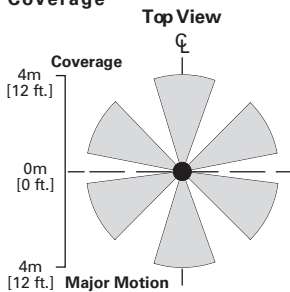


### How it works:

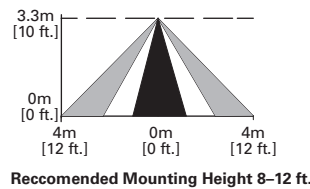
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



### Coverage



### Side View



### Optional Remote Controls



ISHH-01 Programming Remote



ISHH-02 Personal Control Remote