



### FEATURES

- Attractive recessed fluorescent with architecturally enhanced triple lens design
- T8 or T5 Fluorescent
- Full distribution provides controlled high angle light for visual comfort
- Advanced optical design produces high efficiencies
- Hinged optical system allows easy access to lamps and electrical from below the ceiling
- Lenses interlock for structural integrity
- Two optional lens aesthetics
- Exclusive optional T8 EnergyMax® tuned 1.04 ballast factor ballast
- Step and full dimming options for both T5 and T8 expand energy saving and control opportunities
- Recessed, surface or cable mount
- Most configurations produce low W/ft<sup>2</sup> to meet the most restrictive lighting power density codes

#### HUBBELL SUSTAINABLE DESIGN SOLUTION FEATURES

- Made with 90% recycled steel
- Made of 80% recyclable materials by weight
- Job pack available for minimizing amount of packaging material at job site
- Individual cartons made of 100% recycled corrugated

### PROJECT INFORMATION

Project Name \_\_\_\_\_

Type \_\_\_\_\_

Catalog No. \_\_\_\_\_

Date \_\_\_\_\_

### CONSTRUCTION

Housing is constructed of heavy gauge steel, die formed for extra rigidity. Four T-bar clips integral to housing. Optical system hinges and latches from either side for easy access to electrical components. Mechanical light trap prevents light leaks. Latches are spring loaded.

### FINISH

All visible parts are custom formulated soft, non-glare high reflectance white powder coat finish, painted after fabrication.

### SHIELDING

Lenses are high transmission extruded acrylic with an interlocking design for structural integrity and ease of maintenance.

### INSTALLATION

An access plate or mounting collar is furnished with luminaire for fast wiring connections without the necessity to open the fixture or wireway.

### BALLASTS

Energy-efficient, thermally protected, automatic resetting, Class "P", high power factor, sound rated A, unless otherwise specified. For a specific vendor and/or ballast, specify as option. CEE NEMA Premium compliant.

### ELECTRICAL

Standard class "P," thermally protected, auto-resetting HPF ballast, sound rated A. CEE NEMA Premium compliant. All ballast leads extend a minimum of 6" through access location. NEC/CEC compliant ballast disconnect is standard.

### EMERGENCY

Field installation of battery packs requires use of remote test switch.

### CEILING COMPATIBILITY

Designed for recessed installation in standard inverted tee grid ceilings (G), recessed installation in hard ceilings (G with FK accessory), Surface mount at ceiling plane (SM) or cable mount suspension below ceiling plane (CM). For compatibility with specific ceilings contact your Hubbell Lighting representative.

### CERTIFICATION

All luminaires are built to UL1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 standards. IC rating optional (see availability table). UL Sanitation Approved.

## ORDERING INFORMATION

## EXAMPLE SER22-314G-CP-EPU

SER 22 -									
MODEL	NO. OF LAMPS	CEILING TYPE	SHIELDING	REFLECTOR	VOLTAGE	OPTIONS			
SER Serrano® Recessed Architectural Luminaire	1 One (N/A 17, 14, 24) 2 Two 3 Three (N/A TT)	G Grid <sup>1</sup> SM Surface Mount CM Cable Mount <sup>2</sup>	C Contour R Rail	P Performance- Specular Aluminum F Full-White Gloss Paint	U 120V-277V 347 347V <sup>3</sup>	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex EL T8 Emergency Battery Pack, 350-450 Lumens EL5 T5 or T5HO Emergency Battery Pack, 390-700 Lumens GLR Fast Blow Fuse GMF Slow Blow Fuse IC IC Rating CP Chicago Plenum			
SIZE	LAMP TYPE	BALLAST							
22 2' x 2'	14 2', T5: 14 Watt 17 2', T8: 17 Watt 24 2', T5HO: 24 Watt 40TT Twin Tube Compact, 2G11 Base: 40 Watt	<b>E</b> Electronic T8, 0.88 Ballast Factor, Instant Start <b>ESD</b> Electronic T8, 0.88 Ballast Factor, Step Dimming, Programmed Start <b>ED</b> Electronic T8, T5, T5HO Dimming, Programmed Start <sup>3</sup> <b>EP</b> Electronic T5, T5HO, 1.0 Ballast Factor or T8, 0.88 Ballast Factor, Programmed Start <b>EP95</b> Electronic T5, 0.95 Ballast Factor, Programmed Start (N/A T5HO, 1-Lamp) <b>ESD95</b> Electronic T5, 0.95 Ballast Factor, Step Dimming, Programmed Start (N/A T5HO, 1-Lamp) <b>EP115</b> Electronic T5, 1.15 Ballast Factor, Programmed Start (N/A T5HO, 1-Lamp) <b>ETT</b> Electronic Twin Tube, Instant Start <b>EPTT</b> Electronic Twin Tube, Programmed Start							

### ACCESSORIES (ORDER SEPARATELY)

**FK22** 2' x 2' Flange Kit, Single Mounting (for rows add FKCR)

**FKCR** Flange Kit Row Adaptor

**CM 48Y2SC3F** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-wire

<sup>1</sup> For drywall, order Flange Kit accessories separately.

<sup>2</sup> Order hanger accessories separately.

<sup>3</sup> Where available.

### PHOTOMETRIC DATA

Test 4431 Test Date 9/9/2011

#### LUMINAIRE DATA

Luminaire	SER22-217G-CP-EU SER Serrano, Recessed Architectural 2 x 2 2-lamp with Contour center lens, linear prisms side lenses, and performance reflector
Ballast	ICN-2P32-SC
Ballast Factor	0.88
Lamp	F17T8
Lumens per Lamp	1325
Watts	31
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.21 90° = 1.54
Luminous Opening in Feet	Length: 1.79 Width: 1.83 Height: 0.00

#### AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	2238	2238	2238	2238	2238
30	2098	2265	2595	2838	2925
40	2003	2226	2544	2720	2775
45	1938	2114	2389	2556	2602
50	1840	1953	2214	2382	2428
55	1684	1776	2040	2217	2269
60	1505	1604	1880	2064	2116
65	1322	1446	1734	1921	1983
70	1163	1287	1604	1787	1854
75	1003	1143	1473	1651	1714
80	814	984	1325	1438	1457
85	641	754	943	754	679

#### COEFFICIENTS OF UTILIZATION (%)

RCR	RC 80				RC 70				RC 50				RC 0				
	RW 70	50	30	10	70	50	30	10	50	30	10	0	70	50	30	10	0
1	84	80	77	74	82	79	76	73	75	73	71	65					
2	77	70	65	61	75	69	64	60	66	62	59	55					
3	70	62	56	51	68	61	55	51	59	54	50	46					
4	64	55	49	43	62	54	48	43	52	47	43	40					
5	59	49	43	38	57	48	42	37	47	41	37	34					
6	55	44	38	33	53	44	37	33	42	37	32	30					
7	51	40	34	29	49	40	33	29	38	33	29	27					
8	47	37	30	26	46	36	30	26	35	30	26	24					
9	44	34	27	23	43	33	27	23	32	27	23	21					
10	41	31	25	21	40	31	25	21	30	25	21	19					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

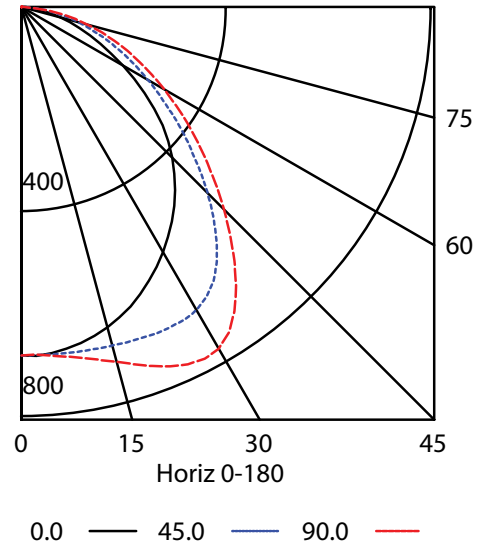
#### ENERGY DATA

Total Luminaire Efficiency	76.8%
Luminaire Efficacy Rating (LER)	58
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$4.14 based on 3000 hrs. and \$0.08 per KWH

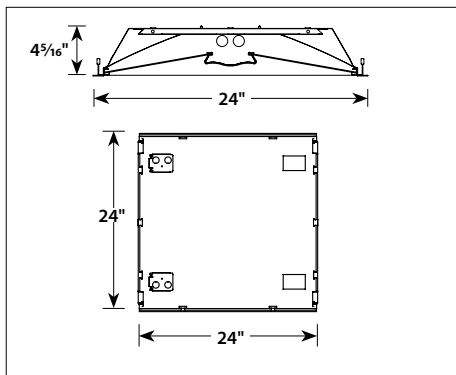
#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	575	21.7	28.3
0-40	971	36.6	47.7
0-60	1671	63.1	82.1
0-90	2033	76.7	99.9
0-180	2035	76.8	100.0

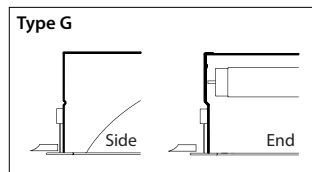
#### INDOOR CANDELA PLOT



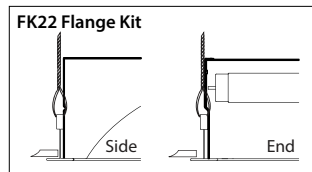
#### DIMENSIONAL DATA - GRID



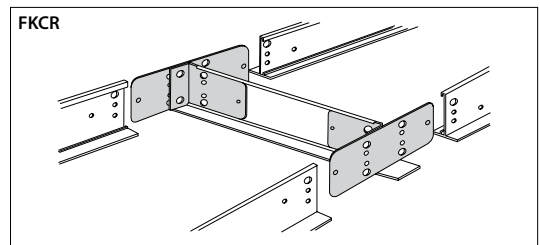
#### CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK22 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

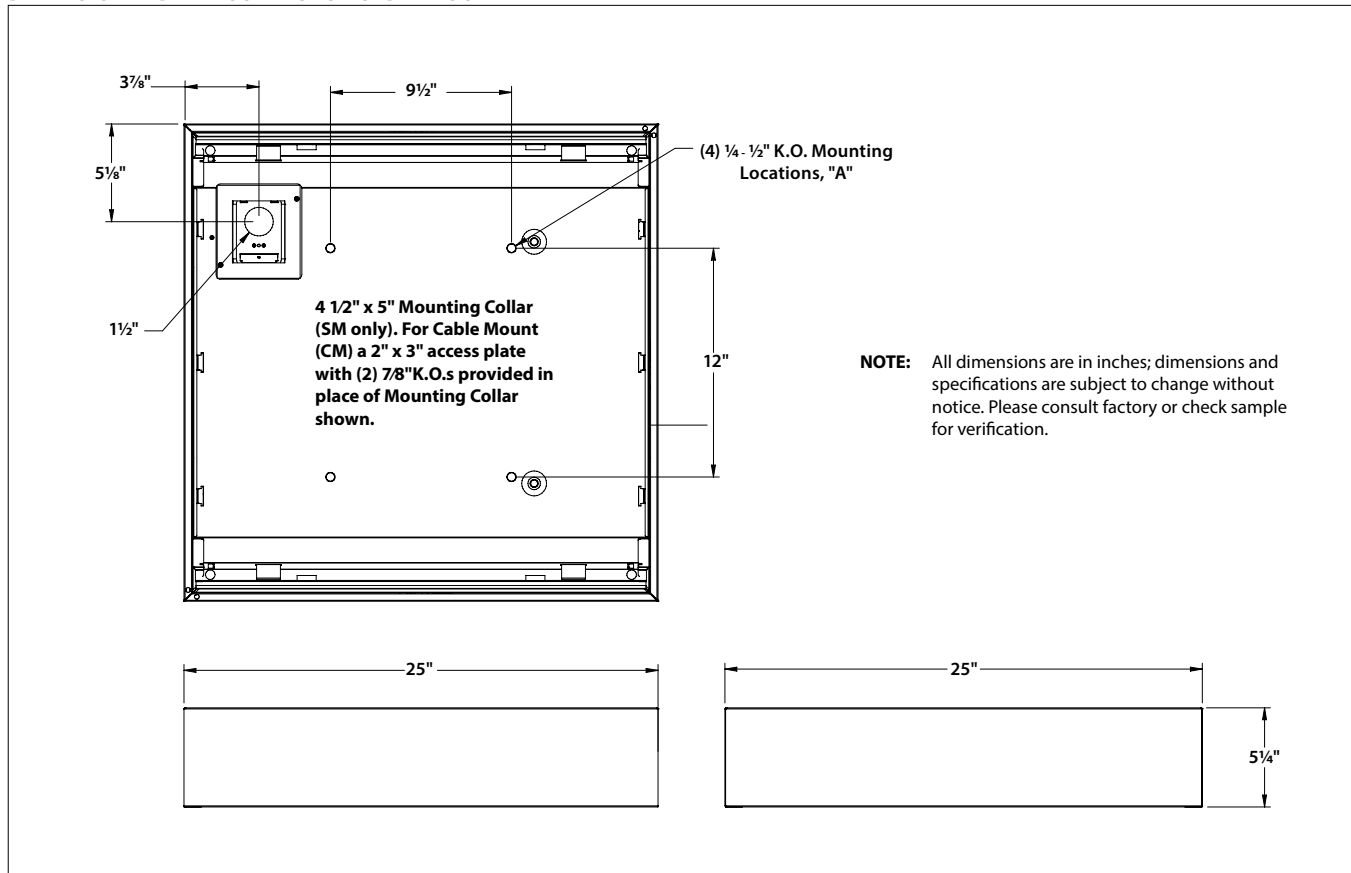


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK22 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK22 & (1) FKCR)

Row cut out dimensions using FK22s & FKCR adapters:  
Width 24 3/8", Length [24" x (# in row)] + 3/8".  
Example: (24" x 2) + 3/8" = 48 3/8"

Flange kit cut out dimension for single unit only: 24 3/8" x 24 3/8"

### DIMENSIONAL DATA - SURFACE OR CABLE MOUNT



**SURFACE MOUNT**

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock outs, 1/4" to 1/2" provided as shown, marked "A".

**CABLE MOUNT**

Order CM ceiling type. Access plate supplied for cable mounting or suspension. Use CM48Y2C3F-KIT 48" cable mount kit. Includes 3 wire feed cord. For other wiring needs, contact Hubbell representative. Mounting knock-outs, 1/4" to 1/2", provided as shown, marked "A".