

FEATURES

- Class 1 Cleanroom certified for any application
- 1½" T-Bar standard, 1" or 2" optional
- Anodized extruded aluminum door frame
- One-piece, 18 gauge stainless or carbon steel doors available
- Meets Federal Standard No. 209E for Class 1 cleanrooms and ISO 14644-1 Class 6 cleanrooms

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 either 1½" wide face T-Bar used in clean rooms as standard with 1" or 2" T-Bar as option.

FINISH

Painted parts are treated with a five stage phosphate bonding process and finished with a high reflectance baked white enamel.

SHIELDING

Lens is constructed of acrylic material with many pattern and thicknesses available. The door frame is of anodized extruded aluminum material. Also, a one piece 18 gauge stainless steel or carbon steel door is available.

BALLASTS

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

CERTIFICATION

Meets Federal Standard No. 209E for Class 1 cleanrooms and ISO 14644-1 Class 6 cleanrooms. All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard and Wet Location labeling is an option. Emergency-equipped fixtures labeled UL 924.

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.

ORDERING INFORMATION

EXAMPLE CRS24-332G-FCSA12125-3EU

CRS									
MODEL	NO. OF LAMPS IN CROSS SECTION	CEILING TYPE	DOORS	VOLTAGE	OPTIONS	SIZE	LAMP TYPE	LENS	BALLAST ²
CRS Cleanroom, Class 1	2 Two 3 Three 4 Four (2 x 4 only) 6 Six (2 x 4 only)	G Lay-in Inverted 1½" Grid F Flange with Wing Hangers S Surface Mount	FA Flush Aluminum FCS Flush One-Piece Carbon Steel Door ¹ FSS Flush One-Piece Stainless Steel Door ¹	U 120V-277V 347 347V	1T 1" T-Bar 2T 2" T-Bar GLR Fast Blow Fuse RIF Radio Interference Filter ³ EL Emergency Battery Pack WL Wet Location ⁵ NYC NYC Compliant NYCU NYC Compliant, Union Label	14 1' x 4' 24 2' x 4'	28 4', T5: 28 Watt 32 4', T8: 32, 30, 28 or 25 Watt 54 4', T5HO; 54 or 51 Watt (not available in 1' x 4' 3-Lamp)	A12 Pattern 12 Acrylic Lens A12125 Pattern 12 Acrylic Lens, 0.125" Nominal A12125M Pattern 12 Acrylic Lens, 0.125" Minimum A19 Pattern 19 Acrylic Lens, 0.156" Nominal RF12125 Pattern 12 Acrylic Lens, Radio Frequency Suppressed, 0.125" Nominal ³ SASRF Surgical Symmetric/Asymmetric Configuration with RFI Grounding Overlay ³	E Electronic T8, Instant Start 3E 3-Lamp Electronic T8, Instant Start 4E 4-Lamp Electronic T8, Instant Start EP Electronic T5 or T8, Programmed Start 3EP 3-Lamp Electronic T5HO or T8, Programmed Start 4EP 4-Lamp, Electronic T5 (N/A 347V) or T8, Programmed Start

¹ Not available for 1½" or 2" grid, RF12125 or SASRF lens.

² Ballasts may not be available in all combinations of lamp/voltage/starting temp/THD shown above. Contact your local Columbia Representative for more details.

³ When using electronic ballasts, Radio Frequency Interference (RFI) cannot be blocked by an RFI filtering lens to the levels specified by MIL std 461. RFI reflected back onto the primary line by the ballast can be blocked by this RFI filter.

⁴ One per ballast.

⁵ Not available with emergency battery pack.



PHOTOMETRIC DATA

Test Lpi62521 Test Date 1/26/05

LUMINAIRE DATA

Luminaire	CRS24-432F-FAA12.125-EB8 CRS Cleanroom 2 x 4 4-Lamp with 0.125" A-12 Pattern Acrylic Prisms Lens
Ballast	B4321120RH
Ballast Factor	0.88
Lamp	F32T8
Lumens per Lamp	2850
Watts	111
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 0.96 90° = 0.93
Luminous Opening in Feet	Length: 3.79 Width: 1.80 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt.
0-30	2117	18.6	27.1
0-40	3384	29.7	43.4
0-60	6006	52.7	77.0
0-90	7799	68.4	100.0
0-180	7799	68.4	100.0

ENERGY DATA

Total Luminaire Efficiency	68.4%
Luminaire Efficacy Rating (LER)	62
IESNA RP-1-1993 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$3.87 based on 3000 hrs. and \$0.08 per KWH

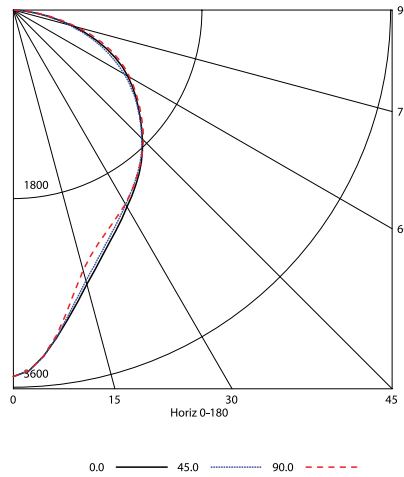
COEFFICIENTS OF UTILIZATION (%)

RCR	RW	80				70				50				0
		70	50	30	10	70	50	30	10	50	30	10	0	
1	74	71	68	65	72	69	67	64	66	64	62	57		
2	67	62	57	53	65	60	56	52	58	54	51	47		
3	61	54	48	44	60	53	48	43	51	46	42	39		
4	56	48	42	37	54	47	41	37	45	40	36	34		
5	52	43	36	32	50	42	36	32	40	35	31	29		
6	48	38	32	28	46	38	32	28	36	31	27	25		
7	44	35	29	24	43	34	28	24	33	28	24	22		
8	41	32	26	22	40	31	26	22	30	25	22	20		
9	38	29	24	20	37	29	23	20	28	23	20	18		
10	36	27	22	18	35	27	21	18	26	21	18	16		

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

INDOOR CANDELA PLOT



AVG. LUMINANCE (Candela/Sq. M.)

Average Luminance Angle	0.0	22.5	45.0	67.5	90.0
0	5518	5518	5518	5518	5518
30	3950	3955	3903	3875	3893
40	3911	3911	3878	3889	3895
45	3885	3892	3867	3916	3912
50	3871	3896	3856	3947	3920
55	3909	3912	3859	3989	3961
60	3976	3919	3850	4008	4049
65	3999	3872	3808	3984	4137
70	3889	3718	3672	3847	4129
75	3572	3390	3359	3554	3908
80	2989	2835	2808	3035	3326
85	2046	1991	1991	2245	2426

DIMENSIONAL DATA

