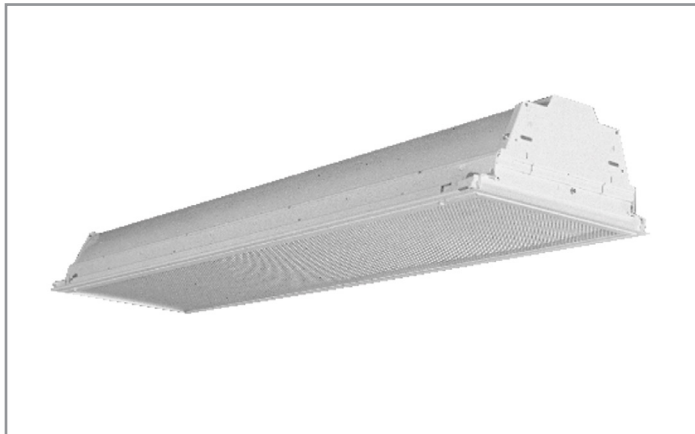| Project		Catalog #		Type	
Prepared by		Notes		Date	

Metalux

14GR LED

1' x 4' LED Troffer
General Recessed LED Troffer
For Use in Insulated Ceilings

Typical Applications
• Office • Schools • Residential • Hospitals • Retail Merchandising Areas

Interactive Menu

Product Certification

UL CERTIFIED   DLC LISTED   RoHS COMPLIANT   IC RATED   ISO SYSTEMS CERTIFIED

Product Features

Connected Systems   VividTune color tuning solutions   LINEAR DISCONNECT Designed to provide safe and convenient means of disconnecting power   BAA BUY AMERICAN ACT

MWS MODULAR WIRING SYSTEM **CLICK HERE**

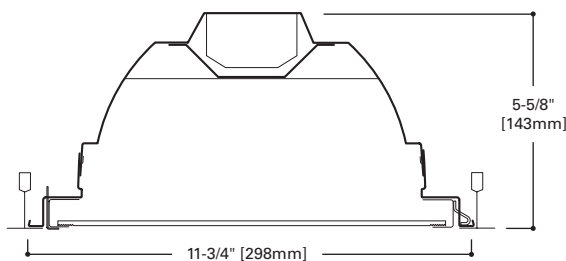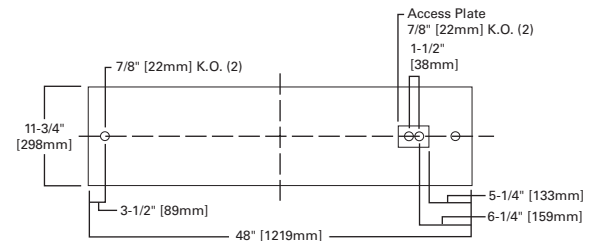## Top Product Features

• Available in 2' x 4', 2' x 2' and 1' x 4'
• Multiple lumen packages up to 18,000 in 2x4 and 9,000 in 2x2
• Up to 140 lm/W for maximum energy savings versus fluorescent troffers
• Correlated Color Temperatures 3000K, 3500K, 4000K and 5000K at 80 and 90 CRI
• Standard 0-10V continuous dimming driver
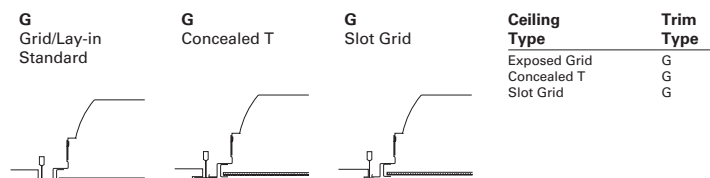• Options to meet Buy American and other domestic preference requirements

Dimensional and Mounting Details

5-5/8" [143mm]

11-3/4" [298mm]

Mounting Data

Access Plate
7/8" [22mm] K.O. (2)
1-1/2" [38mm]

7/8" [22mm] K.O. (2)

11-3/4" [298mm]

3-1/2" [89mm]

48" [1219mm]

5-1/4" [133mm]
6-1/4" [159mm]

Ceiling Compatibility

G
Grid/Lay-in
Standard

G
Concealed T

G
Slot Grid

Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G

Door Frames

GR
Flat, White
Steel

GRFA
Flat, Extruded
White Aluminum

GRRA
Deep, Regressed,
Extruded White Aluminum

COOPER Lighting Solutions
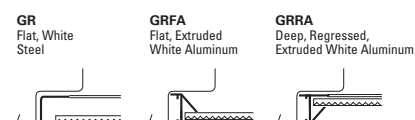
Order Information

SAMPLE ORDER NUMBER: **14GR-LD5-24-F1-UNV-L835-CD1-U**

Domestic Preferences (1)	Rating	Width/Length	Trim Type	Series (3)	Door Frame	LED Type	LED Lumen Output (4)	Shielding
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**[Blank]**=Standard **ATW-SW4**=Chicago Rated	**14**=1' x 4'	**G**=Grid/Lay-in (Standard) (2) **G**=Concealed T **G**=Slot Grid	**R**=General Purpose Troffer	**Standard**=Flat White Steel Door (Leave Blank) (25) **FA**=Flush White Extruded Aluminum c/w Spring Latch **RA**=Regressed White Extruded Aluminum **FAN**=Flush Natural Anodized Extruded Aluminum **RAN**=Regressed Natural Anodized Extruded Aluminum **FAB**=Flush Black Extruded Aluminum **RAB**=Regressed Black Extruded Aluminum	**LD5**=LED 5.0	**20**=2000 (6) **24**=2400 (6) **28**=2800 **32**=3200 **36**=3600 **40**=4000 **43**=4300 **50**=5000 (5) **60**=6000 (5)	**F1**=Pattern 12, Frosted Acrylic, 0.095" thick **F125**=Pattern 12, Frosted Acrylic, 0.125" thick **A**=Pattern 12, Clear Acrylic, 0.095" thick **A125**=Pattern 12, Clear Acrylic, 0.125" thick **A19/156**=Pattern 19, Clear Acrylic, 0.156" thick (24) **FGW080**=Frosted Smooth Acrylic, 0.080" thick
Notes (1) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.			**Notes** (2) An EQ Grid Clip is recommended for all 9/16" ceiling systems.	**Notes** (3) DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.	**Notes** (25) Only Standard door frames can support wireguard accessory.		**Notes** (4) Nominal lumen output. See table for actual values. (5) White tuning not available with this model. (6) Not compatible with WN driver.	**Notes** (24) A19/156 lens creates holographic effect on the surface of the lens.

Voltage (8)	Options	Emergency	CCT	Factory Wiring	Driver Type
347V=347 Volt (10) **UNV**=Universal Voltage 120-277 (9) **48V**=48 Volt Low-voltage (Class 2) (C) **120V**=120 Volt (11) **277V**=277 Volt (11)	**GL**=Single Element Fuse **GM**=Double Element Fuse	**EL7W**=7-watt 120V-277V emergency battery pack (12) **EL10W**=10-watt 120V-277V emergency battery pack (12) **EL14W**=14-watt 120V-277V emergency battery pack (12) **EL10WSD**=10W emergency battery pack with self-diagnostic installed (12), (25) **EL14WSD**=14W emergency battery pack with self-diagnostic installed (12), (25) **ELV7W**=Low-voltage system, 7-watt emergency battery pack (C) **ELV14W**=Low-voltage system, 14-watt emergency battery pack (C) **GTR2**=Bodine Generator Transfer Relay (13), (14) **ETRD**=Emergency Transfer Relay with dimming control (13)	**L830**=80CRI, 3000K **L835**=80CRI, 3500K **L840**=80CRI, 4000K **L850**=80CRI, 5000K **L930**=90CRI, 3000K **L935**=90CRI, 3500K **L940**=90CRI, 4000K **L950**=90CRI, 5000K **L83050**=80CRI 3000K-5000K White Tuning (15) **L93050**=90CRI 3000K-5000K White Tuning (15) **L82765**=80CRI 2700K-6500K White Tuning (15) **L92765**=90CRI 2700K-6500K White Tuning (15)	**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 Driver (10%-100% Dimming) **HCD**=0-10V Driver (1%-100% Dimming) **5LTD**=DALI Driver (5%-100% Dimming) (16) **5LTHD**=DALI Driver (1%-100% Dimming) **LV**=Low-voltage System Driver (0%-100% Dimming) (C) **SD**=Step Dimming Driver (50% or 100% Dimming) (16) **LH**=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming (F) **W2A**=White Tuning, 2 ch, Intensity and CCT Control (17) **SR**=Sensor-ready Driver (1%-100% Dimming)
Notes (8) Products also available in non-US voltages and frequencies for international markets. (9) Not available when specifying emergencies, voltage must be specific. (10) 347V is not available with the W2A driver. (11) Must specify voltage as 120V or 277V when ordering GTR2 option. (C) Consult WaveLinx Low-Voltage or DLVP system pages for additional details and compatibility.		**Notes** (12) Factory installed 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. Battery option increases total height by 1 inch. (13) 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. (14) Must specify voltage as 120V or 277V when ordering GTR2 option. (25) EL10WSD and EL14WSD not available with 347V. (C) Consult WaveLinx Low-Voltage or DLVP system pages for additional details and compatibility.	**Notes** (15) 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.	**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. **A3/8-4/18DIM 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** (16) Step Dim (Bi Level) and DALI only available in 3600 lumen and above. (17) 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. 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: (C) Consult WaveLinx Low-Voltage or DLVP 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

No. of Drivers	Options	Integrated Sensing Systems	Packaging	Accessories (23)
1=1 Driver	**PAF**=Painted After Fabrication **G1**=Gasket, Door Frame and Housing **G2**=G1 plus Gasket between Lens and Door **G3**=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims (17), (18)	**[Blank]**=No Sensor **WAA**=WaveLinx PRO Wireless Integrated Sensor (19), (A) **WPN**=WaveLinx PRO Wireless Node without Sensor (19), (A) **WAB**=WaveLinx LITE Wireless Integrated Sensor (20), (B) **WLA**=Low-voltage Integrated Sensor (21), (C)	**U**=Unit Pack **PAL**=Job Pack, out of carton **PALC**=Job Pack, in carton	**EQ-CLIP-U**=T-BAR Safety Earthquake Clips (22) **DF-14W-U**=1' x 4' Drywall Frame Kit **SK-14-WT**=1' x 4' Tall Surface Mount Kit
	Notes (17) Gasketing only available with aluminum door frame. (18) Gasketing minimum .125.	**Notes** (19) WAA sensor and WPN node to be used with CD, HCD or W2A driver. Consult factory for WPN with tunable white W2A driver. (20) WAB sensor to be used with CD driver. (21) WLA sensor to be used with LV driver. 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 PRO system pages for additional details and compatibility. (B) WaveLinx LITE devices are not currently compatible with the WaveLinx Wireless Area Controller. Consult WaveLinx LITE system pages for additional details and compatibility. (C) Consult WaveLinx Low-Voltage or DLVP system pages for additional details and compatibility.		**Notes** (22) An EQ Grid Clip is recommended for all 9/16" ceiling systems. (23) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

Product Specifications

Construction

- Rigid housing is die formed of code gauge prime cold rolled steel
- Full length die-formed stiffeners and unibody endplate for added strength
- 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

- Standard with 0-10V dimming driver (10% standard, 1% optional)
- WaveLinx wireless sensor compatible for standalone, controlled, connected, and IoT capability
- Low-voltage sensor and driver compatible for WaveLinx Low-Voltage and DLVP applications
- DALI 2.0, Lutron, and step-dimming available

Electrical

- TM-21 life at 60,000 hours up to L88 and calculated L70 exceeds 162,000 hrs.
- Available in 3000K, 3500K, 4000K or 5000K with a minimum of 80 CRI
- Color accuracy ≤3-Step MacAdam ellipse (SDCM)
- Drivers available in 120-277V and 347V
- Tunable white options available with Cooper Lighting Solutions' VividTune

Emergency Battery Pack Option

- 120V-277V integral emergency battery pack comes in 7-watts, 10-watt, or 14-watts
- Self-diagnostic emergency battery available in 10 or 14-watts (NFPA 101® Life Safety Code®)
- Constant power to the LED system for controlled, predictable discharge
- Integrated test switch/indicator light visible from floor
- Min. 90-minute backup period for code compliance
- Integral emergency transfer relay available for generator equipped power systems

Frame/Optical Shielding

- Die formed, flat steel door with frosted #12 pattern acrylic prismatic lens
- Primary stocking skus come standard with robust .095 lens
- Other options available for maximum versatility
- Replacement lenses available, contact factory

Compliance

- IC rated for insulation contact
- cULus listed for damp locations
- RoHS compliant
- Tested to IESNA LM-79 and LM-80
- Stated life per TM21 standards
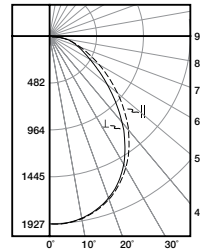- Can be used for State of California Title 24 high efficacy luminaire

Photometric Data

View IES files
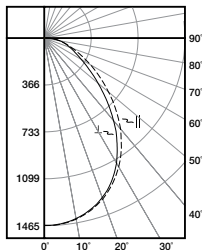
14GR-LD5-32-F1-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.18 x mounting height, (⊥) 1.15 x mounting height
Lumens: 3257
Input Watts: 29.9W
Efficacy: 108.9 lm/W
Test Report: 14GR-LD5-32-F1-UNV-L835-CD1-U.IES

14GR-LD5-43-F1-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.18 x mounting height, (⊥) 1.15 x mounting height
Lumens: 4284
Input Watts: 41.9W
Efficacy: 102.2 lm/W
Test Report: 14GR-LD5-43-F1-UNV-L835-CD1-U. IES

Energy and Performance Data

Stock or MTO	Catalog Logic (Rectilinear Shielding)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	14GR-LD5-20-F1-UNV-L835-CD1-U	2029	17.2	117
MTO	14GR-LD5-24-F1-UNV-L835-CD1-U	2425	21.0	115
MTO	14GR-LD5-28-F1-UNV-L835-CD1-U	2803	24.8	113
MTO	14GR-LD5-32-F1-UNV-L835-CD1-U	3257	29.8	109
MTO	14GR-LD5-36-F1-UNV-L835-CD1-U	3671	35.0	105
MTO	14GR-LD5-40-F1-UNV-L835-CD1-U	4045	38.8	104
MTO	14GR-LD5-43-F1-UNV-L835-CD1-U	4338	42.0	102
MTO	14GR-LD5-50-F1-UNV-L835-CD1-U	4951	45.1	101
MTO	14GR-LD5-60-F1-UNV-L835-CD1-U	6024	59.9	110

Lens Table

Approximate Lumen Multiplier	
F1	1.0
F125	1.0
A125	1.01
A	1.01
A19/156	.975
FGW080	.85

CCT Table

Approximate Color Temperature Multiplier	
5000K	1.016
4000K	1.016
3500K	1.0
3000K	.982
2700K	.930

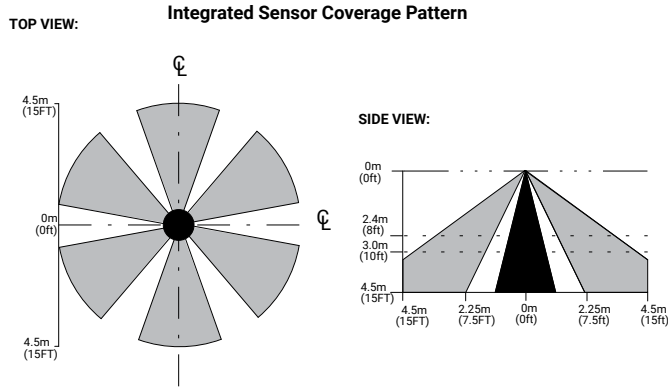### Shipping Data

Catalog No.	Wt.	Pallet
14GR-LD5-32	10 lbs.	24

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 88%	> 162,000

COOPER
Lighting Solutions

🔗 Control Systems

- WaveLinx PRO Wireless
- WaveLinx LITE Wireless
- WaveLinx Wired

The GRLED with WaveLinx offers no-hassle lighting control with multiple luminaire level control solutions.

WaveLinx PRO is used for applications where spaces need to be connected to a lighting or building management system and to help building owners improve their operations, building environment, and tenants' experience by leveraging the data generated by the sensors. The WaveLinx PRO devices communicate with each other via the WaveLinx Area Controller which coordinates the data traffic between the devices, lighting apps and CORE platform. The WaveLinx Area Controller also hosts the time clock required if spaces need to be turned on/off at a specific time.

The WaveLinx PRO Sensor offers built-in occupancy and daylighting controls as well as luminaire level control including white tuning while the WaveLinx PRO Node offers luminaire level control and white tuning. If opting for the WaveLinx PRO Node option, a PRO Ceiling Sensor will most likely be needed within the space to control the lights based on occupancy and daylight levels.

WaveLinx LITE is used for single spaces where there is no need to manage the spaces remotely or exchange the sensor data with other sub-systems within the building or smart applications.

The WaveLinx LITE Sensor offers built-in occupancy and daylighting controls as well as luminaire level control.

Integrated Sensor Coverage Pattern

TOP VIEW:

SIDE VIEW:

Note: Installation of integrated sensors within 3-ft (1m) of HVAC air vents is not recommended. The pattern shown is intended solely as a general guide and is not to scale.

Systems comparison chart

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

	Luminaire with standalone sensor	Standalone Spaces WaveLinx LITE	Networked Spaces WaveLinx PRO	Enterprise WaveLinx CORE
Occupancy	Yes	Yes	Yes	Yes
Daylighting	Yes	Yes	Yes	Yes
Wallstations	–	Yes	Yes	Yes
Gateways	–	–	1 WAC	300 WACs
Devices (MAX)	–	50 per Area (1400 per site)	200 per WAC2	32,500 per CORE Enterprise
Software	–	WaveLinx LITE Mobile App	WaveLinx Mobile App	CORE
Areas	–	28 per Site	50 per WAC2	up to 3,000
Zones	–	16 per Area	16 per Area	up to 9,000
Scheduling	–	–	Local	Global
VividTune™	–	–	Yes	Yes
Plug-Load Control	–	–	Yes	Yes
Low-Voltage Power	–	–	Yes	Yes
Integration	–	–	–	BACnet, API
Dashboards	–	–	–	Energy, Occupancy
Configuration	–	Installer	Technician	Technician / IT

SCALABILITY

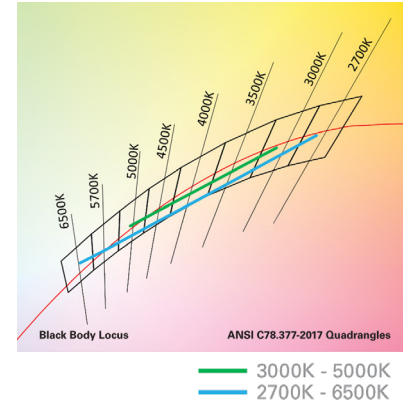devices → areas → floors → buildings

VividTune
color tuning solutions

14GR 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.
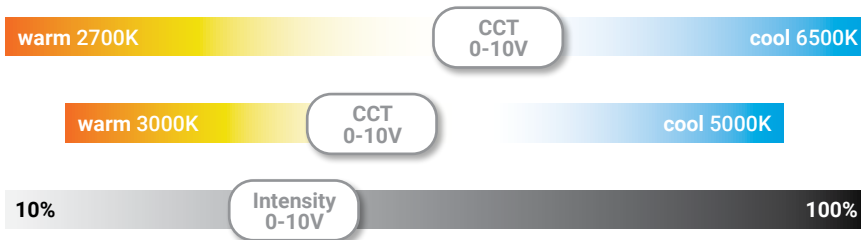
Black Body Locus   ANSI C78.377-2017 Quadrangles

━━ 3000K - 5000K
━━ 2700K - 6500K

Performance Data*

CCT	3000K-5000K		2700K-6500K	
	80 CRI	**90 CRI**	**80 CRI**	**90 CRI**
2700K	-	-	0.922	0.787
3000K	0.949	0.781	0.948	0.818
3500K	1.004	0.853	0.981	0.859
4000K	1.054	0.922	1.002	0.887
4500K	1.064	0.938	1.020	0.910
5000K	1.064	0.938	1.034	0.928
6500K	-	-	1.049	0.953

Tunable White - Lumen Adjustment Factors (example only)

1' x 4' GRLED - Example of Approximate Lumen Calculation

CCT Setting	Standard Catalog # 14GR-LD5-32-F1-UNV-L835-CD1-U	VividTune 80 CRI Catalog # 14GR-LD5-32-F1-UNV-L83050-W2A1-U	VividTune 90 CRI Catalog # 14GR-LD5-32-F1-UNV-L93050-W2A1-U
3000K	-	3090	2544
3500K	3257	3270	2780
4000K	-	3434	3002
4500K	-	3466	3054
5000K	-	3466	3054

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, go to www.cooperlighting.com for tunable white application guides.

warm 2700K | CCT 0-10V | **cool 6500K**

warm 3000K | CCT 0-10V | **cool 5000K**

10% | Intensity 0-10V | **100%**

Example of Lumen Adjustment Calculation

14GR-LD5-32-F1-UNV-L83050-W2A1-U at 80 CRI tuned to 3500K

Adjusted Lumen = published lm x adjusted lm factor

Adjusted Lumen = 3257 x 1.004

Adjusted Lumen = 3270 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.

COOPER Lighting Solutions