





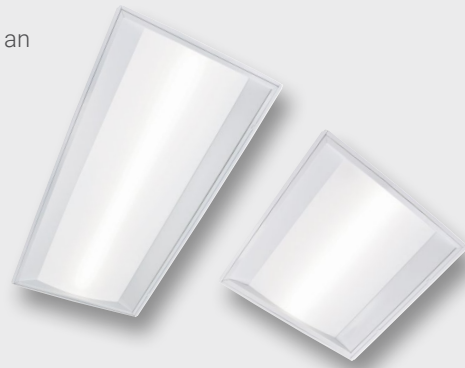
FR Premium commercial LED luminaire

Aesthetics, performance, value. The **FR** series is a premium luminaire offering an excellent connected lighting solution with the latest solid state and optimized electronic driver technologies.

Aesthetics. Offered in two unique visual aesthetics – Standard and High Performance, the FR series is a modern styled luminaire suitable for any application such as offices, hospitals, schools, retail and other work spaces. With its styled design, FR series is a premium upgrade over traditional lensed troffers, parabolics and direct/indirect lighting products.

Performance. With performance as high as 142 lm/W, the payback period for energy savings may be reduced especially when combined with DLC standard and premium rebates. This connected lighting solution offers further flexibility with 0-10V dimming standard, and step/ Bi-level, 10% and 1% DALI, three lumen options, and integrated sensor options to reduce energy consumption and cost while meeting or exceeding national, state and local code requirements. A full complement of emergency lighting options are also available.

Value. Compared to traditional fluorescent and other LED solutions, the FR series offers superior energy efficiency and excellent application flexibility allowing the reduction of overall operating and maintenance costs.



Improved aesthetic over traditional prismatic lensed troffer

2 x 4 and 2 x 2 product configurations

Excellent performance with up to 142 lm/W

Two unique versions - Standard or High Performance (HP)

0 to 10V driver, optional step dim, 1%, DALI, and Lutron

CCT: 2700K, 3000K, 3500K, 4000K, 5000K

Ease of driver access with hinged door assembly

Damp location listed



FR Premium commercial LED luminaire



Construction

- Recessed: 2' x 2' and 2' x 4'
- Shallow depth: 3.25"
- Tool-less hinged door for easy access
- cULus damp location / IC Rated / RoHS compliant
- Sustainable materials
- Five-year warranty



Options

- Three stocked lumen packages in two CCTs
 - 2' x 2': 3200 (29.4W); 2' x 4': 4000 (30.6W) and 6500 (59.1W)
 - Ten additional lumen packages offered as MTO
- Six different models – Standard (Single Bar) or High Performance (Dual Bar)
- Universal (120V/277V) or 347V
- Emergency – EL (700) and EL14 (1400), and other options
- Surface mount field install kits
- Flex wiring configurations
- Chicago plenum rated version

Performance

- High-performance efficacy up to 142 lumens per watt
- Energy savings in excess of 50% compared to traditional fluorescent troffers
- Five Correlated Color Temperatures (2700K, 3000K, 3500K, 4000K, 5000K) at typical 85 CRI
- 2' x 2': >L88 @ 60,000 hrs.
2' x 4': >L82 @ 60,000 hrs.
- Binning: Per ANSI, 3-step MacAdam ellipse

Controls

- FR series can include a factory-installed integrated sensor system for occupancy and daylight dimming control, with programming and manual controls from an optional handheld remote.
- FR luminaires include 0-10V dimming drivers for control using wall dimmers (10% - 100%), daylighting sensors and room controllers from Cooper Lighting Solutions. Optional 1% dimming available.
- FR luminaires are available with native DALI drivers for complete digital energy management using Fifth Light addressable lighting controls.
- Connected sensors available with Enlighted and WaveLinx options.



Energy data



Catalog Number	Performance Type	Nominal Lumens	Wattage	Efficacy (lm/W @ 3500K)
2' x 2'				
22FR-24-UNV-L8XX-CD1-U	Standard	2345	20.2	120.0
22FR-32-UNV-L8XX-CD1-U	Standard	3313	29.4	110.0
22FR-24-HP-UNV-L8XX-CD1-U	Premium	2365	19.4	126.2
22FR-32-HP-UNV-L8XX-CD1-U	Premium	3238	26.1	121.8
2' x 4'				
24FR-30-UNV-L8XX-CD1-U	Premium	3023	22.9	135.3
24FR-40-UNV-L8XX-CD1-U	Premium	4096	30.6	130.6
24FR-50-UNV-L8XX-CD1-U	Premium	5034	40.9	123.4
24FR-65-UNV-L8XX-CD1-U	Standard	6703	59.1	110.7
24FR-69-UNV-L8XX-CD1-U	Standard	6900	67.1	105.2
24FR-72-UNV-L8XX-CD1-U	Standard	7237	68.8	104.6
24FR-30-HP-UNV-L8XX-CD1-U	Premium	3067	21.5	139.0
24FR-40-HP-UNV-L8XX-CD1-U	Premium	4542	29.7	136.1
24FR-50-HP-UNV-L8XX-CD1-U	Premium	5090	38.5	131.8
24FR-65-HP-UNV-L8XX-CD1-U	Premium	6530	53.2	123.6
24FR-69-HP-UNV-L8XX-CD1-U	Premium	6986	57.6	121.3
24FR-72-HP-UNV-L8XX-CD1-U	Standard	7265	63.9	118.5
24FR-80-HP-UNV-L8XX-CD1-U	Standard	8028	68.5	117.0

Notes: Bold=stocked SKUs (STK), available for immediate shipment. Non-bold=MTO SKUs, available in less than two weeks. All models also available in 2700K and 3000K. Lumens based on 3500K. Use lumen multiplier for 4000K and 5000K.

Connected Lighting Systems



SVPD Integrated Sensor System



- Adjustable occupancy sensing and daylight dimming control
- Out-of-the-box functionality with no configuration required
- Optional handheld remote for field adjustments and personal control
- Low-bay and high-bay detection pattern options for various ceiling heights up to 30 feet

ENLIGHTED Wireless Connected Lighting System



- Configurable dimming, occupancy, light, temperature and power use sensing
- Enterprise-class wireless networking with fully addressable settings
- Powerful software for energy management and Internet of Things (IoT) data capture and analytics
- Low bay detection pattern covers low- and high-ceiling applications up to 20 feet

WaveLinx Wireless Connected Lighting System



- Adjustable occupancy sensing and daylight dimming control
- Simple, secure wireless connectivity with out-of-the-box code compliance
- Easy to use mobile application allows for fast set up and unlocks advanced control capabilities
- Detection pattern covers standard ceiling applications up to 12 feet

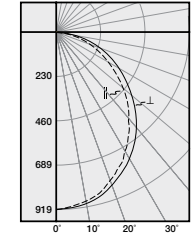
DLVP Distributed Low Voltage Power System



- Save on labor costs.** With an average of 40% reduction in man hours, DLVP reduces number of qualified electricians needed on the job site and installs 2X faster than traditional systems.
- Save on materials.** DLVP eliminates the need for unnecessary line-voltage materials.
- No system commissioning.** A contractor can configure the system with the flip of a switch, or by using a handheld remote.
- Code compliance made easy.** The system was designed to meet the energy code requirements of any space.

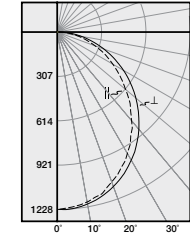
Optics and photometry

2' x 2', 2400 lumens



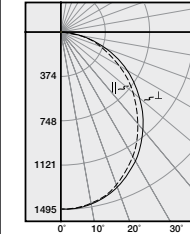
Electronic Driver
Linear LED 3500K
Spacing criterion:
(H) 1.17 x mtg height,
(L) 1.23 x mtg height
Lumens = 2419
Input Watts = 20.2
Efficacy = 119.8 lm/W
Test: 22FR-LD4-24-UNV-L835-CD1-U.IES

2' x 2', 3200 lumens



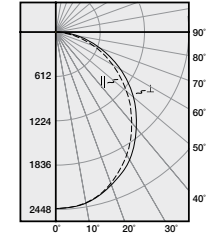
Electronic Driver
Linear LED 3500K
Spacing criterion:
(H) 1.17 x mtg height,
(L) 1.23 x mtg height
Lumens = 3231
Input Watts = 29.4
Efficacy = 109.9 lm/W
Test: 22FR-LD4-32-UNV-L835-CD1-U.IES

2' x 4', 4000 lumens



Electronic Driver
Linear LED 4000K
Spacing criterion:
(H) 1.19 x mtg height,
(L) 1.23 x mtg height
Lumens = 3991
Input Watts = 30.6
Efficacy = 130.4 lm/W
Test: 24FR-LD4-40-UNV-L835-CD1-U.IES

2' x 4', 6500 lumens



Electronic Driver
Linear LED 4000K
Spacing criterion:
(H) 1.19 x mtg height,
(L) 1.23 x mtg height
Lumens = 6543
Input Watts = 59.1
Efficacy = 110.7 lm/W
Test: 24FR-LD4-40-UNV-L835-CD1-U.IES



Lighting Product Lines

Ametrix
AtLite
Corelite
Ephesus
Fail-Safe
Halo
Halo Commercial
Invue
io
Iris
Lumark
Lumière
McGraw-Edison
Metalux
MWS
Neo-Ray
Portfolio
RSA
Shaper
Streetworks
Sure-Lites

Controls Product Lines

Fifth Light Technology
Greengate
iLight (International Only)
iLumin
Zero 88

Connected Lighting Systems

Distributed Low-Voltage Power
HALO Home
iLumin Plus
Enlighted
WaveLinx
Trellix



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