

PHILIPS

Linear Troffer

EvoKit LED Retrofit Kit

2'x2'



Project: _____
Location: _____
Cat.No: _____
Type: _____
Lamps: _____ Qty: _____
Notes: _____

Philips EvoKit LED Retrofit Kit is an energy efficient LED alternative to traditional linear fluorescent troffers. Not only does it offer energy savings¹, it also helps reduce maintenance costs due to its long lifetime. Simple construction helps decrease the installation time meaning you can have an LED solution in your ceiling in just minutes.

Ordering guide

| Product Number | Description | Watts | Volts | Lumen Maintenance (Hrs.) ² | Approx. Lumens ³ | CRI | Color Temperature (K) |
|--|--|-------|---------|---------------------------------------|-----------------------------|-----|-----------------------|
| 2'x2' Stock SKUs | | | | | | | |
| 501734 | EvoKit 2x2 P 32L 31W 835 2 0-10 7 G2 | 31 | 120-277 | 70,000 | 3210 | 80 | 3500 |
| 501759 | EvoKit 2x2 P 32L 31W 840 2 0-10 7 G2 | 31 | 120-277 | 70,000 | 3280 | 80 | 4000 |
| 502773 | EvoKit 2x2 P 32L 31W 835 2 STEP 7 G2 | 31 | 120-277 | 70,000 | 3120 | 80 | 3500 |
| 502781 | EvoKit 2x2 P 32L 31W 840 2 STEP 7 G2 | 31 | 120-277 | 70,000 | 3280 | 80 | 4000 |
| 501775 | EvoKit 2x2 P 32L 32W 835 1 Mk10 7 G2 | 32 | 120 | 70,000 | 3210 | 80 | 3500 |
| 501783 | EvoKit 2x2 P 32L 32W 840 1 Mk10 7 G2 | 32 | 120 | 70,000 | 3280 | 80 | 4000 |
| 501791 | EvoKit 2x2 P 32L 34W 835 5 Mk10 7 G2 | 34 | 277 | 70,000 | 3210 | 80 | 3500 |
| 501809 | EvoKit 2x2 P 32L 34W 840 5 Mk10 7 G2 | 34 | 277 | 70,000 | 3280 | 80 | 4000 |
| 2'x2' Made to Order SKU's⁴ | | | | | | | |
| 502096 | EvoKit 2x2 P 23L 23W 835 2 0-10 7 G2** | 23 | 120-277 | 70,000 | 2400 | 80 | 3500 |
| 502104 | EvoKit 2x2 P 23L 23W 840 2 0-10 7 G2** | 23 | 120-277 | 70,000 | 2450 | 80 | 4000 |
| 502799 | EvoKit 2x2 P 23L 23W 835 2 STEP 7 G2** | 23 | 120-277 | 70,000 | 2400 | 80 | 3500 |
| 502807 | EvoKit 2x2 P 23L 23W 840 2 STEP 7 G2** | 23 | 120-277 | 70,000 | 2450 | 80 | 4000 |
| 502112 | EvoKit 2x2 P 23L 23W 835 1 Mk10 7 G2 | 23 | 120 | 70,000 | 2400 | 80 | 3500 |
| 502120 | EvoKit 2x2 P 23L 23W 840 1 Mk10 7 G2 | 23 | 120 | 70,000 | 2450 | 80 | 4000 |
| 502138 | EvoKit 2x2 P 23L 25W 835 5 Mk10 7 G2 | 25 | 277 | 70,000 | 2400 | 80 | 3500 |
| 502146 | EvoKit 2x2 P 23L 25W 840 5 Mk10 7 G2 | 25 | 277 | 70,000 | 2450 | 80 | 4000 |
| 503953 | EVOKIT 2X2 P 32L 31W 835 2 SR 7 G2 | 31 | 120-277 | 70,000 | 3200 | 80 | 3500 |
| 503961 | EVOKIT 2X2 P 32L 30W 840 2 SR 7 G2 | 30 | 120-277 | 70,000 | 3200 | 80 | 4000 |

See footnotes on page 3.



EvoKit 2'x2' LED Retrofit Kit

Application

- A highly efficient, visually comfortable, architecturally styled LED retrofit kit designed to replace recessed linear fluorescent troffers.
- Unique modular design offers refreshing new look in the ceiling when compared to traditional fluorescent luminaires.
- Single light bar combined with slanted troffer helps reflect light to reduce glare and provide uniform light distribution making it ideal for applications such as offices, schools, healthcare and retail.
- Excellent color rendering with a CRI above 80.
- Extremely high efficacies up to 110 lumens per watt.
- LEDs are an excellent source for use with controls since dimming or frequent switching does not degrade the performance or life of the source.
- Designed for use with Standard Grid (NEMA "G") or Narrow Grid (NEMA "NFG") ceiling T-Grids.
- High efficiency source and luminaire design help significantly reduce energy consumption and more easily comply with known energy codes.
- Helps meet regulation requirements such as ASHRAE 90.1 and Title 24 when matched with suitable controls.

Construction/Finish

- Simple design allows for quick installation (under 4 minutes) in existing luminaire without the need to break the ceiling plenum.
- Constructed using galvanized steel which helps fight rust and makes for more durable product.
- Minimum depth of only 3" necessary to allow proper clearance and installation of the EvoKit.
- Retrofit kit is powder coated after fabrication with high quality, durable finish to ensure no unfinished edges and avoid future potential of corrosion.
- Components fit together easily without the need for tools during installation.

Electrical

- Multiple driver options available
 - 0-10V dimming satisfies universal voltage requirements.
 - Mark10 leading edge dimming offers ability to dim without pulling neutral wires making it compatible with more existing systems.
 - Step dimming to 40%.
- 5 year limited warranty includes all components of the retrofit kit, including driver, LED board and nonelectrical components."

- Listed with UL and Design Lights Consortium to ensure quality performance and safety standards are met. High efficiency LEDs have a minimum 70,000 hour rated life (L₇₀).

Enclosure

- Diffuser requires no frames or fasteners and can be easily removed from below without tools if needed.

Accessories

- Earthquake cables available for extra securement within the ceiling for areas prone to extreme conditions.
- Suitable for use with Philips 503441 emergency backup.
- Suitable for use with a wide range of control systems.
- Appropriate for new construction when used with standard listed lensed or parabolic troffers.

| Prod. No. | Description |
|-----------|---|
| 502435 | EvoKit Accessory Earthquake Cable 317mm |
| 502575 | EvoKit 2x2 Replacement Lens |
| 503441 | EvoKit Field Installed Emergency Battery Backup |

SpaceWise Technology 4.1 (SWZ) – To be purchased separately

- Optional SpaceWise automated wireless technology via the unique Philips Evokit SpaceWise Accessory provides integrated occupancy and daylight harvesting for additional control and energy savings. Requiring no system re-wiring, SpaceWise technology is ideal for retrofit applications.
- Occupancy and daylight sensors are integral to each luminaire. Luminaires in large rooms and open plan areas are grouped together up to a maximum of 50 using a handheld remote so room lighting turns on at first sign of occupancy.
- Upon first entry, grouped luminaires brighten up gently to a background level. Once occupants arrive at their workstations, luminaires in the immediate area brighten up to full illumination and will dim down when no presence is detected. Grouped luminaires will dim to off when no presence is detected in the group.
- Daylight sensing is automatic and re-calibration occurs daily when luminaires turn on.
- The SpaceWise Accessory, when combined in the field with any standard 0-10 dimmable Evokit, will transform the kit into a SpaceWise-enable retrofit kit. There are two variations of the accessory, one for the Evokit 2x4 and one for the Evokit 2x2.



| EvoKit | | | |
|--------------------------------------|----------------|-------------|-----------------|
| Model | Initial Lumens | Input Power | Lumens per Watt |
| EvoKit 2x2 P 32L 31W 840 2 0-10 7 G2 | 3280 | 32 | 103 |

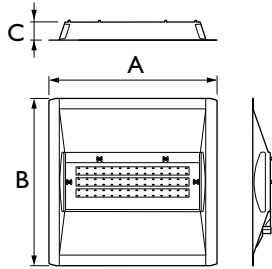
| Prod. No. | 12NC | Description |
|-----------|--------------|--------------------------------|
| 503599 | 929000725913 | EvoKit 2x2 SpaceWise Accessory |
| 504449 | 913700359103 | Spacewise Programming Tool |
| 455436 | 913700364403 | Switch/Dimmer |
| 455428 | 913700364203 | 4 position scene selector |

| EvoKit with Spacewise (SWZ) | | | |
|---------------------------------|----------------|----------------------------|-----------------------------------|
| Model | Initial Lumens | Input Power Max Output (W) | Input Power Background Output (W) |
| High Power Setting (120/277V) | 3280 | 32/33 | 12/13 |
| Medium Power Setting (120/277V) | 2886 | 29/29 | 11/12 |
| Low Power Setting (120/277V) | 2525 | 25/26 | 10/11 |

EvoKit 2'x2' LED Retrofit Kit

Dimensions

| A Face Plate Length | B Face Plate Width | C Height |
|---------------------------|--------------------------|-------------|
| 23.9" | 23.9" | 2.95" |



Energy Saving Solution – 2'x2'

| | |
|--------------------------|---|
| Present Wattage | 59 W |
| x Annual Operating Hours | 4,380 hrs |
| | = 258,420 watt-hours |
| +1,000 | = 258.42 kWh per year |
| x kWh rate of \$0.11 | = \$28.43 per year |
| x 125 fixtures | = \$3,553.28 annual energy cost per space |

| | |
|--------------------------|---|
| Present Wattage | 30 W |
| x Annual Operating Hours | 4,380 hrs |
| | = 131,400 watt-hours |
| +1,000 | = 131.40 kWh per year |
| x kWh rate of \$0.11 | = \$14.45 per year |
| x 125 fixtures | = \$1,806.75 annual energy cost per space |

Total Estimated Annual Savings[◇] = \$1,746.53

◇ Based on 125 fixtures per space operating 4,380 hours a year. 125 fixtures is roughly equivalent to a 10,000 square foot space. kWh rates will vary.

2'x2' EvoKit, P 23L 23W 835, 2408 delivered lumens

| | |
|-------------|--------------|
| Catalog No. | |
| Test No. | 3l |
| S/MH | 1.2 |
| Lamp Type | 929000713713 |
| Ballast | Mark7 |
| Lumens/Watt | 104 |
| Input Watts | 23 |

Comparative yearly lighting energy cost per 1000 lumens - \$2.31 based on 3000 hours and \$0.08/kWh

The photometric results were obtained in the Design Lights Consortium Test Lab which is NVLAP accredited by the National Institute of Standards and Technology

Photometric values based on tests performed in compliance with LM-79

Candlepower

| Angle | End | 45 | Cross | Back-45 |
|-------|-----|-----|-------|---------|
| 0 | 883 | 883 | 883 | 883 |
| 5 | 875 | 880 | 877 | 877 |
| 10 | 859 | 862 | 859 | 860 |
| 15 | 833 | 835 | 832 | 833 |
| 20 | 796 | 798 | 797 | 796 |
| 25 | 751 | 754 | 754 | 752 |
| 30 | 698 | 702 | 705 | 700 |
| 35 | 638 | 645 | 652 | 643 |
| 40 | 575 | 584 | 597 | 583 |
| 45 | 508 | 523 | 543 | 522 |
| 50 | 441 | 462 | 491 | 462 |
| 55 | 374 | 404 | 439 | 405 |
| 60 | 309 | 349 | 385 | 350 |
| 65 | 247 | 296 | 326 | 294 |
| 70 | 191 | 240 | 262 | 235 |
| 75 | 134 | 181 | 184 | 173 |
| 80 | 83 | 115 | 100 | 102 |
| 85 | 38 | 46 | 20 | 31 |

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

| pcc | 80 | | | 70 | | | 50 | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 70 | 50 | 30 | 50 | 30 | |
| pw | | | | | | | | | |
| RCR | | | | | | | | | |
| 0 | 118 | 118 | 118 | 115 | 115 | 115 | 111 | 111 | |
| 1 | 108 | 103 | 98 | 105 | 101 | 96 | 96 | 93 | |
| 2 | 97 | 90 | 82 | 94 | 88 | 81 | 83 | 79 | |
| 3 | 89 | 79 | 69 | 86 | 77 | 68 | 73 | 68 | |
| 4 | 81 | 69 | 60 | 80 | 68 | 59 | 66 | 58 | |
| 5 | 75 | 61 | 53 | 72 | 60 | 53 | 58 | 52 | |
| 6 | 69 | 56 | 46 | 68 | 55 | 46 | 53 | 46 | |
| 7 | 65 | 51 | 41 | 63 | 50 | 41 | 48 | 40 | |
| 8 | 59 | 46 | 38 | 58 | 46 | 38 | 45 | 36 | |
| 9 | 56 | 42 | 34 | 55 | 41 | 34 | 40 | 34 | |
| 10 | 53 | 40 | 32 | 51 | 39 | 30 | 38 | 30 | |

Light Distribution

| Degrees | Lumens | % Luminaire |
|---------|--------|-------------|
| 0-30 | 669 | 27.9 |
| 0-40 | 1077 | 44.9 |
| 0-60 | 1859 | 77.5 |
| 0-90 | 2399 | 100 |

Average Luminance

| Angle | End | 45° | Cross |
|-------|------|------|-------|
| 45 | 1995 | 2054 | 2135 |
| 55 | 1812 | 1958 | 2125 |
| 65 | 1625 | 1944 | 2145 |
| 75 | 1437 | 1940 | 1976 |
| 85 | 1225 | 1476 | 627 |

EvoKit 2'x2' LED Retrofit Kit

2'x2' EvoKit, P 32L 31W 835, 3210 delivered lumens

Catalog No. 2l
 Test No. 1.2
 S/MH 929000713713
 Lamp Type Mark7
 Ballast Mark7
 Lumens/Watt 103
 Input Watts 31

Comparative yearly lighting energy cost per 1000 lumens - \$2.33 based on 3000 hours and \$0.08/kWh

The photometric results were obtained in the Design Lights Consortium Test Lab which is NVLAP accredited by the National Institute of Standards and Technology

Photometric values based on tests performed in compliance with LM-79

Candlepower

| Angle | End | 45 | Cross | Back-45 |
|-------|------|------|-------|---------|
| 0 | 1177 | 1177 | 1177 | 1177 |
| 5 | 1167 | 1173 | 1169 | 1170 |
| 10 | 1146 | 1150 | 1145 | 1147 |
| 15 | 1110 | 1113 | 1110 | 1111 |
| 20 | 1062 | 1064 | 1063 | 1062 |
| 25 | 1001 | 1005 | 1005 | 1002 |
| 30 | 930 | 936 | 939 | 933 |
| 35 | 851 | 860 | 869 | 857 |
| 40 | 766 | 779 | 796 | 777 |
| 45 | 677 | 697 | 725 | 696 |
| 50 | 588 | 616 | 654 | 616 |
| 55 | 499 | 539 | 585 | 541 |
| 60 | 412 | 466 | 513 | 466 |
| 65 | 330 | 394 | 435 | 392 |
| 70 | 255 | 320 | 350 | 313 |
| 75 | 178 | 241 | 245 | 231 |
| 80 | 111 | 153 | 134 | 136 |
| 85 | 51 | 62 | 26 | 42 |

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

| pcc | 80 | | | 70 | | | 50 | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 70 | 50 | 30 | 50 | 30 | |
| pw | | | | | | | | | |
| RCR | | | | | | | | | |
| 0 | 118 | 118 | 118 | 115 | 115 | 115 | 111 | 111 | |
| 1 | 108 | 103 | 98 | 105 | 101 | 96 | 96 | 93 | |
| 2 | 97 | 90 | 82 | 94 | 88 | 81 | 83 | 79 | |
| 3 | 89 | 79 | 69 | 86 | 77 | 68 | 73 | 68 | |
| 4 | 81 | 69 | 60 | 80 | 68 | 59 | 66 | 58 | |
| 5 | 75 | 61 | 53 | 72 | 60 | 53 | 58 | 52 | |
| 6 | 69 | 56 | 46 | 68 | 55 | 46 | 53 | 46 | |
| 7 | 65 | 51 | 41 | 63 | 50 | 41 | 48 | 40 | |
| 8 | 59 | 46 | 38 | 58 | 46 | 38 | 45 | 36 | |
| 9 | 56 | 42 | 34 | 55 | 41 | 34 | 40 | 34 | |
| 10 | 53 | 40 | 32 | 51 | 39 | 30 | 38 | 30 | |

Light Distribution

| Degrees | Lumens | % Luminaire |
|---------|--------|-------------|
| 0-30 | 892 | 27.9 |
| 0-40 | 1436 | 44.9 |
| 0-60 | 2479 | 77.5 |
| 0-90 | 3199 | 100 |

Average Luminance

| Angle | End | 45° | Cross |
|-------|------|------|-------|
| 45 | 2660 | 2739 | 2846 |
| 55 | 2416 | 2611 | 2833 |
| 65 | 2167 | 2592 | 2859 |
| 75 | 1915 | 2586 | 2635 |
| 85 | 1633 | 1968 | 836 |

FOOTNOTES:

- 1) Please refer to the energy saving chart on page 3 for details.
 - 2) L_{70} 72,000 hours @ 35°C based on TM21 and LM80.
 - 3) Based on photometric testing consistent with IES LM-79.
- * "Made-To-Order" product is not kept in inventory. Minimum quantities will apply.
 ** These products do not meet DLC criteria.
 *** Please visit www.philips.com/warranties for full details.
- † DLC requires the product to meet specific performance requirements regarding: lumen output, spacing criteria, lumens per watt, color temperature, CRI, lifetime and warranty.

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