Metalux

DESCRIPTION

The Cruze™ SB LED series combines contemporary styling and optimal Illumination design with features to enable service from below (SB). This high performance LED troffer is constructed with Cooper Lighting Solutions' latest solid-state technology platform and delivers unprecedented energy savings and aesthetics at an incredible value. Cruze SB offers a perfect balance of form and function making it an ideal choice for commercial offce spaces, schools, hospitals, and retail merchandising areas.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

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

Controls
- 0-10V dimming to 1% standard
- WaveLinx wireless fixture for sensor-less wireless control
- WaveLinx wireless sensor compatible for standalone, controlled, connected, and IoT capability
- SVPD sensor compatible for standalone functionality
- Low-voltage sensor and driver compatible for WaveLinx Low-Voltage and DLVP applications
- 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
- 120-277V 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
- EZ Key feature prevents accidental discharge during construction
- Generator transfer options available

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

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
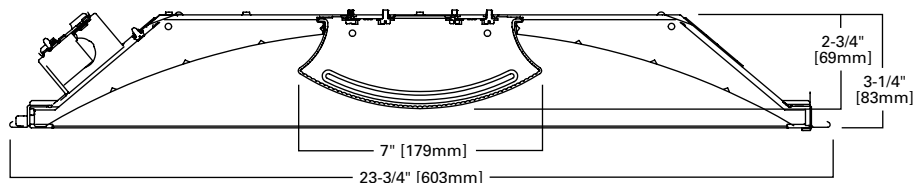
Frame/Sheilding
- Die formed, heavy gauge flat steel door
- Mitered corners and painted after fabrication
- Baked matte white enamel finish
- Positive light seals
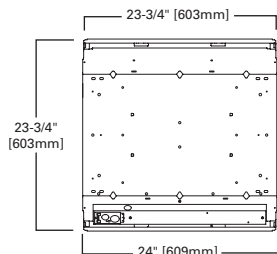- Acrylic frosted lens

Compliance
- IC rated for insulation contact
- cULus listed for damp locations
- RoHS compliant
- Test 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
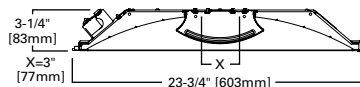
Warranty
- Five year warranty standard. Optional ten year warranty available.

HRP - High-Efficiency Round Perf Inlay

Cruze **SB 22CZ** LED

2' X 2' TROFFER LED MODULE

Specification Grade Troffer

DLC QPL LISTED · DLC QPL LISTED PREMIUM

VividTune color tuning solutions

Connected Systems CLICK HERE · Bluetooth · MWS MODULAR WIRING SYSTEM CLICK HERE

Dimensional Drawing

2-3/4" [69mm]
3-1/4" [83mm]
7" [179mm]
23-3/4" [603mm]

MOUNTING DATA

23-3/4" [603mm]
23-3/4" [603mm]
24" [609mm]

LAMP CONFIGURATIONS

3-1/4" [83mm]
X=3" [77mm]
23-3/4" [603mm]

CEILING COMPATIBILITY

G Grid/Lay-in Standard

G Concealed T

G Slot Grid

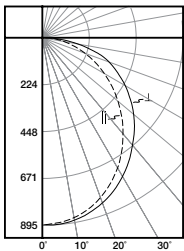| Ceiling Type	Trim Type
Exposed Grid	Standard
Concealed T	Standard
Slot Grid	Standard
Flange	*

LOAD DATA (STOCK PRODUCT)

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

LINEAR DISCONNECT
Safe and convenient means of disconnecting power

ISO SYSTEMS CERTIFIED

COOPER
Lighting Solutions

PHOTOMETRICS

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: 126.0 lm/W

Test Report: 22CZ-LD5-24-UNV-L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	893	893	893
5	884	890	892
10	866	875	879
15	838	849	857
20	799	815	829
25	753	774	793
30	701	725	750
35	641	670	703
40	577	611	651
45	511	551	602
50	445	492	548
55	379	432	490
60	313	372	434
65	249	311	374
70	186	251	315
75	126	193	231
80	74	122	140
85	30	47	46
90	0	0	0

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 lm/W

Test Report: 22CZ-LD5-34-UNV-L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1264	1264	1264
5	1252	1260	1263
10	1226	1239	1246
15	1186	1202	1215
20	1133	1154	1173
25	1066	1095	1122
30	991	1026	1061
35	906	949	995
40	816	866	922
45	726	782	851
50	630	697	776
55	537	612	696
60	443	527	614
65	351	439	529
70	262	356	445
75	178	273	322
80	102	170	198
85	42	67	64
90	0	0	0

Coefficients of Utilization

Effective floor cavity reflectance 20%

rc	80%				70%				50%			30%			10%			0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	680	27.5
0-40	1099	44.5
0-60	1915	77.5
0-90	2470	100.0
0-180	2470	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2314	2495	2726
55	2116	2412	2736
65	1887	2357	2834
75	1559	2388	2858
85	1102	1727	1690

Coefficients of Utilization

Effective floor cavity reflectance 20%

rc	80%				70%				50%			30%			10%			0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	962	27.5
0-40	1557	44.5
0-60	2711	77.5
0-90	3497	100.0
0-180	3497	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3288	3542	3854
55	2998	3417	3886
65	2660	3327	4009
75	2202	3378	3984
85	1543	2462	2352

LUMEN MAINTENANCE

Version	TM-21 Lumen Maintenance (60,000 hours) [1]	Theoretical L70 (hours) [2]
Standard	> 89%	> 173,000
High Efficiency	> 89%	> 188,000

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.

SHIELDING

Lumen Adjustment Factors		
S	RDP/SQP	HRP
1.05	0.670	0.883

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.0865
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

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

Specifications and dimensions subject to change without notice.

COOPER Lighting Solutions

Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20-UNV-L830-CD1-U	1964	16.4	120
22CZ-LD5-20-UNV-L835-CD1-U	2086	16.4	127
22CZ-LD5-20-UNV-L840-CD1-U	2128	16.4	130
22CZ-LD5-20-UNV-L850-CD1-U	2302	16.4	141
22CZ-LD5-24-UNV-L830-CD1-U	2325	19.6	119
22CZ-LD5-24-UNV-L835-CD1-U	2470	19.6	126
22CZ-LD5-24-UNV-L840-CD1-U	2519	19.6	128
22CZ-LD5-24-UNV-L850-CD1-U	2725	19.6	139
22CZ-LD5-29-UNV-L830-CD1-U	2729	23.5	116
22CZ-LD5-29-UNV-L835-CD1-U	2899	23.5	123
22CZ-LD5-29-UNV-L840-CD1-U	2957	23.5	126
22CZ-LD5-29-UNV-L850-CD1-U	3199	23.5	136
22CZ-LD5-34-UNV-L830-CD1-U	3292	29.4	112
22CZ-LD5-34-UNV-L835-CD1-U	3497	29.4	119
22CZ-LD5-34-UNV-L840-CD1-U	3567	29.4	121
22CZ-LD5-34-UNV-L850-CD1-U	3858	29.4	131
22CZ-LD5-39-UNV-L830-CD1-U	3701	36.4	102
22CZ-LD5-39-UNV-L835-CD1-U	3932	36.4	108
22CZ-LD5-39-UNV-L840-CD1-U	4011	36.4	110
22CZ-LD5-39-UNV-L850-CD1-U	4338	36.4	119
22CZ-LD5-44-UNV-L830-CD1-U	4173	41.8	100
22CZ-LD5-44-UNV-L835-CD1-U	4433	41.8	106
22CZ-LD5-44-UNV-L840-CD1-U	4522	41.8	108
22CZ-LD5-44-UNV-L850-CD1-U	4891	41.8	117

Standard Efficacy Versions

Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20SE-UNV-L830-CD1-U	1948	17.2	113
22CZ-LD5-20SE-UNV-L835-CD1-U	2069	17.2	120
22CZ-LD5-20SE-UNV-L840-CD1-U	2110	17.2	123
22CZ-LD5-20SE-UNV-L850-CD1-U	2283	17.2	133
22CZ-LD5-24SE-UNV-L830-CD1-U	2322	21.1	110
22CZ-LD5-24SE-UNV-L835-CD1-U	2467	21.1	117
22CZ-LD5-24SE-UNV-L840-CD1-U	2516	21.1	119
22CZ-LD5-24SE-UNV-L850-CD1-U	2722	21.1	129
22CZ-LD5-32SE-UNV-L830-CD1-U	3015	30.5	99
22CZ-LD5-32SE-UNV-L835-CD1-U	3203	30.5	105
22CZ-LD5-32SE-UNV-L840-CD1-U	3267	30.5	107
22CZ-LD5-32SE-UNV-L850-CD1-U	3534	30.5	116
22CZ-LD5-39SE-UNV-L830-CD1-U	3728	34.9	107
22CZ-LD5-39SE-UNV-L835-CD1-U	3960	34.9	114
22CZ-LD5-39SE-UNV-L840-CD1-U	4039	34.9	116
22CZ-LD5-39SE-UNV-L850-CD1-U	4369	34.9	125
22CZ-LD5-44SE-UNV-L830-CD1-U	4118	40.0	103
22CZ-LD5-44SE-UNV-L835-CD1-U	4375	40.0	109
22CZ-LD5-44SE-UNV-L840-CD1-U	4463	40.0	112
22CZ-LD5-44SE-UNV-L850-CD1-U	4827	40.0	121

Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20-S-UNV-L830-CD1-U	2003	16.4	122
22CZ-LD5-20-S-UNV-L835-CD1-U	2128	16.4	130
22CZ-LD5-20-S-UNV-L840-CD1-U	2170	16.4	132
22CZ-LD5-20-S-UNV-L850-CD1-U	2348	16.4	143
22CZ-LD5-24-S-UNV-L830-CD1-U	2372	19.6	121
22CZ-LD5-24-S-UNV-L835-CD1-U	2519	19.6	128
22CZ-LD5-24-S-UNV-L840-CD1-U	2570	19.6	131
22CZ-LD5-24-S-UNV-L850-CD1-U	2780	19.6	142
22CZ-LD5-29-S-UNV-L830-CD1-U	2784	23.5	118
22CZ-LD5-29-S-UNV-L835-CD1-U	2957	23.5	126
22CZ-LD5-29-S-UNV-L840-CD1-U	3016	23.5	128
22CZ-LD5-29-S-UNV-L850-CD1-U	3263	23.5	139
22CZ-LD5-34-S-UNV-L830-CD1-U	3358	29.4	114
22CZ-LD5-34-S-UNV-L835-CD1-U	3567	29.4	121
22CZ-LD5-34-S-UNV-L840-CD1-U	3638	29.4	124
22CZ-LD5-34-S-UNV-L850-CD1-U	3936	29.4	134
22CZ-LD5-39-S-UNV-L830-CD1-U	3775	36.4	104
22CZ-LD5-39-S-UNV-L835-CD1-U	4011	36.4	110
22CZ-LD5-39-S-UNV-L840-CD1-U	4091	36.4	112
22CZ-LD5-39-S-UNV-L850-CD1-U	4425	36.4	122
22CZ-LD5-44-S-UNV-L830-CD1-U	4256	41.8	102
22CZ-LD5-44-S-UNV-L835-CD1-U	4522	41.8	108
22CZ-LD5-44-S-UNV-L840-CD1-U	4612	41.8	110
22CZ-LD5-44-S-UNV-L850-CD1-U	4989	41.8	119

Standard Efficacy Versions

Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
22CZ-LD5-20SE-S-UNV-L830-CD1-U	1987	17.2	115
22CZ-LD5-20SE-S-UNV-L835-CD1-U	2110	17.2	123
22CZ-LD5-20SE-S-UNV-L840-CD1-U	2153	17.2	125
22CZ-LD5-20SE-S-UNV-L850-CD1-U	2328	17.2	135
22CZ-LD5-24SE-S-UNV-L830-CD1-U	2369	21.1	112
22CZ-LD5-24SE-S-UNV-L835-CD1-U	2516	21.1	119
22CZ-LD5-24SE-S-UNV-L840-CD1-U	2567	21.1	122
22CZ-LD5-24SE-S-UNV-L850-CD1-U	2776	21.1	132
22CZ-LD5-32SE-S-UNV-L830-CD1-U	3075	30.5	101
22CZ-LD5-32SE-S-UNV-L835-CD1-U	3267	30.5	107
22CZ-LD5-32SE-S-UNV-L840-CD1-U	3332	30.5	109
22CZ-LD5-32SE-S-UNV-L850-CD1-U	3605	30.5	118
22CZ-LD5-39SE-S-UNV-L830-CD1-U	3802	34.9	109
22CZ-LD5-39SE-S-UNV-L835-CD1-U	4039	34.9	116
22CZ-LD5-39SE-S-UNV-L840-CD1-U	4120	34.9	118
22CZ-LD5-39SE-S-UNV-L850-CD1-U	4457	34.9	128
22CZ-LD5-44SE-S-UNV-L830-CD1-U	4201	40.0	105
22CZ-LD5-44SE-S-UNV-L835-CD1-U	4463	40.0	112
22CZ-LD5-44SE-S-UNV-L840-CD1-U	4552	40.0	114
22CZ-LD5-44SE-S-UNV-L850-CD1-U	4924	40.0	123

COOPER
Lighting Solutions

ORDERING INFORMATION

SAMPLE NUMBER: 22CZ-LD5-34-UNV-L835-CD1-U

Domestic Preferences [16]
[Blank]=Standard
BAA=Buy American Act
TAA=Trade Agreements Act

Rating
Blank= Standard
ATW-SW4= Chicago Rated

Series [8]
22CZ=2x2 Cruze SB Series

Door Frame
Standard=Flat White Steel Door (Leave Blank)

Lamp Type
LD5=LED 5.0

Cruze SB
Lumen Output
20=2000 Lumens [11]
24=2400 Lumens [11]
29=2900 Lumens
34=3400 Lumens
39=3900 Lumens
44=4400 Lumens

Standard Efficacy
Lumen Output
20SE=2000 Lumens [10], [11]
24SE=2400 Lumens [10], [11]
32SE=3200 Lumens [10]
39SE=3900 Lumens [10]
44SE=4400 Lumens [10]

Shielding
Blank=Ribbed Frosted Acrylic Lens (standard)
S=Smooth Frosted Acrylic Lens
SQP=Smooth Lens with Square Pattern Insert
RDP=Smooth Lens with Round Pattern Insert
HRP=High Efficiency Round Perf Inlay

Voltage [2]
347V=347 Volt [6]
UNV=Universal Voltage 120-277
48V=48 Volt Low-voltage (Class 2) [C]
120V=1207 Volt [12]
277V=277 Volt [12]

Options
GL=Single Element Fuse
GM=Double Element Fuse
Emergency
EL7W=7-watt, 120V-277V emergency battery pack installed [3]
EL14W=14-watt 120V-277V emergency battery pack installed [3]
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 [7], [12]
ETRD=Iota Emergency Transfer Relay with dimming control [7]

CCT
L830=3000K
L835=3500K
L840=4000K
L850=5000K
L930=3000K
L935=3500K
L940=4000K
L950=5000K
L83050=80CRI 3000K-5000K White Tuning [9]
L93050=90CRI 3000K-5000K White Tuning [9]
L82765=80CRI 2700K-6500K White Tuning [9]
L92765=90CRI 2700K-6500K White Tuning [9]

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.

Driver Type
CD=0-10V Dimming Driver (1%-100% Dimming)
WN=WaveLinx Wireless Fixture, No Sensor [A], [G], [H]
5LTD=Fifth Light DALI Driver (10%-100% Dimming) [E]
5LTHD=Fifth Light Dimming Driver (1%-100% Dimming) [E]
LV= Low-voltage System Dimming Driver(0%-100% Dimming) [C]
SD=Step Dimming Driver (50% or 100% Dimming) [4]
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, 2 ch, Analog 0-10V Intensity and CCT Control [9]
SR=Sensor-ready Dimming Driver (1%-100% Dimming)

Number of Drivers
1=1 Driver

Integrated Sensing Systems
WAA=WaveLinx Wireless Integrated Sensor [13], [A]
WAB=WaveLinx Lite Wireless Integrated Sensor [14], [B]
WLA=Low-voltage Integrated Sensor [15], [C]
SVPD1=0-10V Stand-alone Integrated Sensor [14], [D]

Sensor Accessories
DV=Dual Band [5]

Connected Systems
CLICK HERE

Packaging
U=Unit Pack
PAL=Job Pack, out of carton
PALC=Job Pack, in carton

ACCESSORIES
EQ-CLIP-U=T-BAR Safety Earthquake Clips [1]
DF-22W-U=2' x 2' Drywall Frame Kit
SK-22-WS=2' x 2' Shallow Surface Mount Kit
SK-22-WT=2' x 2' Tall Surface Mount Kit
ISHH-01=Programming Remote for Integrated Sensor [D]
ISHH-02=Personal Control Remote for Integrated Sensor [D]

NOTES: [1]An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. [2]Products also available in non-US voltages and frequencies for international markets. [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. [4]Step dim driver option is not available with 2000, 2400, 2900 and 3400 lumen packages and 2000SE, 2400SE and 3200SE versions. [5]Provides blank band on opposite side from sensor band to provide symmetric appearance. [6]347V versions are not available with emergency options. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. [7]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. [8]DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. [9]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. May be combined with Wavelinx sensor control systems only. [10]White tuning not available with this model. [11]Not compatible with WN driver. [12]Must specify voltage as 120V or 277V when ordering GTR2 option. [13]WAA sensor to be used with CD or W2A driver. [14]WAB and SVPD1 sensor to be used with CD driver. [15]WLA sensor to be used with LV driver. [16]To order product that is compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act (TAA), use the online specification configurator to specify BAA or TAA. Please refer to DOMESTIC PREFERENCES LINK for more information. Components shipped separately may be separately analyzed under domestic preference requirements. Accessories sold separately will be separately analyzed under domestic preference requirements.

Integrated Sensing and Control System Options
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: [A] Consult WaveLinx 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. [D] Consult SVPD series 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.

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).

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Solutions Representative for availability and ordering information.

SHIPPING DATA

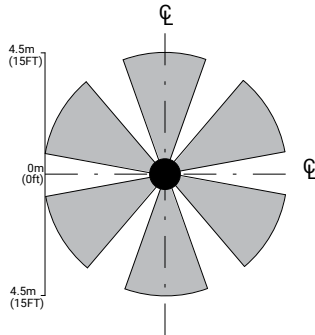| Catalog No.	Wt.
22CZ-LD5-27	12.5 lbs.
22CZ-LD5-36	12.5 lbs.

COOPER Lighting Solutions

Control Systems

- WaveLinx Wireless
- WaveLinx Wired
- WaveLinx Lite
- DLVP
- VividTune

Connected Systems
CLICK HERE

The Cruze SB with Integrated Sensor technology provides automatic energy savings without sacrificing performance. The Cruze SB delivers superior lighting with integrated occupancy and daylighting controls.

For standalone and controlled applications, the WaveLinx Lite integral sensor provides out-of-the-box functionality with no gateways required and factory startup is not needed.

When more connectivity is required, the WaveLinx Wireless sensor meets modern code and utility requirements, delivers energy and cost savings, while enabling buildings to become smart buildings.

The WaveLinx Wireless Connected Lighting System combined with Trellix provides an open IoT platform and infrastructure that connects intelligent sensors leveraging the real-estate of the physical light fixture to solve higher complexity problems to deliver actionable insights through the aggregation of valuable data.

TOP VIEW:

4.5m (15FT)

0m (0ft)

4.5m (15FT)

SIDE VIEW:

0m (0ft)
2.4m (8ft)
3.0m (10ft)
4.5m (15FT)

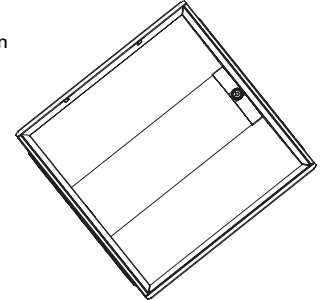4.5m (15FT) 2.25m (7.5FT) 0m (0ft) 2.25m (7.5ft) 4.5m (15ft)

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.

	Standalone	Controlled WaveLinx Lite	Connected WaveLinx Wireless	Enterprise Trellix
Occupancy	Yes	Yes	Yes	Yes
Daylighting	Yes	Yes	Yes	Yes
Gateways	–	–	1 WAC	300 WACs
Devices	–	50 per Area (1400 per site)	150 per WAC	45,000 per Core Enterprise
Software	–	WaveLinx Lite Mobile App	WaveLinx Mobile App	Trellix Core
Areas	–	28 per Site	16 per WAC	up to 4,800
Zones	–	16 per Area	16 per Area	up to 76,800
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

COOPER
Lighting Solutions

VividTune™
color tuning solutions

22 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.
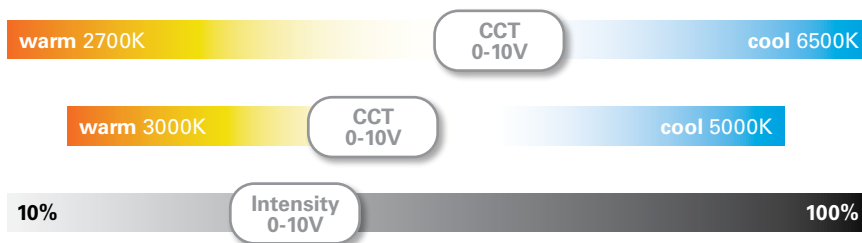

Black Body Locus   ANSI C78.377-2017 Quadrangles

— 3000K - 5000K
— 2700K - 6500K
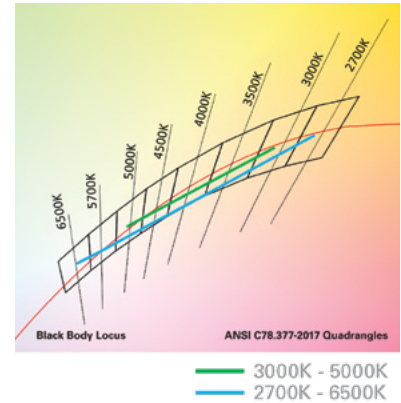
Performance Data*

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

CCT Setting	Standard Catalog # 22CZ-LD5-34-UNV-L835-CD1-U	VividTune 80 CRI Catalog # 22CZ-LD5-34-UNV-L83050-W2A1-U	VividTune 90 CRI Catalog # 22CZ-LD5-34-UNV-L93050-W2A1-U
3000K	-	3247	2673
3500K	3497	3436	2921
4000K	-	3608	3154
4500K	-	3642	3209
5000K	-	3642	3209

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

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.

Specifications and dimensions subject to change without notice.

COOPER
Lighting Solutions