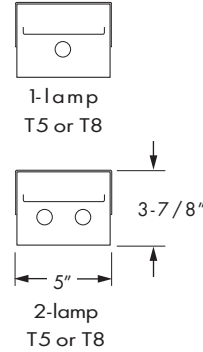
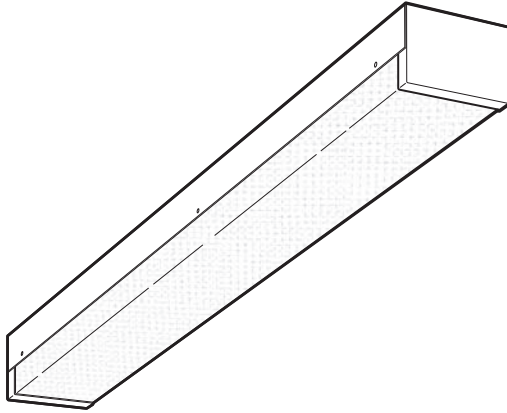


# 5" WIDE VANDAL WRAP

SERIES  
**V5**  
T5 & T8



VOLTAGE TYPE JOB \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## SPECIFICATIONS

- HOUSING – 20-gauge die-formed C.R.S. standard – 16-gauge C.R.S. housing optional.
- SHIELDING – .130" thick acrylic lens with 50% DR additive standard – .156" thick polycarbonate lens optional. Lens is secured to housing with six #8-32 x 3/4" tamper-resistant tri-groove screws.
- FINISH – 92% minimum average reflective white powder coat with multi-stage iron/phosphate prepared metal.
- ELECTRICAL – Electronic ballast standard, instant start T8, programmed start T5, rated Class P.
- LABELS – UL/CUL listed as fluorescent luminaire suitable for dry or damp locations. Wet location under covered ceilings optional.
- MOUNTING – Surface.

## FEATURES

- Ideal for schools, hallways, dormitories, locker rooms, or any other vandal prone areas.
- Heavy-gauge C.R.S. housing designed to withstand harsh environments.
- Tamper-resistant screws protect against vandals.
- Steel end caps envelop diffuser for added strength and durability.
- Surface mount to ceilings or walls.
- All parts painted after fabrication to facilitate installation, increase efficiency, and inhibit corrosion.
- This fixture is proudly made in the USA.

## ORDERING INFORMATION

Submittal

EXAMPLE: **V5** **20** - **4** - **2** **32** - **DR** - **OPTIONS** - **EB2** - **UNV**

### SERIES

**V5** Vandal Wrap, 5" wide

### HOUSING

**16** 16-gauge C.R.S.  
**20** 20-gauge C.R.S.

### NOMINAL LENGTH

**4** 4'

### TOTAL LAMPS

**1 or 2**

### LAMP WATTAGE/TYPE

**28T5S** 4', 28-watt T5  
**32** 4', 32-watt T8  
**54T5H** 4', 54-watt T5HO

### SHIELDING

**DR** Acrylic, 50% DR additive, .130" thick  
**PC** Polycarbonate lens, .156" thick

### OPTIONS

**WET/CC** Wet location under covered ceiling

### BALLAST TYPE

**EB1** 1-lamp electronic ballast  
**EB2** 2-lamp electronic ballast

### VOLTAGE

**120** 120V  
**208** 208V  
**240** 240V  
**277** 277V  
**UNV** 120 - 277V  
**347** 347V  
**480** 480V (T5 only)  
**HRV** 347 - 480V (T5 only)

Specify voltage (not UNV or HRV) if using modular wiring, cord & plug, or occupancy sensor.

Tamper-resistant tool ordered as a separate line item: Tamper Proof Tool (tri-groove).

**Note:** For more options/accessories, ballast combinations, and product details, please consult factory.



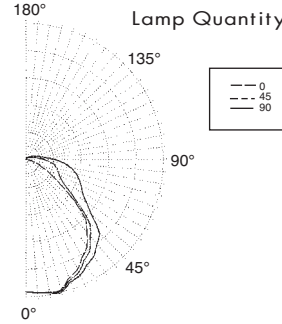
FLUORESCENT LIGHTING

Williams Catalog #V520-4-232-DR-EB2-120  
Test Report #12720.0, Dated 06/08/05

Lamp Type: F32T8/835  
Lamp Quantity: 2

**CANDLEPOWER DISTRIBUTION**

VERT. ANG.	HORIZONTAL ANGLE			ZONAL LUMENS
	0	45	90	
0	1627.	1627.	1627.	
5	1641.	1641.	1642.	156.6
15	1661.	1673.	1689.	474.6
25	1496.	1535.	1573.	710.3
35	1308.	1368.	1453.	862.4
45	1034.	1108.	1277.	881.4
55	516.	643.	905.	612.6
65	246.	453.	748.	466.1
75	98.	390.	637.	386.6
85	35.	293.	469.	286.9
90	4.	230.	359.	



**LUMEN SUMMARY**

ZONE	LUMENS	% LAMP	% FIXTURE
0 - 30	1342.	22.7	25.7
0 - 40	2204.	37.4	42.3
0 - 60	3698.	62.7	70.9
0 - 90	4838.	82.0	92.8
90 - 120	305.	5.2	5.8
90 - 130	336.	5.7	6.5
90 - 150	368.	6.2	7.1
90 - 180	375.	6.4	7.2
0 - 180	5213.	88.3	100.0

**ZONAL CAVITY COEFFICIENTS**

EFFECTIVE FLOOR CAVITY REFL. = .20

CEILING WALL RCR	.80			.70			.50		
	.70	.50	.30	.70	.50	.30	.50	.30	.10
0	104	104	104	101	101	101	.95	.95	.95
1	.94	.90	.86	.91	.87	.84	.82	.79	.77
2	.86	.79	.73	.83	.77	.71	.72	.68	.64
3	.79	.70	.63	.76	.68	.62	.65	.59	.55
4	.73	.62	.55	.70	.61	.54	.58	.52	.47
5	.67	.55	.48	.64	.54	.47	.52	.45	.40
6	.61	.50	.42	.59	.49	.42	.47	.40	.35
7	.57	.45	.37	.55	.44	.37	.42	.36	.31
8	.52	.40	.33	.50	.39	.32	.38	.31	.27
9	.48	.36	.29	.47	.35	.29	.34	.28	.23
10	.45	.33	.26	.43	.32	.26	.31	.25	.21

**TOTAL LUMINAIRE**

OPTICAL EFFICIENCY = **88.3%**

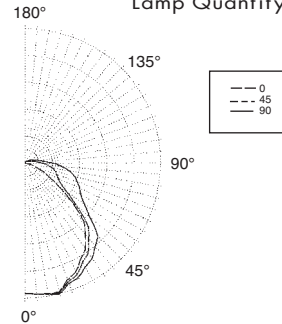
SPACING CRITERIA: END = 1.3 DIAG. = 1.3 ACROSS = 1.4

Williams Catalog #V520-4-232-PC-EB2-120  
Test Report #12691.0, Dated 06/08/05

Lamp Type: F32T8/835  
Lamp Quantity: 2

**CANDLEPOWER DISTRIBUTION**

VERT. ANG.	HORIZONTAL ANGLE			ZONAL LUMENS
	0	45	90	
0	1316.	1316.	1316.	
5	1327.	1327.	1328.	126.7
15	1343.	1353.	1366.	383.8
25	1210.	1241.	1272.	574.4
35	1058.	1106.	1175.	697.4
45	836.	896.	1033.	712.8
55	417.	520.	732.	495.3
65	199.	366.	605.	376.9
75	79.	315.	515.	312.6
85	28.	237.	379.	232.0
90	3.	186.	290.	



**LUMEN SUMMARY**

ZONE	LUMENS	% LAMP	% FIXTURE
0 - 30	1085.	18.4	25.7
0 - 40	1782.	30.2	42.3
0 - 60	2990.	50.7	70.9
0 - 90	3912.	66.3	92.8
90 - 120	246.	4.2	5.8
90 - 130	272.	4.6	6.5
90 - 150	298.	5.0	7.1
90 - 180	303.	5.1	7.2
0 - 180	4215.	71.4	100.0

**ZONAL CAVITY COEFFICIENTS**

EFFECTIVE FLOOR CAVITY REFL. = .20

CEILING WALL RCR	.80			.70			.50		
	.70	.50	.30	.70	.50	.30	.50	.30	.10
0	84	84	84	81	81	81	.77	.77	.77
1	.76	.73	.69	.74	.70	.68	.67	.64	.62
2	.70	.64	.59	.67	.62	.57	.59	.55	.52
3	.64	.57	.51	.62	.55	.50	.52	.48	.44
4	.59	.50	.44	.57	.49	.44	.47	.42	.38
5	.54	.45	.39	.52	.44	.38	.42	.37	.33
6	.50	.40	.34	.48	.39	.34	.38	.32	.29
7	.46	.36	.30	.44	.36	.30	.34	.29	.25
8	.42	.33	.27	.41	.32	.26	.31	.25	.22
9	.39	.29	.23	.38	.29	.23	.27	.22	.19
10	.36	.27	.21	.35	.26	.21	.25	.20	.17

**TOTAL LUMINAIRE**

OPTICAL EFFICIENCY = **71.4%**

SPACING CRITERIA: END = 1.3 DIAG. = 1.3 ACROSS = 1.4

**BACK VIEW**

