Vaporproof Fluorescent

2/22/2015

Vaporproof Highbay Fluorescent
3 - 6 Lamps

Project:	
Catalog#:	
Approved by:	

Applications

Entrance Lighting
Car Washes
Public Access
Parking Structures

Beverage Industry
Food Processing
Construction Sites
Industrial Lighting

Certifications

Dimensional Drawings

14.6"

6"

52"
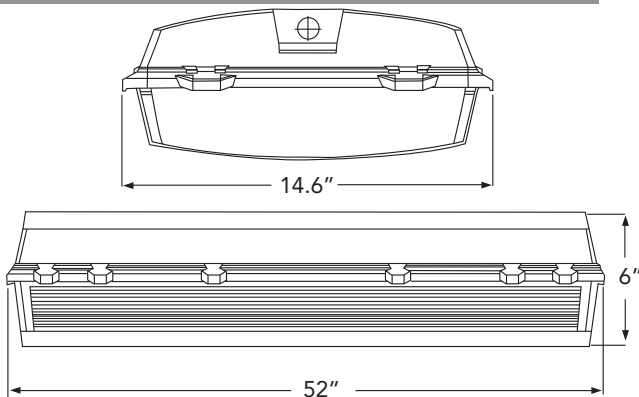
Description

VHA1 series vaporproof highbay is engineered for performance down to the smallest detail. It is fully gasketed to provide total protection from dust and moisture penetration. It withstands corrosion, splashing water, hose-directed water, damage from external ice formation, and temporary submersion. This rugged fixture operates three to six lamps and as a standard feature 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
- Stainless steel hardware for maximum durability
- Twelve latches for positive lens retention
- White polyethylene molded end plugs for use as knockouts
- High gloss, baked enamel reflective front
- Available 95% Enhanced Specular Aluminum Reflector
- Pressure wash up to 1500 PSI[1]

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
- Frosted ends and lineal prisms on sides reduce glare
- Continuous formed perimeter provides for positive seal
- Materials:
    100% Virgin Impact Resistant Acrylic
    Long lasting clarity and resistance to weathering
        OR
    UV Stabilized Polycarbonate
    Maximum impact resistance

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
- NEC compliant luminaire power disconnect standard
- Mounting:
    Standard: two versatile V-Hook mounting brackets
        OR
    Optional: wire hanging kit

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.

(1) All installed fittings must be both of appropriate type and be installed to the manufacture's specifications.

Specifications subject to change without notice.

Howard Lighting Products | 580 Eastview Drive | Laurel, MS 39443
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Vaporproof Fluorescent (side tab)

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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.
VHA1	**A**	**6**	**32**	**A**					**SE**	**MV**	**00C**	**01**	**0**	**I**

Model Family	Lens	No. of Lamps	Lamp Type/ Wattage(1)	CRI/CCT					Ballast	Input Volts	Factory Installed Options	Cordset Options	TBA	Pack.

Detailed column content:

Model Family: VHA1

Lens:
A: Impact resistant acrylic
P: UV stabilized polycarb.

No. of Lamps: 3 4 5 6

Lamp Type/Wattage(1):
28: F28T8
32: F32T8
28:F28T5
54: F54T5HO

CRI/CCT:

	CRI	CCT	High Lumen	T8	T5
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	

Ballast (see Table1):
SE: SBF High Eff(2)
HE: HBF High Eff(2)
LE: LBF High Eff(2)

PS: PRS T5
P8: PRS T8(2)

Input Volts:
MV: 120-277v
HV: 347-480v (T5HO)
AX: 480-277(3)

Factory Installed Options:
000: No FIOs
A: Occ Sensor(4)
C: Lens Tether Safety Cable
E: Enhanced Specular Reflector(5)
M: End Mount Bracket
R: Rough Service Lampholders (6LT5)
W: Wire Cable Hanging Kit

Cordset Options:
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
Y1: Yellow 6' 16/3 STOW, no plug

Pack.: I: Single

(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) Occupancy Sensors should be used with programmed rapid start ballasts for maximum lamp life.
    Standard Occupancy Sensor requires neutral wired fixtures (ex. -120v or -277v).
    For phase-to-phase voltage applications (240v) advise Customer Service at time of request.
(5) Consult factory when ordering 3 or 5 lamp reflector.

Table1:

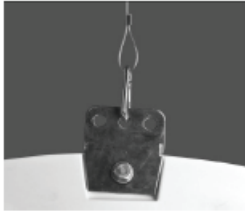| SE	Standard Ballast Factor High Efficiency Instant Start T8 Ballast
HE	High Ballast Factor High Efficiency Instant Start T8 Ballast
LE	Low Ballast Factor High Efficiency Instant Start T8 Ballast
PS	Program Rapid Start T5 Ballast
P8	Program Rapid Start High Efficiency T8 Ballast

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Sample Ordering Number:
VHA1 A 6 32 A SE MV 00C 01 I
VHA1 Series Vaporproof Highbay Fluorescent
Impact Resistant Acrylic Lens
6-lamps (none installed)
F32T8 Standard Ballast Factor High Efficiency Ballast
Multi-volt (120-277v)
Factory Installed Lens Tether Safety Cable
6 foot 18/3 SJT cord
Single Packaging

RAPID SHIP MODELS
AVAILABLE FOR NEXT DAY SHIPMENT

• VHA1A454APSMV000000I
• VHA1A632AHEMV000000I
• VHA1A654APSMV000000I

Note: VHA1 comes standard with 2 versatile V-hook mounting brackets.
OR Optional Wire Hanging Kit (FIO option W)

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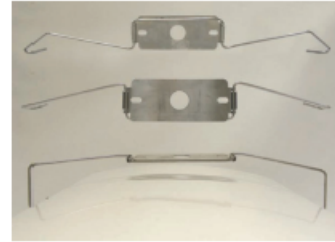**Vaporproof Fluorescent**

Options Available

V-Hook
2 per fixture

End Mount Bracket
(clip not included)

Rough Service
Yellow Cord
(plug not included)

VHA1-CM
Ceiling Mount
Bracket
2 per fixture

Rough Service
Socket Bar (T5
only)

Energy Cost Estimator

		Existing System		New System	
		400W MH Highbay		VHA1E632AHE High Eff Standard BF Fluorescent Highbay	
Hours burned per year	4368	Number of Fixtures	1	Number of Fixtures	1
Cost per kWh$	0.12	Watts per Fixture (existing system)	458	Watts per Fixture (new system)	214
Energy Cost Estimation		Energy used per year (existing system)	$240	Energy used per year (new system)	$112
		Energy saving per year (per fixture)		**$128.00**	

53% Annual Savings

Existing System: $240
New System: $112

$250
$200
$150
$100
$50
$0

Existing System | New System
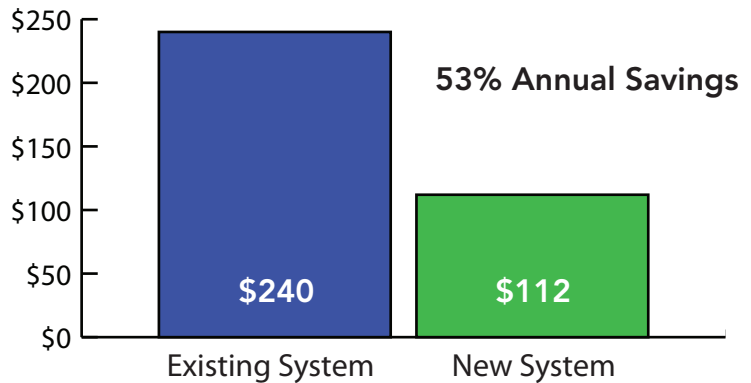
Howard Industries provides this tool to examine the potential impact of lighting decisions. This tool provides an ESTIMATE only. The analysis of this tool does not warrant or guarantee the actual costs or savings that will be realized as the analysis suggested. You can find the full version of this cost saving tool at the Howard Lighting Website—www.howardlightingproducts.com. Click "Cost of Ownership Calculator".
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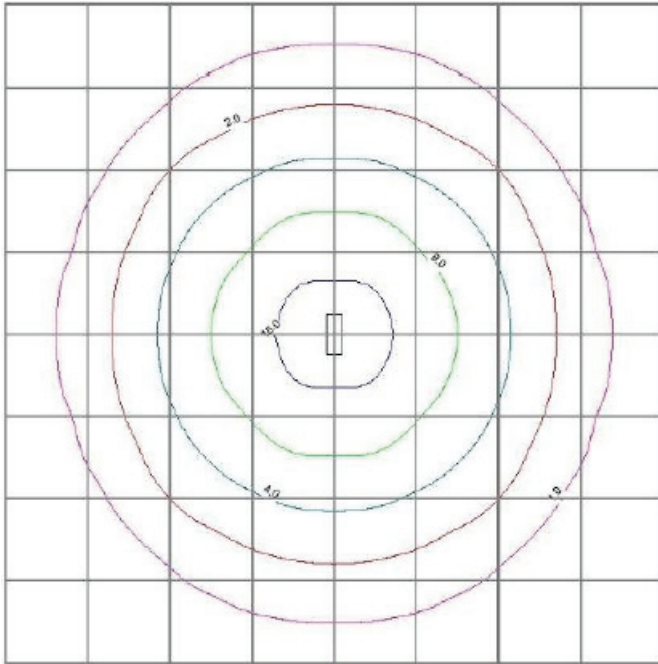Specifications subject to change without notice.

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Photometric Data - 6 Lamp T8 (VHA1A632AHE)

Iso Footcandle Plot

16' Mounting Height
Ballast: EPH3/32IS/MV/MC/HE (High Ballast Factor)
Lamps: Six 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)
3-4	T5	Standard	-30 to 42	-20 to 108
5-6	T5	Standard	-30 to 33	-20 to 91
3-4	T8	Standard	-15 to 42	0 to 108
3-4	T8	High	-15 to 35	0 to 95
5-6	T8	Standard	-15 to 25	0 to 77
5-6	T8	High	-15 to 25	0 to 77

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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