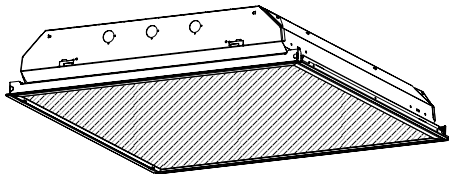
# Day-Brite CFI by Signify

## Recessed

### SP troffer 1x4

T8, T5, or T5HO



Project:

Location:

Cat.No:

Type:

Lamps: Qty:

Notes:

The Day-Brite / CFI SP troffer is a specification grade recessed lensed luminaire and offers many premium options.

## Ordering guide

**Example: 2SPG217R-FS01-UNV-1/2-EBHE-LPT835HL**

| Width | Family | Ceiling Type | No. of Lamps (not included) | Lamp Type | Housing | Door Frame | Lens | Door Finish | Voltage | Options |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | SP | | | | R – | – | | – | – | |
| **2** 2' | **SP** SP Troffer | **G** Grid<br>**F** Flange | **2**<br>**3** (except 31U6)<br>**4** (except 31U6 or 31U1) | **14** 14WT5 (22")<br>**17** 17WT8 (24")<br>**24HO** 24WT5HO (22")<br>**31U1** 31WT8 1-5/8" (24")<br>**31U6** 31WT8 6" (24") | **R** Revised Housing | **FS** Flat Steel<br>**FA** Flat Aluminum<br>**RA** Regressed Aluminum | **01** Pattern 12 prismatic acrylic<br>**12** K-12, .125" nominal<br>**19** K-19, .156" nominal<br>**21** Pattern 12, .125" nominal<br>**30** 1/2"x1/2"x1/2" silver polystyrene louver<br>**34** 1-1/2"x1-1/2"x1" silver polystyrene louver<br>**52** 3/4"x3/4"x1/2" silver polystyrene louver | **BLANK** White Door<br>**B** Black Door | **120**<br>**277**<br>**347**<br>**UNV** Universal Voltage 120-277V | **1/2** One 2-lamp ballast<br>**1/3** One 3-lamp ballast<br>**1/21** 2-lamp & 1-lamp ballasts<br>**1/4** One 4-lamp ballast<br>**2/2** Two 2-lamp ballasts<br>**EB** Electronic ballast, <10% THD, std. ballast factor<br>**EB10R** T8 electronic ballast, program rapid start, <10% THD<br>**EBHE** T8 electronic ballast, high efficiency, std. ballast factor<br>**EBLHE** T8 electronic ballast, high efficiency, low ballast factor<br>**EBHHE** T8 electronic ballast, high efficiency, high ballast factor<br>**EBSD** T8 electronic step dimming ballast, .88 ballast factor<br>**EBD7** Advance Mark 7 dimming ballast, 0-10V (low voltage) control<br>**EBDX** Advance Mark 10 dimming ballast, phase control<br>**EBD** Electronic dimming ballast, customer specified<br>**E1** B100 emerg. ballast, T8, 350-450 lumens, 120/277V<br>**E1CAN** B100-CAN emerg. ballast, Canada market, T8, 350-450 lumens, 120/347V<br>**E7** B60 emerg. ballast, T8, 600-700 lumens, 120/277V<br>**E5** B50 emerg. ballast, U.S. or Canada market, T8, 1100-1400 lumens, UNV<br>**E5CAN** B50-CAN emerg. ballast, Canada market, T8, 1100-1400 lumens, 120/347V<br>**E5ST** B50ST emerg. ballast w/self test, T8, 1100-1400 lumens, UNV<br>**E7LP** LP550 emerg. ballast T5/T5HO, 430-700 lumens, 120/277V<br>**E6LP** LP600 emerg. ballast U.S. or Canada market, T5/T5HO, 750-1325 lumens, 120/277V<br>**F1** 3/8" flex 3 wire, 18 gauge 6'<br>**F2** 3/8" flex 4 wire, 18 gauge 6'<br>**F2/5W** 3/8" flex, 5 wire 18 gauge 6'<br>**GLR** Fusing, fast blow<br>**PAF** Housing painted after fabrication |

**LPT830** Installed T8/T5/T5HO lamps, 80+ CRI, 3000K
**LPT835** Installed T8/T5/T5HO lamps, 80+ CRI, 3500K
**LPT841** Installed T8/T5/T5HO lamps, 80+ CRI, 4100K
**LPT830HL** Installed T8 hi lumen lamps, 80+ CRI, 3000K
**LPT835HL** Installed T8 hi lumen lamps, 80+ CRI, 3500K
**LPT841HL** Installed T8 hi lumen lamps, 80+ CRI, 4100K
**1W** 1-way gasketing, between lens & door frame (not avail. w/RA door)
**2W** 2-way gasketing, 1W + gasketing between door frame & housing
**3W** 3-way gasketing, 2W + gasketing for field installation between housing & ceiling

## Accessories (order separately)

- **FKDP22** Flange conversion kit 2x2
- **FMA22** 2x2 "F" mounting frame for NEMA "F" mounting

# 2SP SP troffer recessed 2x2

## T5, T5HO, or T8

### Construction/Finish

- Specification Quality recessed troffer for the following “NEMA” ceiling types: NEMA “G”-Grid, NEMA “NFSG”-Narrow Faced Slot Grid, NEMA “GR”-Grid Regressed, NEMA “NFG”-Narrow Faced Grid, NEMA “F”-Flange.
- Housing and door frame have smooth edges for easy handling.
- Housing is multi-stage phosphate treated for maximum corrosion resistance and finish coat is high reflectance baked white enamel.
- Troffer body constructed of die-formed CR steel.
- Factory installed access plate includes 7/8" hole, 7/8" knockout and grounding screw.
- T-bar grid clips built into fixture, no extra parts required. Designed for use with standard grid ceiling members, 1-1/2" maximum height.
- One-piece housing features integral end plates that increase rigidity and minimize damage from handling or shipping.
- Low profile body minimizes clearance required.
- All units have wire hanger tabs for independent wire suspension.

### Electrical

- cULus listed for damp locations.
- Self-contained fluorescent emergency power packs can be incorporated.
- No exposed internal wiring.

### Enclosure

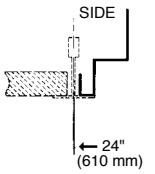
- Mitered corner door frames.
- Mechanically designed interlocks eliminate light leaks, no gaskets are needed.
- White (standard) or black (optional) door frames available.
- Door frames can be hinged and latched from either side.
- Spring loaded latches are standard.

### Ceiling configuration

2 SP G 2 31U1 R

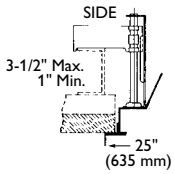
Ceiling type

**G** = Grid (NEMA G)




(NEMA Type G)
Lay-in acoustical ceilings using exposed grid suspension, with tees for luminaires on 24" x 24" spacing.

**F** = Flange (NEMA F)




(NEMA Type F)
Flange for acoustical ceilings using concealed mechanical suspension. Swing-jack mounting brackets: adjustment 3-1/2" max. and 1" min. Refer to sheet 801-CL for output information.

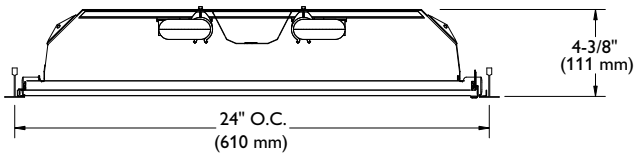
Hg

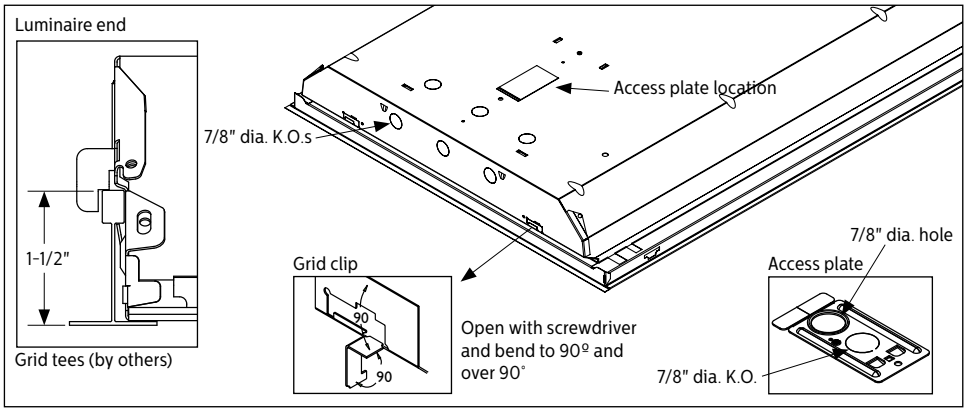
Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled, “Contain Mercury” and/or the symbol “HG”. Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org

# 2SP SP troffer recessed 2x2

T5, T5HO, or T8

## Dimensions




## Photometry

**SP 2x2 2 Lamp FB31U1** **Efficiency – 82.3%** **LER – 75** **TER – 66**

| | |
|---|---|
| **Catalog No.** | 2SPG231U1R-FS01-1/2-EB |
| **Test No.** | 22804P |
| **S/MH** | 1.3 |
| **Lamp Type** | FB31U1 |
| **Lumens/Lamp** | 2800 |
| **Ballast Factor** | .88 |
| **Input Watts** | 54 |

Comparative yearly lighting energy cost per 1000 lumens – **$3.20** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

### Candlepower

| Angle | End | 45 | Cross |
|---|---|---|---|
| **0** | 1851 | 1851 | 1851 |
| **5** | 1848 | 1839 | 1846 |
| **10** | 1819 | 1819 | 1834 |
| **15** | 1759 | 1772 | 1803 |
| **20** | 1699 | 1735 | 1784 |
| **25** | 1605 | 1667 | 1742 |
| **30** | 1491 | 1578 | 1682 |
| **35** | 1358 | 1463 | 1593 |
| **40** | 1201 | 1304 | 1451 |
| **45** | 1022 | 1124 | 1251 |
| **50** | 843 | 959 | 1031 |
| **55** | 668 | 770 | 827 |
| **60** | 512 | 561 | 614 |
| **65** | 383 | 371 | 437 |
| **70** | 294 | 235 | 314 |
| **75** | 237 | 170 | 223 |
| **80** | 177 | 139 | 164 |
| **85** | 92 | 79 | 87 |

### Light Distribution

| Degrees | Lumens | % Lamp | % Luminaire |
|---|---|---|---|
| **0-30** | 1449 | 25.9 | 31.4 |
| **0-40** | 2363 | 42.2 | 51.3 |
| **0-60** | 3905 | 69.7 | 84.7 |
| **0-90** | 4609 | 82.3 | 100.0 |

### Average Luminance

| Angle | End | 45˚ | Cross |
|---|---|---|---|
| **45** | 4682 | 5149 | 5731 |
| **55** | 3773 | 4349 | 4671 |
| **65** | 2936 | 2844 | 3350 |
| **75** | 2966 | 2128 | 2791 |
| **85** | 3419 | 2936 | 3234 |

### Coefficients of Utilization

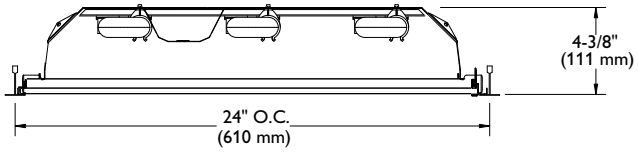
**EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)**

| pcc | 80 | | | 70 | | | 50 | |
|---|---|---|---|---|---|---|---|---|
| pw | 70 | 50 | 30 | 70 | 50 | 30 | 50 | 30 |
| RCR | | | | | | | | |
| 0 | 97 | 97 | 97 | 95 | 95 | 95 | 91 | 91 |
| 1 | 90 | 85 | 82 | 88 | 84 | 81 | 81 | 79 |
| 2 | 82 | 76 | 70 | 81 | 75 | 69 | 71 | 68 |
| 3 | 76 | 68 | 60 | 73 | 66 | 60 | 64 | 58 |
| 4 | 69 | 59 | 54 | 68 | 58 | 53 | 56 | 52 |
| 5 | 64 | 54 | 46 | 63 | 53 | 46 | 52 | 46 |
| 6 | 59 | 48 | 41 | 57 | 47 | 41 | 46 | 40 |
| 7 | 55 | 45 | 38 | 54 | 44 | 36 | 42 | 36 |
| 8 | 52 | 40 | 34 | 50 | 40 | 34 | 39 | 33 |
| 9 | 47 | 38 | 30 | 46 | 36 | 30 | 35 | 29 |
| 10 | 45 | 34 | 28 | 44 | 34 | 28 | 34 | 28 |

# **2SP** SP troffer recessed 2x2

## T5, T5HO, or T8

### Dimensions




### Photometry

**SP 2x2 3 Lamp FB31U1** **Efficiency – 75.5%** **LER – 72** **TER – 69**

| | |
|---|---|
| **Catalog No.** | 2SPG331U1R-FS01-1/3-EB |
| **Test No.** | 22814P |
| **S/MH** | 1.3 |
| **Lamp Type** | FB31U1 |
| **Lumens/Lamp** | 2800 |
| **Ballast Factor** | 0.88 |
| **Input Watts** | 72 |

Comparative yearly lighting energy cost per 1000 lumens – **$3.33** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

#### Candlepower

| Angle | End | 45 | Cross |
|---|---|---|---|
| **0** | 2657 | 2657 | 2657 |
| **5** | 2645 | 2645 | 2645 |
| **10** | 2604 | 2615 | 2625 |
| **15** | 2531 | 2561 | 2591 |
| **20** | 2430 | 2480 | 2532 |
| **25** | 2295 | 2374 | 2449 |
| **30** | 2131 | 2231 | 2322 |
| **35** | 1937 | 2044 | 2146 |
| **40** | 1705 | 1794 | 1900 |
| **45** | 1447 | 1535 | 1615 |
| **50** | 1189 | 1273 | 1310 |
| **55** | 941 | 999 | 1042 |
| **60** | 706 | 728 | 789 |
| **65** | 525 | 481 | 572 |
| **70** | 407 | 311 | 407 |
| **75** | 325 | 228 | 295 |
| **80** | 243 | 183 | 214 |
| **85** | 128 | 102 | 110 |

#### Light Distribution

| Degrees | Lumens | % Lamp | % Luminaire |
|---|---|---|---|
| **0-30** | 2067 | 24.6 | 32.6 |
| **0-40** | 3338 | 39.7 | 52.6 |
| **0-60** | 5403 | 64.3 | 85.2 |
| **0-90** | 6342 | 75.5 | 100.0 |

#### Average Luminance

| Angle | End | 45° | Cross |
|---|---|---|---|
| **45** | 6629 | 7032 | 7398 |
| **55** | 5314 | 5642 | 5885 |
| **65** | 4024 | 3687 | 4384 |
| **75** | 4068 | 2854 | 3692 |
| **85** | 4757 | 3791 | 4088 |

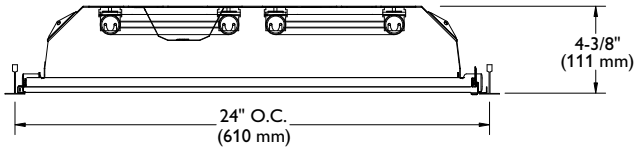
#### Coefficients of Utilization

| pcc | 80 | | | 70 | | | 50 | |
|---|---|---|---|---|---|---|---|---|
| pw | 70 | 50 | 30 | 70 | 50 | 30 | 50 | 30 |
| RCR | | | | | | | | |
| 0 | 90 | 90 | 90 | 88 | 88 | 88 | 83 | 83 |
| 1 | 82 | 79 | 76 | 81 | 78 | 75 | 75 | 71 |
| 2 | 76 | 69 | 65 | 73 | 68 | 64 | 66 | 63 |
| 3 | 69 | 61 | 56 | 68 | 60 | 56 | 58 | 54 |
| 4 | 64 | 56 | 50 | 63 | 55 | 48 | 53 | 47 |
| 5 | 58 | 50 | 44 | 57 | 48 | 42 | 47 | 42 |
| 6 | 55 | 46 | 39 | 54 | 45 | 39 | 42 | 38 |
| 7 | 51 | 40 | 34 | 50 | 40 | 34 | 40 | 34 |
| 8 | 47 | 38 | 32 | 46 | 36 | 32 | 36 | 30 |
| 9 | 45 | 34 | 28 | 44 | 34 | 28 | 34 | 28 |
| 10 | 41 | 32 | 27 | 40 | 32 | 26 | 30 | 26 |

# 2SP SP troffer recessed 2x2

T5, T5HO, or T8

## Dimensions




## Photometry

**SP 2x2 2 Lamp FB032T8/6** **Efficiency – 76.5%** **LER – 69** **TER – 61**

| | |
|---|---|
| **Catalog No.** | 2SPG231U6R-FS01-1/2-EB |
| **Test No.** | 22784P |
| **S/MH** | 1.3 |
| **Lamp Type** | FB032T8/6 |
| **Lumens/Lamp** | 2800 |
| **Ballast Factor** | 0.88 |
| **Input Watts** | 55 |

Comparative yearly lighting energy cost per 1000 lumens – **$3.48** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

### Candlepower

| Angle | End | 45 | Cross |
|---|---|---|---|
| **0** | 1752 | 1752 | 1752 |
| **5** | 1738 | 1747 | 1751 |
| **10** | 1710 | 1727 | 1739 |
| **15** | 1665 | 1695 | 1719 |
| **20** | 1598 | 1647 | 1687 |
| **25** | 1511 | 1578 | 1635 |
| **30** | 1403 | 1488 | 1558 |
| **35** | 1283 | 1371 | 1444 |
| **40** | 1143 | 1211 | 1295 |
| **45** | 972 | 1036 | 1105 |
| **50** | 799 | 867 | 914 |
| **55** | 641 | 694 | 741 |
| **60** | 484 | 510 | 570 |
| **65** | 362 | 338 | 404 |
| **70** | 278 | 217 | 286 |
| **75** | 221 | 156 | 205 |
| **80** | 166 | 127 | 149 |
| **85** | 84 | 70 | 78 |

### Light Distribution

| Degrees | Lumens | % Lamp | % Luminaire |
|---|---|---|---|
| **0-30** | 1370 | 24.5 | 32.0 |
| **0-40** | 2222 | 39.7 | 51.8 |
| **0-60** | 3638 | 65.0 | 84.8 |
| **0-90** | 4287 | 76.5 | 100.0 |

### Average Luminance

| Angle | End | 45° | Cross |
|---|---|---|---|
| **45** | 4453 | 4746 | 5062 |
| **55** | 3620 | 3919 | 4185 |
| **65** | 2775 | 2591 | 3097 |
| **75** | 2766 | 1952 | 2566 |
| **85** | 3122 | 2602 | 2899 |

### Coefficients of Utilization

**EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)**

| pcc | 80 | | | 70 | | | 50 | |
|---|---|---|---|---|---|---|---|---|
| pw | 70 | 50 | 30 | 70 | 50 | 30 | 50 | 30 |
| RCR | | | | | | | | |
| 0 | 91 | 91 | 91 | 89 | 89 | 89 | 84 | 84 |
| 1 | 83 | 81 | 77 | 81 | 79 | 76 | 76 | 72 |
| 2 | 77 | 70 | 66 | 75 | 69 | 65 | 67 | 63 |
| 3 | 70 | 63 | 56 | 68 | 61 | 56 | 59 | 55 |
| 4 | 65 | 56 | 50 | 63 | 55 | 48 | 53 | 47 |
| 5 | 59 | 51 | 44 | 57 | 50 | 44 | 47 | 42 |
| 6 | 56 | 46 | 39 | 54 | 45 | 39 | 44 | 38 |
| 7 | 52 | 41 | 34 | 50 | 40 | 34 | 40 | 34 |
| 8 | 47 | 38 | 32 | 46 | 38 | 32 | 36 | 30 |
| 9 | 45 | 34 | 28 | 44 | 34 | 28 | 34 | 28 |
| 10 | 41 | 33 | 27 | 40 | 32 | 27 | 30 | 26 |

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Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008