

## DESCRIPTION

The Fail-Safe CFD Cleanroom Troffer is enclosed and gasketed to maintain ceiling integrity and protect against infiltration of particles and airborne bacteria. The housing and door are designed to work with 1" inverted T-Grid ceilings. The sealed, hole-free housing prevents air exchange between the fixture and plenum and allows relamping without contamination of clean areas. These luminaires are UL/cUL listed for wet locations for covered ceiling applications, and are manufactured in accordance with U.S.D.A., F.D.A., and Federal Standard 209E.

Catalog #		Type
Project		
Comments		Date
Prepared by		

## SPECIFICATION FEATURES

### Application

The CFD is suitable for use in I.E.S. Class 1,000, 10,000 and 100,000 clean room environments. Applications include cleanrooms, technical and biomedical labs, food processing/testing centers and pharmaceutical labs.

### Housing

Nominal 3 3/4" deep recessed housing consists of one-piece, code gauge, prime cold rolled steel. The hole-free embossed housing has full length die formed stiffeners for added strength. End plates are securely attached and completely sealed for air-tight construction.

### Finish

Electrostatically applied baked white polyester powder enamel finish. Minimum reflectance 90%. Multistage cleaning cycle, iron phosphate coating with rust inhibitor. Conveyorized application and baking timing accurately controlled at an elevated temperature.

### Door Frame

Die formed, heavy gauge, flat extruded aluminum door with reinforced corners and baked white enamel finish. Positive light seals.

### Hinging/ Latching

Two slide-latches with safety screws secure lens frame in the

closed position. Lens frame hinges and is removable without the use of tools.

### Gasket

One piece continuous gasket surrounds perimeter of lens to seal lens to door frame. Additional gasketing seals door to housing.

### Ballast

Standard Class P, CBM/ETL ballast.

### Labels

UL/cUL listed. 100 PSI High-Pressure hose-down rated. Optional 200 PSI rating.

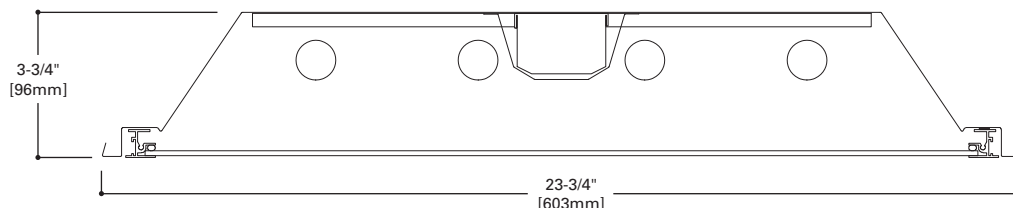


## CFD

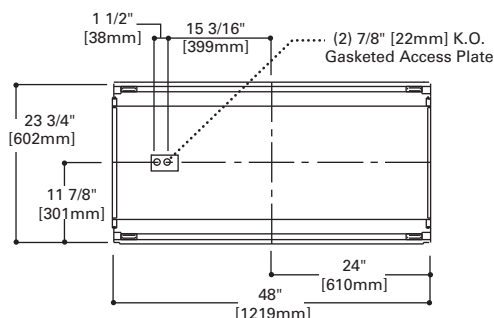
2x4  
Cleanroom

RECESSED GRID  
Inset Flat Door  
1" Grid

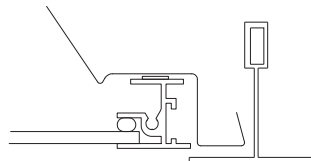
100 PSI Hosedown



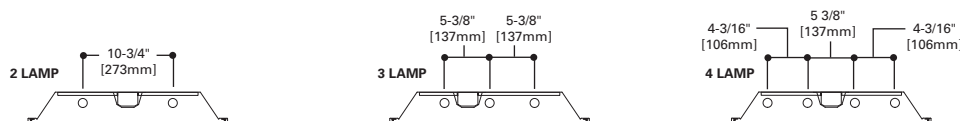
## MOUNTING DIMENSIONS



## DOOR FRAME



## LAMP CONFIGURATIONS



## ENERGY DATA

Input Watts:  
ES Ballasts & STD Lamps  
(2) 32WT8 Fluorescents: 71W  
(3) 32WT8 Fluorescents: 108W  
(4) 32WT8 Fluorescents: 142W

## Electronic Ballast Data

Consult Cooper Lighting Representative

## ORDERING INFORMATION

SAMPLE NUMBER: CFDA-432A125-UNV-EL4-EB81-U

SAMPLE NUMBER: CFDFA-432A125-UNV-EL4-EB81-U										Accessories (Order Separately)
Product Family	No. of Lamps	Wattage (Length)	Lamp Type	Voltage	Options	Ballast <sup>2</sup>	Options	Packaging		
<b>CFD</b>										
<b>Series CFD=</b> Fluorescent Grid			<b>A125=</b> #12 Pattern Acrylic (0.125" Nominal thickness)		<b>GL=</b> Internal Single Element Fusing <b>EL4=</b> Emergency Battery Pack, 1T8 lamp <b>EL5HO=</b> Emergency Battery Pack, 1T5 or T5HO lamp <b>GM=</b> Internal Double Element Fusing		<b>RIF1=</b> Radio Interference Suppressor <b>PSI=</b> 200 PSI Hose Down Rating <b>15T=</b> Compatible with 1 1/2" T-Grid Ceilings <b>G3=</b> Gasket applied to housing lip to seal against grid	<b>U=</b> Unit Pack <b>PALC=</b> Palletized in Carton		
<b>Door Frame FA=</b> Flat White Extruded Aluminum Door			<b>A19/156=</b> #19 Pattern Acrylic (0.156" Nominal thickness) <b>KSH25 =</b> BatWing Distribution <sup>1</sup> <b>POLY12/125=</b> #12 Pattern Polycarbonate (0.125" Nominal thickness)		<b>EB81=</b> (1) Ballast for use with T8 Lamp <b>EB82=</b> (2) Ballasts for use with T8 Lamp <b>EB51=</b> (1) Ballast for use with T5 Lamp <b>EB52=</b> (2) Ballasts for use with T5 Lamp			<b>EQ-Clip-U=</b> Safety Earthquake Clips		
<b>2, 3, or 4 Lamps</b>  (Not included)										
<b>32=</b> 32WT8 <b>28T5=</b> 28WT5 <b>54T5=</b> 54WT5HO			<b>120=</b> 120V <b>277=</b> 277V <b>347=</b> 347V <b>UNV=</b> 120V-277V							

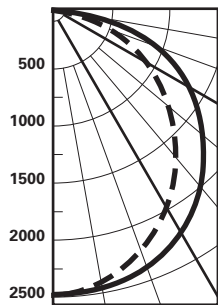
## Notes:

Electronic ballast may cause interference with other electronic devices. If interference occurs, move the device away from the product or plug/connect into a different circuit/outlet.

<sup>1</sup> The KSH25 provides improved visual performance and wide angle distribution. This lens has an integral prism pattern designed so that prisms face the lamp cavity and still supply superior photometrics. Highly recommended for all high tech manufacturing environments<sup>2</sup> For Specific Electronic Ballast Specify Brand and Catalog Number.

## PHOTOMETRICS

## Candlepower Distribution



Test No. 180P104  
**CFDSF-332A**  
 Lamp=(3) 32WT8  
 Lumens=2800  
 Spacing Criteria  
 $\perp=1.2$   $\parallel=1.1$   
 Efficiency=80.2%

## Average Luminance

Deg.	$\perp$	$\parallel$
45	4010	3423
55	3943	3222
65	3778	2967
75	3388	2516
85	2629	1680

## Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	1871	22.3	27.8
0-40	3026	36.0	44.9
0-60	5304	63.1	78.7
0-90	6736	80.2	100.0
90-180	0	0.0	0.0
0-180	6736	80.2	100.0

## Coefficient of Utilization

rc rw RCR	80%				70%			50%		30%		10%		0%
	70	50	30	10	50	30	10	50	10	50	10	50	10	0
0	95	95	95	95	93	93	93	89	89	85	85	82	82	80
1	88	84	81	78	82	79	77	79	74	76	72	73	70	68
2	80	74	69	65	73	68	64	70	62	60	52	58	51	50
3	74	66	59	54	64	59	54	62	53	53	45	52	44	43
4	68	58	52	46	57	51	46	55	45	53	45	52	44	43
5	62	52	44	39	51	44	39	49	39	47	38	46	38	36
6	57	46	39	34	45	39	34	44	34	43	33	41	33	31
7	52	42	35	30	41	34	29	40	34	29	38	29	37	29
8	48	37	30	26	37	30	26	36	25	35	25	34	25	24
9	44	33	27	22	33	27	22	32	22	31	22	30	22	20
10	41	30	24	20	30	24	20	29	19	28	19	28	19	18

rc=Ceiling reflectance, rw=W all reflectance, RCR=Room cavity ratio

CU Data Based on 20% Effective Floor Cavity Reflectance.