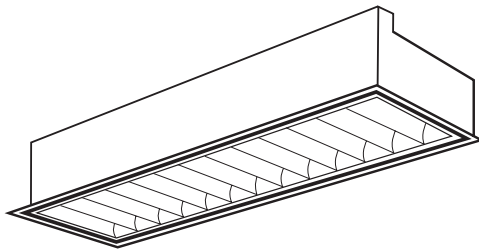


**4" Deep Louver**



**FEATURES**

- Meets IES standard RP-1 glare control recommendations on most models
- Ideal for today's computer intensive electronic offices
- Wide light distribution provides uniform illumination
- 4" deep low iridescent anodized aluminum louver
- UL listed 1598
- Surface mount available
- Mechanical light trap prevents light leaks
- Black reveal with full air handling capabilities
- Damp label standard
- NEC/CEC-compliant ballast disconnect standard

**PROJECT INFORMATION**

Project Name \_\_\_\_\_

Type \_\_\_\_\_

Catalog No. \_\_\_\_\_

Date \_\_\_\_\_

**CONSTRUCTION**

Luminaire housing and end caps are die formed code gauge cold rolled steel. Anodized aluminum louver is secured in open or closed position by die formed steel hinges. Louver hinges from either side. A mechanical light trap prevents light leaks. Latches are finger-tip actuated, positive feed type, fabricated of spring steel, and completely concealed in the black reveal.

magnetic or electronic ballasts. CEE NEMA Premium compliant.

**ELECTRICAL**

Standard class "P", thermally protected, autoresetting 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.

**INSTALLATION**

For fast wiring connections without the necessity of opening fixture or wireway, a flex connector adapter plate is furnished with each luminaire. A plastic dust cover which eliminates construction dust and protects the lamps is provided as standard.

**CEILING COMPATIBILITY**

Luminaire is available to fit most standard ceiling types as shown in specification sheet. For information on compatibility with specific ceilings, contact your Columbia representative. luminaires for concealed suspension ceilings are furnished with necessary T-bar clips and/or wing hangers.

**FINISH**

Painted parts are treated with a five stage phosphate bonding process and finished with a high temperature baked white enamel. For post painted housing, suffix catalog number with PAF. Regressed slots are flat black. Choice of low iridescent silver louver finishes.

**AIR HANDLING**

All supply/return and air extract functions are shown on the specification sheet and are available as a specified option. Specify air handling requirement by including function number as part of complete catalog number. Directional control vanes and/or extract dampers must be specified. Air extract slots are located out of sight in end caps. See air removal data on specification sheet.

**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.

**BALLASTS**

Energy efficient, thermally protected, automatic resetting, Class P, high power factor, sound rated A,

**ORDERING INFORMATION**

**EXAMPLE 4514-132G-LD19-S-EU**

<b>45</b>	<b>14</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>E</b>	<b>-</b>
<b>MODEL</b>	<b>NO. OF LAMPS</b>	<b>CEILING TYPE</b>	<b>NO. CELLS CROSSWISE</b>	<b>NO. CELLS LENGTHWISE</b>	<b>BALLAST</b>	<b>OPTIONS</b>		
45 Recessed 4" Deep Cell Parabolic	1 One 2 Two	G Grid F Overlap Flange M Modular Fit-in Trim SG Slot Grid SM Surface Mount (Static only)	1 One	6 Six 9 Nine	E Electronic T8, Instant Start  For a specific ballast vendor show as option.	<b>GLR</b> Fast Blow Fuse <b>GMF</b> Slow Blow Fuse <b>EL</b> Emergency Battery Pack <b>F0735</b> 35K 75 CRI T8 Lamps Installed <b>F0835</b> 35K 80 CRI T8 Lamps Installed <b>F5835</b> 35K 80 CRI T5 Lamps Installed	<b>C388</b> 3-Wire Flex <b>C488</b> 4-Wire Flex <b>MS9</b> Master/Satellite w/9' Harness <b>PAF</b> Paint After Fabrication <b>NYC</b> NYC Compliant <b>NYCU</b> NYC Compliant, Union Label	
<b>SIZE</b>	<b>LAMP TYPE</b>	<b>LOUVER FINISH</b>	<b>AIR FUNCTIONS</b>		<b>VOLTAGE</b>			
14 1' x 4'	28 4', T5: 28 Watt 32 4', T8: 32, 30, 28 or 25 Watt 54 4', T5HO: 54 or 51 Watt	LD Low Iridescent Semi-Specular (Std.) MA Matte Anodized Low Iridescent Semi-Specular Aluminum LS Low Iridescent Specular	<b>S</b> Static <b>A</b> Air Handling <b>AV</b> Air Handling w/Supply Vanes <b>C</b> Combination Supply/Extract <b>CV</b> Combination Supply Vanes/Extract <b>CD</b> Combination Supply Extract Dampers <b>CVD</b> Combination Supply Vanes Extract Dampers <b>H</b> Heat Extract <b>HD</b> Heat Extract w/Dampers	<b>U</b> 120V-277V <b>347</b> 347V				

### PHOTOMETRIC DATA

#### LUMINAIRE DATA

Luminaire	4514-132G-LD19-E-PAF 45 Parabolic 1' x 4' 1-Lamp with 1 x 9 Cell Semi- Specular Louver
Ballast	B2321120
Ballast Factor	1.10
Lamp	FO32
Lumens per Lamp	2900
Total Input Watts	35
Shielding Angle	N/A
Spacing Criterion	Along = 1.22 Across = 1.87

#### AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	3356	3356	3356	3356	3356
30	3149	3297	3462	3575	3597
40	2955	3260	3860	5458	6009
45	2781	3271	4326	5252	5082
50	2367	3012	4026	3106	2766
55	919	1826	2331	1911	1950
60	105	218	957	1243	1349
65	62	89	205	383	357
70	44	55	55	77	55
75	29	44	44	29	29
80	22	22	22	22	22
85	0	0	0	0	0

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	712	24.5	33.8
0-40	1219	42.0	57.9
0-60	2066	71.2	98.2
0-90	2104	72.6	100.0
0-180	2104	72.6	100.0

#### COEFFICIENTS OF UTILIZATION (%)

RC	80				70				50				0				
	RW	70	50	30	10	70	50	30	10	50	30	10	0	50	30	10	0
RCR	1	81	78	76	74	79	77	75	73	74	72	71	65				
	2	75	71	67	64	74	69	66	63	67	64	61	57				
	3	70	64	59	55	68	62	58	54	60	57	54	50				
	4	65	57	52	48	63	56	51	47	55	50	47	44				
	5	60	52	46	42	58	51	46	42	49	45	41	39				
	6	55	47	41	37	54	46	41	37	45	40	37	35				
	7	51	43	37	33	50	42	37	33	41	36	33	31				
	8	48	39	33	29	47	38	33	29	38	33	29	28				
	9	45	36	30	26	44	35	30	26	35	30	26	25				
	10	42	33	28	24	41	33	27	24	32	27	24	22				

RCR = Room Cavity Ratio

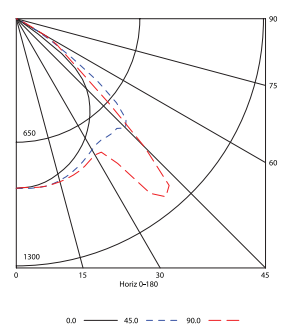
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

#### ENERGY DATA

Total Luminaire Efficiency	72.6%
Luminaire Efficacy Rating (LER)	66
IESNA RP-1-1993 Compliance	Yes-Maximum
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$3.64 based on 3000 hrs. and \$0.08 per KWH

Test 10232 Test Date 6/10/03

#### INDOOR CANDELA PLOT



#### LUMINAIRE DATA

Luminaire	4514-232G-LD19-E-PAF 45 Parabolic 1' x 4' 2-Lamp with 1 x 9 Cell Semi- Specular Louver
Ballast	B2321120RH
Ballast Factor	0.95
Lamp	FO32/741
Lumens per Lamp	2850
Total Input Watts	60
Shielding Angle	N/A
Spacing Criterion	Along = 1.21 Across = 1.57

#### AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	7659	7659	7659	7659	7659
30	7203	7968	9169	10590	10914
40	6845	8031	9546	9434	9788
45	6428	7848	8353	8118	7848
50	5376	6821	6720	5829	5618
55	2417	3546	4352	4317	4641
60	783	1015	2170	2913	3174
65	475	523	701	1224	1141
70	308	338	382	455	455
75	233	233	252	272	291
80	174	202	202	202	202
85	115	115	115	115	115

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1322	23.2	36.6
0-40	2244	39.4	62.2
0-60	3503	61.5	97.2
0-90	3606	63.3	100.0
0-180	3606	63.3	100.0

#### COEFFICIENTS OF UTILIZATION (%)

RC	80				70				50				0				
	RW	70	50	30	10	70	50	30	10	50	30	10	0	50	30	10	0
RCR	1	71	68	66	65	69	67	65	64	64	63	62	57				
	2	66	62	58	56	64	61	58	55	58	56	54	50				
	3	61	56	51	48	60	55	51	48	53	50	47	44				
	4	57	50	46	42	55	49	45	42	48	44	41	39				
	5	52	45	41	37	51	45	40	37	44	40	36	35				
	6	49	41	36	33	48	41	36	33	40	36	32	31				
	7	45	38	33	29	44	37	33	29	36	32	29	28				
	8	42	35	30	26	41	34	30	26	33	29	26	25				
	9	40	32	27	24	39	31	27	24	31	27	24	22				
	10	37	29	25	22	36	29	25	22	28	24	22	20				

RCR = Room Cavity Ratio

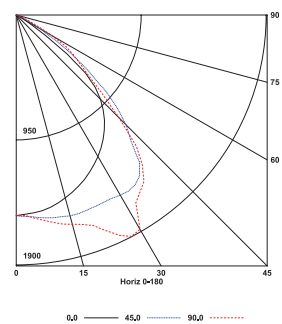
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

#### ENERGY DATA

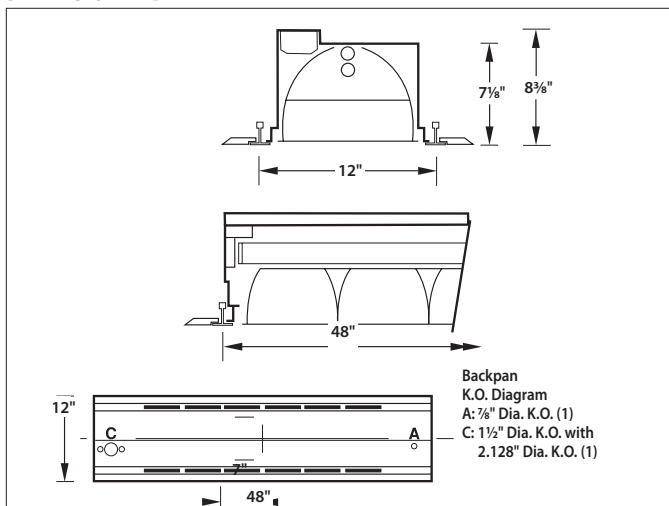
Total Luminaire Efficiency	63.3%
Luminaire Efficacy Rating (LER)	57
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$4.21 based on 3000 hrs. and \$0.08 per KWH

Test A10229 Test Date 1/8/03

#### INDOOR CANDELA PLOT

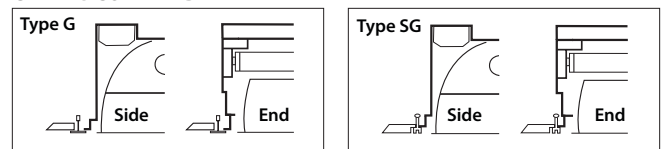


### DIMENSIONAL DATA



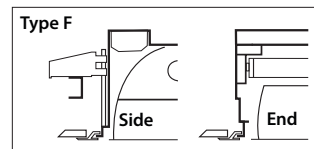
**NOTE:** All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.  
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### CEILING COMPATIBILITY



**Type G**  
For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 1/2" allowed.

**Type SG**  
For 3/8" slot grid type ceilings. Louver will be level with the ceiling plane. Shoulder heights of tee or exact slot grid must be specified.



**Type F**  
For tile, plaster or plasterboard type ceilings. Overlapping extruded aluminum trim conceals edges of ceiling opening. Wing hanger suspension system included. For row mounting, row information is required.

**Type M**  
For metal pan ceilings "Fit-in" style extruded trim aligns with modular tile joints. Fixture is supported from concealed suspension and includes all adjustable wing hangers.

Flange kit rough in dimensions for single unit only: 12 1/8" x 48 1/8" PARABOLICS / 4514