

Survi'VR™

Vandal-Resistant Lighting

HID, Compact Fluorescent & Linear Fluorescent



A New Standard for Vandal-Resistant Lighting

Stonco®



Setting the New Standard for Vandal-Resistant Lighting

Once again, Stonco has taken the lead in the lighting industry by developing the first comprehensive standard for addressing intentional vandalism of outdoor lighting fixtures. Stonco engineers developed the standard as a guide for product development and to test both our product line and competitor fixtures. From this has emerged the Survi'VR, the first truly vandal resistant luminaire strong enough to take a violent assault without affecting performance.

Defining Vandal Resistance

The term "Vandal Resistant" is used by many luminaire manufacturers to define a category of lighting products that are designed for use in abusive environments. Intentional vandalism can be categorized in many different forms with impact and prying being the most common. Impact attack is typically carried out with objects such as pipes, baseball bats, sticks, rocks, or other hard objects. Prying attack is when any device can be leveraged in a manner that allows the luminaire to be removed from its mounting surface. In experiments designed to simulate intentional vandalism, many of these fixtures fall short of their intended capabilities.



Potential results of vandalized luminaires

- Cracked/splintered/penetrated lens, face trims or housings
- Deformed non-operational components
- Disengaged or missing parts
- Damaged interior components
- Non-operable lamp
- Luminaire pried away from mounting surface
- Luminaire dangling from supply wires
- Complete removal of luminaire



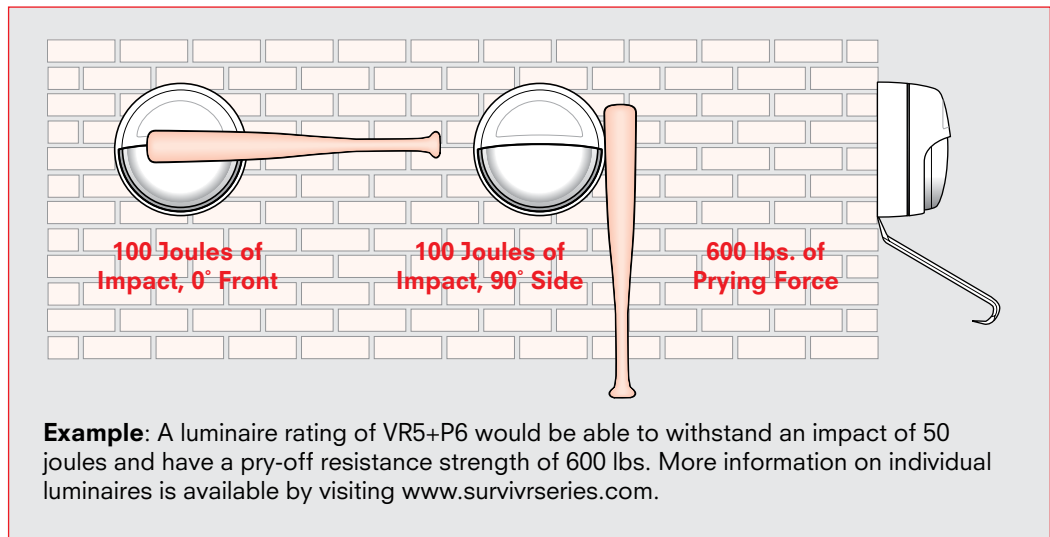
Potential affects of vandalized luminaires

- Absence of light
- Openings that allow entry of water or debris
- Exposed wiring
- Sharp-edge hazard
- Shock hazard
- Short-circuit hazard
- Replacement of lamps, components and luminaires

Withstands 100 Joules of Impact without Affecting Performance

Vandal Resistant Ratings (VR+P)

A vandal-resistant rating was developed by Stonco so end-users could select the appropriate luminaire for a specific application. Impact ratings are listed on a scale of VR1 to VR10 for luminaires that withstand from 10 joules of impact up to 100 joules. Pry-off ratings are listed on a scale of P1 to P5 for luminaires able to handle from 100 lbs. to 500 lbs. of prying force.



Stonco Vandal Resistant Impact Standard

The SurvivⁱVR Series will withstand a wide range of impact forces up to 100 joules on the front and side surfaces without affecting performance. An average person using a standard baseball bat is equal to about 80 joules. (Round series only)

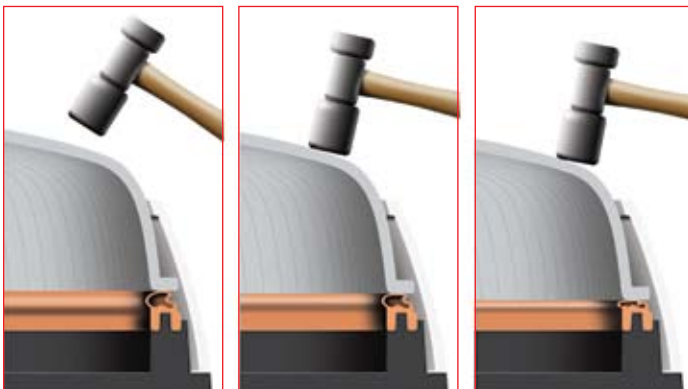
Stonco Vandal Resistant Prying Standard

Able to withstand as much as 600 lbs. of pry-off force without affecting performance. A typical crowbar has a 3:1 leverage ratio, which translates into an average person being able to apply approximately 400 lbs. of pry-off force. (Round series only)

Shock & Seal System

Front Impact

The SurvivⁱVR Round Series includes the S&S integral air cushion designed to support the lens perimeter and absorb shock up to 100 joules of impact. Traditional luminaires transfer forces directly to the back housing causing the lens or housing to fracture.



Side Impact

The SurvivⁱVR Round Series accepts an optional back trim ring and high-density foam ring that absorbs side impact shock. When impacted, traditional luminaire castings can fracture. With the S&S feature, the forces are absorbed resulting in a luminaire that can withstand up to 100 joules of impact. (Not available on 13" shallow)



Construction Features: Round

Front Shock and Seal Impact System

- Integral air cushion feature supports lens perimeter and absorbs shock upon impact up to 100 joules
- Provides a highly durable reinforced perimeter seal keeping out dirt, moisture and rain

Spin-On Twist and Lock Faces

- Solid, one-piece, injection-molded design
- Made from UV-stabilized, high impact-resistant polycarbonate
- Standard colors include black, white and bronze
- Four concealed interlocking tabs resist prying
- Single-point stainless steel tamper-resistant locking screw located out of view

High-Performance Reflector Systems

- HID reflector is a computer-designed multifaceted system made from high-purity aluminum with a semi-specular finish
- Compact fluorescent reflector has a 92% highly reflective white finish that maximizes uniformity

High Impact-Resistant Lens

- Textured prismatic design obscures lamp image while maximizing uniformity
- Made from UV-stabilized injection-molded polycarbonate or acrylic
- Available in clear and opal

Contractor-Friendly Features

- Shipped disassembled and ready to install
- Keyhole mounting holes speeds installation and allows for hand-free mounting
- Integral bubble level ensures fast, level installation without additional tools
- Simple reflector and lamp installation
- Twist-lock optic face assembly

Marine-Grade Die-Cast Aluminum Housing

- Reinforced construction and mounting system resists breakage from impact and prying
- Integral heat sinks for overall cooler operation of fixture and components
- Polyester powder coated in three standard fade-resistant colors



Shock Absorbing Trim Ring (Optional Accessory)

- Shields casting sides, with increased side impact resistance up to 100 joules
- Eliminates traditional perimeter holding/prying points
- Provides a smooth, clean, finished appearance
- Reveals an accent stripe when ordering base housing in different color

Modularity

Unsurpassed Modular Versatility

The seamless design of the Surviv'VR Series provides a smooth appearance that blends well with most building styles. The modular design allows you to specify many different combinations of the fixture.

The Surviv'VR Series is shipped in modular components, eliminating disassembly and decreasing installation time. Shipping modular components expedites the ordering and shipping of the fixture, reducing delays for on-site delivery.



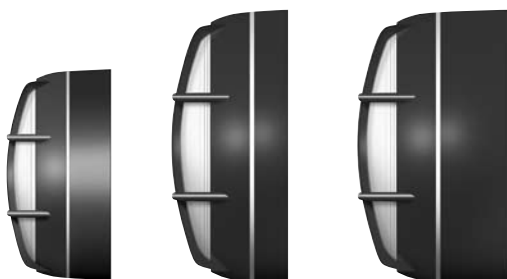
Three Face Selections

Select from open bezel, grid and closed eyelid using either a clear prismatic or opal prismatic lens that snaps into place.



Choice of Colors

Standard fixture colors include black, white and bronze. Each face is injection molded in matching colors, and the housing is powder coated using a Duraplex II polyester powder coating.

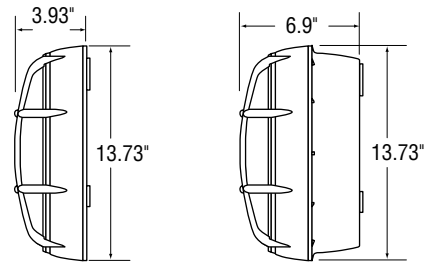
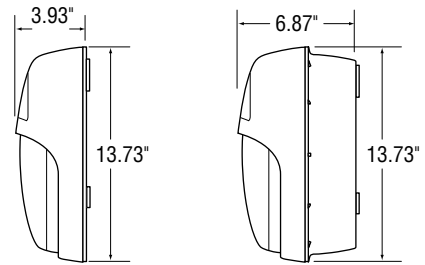
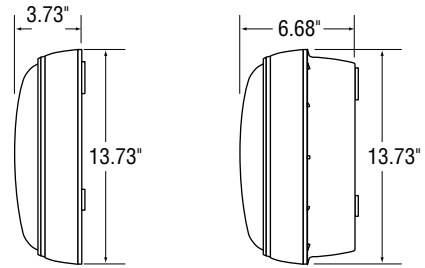


Trim Ring Exposing Reveal

Available on all sizes except the 13" shallow fixture, a trim ring can be added for flush-to-wall appearance in any standard color. The trim ring exposes a subtle reveal on the fixture housing that will add a distinctive accent when the housing color is ordered different from that of the trim ring and face. The addition of this trim ring also increases vandal resistance of the luminaire by improving side impact and eliminates perimeter holding/prying points.

13" Round Shallow/Deep

ADA Compliant (13" Shallow only)



The 13" Round Series is available with either a shallow or deep base depending on the wattage requirements. Face options include open bezel, grid and closed eyelid with a trim ring available on the deep base only. The base is constructed of marine-grade die cast aluminum with face and lens components made from impact-resistant polycarbonate material. The 13" shallow meets all American Disabilities Act (ADA) guidelines.

Ordering Guide Example: **SR3SW113HFLB8GCW**

Series	Shape	Size	Depth	Mounting	Wattage	Source	Options	Base Color*	Voltage	Style	Lens	Face Color*
S	R	3	S	W	113	HF	L	B	8	G	C	B
Survi'VR	Round	3=13"	S=Shallow D=Deep	W=Wall C=Ceiling	50=50 ⁷ 70=70 ^{4,7} 113=1x13 ⁸ 118=1x18 126=1x26 132=1x32 142=1x42 213=2x13 218=2x18 226=2x26 232=2x32 ⁷ 242=2x42 ⁷	NX=HPS (NPF) ^{6,7} PM=PS MH ⁷ LX=HPS (HPF) ⁷ HF=Compact Fluorescent (HPF)	L=Lamped U=UV Shield ⁹ E=Emergency (1 or 2) 13w (1 or 2) 18w F=Fusing T=Thru Wiring ⁵ P=Photo Control ⁵ Q=Quartz Aux.	B=Black W=White P=Bronze	1=120 8=120-277	B=Open Bezel E=Closed Eyelid ¹ G=Grid	O=Opal Poly C=Clear Poly A=Acrylic ^{2,3}	B=Black W=White P=Bronze

¹ Not available with ceiling-mounted luminaires.

² Available in reduced HID wattages (50w max. MH/HPS). Consult factory.

³ Not recommended for use in high-abuse areas.

⁴ 70 watt models are not available with a PM lamp source for ceiling- or wall-mounted luminaires.

⁵ Unavailable with trim rings.

⁶ 120v only.

⁷ 13 Deep models only.

⁸ 13 Shallow models only.

⁹ For MH lamps only.

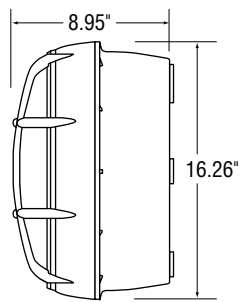
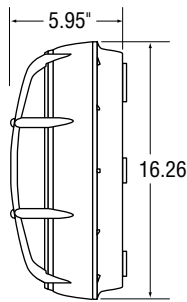
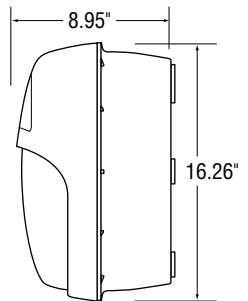
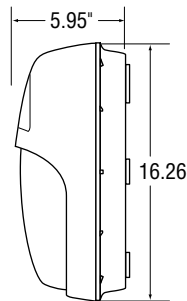
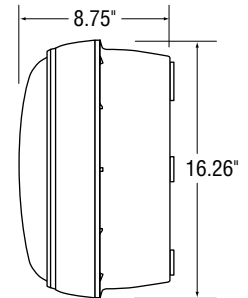
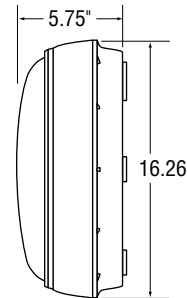
* Custom colors available. Consult factory.



16" Round Shallow/Deep



The 16" Round Series is available with either a shallow or deep base depending on the wattage requirements. Face options include open bezel, grid and closed eyelid with a trim ring available on both shallow and deep bodies. The base is constructed of marine-grade die cast aluminum with face and lens components made from impact-resistant polycarbonate material.



Ordering Guide Example: **SR6SW150MHPCB8GCB**

S	R	6	S	W	150	MH	PC	B	8	G	C	B
Series	Shape	Size	Depth	Mounting	Wattage	Source	Options	Base Color*	Voltage	Style	Lens	Face Color*
Surviv ^{VR}	Round	6=16"	S=Shallow D=Deep	W=Wall C=Ceiling	50=50 ¹¹ 70=70 ¹ 100=100 ¹⁰ 150=150 ^{2,5,10} 126=1x26 ¹¹ 132=1x32 ¹¹ 142=1x42 ¹¹ 226=2x26 232=2x32 242=2x42 326=3x26 332=3x32 ¹⁰ 342=3x42 ¹⁰	NX=HPS (NPF) ⁹ PM=PS MH LX=HPS (HPF) HF=Compact Fluorescent (HPF)	L=Lamped U=UV Shield ⁸ E=Emergency (1) 42w (1 or 2) 26w (1) 32w (2) 18w Q=Quartz Aux. F=Fusing T=Thru Wiring ³ PC=Photo Control ⁵	B=Black W=White P=Bronze	1=120 8=120-277	B=Open Bezel E=Closed Eyelid ⁴ G=Grid	O=Opal Poly C=Clear Poly A=Acrylic ^{6,7}	B=Black W=White P=Bronze

¹ 70 watt models with a PM lamp source are only available for ceiling-mounted luminaires.

² 150 watt not available with PM lamp for ceiling or wall.

³ Unavailable with trim rings.

⁴ Not available with ceiling-mounted luminaires.

⁵ Not available with trim ring for ceiling mount.

⁶ Available in reduced HID wattages (50w max. MH/HPS Shallow) (100w max. MH/HPS Deep). Consult factory.

⁷ Not recommended for use in high-abuse areas.

⁸ For MH lamps only.

⁹ 120v only.

¹⁰ 16 Deep models only.

¹¹ 16 Shallow models only.

* Custom colors available. Consult factory.



Construction Features: Linear Fluorescent

Rugged Housing

- Low-copper extruded aluminum body
- Reinforced crumple zones cast into end caps absorbs impact
- Tamper-resistant stainless steel hardware
- Hinged side panels preserves architectural design and absorbs shock from impact

Duraplex II Polyester Powder Finish

- Fade-resistant color
- Available in three standard colors
- Custom colors available, consult factory

High-Efficiency Lamping T5, T5HO and T8

- Exceptionally high fixture efficiency
- 95% maintained lumens
- Extremely high CRI of 85
- Greater uniformity
- No color shift
- Instant-on
- Immediate hot re-strike
- Built-in multiple light levels

Glare-Resistant Lens

- Impact-resistant polycarbonate
- Delivers uniform illumination without glare
- Available in clear prismatic and opal prismatic

Protective Reflector

- Precision die-formed for strength
- Channeled design protects lamps from external impact
- High-reflectance white finish for even illumination

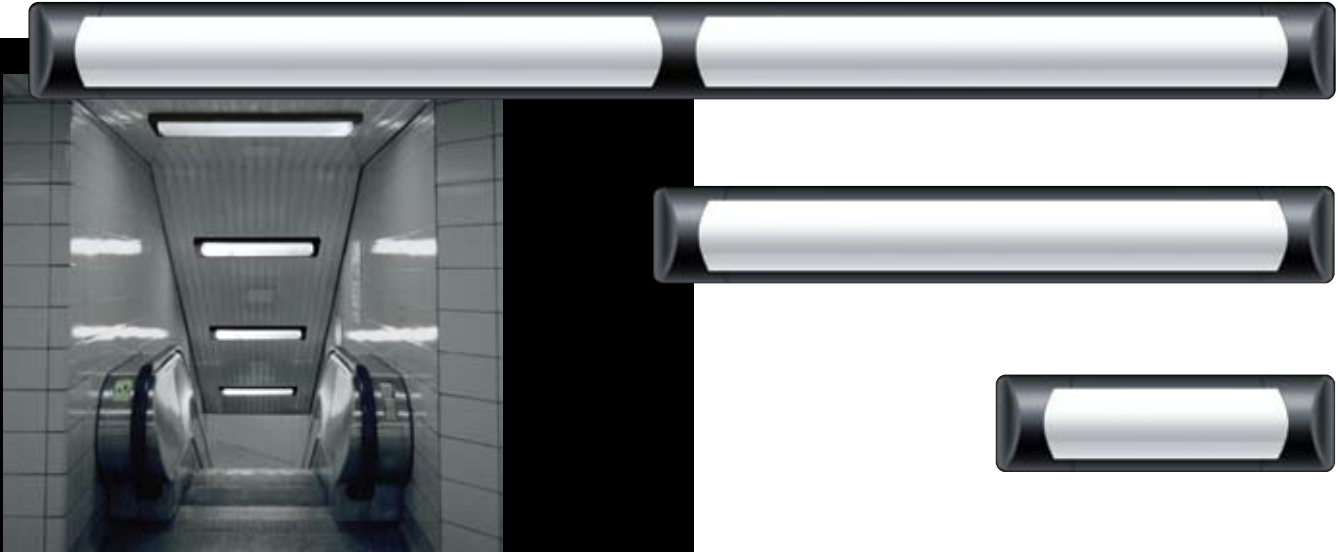


Row Mounting Capability

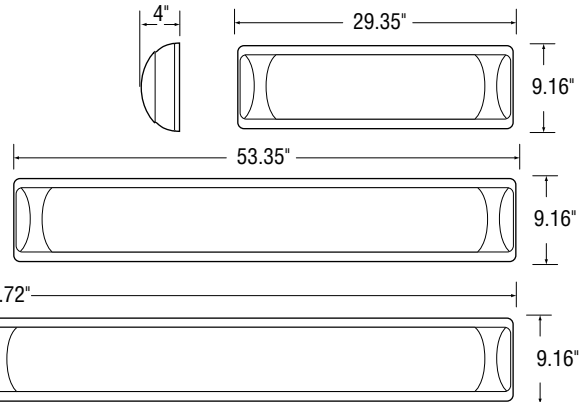
- Available direct from factory
- No field drilling required

2', 4' and 8' Linear Fluorescent

ADA Compliant



Linear fluorescent luminaires are available in an extruded aluminum back housing with die-cast aluminum end caps or optional high-impact, injection-molded polycarbonate end caps. Lens selections include clear or opal prismatic polycarbonate, with fixture lengths in sizes 2', 4' and 8'. Lamping choices include high-performance T5, T5HO and T8 using a two-lamp arrangement up to 54 watts. This model meets all American Disabilities Act guidelines.



Ordering Guide Example: **SAO2141S2YBF**

S	A	O	2	14	1	S2Y	B	F
Series S=Surviv ^{VR}	Style A=Aluminum AT=Aluminum Tandem P=Polycarbonate PT=Polycarbonate Tandem	Lens O=Opal Poly C=Clear Poly	Lamp # 2	Watts 14 (T5) 17 (T8) 24 (T5HO) 28 (T5) 32 (T8) 54 (T5HO)	Volts 1=120v 7=277v B=Univ	Ballast K2Y (T8) K4Y (T8) S2Y (T5HO) S4Y (T5HO) N2Y (T5)	Color* B=Black W=White P=Bronze	Options 2C=2 Circuit 3C=3 Circuit F=Fused RB=Row Beginning RM=Row Middle RE=Row End PC=Photo Control Battery Back-Up Consult Factory for Availability

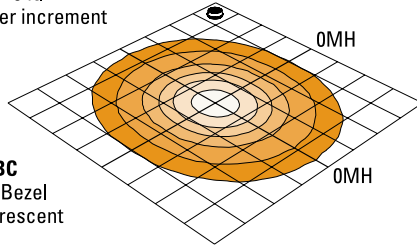


*Custom colors available. Consult factory.

Photometric Data: Round Fixtures



Mounting Height = 8 ft.
Gridscale = 8 ft. per increment

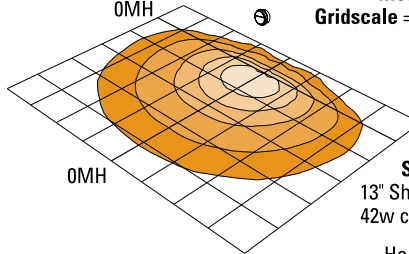


SR3SC142HFLW8BC
13" Shallow Open Bezel
42w compact fluorescent
Horizontal Footcandles
Lumen/Lamp = 3,200
Light Loss Factor = 1.00

CEILING MOUNT



Mounting Height = 8 ft.
Gridscale = 8 ft. per increment



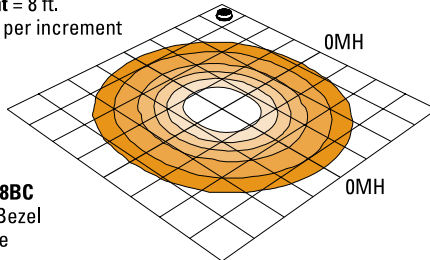
SR3SW142HFLW8EC
13" Shallow Closed Eyelid
42w compact fluorescent
Horizontal Footcandles
Lumen/Lamp = 3,200
Light Loss Factor = 1.00

WALL MOUNT

Iso-Footcandle Legend:

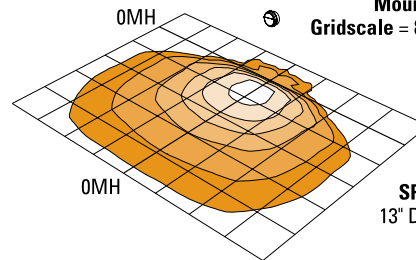


Mounting Height = 8 ft.
Gridscale = 8 ft. per increment



SR3DC50PMLW8BC
13" Deep Open Bezel
50w metal halide
Horizontal Footcandles
Lumen/Lamp = 3,400
Light Loss Factor = 1.00

CEILING MOUNT



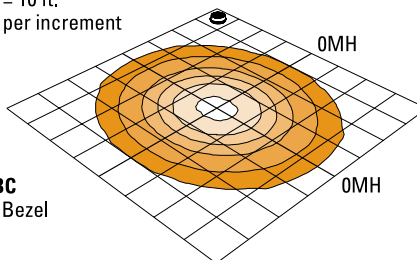
SR3DW50PMLW8EC
13" Deep Closed Eyelid
50w metal halide
Horizontal Footcandles
Lumen/Lamp = 3,400
Light Loss Factor = 1.00

WALL MOUNT

Iso-Footcandle Legend:



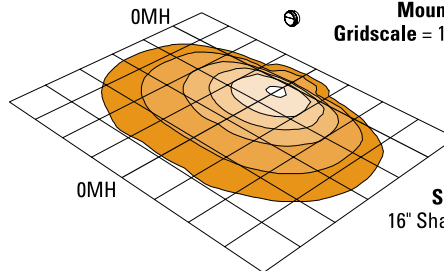
Mounting Height = 10 ft.
Gridscale = 10 ft. per increment



SR6SC70PMLW8BC
16" Shallow Open Bezel
70w metal halide
Horizontal Footcandles
Lumen/Lamp = 4,750
Light Loss Factor = 1.00

CEILING MOUNT

Mounting Height = 10 ft.
Gridscale = 10 ft. per increment



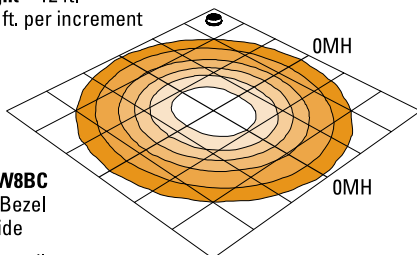
SR6SW70PMLW8EC
16" Shallow Closed Eyelid
70w metal halide
Horizontal Footcandles
Lumen/Lamp = 4,750
Light Loss Factor = 1.00

WALL MOUNT

Iso-Footcandle Legend:



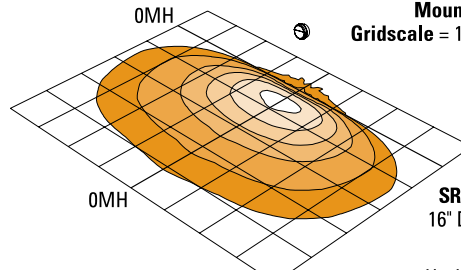
Mounting Height = 12 ft.
Gridscale = 12 ft. per increment



SR6DC100PMLW8BC
16" Deep Open Bezel
100w metal halide
Horizontal Footcandles
Lumen/Lamp = 7,600
Light Loss Factor = 1.00

CEILING MOUNT

Mounting Height = 12 ft.
Gridscale = 12 ft. per increment

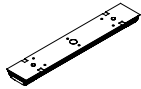


SR6DW100PMLW8EC
16" Deep Closed Eyelid
100w metal halide
Horizontal Footcandles
Lumen/Lamp = 7,600
Light Loss Factor = 1.00

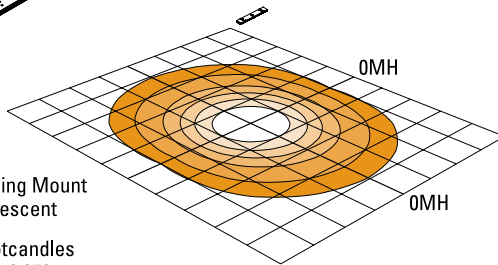
WALL MOUNT

Photometric Data: Linear Fluorescent

Mounting Height = 8 ft.
Gridscale = 8 ft. per increment



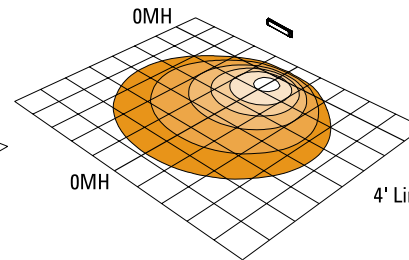
CEILING MOUNT



SA0232K2YW
4' Linear - Ceiling Mount
2-32w T8 fluorescent

Horizontal Footcandles
Lumen/Lamp = 2,850
Light Loss Factor = 1.00

WALL MOUNT



Mounting Height = 8 ft.
Gridscale = 8 ft. per increment



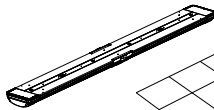
SA0232K2YW
4' Linear - Horizontal Mount
2-32w T8 fluorescent

Horizontal Footcandles
Lumen/Lamp = 2,850
Light Loss Factor = 1.00

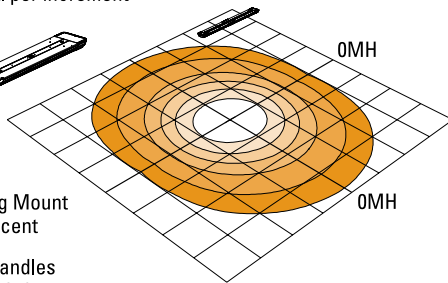
Iso-Footcandle Legend:



Mounting Height = 12 ft.
Gridscale = 12 ft. per increment



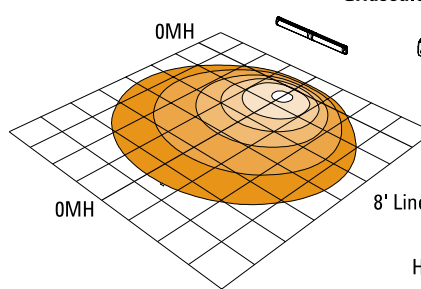
CEILING MOUNT



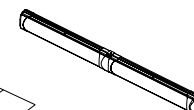
SAT0432K4YW
8' Linear - Ceiling Mount
4-32w T8 fluorescent

Horizontal Footcandles
Lumen/Lamp = 2,850
Light Loss Factor = 1.00

WALL MOUNT



Mounting Height = 12 ft.
Gridscale = 12 ft. per increment



SAT0432K4YW
8' Linear - Horizontal Mount
4-32w T8 fluorescent

Horizontal Footcandles
Lumen/Lamp = 2,850
Light Loss Factor = 1.00

Iso-Footcandle Legend:



PHOTOMETRIC CONVERSION FACTORS

MOUNTING HEIGHT CONVERSION

FOOTCANDLE CORRECTION FOR 8 FT. MOUNTED FIXTURES

Multiply the following factors times the footcandle values from the iso-footcandle curves to change mounting heights.

NEW HEIGHT	6 FT	8 FT	10 FT	12 FT
FACTOR	1.78	1.00	0.64	0.44

MOUNTING HEIGHT FACTORS FOR OTHER THAN 08 FEET. USE TABLE OR:

$$\text{FACTOR} = \frac{64}{(\text{MOUNTING HEIGHT})^2}$$

FOOTCANDLE CORRECTION FOR 10 FT. MOUNTED FIXTURES

Multiply the following factors times the footcandle values from the iso-footcandle curves to change mounting heights.

NEW HEIGHT	8 FT	10 FT	12 FT	14 FT
FACTOR	1.56	1.00	0.69	0.51

MOUNTING HEIGHT FACTORS FOR OTHER THAN 10 FEET. USE TABLE OR:

$$\text{FACTOR} = \frac{100}{(\text{MOUNTING HEIGHT})^2}$$

FOOTCANDLE CORRECTION FOR 12 FT. MOUNTED FIXTURES

Multiply the following factors times the footcandle values from the iso-footcandle curves to change mounting heights.

NEW HEIGHT	10 FT	12 FT	14 FT	16 FT
FACTOR	1.44	1.00	0.73	0.56

MOUNTING HEIGHT FACTORS FOR OTHER THAN 12 FEET. USE TABLE OR:

$$\text{FACTOR} = \frac{144}{(\text{MOUNTING HEIGHT})^2}$$

WATTAGE CONVERSION

$$\text{FACTOR} = \frac{\text{EXISTING LAMP LUMENS}}{\text{PROPOSED LAMP LUMENS}}$$

This formula is for use within the same lamp source. Not for converting from one light source to another. (i.e. - metal halide to high pressure sodium)

Options and Accessories



Field-Installed Accessories:

Trim Ring

Installs to die-cast back housing and creates a flush, smooth transitional look. Includes a closed-cell neoprene rubber gasket that fits between the housing and inside lip of the trim ring. Provides a weather-tight seal and acts as an additional shock absorber as part of the S&S Shock and Seal System. Minimizes back pry point.

	Black	White	Bronze
VR3DB	13" Deep	VR3DW 13" Deep	VR3DP 13" Deep
VR6SB	16" Shallow	VR6SW 16" Shallow	VR6SP 16" Shallow
VR6DB	16" Deep	VR6DW 16" Deep	VR6DP 16" Deep

VRTOOL Vandal-resistant access tool for both round and linear series

Factory-Installed Options:

Round Series

- L** = Supplied with appropriate lamp.
- U** = Provided with UV reduced lamp (pulse-start MH).
- E** = Emergency battery backup for one compact fluorescent lamp.
- Q** = Quartz auxiliary standby. Provides light after a momentary power interruption knocks out the main HID lamp. Not for use with compact fluorescent systems.
- F** = Single- or double-fused (voltage required).
- T** = Die-cast housing is factory drilled for through-wiring conduit access. Cannot be used with Trim Ring accessory and not available in 13" shallow models.

Linear Fluorescent Series

F = Internal fusing

Row Mounting:

- Factory engineered to speed row mounting applications. When ordering, make note that all row mounting options require 1 RB and 1 RE style to begin and end the run. 1 or multiple RM styles can be used. For shorter runs, an RB will mount to an RE style unit.
- RB** = Beginning style for row mounting. Supplied with 1 end cap installed and 1 factory-installed joiner on the opposite end.
 - RM** = Middle style for row mounting. Supplied with 1 open end (no end cap) and one factory installed joiner.
 - RE** = End style for row mounting. Supplied with 1 end cap and 1 open end.

Emergency Back-up:

Consult factory for availability.



2345 Vauxhall Road
Union, NJ 07083
1-800-334-2212

www.stoncolighting.com
www.survivrseries.com