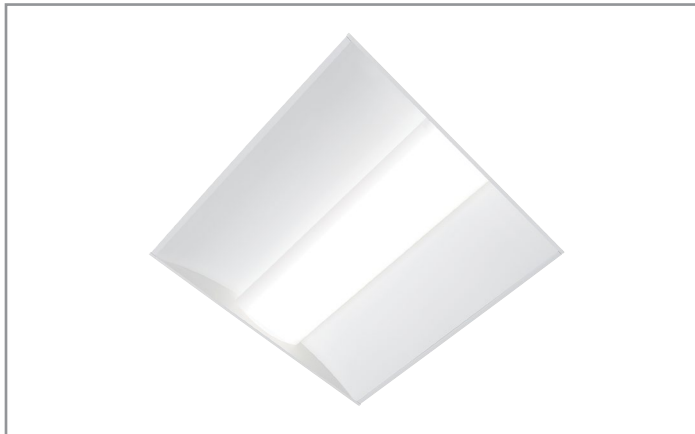


Project		Catalog #		Type	
Prepared by		Notes		Date	



Fail-Safe

FCZ2 Sealed Cruze ST 2x2

2x2 Sealed Center Basket
Sterile Environments / Behavioral Health
Curved or Square Lens
2,000 to 11,000 lumens

Typical Applications

Medical • Cleanroom • Behavior Health • Education • Laboratory • Pharmacy • Fitness Center • R&D Center

Interactive Menu

- Order Information page 2
- Photometric Data page 3
- VividTune Tunable White page 5
- Product Warranty

Product Certification



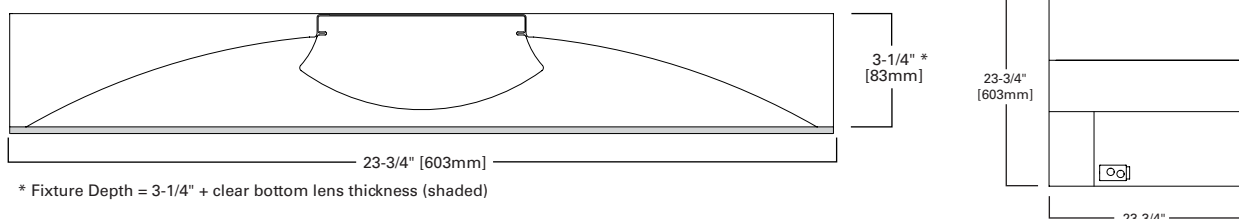
Product Features



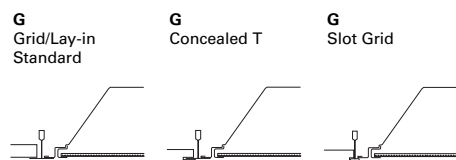
Top Product Features

- Sealed center basket luminaire for use in high abuse, medical, wet location, and sterile applications
- Wet location standard, IP65 standard for dust and water ingress protection
- NSF listed for use in food services/food preparation environments
- Clear polycarbonate bottom lens for use in **behavioral health applications**
- ISO5-9 certified
- VividTune tunable white (3000K-5000K and 2700K-6500K) available in 80CRI or 90CRI
- Options to meet Buy American and other domestic preference requirements
- IK10 with Polycarbonate Lens

Dimensional and Mounting Details (standard curved lens shown)



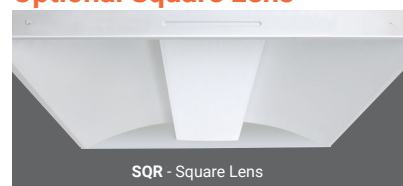
Ceiling Compatibility



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

*See Drywall Frame Kit Accessory in Ordering Information Section

Optional Square Lens



Order Information

SAMPLE ORDER NUMBER: **22FCZ2-34HE-UNV-L82765-CP125-W2A1**

Domestic Preferences	Series	Lumen Output		Efficacy	Shielding	Voltage	Options CRI/CCT
[Blank] =Standard BAA =Buy American Act TAA =Trade Agreements Act	22FCZ2=24 inch width, 2 ft. length	20=2000 Lumens ⁽⁹⁾ 24=2400 Lumens ⁽⁹⁾ 29=2900 Lumens ⁽¹³⁾ 32=3200 Lumens ⁽¹²⁾ 34=3400 Lumens ⁽¹³⁾ 39=3900 Lumens 44=4400 Lumens 50=5000 Lumens ⁽¹¹⁾ 55=5500 Lumens ⁽¹¹⁾ 60=6000 Lumens ⁽¹¹⁾ 65=6500 Lumens ⁽¹¹⁾	70=7000 Lumens ⁽¹¹⁾ 75=7500 Lumens ⁽¹¹⁾ 80=8000 Lumens ⁽¹¹⁾ 85=8500 Lumens ⁽¹¹⁾ 90=9000 Lumens ⁽¹¹⁾ 95=9500 Lumens ⁽¹¹⁾ 100=10000 Lumens ⁽¹¹⁾ 110=11000 Lumens ⁽¹¹⁾	[Blank] =Standard Efficacy ^{(8),(10)} HE =High Efficacy ⁽¹⁰⁾ VHE =Very High Efficacy ⁽¹¹⁾	[Blank] =Ribbed Frosted Acrylic Curved Lens (standard) S =Smooth Frosted Curved Acrylic Lens RDP =Smooth Curved Lens with Round Pattern Insert HRP =Curved Lens with High-Efficiency Round Perf Inlay SQR =Square Lens	UNV=Universal Voltage 120-277 347V=347 Volt ⁽⁵⁾	L830=80CRI, 3000K L835=80CRI, 3500K L840=80CRI, 4000K L850=80CRI, 5000K L83050=80CRI 3000K-5000K White Tuning ⁽⁶⁾ L82765=80CRI 2700K-6500K White Tuning ⁽⁶⁾ L930=90CRI, 3000K L935=90CRI, 3500K L940=90CRI, 4000K L950=90CRI, 5000K L93050=90CRI 3000K-5000K White Tuning ⁽⁶⁾ L92765=90CRI 2700K-6500K White Tuning ⁽⁶⁾
Notes (14) 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 (8) White tuning not available with this model. (9) Not available with WN driver. (10) Available up to 4400 lumens. (11) Currently only available with CD driver option. (12) Only available in Standard Efficacy. (13) Not available in Standard Efficacy.			Notes (2) Products also available in non-US voltages and frequencies for international markets. (5) 347 versions 6000 lumens and below are available with emergency options, 347 versions with emergency 5LTHD, step-dim or sensors are not available.	Notes (6) 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. Not compatible with other control or sensor options. Must be used in conjunction with W2A driver only. Must be used with two (2) 10V dimming control channels, 1 color, 1 intensity. Not compatible with other control or sensor options.		

Flex	Bottom Lens	Driver Type	Number of Drivers
[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.	CA08=0.080" Clear Acrylic CA125=0.125" Clear Acrylic CP125=Clear Polycarbonate 0.125" CP187=Clear Polycarbonate 0.187" CP250=Clear Polycarbonate 0.250"	CD=0-10V Driver (10%-100% Dimming) HCD=0-10V Driver (1%-100% Dimming) 5LTD=DALI Driver (5%-100% Dimming) 5LTHD=DALI Driver (1%-100% Dimming) SD=Step Dimming Driver (50% or 100% Dimming) LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming ⁽⁷⁾ W2A=White Tuning, 2 ch, Analog 0-10V Intensity and CCT Control ⁽⁷⁾	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).	Bold, Underlined choices may result in expedited delivery. Intent is to ship in (10) days from receipt of order. Consult order fulfillment for up to date delivery schedules.	Notes (7) 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. Not compatible with other control or sensor options. 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	

Options	Emergency	Integrated Sensing Systems	Accessories
[Blank] =No Element Fuse GL =Single Element Fuse GM =Double Element Fuse AMW =Anti-microbial, Powder Coat, Matte White Paint	[Blank] =No Emergency Pack EL7W=7-watt, 120V-277V emergency battery pack installed ⁽³⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽³⁾ GTR2=Generator Transfer Relay ⁽⁶⁾ ETRD=Emergency Transfer Relay with dimming control ⁽⁶⁾	[Blank] =No Sensor LWTPD1=Enlightened Wireless Tile-mount Sensor ⁽⁸⁾	[Blank] =No Accessory FCZ2-EQCLIP-U-PK =Pack of four Fail-Safe Cruze grid security clips ⁽¹⁾ DFCL-2424W-U=2' x 2' gasketed drywall framing kit. Ships with gasket to be applied in field. Cutout Dimensions 24.25" x 24.25" ⁽¹⁴⁾ DFVR/FCZ-2424W-U=2' x 2' secured tamper resistant drywall kit. Cutout dimensions 24.25" x 24.25" ⁽¹⁴⁾ ISHH-01=Programming Remote for Integrated Sensor ⁽⁹⁾ ISHH-02=Personal Control Remote for Integrated Sensor ⁽⁹⁾
Notes (3) 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. (6) 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. 347 not available. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories.	Notes (8) 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. (6) 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. 347 not available. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories.	Notes (1) An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. (15) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. 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. (16) For Anti-microbial matte white finish, replace W with AMW. ex: DFCL-2424AMW-U.	

Product Specifications

Construction

- Formed steel housing with integral Grid-lock feature and optional grid security clips

Integrated Controls

- Standard with 0-10V dimming. Optionally available with Lutron and Dali

LED and Light Engine

- Available in 3000, 3500, 4000, and 5000K fixed color temperatures, or with VividTune white tuning technology
- Drivers available in 120-277V and 347V
- TM21 life at 60,000 hours up to L85 and L70 exceeds 132,000 hours

Emergency Battery Options

- Optional 120-277V emergency battery available in 7W or 14W
- 90-minute backup period for code compliance
- Test switch with laser pointer and testing from floor feature for ease of use
- Generator transfer options available

Finish

- High Gloss white finish standard

Shielding

- Standard ribbed frosted acrylic curved diffuser
- Optional clear curved diffuser with perf or decorative pattern inserts
- Optional smooth frosted acrylic curved lens (S)
- Optional metal perforated curved acrylic curved lens (RDP)
- Optional High-Efficiency curved Round Perf Inlay (HRP)
- Optional square frosted acrylic lens (SQR)

Compliance

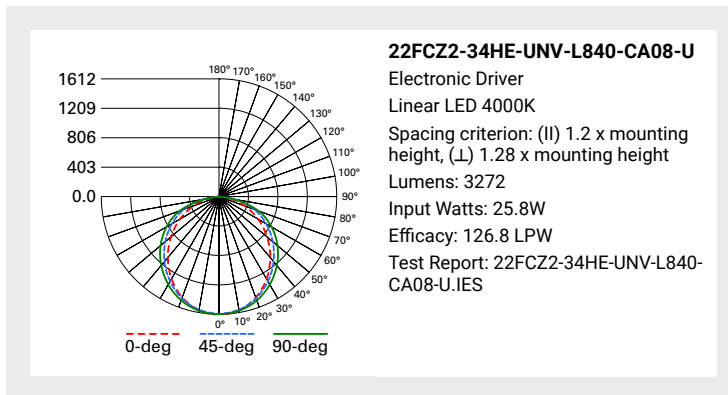
- IC rated, cULus Wet Location
- RoHS compliant
- ISO5-9 certified
- IP65
- IK10 - Polycarbonate Lens
- NSF rated; Splash, Non-Food Zone - Typical rating for lighting equipment not subjected to direct food contact. (e.g. ceiling mount luminaires). Examples of equipment subjected to direct food contact would be cutting boards, work-tables, mixers, can-openers, other)

Warranty

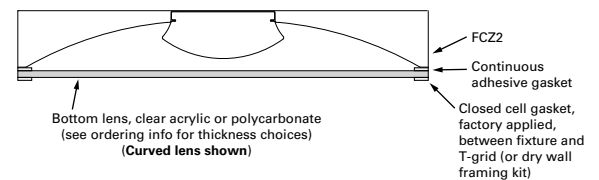
- Five year warranty standard

Photometric Data

[View IES files](#)



Cross Section



Energy and Performance Data

Shielding

Lumen Adjustment Factors			
S	RDP	HRP	SQR
1.05	0.67	0.85	0.96

Lumen Calculator

CCT Multiplier	80 CRI	90 CRI
3000K	0.994	0.830
3500K	1.00	0.845
4000K	1.00	0.854
5000K	1.065	0.852

Lumen Maintenance

Version	TM-21 Lumen Maintenance (60,000 hours) ⁽¹⁾	Theoretical L70 (Hours) ⁽²⁾
Standard	> 85%	> 131,000
High Efficiency	> 94%	> 290,000
Very High Efficiency	> 94%	> 290,000

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.

Load Data (Stock Product)

THD	6%
Power Factor	0.99
Weight (lbs.)	10.6
Low Temp. Start	-20°C

Shipping Data

Catalog No.	Wt.	Pallet 49"L x 52"W x 55"H
2' x 2'	12.5 lbs.	48

Energy and Performance Data Catalog Number

Standard Efficacy Versions – Single Row of LEDs

Catalog Number	Watts	CA08	LPW	CA125	LPW	CP125	LPW	CP187	LPW	CP250	LPW
22FCZ2-20-XXXX-UNV-35-CD1	17.9	2031	113	2024	113	1984	111	1900	106	1885	105
22FCZ2-24-XXXX-UNV-35-CD1	21.9	2368	108	2360	108	2314	106	2216	101	2198	100
22FCZ2-32-XXXX-UNV-35-CD1	26.7	3170	119	3159	118	3097	116	2966	111	2942	110
22FCZ2-39-XXXX-UNV-35-CD1	34.5	3811	110	3797	110	3723	108	3566	103	3537	103
22FCZ2-44-XXXX-UNV-35-CD1	42.7	4275	100	4260	100	4177	98	4001	94	3968	93

High Efficacy Versions – Two Rows of LEDs

Catalog Number	Watts	CA08	LPW	CA125	LPW	CP125	LPW	CP187	LPW	CP250	LPW
22FCZ2-20HE-XXXX-UNV-35-CD1	16.0	1975	123	1968	123	1930	121	1848	116	1833	115
22FCZ2-24HE-XXXX-UNV-35-CD1	19.2	2335	122	2327	121	2281	119	2185	114	2167	113
22FCZ2-29HE-XXXX-UNV-35-CD1	22.2	2844	128	2833	128	2778	125	2661	120	2639	119
22FCZ2-34HE-XXXX-UNV-35-CD1	25.8	3272	127	3261	126	3197	124	3062	119	3037	118
22FCZ2-39HE-XXXX-UNV-35-CD1	30.3	3798	125	3785	125	3711	122	3554	117	3525	116
22FCZ2-44HE-XXXX-UNV-35-CD1	35.0	4314	123	4299	123	4215	120	4037	115	4004	114

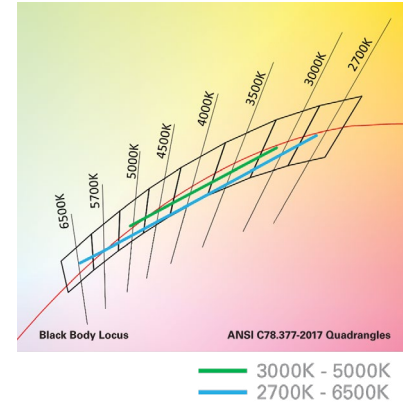
Very High Efficacy Versions – Three Rows of LEDs

Catalog Number	Watts	CA08	LPW	CA125	LPW	CP125	LPW	CP187	LPW	CP250	LPW
22FCZ2-20VHE-XXXX-UNV-35-CD1	14.2	1941	137	1934	136	1896	134	1896	134	1801	127
22FCZ2-24VHE-XXXX-UNV-35-CD1	17.5	2417	138	2409	138	2362	135	2362	135	2243	128
22FCZ2-29VHE-XXXX-UNV-35-CD1	21.7	3010	139	2999	138	2940	136	2940	136	2793	129
22FCZ2-34VHE-XXXX-UNV-35-CD1	25.1	3477	139	3465	138	3398	135	3398	135	3227	129
22FCZ2-39VHE-XXXX-UNV-35-CD1	28.6	3941	138	3927	137	3851	135	3851	135	3658	128
22FCZ2-44VHE-XXXX-UNV-35-CD1	32.6	4465	137	4449	137	4363	134	4363	134	4144	127
22FCZ2-50VHE-XXXX-UNV-35-CD1	36.2	4924	136	4907	136	4811	133	4811	133	4570	126
22FCZ2-55VHE-XXXX-UNV-35-CD1	39.4	5345	136	5325	135	5222	133	5222	133	4960	126
22FCZ2-60VHE-XXXX-UNV-35-CD1	44.1	5905	134	5884	133	5770	131	5770	131	5480	124
22FCZ2-65VHE-XXXX-UNV-35-CD1	47.9	6339	132	6316	132	6194	129	6194	129	5883	123
22FCZ2-70VHE-XXXX-UNV-35-CD1	50.3	6782	135	6757	134	6626	132	6626	132	6294	125
22FCZ2-75VHE-XXXX-UNV-35-CD1	54.7	7304	134	7278	133	7136	131	7136	131	6778	124
22FCZ2-80VHE-XXXX-UNV-35-CD1	59.1	7821	132	7793	132	7641	129	7641	129	7258	123
22FCZ2-85VHE-XXXX-UNV-35-CD1	63.6	8326	131	8296	130	8135	128	8135	128	7727	122
22FCZ2-90VHE-XXXX-UNV-35-CD1	68.2	8819	129	8788	129	8617	126	8617	126	8185	120
22FCZ2-95VHE-XXXX-UNV-35-CD1	72.7	9288	128	9255	127	9075	125	9075	125	8620	119
22FCZ2-100VHE-XXXX-UNV-35-CD1	77.7	9769	126	9734	125	9545	123	9545	123	9066	117
22FCZ2-110VHE-XXXX-UNV-35-CD1	87.7	10694	122	10656	122	10448	119	10448	119	9925	113



24 FCZ 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				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.878	0.750
3000K	0.904	0.744	0.903	0.779
3500K	0.956	0.813	0.934	0.819
4000K	1.004	0.878	0.954	0.844
4500K	1.014	0.893	0.972	0.866
5000K	1.014	0.893	0.985	0.884
6500K	-	-	0.999	0.908

2' x 4' FCZ LED - Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	22FCZ2-40HE-UNV-L835-CD1-U	22FCZ2-40HE-UNV-L83050-W2A1-U	22FCZ2-40HE-UNV-L93050-W2A1-U
3000K	-	3641	2998
3500K	4029	3853	3275
4000K	-	4046	3537
4500K	-	4084	3599
5000K	-	4084	3599

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.

