

DESCRIPTION

The GR5 is a T5-dedicated lensed troffer designed to offer premium performance in a low profile housing. The GR5's shallow, low profile housing is compatible with even highly restrictive plenums. Luminaires are compatible with today's popular ceiling systems.

The GR5 offers great performance and great quality. The series is an excellent choice for commercial offices, schools, hospitals, retail merchandising and many other applications.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Construction

Unitized low profile recessed housing is die formed of code gauge prime cold rolled steel with full length stiffeners and mechanical endplate attachment for added strength. Off center, ballast cover is easily removed without tools. Die formed captive lampholder bracket fully encloses lampholder wiring for easy lampholder replacement. Ample KO's are provided for continuous row wiring. Built-in grid-lock feature for safety and convenience.

Electrical**

Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Rotor-lock T5 lampholders. UL/CUL listed. Suitable for damp locations.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Lighting grade baked white enamel finish with premium reflectance for high efficiency.

Hinging/Latching

Positive spring loaded steel latches and safety lock T-hinges provide secure, high quality door fit and allow hinging and latching from either side.

Frame/Shielding

Heavy gauge flat steel door is die formed with reinforced mitered corners. Housing and door frame assemblies incorporate full length and width mechanical light traps. Light stabilized, acrylic prismatic lens.

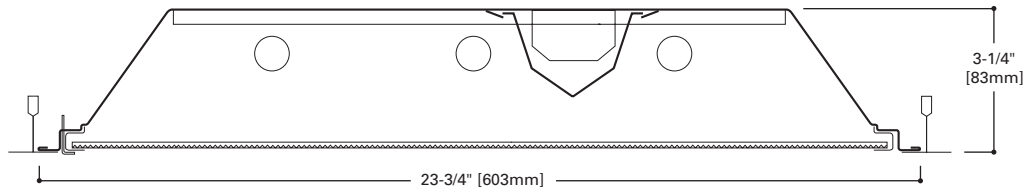
Controls

Fifth Light ballast options are offered for both 0-10V continuous dimming and DALI applications. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Lighting Solutions (www.cooperlighting.com) to maximize energy savings.

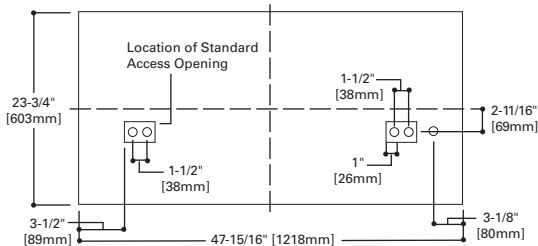


2GR5
328T5
354T5

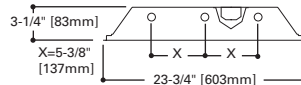
2' X 4' TROFFER
3 Lamp T5
General Purpose
T5 Commercial Troffer



MOUNTING DATA



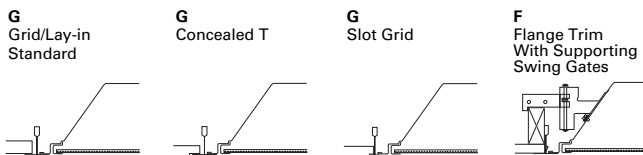
LAMP CONFIGURATIONS



DOOR FRAMES



CEILING COMPATIBILITY



Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G
Flange	G***

ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
328T5 (99)
354T5 (182)

Luminaire Efficacy Rating

LER = FL-73

Catalog Number: 2GR5-328T5A

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.29

*Standard G (Grid) Type Fixtures can be field converted by adding trim kits. See Compatibility Section or Consult Factory.

**Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

***When ordering Flange Kit for installation in drywall ceilings, see options and accessories compatibility section and ordering logic.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

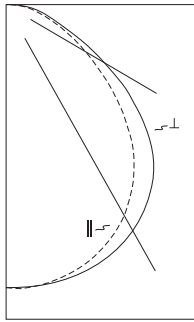
LINEAR DISCONNECT

Safe and convenient means of disconnecting power.



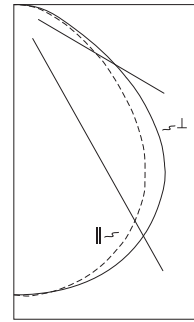
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PHOTOMETRICS



2GR5-328T5A
 Electronic Ballast
 (3) F28W/T5/835
 lamps
 2900 lumens
 Spacing criterion:
 (||) 1.2 x mounting
 height, (⊥) 1.3 x
 mounting height
 Efficiency 78.7%
 Test Report:
 2GR5-328T5A.IES
 LER = FL-73
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.29

Candela			
Angle	Along	45°	Across ⊥
0	2561	2561	2561
5	2566	2552	2561
10	2533	2532	2550
15	2480	2498	2527
20	2402	2440	2486
25	2297	2362	2421
30	2164	2251	2329
35	1996	2111	2211
40	1798	1926	2067
45	1549	1699	1872
50	1289	1446	1606
55	1028	1190	1319
60	807	908	998
65	612	621	731
70	451	400	521
75	322	263	389
80	230	200	285
85	128	126	167
90	0	0	0



2GR5-354T5A
 Electronic Ballast
 (3) F54W/T5/835
 lamps
 4400 lumens
 Spacing criterion:
 (||) 1.3 x mounting
 height, (⊥) 1.3 x
 mounting height
 Efficiency 79.8%
 Test Report:
 2GR5-354T5A.IES
 LER = FL-64
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.75

Candela			
Angle	Along	45°	Across ⊥
0	3940	3940	3940
5	3949	3929	3937
10	3902	3898	3922
15	3820	3839	3888
20	3696	3749	3820
25	3540	3628	3718
30	3331	3459	3576
35	3092	3245	3393
40	2769	2960	3181
45	2399	2616	2873
50	1983	2227	2471
55	1600	1835	2027
60	1240	1413	1544
65	944	961	1117
70	705	624	806
75	503	411	599
80	360	309	443
85	202	194	254
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	0	94	94	94	91	91	91	91	87	87	87	84	84	84	80	80	80	79	79	79	77	77	77	
1	86	82	79	76	84	81	78	75	77	75	73	74	72	70	71	70	68	67	67	67	67	67	67	
2	79	72	67	63	77	71	66	62	68	64	61	66	62	59	63	61	58	56	56	56	56	56	56	
3	72	64	58	53	70	63	57	52	60	56	52	58	54	51	56	53	50	48	48	48	48	48	48	
4	66	57	50	45	64	56	50	45	54	49	44	52	48	44	51	46	43	41	41	41	41	41	41	
5	61	51	44	39	59	50	44	39	49	43	39	47	42	38	46	41	38	36	36	36	36	36	36	
6	56	46	39	34	55	45	39	34	44	38	34	43	38	34	41	37	33	32	32	32	32	32	32	
7	52	42	35	30	51	41	35	30	40	34	30	39	34	30	38	33	30	28	28	28	28	28	28	
8	49	38	32	27	47	38	31	27	37	31	27	36	31	27	35	30	27	25	25	25	25	25	25	
9	46	35	29	25	44	35	29	24	34	28	24	33	28	24	32	28	24	23	23	23	23	23	23	
10	43	32	26	22	42	32	26	22	31	26	22	31	26	22	30	25	22	21	21	21	21	21	21	

Coefficients of Utilization

rc	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	0	95	95	95	93	93	93	93	89	89	89	85	85	85	81	81	81	80	80	80	79	79	79	
1	87	84	80	77	85	82	79	76	78	76	74	75	73	71	72	71	69	68	68	68	68	68	68	
2	80	73	68	64	78	72	67	63	69	65	62	67	63	60	64	61	59	57	57	57	57	57	57	
3	73	65	59	54	71	64	58	53	61	56	52	59	55	51	57	54	51	49	49	49	49	49	49	
4	67	58	51	46	65	57	50	46	55	49	45	53	48	44	51	47	44	42	42	42	42	42	42	
5	62	52	45	40	60	51	44	40	49	44	39	48	43	39	46	42	38	37	37	37	37	37	37	
6	57	47	40	35	56	46	39	35	45	39	34	43	38	34	42	37	34	32	32	32	32	32	32	
7	53	43	36	31	52	42	35	31	41	35	31	40	34	30	38	34	30	29	29	29	29	29	29	
8	49	39	32	28	48	38	32	28	37	31	27	36	31	27	35	31	27	26	26	26	26	26	26	
9	46	36	29	25	45	35	29	25	34	29	25	33	28	25	33	28	24	23	23	23	23	23	23	
10	43	33	27	23	42	33	27	23	32	26	22	31	26	22	30	26	22	21	21	21	21	21	21	

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	2036	23.4	29.7
0-40	3351	38.5	49.0
0-60	5708	65.6	83.4
0-90	6843	78.7	100.0
0-180	6843	78.7	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3514	3854	4246
55	2875	3328	3689
65	2323	2357	2774
75	1996	1630	2411
85	2356	2319	3073

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	3130	23.7	29.7
0-40	5152	39.0	48.9
0-60	8785	66.6	83.4
0-90	10540	79.8	100.0
0-180	10540	79.8	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	5442	5934	6517
55	4474	5131	5668
65	3583	3647	4239
75	3117	2547	3712
85	3718	3570	4675

ORDER INFORMATION

SAMPLE NUMBER: 2GR5-328T5A-UNV-EBT1-U

Rating⁽⁴⁾ Blank= Standard ATW-SW4= Chicago Rated	Number of Lamps 3=3 Lamps (Not included)	Voltage⁽²⁾ 347V=347 Volt UNV=Universal Voltage 120-277 ⁽³⁾	Ballast Type EBT__=T5 or T5HO Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Standard Ballast Factor=1.0 Ballast/FactorType EBT_N=T5 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Normal Ballast Factor=.90 ⁽⁶⁾ EBT_H=T5 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. High Ballast Factor=1.15 ⁽⁷⁾ EBT_NDIM=T5 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Step Dimming, Normal Ballast Factor=.95-1.0 ⁽⁶⁾ EBT_HDIM=T5 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Step Dimming, High Ballast Factor=1.15 Fifth Light DALI Ballasts⁽⁸⁾ 5LT5__=T5 DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0 5LT5H__=T5HO DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0	Options FR=Fire Label	Packaging U=Unit Pack
Width 2=2' Width	Wattage 28T5=28W T5 (48") 54T5=54W T5HO (48")	Options GL=Single Element Fuse GM=Double Element Fuse Lamps=Lamps Installed Flex=Flex Installed EL=Emergency Installed ⁽⁹⁾			
Trim Type G=Grid/Lay-in (Standard)	Shielding A=#12 Acrylic Pattern A125=#12 Pattern Acrylic (.125" Thick) A19/156=#19 Pattern Acrylic (.156" Thick)	Series R5=General Purpose T5 Commercial Troffer ⁽¹⁾			

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾For NYC rated product, see separate specification sheets. ⁽⁵⁾90 ballast factor available for 2 or 3 14W T5 or 28W T5 lamps only. ⁽⁶⁾1-Lamp step dimming ballast in a Normal Ballast factor not available. 2-Lamp ballast will not operate 1-Lamp. ⁽⁷⁾1-Lamp ballast in a High Ballast factor not available. ⁽⁸⁾For a complete listing of Fifthlight Technology products and other solutions from Cooper Lighting Solutions, visit www.cooperlighting.com ⁽⁹⁾Please specify required voltage, 120V or 277V.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Solutions Representative for availability and ordering information.

Number of Ballasts
 1=1 Ballast
 2=2 Ballasts
 3=3 Ballasts

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips⁽¹⁾
 FCTKA-24W-U=Field Installed Flange Kit

FCTK | **A** - **24** | **R** | **W** - **U**

Trim Kit Field Convertible	22=2' x 2' 24=2' x 4'	N=Natural W=White
Aluminum	Blank=Single R=In Row E=End Row	U=Unit Pack

SHIPPING DATA

Catalog No.	Wt.
2GR5-328T5A	22 lbs.
2GR5-354T5A	25 lbs.