

9/6/2015

# Vaporproof Strip - 4 Foot

## 1 - 3 Lamps

Vaporproof Fluorescent



|              |  |
|--------------|--|
| Project:     |  |
| Catalog#:    |  |
| Approved by: |  |

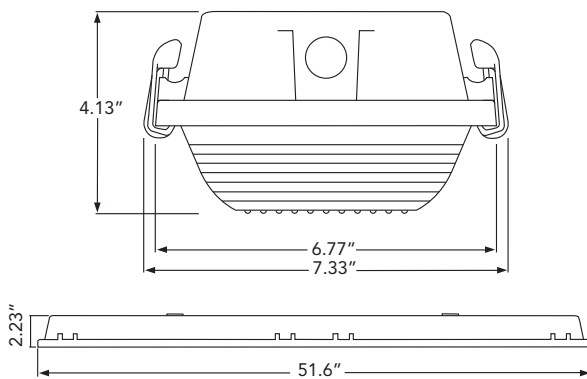
### Applications

- |                    |                     |
|--------------------|---------------------|
| Entrance Lighting  | Beverage Industry   |
| Car Washes         | Food Processing     |
| Public Access      | Construction Sites  |
| Parking Structures | Industrial Lighting |

### Certifications



### Dimensional Drawings



### Description

VSA4 series 4' fluorescent vaporproof strip fixture is gasketed to provide dust and moisture resistant illumination. This fixture operates up to three T8 or T5HO lamps, and as a standard feature, it comes with a Howard ballast.

### Features

#### Housing

- One-piece upper body; no seams to crack, break, or leak
- Reinforced fiberglass body is rugged and corrosion resistant
- 5VA Flammability Rating
- White plastic latches standard
- Eight latches for positive lens retention
- Latches designed to accept screws to make enclosure tamper resistant
  - White Polycarbonate latches accepts #4 - 1/2" screw
  - Stainless steel latches accepts #6 - 3/8" screw (optional)
- White polyethylene molded end plugs for use as knockouts
- High gloss, baked enamel reflective front

#### Gasket

- Closed cell polyester gasket
- Poured gasket seamlessly fills channel for maximum seal
- Gasket has dry skin that will not stick to the mating surface
- High gasket compression recovery ensures a solid seal over life of fixture

#### Diffuser

- Injection molded for maximum strength and precise detail
- Lineal prisms on sides reduce glare
- Continuous formed perimeter provides for positive seal
- Materials:
  - Option A: 100% Virgin Impact Resistant Acrylic  
Long lasting clarity and resistance to weathering
  - Option P: UV Stabilized Polycarbonate  
Maximum impact resistance
  - Option D: Deep Lens, Impact Resistant Clear Acrylic with diffused ends
  - Option F: Deep Lens, Impact Resistant Frosted Acrylic

#### Installation

- Shipped fully wired with Howard ballast
- Easy access to wiring compartment and ballast via removable gear tray
- Gear tray tethered to housing by two lanyards for extra safety
- Knockouts on each end
- Spring-mount, stainless steel bracket allows for surface or chain mount
- Brackets install first, then snap securely onto fixture
- NEC compliant luminaire power disconnect standard

#### Ballast

- Electronic, Inherent Thermal Protection, Class P, Sound rated A
- UL Listed

#### Quality Assurance

- System Tested, Designed, Approved, and Manufactured by Howard Lighting Products in Mendenhall, Mississippi.

Specifications subject to change without notice.

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### Ordering Information

| Model Family | Lens   | No. of Lamps | Lamp Type/Wattage <sup>(1)</sup>                      | CRI/CCT     |      |            |    | Ballast (See Table1) | Input Volts  | Factory Installed Options  | Cordset Options  | T<br>B<br>A  | Pack. |           |
|--------------|--|--------------|---|-------------|------|------------|----|----------------------|--|--|--|--|-------|-----------|
| VSA4         | A  | 2            | 32  | A           |      |            |    | SE                   | MV   | 000  | 00   | 0  | I     |           |
| VSA4         | A: Impact resistant acrylic<br><br>P: UV stabilized polycarb.<br><br>D: Deep Lens, Impact Resistant Clear Acrylic with diffused ends<br><br>F: Deep impact resistant frosted acrylic | 1<br>2<br>3  | 28: F28T8<br>32: F32T8<br><br>28:F28T5<br>54: F54T5HO | CRI         | CCT  | High Lumen | T8 | T5                   | SE: SBF High Eff <sup>(2)</sup><br>HE: HBF High Eff <sup>(2)</sup><br>LE: LBF High Eff <sup>(2)</sup><br><br>PS: PRS T5<br>P8: PRS T8 <sup>(2)</sup> | MV: 120-277v<br>HV: 347-480v (T5HO only)<br>AX: 480-277 <sup>(3)</sup> | 000: No FIOs<br>E: Enhanced specular aluminum reflector<br>G: Garage Configuration with Miro-4 reflector <sup>(4)</sup><br>H: Chain hanging bracket<br>I: Special Wiring Instructions<br>S: Stainless steel latches<br>W: Wide distribution reflector <sup>(5)</sup> | 00: Standard Disconnect<br>01: 6', no plug<br>02: 10', no plug<br>03: 6', twist lock 120v<br>04: 10' twist lock 120v<br>05: 6' non twist lock 120v<br>06: 10' non twist lock 120v<br>07: 6' twist lock 277v<br>08: 10' twist lock 277v<br>09: 6' non twist lock 277v<br>10: 10' non twist lock 277v<br>11: 16/3, no plug spec len<br>12: 16/4, no plug spec len<br>16: 16', non twist lock 277v<br>17: 18/3, no plug spec len<br>18: 6', twist lock 480v<br>19: 10', twist lock 480v<br>20: 16', twist lock 120v<br>21: 16', twist lock 277v |       | I: Single |
|              |  |              |   | A: No Lamps |      |            |    |                      |  |  |  |  |       |           |
|              |  |              |   | B: 75       | 3000 |            | X  |                      |  |  |  |  |       |           |
|              |  |              |   | C: 75       | 3500 |            | X  |                      |  |  |  |  |       |           |
|              |  |              |   | D: 75       | 4100 |            | X  |                      |  |  |  |  |       |           |
|              |  |              |   | E: 75       | 5000 |            | X  |                      |  |  |  |  |       |           |
|              |  |              |   | F: 85       | 3000 |            | X  | X                    |  |  |  |  |       |           |
|              |  |              |   | G: 85       | 3500 |            | X  | X                    |  |  |  |  |       |           |
|              |  |              |   | H: 85       | 4100 |            | X  | X                    |  |  |  |  |       |           |
|              |  |              |   | I: 85       | 5000 |            | X  | X                    |  |  |  |  |       |           |
|              |  |              |   | J: 85       | 6500 |            |    | X                    |  |  |  |  |       |           |
|              |  |              |   | K: 85       | 3000 | Yes        | X  |                      |  |  |  |  |       |           |
|              |  |              |   | L: 85       | 3500 | Yes        | X  |                      |  |  |  |  |       |           |
|              |  |              |   | M: 85       | 4100 | Yes        | X  |                      |  |  |  |  |       |           |
|              |  |              |   | N: 85       | 5000 | Yes        | X  |                      |  |  |  |  |       |           |

(1) Lamp installation available.

(2) High Efficiency ballasts are CEE Listed.

(3) Step-down autotransformer. Allows hook-up of standard MV ballast to 480v.

(4) Garage application reflector works with 3 lamp configuration and deep lens (options D & F) only.

(5) Wide distribution reflector available with lens options D & F (frosted acrylic)

Table1:

|    |  |
|----|--|
| SE | Standard Ballast Factor High Efficiency Instant Start T8 Ballast |
| HE | High Ballast Factor High Efficiency Instant Start T8 Ballast     |
| LE | Low Ballast Factor High Efficiency Instant Start T8 Ballast      |
| PS | Program Rapid Start T5 Ballast                                   |
| P8 | Program Rapid Start High Efficiency T8 Ballast                   |

Specifications subject to change without notice.

**Sample Ordering Number:**

VSA4 A 2 32A SE MV 000 00 I

VSA4 Series 4-Foot Vaporproof Strip

Impact resistant acrylic lens

2-lamps (none installed)

F32T8 Standard Ballast Factor High Efficiency Ballast

Multi-volt (120-277v)

No Factory Installed Options

No Cordset

Single Packaging

**RAPID SHIP MODELS**

**AVAILABLE FOR NEXT DAY SHIPMENT**

•VSA4A232ASEMV000000I

•VSA4A254APSMV000000I

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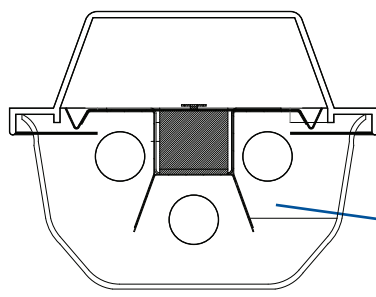
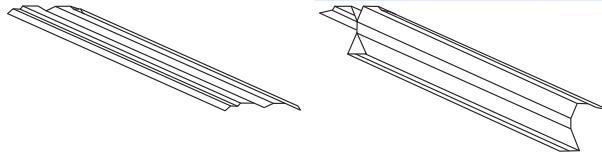
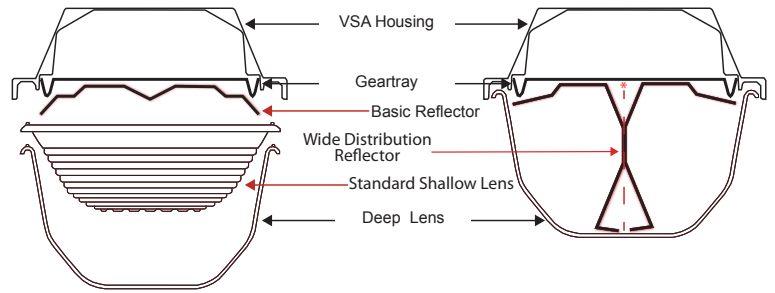
**Options Available**

|              |  |
|--------------|--|
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**Basic Reflector**



**Wide Distribution Reflector**  
For 2-lamp versions only



**Deep Lens, Impact Resistant Clear Acrylic with diffused ends**  
Can be used with:  
FIO Option W  
Wide Distribution Reflector  
FIO Option G\*  
Garage Configuration with Miro-4 reflector.

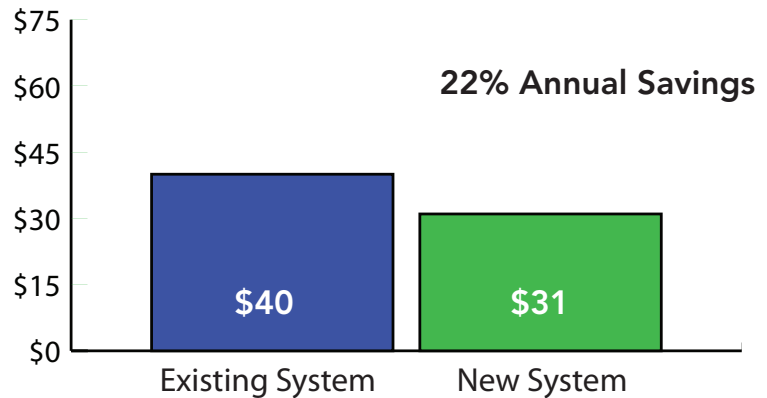
**Frosted Acrylic Lens Option F**  
Can be used with  
Wide Distribution Reflector  
FIO Option W



**VS-CB Chain Bail**  
(2 needed per fixture, order separately)

\* Garage Application reflector works with 3 lamp configuration and Deep Lens options only.

| Energy Cost Estimator  |      |  |               |   |      |
|------------------------|------|--|---------------|---|------|
|                        |      | Existing System                        |               | New System  |      |
|                        |      | M2/40RS-277                            |               | VSA4A232ASE<br>Standard Ballast Factor<br>Fluorescent Strip |      |
| Hours burned per year  | 4368 | Number of Fixtures                     | 1             | Number of Fixtures  | 1    |
| Cost per kWh\$         | 0.12 | Watts per Fixture (existing system)    | 77            | Watts per Fixture (new system)                              | 59   |
| Energy Cost Estimation |      | Energy used per year (existing system) | \$40          | Energy used per year (new system)                           | \$31 |
|                        |      | Energy saving per year (per fixture)   | <b>\$9.43</b> |   |      |



Howard Industries provides this tool to examine the potential impact of lighting decisions. This tool provides an ESTIMATE only. The analysis of this tool does not warrant or guarantee the actual costs or savings that will be realized as the analysis suggested. You can find the full version of this cost saving tool at the Howard Lighting Website—www.howardlightingproducts.com. Click "Cost of Ownership Calculator".  
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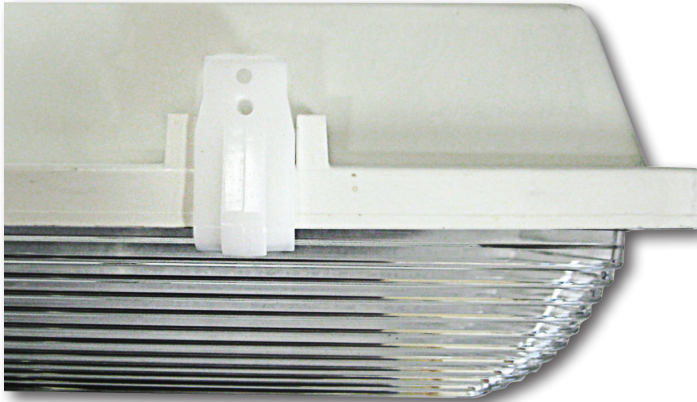
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**Hardware - Latches**

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**White Plastic**

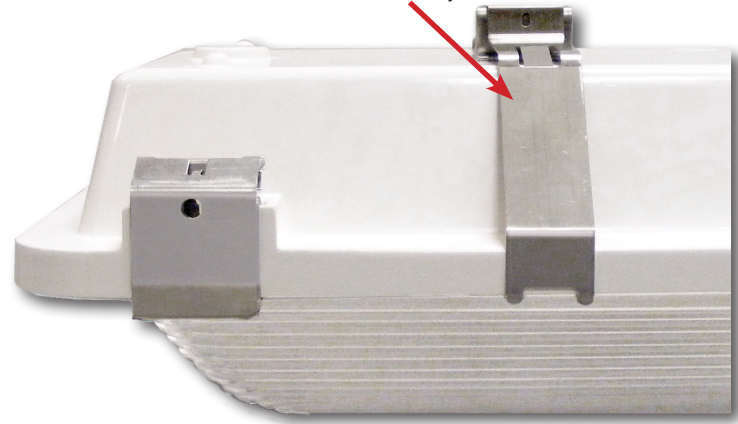


White Plastic Latch locks open during maintenance

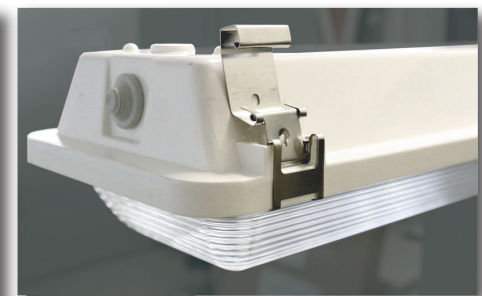
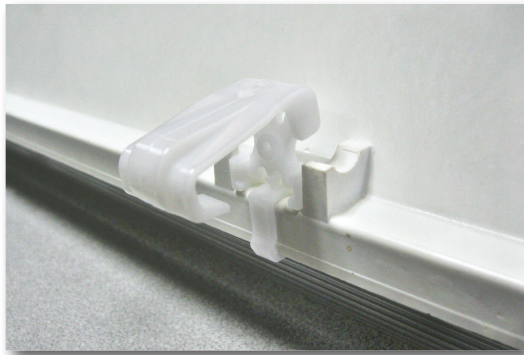
**Stainless Steel**

- withstands corrosive environments

Stainless Steel Mounting Brackets come standard with every fixture



Captive Keeper secures latch to housing preventing accidental loss of latch



**Latch Features:**

Latches can be made Tamper Resistant with the addition of locking screws\*

- White Plastic #4-32 x 1/2" Screws
- Stainless Steel #6-32 x 3/8" Screws

\*\*Screws not included with the fixture

Stainless Steel Mounting Brackets (Model# VSAX-MB-2L-2)

Come standard with every fixture

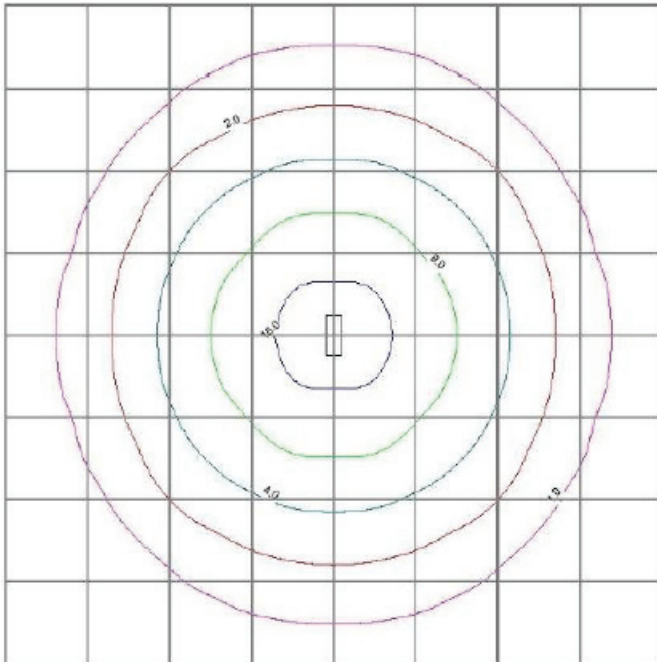


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**Iso Footcandle Plot**



16' Mounting Height  
Ballast: EPH2/32IS/MV/MC/HE (High Ballast Factor)  
Lamps: Two Howard F32T8/841/ECO/IC

|              |  |
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**Operating Temperatures**

| Number of Lamps | Lamp Type | Ballast Factor | Acceptable Temperature Range C (min-max) | Acceptable Temperature Range F (min-max) |
|-----------------|-----------|----------------|--|--|
| 2               | T5        | Standard       | -30 to 35                                | -20 to 95                                |
| 3               | T5        | Standard       | -30 to 25                                | -20 to 77                                |
| 2               | T8        | High           | -17 to 35                                | 0 to 95                                  |
| 3               | T8        | High           | -17 to 25                                | 0 to 77                                  |
| 2               | T8        | Standard       | -17 to 45                                | 0 to 115                                 |
| 3               | T8        | Standard       | -17 to 30                                | 0 to 85                                  |

**Zonal Lumen Summary**

| Zone  | Lumens | %Lamp | %Fix   |
|-------|--------|-------|--------|
| 0-30  | 4080   | 22    | 28     |
| 0-40  | 6613   | 36    | 46     |
| 0-60  | 11426  | 61    | 79     |
| 0-90  | 14472  | 78    | 100.00 |
| 0-180 | 14472  | 78    | 100.00 |

**Coefficients of Utilization - Zonal Cavity Method**

| Effective Floor Cavity Reflectance 0.20 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| RC                                      | 80 |    |    |    | 70 |    |    |    | 50 |    |    | 30 |    |    | 10 |  |
| RW                                      | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |  |
| 0                                       | 93 | 93 | 91 | 91 | 91 | 91 | 87 | 87 | 87 | 83 | 83 | 83 | 80 | 80 | 80 |  |
| 1                                       | 78 | 75 | 83 | 79 | 76 | 73 | 76 | 73 | 71 | 73 | 71 | 69 | 66 | 66 | 66 |  |
| 2                                       | 65 | 61 | 75 | 69 | 64 | 60 | 66 | 62 | 59 | 64 | 60 | 57 | 55 | 55 | 55 |  |
| 3                                       | 56 | 51 | 68 | 61 | 55 | 50 | 59 | 53 | 49 | 56 | 52 | 48 | 46 | 46 | 46 |  |
| 4                                       | 48 | 43 | 63 | 54 | 48 | 43 | 52 | 47 | 42 | 50 | 45 | 42 | 39 | 39 | 39 |  |
| 5                                       | 42 | 37 | 58 | 48 | 42 | 37 | 47 | 41 | 37 | 45 | 40 | 36 | 34 | 34 | 34 |  |
| 6                                       | 37 | 32 | 53 | 44 | 37 | 32 | 42 | 36 | 32 | 41 | 36 | 32 | 30 | 30 | 30 |  |
| 7                                       | 34 | 29 | 50 | 40 | 33 | 29 | 38 | 33 | 28 | 37 | 32 | 28 | 26 | 26 | 26 |  |
| 8                                       | 30 | 26 | 46 | 36 | 30 | 26 | 35 | 30 | 25 | 34 | 29 | 25 | 24 | 24 | 24 |  |
| 9                                       | 27 | 23 | 43 | 33 | 27 | 23 | 32 | 27 | 23 | 32 | 26 | 23 | 21 | 21 | 21 |  |
| 10                                      | 25 | 21 | 41 | 31 | 25 | 21 | 30 | 25 | 21 | 29 | 24 | 21 | 19 | 19 | 19 |  |

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