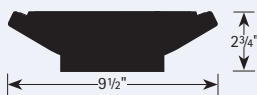


### FEATURES

- A+CLASS™ compatible for GEN/ A/V classroom lighting
- Parabolic louver combines with curved shape for direct/indirect distribution
- Sturdy 20-gauge steel construction for excellent housing rigidity
- High efficiency with wide distribution
- Flat end caps standard (5/16" length)
- Modular mounting points for convenient hanging locations
- Patented die cast aluminum, tongue and groove couplers provide zero tolerance alignment resulting in consistently straight rows (Patent# 6,796,676B2)
- Aircraft cable mounting
- RAL colors available
- A+CLASS™ system includes lighting controls, switches and low voltage wiring
- See APCS controls submittal for additional details

### SHAPE AND DIMENSIONS



### PROJECT INFORMATION

Project Name	Type
Catalog No.	Date

### A+CLASS

A+CLASS™ energy management system compatible. Can be installed as part of A+CLASS™ classroom-in-a-box. A+CLASS™ electronic ballast must be program rapid start (EP). Electronic Dimming (ED) requires 0-10V ballast. 347V not available.

### CONSTRUCTION

- Modular mounting points maintain convenient, predictable locations and fixture lengths.
- Heavy 20-gauge steel housing.
- The housing is designed to wrap around the end plates and secures on top with concealed screws to ensure housing tolerances are consistent.

–3-Lamp CVL APCS is shipped with an A/V Center Lamp Cover for enhanced classroom performance in the audio-visual mode.

### FINISH

Housing and all painted parts are treated with a multi-stage phosphate prior to finish. Parts are then finished with a white powder coat for maximum consistent coverage and longevity. Other colors may be specified; refer to page MTX-1 or contact your local Alera Lighting representative.

### SHIELDING

–Low iridescence semi-specular louver (LD) provides both direct and indirect illumination.

### MOUNTING

To maintain consistent, predictable mounting points, 3-lamp fixtures use a yoke hanger at each hanging location. The end of the cable barrel screws into a standard 1/4-20 bolt brought down from the ceiling. All fixtures are suspended in modular increments and must be supported at each fixture housing end.

### LABELS AND ELECTRICAL

- UL 1598 or CSA
- Prewired w/ T8
- Quick connect plugs standard
- Damp label available on most models

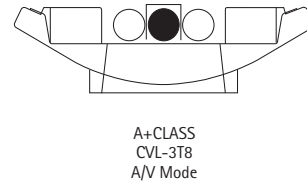
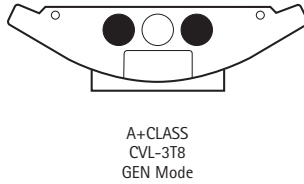
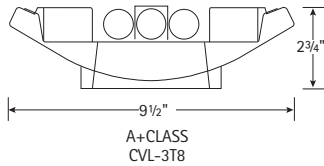
Name:	CVL-3T8-2UD-CLC-LD
Test #:	ITL62670
Efficiency:	79.5%
LER:	71

### ORDERING INFORMATION

### EXAMPLE: CVL-24-3T8-CLC-CM48-LD-EDAGDD277-MW-IBOB

CVL -		- 3T8 -		CLC -		CM		- LD -		-		-	
MODEL	LAMP TYPE AND PROFILE	MOUNTING METHOD	SHIELDING	DIMMING FEATURE	COLOR						OPTIONS		
CVL CÛrv Louvered High Performance Lighting	3T8 Three T8 Lamps	CM Adjustable Aircraft Cable Mount	LD Low Iridescence Semi-Specular Louver (Std.)	Blank None DD Daylight Dimming <sup>3</sup> AVD A/V Teacher Dimming <sup>3</sup> AVDD AVD & Daylight Dimming <sup>3</sup> AGD GEN & A/V Teacher Dimming <sup>3</sup> AGDD AGD & Daylight Dimming <sup>3</sup> GMD General Teacher Dimming <sup>3</sup> GMDD General Teacher and Daylight Dimming <sup>3</sup>	MW Matte White (Std.) ZT ZET Metallic Silver	Additional RAL colors available. Contact factory.						SCE Sculpted End Cap (5 5/16") BN Bull Nose End Cap (5 1/16") IBOB Inboard/Outboard Switching EL One Emergency Battery Pack <sup>2,3</sup> GLR Fast Blow Fuse GMF Slow Blow Fuse TBAR T-Bar Mounting CSA UL listed or CSA certified for Canada	
To order A+CLASS™ controls: see page APCS.													
ROW LENGTH	DISTRIBUTION	ADJUSTABLE CABLE LENGTH	BALLAST	VOLTAGE									
4 4' Single 8 8' Single – Indicate row length over 8' in 4' increments	CLC Center Lamp Cover A/V Mode	48 48" 96 96" Other lengths available on request.	EP Electronic, Programmed Start ED Electronic, 0-10V Dimming	U 120V-277V 120 120V 277 277V									
<p><sup>1</sup> Specify voltage. For additional, specify quantity before nomenclature (Example: 2EL120).</p> <p><sup>2</sup> Not available with all configurations; some limitations apply. Contact factory for details.</p> <p><sup>3</sup> Requires ED ballast.</p>													

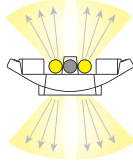
### CROSS SECTION



### PHOTOMETRIC DATA

#### LUMINAIRE DATA Test ITL62670

Luminaire	CVL-3T8-2UD-CLC-LD-EU-MW-4-IBOB
Ballast	Advance ICN-P2P3-N
Ballast Factor	0.88
Lamp	Two 32W T8 FO32/835
Lumens per Lamp	2950
Watts	57.9
Mounting	Suspended
Shielding Angle	0° = 28 90° = 26
Spacing Criterion	0° = 1.15 90° = .94
Luminous Opening in Feet	Length: 3.58 Width: 0.32 Height: 0.00



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

Angle	0.0	45.0	90.0
45	6407	4486	4854
55	4298	3714	4525
65	814	1651	2355
75	323	539	934
85	213	213	427

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	602	10.2	12.8
0-40	922	15.6	19.7
0-60	1438	24.4	30.6
0-90	1540	26.1	32.8
90-120	604	10.2	12.9
90-130	1106	18.7	23.6
90-150	2243	38.0	47.8
90-180	3153	53.4	67.2
0-180	4693	79.5	100.0

#### COEFFICIENTS OF UTILIZATION (%)

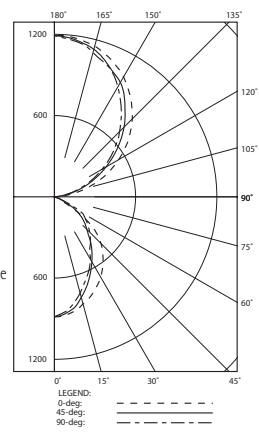
RC	80				70				50				0
	RW	70	50	30	10	70	50	30	10	50	30	10	0
1	75	72	69	67	68	65	63	61	52	51	49	23	
2	69	64	59	56	62	58	54	51	46	44	42	20	
3	63	56	51	47	57	51	47	43	41	38	36	18	
4	58	50	44	40	52	46	41	37	37	34	31	16	
5	53	45	39	34	48	41	36	32	33	30	27	14	
6	49	40	34	30	44	37	32	28	30	26	23	12	
7	46	36	30	26	41	33	28	24	27	24	21	11	
8	42	33	27	23	38	30	25	22	25	21	18	10	
9	39	30	25	21	36	28	23	19	23	19	17	9	
10	37	28	22	19	33	25	21	17	21	17	15	9	

RCR = Room Cavity Ratio  
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

#### ENERGY DATA

Total Luminaire Efficiency	79.5%
Luminaire Efficacy Rating (LER)	71
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Intensive Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$3.38 based on 3000 hrs. and \$0.08 per KWH

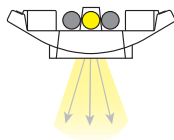
#### INDOOR CANDELA PLOT



### PHOTOMETRIC DATA

#### LUMINAIRE DATA Test ITL62671

Luminaire	CVL-3T8-1D-CLC-LD-EU-MW-4-IBOB
Ballast	Advance ICN-1P32-N
Ballast Factor	0.88
Lamp	One 32W T8 FO32/835
Lumens per Lamp	2950
Watts	31.4
Mounting	Suspended
Shielding Angle	0° = 28 90° = 38
Spacing Criterion	0° = 1.2 90° = 1.5
Luminous Opening in Feet	Length: 3.58 Width: 0.32 Height: 0.00



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

Angle	0.0	45.0	90.0
45	6446	6328	5960
55	4606	4119	3649
65	814	1299	1959
75	323	503	1114
85	0	213	320

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	623	21.1	36.2
0-40	1013	34.4	58.9
0-60	1611	54.6	93.7
0-90	1701	57.7	98.9
90-120	3	0.1	0.2
90-130	6	0.2	0.3
90-150	13	0.4	0.7
90-180	18	0.6	1.1
0-180	1720	58.3	100.0

#### COEFFICIENTS OF UTILIZATION (%)

RC	80				70				50				0
	RW	70	50	30	10	70	50	30	10	50	30	10	0
1	86	82	79	76	78	75	72	70	61	59	58	30	
2	78	72	67	63	71	66	62	58	54	51	49	26	
3	72	64	58	53	65	58	53	49	48	44	41	23	
4	66	57	50	45	60	52	46	42	43	39	35	20	
5	60	51	44	39	55	46	40	36	38	34	31	17	
6	56	45	38	34	50	42	36	31	35	30	27	15	
7	51	41	34	29	47	38	32	27	31	27	23	14	
8	48	37	30	26	43	34	28	24	29	24	21	12	
9	44	34	27	23	40	31	25	21	26	22	19	11	
10	41	31	25	20	38	28	23	19	24	20	17	10	

RCR = Room Cavity Ratio  
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

#### ENERGY DATA

Total Luminaire Efficiency	58.3%
Luminaire Efficacy Rating (LER)	49
ANSI/IESNA RP-1-2004 Compliance	Yes-VDT Normal Use
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$4.90 based on 3000 hrs. and \$0.08 per KWH

#### INDOOR CANDELA PLOT

