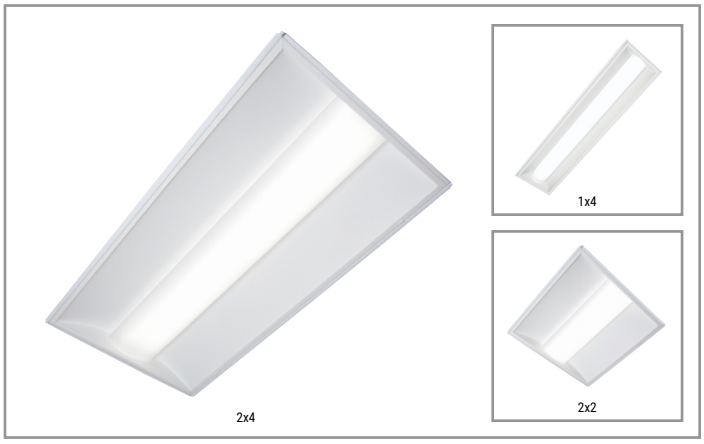
Project		**Catalog #**		**Type**	
Prepared by		**Notes**		**Date**	



Metalux

Cruze SB Troffer

Cruze SB LED Specification Grade Troffer
1x4 / 2x2 / 2x4

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information page 2
- Photometric Data page 5
- Control Solutions page 11
- VividTune™ Color Tuning Solutions page 12
- Product Warranty

Product Certification

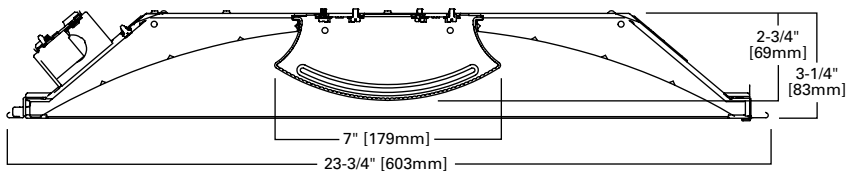
Product Features

Top Product Features

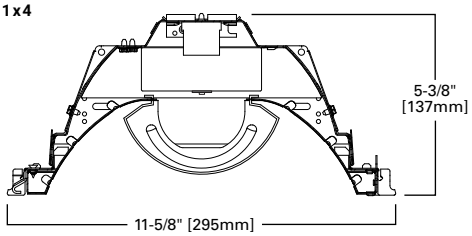
- Matte white door provides access to drivers and LED from below
- Lens options - ribbed, smooth, round & square perforated
- High performance efficacy up to 157 lumens per watt
- Integrated sensor systems - occupancy, daylight and IoT connectivity
- VividTune CCT tuning options from 3000K–5000K or 2700K-6500K
- Options to meet Build America, Buy America, Buy American and other domestic preference requirements

Dimensional and Mounting Details

2x2 / 2x4

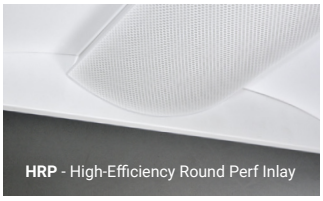


1x4



Shielding

2' wide versions shown for detail.



See ordering information for more shielding options.

additional product diagrams

Order Information

SAMPLE ORDER NUMBER: **24CZ-LD5-40-UNV-L835-CD1-U**

Domestic Preferences [1]	Rating	Series [2]	Door Frame	Lamp Type	MTO Lumen Outputs [3]			Shielding
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act **BABAF**=FHWA and FTA projects funded through October 1, 2026	**[Blank]**=Standard **ATW-SW4**=Chicago Rated	**14CZ**=1x4 Cruze SB **22CZ**=2x2 Cruze SB **24CZ**=2x4 Cruze SB	**[Blank]**=Flat White Steel Door (standard)	**LD5**=LED 5.0	**1x4** **20**=2000 Lumens [4] **25**=2500 Lumens [4] **29**=2900 Lumens **35**=3500 Lumens **39**=3900 Lumens **44**=4400 Lumens	**2x4** **30**=3000 Lumens [3] **35**=3500 Lumens **40**=4000 Lumens **45**=4500 Lumens **50**=5000 Lumens **55**=5500 Lumens **60**=6000 Lumens **65**=6500 Lumens **70**=7000 Lumens [3] **75**=7500 Lumens [3] **2x4 Standard Efficacy** **30SE**=3000 Lumens **35SE**=3500 Lumens **40SE**=4000 Lumens **45SE**=4500 Lumens **50SE**=5000 Lumens **55SE**=5500 Lumens [4] **60SE**=6000 Lumens [4] **65SE**=6500 Lumens [3], [4]	**2x2** **20**=2000 Lumens [3] **24**=2400 Lumens [3] **29**=2900 Lumens **34**=3400 Lumens **39**=3900 Lumens **44**=4400 Lumens **2x2 Standard Efficacy** **20SE**=2000 Lumens [3], [4] **24SE**=2400 Lumens [3], [4] **32SE**=3200 Lumens [4] **39SE**=3900 Lumens [4] **44SE**=4400 Lumens [4]	**[Blank]**=Ribbed Frosted Acrylic Lens (standard) **S**=Smooth Frosted Acrylic Lens **SQP**=Smooth Lens with Square Pattern Insert **HRP**=High-Efficiency Round Perf Inlay
Notes (1) Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA), Trade Agreements Act of 1979 (TAA), or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Individual Government Agencies may have more stringent compliance standards. BABAF designates the product will meet the standards set for FHWA and FTA. As noted, these must be funded by October 1, 2026. Please refer to DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.		**Notes** (2) DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details			**Notes** (3) Made-to-order (MTO) requires a typical three week leadtime. (4) Not compatible with WN driver.			

Voltage [5]	Options	Emergency Options	CRI/CCT	Flex
UNV=Universal Voltage 120-277 **347V**=347 Volt [6] **120V**=120 Volt **277V**=277 Volt	**GL**=Single Element Fuse **GM**=Double Element Fuse	**[Blank]**=No emergency **EL7W**=7-watt 120V-277V emergency battery pack installed [7] **EL10W**=10-watt 120V-277V emergency battery pack installed [7] **EL14W**=14-watt 120V-277V emergency battery pack installed [7] **EL10WSD**=10W emergency battery pack with self-diagnostic installed [7], [9] **EL14WSD**=10W emergency battery pack with self-diagnostic installed [7], [9] **ETRD**= 120-277V Emergency Transfer Relay with dimming control [8] **WNPS**=WaveLinx with Normal Power Sensing Beacon [10], [11], [12], [24] **WEM**=WaveLinx Enabled UL924 [10], [11], [12]	**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 [13] **L93050**=90CRI 3000K-5000K White Tuning [13] **L82765**=80CRI 2700K-6500K White Tuning [13] **L92765**=90CRI 2700K-6500K White Tuning [13]	**[Blank]**=No Flex **A3/8-4/18GDIM**=3/8" Flex with 0-10V Dimming Leads **A3/8-2/18G**=3/8" Flex with line and common **A3/8-5/18GDIM**=Flex with 0-10V Dimming leads and Blue for alternate wiring. See below for details.
Notes (5) Products also available in non-US voltages and frequencies for international markets. (6) 347V versions are not available with emergency options. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified.		**Notes** (7) 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. (8) Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). ETRD option only requires one relay when used on a dimming fixture. (9) EL10WSD and EL14WSD not available with 347V. (10) Only available as part of a WaveLinx control system; must order with WLS or WPS sensor. Compatible with UNV CD/HCD drivers only. (11) Cannot be combined with other emergency, control or relay options. (12) For UL924 compliance, WEM and WNPS luminaires must be installed in the same application space. (24) WNPS is compatible with ESP-L or ESP-P emergency control devices.	**Notes** (13) 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. May be combined with Wavelinx sensor control systems only.	**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. See online configurator for all flex options. **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).

Continued next page

Order Information
CONTINUED

Driver Type	No. of Drivers	Integrated Sensing Systems [20]	Sensor Accessories	Packaging
CD=0-10V Driver (1%-100% Dimming) [16], [18], [19] **5LTD**=DALI Driver (5%-100% Dimming) **5LTHD**=DALI Driver (1%-100% Dimming) **SD**=Step Dimming Driver (50%-100% Dimming) [14] **LH**=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming [F] **W2A**=White Tuning, 2 ch, Analog 0-10V Intensity and CCT Control [15], [16], [18], [19] **SR**=Sensor-ready Driver (1%-100% Dimming) **CDW**=0-10V Dimming (10%-100%) [17]	**1**=1 Driver	**[Blank]**=No Sensor **WLS**=WaveLinx LITE Integrated Sensor, Dim and Daylight, Bluetooth, 8'-15' MH [22], [B] **WPS**=WaveLinx PRO Integrated Sensor, Dim and Daylight, ZigBee, 8'-15' MH [21], [A] **WLN**=WaveLinx LITE Integrated Node, Dim and Daylight, Bluetooth [22], [B] **WPN**=WaveLinx PRO Integrated Node, Dim and Daylight, Zigbee [21], [A]	**DV**=Dual Band [23]	**U**=Unit Pack **PAL**=Job Pack, out of carton **PALC**=Job Pack, in carton
Notes (14) Step dim (SD) driver option is not available with 2000, 2500, 2900 and 3500 lumen packages. (2) 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 (15) 10V dimming control channels, 1 color, 1 intensity. May be combined with Wavelinx sensor control systems only. (16) When selecting 0-10V driver with Integrated Sensing System a 0-10V driver might be susbstituted with another type. (17) Not available with 20, 65 or higher lumen packages. (18) WPS and WPN node used with CD or W2A drivers only. (19) WLS and WLN node used with CD drivers only. 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: (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.		**Notes** (20) Add "D" to sensor ordering logic - WPSD or WLSD, to create a symmetrical dual band appearance on the luminaire/lens. (21) WPS and WPN node used with CD, HCD or W2A drivers only. (22) WLS and WLN node used with CD or HCD drivers only. 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) Consult WaveLinx LITE system pages for additional details and compatibility.	**Notes** (23) Provides blank band on opposite side from sensor band to provide symmetric appearance.	

Accessories (order separately) [25]
EQ-CLIP-U=T-BAR Safety Earthquake Clips [24] **DF-14W-U**=1' x 4' Drywall Frame Kit **DF-22W-U**=2' x 2' Drywall Frame Kit **DF-24W-U**=2' x 4' Drywall Frame Kit **SK-14-WT**=1' x 4' Tall Surface Mount Kit **SMK-22-W**= 4" Tall Surface Mount Kit, 2' x 2' **SMK-24-W**= 4" Tall Surface Mount Kit, 2' x 4' **DF10P-C**__=Decorator Dimmer, 0-10V [26] **SF10P-**__=Decorator Slide Dimmer, 0-10V [26]
Notes (24) An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. (25) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. (26) 1x4 only. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories.

Product Specifications

Construction
- Die formed of code gauge prime cold rolled steel with full length die-formed stiffeners
- Unibody endplates attached with interlocking tabs and screws
- Hemmed side flanges
- Four auxiliary fixture end suspension points provided
- Optional earthquake clips available

Integrated Controls
- 0-10V dimming to 1% standard
- Integrated WaveLinx options provide wireless individual fixture control and enable code compliance, increased energy savings, grouping of fixtures, and connection to WaveLinx control systems
- DALI 2.0, Lutron, and step-dimming available

LED and Light Engine
- Long-life LED systems coupled with electrical driver
- Color accuracy ≤3-Step MacAdam ellipse (SDCM)
- Available in 3000K, 3500K, 4000K, or 5000K with a minimum CRI of 80
- L70 is more than 60,000 hours based on TM21 testing standards
- Available in 120-277V and 347V

Emergency Battery Options
- 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

WNPS - WaveLinx Normal Power Sensing
- Normal Power Sensing (NPS) wireless beacon enabled luminaire that signals normal power is present
- Must be ordered with WaveLinx LITE or PRO sensor as part of a WaveLinx control system
- For UL924 compliance, WNPS enabled luminaires with standard product and compatible emergency control devices (ESP-P/ESP-L) must be installed in same application space

WEM - WaveLinx UL924 Emergency Sensor
- Emergency control devices (ESP-P/ESP-L) not required when WEM and WNPS luminaires are installed in the same application space
- For UL924 compliance, order WEM and WNPS luminaires in the same application space
- WEM must be ordered with WLS or WPS sensor as part of a WaveLinx control system

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
- Mitered corners and painted after fabrication
- Baked matte white enamel finish
- Positive light seals
- Acrylic frosted lens
- Replacement lenses available, contact factory
- Lens is acrylic with features on the face and sides to optimize the direct and indirect lighting contributions for improved glare and efficacy

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

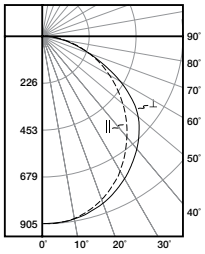
BABA Domestic Preference Compliance
- FHWA and FTA agencies are utilizing their BAA rules for BABA compliance. Cooper's products with a BAA designation are manufactured in the US and utilize a BAA COTS exemption rule for compliance. To verify a configured product with specific accessories and options meet BABA Domestic Preference Requirements; submit this catalog number to Cooper Lighting Quotation team for validation by our Engineering and Manufacturing teams. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

Warranty
- Five-year limited warranty standard. Optional ten year limited warranty available.

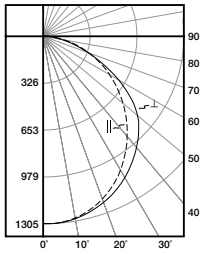
Finish
- Multistage, iron phosphate pretreatment
- Housing finished with 90% white enamel

Photometric Data

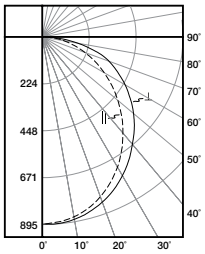
View IES files



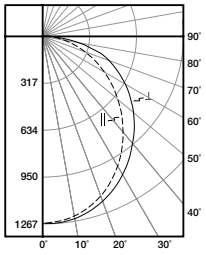
14CZ-LD5-25-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.21 x mounting height, (⊥) 1.28 x mounting height
Lumens: 2504
Input Watts: 20.5W
Efficacy: 122.1 LPW
Test Report: 14CZ-LD5-25-UNV-L835-CD1-U.IES



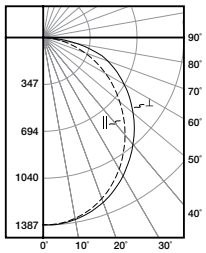
14CZ-LD5-35-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.21 x mounting height, (⊥) 1.28 x mounting height
Lumens: 3590
Input Watts: 31.4W
Efficacy: 114.3 LPW
Test Report: 14CZ-LD5-35-UNV-L835-CD1-U.IES



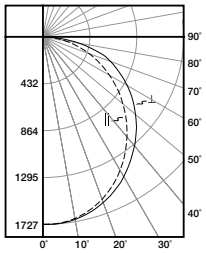
22CZ-LD5-24-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.17 x mounting height, (⊥) 1.25 x mounting height
Lumens: 2470
Input Watts: 19.6W
Efficacy: 126 LPW
Test Report: 22CZ-LD5-24-UNV-L835-CD1-U.IES



22CZ-LD5-34-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.17 x mounting height, (⊥) 1.25 x mounting height
Lumens: 3497
Input Watts: 29.4W
Efficacy: 118.9 LPW
Test Report: 22CZ-LD5-34-UNV-L835-CD1-U.IES



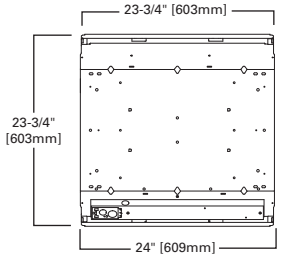
24CZ-LD5-40-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.2 x mounting height, (⊥) 1.26 x mounting height
Lumens: 3964
Input Watts: 29W
Efficacy: 136.7 LPW
Test Report: 24CZ-LD5-40-UNV-L835-CD1-U.IES



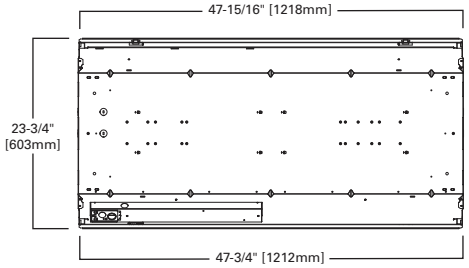
24CZ-LD5-50-UNV-L835-CD1-U
Electronic Driver
Linear LED 3500K
Spacing criterion: (II) 1.2 x mounting height, (⊥) 1.26 x mounting height
Lumens: 4988
Input Watts: 40.6W
Efficacy: 122.9 LPW
Test Report: 24CZ-LD5-50-UNV-L835-CD1-U.IES

Dimensional and Mounting Details

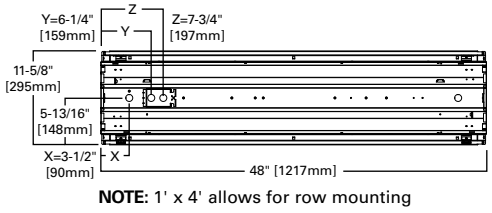
2x2



2x4



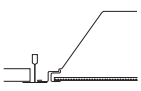
1x4



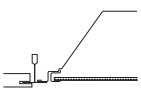
NOTE: 1' x 4' allows for row mounting

Ceiling Compatibility

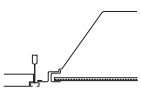
G
Grid/Lay-in
Standard



G
Concealed T



G
Slot Grid



Ceiling Type	Trim Type
Exposed Grid	Standard
Concealed T	Standard
Slot Grid	Standard
Flange	*

1' x 4' Energy and Performance Data

Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
14CZ-LD5-20-UNV-L830-CD1-U	1957	15.6	125
14CZ-LD5-20-UNV-L835-CD1-U	2028	15.6	130
14CZ-LD5-20-UNV-L840-CD1-U	2066	15.6	132
14CZ-LD5-20-UNV-L850-CD1-U	2067	15.6	132
14CZ-LD5-25-UNV-L830-CD1-U	2457	19	129
14CZ-LD5-25-UNV-L835-CD1-U	2546	19	134
14CZ-LD5-25-UNV-L840-CD1-U	2593	19	136
14CZ-LD5-25-UNV-L850-CD1-U	2595	19	137
14CZ-LD5-29-UNV-L830-CD1-U	2750	20.5	134
14CZ-LD5-29-UNV-L835-CD1-U	2849	20.5	139
14CZ-LD5-29-UNV-L840-CD1-U	2902	20.5	142
14CZ-LD5-29-UNV-L850-CD1-U	2903	20.5	142
14CZ-LD5-35-UNV-L830-CD1-U	3520	28.5	124
14CZ-LD5-35-UNV-L835-CD1-U	3647	28.5	128
14CZ-LD5-35-UNV-L840-CD1-U	3715	28.5	130
14CZ-LD5-35-UNV-L850-CD1-U	3717	28.5	130
14CZ-LD5-39-UNV-L830-CD1-U	3796	27.3	139
14CZ-LD5-39-UNV-L835-CD1-U	3933	27.3	144
14CZ-LD5-39-UNV-L840-CD1-U	4006	27.3	147
14CZ-LD5-39-UNV-L850-CD1-U	4008	27.3	147
14CZ-LD5-44-UNV-L830-CD1-U	4304	34.6	124
14CZ-LD5-44-UNV-L835-CD1-U	4459	34.6	129
14CZ-LD5-44-UNV-L840-CD1-U	4542	34.6	131
14CZ-LD5-44-UNV-L850-CD1-U	4545	34.6	131

Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
14CZ-LD5-20-S-UNV-L830-CD1-U	2055	15.6	132
14CZ-LD5-20-S-UNV-L835-CD1-U	2129	15.6	136
14CZ-LD5-20-S-UNV-L840-CD1-U	2169	15.6	139
14CZ-LD5-20-S-UNV-L850-CD1-U	2170	15.6	139
14CZ-LD5-25-S-UNV-L830-CD1-U	2580	19	136
14CZ-LD5-25-S-UNV-L835-CD1-U	2673	19	141
14CZ-LD5-25-S-UNV-L840-CD1-U	2723	19	143
14CZ-LD5-25-S-UNV-L850-CD1-U	2724	19	143
14CZ-LD5-29-S-UNV-L830-CD1-U	2887	20.5	141
14CZ-LD5-29-S-UNV-L835-CD1-U	2991	20.5	146
14CZ-LD5-29-S-UNV-L840-CD1-U	3047	20.5	149
14CZ-LD5-29-S-UNV-L850-CD1-U	3049	20.5	149
14CZ-LD5-35-S-UNV-L830-CD1-U	3696	28.5	130
14CZ-LD5-35-S-UNV-L835-CD1-U	3830	28.5	134
14CZ-LD5-35-S-UNV-L840-CD1-U	3901	28.5	137
14CZ-LD5-35-S-UNV-L850-CD1-U	3903	28.5	137
14CZ-LD5-39-S-UNV-L830-CD1-U	3986	27.3	146
14CZ-LD5-39-S-UNV-L835-CD1-U	4129	27.3	151
14CZ-LD5-39-S-UNV-L840-CD1-U	4206	27.3	154
14CZ-LD5-39-S-UNV-L850-CD1-U	4209	27.3	154
14CZ-LD5-44-S-UNV-L830-CD1-U	4519	34.6	131
14CZ-LD5-44-S-UNV-L835-CD1-U	4682	34.6	135
14CZ-LD5-44-S-UNV-L840-CD1-U	4769	34.6	138
14CZ-LD5-44-S-UNV-L850-CD1-U	4772	34.6	138

2' x 2' Energy and Performance Data

Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20-UNV-L830-CD1-U	1865	15	124
22CZ-LD5-20-UNV-L835-CD1-U	1932.3	15	129
22CZ-LD5-20-UNV-L840-CD1-U	1968.2	15	131
22CZ-LD5-20-UNV-L850-CD1-U	1969.3	15	131
22CZ-LD5-24-UNV-L830-CD1-U	2273	18.1	126
22CZ-LD5-24-UNV-L835-CD1-U	2355	18.1	130
22CZ-LD5-24-UNV-L840-CD1-U	2398.7	18.1	133
22CZ-LD5-24-UNV-L850-CD1-U	2400.1	18.1	133
22CZ-LD5-29-UNV-L830-CD1-U	2739.2	20.9	131
22CZ-LD5-29-UNV-L835-CD1-U	2838	20.9	136
22CZ-LD5-29-UNV-L840-CD1-U	2890.8	20.9	138
22CZ-LD5-29-UNV-L850-CD1-U	2892.4	20.9	138
22CZ-LD5-34-UNV-L830-CD1-U	3147.2	24.3	130
22CZ-LD5-34-UNV-L835-CD1-U	3260.7	24.3	134
22CZ-LD5-34-UNV-L840-CD1-U	3321.3	24.3	137
22CZ-LD5-34-UNV-L850-CD1-U	3323.2	24.3	137
22CZ-LD5-39-UNV-L830-CD1-U	3671.7	28.5	129
22CZ-LD5-39-UNV-L835-CD1-U	3804.2	28.5	133
22CZ-LD5-39-UNV-L840-CD1-U	3874.9	28.5	136
22CZ-LD5-39-UNV-L850-CD1-U	3877.1	28.5	136
22CZ-LD5-44-UNV-L830-CD1-U	4196.2	32.8	128
22CZ-LD5-44-UNV-L835-CD1-U	4347.6	32.8	133
22CZ-LD5-44-UNV-L840-CD1-U	4428.4	32.8	135
22CZ-LD5-44-UNV-L850-CD1-U	4430.9	32.8	135

Standard Efficacy Versions

Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20SE-UNV-L830-CD1-U	1967.9	16.2	121
22CZ-LD5-20SE-UNV-L835-CD1-U	2038.8	16.2	126
22CZ-LD5-20SE-UNV-L840-CD1-U	2076.7	16.2	128
22CZ-LD5-20SE-UNV-L850-CD1-U	2077.9	16.2	128
22CZ-LD5-24SE-UNV-L830-CD1-U	2254.6	18.5	122
22CZ-LD5-24SE-UNV-L835-CD1-U	2335.9	18.5	126
22CZ-LD5-24SE-UNV-L840-CD1-U	2379.3	18.5	129
22CZ-LD5-24SE-UNV-L850-CD1-U	2380.7	18.5	129
22CZ-LD5-32SE-UNV-L830-CD1-U	3006.4	24.2	124
22CZ-LD5-32SE-UNV-L835-CD1-U	3114.9	24.2	129
22CZ-LD5-32SE-UNV-L840-CD1-U	3172.8	24.2	131
22CZ-LD5-32SE-UNV-L850-CD1-U	3174.6	24.2	131
22CZ-LD5-39SE-UNV-L830-CD1-U	3849.3	31.2	123
22CZ-LD5-39SE-UNV-L835-CD1-U	3988.1	31.2	128
22CZ-LD5-39SE-UNV-L840-CD1-U	4062.2	31.2	130
22CZ-LD5-39SE-UNV-L850-CD1-U	4064.5	31.2	130
22CZ-LD5-44SE-UNV-L830-CD1-U	4099.7	33.2	123
22CZ-LD5-44SE-UNV-L835-CD1-U	4247.6	33.2	128
22CZ-LD5-44SE-UNV-L840-CD1-U	4326.5	33.2	130
22CZ-LD5-44SE-UNV-L850-CD1-U	4329	33.2	130

Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20-S-UNV-L830-CD1-U	1958	15.0	131
22CZ-LD5-20-S-UNV-L835-CD1-U	2029	15.0	135
22CZ-LD5-20-S-UNV-L840-CD1-U	2067	15.0	138
22CZ-LD5-20-S-UNV-L850-CD1-U	2068	15.0	138
22CZ-LD5-24-S-UNV-L830-CD1-U	2387	18.1	132
22CZ-LD5-24-S-UNV-L835-CD1-U	2473	18.1	137
22CZ-LD5-24-S-UNV-L840-CD1-U	2519	18.1	139
22CZ-LD5-24-S-UNV-L850-CD1-U	2520	18.1	139
22CZ-LD5-29-S-UNV-L830-CD1-U	2876	20.9	138
22CZ-LD5-29-S-UNV-L835-CD1-U	2980	20.9	143
22CZ-LD5-29-S-UNV-L840-CD1-U	3035	20.9	145
22CZ-LD5-29-S-UNV-L850-CD1-U	3037	20.9	145
22CZ-LD5-34-S-UNV-L830-CD1-U	3305	24.3	136
22CZ-LD5-34-S-UNV-L835-CD1-U	3424	24.3	141
22CZ-LD5-34-S-UNV-L840-CD1-U	3487	24.3	144
22CZ-LD5-34-S-UNV-L850-CD1-U	3489	24.3	144
22CZ-LD5-39-S-UNV-L830-CD1-U	3855	28.5	135
22CZ-LD5-39-S-UNV-L835-CD1-U	3994	28.5	140
22CZ-LD5-39-S-UNV-L840-CD1-U	4069	28.5	143
22CZ-LD5-39-S-UNV-L850-CD1-U	4071	28.5	143
22CZ-LD5-44-S-UNV-L830-CD1-U	4406	32.8	134
22CZ-LD5-44-S-UNV-L835-CD1-U	4565	32.8	139
22CZ-LD5-44-S-UNV-L840-CD1-U	4650	32.8	142
22CZ-LD5-44-S-UNV-L850-CD1-U	4653	32.8	142

Standard Efficacy Versions

Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20SE-S-UNV-L830-CD1-U	2066	16.2	128
22CZ-LD5-20SE-S-UNV-L835-CD1-U	2141	16.2	132
22CZ-LD5-20SE-S-UNV-L840-CD1-U	2181	16.2	135
22CZ-LD5-20SE-S-UNV-L850-CD1-U	2182	16.2	135
22CZ-LD5-24SE-S-UNV-L830-CD1-U	2367	18.5	128
22CZ-LD5-24SE-S-UNV-L835-CD1-U	2453	18.5	133
22CZ-LD5-24SE-S-UNV-L840-CD1-U	2498	18.5	135
22CZ-LD5-24SE-S-UNV-L850-CD1-U	2500	18.5	135
22CZ-LD5-32SE-S-UNV-L830-CD1-U	3157	24.2	130
22CZ-LD5-32SE-S-UNV-L835-CD1-U	3271	24.2	135
22CZ-LD5-32SE-S-UNV-L840-CD1-U	3331	24.2	138
22CZ-LD5-32SE-S-UNV-L850-CD1-U	3333	24.2	138
22CZ-LD5-39SE-S-UNV-L830-CD1-U	4042	31.2	130
22CZ-LD5-39SE-S-UNV-L835-CD1-U	4188	31.2	134
22CZ-LD5-39SE-S-UNV-L840-CD1-U	4265	31.2	137
22CZ-LD5-39SE-S-UNV-L850-CD1-U	4268	31.2	137
22CZ-LD5-44SE-S-UNV-L830-CD1-U	4305	33.2	130
22CZ-LD5-44SE-S-UNV-L835-CD1-U	4460	33.2	134
22CZ-LD5-44SE-S-UNV-L840-CD1-U	4543	33.2	137
22CZ-LD5-44SE-S-UNV-L850-CD1-U	4545	33.2	137

2' x 4' Energy and Performance Data

Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
24CZ-LD5-30-UNV-L830-CD1-U	2830	22.3	127
24CZ-LD5-30-UNV-L835-CD1-U	2932	22.3	131
24CZ-LD5-30-UNV-L840-CD1-U	2987	22.3	134
24CZ-LD5-30-UNV-L850-CD1-U	2989	22.3	134
24CZ-LD5-35-UNV-L830-CD1-U	3365	27	125
24CZ-LD5-35-UNV-L835-CD1-U	3486	27	129
24CZ-LD5-35-UNV-L840-CD1-U	3551	27	132
24CZ-LD5-35-UNV-L850-CD1-U	3553	27	132
24CZ-LD5-40-UNV-L830-CD1-U	3783	30.7	123
24CZ-LD5-40-UNV-L835-CD1-U	3920	30.7	128
24CZ-LD5-40-UNV-L840-CD1-U	3993	30.7	130
24CZ-LD5-40-UNV-L850-CD1-U	3995	30.7	130
24CZ-LD5-45-UNV-L830-CD1-U	4303	35.3	122
24CZ-LD5-45-UNV-L835-CD1-U	4458	35.3	126
24CZ-LD5-45-UNV-L840-CD1-U	4541	35.3	129
24CZ-LD5-45-UNV-L850-CD1-U	4543	35.3	129
24CZ-LD5-50-UNV-L830-CD1-U	4715	38.6	122
24CZ-LD5-50-UNV-L835-CD1-U	4885	38.6	127
24CZ-LD5-50-UNV-L840-CD1-U	4976	38.6	129
24CZ-LD5-50-UNV-L850-CD1-U	4979	38.6	129
24CZ-LD5-55-UNV-L830-CD1-U	5225	43.5	120
24CZ-LD5-55-UNV-L835-CD1-U	5413	43.5	124
24CZ-LD5-55-UNV-L840-CD1-U	5514	43.5	127
24CZ-LD5-55-UNV-L850-CD1-U	5517	43.5	127
24CZ-LD5-60-UNV-L830-CD1-U	5645	44.1	128
24CZ-LD5-60-UNV-L835-CD1-U	5848	44.1	133
24CZ-LD5-60-UNV-L840-CD1-U	5957	44.1	135
24CZ-LD5-60-UNV-L850-CD1-U	5960	44.1	135
24CZ-LD5-65-UNV-L830-CD1-U	6188	48.9	127
24CZ-LD5-65-UNV-L835-CD1-U	6411	48.9	131
24CZ-LD5-65-UNV-L840-CD1-U	6531	48.9	134
24CZ-LD5-65-UNV-L850-CD1-U	6534	48.9	134
24CZ-LD5-70-UNV-L830-CD1-U	6590	49.3	134
24CZ-LD5-70-UNV-L835-CD1-U	6828	49.3	138
24CZ-LD5-70-UNV-L840-CD1-U	6955	49.3	141
24CZ-LD5-70-UNV-L850-CD1-U	6959	49.3	141
24CZ-LD5-75-UNV-L830-CD1-U	7110	55.4	128
24CZ-LD5-75-UNV-L835-CD1-U	7367	55.4	133
24CZ-LD5-75-UNV-L840-CD1-U	7504	55.4	135
24CZ-LD5-75-UNV-L850-CD1-U	7508	55.4	136

Standard Efficacy Versions

Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
24CZ-LD5-30SE-UNV-L830-CD1-U	2765	22.4	123
24CZ-LD5-30SE-UNV-L835-CD1-U	2864	22.4	128
24CZ-LD5-30SE-UNV-L840-CD1-U	2918	22.4	130
24CZ-LD5-30SE-UNV-L850-CD1-U	2919	22.4	130
24CZ-LD5-35SE-UNV-L830-CD1-U	3317	27.3	122
24CZ-LD5-35SE-UNV-L835-CD1-U	3437	27.3	126
24CZ-LD5-35SE-UNV-L840-CD1-U	3501	27.3	128
24CZ-LD5-35SE-UNV-L850-CD1-U	3503	27.3	128
24CZ-LD5-40SE-UNV-L830-CD1-U	3815	30.4	125
24CZ-LD5-40SE-UNV-L835-CD1-U	3953	30.4	130
24CZ-LD5-40SE-UNV-L840-CD1-U	4026	30.4	132
24CZ-LD5-40SE-UNV-L850-CD1-U	4028	30.4	133
24CZ-LD5-45SE-UNV-L830-CD1-U	4202	35	120
24CZ-LD5-45SE-UNV-L835-CD1-U	4354	35	124
24CZ-LD5-45SE-UNV-L840-CD1-U	4435	35	127
24CZ-LD5-45SE-UNV-L850-CD1-U	4437	35	127
24CZ-LD5-50SE-UNV-L830-CD1-U	4866	39.6	123
24CZ-LD5-50SE-UNV-L835-CD1-U	5041	39.6	127
24CZ-LD5-50SE-UNV-L840-CD1-U	5135	39.6	130
24CZ-LD5-50SE-UNV-L850-CD1-U	5138	39.6	130
24CZ-LD5-55SE-UNV-L830-CD1-U	5087	41.1	124
24CZ-LD5-55SE-UNV-L835-CD1-U	5270	41.1	128
24CZ-LD5-55SE-UNV-L840-CD1-U	5368	41.1	131
24CZ-LD5-55SE-UNV-L850-CD1-U	5371	41.1	131
24CZ-LD5-60SE-UNV-L830-CD1-U	5529	46.3	119
24CZ-LD5-60SE-UNV-L835-CD1-U	5729	46.3	124
24CZ-LD5-60SE-UNV-L840-CD1-U	5835	46.3	126
24CZ-LD5-60SE-UNV-L850-CD1-U	5838	46.3	126
24CZ-LD5-65SE-UNV-L830-CD1-U	6027	50.1	120
24CZ-LD5-65SE-UNV-L835-CD1-U	6244	50.1	125
24CZ-LD5-65SE-UNV-L840-CD1-U	6360	50.1	127
24CZ-LD5-65SE-UNV-L850-CD1-U	6364	50.1	127

2' x 4' Energy and Performance Data

Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
24CZ-LD5-30-S-UNV-L830-CD1-U	2972	22.3	133
24CZ-LD5-30-S-UNV-L835-CD1-U	3079	22.3	138
24CZ-LD5-30-S-UNV-L840-CD1-U	3136	22.3	141
24CZ-LD5-30-S-UNV-L850-CD1-U	3138	22.3	141
24CZ-LD5-35-S-UNV-L830-CD1-U	3533	27	131
24CZ-LD5-35-S-UNV-L835-CD1-U	3660	27	136
24CZ-LD5-35-S-UNV-L840-CD1-U	3728	27	138
24CZ-LD5-35-S-UNV-L850-CD1-U	3730	27	138
24CZ-LD5-40-S-UNV-L830-CD1-U	3973	30.7	129
24CZ-LD5-40-S-UNV-L835-CD1-U	4116	30.7	134
24CZ-LD5-40-S-UNV-L840-CD1-U	4192	30.7	137
24CZ-LD5-40-S-UNV-L850-CD1-U	4195	30.7	137
24CZ-LD5-45-S-UNV-L830-CD1-U	4518	35.3	128
24CZ-LD5-45-S-UNV-L835-CD1-U	4681	35.3	133
24CZ-LD5-45-S-UNV-L840-CD1-U	4768	35.3	135
24CZ-LD5-45-S-UNV-L850-CD1-U	4771	35.3	135
24CZ-LD5-50-S-UNV-L830-CD1-U	4951	38.6	128
24CZ-LD5-50-S-UNV-L835-CD1-U	5129	38.6	133
24CZ-LD5-50-S-UNV-L840-CD1-U	5225	38.6	135
24CZ-LD5-50-S-UNV-L850-CD1-U	5228	38.6	135
24CZ-LD5-55-S-UNV-L830-CD1-U	5486	43.5	126
24CZ-LD5-55-S-UNV-L835-CD1-U	5684	43.5	131
24CZ-LD5-55-S-UNV-L840-CD1-U	5790	43.5	133
24CZ-LD5-55-S-UNV-L850-CD1-U	5793	43.5	133
24CZ-LD5-60-S-UNV-L830-CD1-U	5927	44.1	134
24CZ-LD5-60-S-UNV-L835-CD1-U	6141	44.1	139
24CZ-LD5-60-S-UNV-L840-CD1-U	6255	44.1	142
24CZ-LD5-60-S-UNV-L850-CD1-U	6258	44.1	142
24CZ-LD5-65-S-UNV-L830-CD1-U	6498	48.9	133
24CZ-LD5-65-S-UNV-L835-CD1-U	6732	48.9	138
24CZ-LD5-65-S-UNV-L840-CD1-U	6857	48.9	140
24CZ-LD5-65-S-UNV-L850-CD1-U	6861	48.9	140
24CZ-LD5-70-S-UNV-L830-CD1-U	6920	49.3	140
24CZ-LD5-70-S-UNV-L835-CD1-U	7169	49.3	145
24CZ-LD5-70-S-UNV-L840-CD1-U	7303	49.3	148
24CZ-LD5-70-S-UNV-L850-CD1-U	7307	49.3	148
24CZ-LD5-75-S-UNV-L830-CD1-U	7466	55.4	135
24CZ-LD5-75-S-UNV-L835-CD1-U	7735	55.4	140
24CZ-LD5-75-S-UNV-L840-CD1-U	7879	55.4	142
24CZ-LD5-75-S-UNV-L850-CD1-U	7883	55.4	142

Standard Efficacy Versions

Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
24CZ-LD5-30SE-S-UNV-L830-CD1-U	2903	22.4	130
24CZ-LD5-30SE-S-UNV-L835-CD1-U	3008	22.4	134
24CZ-LD5-30SE-S-UNV-L840-CD1-U	3063	22.4	137
24CZ-LD5-30SE-S-UNV-L850-CD1-U	3065	22.4	137
24CZ-LD5-35SE-S-UNV-L830-CD1-U	3483	27.3	128
24CZ-LD5-35SE-S-UNV-L835-CD1-U	3609	27.3	132
24CZ-LD5-35SE-S-UNV-L840-CD1-U	3676	27.3	135
24CZ-LD5-35SE-S-UNV-L850-CD1-U	3678	27.3	135
24CZ-LD5-40SE-S-UNV-L830-CD1-U	4006	30.4	132
24CZ-LD5-40SE-S-UNV-L835-CD1-U	4150	30.4	137
24CZ-LD5-40SE-S-UNV-L840-CD1-U	4228	30.4	139
24CZ-LD5-40SE-S-UNV-L850-CD1-U	4230	30.4	139
24CZ-LD5-45SE-S-UNV-L830-CD1-U	4412	35	126
24CZ-LD5-45SE-S-UNV-L835-CD1-U	4571	35	131
24CZ-LD5-45SE-S-UNV-L840-CD1-U	4656	35	133
24CZ-LD5-45SE-S-UNV-L850-CD1-U	4659	35	133
24CZ-LD5-50SE-S-UNV-L830-CD1-U	5109	39.6	129
24CZ-LD5-50SE-S-UNV-L835-CD1-U	5293	39.6	134
24CZ-LD5-50SE-S-UNV-L840-CD1-U	5392	39.6	136
24CZ-LD5-50SE-S-UNV-L850-CD1-U	5395	39.6	136
24CZ-LD5-55SE-S-UNV-L830-CD1-U	5341	41.1	130
24CZ-LD5-55SE-S-UNV-L835-CD1-U	5534	41.1	135
24CZ-LD5-55SE-S-UNV-L840-CD1-U	5637	41.1	137
24CZ-LD5-55SE-S-UNV-L850-CD1-U	5640	41.1	137
24CZ-LD5-60SE-S-UNV-L830-CD1-U	5806	46.3	125
24CZ-LD5-60SE-S-UNV-L835-CD1-U	6015	46.3	130
24CZ-LD5-60SE-S-UNV-L840-CD1-U	6127	46.3	132
24CZ-LD5-60SE-S-UNV-L850-CD1-U	6130	46.3	132
24CZ-LD5-65SE-S-UNV-L830-CD1-U	6328	50.1	126
24CZ-LD5-65SE-S-UNV-L835-CD1-U	6556	50.1	131
24CZ-LD5-65SE-S-UNV-L840-CD1-U	6678	50.1	133
24CZ-LD5-65SE-S-UNV-L850-CD1-U	6682	50.1	133

1' x 4' Energy and Performance Data

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours) [2]	Theoretical L70 (Hours) [3]
25°C	> 85%	> 135,000

Notes: (2) Supported by IES TM-21 standards. (3) 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.

Load Data (Stock Product)

Thd	13%
Power Factor	0.98
Weight (lbs.)	22
Low Temp. Start	-20°C

Shipping Data

Catalog No.	Wt.
14CZ-LD5-25	22 lbs.
14CZ-LD5-35	22 lbs.

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

14CZ-LD5-35-UNV-L935-CD1-U
at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
3,590 lm x 0.861 = 3,090 lm

$$\textit{Efficacy} = \frac{3{,}090\ lm}{31.5W} = 97.1\ lm/W$$

Shielding

Lumen Adjustment Factors		
S	SQP	HRP
1.012	0.642	0.878

2' x 2' Energy and Performance Data

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours) [2]	Theoretical L70 (Hours) [3]
25°C	> 85%	> 135,000

Notes: (2) Supported by IES TM-21 standards. (3) 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.

Load Data (Stock Product)

Thd	6.78%
Power Factor	0.99
Weight (lbs.)	12.5
Low Temp. Start	-20°C

Shipping Data

Catalog No.	Wt.
22CZ-LD5-27	12.5 lbs.
22CZ-LD5-36	12.5 lbs.

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

22CZ-LD5-34-UNV-L935-CD1-U
at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
3,497 lm x 0.861 = 3,010 lm

$$\textit{Efficacy} = \frac{3{,}010\ lm}{29.4W} = 102.3\ lm/W$$

Shielding

Lumen Adjustment Factors		
S	SQP	HRP
1.05	0.670	0.883

2' x 4' Energy and Performance Data

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours) [2]	Theoretical L70 (Hours) [3]
25°C	> 85%	> 135,000

Notes: (2) Supported by IES TM-21 standards. (3) 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.

Load Data (Stock Product)

Thd	12.9%
Power Factor	0.97
Weight (lbs.)	20.5
Low Temp. Start	-20°C

Shipping Data

Catalog No.	Wt.
24CZ-LD5-45	20.5 lbs.
24CZ-LD5-55	20.5 lbs.

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

24CZ-LD5-40-UNV-L835-CD1-U
at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
3,964 lm x 0.861 = 3,413 lm

$$\textit{Efficacy} = \frac{3{,}413\ lm}{29.4W} = 117.6\ lm/W$$

Shielding

Lumen Adjustment Factors		
S	SQP	HRP
1.05	0.673	0.849

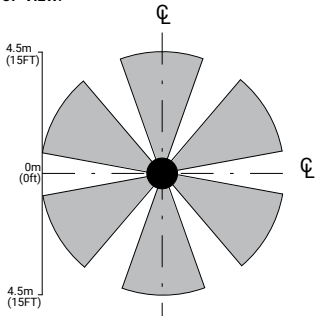
Control Solutions

- WaveLinx LITE wireless
- WaveLinx PRO wireless
- WaveLinx CAT wired
- WaveLinx DALI wired

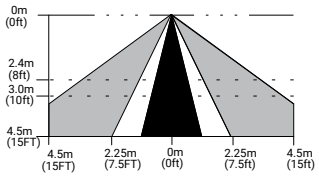
WaveLinx Digital Lighting Control Solutions

Integrated Sensor Coverage Pattern

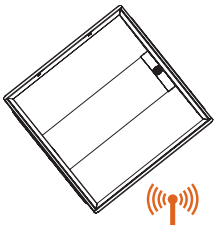
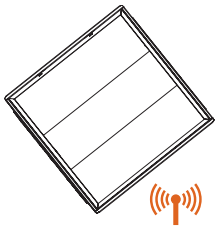
TOP VIEW:



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.*

With Integrated WaveLinx Sensor	With Integrated WaveLinx Node
	

Add a hidden WaveLinx Node (WPN, WLN) to your space lighting design!

To:

- Keep luminaire aesthetics
- Connect fixtures without space for a sensor, such as downlights
- Connect sealed fixtures without a standard sensor option such as products for clinical space

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

WaveLinx by Cooper Lighting Solutions is a wired and wireless solution for a single room, a parking lot, or an entire campus, helping meet energy codes, reduce energy use, and create healthier environments. As a true hybrid architecture, it enables the seamless integration of DALI, CAT, and PRO technologies and luminaires for unmatched reliability and flexibility, with sensor-enabled luminaires that can also share data with the WaveLinx CORE platform, further improving operations across office, education, healthcare, warehouse, and parking garage applications.

WaveLinx LITE is a Bluetooth wireless digital lighting control solution with out-of-the-box functionality that saves energy and meets energy codes. It's designed for applications that require occupancy-based, daylighting, or manual light control using WaveLinx LITE-enabled luminaires and a mobile app for cost-effective projects.

WaveLinx PRO is a Zigbee wireless solution that offers a rich portfolio of devices, WaveLinx PRO-enabled luminaires, and a mobile app and the WAC (WaveLinx Area Controller). It offers advanced energy savings and deep data integration to improve the occupant experience.

WaveLinx CAT is a scalable CAT5-wired solution for a single room and connected spaces, supporting applications that require occupancy-based, daylighting, or manual light control, with self-commissioning to meet energy codes and maximize energy savings.

WaveLinx DALI is a powerful two-wire DALI-2 solution for connected spaces, combining open-standard devices enabling interoperability with the simplicity of WaveLinx app-based commissioning. It delivers deterministic wired control, granular addressability, and tunable white.

Integrated Controls Options

Option	Out of the Box Functionality	Luminaire Level Lighting Control (LLLC)	Automatic Dimming Photocell	Occupancy Sensing	CCT Control*
WLS (WaveLinx LITE Sensor)	X	X	X	X	
WLN (WaveLinx LITE Node)		X			
WPS (WaveLinx PRO Sensor)		X	X	X	X
WPN (WaveLinx PRO Node)		X			X

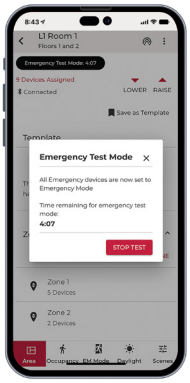
Note: *WaveLinx utilizes scenes to allow users to change an area's fixtures Correlated Color Temperature (CCT) and intensity using a commissioned wireless wallstation scene controller. To enable CCT adjustments through WaveLinx, include WPS or WPN devices in addition to VividTune or BioUp technologies for integrated fixture control. WPS with CCT controls the intensity of the fixture; an additional, externally mounted control device is needed to control the CCT. See RSP-P-010-347

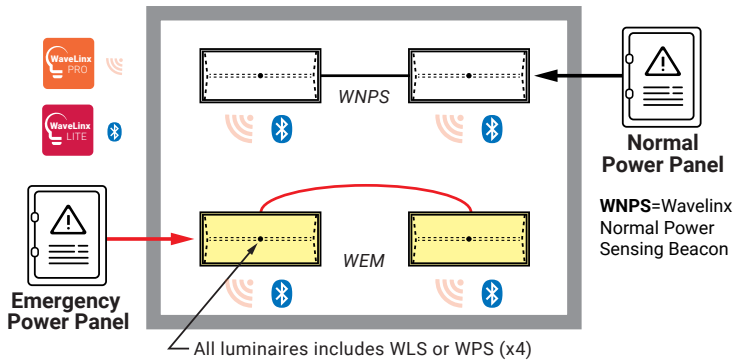
The WNPS and WEM (**UL924** option) only available with WLS or WPS sensors. Must be specified when ordered. WEM must be associated with a group that includes a normal power sensing device to receive NPS beacon. Learn more about WaveLinx EM here.

WaveLinx EM

The WaveLinx Emergency (WEM) solution offered by WaveLinx wireless (PRO and LITE) makes it easy to design your UL924 certified emergency lighting solution. Fixture-integrated WaveLinx Emergency Modules (WEM) override lighting controls and increases light output to emergency level (100%) until normal power is restored. Needs programming. WaveLinx emergency systems are designed to meet UL 924 standards. Learn more here.



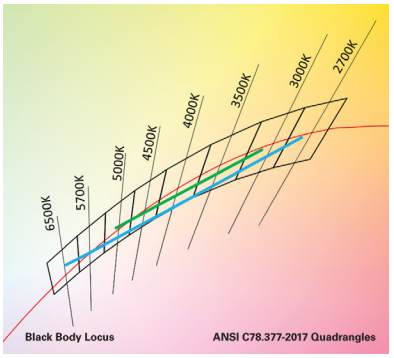




VividTune color tuning solutions

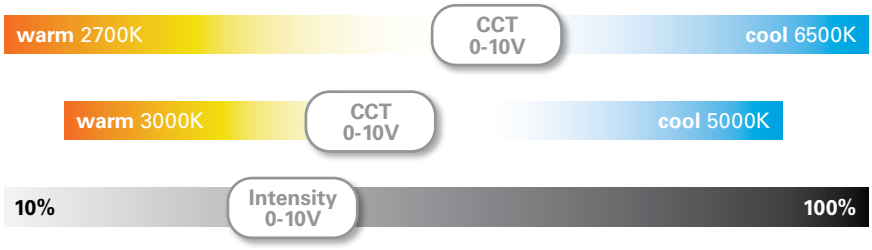
Cruze SB LED with VividTune Tunable White

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.



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.



1' x 4' Performance Data*

Tunable White - Lumen Adjustment Factors				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.904	0.772
3000K	0.931	0.766	0.930	0.803
3500K	0.985	0.837	0.962	0.843
4000K	1.034	0.904	0.983	0.870
4500K	1.044	0.920	1.001	0.892
5000K	1.044	0.920	1.015	0.910
6500K	-	-	1.029	0.935

1' x 4' Cruze SB LED - Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	14CZ-LD5-35-UNV-L835-CD1-U	14CZ-LD5-35-UNV-L83050-W2A1-U	14CZ-LD5-35-UNV-L93050-W2A1-U
3000K	-	3341	2750
3500K	3590	3535	3005
4000K	-	3712	3245
4500K	-	3747	3302
5000K	-	3747	3302

Example of Lumen Adjustment Calculation

14CZ-LD5-35-UNV-L83050-W2A1-U at 80 CRI tuned to 3500K

Adjusted Lumen = published lm x adjusted lm factor

Adjusted Lumen = 3590 x 0.985

Adjusted Lumen = 3536 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.*

VividTune™
color tuning solutions

2' x 2' Performance Data*

Tunable White - Lumen Adjustment Factors				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.902	0.771
3000K	0.929	0.765	0.928	0.801
3500K	0.983	0.836	0.960	0.841
4000K	1.032	0.902	0.981	0.868
4500K	1.042	0.918	0.999	0.891
5000K	1.042	0.918	1.012	0.908
6500K	-	-	1.027	0.933

2' x 2' Cruze SB LED - Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	22CZ-LD5-34-UNV-L835-CD1-U	22CZ-LD5-34-UNV-L83050-W2A1-U	22CZ-LD5-34-UNV-L93050-W2A1-U
3000K	-	3247	2673
3500K	3497	3436	2921
4000K	-	3608	3154
4500K	-	3642	3209
5000K	-	3642	3209

Example of Lumen Adjustment Calculation

22CZ-LD5-34-UNV-L83050-W2A1-U at 80 CRI tuned to 3500K

Adjusted Lumen = published lm x adjusted lm factor

Adjusted Lumen = 3497 x 0.983

Adjusted Lumen = 3436 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.*

2' x 4' Performance Data*

Tunable White - Lumen Adjustment Factors				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.943	0.805
3000K	0.971	0.799	0.969	0.837
3500K	1.027	0.873	1.003	0.879
4000K	1.078	0.943	1.025	0.907
4500K	1.089	0.959	1.043	0.930
5000K	1.089	0.959	1.058	0.949
6500K	-	-	1.073	0.975

2' x 4' Cruze SB LED - Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	24CZ-LD5-40-UNV-L835-CD1-U	24CZ-LD5-40-UNV-L83050-W2A1-U	24CZ-LD5-40-UNV-L93050-W2A1-U
3000K	-	3849	3169
3500K	3964	4073	3462
4000K	-	4277	3739
4500K	-	4317	3804
5000K	-	4317	3804

Example of Lumen Adjustment Calculation

24CZ-LD5-40-UNV-L83050-W2A1-U at 80 CRI tuned to 3500K

Adjusted Lumen = published lm x adjusted lm factor

Adjusted Lumen = 3964 x 1.027

Adjusted Lumen = 4073 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.*

Emergency Lighting

All buildings have to comply with emergency lighting codes to maintain their certificate of occupancy.
To enable this, Cooper Lighting Solutions has created multiple offerings to suit the building type and luminaire type.

Options to Enable Emergency (Stand Alone)

	Standard	Self-Diagnostic	FirstLink Connected ETO for Factory-Installed Only
Metalux Recessed, HALO, APG, Outdoor Medium forward voltage LED arrays usually 20-60V DC	**Batteries**: EBPLEDL7W, EBPLEDL14W **Inverters**: INVM-10W-AD	**Batteries**: EBPLED10WSD, EBPLED7.5WSD **Inverters**: INVM-25W-ADSD, INVM-50W-ADSD	**Batteries**: EBPLEDL10SF, EBPLEDL6SF
Metalux Industrial High forward voltage LED arrays usually 90-200V DC	**Batteries**: EBPLEDC1HV **Inverters**: INVM-10W-AD, INVM-100W-AD	**Inverters**: INVM-25W-ADSD, INVM-50W-ADSD	
How is emergency lighting inspection done?	Turn breakers off Walk around the building and collect compliance data.	No need to turn breakers off. Walk around, look up and collect compliance data.	No need to turn breaker off, No walking around. Open the app, push a button, and collect compliance data.

NOTE: 1. For factory installed First-Link EBP, order xSF option. Example: ETO_22CZ2-34HE-UNV-EBP10SF-L835-CD1-U (see Luminaire Order Info)
2. For factory installed standard EBP. Example: 22CZ2-34HE-UNV-EL7W-L835-CD1--U

Connected Emergency Lighting

ETO via Factory-Installed Only

Use our Connected Emergency Lighting products (FirstLink) to reduce the cost of compliance.

FirstLink is a complete and fully code compliant connected emergency egress lighting system comprised of FirstLink enabled exit signs, unit equipment, emergency LED drivers and the FirstLink application. The monthly and annual tests can be scheduled to be performed on a cadence. And the FirstLink app easy, instant access to compliance information and your system status. Reports can be easily exported to prove the system compliance status is 100%.

Compliance

- Avoid costly non-compliance fines
- Helps reduce risks and insurance premiums

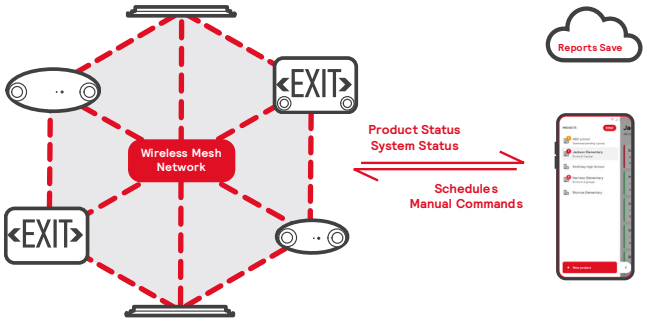
Convenience

- No ladders
- No documentation
- No searching for reports during an inspection.

Control

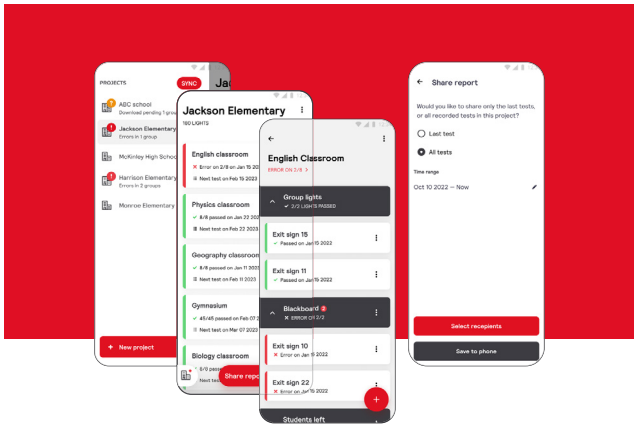
- Scheduling: Adjust the frequency and timing of testing.
- Troubleshooting: Receive complete product status information.
- Customization: Create custom groups and zones.

How does FirstLink work?



FirstLink is a standalone wireless mesh network that connects all devices and ensures a reliable connection through the network, even during the loss of individual devices.

If the app can communicate with just one device, the status of all devices can be read. Once the status is downloaded, the data is uploaded and saved to the cloud.



The FirstLink App

Complete control is in your hands

The FirstLink app is your portal to the FirstLink system. This easy-to-navigate iOS and Android application gives you the ability to configure your system, view and export results, change testing schedules, and more.

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

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