

# TCAT24

2' x 4' LED TWIN CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

## FEATURES

- High efficiency acrylic lenses feature custom formulation for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- Compatible with Dual-Lite inverters

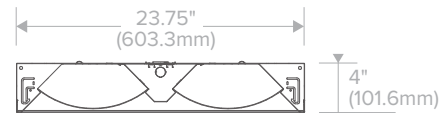


## CONTROL TECHNOLOGY



## RELATED PRODUCTS

- [TCAT14](#)
- [TCAT22](#)



Grid, recessed section

## SPECIFICATIONS

### CONSTRUCTION

- Luminaire housing, reflectors and end caps are die formed code gauge cold rolled steel
- Removable lenses and center channel for easy access to LED module and electrical components
- All reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform illumination

### OPTICS

- High transmission extruded acrylic lenses feature custom formulation for high efficacy without pixelation

### INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

### CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

### CERTIFICATIONS

- IC label is standard for recessed products
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels
- Damp location label standard
- Emergency-equipped fixtures are Dry Location unless specified
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Adheres to LM79, LM80, and TM21 industry standards
- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org)
- NX is available in U.S., Canada and Mexico. For other locations consult factory

### CERTIFICATIONS (CONTINUED)

- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 7 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)

### WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2475–8925
Wattage Range	19–69
Efficacy Range (LPW)	119–145
Reported Life (Hours)	L80/60,000
Input Current Range (mA)	70–580

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## ORDERING GUIDE

Example: TCAT24-35MLG-ESDU

CATALOG #

TCAT24											
Model	Color Temp	Delivered Lumens	Ceiling Type		Driver	Voltage					
TCAT24 2' x 4' LED Contemporary Architectural Troffer	30	3000K	XW	2475-2650	G	Grid Lay-in <sup>2</sup>	E	Fixed Output <sup>10</sup>	U	120-277V	
	35	3500K	VW	3150-3575	SM	Surface Mount <sup>9</sup>	ED	0-10V Dimming	347	347V <sup>11</sup>	
	40	4000K	MW	3550-4050	CM	Cable Suspended Mount <sup>3</sup>	ED1	0-10V 1% Dimming			
	50	5000K	LW	4150-4725			ESD	Step Dimming <sup>4,10</sup>			
	2750T	2700K-5000K SpectraSync™ Tunable White <sup>1</sup>	ML	4700-5350			LUTH	Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology <sup>4,5,10</sup>			
	2765T	2700K-6500K SpectraSync™ Tunable White <sup>1</sup>	HL	5350-6100	VL	6875-7825 <sup>8</sup>	XL	8300-8925	LUT5	5-Series EcoSystem LED driver <sup>4,5,10</sup>	
			HL	5350-6100					DALIP	DALI Power Bus <sup>6</sup>	
		VL	6875-7825 <sup>8</sup>								
		XL	8300-8925								

Options	Control Options
<b>ELL14</b> Emergency Battery Pack Installed, 1400 Lumens <sup>4,5</sup>	<b>NX Standalone</b>
<b>DTS</b> Dimming Bypass Module <sup>7</sup>	<b>NXS</b> NX, PIR Occupancy Sensor, Dimming Daylight Harvesting <sup>10,11,13</sup>
<b>C388</b> 3-Wire Flex <sup>12</sup>	<b>NX Networked – Wired</b>
<b>C488</b> 4-Wire Flex <sup>12</sup>	<b>NXE</b> NX Enabled, Dual SmartPorts <sup>10,11,13</sup>
<b>C588</b> 5-Wire Flex <sup>12</sup>	<b>NXES</b> NX Enabled, PIR Occupancy Sensor, Dimming Daylight Harvesting <sup>10,11,13</sup>
<b>GLR</b> Fast Blow Fuse	<b>NX Networked – Wireless</b>
<b>EOR</b> End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)	<b>NXSW</b> NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting <sup>9,10,11,13</sup>
<b>INT</b> Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)	<b>NXWE</b> NX Wireless Enabled <sup>9,10,11,13</sup>
<b>CP</b> Chicago Plenum	<b>Third-Party Control Options</b>
	<b>ODPG</b> Occupancy and Daylight Sensors w/ Grouping, Philips <sup>4,14,18</sup>
	<b>LV</b> Lutron VIVE Attached FCJS POWPAK Fixture Control (RF only for 0-10V drivers) <sup>15,16,17,18</sup>
	<b>LVS</b> Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) <sup>14,16,18</sup>
	<b>LVR</b> Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only) <sup>14,16,18</sup>

### Accessories

- FK24** 2' x 4' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-wire

Notes:

- 1 Only available with 0-10V Dimming (ED) Driver Option. Not available with VL or XL lumen packages. See page 4 for more information
- 2 For drywall, order G with Flange Kit Accessory
- 3 Order hanger accessories separately
- 4 Not available in 347V
- 5 For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative
- 6 DALIP only available when LVS, LVR or ODPG control options are selected
- 7 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 7 for wiring diagram

**NX In-Fixture Control Options:**

- 8 NX control function not available with VL lumen output
- 9 NXSW, NXWE, NXE and NXES cannot be used with surface mount versions

- 10 NX is available with ED and ED1 drivers only
- 11 NX combined with Spectrasync is not available in 347V
- 12 For NX control and Flex Wire together, consult factory
- 13 NX controls can only be used with NX Sensor options

**Third-Party Control Options:**

- 14 LVS, LVR and ODPG only available with DALIP driver option
- 15 Only available with ED driver option
- 16 VIVE is a trademark of Lutron Electronics Co., Inc.
- 17 Installations controlled solely by the Lutron Pico controller require accessing the LV (Lutron FCJS) module for commissioning after the circuit has been energized
- 18 Not available with SpectraSync (2750T or 2765T)

For questions about configuration options, contact Hubbell Representative

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## PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE								
	XW	VW	MW	LW	ML	HL	VL	XL
E	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X
ESD				X	X	X	X	X
LUT5		X	X	X	X	X		
LUTH		X	X	X	X	X		

## CONTROLS

### NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
<b>NX Standalone</b>								
<a href="#">NXS</a>	<a href="#">NXSMP-SMI</a>	No	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wired</b>								
<a href="#">NXE</a>	N/A	Yes	Yes	No	No	Yes	Yes	Requires <a href="#">NXBTC/R</a> <sup>1</sup>
<a href="#">NXES</a>	<a href="#">NXSMP-SMI</a>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wireless</b>								
<a href="#">NXSW</a>	<a href="#">NXSMP-SMI</a>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<a href="#">NXWE</a>	N/A	Yes	Yes	No	No	Yes	Yes	No <sup>2</sup>

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network  
 2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

### Philips EasySense Controls ODPG Sensor:



- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches<sup>1</sup>
- Uses Philips field apps for on site commissioning<sup>2,3</sup>
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the GPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org)

1 Wireless switches only compatible with ODPG Philips EasySense  
 2 [See link to Philips commissioning](#)  
 3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)

### Wireless Switch Accessories<sup>1</sup>

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white



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## CONTROLS (CONTINUED)

### SpectraSync™ Color Tuning Technology:

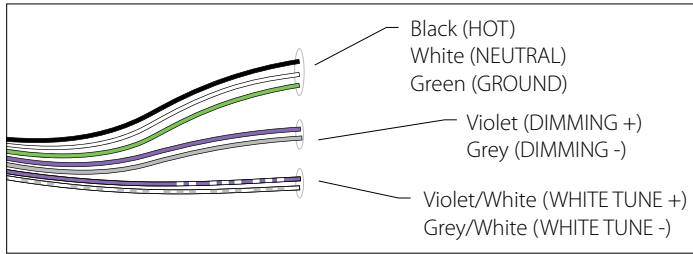
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNC COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

### SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

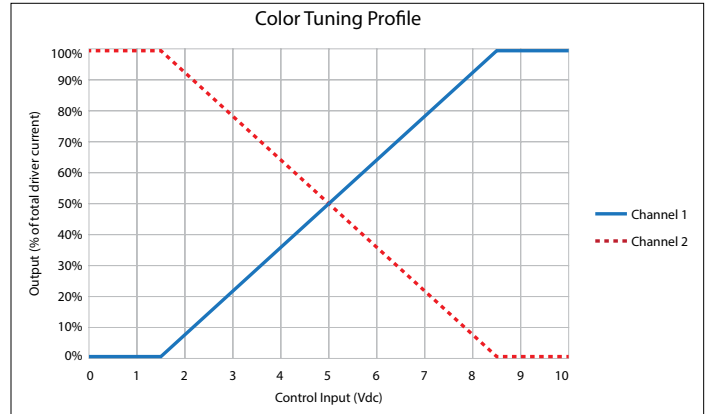


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

### Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

## DELIVERED LUMENS, SPECTRASYNC™



Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
		Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
XW	19	2386	126	2493	131	2538	134	2570	135	2655	140	2615	138
VW	25	3021	121	3157	126	3214	129	3255	130	3362	134	3312	132
MW	28	3405	122	3558	127	3622	129	3668	131	3789	135	3732	133
LW	34	3973	117	4152	122	4227	124	4281	126	4422	130	4355	128
ML	39	4510	116	4713	121	4798	123	4859	125	5019	129	4944	127
HL	45	5137	114	5368	119	5465	121	5534	123	5717	127	5631	125

# TCAT24

2' x 4' LED TWIN CONTEMPORARY ARCHITECTURAL TROFFER

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## DELIVERED LUMENS

LUMEN PACKAGE	LUMENS	INPUT WATTS	LPW
TCAT24-30XWG	2493	19	131.2
TCAT24-35XWG	2568	19	135.2
TCAT24-40XWG	2608	19	137.3
TCAT24-50XWG	2667	19	140.4
TCAT24-30VWG	3157	25	126.3
TCAT24-35VWG	3251	25	130
TCAT24-40VWG	3302	25	132.1
TCAT24-50VWG	3595	25	143.8
TCAT24-30MWG	3558	28	127.1
TCAT24-35MWG	3665	28	130.9
TCAT24-40MWG	3722	28	132.9
TCAT24-50MWG	4053	28	144.8
TCAT24-30LWG	4152	34	122.1
TCAT24-35LWG	4276	34	125.8
TCAT24-40LWG	4343	34	127.7
TCAT24-50LWG	4729	34	139.1
TCAT24-30MLG	4713	39	120.8
TCAT24-35MLG	4855	39	124.5
TCAT24-40MLG	4930	39	126.4
TCAT24-50MLG	5368	39	137.6
TCAT24-30HLG	5368	45	119.3
TCAT24-35HLG	5530	45	122.9
TCAT24-40HLG	5615	45	124.8
TCAT24-50HLG	6115	45	135.9
TCAT24-30VLG	6883	55	125.1
TCAT24-35VLG	7090	55	128.9
TCAT24-40VLG	7200	55	130.9
TCAT24-50VLG	7840	55	142.5
TCAT24-30XLG	8321	69	120.6
TCAT24-35XLG	8571	69	124.2
TCAT24-40XLG	8704	69	126.1
TCAT24-50XLG	8932	69	129.4

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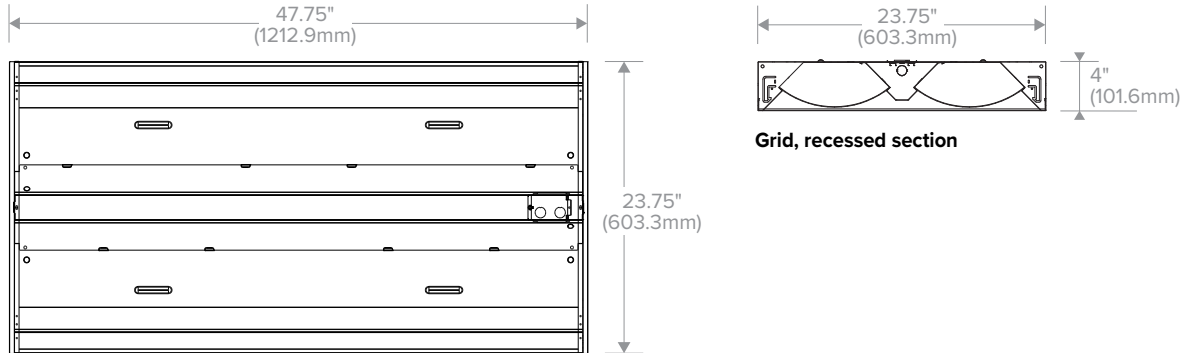
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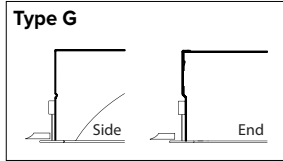
## DIMENSIONS

### GRID

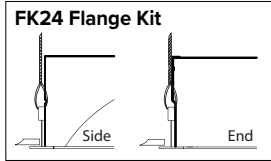


Grid, back of housing

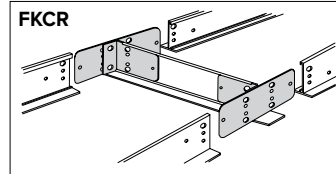
### CEILING COMPATIBILITY



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 FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

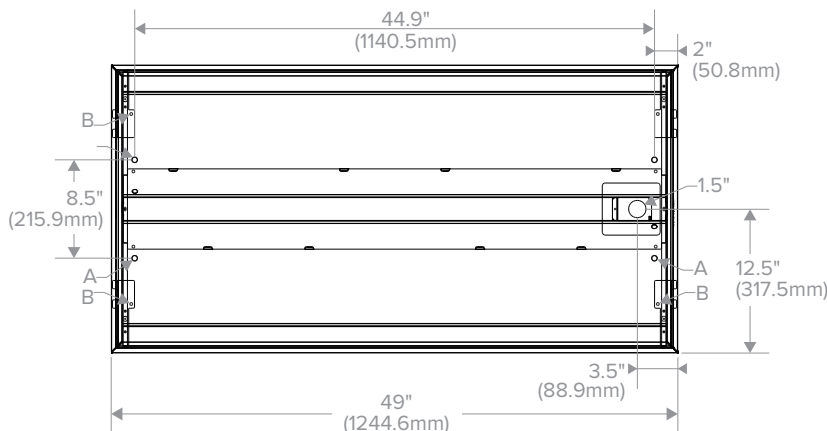


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK24 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK24 & (1) FKCR)

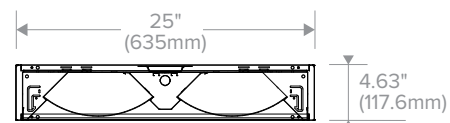
Row cut out dimensions using FK24s & FKCR adapters:  
Width 24<sup>3</sup>/<sub>8</sub>", Length [48" x (# in row)] + <sup>3</sup>/<sub>8</sub>".  
Example: (48" x 2) + <sup>3</sup>/<sub>8</sub>" = 96<sup>3</sup>/<sub>8</sub>"

Flange kit cut out dimension for single unit only: 24<sup>3</sup>/<sub>8</sub>" x 48<sup>3</sup>/<sub>8</sub>"

### SURFACE MOUNT OR CABLE MOUNT



Surface section (SM)



Surface Mount (SM) and Cable Mount (CM), back of housing

#### Surface Mount:

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, <sup>3</sup>/<sub>8</sub>", provided in center channel as indicated at left, marked A.

#### Cable Mount:

Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2" wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

\* For Cable Mount a 2" x 3" access plate with (4) <sup>7</sup>/<sub>8</sub>" KO's provided in place of Mounting Collar shown.

**NOTE:** Dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

