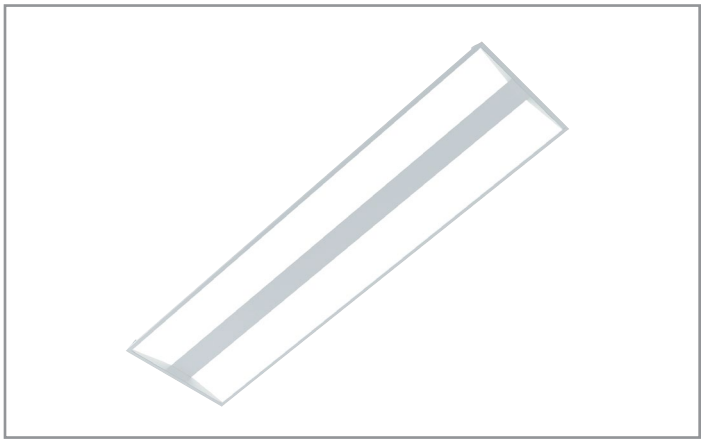
Project		**Catalog #**		**Type**	
Prepared by		**Notes**		**Date**	



Metalux

Encounter 14EN LED

1' x 4' Troffer LED Module
Specification Grade Troffer

Typical Applications

• Commercial Office Spaces • Schools • Hospitals • Retail
• Other Indoor Ambient Applications

Interactive Menu

Product Certification

Product Features

Connected Systems

damp location

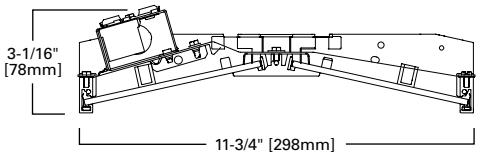
MWS MODULAR WIRING SYSTEM CLICK HERE

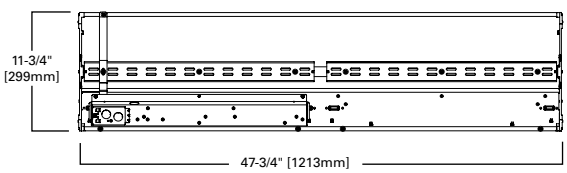
LINEAR DISCONNECT
Safe and convenient means of disconnecting power

Top Product Features

- Available in 1' x 2', 1' x 4', 2' x 2' and 2' x 4' recessed versions
- Leverages our patented WaveStream Technology with AccuAim™ optics
- Four CCT options: 3000K, 3500K, 4000K, and 5000K at 80CRI or 90 CRI
- Efficacy up to 143 lumens per watt
- Over 60% energy savings when compared to a fluorescent troffer

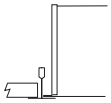
Dimensional and Mounting Details



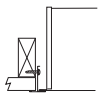


Ceiling Compatibility

G
Grid/Lay-in
Standard



F
Drywall Frame
Kit



Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G or T
Slot Grid	G or T
Flange	*

Notes:
*See Drywall Frame Kit Accessory in Ordering Information section.
**Fixture construction is suitable for use in Air-handling and plenum rated spaces in accordance with Section 300.22 (C) of the National Electrical Code, Section 4.3.11.2.6.5 of NFPA 90A and Section 602.2.1.4 of ICC.

Order Information

SAMPLE ORDER NUMBER: **14EN-LD2-33-UNV-L835-CD1-SVPD1-U**

Rating / Series / Air / Lamp Type / MTO Lumen Output / Optics / Voltage / Emergency Options

Rating	Series [2]	Air	Lamp Type	MTO Lumen Output	Optics	Voltage [5]	Emergency Options
[Blank]=Standard **ATW-SW4**=Chicago Rated [1]	**14EN**=1' x 4' Encounter Series	**[Blank]**=Standard **A**=Air (Vented) [3], [10]	**LD2**=LED 2.0	**18**=1800 Lumens [4] **25**=2500 Lumens [4] **28**=2800 Lumens **33**=3300 Lumens **38**=3800 Lumens **43**=4300 Lumens **47**=4700 Lumens **51**=5100 Lumens	**[Blank]**=Standard	**UNV**=Universal Voltage 120-277 **347V**=347 Volt [6] **48V**=48 Volt Low-voltage (Class 2) [C]	**EL7W**=7-watt, 120V-277V emergency battery pack installed [7] **EL14W**=14-watt 120V-277V emergency battery pack installed [7] **ELV7W**=7-watt, DLVP-compatible low voltage emergency battery pack installed [C] **ELV14W**=14-watt DLVP-compatible low voltage emergency battery pack installed [C] **GTR2**=Bodine Generator Transfer Relay [8] **ETRD**=Iota Emergency Transfer Relay with dimming control [8]
Notes (1) Chicago rated version does not allow for row mounting.	**Notes** (2) DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.	**Notes** (3) Air version is vented but does not meet air handling requirements. (10) Integrated sensor options not available with Air version.		**Notes** (4) Not compatible with WN driver.		**Notes** (5) Products also available in non-US voltages and frequencies for international markets. (6) 347V emergency option not available. (C) Consult DLVP system pages for additional details and compatibility.	**Notes** (7) 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. (8) Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). GTR2 option includes 2 relays on fixtures with dimming drivers. ETRD option only requires one relay when used on a dimming fixture. Must specify voltage as 120V or 277V when ordering these devices. (C) Consult DLVP system pages for additional details and compatibility.

CCT / Flex / Driver Type / Number of Drivers

CCT	Flex	Driver Type	Number of Drivers
L830=3000K **L835**=3500K **L840**=4000K **L850**=5000K **L930**=3000K **L935**=3500K **L940**=4000K **L950**=5000K	**A3/8-4/18GDIM**=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details.	**CD**=0-10V Dimming Driver (1%-100% Dimming) **SR**=Sensor-ready Dimming Driver for LWIPD1 option (5%-100% Dimming) [B] **5LTD**=Fifth Light DALI Driver (10%-100% Dimming) [9], [E] **5LTHD**=Fifth Light Dimming Driver (1%-100% Dimming) [E] **LV1**=DLVP Dimming Driver (0%-100% Dimming) [C] **SD**=Step Dimming Driver (50% or 100% Dimming) [3] **LH**=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming [F] **L5**=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver [F] **WN**=WaveLinx Wireless Fixture, No Sensor. [A], [G], [H]	**1**=1 Driver
	Flexible Metal Conduit Options Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type. **A3/8-4/18GDIM series notes:** Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556. NEC® 250.118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-30B); all applicable OSHA and HUD Requirements. UL Classified 1-, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).	**Notes** (9) 1800, 2500, 2800 and 3300 lumen packages not available with Step-dim or 5LTD option. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: (A) Consult WaveLinx system pages for additional details and compatibility. (B) Consult LumaWatt Pro system pages for additional details and compatibility. (C) Consult DLVP system pages for additional details and compatibility. (E) Consult Fifth Light system pages for additional details and compatibility. (F) Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com. (G) Not compatible with GTR, ETRD, or integrated sensor options. (H) Available with UNV voltage only.	

Integrated Sensing Systems / Packaging / Accessories

Integrated Sensing Systems [10]	Packaging	Accessories (order separately)
SWPD1=WaveLinx Wireless Integrated Sensor [A] **LWIPD1**=LumaWatt Pro Wireless Integrated Sensor [B] **LWTPD1**=LumaWatt Pro Wireless Tile-mount Sensor [B] **SLVPD1**=DLVP Low-voltage Integrated Sensor [C] **SVPD1**=0-10V Stand-alone Integrated Sensor [D]	**U**=Unit Pack **PALC**=Job Pack, in carton	**T3A END E.Q. BRACKET PARTS BAG** (Standard with fixture) **DF-14-W**=1' x 4' Drywall Frame Kit **SK-14-WT**=1' x 4' Tall Surface Mount Kit **ISHH-01**=Programming Remote for Integrated Sensor [D] **ISHH-02**=Personal Control Remote for Integrated Sensor [D]
Notes (10) Integrated sensor options not available with Air version. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: (A) Consult WaveLinx system pages for additional details and compatibility. (B) Consult LumaWatt Pro system pages for additional details and compatibility. (C) Consult DLVP system pages for additional details and compatibility. (D) Consult SVPD series system pages for additional details and compatibility.		**Notes** Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: (D) Consult SVPD series system pages for additional details and compatibility.

Product Specifications

Construction
- Shallow 3-1/16" deep housing extruded aluminum frame
- Injected molded composite end plates
- End plates screws for strength, rigidity and gap eliminations
- End plates accessory grid-lock feature adds safety
- Four auxiliary fixture end suspension points
- Large access plate for supply connection

Controls
- 0-10V dimming drivers to 1% standard
- WaveLinx wireless fixture for sensor-less wireless control
- WaveLinx sensor compatible for IoT capability
- LumaWatt Pro sensor compatible for IoT capability
- SVPD sensor compatible for out-of-the-box functionality
- DLVP sensor and driver compatible for low-voltage applications
- Fifth Light DALI driver, step-dimming and 3rd party drivers available

Electrical
- Long-life LED system with electrical driver for optimal performance
- LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80
- Projected life is 100,000 hours at 92% lumen output
- Electronic drivers available for 120-277V applications

Emergency Battery Pack Options
- Optional 120V-277V integral emergency battery pack available in 7W or 14W
- 90-minute backup period for code compliance
- Test switch with laser pointer allows safe testing from floor
- Patented EZ Key prevents accidental discharge during construction

Driver Access
- Drivers can be accessed via plenum

Finish
- High reflectance baked matte white enamel finish

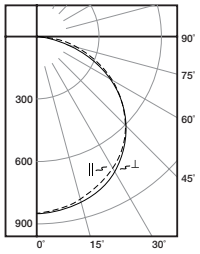
Optics
- Precision formed optical assembly
- Positively retained high optical grade acrylic lenses
- WaveStream technology provides a distribution

Compliance
- Components are UL recognized
- cULus listed for 25° C ambient indoor environments
- RoHS compliant
- Complies with IESNA LM-79 and LM-80 standards
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium (refer to www.designlights.org)

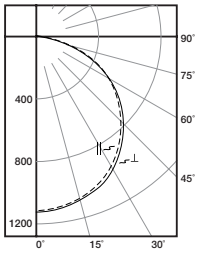
Warranty
- Five-year warranty

Photometric Data

View IES files



14EN-LD2-25-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.3 x mounting height, (⊥) 1.3 x mounting height
Lumens: 2507
Input Watts: 20.9W
Efficacy: 120.0 lm/W
Test Report: 14EN-LD2-25-UNV-L835-CD1-U.IES



14EN-LD2-33-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.3 x mounting height, (⊥) 1.3 x mounting height
Lumens: 3329
Input Watts: 28.1W
Efficacy: 118.5 lm/W
Test Report: 14EN-LD2-33-UNV-L835-CD1-U.IES

Energy and Performance Data by Catalog Number

Stock or MTO	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	14EN-LD2-18-UNV-L830-CD1-U	1800	16.0	113
MTO	14EN-LD2-18-UNV-L835-CD1-U	1856	16.0	116
MTO	14EN-LD2-18-UNV-L840-CD1-U	1893	16.0	118
MTO	14EN-LD2-18-UNV-L850-CD1-U	2060	16.0	129
MTO	14EN-LD2-25-UNV-L830-CD1-U	2432	20.9	116
MTO	14EN-LD2-25-UNV-L835-CD1-U	2507	20.9	120
MTO	14EN-LD2-25-UNV-L840-CD1-U	2557	20.9	122
MTO	14EN-LD2-25-UNV-L850-CD1-U	2783	20.9	133
MTO	14EN-LD2-28-UNV-L830-CD1-U	2729	23.6	116
MTO	14EN-LD2-28-UNV-L835-CD1-U	2813	23.6	119
MTO	14EN-LD2-28-UNV-L840-CD1-U	2869	23.6	122
MTO	14EN-LD2-28-UNV-L850-CD1-U	3122	23.6	132
MTO	14EN-LD2-33-UNV-L830-CD1-U	3229	28.1	115
MTO	14EN-LD2-33-UNV-L835-CD1-U	3329	28.1	118
MTO	14EN-LD2-33-UNV-L840-CD1-U	3396	28.1	121
MTO	14EN-LD2-33-UNV-L850-CD1-U	3695	28.1	131
MTO	14EN-LD2-38-UNV-L830-CD1-U	3723	32.8	114
MTO	14EN-LD2-38-UNV-L835-CD1-U	3838	32.8	117
MTO	14EN-LD2-38-UNV-L840-CD1-U	3915	32.8	119
MTO	14EN-LD2-38-UNV-L850-CD1-U	4260	32.8	130
MTO	14EN-LD2-43-UNV-L830-CD1-U	4205	37.6	112
MTO	14EN-LD2-43-UNV-L835-CD1-U	4335	37.6	115
MTO	14EN-LD2-43-UNV-L840-CD1-U	4422	37.6	118
MTO	14EN-LD2-43-UNV-L850-CD1-U	4812	37.6	128
MTO	14EN-LD2-47-UNV-L830-CD1-U	4586	41.5	111
MTO	14EN-LD2-47-UNV-L835-CD1-U	4728	41.5	114
MTO	14EN-LD2-47-UNV-L840-CD1-U	4823	41.5	116
MTO	14EN-LD2-47-UNV-L850-CD1-U	5248	41.5	126
MTO	14EN-LD2-51-UNV-L830-CD1-U	4963	44.7	111
MTO	14EN-LD2-51-UNV-L835-CD1-U	5117	44.7	114
MTO	14EN-LD2-51-UNV-L840-CD1-U	5219	44.7	117
MTO	14EN-LD2-51-UNV-L850-CD1-U	5680	44.7	127

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (hours)
25°C	> 92%	> 448,000

Lumen Adjustment Factors 80->90 CRI

CCT Multiplier	90 CRI
3000K	0.861
3500K	0.864
4000K	0.883
5000K	0.86

Example of Lumen Adjustment Calculation

14EN-LD2-25-UNV-L835-CD1-U
at 90CRI at 3500K

Lumen Adjustment Factor = 0.864

Total Light Output = 2,507 lm x 0.864 = 2,166 lm

Efficacy = $\frac{2.166\ lm}{20.9W}$ = 103.6 lm/W

Shipping Data

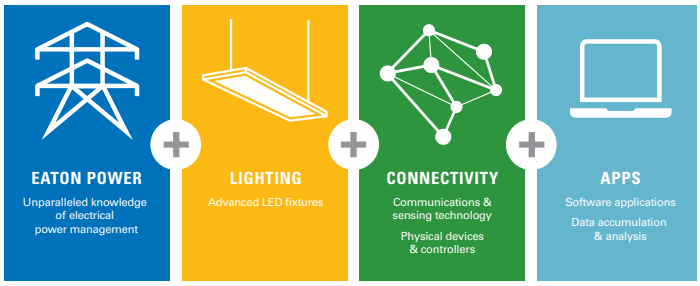
Catalog No.	Wt.
14EN-LD2-33	15 lbs.

Control Systems

- WaveLinx
- DLVP
- LumaWatt Pro
- iLumin Plus
- VividTune

Connected Systems
CLICK HERE

We make connections work



Systems comparison chart

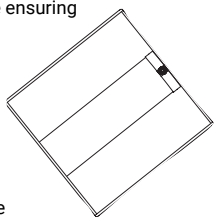
Eaton provides many lighting system solutions designed to satisfy code requirements and meet the unique needs of any project.

	Distributed Low-Voltage Power System	WaveLinx	LumaWatt Pro
Space type	**Interior**	**Interior/ Outdoor**	**Any**
Stand-alone or Network	**Stand-alone**	**Both**	**Network**
Need-based feature progression			
Basic compliance only	•	•	•
Occupancy sensing	•	•	•
Daylight harvesting	•	•	•
Zone control	•	•	•
Scheduling	•	•	•
0-10V dimming	•	•	•
Individual fixture control	•	•	•
Retrofit+Building Integration	•	•	•
Total wireless connectivity		•	•
A/V integration		•	•
BMS integration		•	•
UI options (touchscreen, apps, etc.)		•	•
Enterprise level building integration		•	•
Facility management & tools		•	•
Floor plan & reporting tools			•
Value-added services			•
Asset tracking			•
API integration		•	•
Analytics/higher problem solving			•

Integrated Sensor

The Encounter and Encounter HP 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 Encounter 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 Encounter delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.



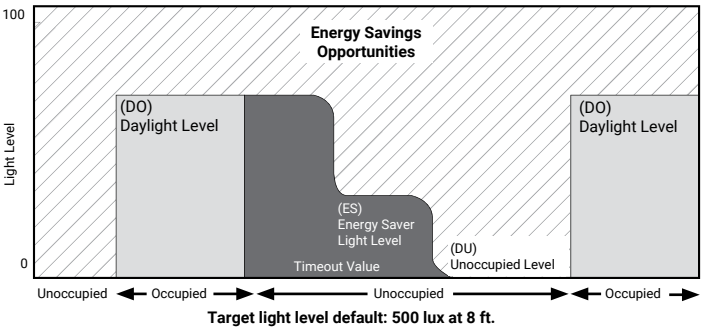
The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

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.

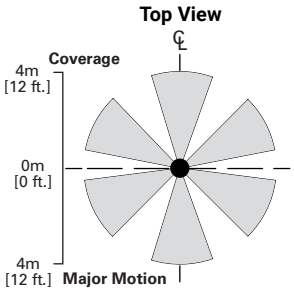
The Encounter with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

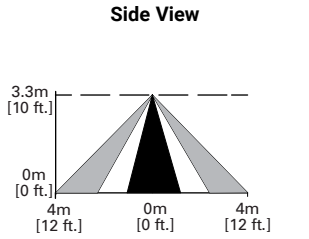
How it works:

- 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.



Target light level default: 500 lux at 8 ft.





Reccomended Mounting Height 8–12 ft.

Installation of integrated sensors within 3-ft (1m) of HVAC air vents is not recommended.

Optional Remote Controls

ISHH-01 Programming Remote

ISHH-02 Personal Control Remote

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting