

DESCRIPTION

The Cruze LED Retrofit Kit is Eaton's newest LED lighting solution for customers looking to upgrade their fluorescent luminaires with a high-performing and an aesthetically-pleasing LED system without the need to install a complete luminaire. This innovative, high quality retrofit kit is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze LED Kit is engineered to quickly and simply install into existing 2' x 4' fluorescent troffers.

The Cruze LED Retrofit Kit combines efficiency, quality, and performance and is an excellent choice for upgrading the lighting in commercial office spaces, schools, hospitals, or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Innovative design allows for quick and simple retrofit of fluorescent recessed troffers and parabolic luminaires resulting in an upgraded look with superior lens brightness uniformity and visual comfort.

Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinx sensor
- LumaWatt Pro sensor
- SVPD sensor
- Fifth Light DALI driver

Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K or 4000K with a CRI \geq 85. Standard projected efficacy is $>$ 110 lm/W. High performance projected efficacy is $>$ 125 lm/W. Projected life is 60,000 hours at 75% lumen output. cULus listed. Electronic drivers are available for 120-277V applications and 347V including 0-10V dimming.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Catalog #		Type
Project		
Comments		Date
Prepared by		

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Shielding

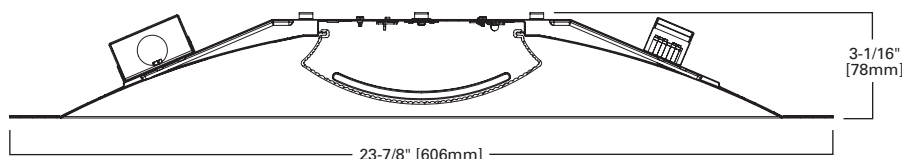
Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.



CZRK LED

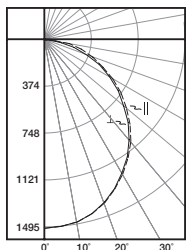
2' x 4' Specification Grade LED Retrofit Kit



CERTIFICATION DATA

cULus - 1598C
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 ROHS Compliant
 DesignLights Consortium® Qualified

PHOTOMETRICS



24CZRK-LD4-40-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.3 x mounting
 height, (⊥) 1.22 x
 mounting height
 Lumens: 4313
 Input Watts: 36.3W
 Efficacy: 119 lm/W
 Test Report:
 24CZRK-LD4-
 40-UNV-L835-CD1-
 U.IES

Candlepower

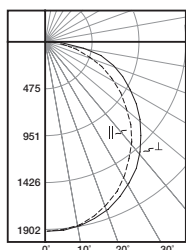
Angle	Along II	Across ⊥
0	1494	1495
5	1491	1488
10	1477	1466
15	1449	1426
20	1409	1372
25	1358	1302
30	1294	1222
35	1221	1132
40	1141	1034
45	1055	926
50	959	816
55	863	704
60	764	586
65	662	469
70	562	354
75	441	237
80	290	132
85	112	43
90	2	1

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	106	102	102	102	100	100	100	100	
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83	83	83	83	83	83	
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68	68	68	68	68	68	
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57	57	57	57	57	57	
4	82	69	60	54	79	68	60	53	65	58	52	63	57	52	61	55	51	49	49	49	49	49	49	
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42	42	42	42	42	42	
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37	37	37	37	37	37	
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32	32	32	32	32	32	
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29	29	29	
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26	26	26	26	26	26	
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24	24	24	24	24	24	

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	1151	12.6	12.6
0-40	1876	43.5	43.5
0-60	3309	76.7	76.7
0-90	4313	100.0	100.0
0-180	4313	100.0	100.0



24CZRK-LD4-50-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.3 x mounting
 height, (⊥) 1.22 x
 mounting height
 Lumens: 5494
 Input Watts: 46.4W
 Efficacy: 118 lm/W
 Test Report:
 24CZRK-LD4-50-
 UNV-L835-CD1-U.
 IES

Candlepower

Angle	Along II	Across ⊥
0	1902	1902
5	1896	1892
10	1875	1862
15	1840	1809
20	1789	1739
25	1721	1653
30	1641	1548
35	1549	1434
40	1447	1309
45	1331	1178
50	1213	1035
55	1085	894
60	960	743
65	833	597
70	702	450
75	550	302
80	369	168
85	143	55
90	3	2

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	106	102	102	102	100	100	100	100	
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83	83	83	83	83	83	
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68	68	68	68	68	68	
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57	57	57	57	57	57	
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49	49	49	49	49	49	
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42	42	42	42	42	42	
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37	37	37	37	37	37	
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32	32	32	32	32	32	
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29	29	29	
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26	26	26	26	26	26	
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24	24	24	24	24	24	

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	1465	26.7	26.7
0-40	2389	43.5	43.5
0-60	4217	76.8	76.8
0-90	5494	100.0	100.0
0-180	5494	100.0	100.0

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO	Catalog Logic (Ribbed Lens)	Performance Type*	Delivered Lumens	Watts	Efficacy (lm/W)
Stock	24CZRK-LD4-40-UNV-L835-CD1-U	Standard	4311	36.48	118
Stock	24CZRK-LD4-40-UNV-L840-CD1-U	Standard	4423	36.82	120
Stock	24CZRK-LD4-40HP-UNV-L835-CD1-U	High Performance	4305	32.46	133
Stock	24CZRK-LD4-40HP-UNV-L840-CD1-U	High Performance	4485	32.56	138
Stock	24CZRK-LD4-50-UNV-L835-CD1-U	Standard	5496	46.58	118
Stock	24CZRK-LD4-50-UNV-L840-CD1-U	Standard	5447	46.50	117
Stock	24CZRK-LD4-50HP-UNV-L835-CD1-U	High Performance	5203	40.26	129
Stock	24CZRK-LD4-50HP-UNV-L840-CD1-U	High Performance	5403	40.69	133

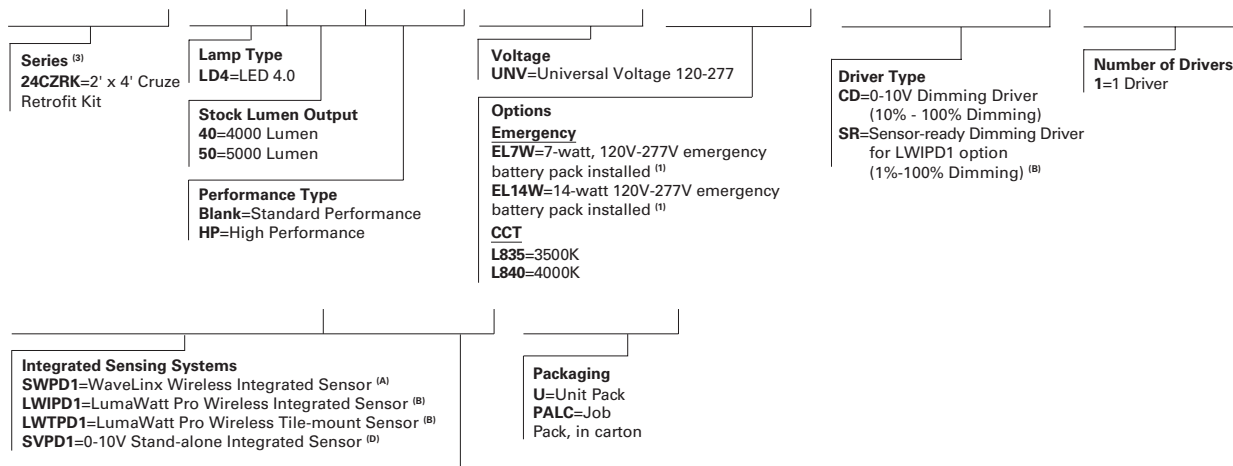
*Standard performance is >110 lm/W. High performance is >125 lm/W.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 75%	> 76,000

ORDERING INFORMATION

SAMPLE NUMBER: 24CZRK-LD4-40HP-UNV-L835-CD1-U



Integrated Sensing Systems
 SWPD1=WaveLinX Wireless Integrated Sensor ^(A)
 LWIPD1=LumaWatt Pro Wireless Integrated Sensor ^(B)
 LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor ^(B)
 SVPD1=0-10V Stand-alone Integrated Sensor ^(D)

Sensor Accessories
 DV=Dual Band ⁽²⁾



Connected Systems
[CLICK HERE](#)

ACCESSORIES

0590CZRKEQCABLE PK=Earthquake Cable Kit

NOTES: ⁽¹⁾ 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. ⁽²⁾ Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽³⁾ DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

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) Consult LumaWatt Pro system pages for additional details and compatibility. ^(D) Consult SVPD series system pages for additional details and compatibility.

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

SHIPPING DATA

Catalog No.	Wt.
24CZRK	12.5 lbs.

DESCRIPTION

The Cruze LED Retrofit Kit is Eaton's newest LED lighting solution for customers looking to upgrade their fluorescent luminaires with a high-performing and an aesthetically-pleasing LED system without the need to install a complete luminaire. This innovative, high quality retrofit kit is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze LED Kit is engineered to quickly and simply install into existing 2' x 4' fluorescent troffers.

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Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinx sensor
- LumaWatt Pro sensor
- SVPD sensor
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Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K or 4000K with a CRI \geq 85. Standard projected efficacy is $>$ 110 lm/W. High performance projected efficacy is $>$ 125 lm/W. Projected life is 60,000 hours at 75% lumen output. cULus listed. Electronic drivers are available for 120-277V applications and 347V including 0-10V dimming.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Catalog #		Type
Project		
Comments		Date
Prepared by		

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Shielding

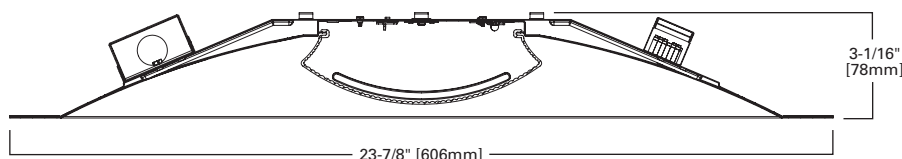
Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.



CZRK LED

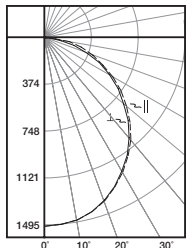
2' x 4' Specification Grade LED Retrofit Kit



CERTIFICATION DATA

cULus - 1598C
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 ROHS Compliant
 DesignLights Consortium® Qualified

PHOTOMETRICS



24CZRK-LD4-40-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.3 x mounting
 height, (⊥) 1.22 x
 mounting height
 Lumens: 4313
 Input Watts: 36.3W
 Efficacy: 119 lm/W
 Test Report:
 24CZRK-LD4-
 40-UNV-L835-CD1-
 U.IES

Candlepower

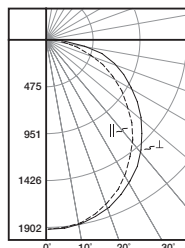
Angle	Along II	Across ⊥
0	1494	1495
5	1491	1488
10	1477	1466
15	1449	1426
20	1409	1372
25	1358	1302
30	1294	1222
35	1221	1132
40	1141	1034
45	1055	926
50	959	816
55	863	704
60	764	586
65	662	469
70	562	354
75	441	237
80	290	132
85	112	43
90	2	1

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%																				
	80%				70%				50%				30%				10%				0%
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83	83	83	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68	68	68	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57	57	57	57
4	82	69	60	54	79	68	60	53	65	58	52	63	57	52	61	55	51	49	49	49	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42	42	42	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37	37	37	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32	32	32	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26	26	26	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	1151	12.6	12.6
0-40	1876	43.5	43.5
0-60	3309	76.7	76.7
0-90	4313	100.0	100.0
0-180	4313	100.0	100.0



24CZRK-LD4-50-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.3 x mounting
 height, (⊥) 1.22 x
 mounting height
 Lumens: 5494
 Input Watts: 46.4W
 Efficacy: 118 lm/W
 Test Report:
 24CZRK-LD4-50-
 UNV-L835-CD1-U.
 IES

Candlepower

Angle	Along II	Across ⊥
0	1902	1902
5	1896	1892
10	1875	1862
15	1840	1809
20	1789	1739
25	1721	1653
30	1641	1548
35	1549	1434
40	1447	1309
45	1331	1178
50	1213	1035
55	1085	894
60	960	743
65	833	597
70	702	450
75	550	302
80	369	168
85	143	55
90	3	2

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%																				
	80%				70%				50%				30%				10%				0%
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83	83	83	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68	68	68	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57	57	57	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49	49	49	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42	42	42	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37	37	37	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32	32	32	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26	26	26	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0-30	1465	26.7	26.7
0-40	2389	43.5	43.5
0-60	4217	76.8	76.8
0-90	5494	100.0	100.0
0-180	5494	100.0	100.0

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO	Catalog Logic (Ribbed Lens)	Performance Type*	Delivered Lumens	Watts	Efficacy (lm/W)
Stock	24CZRK-LD4-40-UNV-L835-CD1-U	Standard	4311	36.48	118
Stock	24CZRK-LD4-40-UNV-L840-CD1-U	Standard	4423	36.82	120
Stock	24CZRK-LD4-40HP-UNV-L835-CD1-U	High Performance	4305	32.46	133
Stock	24CZRK-LD4-40HP-UNV-L840-CD1-U	High Performance	4485	32.56	138
Stock	24CZRK-LD4-50-UNV-L835-CD1-U	Standard	5496	46.58	118
Stock	24CZRK-LD4-50-UNV-L840-CD1-U	Standard	5447	46.50	117
Stock	24CZRK-LD4-50HP-UNV-L835-CD1-U	High Performance	5203	40.26	129
Stock	24CZRK-LD4-50HP-UNV-L840-CD1-U	High Performance	5403	40.69	133

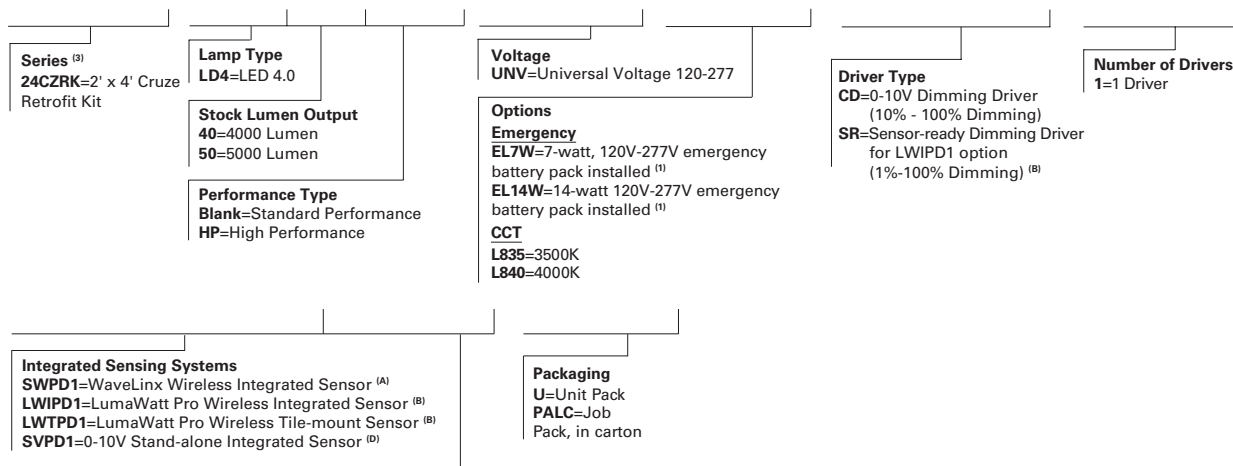
*Standard performance is >110 lm/W. High performance is >125 lm/W.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 75%	> 76,000

ORDERING INFORMATION

SAMPLE NUMBER: 24CZRK-LD4-40HP-UNV-L835-CD1-U



Integrated Sensing Systems
 SWPD1=WaveLinX Wireless Integrated Sensor ^(A)
 LWIPD1=LumaWatt Pro Wireless Integrated Sensor ^(B)
 LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor ^(B)
 SVPD1=0-10V Stand-alone Integrated Sensor ^(D)

Sensor Accessories
 DV=Dual Band ⁽²⁾



Connected Systems
[CLICK HERE](#)

ACCESSORIES

0590CZRKEQCABLE PK=Earthquake Cable Kit

NOTES: ⁽¹⁾ 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. ⁽²⁾ Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽³⁾ DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Integrated Sensing and Control System Options

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

SHIPPING DATA

Catalog No.	Wt.
24CZRK	12.5 lbs.