

JOB NAME _____

TYPE _____



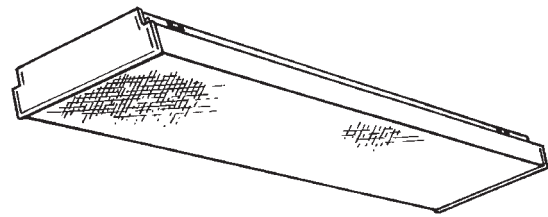
VCA SERIES CARAVEL WRAPAROUND

4' or 8', 2, 3 or 4 Lamp

This heavy duty, vandal resistant luminaire is perfect in corridors, washrooms, exterior walkways and anywhere a damp location rating is desirable.

CONSTRUCTION/FINISH

- Prismatic lens is 100% DR (high impact) acrylic with a nominal thickness of .100", withstands 70 ft-lbs impact without breaking.
- Brackets retained by TORX® T15 pin-in-head tamperproof screws secure lens to housing.
- 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.
- 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 plate 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 only, modification required for pendant mounting. Consult factory for 3 lamp pendant mount applications.



ELECTRICAL

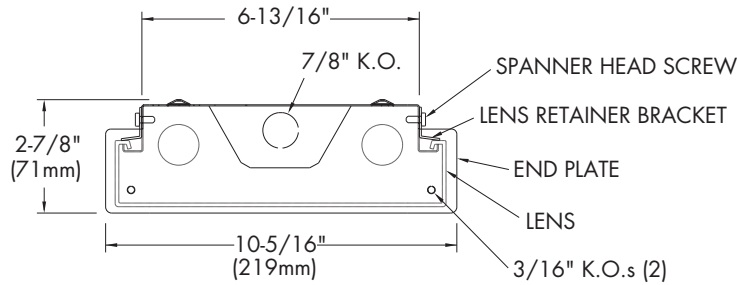
- Class P, HPF ballasts comply with Federal Ballast Law (Public Law 100-357, 1988).
- UL listed for direct mounting on low density ceilings and damp locations.
- Self-contained fluorescent emergency power packs can be incorporated. UL listed for dry location.
- Lampholders can be individually replaced or rewired.

CATALOG NUMBER (example: VCAN232R-1/2-EB)

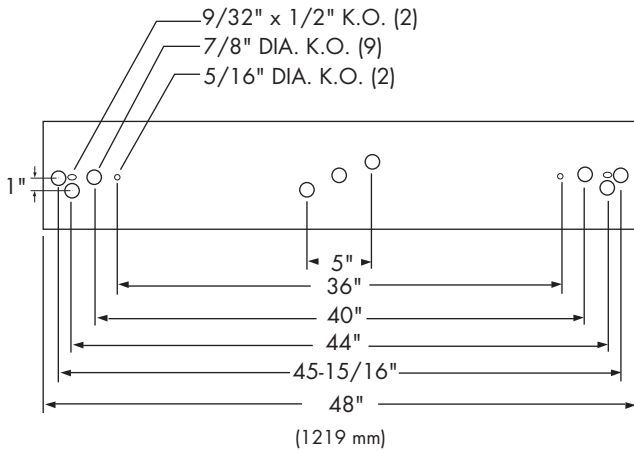
FAMILY	NO. OF LAMPS PER CROSS SECTION (not included)	VOLTAGE	OPTIONS
VCA – Caravel Wraparound	2 – 2 Lamps	120 – 120v	1/2 – One 2-lamp ballast (electronic or non-standard)
TVCA – Tandem (8') Vandal Resistant	3 – 3 Lamps (wide only)	277 – 277v	1/3 – One 3-lamp ballast (electronic or non-standard)
	4 – 4 Lamps (wide only)	347 – 347v	1/21 – 2-lamp & 1-lamp ballasts (electronic or non-standard)
		UNV – Universal voltage, 120-277v (with electronic ballast option only)	1/4 – One 4-lamp ballast (electronic or non-standard)
			2/2 – Two 2-lamp ballasts (electronic or non-standard)
			2/4 – Two 4-lamp ballasts (electronic or non-standard)
			EB – Electronic ballast, <20% THD
			EB10I – Electronic ballast, instant start, <10% THD
			EB10R – Electronic ballast, program rapid start, <10% THD
			E1 – DEB-1 emerg. ballast, T8/T12, 350-450 lumens, UL dry loc.
			E7 – DEB-7 emerg. ballast, T8/T12, 600-700 lumens, UL dry loc.
			E7LP – DEB-7LP emerg. ballast, T5/T5HO, 600-700 lumens, UL dry loc.
			E5 – DEB-5 emerg. ballast, T8/T12, 1100-1400 lumens, UL dry loc.
			E5ST – DEB-5ST emerg. ballast w/self test, T8/T12, 1100-1400 lumens, UL dry loc.
			E6LP – DEB-6LP emerg. ballast, T5/T5HO, 1230 lumens, UL dry loc.
			GLR# – Fusing, fast blow (# = number of ballasts)
WIDTH	LAMP TYPE/WATTAGE		
N – Narrow	28 – 28wT5 (46")		
W – Wide	32 – 32wT8 (48")		
	40 – 40wT12 (48")		
	54HO – 54wT5HO (46")		

VF4005

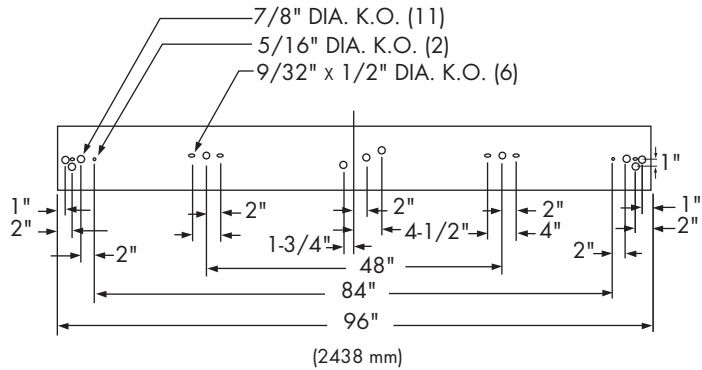
DIMENSIONS



4'



8'



PHOTOMETRIC DATA

CATALOG # VCAN232R-1/2-EB
TEST # 41974 S/MH=1.4

LAMPS = F32T8
BALLAST = ELECTRONIC

INPUT WATTS = 59
BALLAST FACTOR = .92

LER = FW-66

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.64 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 72.8%

CANDLEPOWER			
Angle	End	45	Cross
0	1315	1315	1315
5	1317	1315	1310
15	1275	1291	1302
25	1180	1233	1269
35	1042	1138	1168
45	855	962	999
55	541	617	595
65	252	299	385
75	112	173	278
85	36	118	269
95	0	126	265
105	1	157	244
115	4	123	182
125	7	71	112
135	10	36	53
145	9	31	41
155	8	22	32
165	7	12	20
175	7	7	8

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.76 2900 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture			
		10 ft-c	30 ft-c	50 ft-c	70 ft-c
4' 2-Lamp	5	-	108	65	46
	2	-	75	45	32
	1	-	55	33	-

*Observe Fixture S/MH Requirements for Specific Applications

Average LUMINANCE CD/SQ.M with 2900 Lumen Lamps

ANGLE	END	45°	CROSS
45	4841	4948	4708
55	3776	3765	3225
65	2387	2329	2547
75	1733	1945	2454
85	1654	2519	3741

TYPICAL V.C.P.'s

Room Size	Mounting Height	
	Lengthwise	Crosswise
	8.5	10
30x30	60	63
40x40	57	59
60x30	61	64
60x60	54	56
100x100	52	53

COEFFICIENT OF UTILIZATION

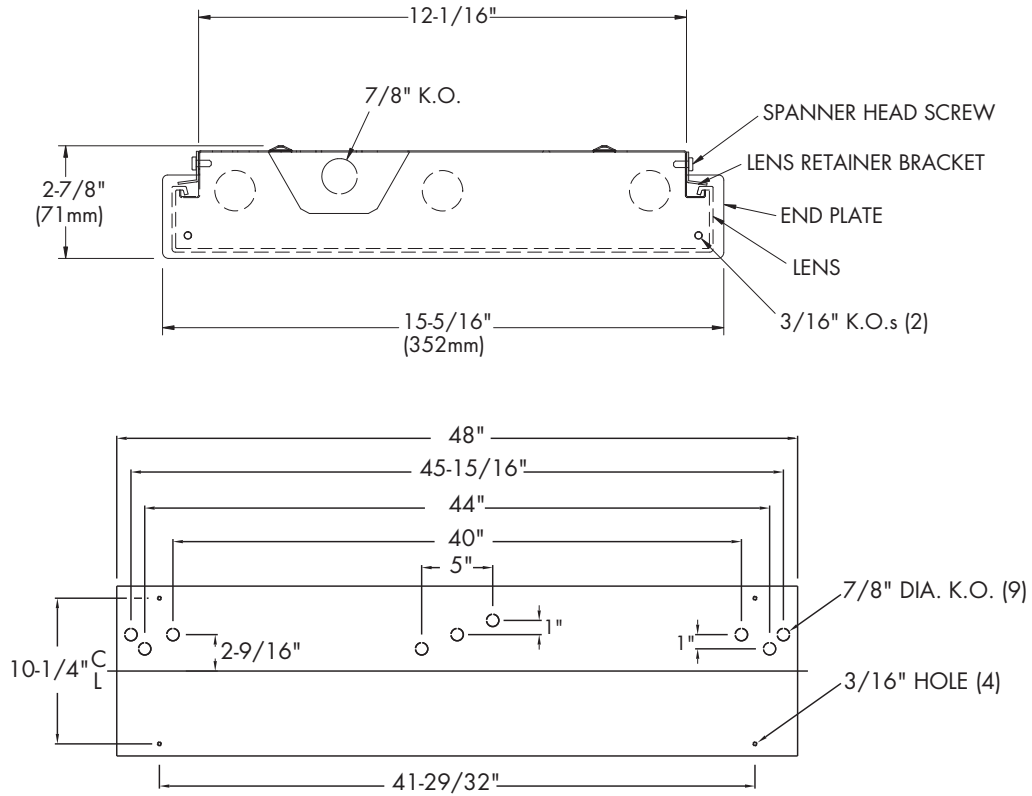
pfc pcc pw RCR	20			70			50		
	80	70	50	30	20	10	30	20	10
0	84	84	84	81	81	81	76	76	76
1	77	73	69	73	70	68	66	64	64
2	69	65	59	68	61	57	57	55	55
3	64	56	51	61	55	50	52	46	46
4	58	51	44	56	48	42	46	40	40
5	54	45	39	52	44	38	41	35	35
6	50	40	34	47	40	34	38	32	32
7	46	36	30	45	35	29	34	28	28
8	42	34	28	41	33	27	30	26	26
9	40	30	25	39	29	25	28	23	23
10	38	28	23	36	28	23	27	22	22

LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1057	18.2	25.0
0-40	1761	30.4	41.7
0-60	3035	52.3	71.9
0-90	3711	64.0	87.9
90-180	511	8.8	12.1
0-180	4222	72.8	100.0

LLF = .76 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
LLD = 0.88 @ 40% RATED LAMP LIFE BF = 0.92 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

DIMENSIONS



PHOTOMETRIC DATA

CATALOG #VCAW332R-1/3-EB LAMPS = F32T8
 TEST #22989 S/MH=1.4 BALLAST = ELECTRONIC

INPUT WATTS = 85
 BALLAST FACTOR = .88

LER = FW-76

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.16 BASED ON 3000 HRS. AND \$.08 PER KWH. FIXTURE EFFICIENCY= 85.7%

CANDLEPOWER				
Angle	End	45	Cross	
0	2372	2372	2372	
5	2374	2374	2364	
15	2304	2345	2369	
25	2153	2259	2295	
35	1928	2069	2114	
45	1603	1785	1833	
55	1019	1230	1189	
65	533	621	714	
75	280	358	494	
85	110	218	320	
95	2	139	234	
105	5	121	160	
115	8	94	130	
125	10	65	92	
135	7	39	57	
145	13	38	48	
155	15	28	37	
165	15	22	24	
175	15	17	19	

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.75 2850 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
4' 3-lamp	5	-	-	113	81	57
	2	-	129	78	55	39
	1	-	94	57	40	-

*Observe Fixture S/MH Requirements for Specific Applications

Average LUMINANCE CD/SQ.M with 2850 Lumen Lamps			
ANGLE	END	45°	CROSS
45	5525	6152	6318
55	4330	5226	5052
65	3074	3581	4117
75	2637	3371	4652
85	3076	6096	8948

Room Size	TYPICAL V.C.P.'s Mounting Height			
	Lengthwise	Crosswise	8.5	10
30x30	43	48	35	42
40x40	38	43	30	35
60x30	43	48	39	45
60x60	33	37	24	28
100x100	28	32	18	21

COEFFICIENT OF UTILIZATION

pfc pcc pw RCR	20				70				50			
	70	50	30	30	70	50	30	30	50	30	30	
0	101	101	101	97	97	97	92	92	92	92	92	
1	92	88	83	89	84	81	81	81	81	78	78	
2	83	77	70	81	75	69	70	67	70	67	67	
3	77	68	60	73	66	59	63	56	63	56	56	
4	69	59	53	68	58	52	56	50	56	50	50	
5	65	54	46	63	53	46	50	44	50	44	44	
6	59	48	40	57	46	40	45	39	45	39	39	
7	55	44	36	54	42	35	40	34	40	34	34	
8	52	40	33	50	39	33	38	32	38	32	32	
9	47	36	29	46	35	28	34	28	34	28	28	
10	45	34	27	44	33	27	32	26	32	26	26	

LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1921	22.5	26.2
0-40	3202	37.5	43.7
0-60	5611	65.6	76.6
0-90	6867	80.3	93.7
90-180	459	5.4	6.3
0-180	7326	85.7	100.0

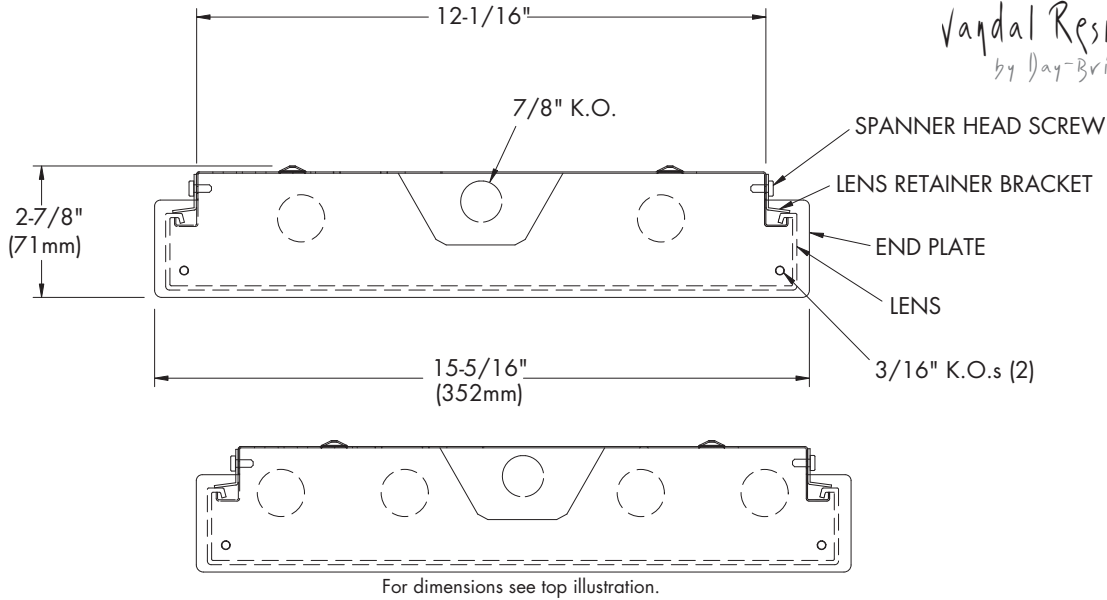
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 LLD = 0.91 @ 40% RATED LAMP LIFE BF = 0.88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

VCA SERIES CARAVEL WRAPAROUND-2 & 4 LAMP WIDE



Vandal Resistant
by Day-Brite Lighting

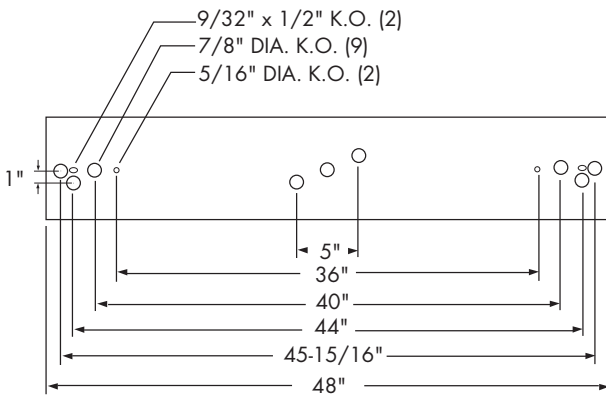
DIMENSIONS



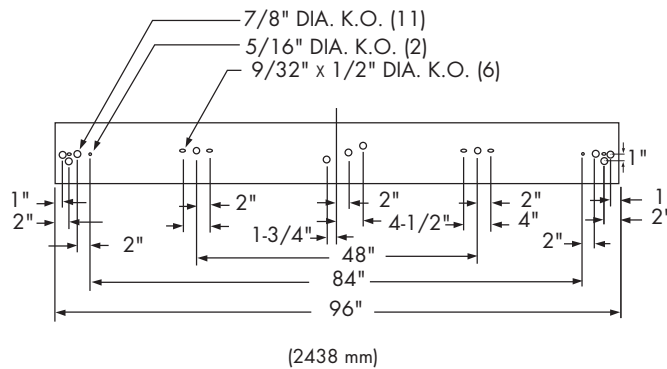
For dimensions see top illustration.

4'

8'



(1219 mm)



PHOTOMETRIC DATA

CATALOG # VCAW432R-1/4-EB
TEST # 41976 S/MH=1.4

LAMPS = F32T8
BALLAST = ELECTRONIC

INPUT WATTS = 107
BALLAST FACTOR = .91

LER = FW-73

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.29 BASED ON 3000 HRS. AND \$.08 PER KWH. FIXTURE EFFICIENCY = 74.1%

CANDLEPOWER			
Angle	End	45	Cross
0	2848	2848	2848
5	2852	2847	2840
15	2761	2792	2818
25	2567	2667	2741
35	2281	2457	2567
45	1875	2120	2248
55	1144	1349	1267
65	555	727	739
75	276	390	528
85	98	195	379
95	1	159	311
105	2	183	270
115	6	141	202
125	9	100	142
135	11	63	88
145	12	48	64
155	12	33	47
165	11	19	28
175	9	11	15

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.75 2900 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture			
		10 ft-c	30 ft-c	50 ft-c	70 ft-c
4' 4-Lamp	5	-	-	133	95
	2	-	-	92	65
	1	-	112	67	48

*Observe Fixture S/MH Requirements for Specific Applications

Average LUMINANCE CD/SQ.M with 2900 Lumen Lamps			
ANGLE	END	45°	CROSS
45	6460	6882	6899
55	4859	5268	4579
65	3199	3704	3373
75	2598	2987	3410
85	2739	3205	4411

TYPICAL V.C.P.'s Room Mounting Height Size Lengthwise Crosswise				
	8.5	10	8.5	10
30x30	49	52	45	49
40x40	46	48	40	44
60x30	51	54	49	52
60x60	43	45	36	39
100x100	43	43	32	34

LLF = .75 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
LLD = 0.88 @ 40% RATED LAMP LIFE BF = 0.91 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

COEFFICIENT OF UTILIZATION

pfc pcc pw RCR	20			70			50		
	70	50	30	70	50	30	50	30	30
0	86	86	86	83	83	83	79	79	79
1	80	76	72	77	73	70	69	67	67
2	72	67	61	69	65	59	60	57	57
3	66	58	53	64	56	52	54	50	50
4	60	52	46	58	51	45	48	44	44
5	56	46	40	54	46	40	44	38	38
6	52	41	35	50	40	34	40	34	34
7	47	38	32	46	38	32	35	30	30
8	45	34	28	42	34	28	33	28	28
9	41	32	26	40	30	26	29	25	25
10	39	29	23	38	28	23	28	23	23

LIGHT DISTRIBUTION

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	2289	19.7	26.6
0-40	3817	32.9	44.4
0-60	6596	56.9	76.7
0-90	7968	68.7	92.7
90-180	631	5.4	7.3
0-180	8599	74.1	100.0

vrf4005

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PHILIPS