

# PHILIPS

## Recessed

### Recessed Troffer

2x2ft & 2x4ft



Project: \_\_\_\_\_

Location: \_\_\_\_\_

Cat.No: \_\_\_\_\_

Type: \_\_\_\_\_

Lumens: \_\_\_\_\_ Qty: \_\_\_\_\_

Notes: \_\_\_\_\_

The Philips Recessed Troffer LED offers architectural appeal with “must have” features. Access to the boards and driver from below make it an ideal solution for a wide range of applications.

#### Ordering guide

Example: P2FGG38B840-2-D-UNV-DIM

Brand	Width	Family	Ceiling Type	Lumens	Color	Length	Center Diffuser	Voltage	Driver
<b>P</b>	<b>2</b>	<b>FG</b>	<b>G</b>				<b>D</b>	<b>UNV</b>	<b>DIM</b>
P Philips	2 2'	FG Recessed Troffer LED	G Grid	<b>38B</b> 2x2 3800 nominal delivered lumens  <b>42B</b> 2x4 4200 nominal delivered lumens	<b>835</b> 80 CRI, 3500K <b>840</b> 80 CRI, 4000K	<b>2</b> 2'  <b>4</b> 4'	D Diffuse (ribbed)	UNV Universal voltage 120-277V	DIM 0-10V 5% dimming

#### Energy data

Luminaire	Catalog Number	Input Power	Efficacy
2x2	P2FGG38B840-2	33.6	114
2x4	P2FGG42B840-4	33.9	124

Lighttogo



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## Application

- 3" deep low profile configuration provides minimal penetration into the plenum space
- Ribbed acrylic diffuser provides even illumination with comfortable appeal
- Lambertian distribution creates uniform horizontal and vertical illuminance on the work plane and reduces scalloping on the walls
- CRI 80 minimum color rendering with balanced spectrum
- LEDs coupled with standard dimming provide prolonged lumen maintenance.
- Designed for use with standard Grid (NEMA "G").
- Continuous row mounting is possible with a 1" gap between fixtures accommodated by others

## Enclosure

- Opal acrylic diffuser provides visually comfortable lumenance without compromise to luminaire efficacy.
- Diffuser requires no frames or fasteners and can be easily removed from below without the use of tools

## Construction/Finish

- Uncomplicated design is 3" deep with minimal material overlap creating several benefits:
  - Less material required
  - Less packaging required
  - Reduced weight for ease of handling and transit
  - Less energy required for construction and assembly
  - More luminaires can be shipped per truck to reduce fuel consumption
- Metal side covers are die formed with a conical shape to enhance light distribution and visual aesthetic
- Injection molded lens retainers allow for easy, tool-free access to the LED boards and driver from below, and provide positive lens retention
- Luminaire finish is matte white polyester powder coat for high quality, durable finish
- T-bar grid clips are integral to the body

## General notes

- Many luminaire components, such as reflectors, refractors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility

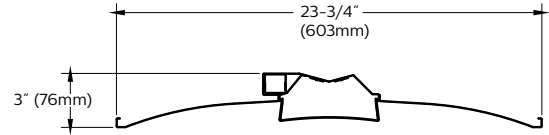
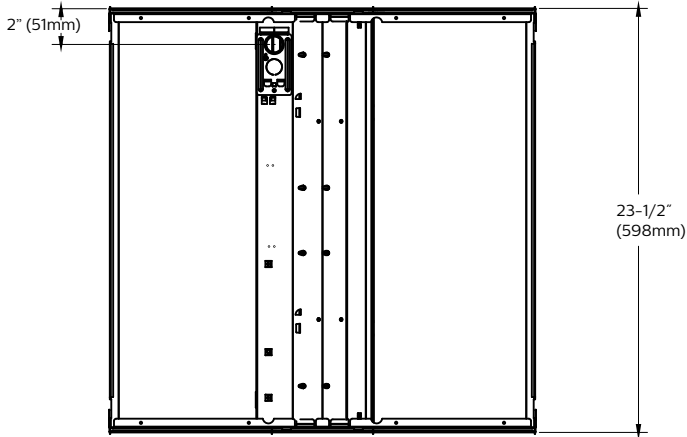
## Electrical

- Provides up to 124 lumens per watt and are available in 3500K and 4000K color temperatures
- LED boards are accessible from below by removal of the lens. Lens removal is tool-free by compressing the sides and pushing to one end
- LED driver is accessible from below by removal of the lens and integral wireway cover. The wireway cover is easily removed with a flat head screwdriver
- Five year limited luminaire warranty includes LED boards and driver. Visit [www.philips.com/warranties](http://www.philips.com/warranties) for complete warranty information.
- TM-21 predicted L70 lumen maintenance up to 85,000 hours
- cETLus listed to UL and CSA standards, suitable for damp locations
- Recessed Troffer luminaires are DesignLights Consortium qualified. Please see the DLC QPL list for exact catalog numbers (<http://www.designlights.org/QPL>)

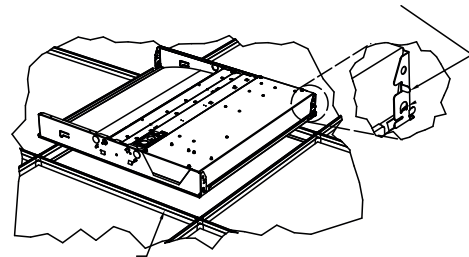
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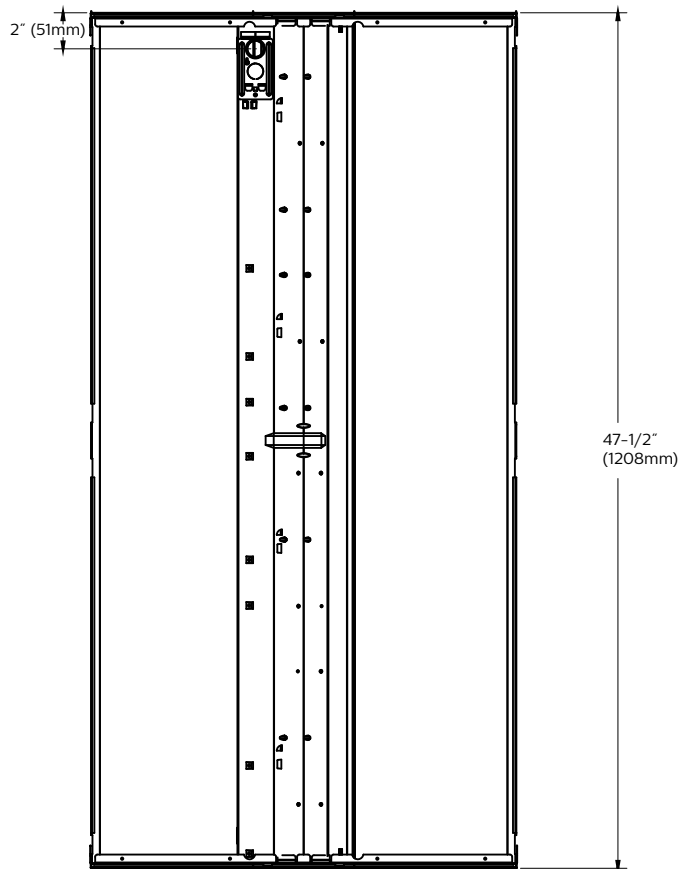
## Dimensions



Integral grid clips upper and lower tabs



Ceiling grid



# Recessed Troffer LED

2x2ft & 2x4ft

## Photometry

### 2x2 Recessed Troffer LED, 3800 nominal delivered lumens

LER - 114

<b>Catalog No.</b>	P2FGG38B840-2-D-UNV-DIM
<b>Test No.</b>	36779
<b>S/MH</b>	1.2
<b>Lamp Type</b>	LED
<b>Lumens</b>	3828
<b>Input Watts</b>	34

Comparative yearly lighting energy cost per 1000 lumens – **\$2.11** based on 3000 hrs. and \$.08 pwr KWH.

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

Photometric values based on test performed in compliance with LM-79.

#### Candlepower

Angle	End	45	Cross	Back-45
0	1465	1465	1465	1465
5	1444	1458	1460	1458
15	1371	1377	1376	1377
25	1227	1229	1240	1229
35	1033	1052	1073	1052
45	816	861	896	861
55	599	666	718	666
65	364	481	542	481
75	181	277	332	277
85	35	77	89	77

#### Light Distribution

Degrees	Lumens	% Luminaire
0-30	1092	28.5
0-40	1750	45.7
0-60	3005	78.5
0-90	3830	100
0-180	3830	100

#### Average Luminance

Zone	End	45°	Cross
45	14765	15577	16218
55	13366	14854	16007
65	11026	14550	16415
75	8928	13683	16392
85	5123	11304	13036

#### Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)												
pfc =	20			80			70			50		
Ceil												
Wall	70	50	30	70	50	30	50	30	50	30	30	
RCR												
0	118	118	118	115	115	115	111	111	111	111	111	
1	109	104	98	106	101	97	96	96	93	93	93	
2	98	90	83	95	89	81	84	84	80	80	80	
3	90	79	70	88	78	69	75	75	68	68	68	
4	82	69	61	80	68	60	67	67	58	58	58	
5	76	63	54	73	61	53	59	59	52	52	52	
6	69	56	47	68	56	46	54	54	46	46	46	
7	65	52	42	63	51	42	48	48	41	41	41	
8	60	46	39	58	46	38	45	45	38	38	38	
9	56	42	34	55	42	34	41	41	34	34	34	
10	53	40	32	52	40	32	39	39	32	32	32	

### 2x4 Recessed Troffer LED, 4200 nominal delivered lumens

LER - 124

<b>Catalog No.</b>	P2FGG42B840-4-D-UNV-DIM
<b>Test No.</b>	36564
<b>S/MH</b>	1.2
<b>Lamp Type</b>	LED
<b>Lumens</b>	4212
<b>Input Watts</b>	34

Comparative yearly lighting energy cost per 1000 lumens – **\$1.94** based on 3000 hrs. and \$.08 pwr KWH.

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

Photometric values based on test performed in compliance with LM-79.

#### Candlepower

Angle	End	45	Cross	Back-45
0	1567	1567	1567	1567
5	1541	1556	1559	1556
15	1467	1473	1476	1473
25	1323	1330	1339	1330
35	1124	1147	1165	1147
45	896	949	978	949
55	659	737	779	737
65	404	534	587	534
75	203	323	365	323
85	43	104	108	104

#### Light Distribution

Degrees	Lumens	% Luminaire
0-30	1176	27.9
0-40	1893	44.9
0-60	3273	77.6
0-90	4215	100
0-180	4216	100

#### Average Luminance

Zone	End	45°	Cross
45	8102	8584	8845
55	7349	8219	8685
65	6120	8077	8890
75	5025	7991	9014
85	3186	7597	7905

#### Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)												
pfc =	20			80			70			50		
Ceil												
Wall	70	50	30	70	50	30	50	30	50	30	30	
RCR												
0	118	118	118	115	115	115	111	111	111	111	111	
1	108	103	98	106	101	96	96	96	93	93	93	
2	97	90	82	95	88	81	84	84	79	79	79	
3	90	79	70	86	77	69	73	73	68	68	68	
4	81	69	60	80	68	59	66	66	58	58	58	
5	76	63	54	72	60	53	58	58	52	52	52	
6	69	56	46	68	55	46	54	54	46	46	46	
7	65	51	41	63	50	41	48	48	40	40	40	
8	59	46	38	58	46	38	45	45	36	36	36	
9	56	42	34	55	41	34	40	40	34	34	34	
10	53	40	32	52	39	32	38	38	30	30	30	

