

2' × 2', LED Lensed Troffer with Advanced Solid State Technology



create**change**

FEATURES

- Full distribution provides controlled high angle light for visual comfort
- Long-life, 50,000 hour LEDs at L80 reduce life cycle maintenance costs
- Lens design and materials provide uniform appearance without pixilation
- Three door frame choices
- Excellent color consistency and 82 CRI
- Fixed output or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED boards and drivers from below the ceiling; modular replaceability of components
- Low W/ft2 ratio typically meets the most restrictive lighting power density codes
- Recessed, surface or cable mount
- All models standard with IC rating

PROJECT INFORMATION Project Name Type Catalog No. Date

CONSTRUCTION

Luminaire housing, end caps, and reflectors are dieformed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks. Spring loaded latches optional on steel door, standard on aluminum doors.

Door frame is powder coat paint after fabrication. All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel. For a post painted housing finish suffix catalog number with PAF.

SHIELDING

Lenses are high transmission extruded acrylic. Lens selections are Pattern 12 frosted acrylic (A12F), Pattern 19 frosted acrylic .156" (A19F), or Smooth Frosted Acrylic (SFA).

INSTALLATION

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

CEILING COMPATIBILITY

Luminaire fits recessed exposed grid ceilings (G); for (4) field installable T- Bar clips, order option 4TB. A flange kit (FK) option is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement on ceiling plane. Cable Mount option (CM) allows suspension below ceiling plane. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Hubbell Lighting representative.

CERTIFICATION

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. UL Sanitation Approved.

WARRANTY

U 120V-277V **347** 347V

Five year warranty. (Terms and Conditions Apply)

ORDERING INFORMATION

EXAMPLE LLT22-35HLG-FSA12F-EU

LLT 22		
MODEL	COLOR TEMP	CEILING TYPE
LLT LED Lensed	30 3000K	G Grid ¹
Troffer	35 3500K	SM Surface Mount
	40 4000K	CM Cable Mount ²
	50 5000K	
SIZE	LUMEN OU	TPUT DOOR
22 2'×2'	LW Low Watt	FS White Flush
	ML Medium Lum	nen Steel
	HL High Lumen	FA White Flush Aluminum ³
	VL Very High Lui	RA White
ACCE	SSORIES	Regressed Aluminum ³

(ORDER SEPARATELY)

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

FKCR Flange Kit Row Adaptor

CM 48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide

Cable Mount fixtures, 3- Wire Feed Cord

SHIELDING	DRIVER		
A12F Pattern 12	E Fixed Output		
Frosted Acrylic Lens	ED 0-10V Dimming		
A19F Pattern 19 Frosted	ED1 0-10V 1% Dimming		
Acrylic Lens .156"	LUTH Hi-lume 1% EcoSystem LED		
SFA Smooth Frosted Acrylic	driver with Soft-on, Fade-to- Black dimming technology		
	LUTS 5-Series		

chnology	
Series	
oSystem LED	
iver	

NOMINAL

LUMENS

C388	3-Wire Flex
C 488	4-Wire Flex
C588	5-Wire Flex
ELL14	Emergency Battery Pack Installed, 1400 Lumens ⁴
PAF	Paint After Fabrication
SLL	Spring Loaded Latches
4TB	Four T-Bar Clips
GTD	Generator Transfer Device
G1	Single Gasket (door to housing)
G2	Double Gasketing (G1 and lens to door)
G3	Triple Gasketing (G2 and housing to ceiling)
GLR	Fast Blow Fuse
EOR	End of Row (SM/CM only) ⁵
INT	Intermediate (SM/CM only) ⁵

OPTIONS

SIZE

OUTPUT

LUMENS **PER WATT** (3500K) IW 2100 95 2' x 2' 22 ML 2500 27 93 HL 3300 36 92 VI 45 89 4000

PRODUCT AVAILABILITY

NOMINAL

Ec

Lumens vary according to color temperature and other factors. See specific photometric test(s).

Page 1/3 Rev. 10/19/17

For more door

options contact

factory.



LED / LLT22

¹ For drywall order Flange Kit accessories separately.

² Order hanger accessories separately.

³ Standard with Spring Loaded Latches.

⁴ For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting representative.

⁵ Provides ends with wiring access for continuous row mounting Damp Label - standard. IC Rating - standard.



PHOTOMETRIC DATA

LUMINAIRE DATA

Luminaire	LLT22-35MLG-A12F-ESD		
	LLT LED, Lensed Troffer		
	2 x 2 LED with frosted A12 lens		
Ballast	D185CQ30UNVA-A		
Ballast Factor	1.00		
Lamp	LED		
Fixture Lumens	2520		
Watts	26.70		
Mounting	Recessed		
Shielding Angle	0° = 90 90° = 90		
Spacing Criterion	0° = 1.16 90° = 1.18		
Luminous Opening	Length: 1.83		
in Feet	Width: 1.83		
	Height: 0.00		

COEFFICIENTS OF UTILIZATION (%)

	RC		8	0			70)			50		0
	RW	70	50	30	10	70	50	30	10	50	30	10	0
	1	109	105	101	97	107	102	99	95	98	95	92	85
	2	100	92	86	80	97	90	84	79	87	82	77	72
	3	92	82	74	68	89	80	73	67	77	71	66	62
	4	84	73	65	58	82	72	64	58	69	62	57	53
ב ב	5	78	66	57	51	76	65	57	50	63	55	50	47
É	6	72	60	51	45	70	59	50	45	57	50	44	41
	7	67	54	46	40	66	53	45	40	52	45	39	37
	8	63	50	41	36	61	49	41	36	48	41	36	33
	9	59	46	38	32	57	45	38	32	44	37	32	30
	10	55	42	35	30	54	42	35	30	41	34	29	27

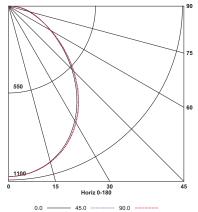
RCR = Room Cavity Ratio

 $\mathbf{RC} = \text{Effective Ceiling Cavity Reflectance } \mathbf{RW} = \text{Wall Reflectance}$

ZONAL LUMEN SUMMARY

	Zone	Lumens	% Lamp	% Fixt.	
ĺ	0-30	812	32.2	32.2	
	0-40	1289	51.2	51.2	
	0-60	2084	82.7	82.7	
	0-90	2520	100.0	100.0	
	0-180	2520	100.0	100.0	

INDOOR CANDELA PLOT



Test **5366** Test Date **7/9/12**

ENERGY DATA

lotal Luminaire Efficiency	100%
Total Lumens Per Watt	94
ANSI/IESNA RP-1-2004 Compliance	Yes - VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.58 based on 3000 hrs. and \$0.08 per KWH

AVG. LUMINANCE (Candela/Sq. M.)

		0.0	22.5	45.0	67.5	90.0
	0	3465	3465	3465	3465	3465
	30	3106	3121	3151	3162	3170
Angle	40	2773	2794	2832	2853	2862
Ā	45	2573	2591	2632	2650	2664
ng e	50	2355	2370	2410	2430	2445
-uminance	55	2146	2157	2185	2208	2225
	60	1961	1961	1974	1993	2012
	65	1825	1810	1795	1810	1833
Average	70	1757	1729	1663	1682	1710
ĕ	75	1763	1714	1627	1614	1639
	80	1888	1795	1684	1629	1666
	85	2102	2065	1881	1733	1807

LUMINAIRE DATA

Luminaire	LLT22-35HLG-A12F-ESD			
	LLT LED, Lensed Troffer			
	2 x 2 LED with frosted A12 lens			
Ballast	D255CQ42UNVA-A			
Ballast Factor	1.00			
Lamp	LED			
Fixture Lumens	3251			
Watts	35.50			
Mounting	Recessed			
Shielding Angle	0° = 90 90° = 90			
Spacing Criterion	0° = 1.16 90° = 1.18			
Luminous Opening	Length: 1.83			
in Feet	Width: 1.83			
	Height: 0.00			

COEFFICIENTS OF UTILIZATION (%)

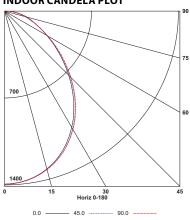
	RC		8	0			70)			50		0
	RW	70	50	30	10	70	50	30	10	50	30	10	0
	1	109	105	101	97	107	102	99	95	98	95	92	85
	2	100	92	86	80	97	90	84	79	87	82	78	72
	3	92	82	74	68	89	80	73	67	77	71	66	62
	4	84	73	65	58	82	72	64	58	69	62	57	53
Z Z	5	78	66	57	51	76	65	57	51	63	55	50	47
~	6	72	60	51	45	70	59	50	45	57	50	44	41
	7	67	54	46	40	66	53	45	40	52	45	39	37
	8	63	50	42	36	61	49	41	36	48	41	36	33
	9	59	46	38	32	57	45	38	32	44	37	32	30
	10	55	42	35	30	54	42	35	30	41	34	29	27

RC = Effective Ceiling Cavity Reflectance **RW** = Wall Reflectance

ZONAL LUMEN SUMMARY

	Zone	Lumens	% Lamp	% Fixt.	
	0-30	1049	32.3	32.3	
	0-40	1665	51.2	51.2	
	0-60	2690	82.8	82.8	
	0-90	3251	100.0	100.0	
	0-180	3251	100.0	100.0	

INDOOR CANDELA PLOT



Test **5352** Test Date **7/6/12**

ENERGY DATA

Total Luminaire Efficiency	100%
Total Lumens Per Watt	92
ANSI/IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.67 based on 3000 hrs. and \$0.08 per KWH

AVG. LUMINANCE (Candela/Sq. M.)

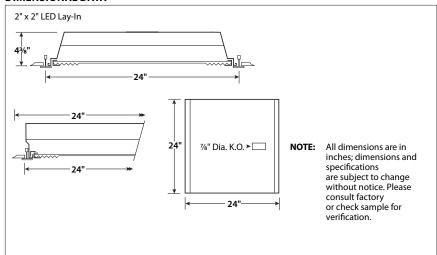
		0.0	22.5	45.0	67.5	90.0
Angle	0	4477	4477	4477	4477	4477
	30	4008	4027	4068	4083	4090
	40	3575	3600	3650	3680	3692
٩	45	3318	3336	3391	3423	3436
Average Luminance	50	3040	3060	3105	3140	3150
ina	55	2768	2779	2819	2852	2869
ᆵ	60	2520	2526	2539	2571	2597
Je L	65	2350	2327	2312	2335	2365
iraç	70	2255	2218	2143	2161	2199
Αĕ	75	2285	2211	2086	2086	2111
	80	2425	2314	2166	2110	2147
	85	2729	2692	2434	2287	2360

RCR = Room Cavity Ratio

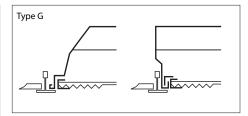
LED / LLT22 Page 2/3 Rev. 10/19/17



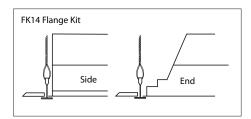
DIMENSIONAL DATA



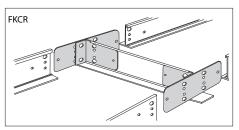
CEILING COMPATIBILITY



For lay-in insallation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed. Shown with flush lens.



For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance. Shown with flush lens.

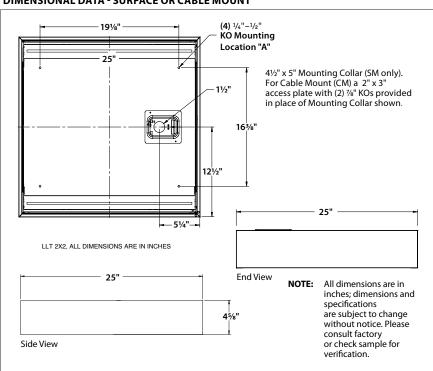


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14 & FKCR adapters: Width 12%", Length [48" × (# in row)] + %" = 96%"]

Flange kit rough in dimensions for single unit only: 12%" x 48%"

DIMENSIONAL DATA - SURFACE OR CABLE MOUNT



Surface Mount

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting KOs, 1/4" to 1/2" provided as shown at left, 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 KOs, ¼" to ½", provided as shown at left, marked "A".

Page 3/3 Rev. 10/19/17 LED / LLT22