

## 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 office spaces, schools, hospitals, and retail merchandising areas.

## 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 sensor compatible for IoT capability
- Enlighted sensor compatible for IoT capability
- SVPD sensor compatible for out of the box functionality
- DLVP sensor and driver compatible for low voltage applications
- DALI 2.0, Lutron, and step-dimming available

### LED and Light Engine

- Long-life LED systems coupled with electrical driver
- 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



VividTune color tuning solutions

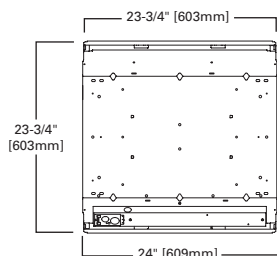


Connected Systems [CLICK HERE](#)



[CLICK HERE](#)

## MOUNTING DATA



## LAMP CONFIGURATIONS



## CEILING COMPATIBILITY

G	G	G	Ceiling Type	Trim Type
Grid/Lay-in Standard	Concealed T	Slot Grid	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

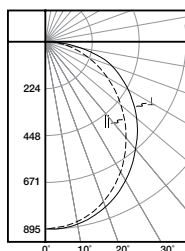
## LINEAR DISCONNECT

Safe and convenient means of disconnecting power



PS519141EN  
July 8, 2020 7:59 AM

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

**Coefficients of Utilization**

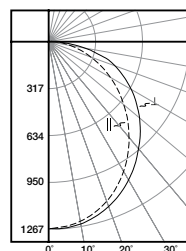
rc	Effective floor cavity reflectance																				
	80%				70%				20%												
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83	83	83	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69	69	69	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37	37	37	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30	30	30	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27	27	27	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	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



**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**

rc	Effective floor cavity reflectance																				
	80%				70%				20%												
rw	70	50	30	10	70	50	30	10	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	100	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83	83	83	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69	69	69	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37	37	37	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30	30	30	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27	27	27	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	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) <sup>(1)</sup>	Theoretical L70 (hours) <sup>(2)</sup>
Standard	> 89%	> 173,000
High Efficiency	> 89%	> 188,000

Notes: (1) Supported by IESTM-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 IESTM-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	0.865
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  
 Efficacy =  $\frac{3,010 \text{ lm}}{29.4 \text{ W}} = 102.3 \text{ lm/W}$

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

## ORDERING INFORMATION

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

<b>Rating</b> <b>Blank</b> =Standard <b>ATW-SW4</b> =Chicago Rated  <b>Series</b> <sup>(8)</sup> <b>22CZ</b> =2x2 Cruze SB Series	<b>Lamp Type</b> <b>LD5</b> =LED 5,0  <b>Cruze SB</b> <b>Lumen Output</b> <b>20</b> =2000 Lumens <sup>(11)</sup> <b>24</b> =2400 Lumens <sup>(11)</sup> <b>29</b> =2900 Lumens <b>34</b> =3400 Lumens <b>39</b> =3900 Lumens <b>44</b> =4400 Lumens <b>Standard Efficacy</b> <b>Lumen Output</b> <b>20SE</b> =2000 Lumens <sup>(10), (11)</sup> <b>24SE</b> =2400 Lumens <sup>(10), (11)</sup> <b>32SE</b> =3200 Lumens <sup>(10)</sup> <b>39SE</b> =3900 Lumens <sup>(10)</sup> <b>44SE</b> =4400 Lumens <sup>(10)</sup>	<b>Voltage</b> <sup>(2)</sup> <b>347V</b> =347 Volt <sup>(6)</sup> <b>UNV</b> =Universal Voltage 120-277 <b>48V</b> =48 Volt Low-voltage (Class 2) <sup>(4)</sup>  <b>Options</b> <b>GL</b> =Single Element Fuse <b>GM</b> =Double Element Fuse <b>Emergency</b> <b>EL7W</b> =7-watt, 120V-277V emergency battery pack installed <sup>(3)</sup> <b>EL14W</b> =14-watt 120V-277V emergency battery pack installed <sup>(3)</sup> <b>ELV7W</b> =7-watt, DLVP-compatible low voltage emergency battery pack installed <sup>(3)</sup> <b>ELV14W</b> =14-watt DLVP-compatible low voltage emergency battery pack installed <sup>(3)</sup> <b>GTR2</b> =Bodine Generator Transfer Relay <sup>(7)</sup> <b>ETRD</b> =Iota Emergency Transfer Relay with dimming control <sup>(7)</sup>  <b>CCT</b> <b>L830</b> =3000K <b>L835</b> =3500K <b>L840</b> =4000K <b>L850</b> =5000K <b>L930</b> =3000K <b>L935</b> =3500K <b>L940</b> =4000K <b>L950</b> =5000K <b>L83050</b> =80CRI 3000K-5000K White Tuning <sup>(9)</sup> <b>L93050</b> =90CRI 3000K-5000K White Tuning <sup>(9)</sup> <b>L82765</b> =80CRI 2700K-6500K White Tuning <sup>(9)</sup> <b>L92765</b> =90CRI 2700K-6500K White Tuning <sup>(9)</sup>  <b>Flex</b> <b>A3/8-4/18GDIM</b> =3/8" Flex with 0-10V Dimming Leads <b>A3/8-2/18G</b> =3/8" Flex with line and common <b>A3/8-5/18GDIM</b> =Flex with 0-10V Dimming leads and Blue for alternate wiring See below for details.	<b>Driver Type</b> <b>CD</b> =0-10V Dimming Driver (1%-100% Dimming) <b>SR</b> =Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming) <sup>(8)</sup> <b>5LTD</b> =Fifth Light DALI Driver (10%-100% Dimming) <sup>(E)</sup> <b>5LTHD</b> =Fifth Light Dimming Driver (1%-100% Dimming) <sup>(E)</sup> <b>LV1</b> =DLVP Dimming Driver (0%-100% Dimming) <sup>(C)</sup> <b>SD</b> =Step Dimming Driver (50% or 100% Dimming) <sup>(4)</sup> <b>LH</b> =Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming <sup>(F)</sup> <b>L5</b> =Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver <sup>(F)</sup> <b>W2A</b> =White Tuning, 2 ch, Analog 0-10V Intensity and CCT Control <sup>(9)</sup> <b>WN</b> =WaveLinX Wireless Fixture, No Sensor <sup>(A), (G), (H)</sup>	<b>Number of Drivers</b> <b>1</b> =1 Driver
<b>Door Frame</b> <b>Standard</b> =Flat White Steel Door (Leave Blank)	<b>Shielding</b> <b>Blank</b> =Ribbed Frosted Acrylic Lens (standard) <b>S</b> =Smooth Frosted Acrylic Lens <b>SQP</b> =Smooth Lens with Square Pattern Insert <b>RDP</b> =Smooth Lens with Round Pattern Insert <b>HRP</b> =High Efficiency Round Perf Inlay			
<b>Integrated Sensing Systems</b> <b>SWPD1</b> =WaveLinX Wireless Integrated Sensor <sup>(A)</sup> <b>LWIPD1</b> =Enlighted Wireless Integrated Sensor <sup>(B)</sup> <b>LWTPD1</b> =Enlighted Wireless Tile-mount Sensor <sup>(B)</sup> <b>SLVPD1</b> =DLVP Low-voltage Integrated Sensor <sup>(C)</sup> <b>SVPD1</b> =0-10V Stand-alone Integrated Sensor <sup>(D)</sup>		<b>Packaging</b> <b>U</b> =Unit Pack <b>PAL</b> =Job Pack, out of carton <b>PALC</b> =Job Pack, in carton	<b>ACCESSORIES</b> <b>EQ-CLIP-U</b> =T-BAR Safety Earthquake Clips <sup>(1)</sup> <b>DF-22-W</b> =2' x 2' Drywall Frame Kit <b>SK-22-WS</b> =2' x 2' Shallow Surface Mount Kit <b>SK-22-WT</b> =2' x 2' Tall Surface Mount Kit <b>ISHH-01</b> =Programming Remote for Integrated Sensor <sup>(D)</sup> <b>ISHH-02</b> =Personal Control Remote for Integrated Sensor <sup>(D)</sup>	

**Sensor Accessories**  
**DV**=Dual Band<sup>(5)</sup>

**Connected Systems**  
[CLICK HERE](#)

**NOTES:** <sup>(1)</sup>An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. <sup>(2)</sup>Products also available in non-US voltages and frequencies for international markets. <sup>(3)</sup>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. <sup>(4)</sup>Step dim driver option is not available with 2000, 2400, 2900 and 3400 lumen packages and 2000SE, 2400SE and 3200SE versions. <sup>(5)</sup>Provides blank band on opposite side from sensor band to provide symmetric appearance. <sup>(6)</sup>347V versions are not available with emergency options. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. <sup>(7)</sup>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. <sup>(8)</sup>DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. <sup>(9)</sup>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. <sup>(10)</sup>White tuning not available with this model. <sup>(11)</sup>Not compatible with WN driver.

**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: <sup>(A)</sup>Consult WaveLinX system pages for additional details and compatibility. <sup>(B)</sup>Consult Enlighted system pages for additional details and compatibility. <sup>(C)</sup>Consult DLVP system pages for additional details and compatibility. <sup>(D)</sup>Consult SVPD series system pages for additional details and compatibility. <sup>(E)</sup>Consult Fifth Light system pages for additional details and compatibility. <sup>(F)</sup>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. <sup>(G)</sup>Not compatible with GTR, ETRD, or integrated sensor options. <sup>(H)</sup>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.

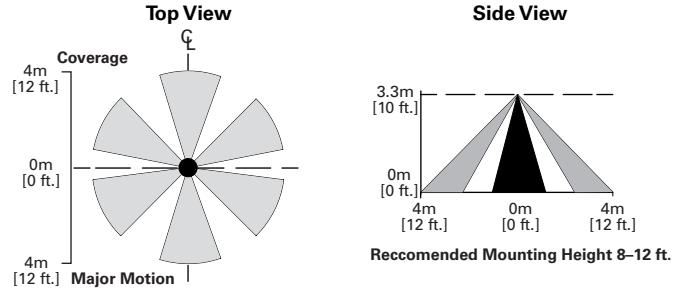
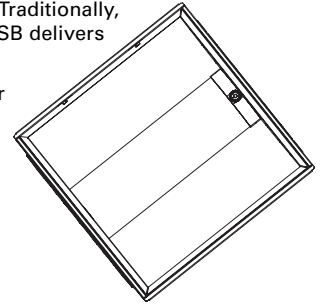
**INTEGRATED SENSOR**

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

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze SB delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

The integral sensor can be offered in both standalone (SVPD1) and networked (SWPD1, LWIPD1, and SLVPD1) for application versatility.



Installation of integrated sensors within 3-ft (1m) of HVAC air vents is not recommended.

**Systems comparison chart**

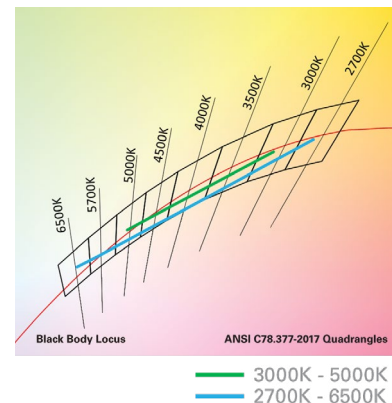
Cooper Lighting Solutions provides many lighting system solutions designed to satisfy code requirements and meet the unique needs of any project.

	Distributed Low-Voltage Power System	WaveLinX	Enlighted
Space type	Interior	Interior/Outdoor	Any
Stand-alone or Network	Stand-alone	Both	Network
<b>Need-based feature progression</b>			
Basic compliance only	●	●	●
Occupancy sensing	●	●	●
Daylight harvesting	●	●	●
Zone control	●	●	●
Scheduling	●	●	●
0-10V dimming	●	●	●
Individual fixture control	●	●	●
Retrofit+Building Integration	●	●	●
Total wireless connectivity		●	●
A/V integration		●	●
BMS integration		●	●
UI options (touchscreen, apps, etc.)		●	●
Enterprise level building integration		●	●
Facility management & tools		●	●
Floor plan & reporting tools			●
Value-added services			●
Asset tracking			●
API integration		●	●
Analytics/higher problem solving			●



## 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.



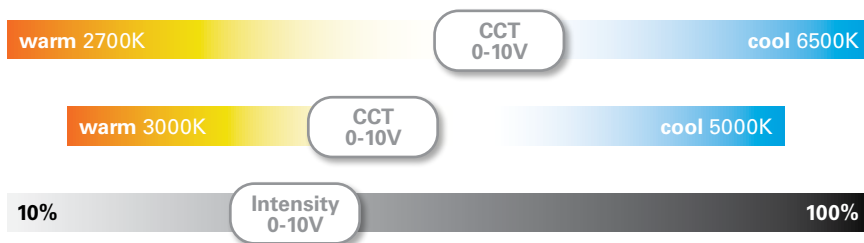
### Performance Data\*

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

### 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](http://www.cooperlighting.com) for tunable white application guides.



### Example of Lumen Adjustment Calculation

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

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

$$\text{Adjusted Lumen} = 3497 \times 0.983$$

$$\text{Adjusted Lumen} = 3436 \text{ } l_m$$

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