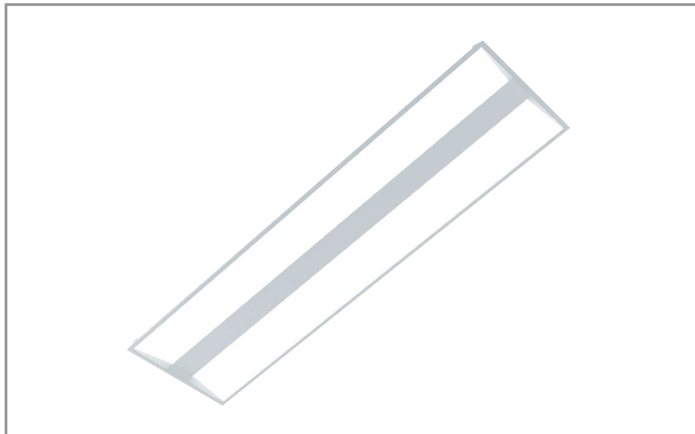


Project		Catalog #		Type	
Prepared by		Notes		Date	



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

- Order Information [page 2](#)
- Photometric Data [page 3](#)
- Control Solutions [page 4](#)
- Connected Systems [page 4](#)
- Product Warranty

Product Certification



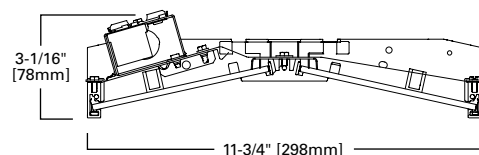
Product Features



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
- White tuning solutions available, either 3000K - 5000K or 2700K - 6500K
- Efficacy up to 143 lumens per watt

Dimensional and Mounting Details



Ceiling Compatibility

G Grid/Lay-in Standard	G or T 9/16" or 15/16" Slot Grid	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	Voltage	Emergency Options
[Blank] =Standard ATW-SW4 =Chicago Rated ⁽¹⁾	14EN =1' x 4' Encounter Series	[Blank] =Standard A =Air (Vented) ^{(9),(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	UNV =Universal Voltage 120-277 347V =347 Volt ⁽⁶⁾ 48V =48 Volt Low-voltage (Class 2) ⁽⁵⁾	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 ⁽³⁾ ELV14W =14-watt DLVP-compatible low voltage emergency battery pack installed ⁽³⁾ GTR2 =Bodine Generator Transfer Relay ⁽⁸⁾ ETRD =lota 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. (C) Consult DLVP system pages for additional details and compatibility.

CCT	Flex	Driver Type	Number of Drivers
L830 =3000K L835 =3500K L840 =4000K L850 =5000K L930 =3000K L935 =3500K L940 =4000K L950 =5000K L83050 =80CRI 3000K-5000K White Tuning ⁽¹¹⁾ L93050 =90CRI 3000K-5000K White Tuning ⁽¹¹⁾ L82765 =80CRI 2700K-6500K White Tuning ⁽¹¹⁾ L92765 =90CRI 2700K-6500K White Tuning ⁽¹¹⁾	A3/8-4/18GDIM =3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details. A3/8-5/18GDIM =Flex with 0-10V Dimming leads and Blue for alternate wiring. See below for details.	CD =0-10V Dimming Driver (1%-100% Dimming) SR =Sensor-ready Dimming Driver for LWIPD1 option (5%-100% Dimming) ⁽⁸⁾ SLTD =Fifth Light DALI Driver (10%-100% Dimming) ^{(9),(E)} SLTHD =Fifth Light Dimming Driver (1%-100% Dimming) ^(E) LV1 =DLVP Dimming Driver (0%-100% Dimming) ^(C) SD =Step Dimming Driver (50% or 100% Dimming) ⁽²⁾ 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) W2A =White Tuning, 2ch, Intensity and CCT Control ⁽¹¹⁾ WN =WaveLinX Wireless Fixture, No Sensor. ^{(A), (G), (H)}	1=1 Driver
Notes (11) White tuning provides correlated color temperatures (CCT) between 3000K (warm) to 5000K (cool) or 2700K (warm) to 6500K (cool). Must be used in conjunction with W2A driver only. Must be used with two (2) 10V dimming control channels, 1 color, 1 intensity.	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 SLTD option. (11) White tuning provides correlated color temperatures (CCT) between 3000K (warm) to 5000K (cool) or 2700K (warm) to 6500K (cool). Must be used in conjunction with W2A driver only. Must be used with two (2) 10V dimming control channels, 1 color, 1 intensity. 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 Enlighted 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⁾ SWPD1 =WaveLinX Wireless Integrated Sensor ^{(A),(12)} LWIPD1 =Enlighted Wireless Integrated Sensor ^{(B),(12)} LWTPD1 =Enlighted Wireless Tile-mount Sensor ^{(B),(12)} SLVDP1 =DLVP Low-voltage Integrated Sensor ^{(C),(12)} SVPD1 =0-10V Stand-alone Integrated Sensor ^{(D),(12)}	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. (12) Sensors are not available with the W2A driver. Vivid Tune is not DLC Qualified. 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 Enlighted 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
- Enlighted 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

- LED's available in 3000K, 3500K, or 4000K at 80 CRI or 90 CRI minimum
- TM21 life at 60,000 hours up to L92 and calculated L70 exceeds 288,000 hrs
- Drivers available in 120-277V and 347V
- White Tuning options available with Cooper Lighting's VividTune

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 visually comfortable fully luminous surface

Compliance

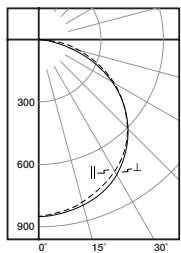
- Components are UL recognized
- cULus Damp Location listed for 25C ambient indoor environments
- Complies with IESNA LM-79 and LM-80 standards
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium (refer to www.designlights.org)

Warranty

- Five year warranty standard. Optional ten year warranty available

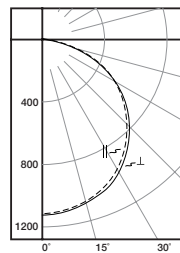
Photometric Data

[View IES files](#)



14EN-LD2-25-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion: (||) 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: (||) 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

Stock or MTO	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	14EN-LD2-18-UNV-L835-CD1-U	1856	16.0	116
MTO	14EN-LD2-25-UNV-L835-CD1-U	2507	20.9	120
MTO	14EN-LD2-28-UNV-L835-CD1-U	2813	23.6	119
MTO	14EN-LD2-33-UNV-L835-CD1-U	3329	28.1	118
MTO	14EN-LD2-38-UNV-L835-CD1-U	3838	32.8	117
MTO	14EN-LD2-43-UNV-L835-CD1-U	4335	37.6	115
MTO	14EN-LD2-47-UNV-L835-CD1-U	4728	41.5	114
MTO	14EN-LD2-51-UNV-L835-CD1-U	5117	44.7	114

Shipping Data

Catalog No.	Weight (lbs)	Units per Pallet 49" L x 52" W x 55" H
14EN-LD2-33	15	27

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours) ⁽¹⁾	Theoretical L70 (Hours) ⁽²⁾
25°C	> 92%	> 448,000

Notes: (1) Supported by IES TM-21 standards. (2) Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, that explains proper use of IES TM-21 and LM-80.

Lumen Calculator

CCT Multiplier	80 CRI	90 CRI
3000K	0.970	0.835
3500K	1.000	0.864
4000K	1.020	0.901
5000K	1.110	0.955

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 = $\frac{2,166 \text{ lm}}{20.9 \text{ W}}$ = 103.6 lm/W

Control Systems

- WaveLinX
- DLVP
- Enlighted
- iLumin Plus
- VividTune



Connected Systems
[CLICK HERE](#)

Integrated Sensor

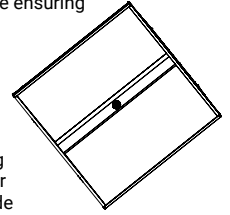
The Encounter with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Encounter delivers superior lighting with integrated occupancy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



Systems comparison chart

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

	Distributed Low-Voltage Power System	WaveLinX	Enlighted
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			•

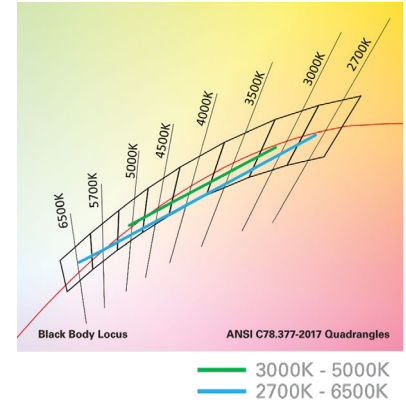
How it works:

- 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.



14EN LED with VividTune Tunable White

VividTune tunable white luminaires from Cooper Lighting Solutions deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.



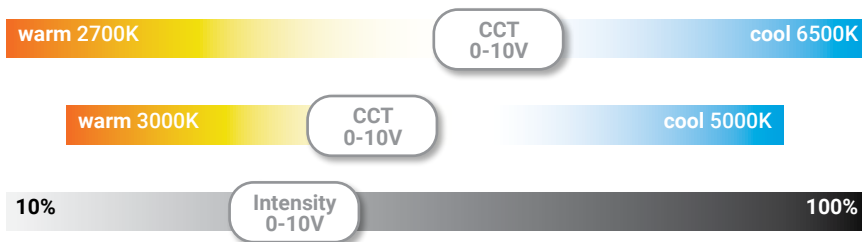
Performance Data*

Tunable White - Lumen Adjustment Factors (example only)				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.927	0.766
3000K	1.004	0.838	0.936	0.790
3500K	1.020	0.858	0.966	0.808
4000K	1.025	0.891	0.953	0.844
4500K	1.039	0.896	0.981	0.838
5000K	1.040	0.900	0.980	0.860
6500K	-	-	0.984	0.881

1' x 4' Encounter LED - Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	14EN-LD2-25-UNV-L835-CD1-U	14EN-LD2-25-UNV-L83050-W2A1-U	14EN-LD2-25-UNV-L93050-W2A1-U
3000K	-	2517	2102
3500K	2507	2558	2151
4000K	-	2569	2234
4500K	-	2604	2246
5000K	-	2606	2256

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, [click here](#) for tunable white application guides.



Example of Lumen Adjustment Calculation

14EN-LD2-25-UNV-L83050-W2A1-U at 80 CRI tuned to 3500K

$$\text{Adjusted Lumen} = \text{published } lm \times \text{adjusted } lm \text{ factor}$$

$$\text{Adjusted Lumen} = 2507 * 1.020$$

$$\text{Adjusted Lumen} = 2558 \text{ lm}$$

* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.