

# SoftVue™





# SoftVue™



**Surface  
Brightness**



**Luminance**

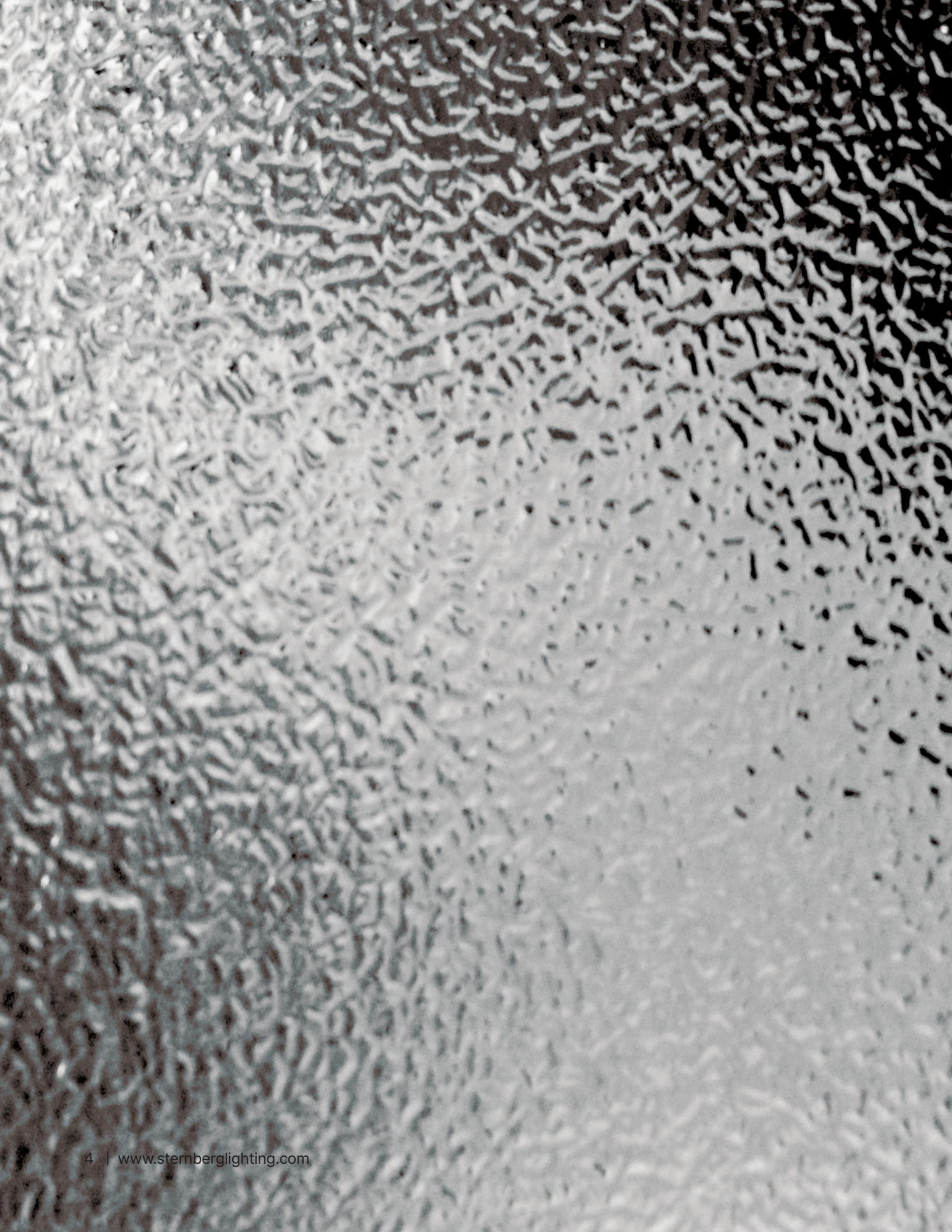


**Performance**

SoftVue™ lenses give a soft smooth effect to LED optical systems. By adding one of our special diffuse lens options, glare is mitigated and visual comfort restored. In pedestrian applications where LED light sources are visible at normal viewing angles glare is a real issue with clear lens lighting fixtures. Sternberg has come up with a way to decrease glare by up to 76%, just by adding a SoftVue™ lens. Light loss is minimal and the light distribution pattern is not significantly changed. Sternberg's SoftVue™ lens provides performance and visual comfort with LED optical systems.

## Features

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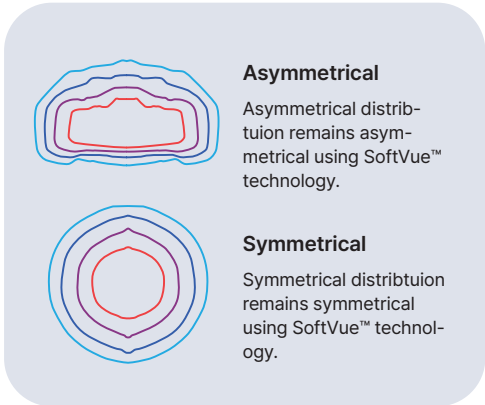


# Surface Brightness

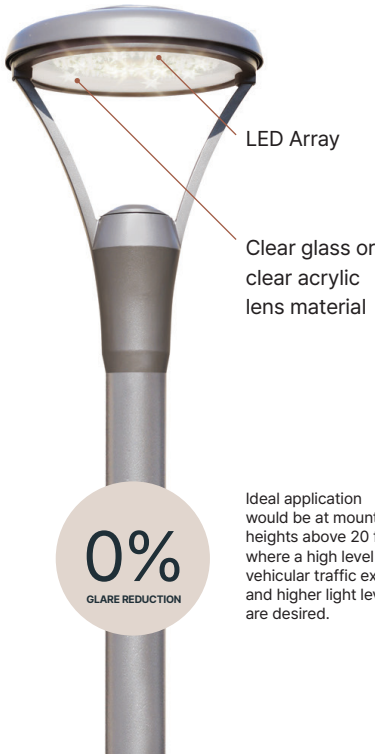
**Sternberg's SoftVue™ lens technology optimizes surface brightness to reduce disability and discomfort glare.**

The Problem: Discomfort glare is the sharp perception of light from an intense lighting point source like LED or Metal Halide. Very high luminous flux from a very small emitter package will cause discomfort when light rays directly enter the eye. The Iris will constrict down as tightly as possible causing stress on the eye.

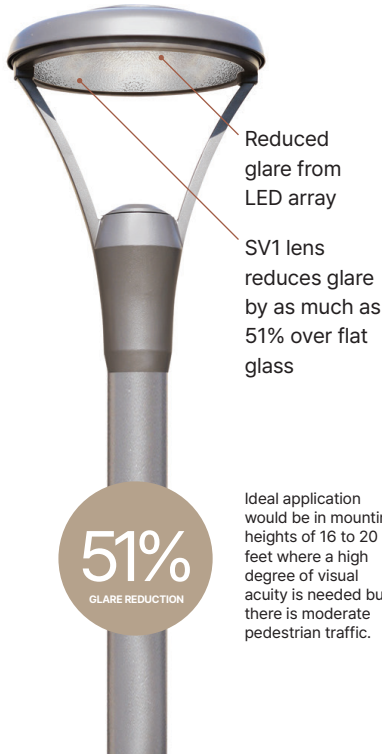
Disability glare is amplified discomfort glare. It not only causes discomfort but actually hampers the eye's ability to react appropriately to conditions where critical vision is needed. An example would be when an oncoming car has its High Beams on, the eye will close its pupil down in reaction to the high light level perceived. As a result visual acuity in the peripheral is negatively affected. Objects like people or animals on the side of the road, where less light exists, will not be as visible. Additionally, the aging eye does not react quickly to large changes in light level causing a loss of acuity in older drivers and potentially unsafe driving conditions for those around them.



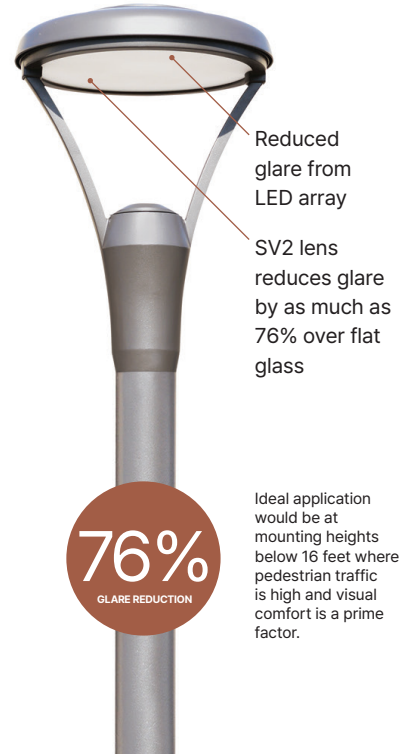
## CLEAR

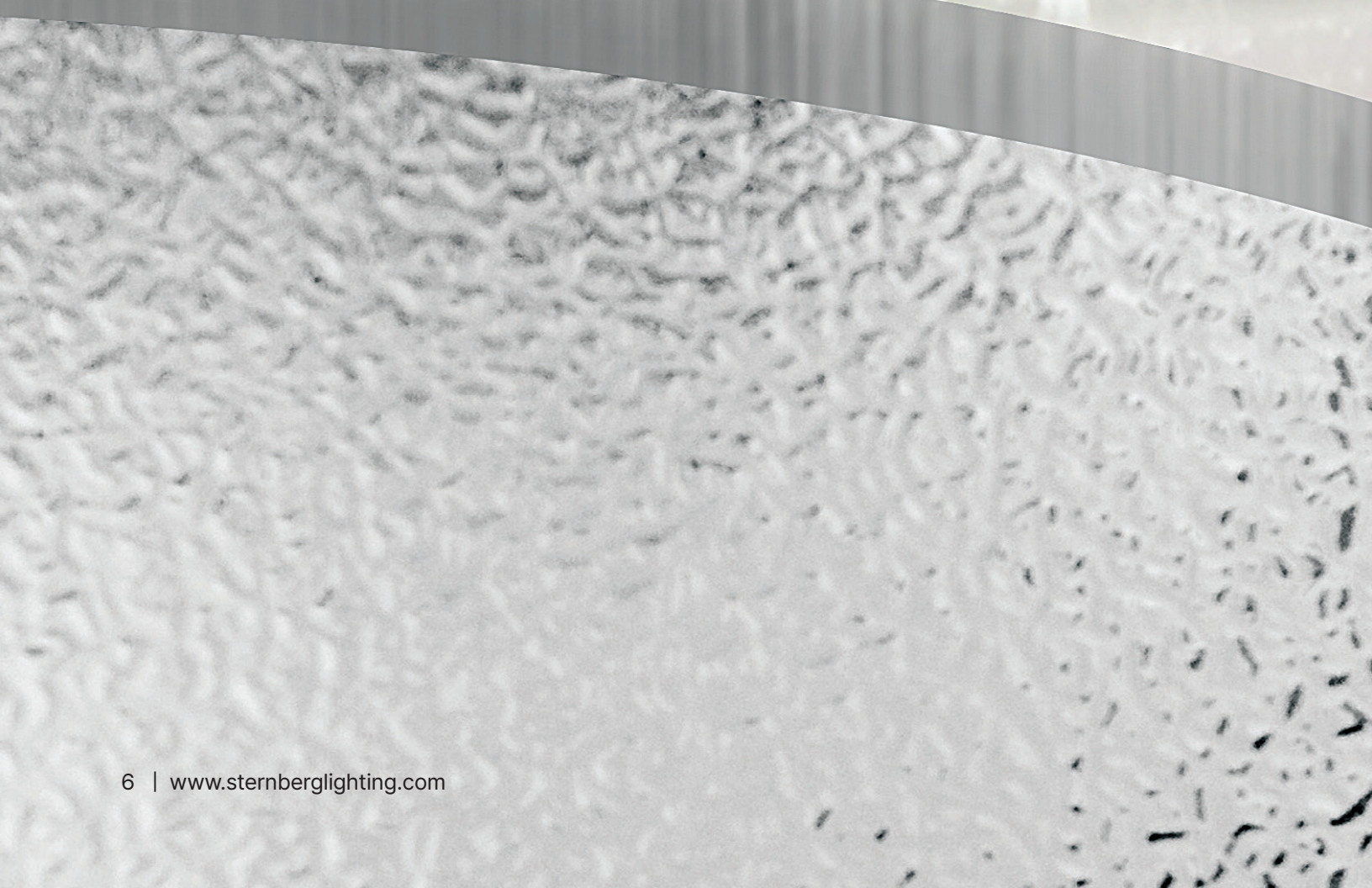
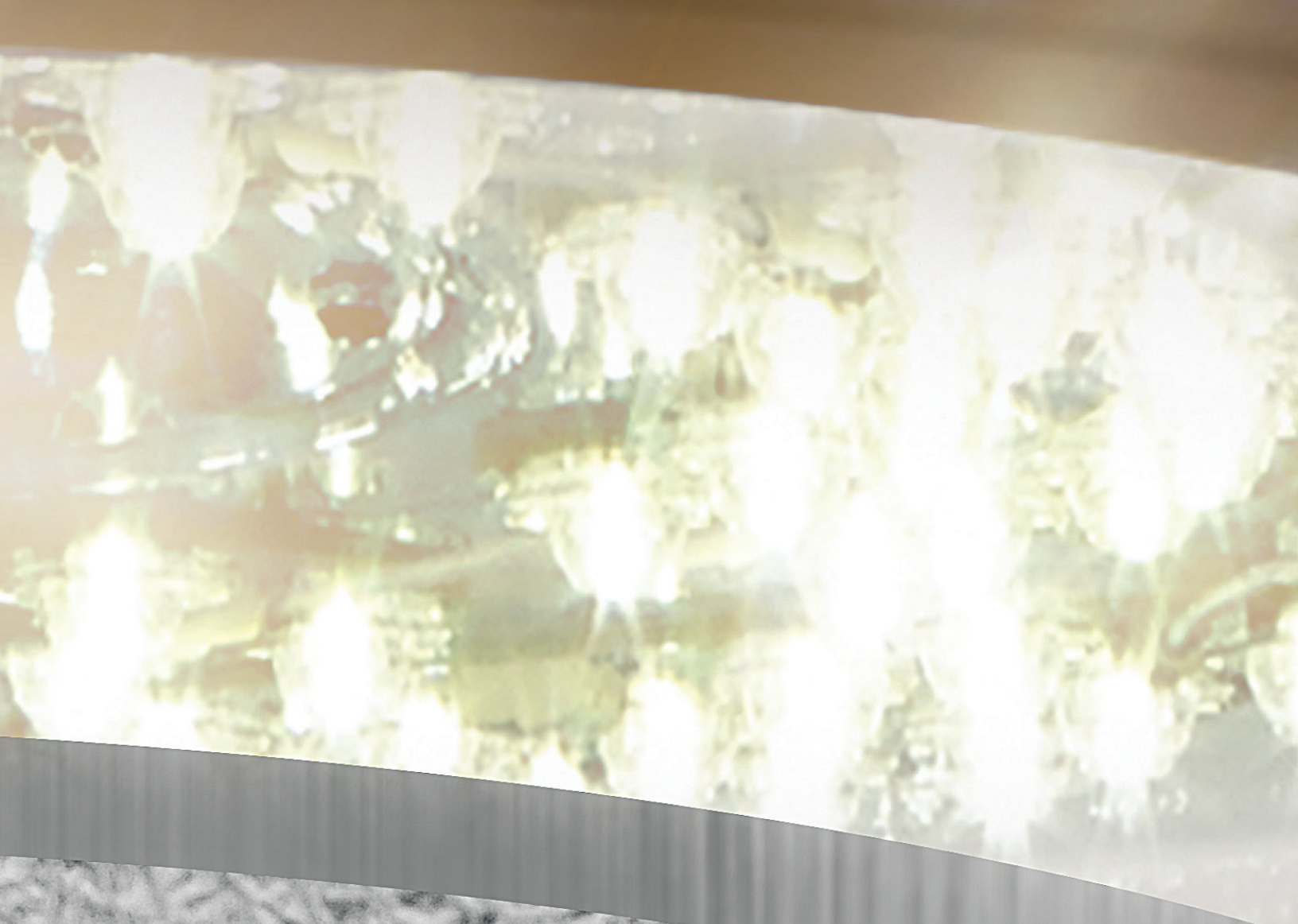


## SV1



## SV2



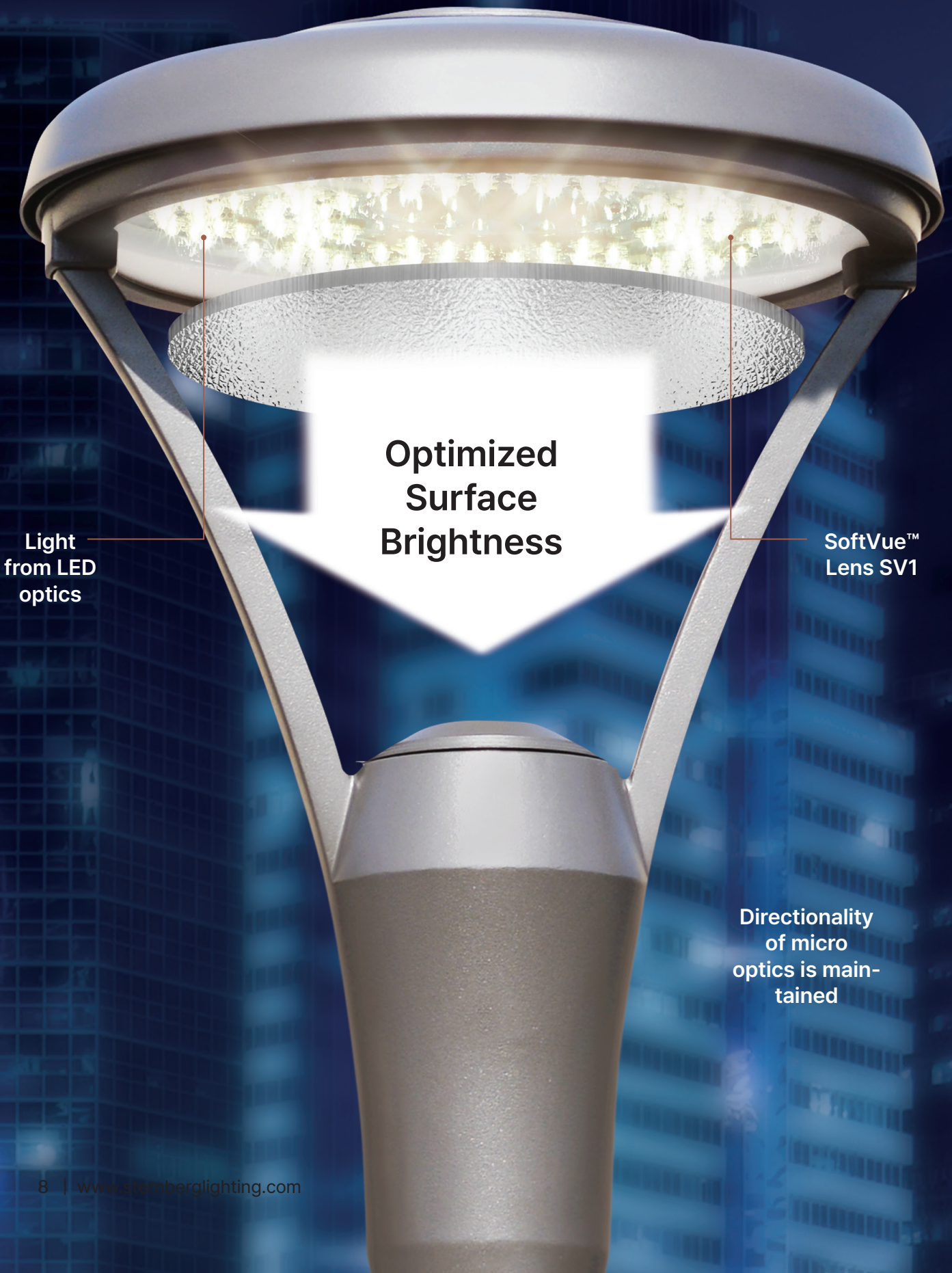


# Advantages

**The Solution:** SoftVue™ lens solutions take point source lighting and soften the light emitter image the eye sees by spreading the high level of luminous flux over a wide surface area thus softening the perceived light and lessening the impact of glare on the eye. Stress is relieved and visual acuity is restored. Two levels of glare mitigation are available. SoftVue™ 1 (SV1) and SoftVue™ 2 (SV2) lenses give choices in glare reduction for different project applications.

	LENSES		
	FG (Flat Glass)	SV1	SV2
<b>Front (70 Deg. Horiz)</b>			
Luminance (CD/M <sub>2</sub> )	299,900	145,800	71,690
Brightness decrease (from Flat Glass)	0%	51.4%	76.1%
<b>Side (120 Deg. Horiz)</b>			
Luminance (CD/M <sub>2</sub> )	94,900	50,720	46,640
Brightness decrease (from Flat Glass)	0%	46.6%	50.9%
<b>Back (180 Deg. Horiz)</b>			
Luminance (CD/M <sub>2</sub> )	33,540	26,240	22,940
Brightness decrease (from Flat Glass)	0%	21.8%	31.6%
<i>Note: Lumen depreciation from Flat Glass</i>	0%	16.6%	20.9%

See spec pages for product compatibility



Light  
from LED  
optics

**Optimized  
Surface  
Brightness**

SoftVue™  
Lens SV1

Directionality  
of micro  
optics is main-  
tained



# Performance

Ever turned up the sound a little too much when your favorite song comes on? At some point, a percentage of the sound becomes distortion, and now you've traded a quality listening experience for sheer volume. It's exactly the same with light. At some point, when the output of a luminaire is simply too bright, a percentage of that light becomes glare, and now you've traded a comfortable environment for one in which you can no longer effectively and comfortably see. Consequently, your activity in that space is impeded, whether it's walking, driving, nighttime construction, or anything else. It is important to note that glare brings not only discomfort and impeded ability to see, but understandably, can also create a space that is consequently less safe.

LEDs, by their nature, are very small but intensely bright light sources. Because of this, there is a real challenge to getting optimal light output from an LED luminaire, without generating discomfort or disability

glare. The question behind the design of our SoftVue™ lens was, can we provide an attractive tradeoff, whereby a relatively small amount of total light is sacrificed in order to provide a significant decrease in glare? Sternberg, and our customers, have been very pleased with the results of that effort. Compared to a clear glass lens, the SV1 lens offers the ability to reduce glare by over 50% with a loss of only about 16% of total lumen output – an impressive ratio of over 3:1. The SV2 lens offers a reduction in glare of over 75% by giving up only about 20% of total lumen output – a ratio of almost 4:1.

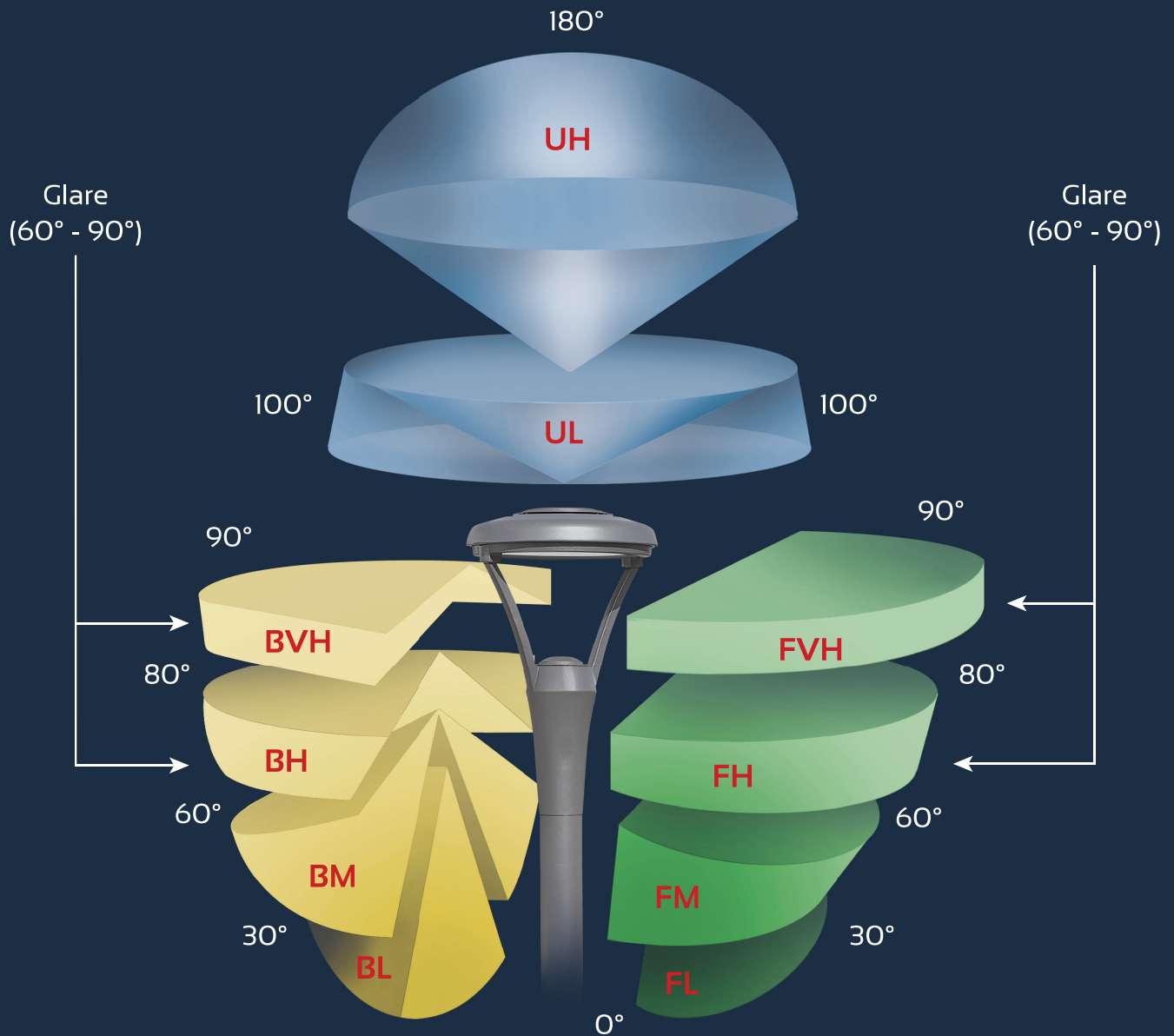
This is not to suggest that the site should have less lumens. Only that the lighting plan may need to be slightly tweaked, in terms of pole location, mounting height, or other variables, in order to take advantage of this tremendous tradeoff, and ensure that the area is well lit, safe, and comfortable.



See spec pages for product compatibility

# IESNA TM-15-11

Luminaire classification system for outdoor luminaires



**B** Backlight  
**U** Uplight  
**G** Glare

# Performance

## Example: ML760 photometric toolbox output with CA and SV1 lenses

- Total lumen output reduced by only 12%.
- BUG Rating improved from B2-U1-G2 to B1-U1-G1
- IES distribution remains at Type II short for each lens

## Example: ML760 Lumen output by zone, CA vs. SV1 lenses

(CA=clear acrylic, SV1= SoftVue™ 1)

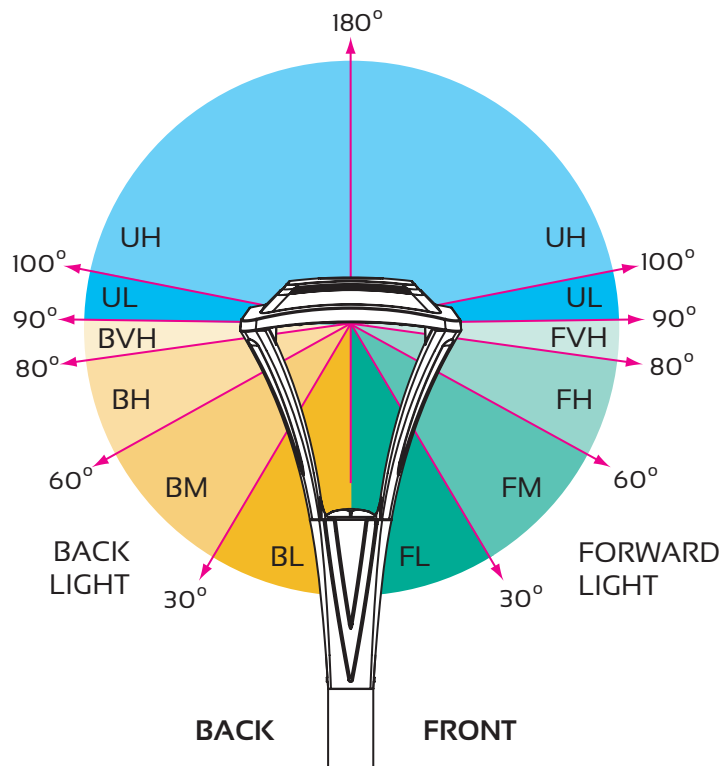
- Combined FH and FVH (front):
  - A. CA: 26.1%
  - B. SV1: 18.3%

- Combined BH and BVH (back):
  - A. CA: 12.6%
  - B. SV1: 18.3%

Total lumen output in the four sectors that account for Glare in the BUG Rating:

- CA: 38.7%
- SV1: 28.1%

Of the 12% drop in total lumen output, 11% came from Glare sectors. Additional note: Total uplight of less than 1% with either lens solution.





**Located in Roselle, Illinois  
Engineered, Tested and Assembled in the USA!**

Sternberg has created a legacy of old world craftsmanship that dates back to the company's inception in 1923. The work ethic and product innovations that made the early Sternberg company successful are still being practiced by our employees today. Our dedicated staff, attention to detail, and quality production processes are what make Sternberg a world class company.

Sternberg serves the municipal, landscape, higher education and commercial markets providing efficient and cost effective lighting solutions to the outdoor market.

See our complete catalog online at:  
[www.sternberglighting.com](http://www.sternberglighting.com)



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