Vaporproof Fluorescent

10/18/2012

Vaporproof Strip - 4 Foot
1 - 3 Lamps

Project:	
Catalog#:	
Approved by:	

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
- Clear polycarbonate latches standard
- Eight latches for positive lens retention
- Latches designed to accept screws to make enclosure tamper resistant
    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.

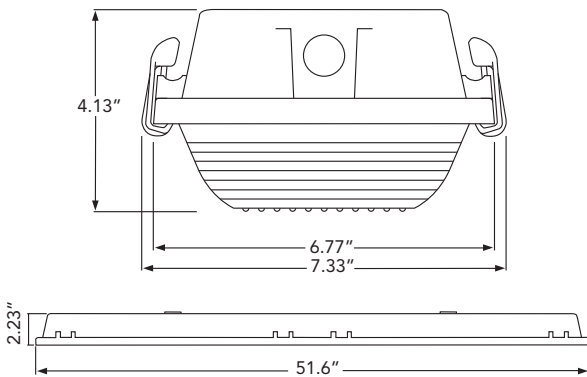## Applications

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

Certifications

NSF COMPONENT — IP65 CERTIFIED — IP67 CERTIFIED — c(UL)us LISTED — HIGH PRESURE HOSE TEST — 1500 PSI — Guardian seal

Dimensional Drawings

4.13"
6.77"
7.33"
2.23"
51.6"

Specifications subject to change without notice.

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Ordering Information

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

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

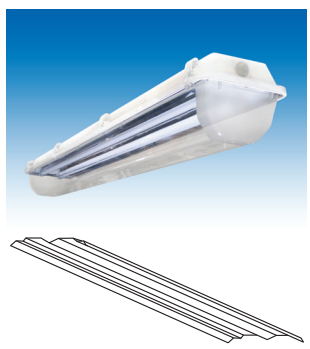Specifications subject to change without notice.

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Options Available

Basic Reflector

Wide Distribution Reflector
For 2-lamp versions only

VSA Housing

Geartray

Basic Reflector

Wide Distribution Reflector
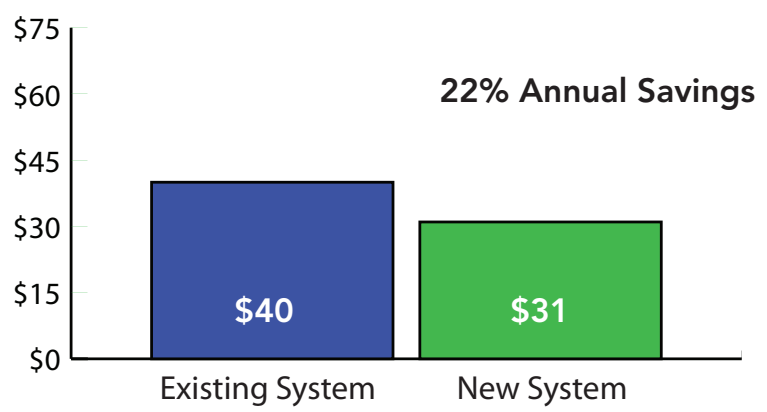
Standard Shallow Lens
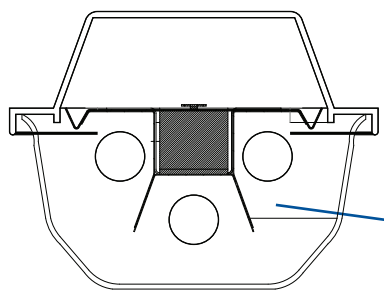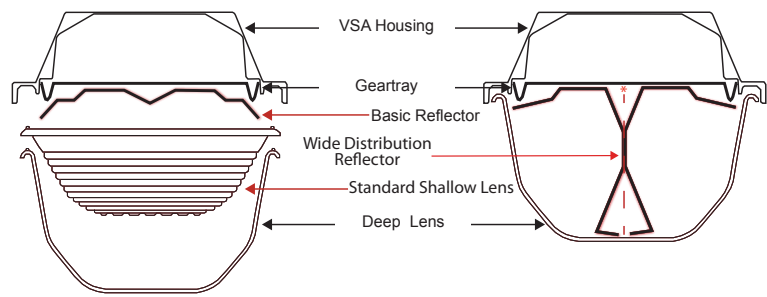
Deep Lens

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 Acylic Lens
Option F
Can be used with
Wide Distribution Reflector
FIO Option W

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

Energy Cost Estimator

		Existing System		New System	
		M2/40RS-277		VSA4A232ASE Standard Ballast Factor 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)		$9.43	

22% Annual Savings

$75
$60
$45
$30
$15
$0

$40 — Existing System
$31 — New System

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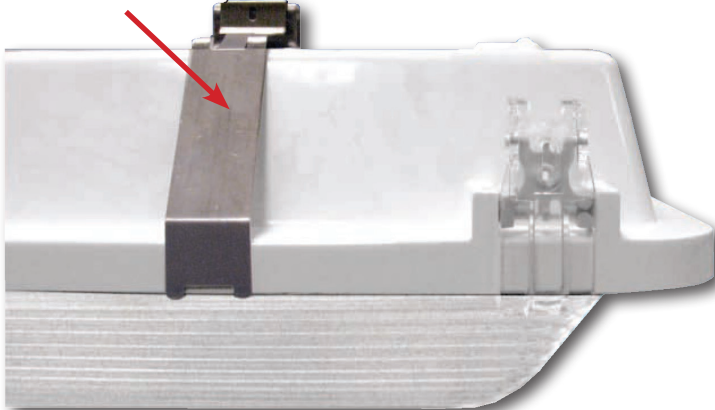www.HowardLightingProducts.com

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Hardware - Latches

Clear Polycarbonate

Stainless Steel Mounting Brackets come standard with every fixture

Stainless Steel
- withstands corrosive environments

Clear Polycarbonate Latch locks open during maintenance
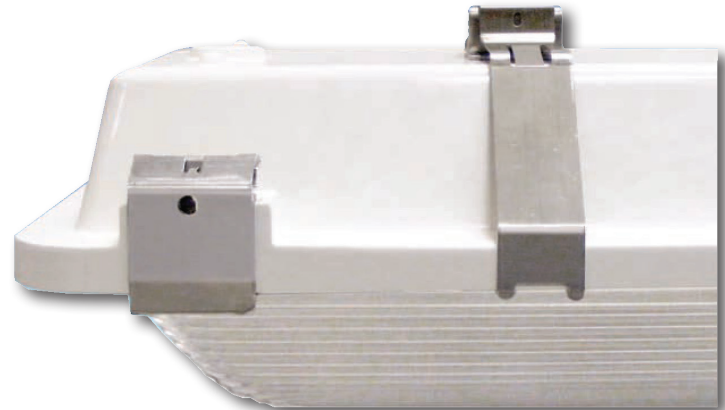
Captive Keeper secures latch to housing preventing accidental loss of latch

Keeper

Latch Features:
Latches can be made Tamper Resistant with the addition of locking screws*
- Polycarbonate #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)
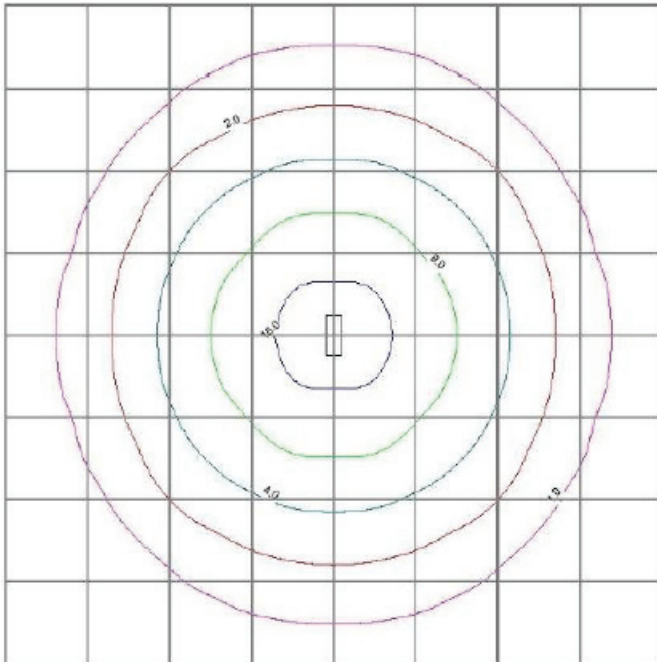Come standard with every fixture

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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

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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