

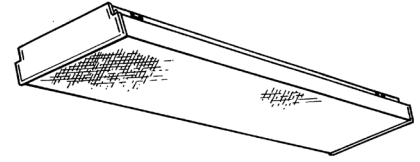
Special Applications

Vandal Resistant Caravel

4' or 8'

2, 3, or 4 Lamp

Narrow or Wide T5, T5HO, or T8



Specifier's Reference

Project
Type
Model No.
Comments

construction/finish

- Prismatic lens is 100% DR (high impact) acrylic with a nominal thickness of .100", withstands 70 ft-lbs impact without breaking.
- Torx T15 pin-in-head tamperproof screws secure lens brackets to housing, preventing unauthorized removal of the lens. **Special screwdriver required, catalog #TPDTH, sold separately.**
- Housing and end plates are phosphate treated for maximum corrosion resistance and painted after fabrication with a high reflectance white polyester powder coat finish for premium reflectivity and protection.
- Heavy duty channel of code gauge die formed steel.
- Full steel end caps are standard.
- 3/16" K.O.s in end plates allow luminaires to be bolted together in continuous row applications, to provide alignment and reduce the number of hangers required when suspended.
- 7/8" K.O. in end plates allows through wiring when row mounting.
- 2 and 4 lamp units are suitable for surface or pendant mounting.
- 3 lamp units are suitable for surface mounting. Field modification required for pendant mounting.

electrical

- cULus listed for direct mounting on low density ceilings and damp locations.
- Self-contained fluorescent emergency power packs can be incorporated, listed for dry locations.
- Lampholders can be individually replaced or rewired.

Green Choice: CAW232-UNV-1/2-EBLHE

Width	Lamp Type/Wattage	Options
<b>N</b> – Narrow	28 – 28WT5 (46")	1/2 – One 2-lamp ballast
<b>W</b> – Wide	32 – 32WT8 (48")	1/3 – One 3-lamp ballast
	54HO – 54WT5HO (46")	1/21 – 2-lamp & 1-lamp ballasts
		1/4 – One 4-lamp ballast
		2/2 – Two 2-lamp ballasts
		1/42 – 4-lamp & 2-lamp ballasts
		2/4 – Two 4-lamp ballasts
		<b>EB</b> – Electronic ballast, <20% THD
		<b>EB10I</b> – T8 electronic ballast, instant start, <10% THD
		<b>EB10R</b> – Electronic ballast, program rapid start, <10% THD
		<b>EBHE</b> – T8 electronic ballast, high efficiency, std. ballast factor
		<b>EBLHE</b> – T8 electronic ballast, high efficiency, low ballast factor
		<b>EBHHE</b> – T8 electronic ballast, high efficiency, high ballast factor
		<b>EBSD</b> – T8 elec. ballast, step dimming, std. (.88) ballast factor
		<b>ESNOLP</b> – Electronic ballast for energy saving (25/28/30W) T8 lamps, use when lamps are not specified w/luminaire
		<b>EBD</b> – Electronic dimming ballast
		<b>E1</b> – DEB-1 emerg. ballast, T8, 350-450 lumens, 120/277V
		<b>E1CAN</b> – DEB-1 emerg. ballast, Canada market, T8, 350-450 lumens, 120/347V
		<b>E7</b> – DEB-7 emerg. ballast, T8, 600-700 lumens
		<b>E5</b> – DEB-5 emerg. ballast, US or Canada market, T8, 1100-1400 lumens, 120/277V
		<b>E5CAN</b> – DEB-5 emerg. ballast, Canada market, T8, 1100-1400 lumens, 120/347V
		<b>E5ST</b> – DEB-5ST emerg. ballast with self test, 1100-1400 lumens
		<b>E7LP</b> – DEB-7LP emerg. ballast, T8/T5/T5HO, 430-700 lumens
		<b>E6LP</b> – DEB-6LP emerg. ballast, US or Canada market, T8/T5/T5HO, 750-1325 lumens, 120/277V
		<b>GLR#</b> – Fusing, fast blow (# = number of ballasts)
Family	No. of Lamps/Cross Section	Voltage
<b>VCA</b> – Vandal Resistant Caravel	(not included)	120
<b>TVCA</b> – Tandem (8") Vandal Resistant	2	277
	3 (wide only)	347
	4 (wide only)	<b>UNV</b> – Universal voltage, 120-277 volt (with electronic ballast option only)

Accessories

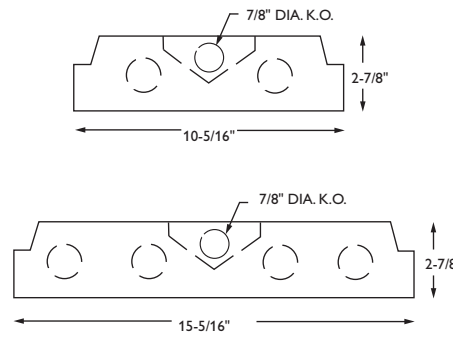
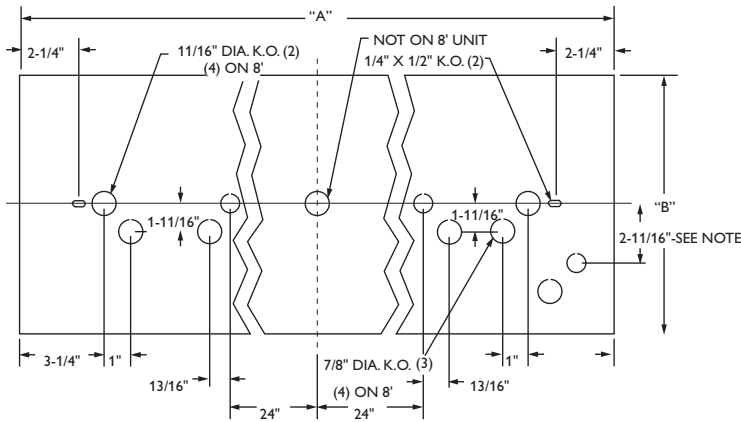
- TPDTH – Tamper proof driver, Torx head pin drive
- CS-400 – Rigid stem canopy
- CS-500 – Swivel stem canopy
- CS Series Stems



# 717-SA dimensions

VCA 4' or 8' 2, 3, or 4 Lamp Narrow or Wide T5 or T8

DIM "A"		
4'	(1219mm)	48"
8'	(2438mm)	96"



## photometry

### VCA 4' 2 Lamp T8

Efficiency – 77.8%

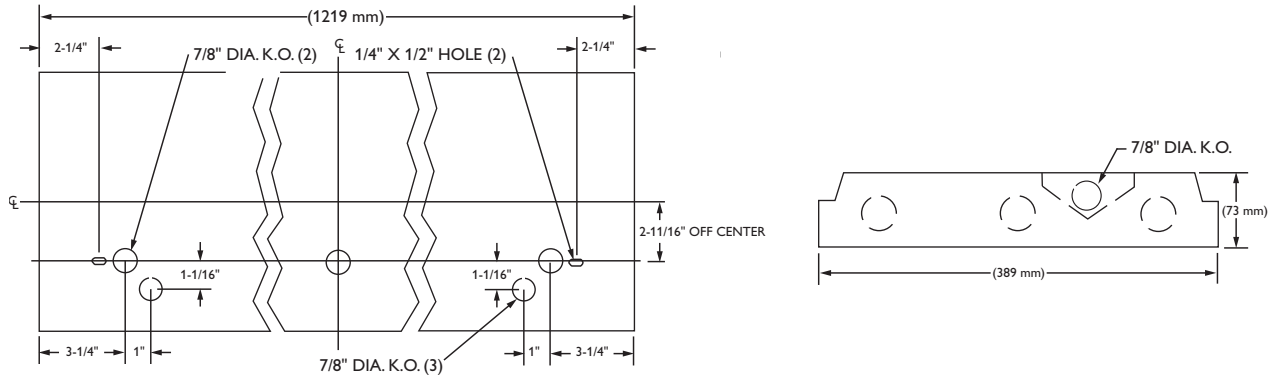
LER – 70

TER – 61

Catalog No.	VCAN232-1/2-EB	Candlepower				Light Distribution				Average Luminance						
		Angle	End	45	Cross	Degrees	Lumens	% Lamp	% Luminaire	Angle	End	45°	Cross			
Test No.	ITL41974D1	0	1482	1482	1482	0-30	1202	20.7	26.6	45	4307	4399	3934			
S/MH	1.4	5	1482	1482	1479	0-40	2014	34.7	44.6	55	2970	2986	2472			
Lamp Type	F32T8	15	1432	1463	1483	0-60	3362	58.0	74.5	65	2273	2049	2076			
Lumens/Lamp	2900	25	1331	1409	1458	0-90	4087	70.5	90.6	75	1971	1887	2111			
Ballast Factor	0.92	35	1186	1313	1375	0-180	4512	77.8	100.0	85	1626	2278	2934			
Input Watts	59	45	967	1078	1045											
		55	541	615	568											
		65	305	329	388											
		75	162	208	292											
		85	45	129	251											
		95	0	111	261											
		105	1	147	199											
		115	3	83	107											
		125	4	48	62											
		135	6	44	57											
		145	7	34	47											
		155	7	21	32											
		165	5	9	15											
		175	5	6	7											
Comparative yearly lighting energy cost per 1000 lumens – \$3.43 based on 3000 hrs. and \$.08 pwr KWH.																
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.																
						Coefficients of Utilization										
						EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)										
						pcc		80			70			50		
						pw		70	50	30	70	50	30	50	30	
						RCR										
						0	91	91	91	88	88	88	81	81		
						1	82	79	76	80	77	73	71	69		
						2	76	69	65	72	68	63	64	59		
						3	68	61	56	67	59	54	56	52		
						4	64	55	47	61	53	46	51	45		
						5	58	48	42	56	47	41	45	40		
						6	54	44	38	52	42	36	40	35		
						7	50	40	34	48	39	33	38	32		
						8	46	36	29	45	35	29	34	28		
						9	44	34	28	41	33	27	32	26		
						10	40	30	25	40	29	25	28	23		

# 717-SA dimensions

VCA 4' or 8' 2, 3, or 4 Lamp Narrow or Wide T5 or T8



## photometry

### VCA 4' 3 Lamp T8

Efficiency – 79.8%

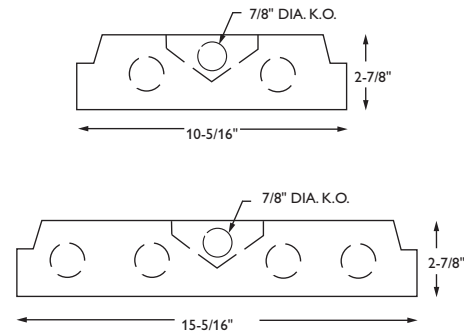
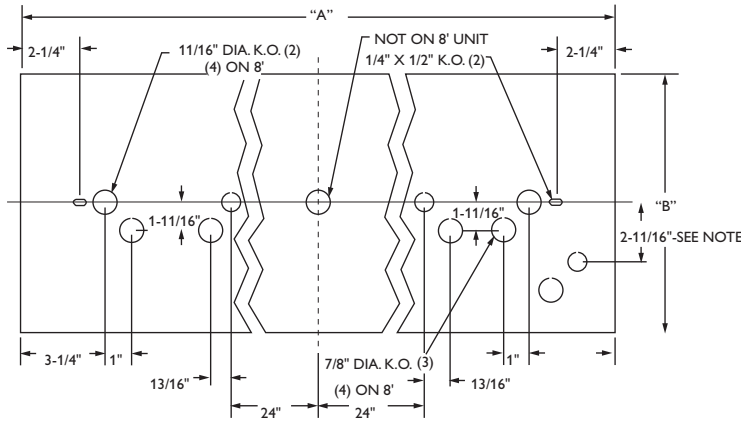
LER – 75

TER – 64

<b>Catalog No.</b> CAW332-1/3-EB <b>Test No.</b> ITL41975D1 <b>S/MH</b> 1.4 <b>Lamp Type</b> F32T8 <b>Lumens/Lamp</b> 2900 <b>Ballast Factor</b> 0.93 <b>Input Watts</b> 86	<b>Candlepower</b>				<b>Light Distribution</b>				<b>Average Luminance</b>				
	<b>Angle</b> 0 5 15 25 35 45 55 65 75 85 95 105 115 125 135 145 155 165 175	<b>End</b> 2339 2340 2267 2110 1876 1534 866 474 260 68 0 1 4 8 10 9 9 8 8	<b>45</b> 2339 2337 2302 2208 2053 1730 1020 540 310 184 134 137 94 60 45 34 22 12 7	<b>Cross</b> 2339 2331 2328 2274 2133 1757 973 679 453 322 266 205 129 78 60 47 33 17 9	<b>Degrees</b> 0-30 0-40 0-60 0-90 0-180	<b>Lumens</b> 1890 3161 5356 6478 6941	<b>% Lamp</b> 21.7 36.3 61.6 74.5 79.8	<b>% Luminaire</b> 27.2 45.5 77.2 93.3 100.0	<b>Angle</b> 45 55 65 75 85	<b>End</b> 4592 3196 2374 2126 1652	<b>45°</b> 4898 3479 2408 2088 2699	<b>Cross</b> 4718 3085 2729 2594 3383	
Comparative yearly lighting energy cost per 1000 lumens – <b>\$3.20</b> based on 3000 hrs. and \$.08 pwr KWH.  The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.				<b>Coefficients of Utilization</b> <b>EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)</b>									
				pcc		80		70		50			
				pw		70	50	30	70	50	30	50	30
				RCR									
				0	93	93	93	91	91	91	85	85	
				1	85	81	79	82	80	77	75	72	
				2	78	71	67	76	69	65	66	61	
				3	71	64	56	68	61	56	58	54	
				4	66	56	50	64	55	48	53	46	
				5	60	51	44	58	50	42	46	41	
				6	56	46	39	54	45	38	42	36	
				7	52	41	34	50	40	34	39	33	
				8	47	38	30	46	36	30	35	29	
				9	45	34	28	44	34	28	33	27	
				10	41	32	26	40	32	26	29	25	

dimensions

DIM "A"		
4'	(1219mm)	48"
8'	(2438mm)	96"



photometry

VCA 4' 4 Lamp T8

Efficiency – 78.2%

LER – 76

TER – 67

<b>Catalog No.</b>	VCAW432-1/4-EB
<b>Test No.</b>	ITL41976D1
<b>S/MH</b>	1.4
<b>Lamp Type</b>	F32T8
<b>Lumens/Lamp</b>	2900
<b>Ballast Factor</b>	.91
<b>Input Watts</b>	108
Comparative yearly lighting energy cost per 1000 lumens – <b>\$3.16</b> based on 3000 hrs. and \$.08 pwr KWH.	
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.	

Candlepower

Angle	End	45	Cross
0	3116	3116	3116
5	3123	3119	3107
15	3020	3063	3099
25	2814	2941	3020
35	2506	2716	2830
45	2040	2285	2285
55	1178	1348	1257
65	632	696	862
75	348	395	553
85	95	229	372
95	0	156	306
105	3	163	237
115	6	119	162
125	10	87	117
135	15	65	91
145	13	48	65
155	13	31	46
165	11	17	25
175	11	11	14

Light Distribution

Degrees	Lumens	% Lamp	% Luminaire
0-30	2512	21.7	27.7
0-40	4197	36.2	46.2
0-60	7077	61.0	78.0
0-90	8492	73.2	93.6
0-180	9076	78.2	100.0

Average Luminance

Angle	End	45°	Cross
45	6107	6469	6136
55	4347	4598	3986
65	3165	3104	3465
75	2846	2661	3167
85	2307	3359	3909

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

pcc	80			70			50		
	70	50	30	70	50	30	50	30	
pw									
RCR									
0	92	92	92	89	89	89	83	83	
1	83	81	77	81	78	75	73	71	
2	77	70	66	75	68	64	65	61	
3	70	63	56	68	60	56	57	53	
4	65	56	48	63	55	47	52	46	
5	59	50	42	57	48	42	46	40	
6	55	45	39	53	44	38	41	36	
7	51	40	34	50	40	34	39	33	
8	47	38	30	46	36	30	34	29	
9	45	34	28	42	34	28	32	27	
10	41	32	26	40	30	25	29	25	



Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled, "Contain Mercury" and/or the symbol "HG". Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at [www.lamprecycle.org](http://www.lamprecycle.org)



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