



FEATURES

- Meets Federal Standard No. 209B for Class 1,000 cleanrooms and ISO 14644-1 Class 6 cleanrooms
- Completely sealed housing eliminates passage of contaminants through the fixture even during relamping
- Unique optical system allows wide fixture spacing for uniform light distribution
- Designed for installation in standard 1" or 1½" wide face T-bar ceilings used in clean room
- Aesthetically pleasing recessed fixture provides maximum light output
- "T" hinges allow sturdy opening and hinging of door from either side without the use of tools
- Spring loaded latches allow secure door retention
- Flush aluminum door provides maximum rigidity

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Heavy duty channel is constructed of die-formed code gauge steel. All holes in housing are completely closed with silicone sealant. Both housing and door frame are sealed with gasketing. Full length steel ballast cover and socket plates completely enclose all wiring. Fixture is designed for installation into a 1½" wide face T-bar used in clean rooms.

FINISH

All painted parts are processed with a multi-stage phosphate bonding treatment and finished with a high temperature baked white enamel after fabrication. Internal reflecting parts will have a reflectance of 90%.

SHIELDING

Standard lens is a pattern 12 100% virgin acrylic clear prismatic. For other available options see ordering guide. Flush door frame is available in extruded aluminum only.

BALLASTS

Energy efficient, thermally protected, automatic resetting, Class P, high power factor, sound rated A, unless otherwise specified. CEE NEMA Premium compliant.

ELECTRICAL

Standard class "P", thermally protected, auto-resetting HPF ballast, sound rated A. CEE NEMA Premium compliant. All ballast leads extend a minimum of 6" through access location. NEC/CEC-compliant ballast disconnect is standard.

CERTIFICATION

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Emergency-equipped fixtures labeled UL 924. Wet location label available as option. UL Sanitation Approved.

ORDERING INFORMATION

EXAMPLE CRC24-432G-FAA12-4EU

CRC		-		-		FA		-		-	
MODEL		NO. OF LAMPS		CEILING TYPE		DOOR		VOLTAGE		OPTIONS	
CRC Cleanroom Recessed Sealed Troffer		2 Two 3 Three 4 Four (N/A in 1' x 4')		G Lay-in Inverted 1" or 1½" Grid ¹ F Flange (Yoke)		FA Flush Aluminum		U 120V-277V 347 347V		F830 30K 78+ CRI T8 Lamps Installed F835 35K 78+ CRI T8 Lamps Installed F841 41K 78+ CRI T8 Lamps Installed GLR Fast Blow Fuse EL Emergency Battery Pack C388 ¾" Flex w/3 No. 18 Wires C384 ¾" Flex w/3 No. 14 Wires C488 ¾" Flex w/4 No. 18 Wires C424 ½" Flex w/4 No. 14 Wires 2T Modified Housing for 1-1/2" and 2" T-bar WL Wet Location (N/A with Emergency Battery Pack)	
SIZE		LAMP TYPE		SHIELDING		BALLAST					
14 1' x 4'		14 2', T5: 14 Watt		A12 Pattern 12 Acrylic		E Electronic T8, Instant Start					
22 2' x 2'		17 2', T8: 17 Watt		A12.125 Pattern 12 Acrylic, .125" Nominal		3E 3-Lamp Electronic T8, Instant Start					
24 2' x 4'		24 2', T5HO: 24 Watt		A12.125M Pattern 12 Acrylic, .125" Minimum		4E 4-Lamp Electronic T8, Instant Start					
		32 4', T8: 32, 30, 28 or 25 Watt		A19 Pattern 19, .156"		EP Electronic T5 or T8, Programmed Start					
		54 4', T5HO: 54 or 51 Watt				3EP 3-Lamp Electronic T5HO or T8, Programmed Start					
		31U1 U-Bent, T8, 31 watt, 1½" leg spacing (2 lamps)				4EP 4-Lamp Electronic T5HO (N/A 347V) or T8, Programmed Start					
		32U6 U-Bent, T8, 32 Watt, 6" Leg spacing (2 lamps)				ETT Electronic Twin Tube, Instant Start (Specify Voltage)					
		40TT 2', Twin Tube Compact, 2G11 Base: 40 Watt (2 lamps)									

¹ 1-1/2" and 2" grids require 2T option.

Test 9403 Test Date 1/8/03

PHOTOMETRIC DATA

LUMINAIRE DATA

Luminaire	CRC24-440G-FAA12-LE 2' x 4' 4-Lamp Clean Room Fixture with A12 Lens
Ballast	446-L-SLH
Ballast Factor	1.00
Lamp	F40WW
Lumens per Lamp	3200
Watts	168
Shielding Angle	N/A
Spacing Criterion	0° = 1.23 90° = 1.31
Luminous Opening in Feet	Length: 3.77 Width: 1.78 Height: 0.00

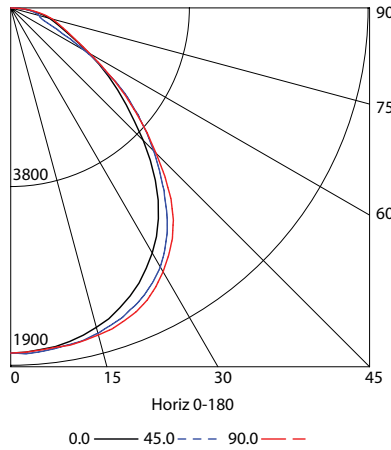
ZONAL LUMEN SUMMARY

Zone	Lumens	Lamp	Fixt.
0-30	2897	22.6	33.2
0-40	4692	36.7	53.8
0-60	7520	58.8	86.2
0-90	8722	68.1	100.0
0-180	8722	68.1	100.0

ENERGY DATA

Total Luminaire Efficiency	68.1%
Luminaire Efficacy Rating (LER)	N/A
IESNA RP-1-1993 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$N/A based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



AVG. LUMINANCE (Candela/Sq. M.)

Average Luminance Angle	0.0	22.5	45.0	67.5	90.0
0	5885	5885	5885	5885	5885
30	5573	5690	5888	5982	5999
40	5009	5128	5310	5467	5553
45	4521	4671	4866	4991	4959
50	4000	4185	4419	4419	4359
55	3554	3658	3786	3792	3747
60	3077	3041	2916	3048	3115
65	2676	2410	2084	2429	2752
70	2542	2129	1674	2246	2669
75	2634	2213	1927	2281	2838
80	2651	2466	2319	2550	2937
85	2724	2798	2742	3037	3037

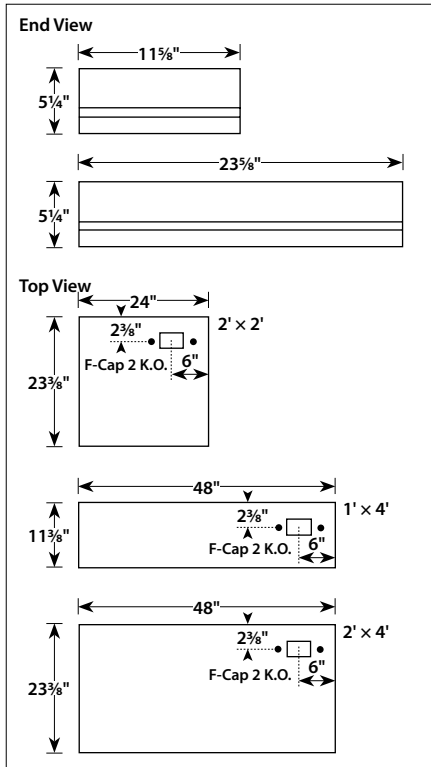
COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80				70				50				0
		RW	70	50	30	10	70	50	30	10	50	30	10	0
1	75	72	69	67	73	70	68	66	67	65	64	59		
2	69	64	59	56	67	62	58	55	60	57	54	50		
3	63	57	52	47	62	56	51	47	54	50	46	43		
4	58	51	45	41	57	50	45	41	48	44	40	38		
5	54	46	40	36	53	45	40	36	44	39	35	33		
6	50	41	36	32	49	41	35	31	40	35	31	29		
7	47	38	32	28	45	37	32	28	36	31	28	26		
8	43	35	29	25	42	34	29	25	33	29	25	24		
9	41	32	27	23	40	31	26	23	31	26	23	21		
10	38	29	24	21	37	29	24	21	28	24	21	19		

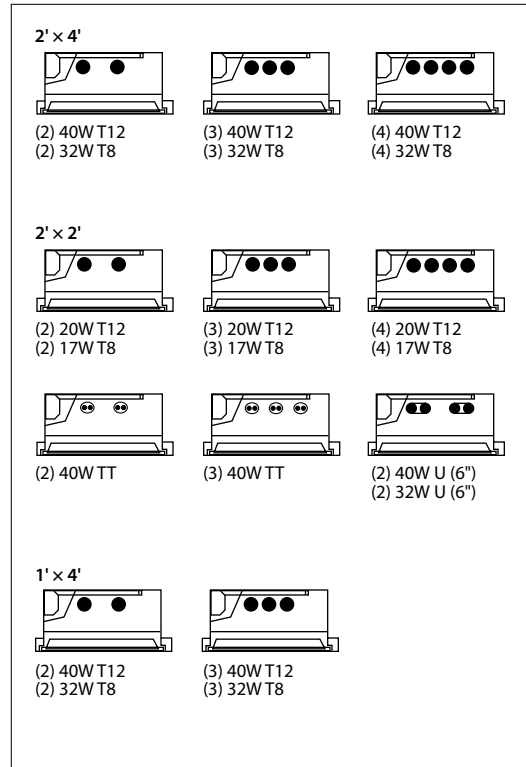
RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

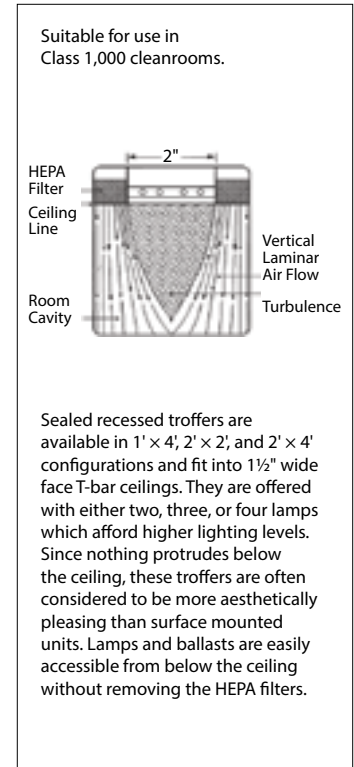
DIMENSIONAL DATA



LAMP SELECTION



AIR FLOW PATTERN



NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.