

# PIX™ MRC

Application Guide

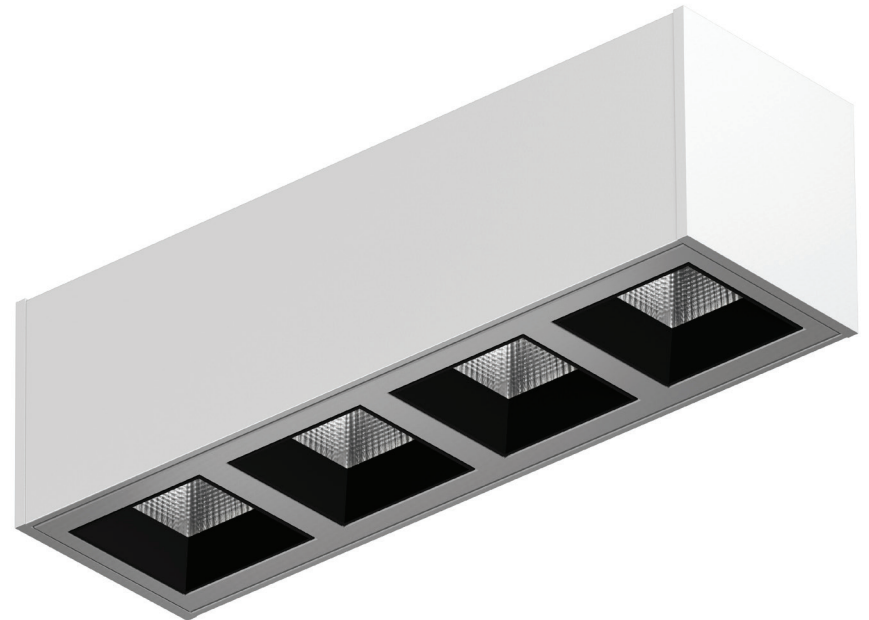
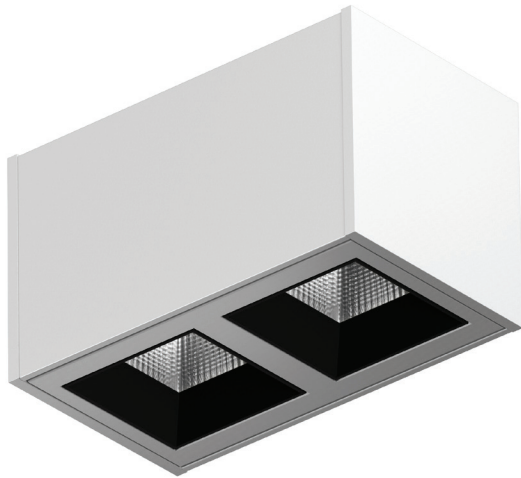
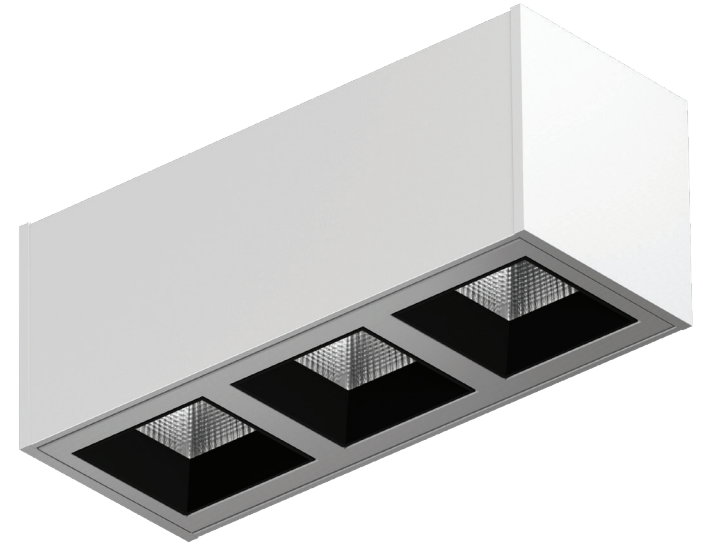


**selux**



### Piix™ MRC

For lighting designers who want more flexibility and control in their design with less glare, Selux offers the Piix™ MRC (Micro Reflector Cell). With Piix™ MRC, the focus is on the lighting rather than the fixture. The optics are developed to be a subtle presence of the overall design for corporate, residential, or hospitality spaces.



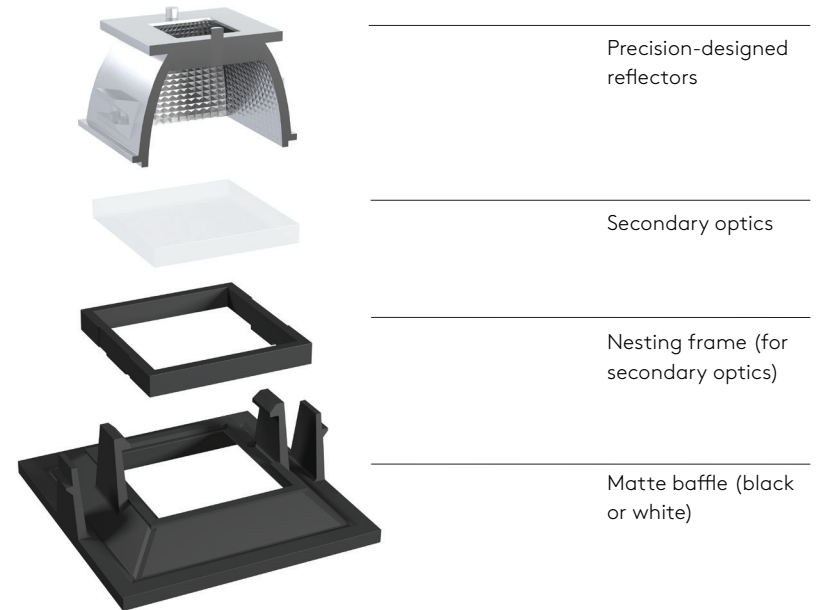
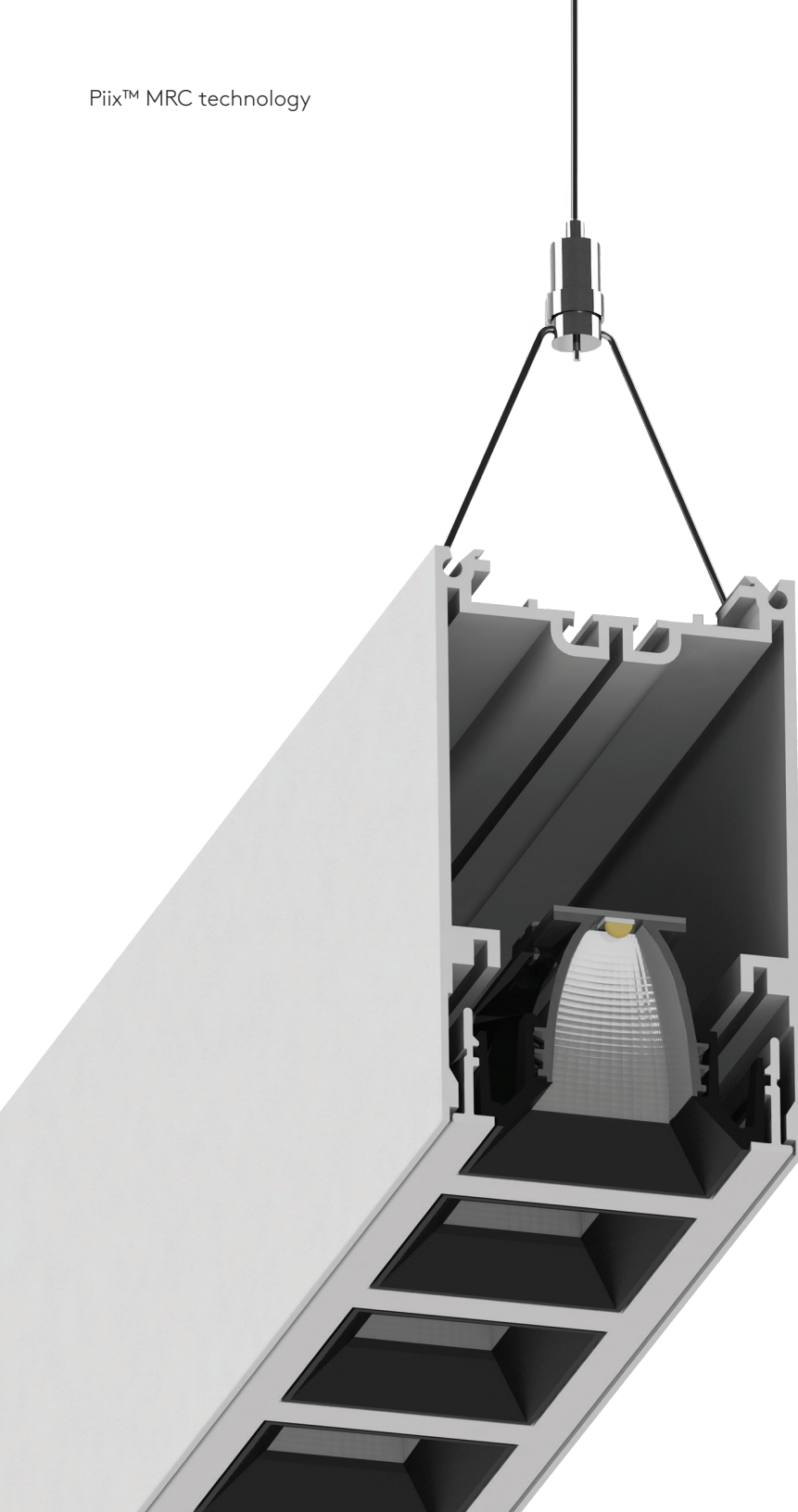
## Product Specifications

Mounting:	Recessed, Pendant (stem or cable), Surface, Wall (1x1 only)
Construction:	Linear and Intervals – extruded aluminum body and faceplate, injection-molded baffle and reflectors Arrays – cast housings or extruded aluminum body; aluminum faceplate
Light engine:	2700K, 3000K, 3500K, 4000K; 90+CRI; Direct or Direct/Indirect (Arrays is Direct only); Efficacy up to 106lm/W; UGR values <13
Driver:	RoHS compliant constant current LED driver, 0-10V dimming, DALI, Lutron
Lifetime:	Reported lumen maintenance of 97.3% at 10,000 hours, 180 mA drive current and >55°C case temperature. Calculated L80 lumen maintenance of > 60,000 hours @ 25°C.
Project-Specific:	Optional secondary optics, separate switching, Emergency options, integral sensors, corners, custom configurations and mountings

Piix™ MRC technology

## Efficient, precise lighting *without glare*

Piix™ Micro Reflector Cell Technology (MRC) allows for efficient, precise lighting without uncomfortable high-angle glare. With the light source hidden deep within the housing, a “quiet ceiling” is created and the focus remains on the effect of the light within the space.



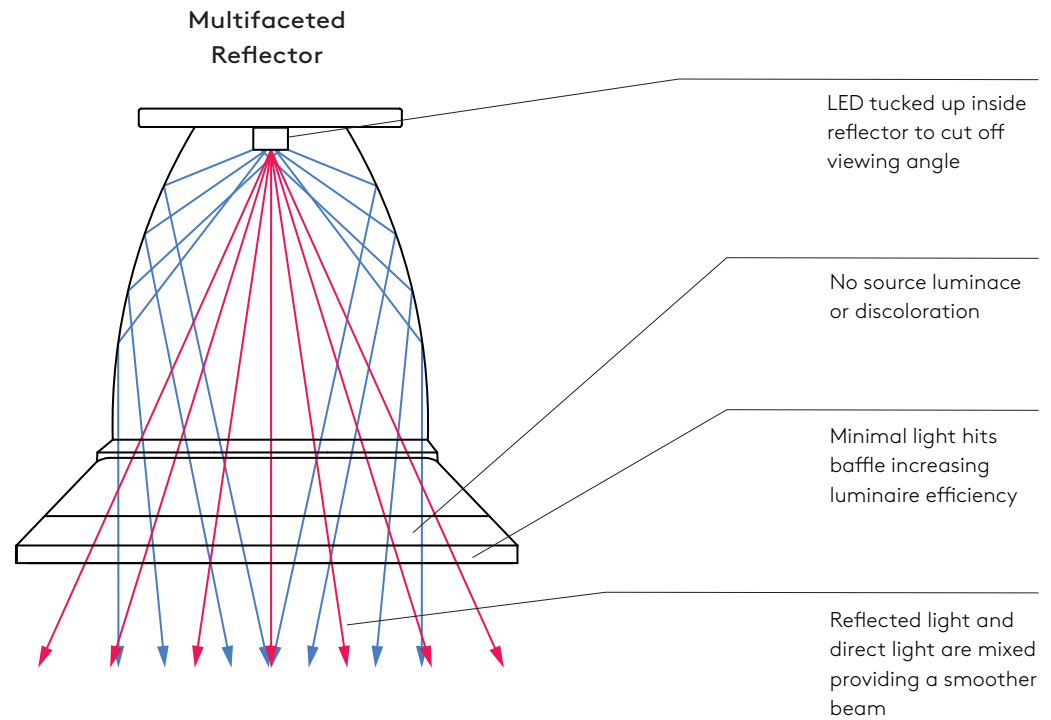


## MRC Technology

The Piix™ MRC utilizes a multifaceted reflector optical design to further reduce the view of the source creating ultimate visual comfort. By tucking the LEDs up inside the reflector, the source luminance, or brightness is reduced. MRC technology with the multifaceted reflector provides the highest color quality ensuring no discoloration. It also uses the reflected light from the reflector and the direct light from the source to produce superior beam mixing which provides smoother beam patterns and better uniformity on the task plane.

### Advantages to MRC technology

- Source luminance is lowered by tucking the LED up inside the reflector
- Improved beam uniformity
- Higher quality of light and less discoloration
- Precision through multi-facets in reflector

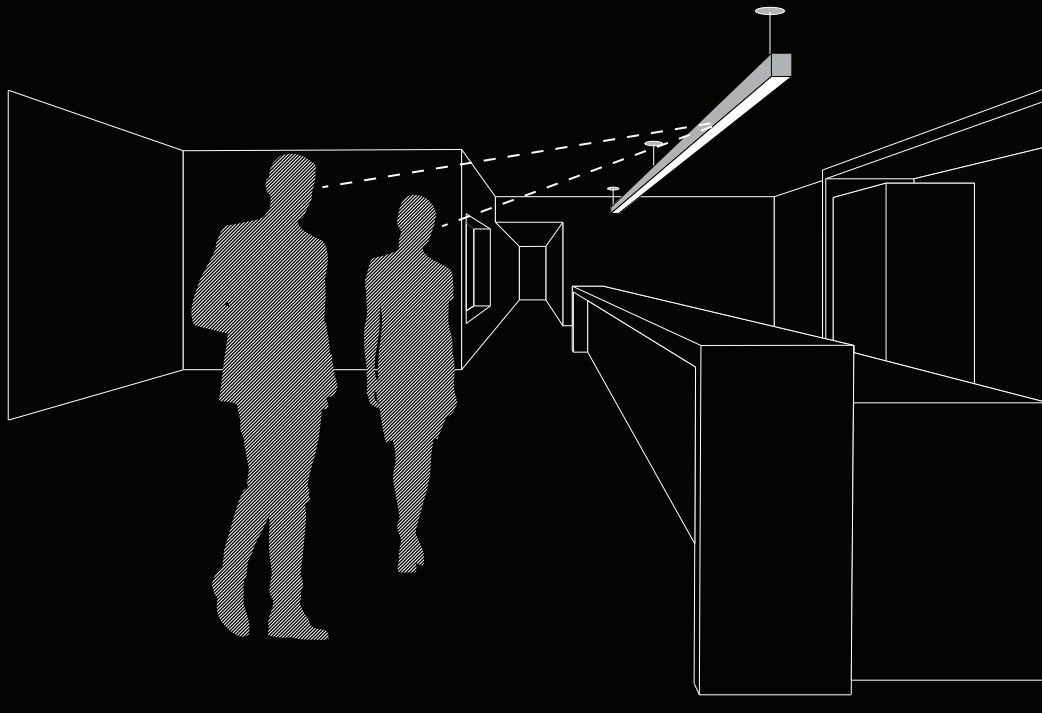


## Producing subtle light that is visually comfortable

Unified Glare Rating (UGR) is a method of calculating glare from luminaires. The UGR helps to determine how likely a luminaire is to cause discomfort to those around it, taking into consideration room reflectances, users point of view, eye level, location of the luminaire, and location of the measurement point. When comparing the UGR of different products, be sure to compare them in the same setting, as the environment and the viewing angle affect the UGR value. UGR values typically range from 10 to 30, where a high value indicates significant discomfort glare, and a low value indicates little to no discomfort glare. A UGR under 13 will create no noticeable glare.

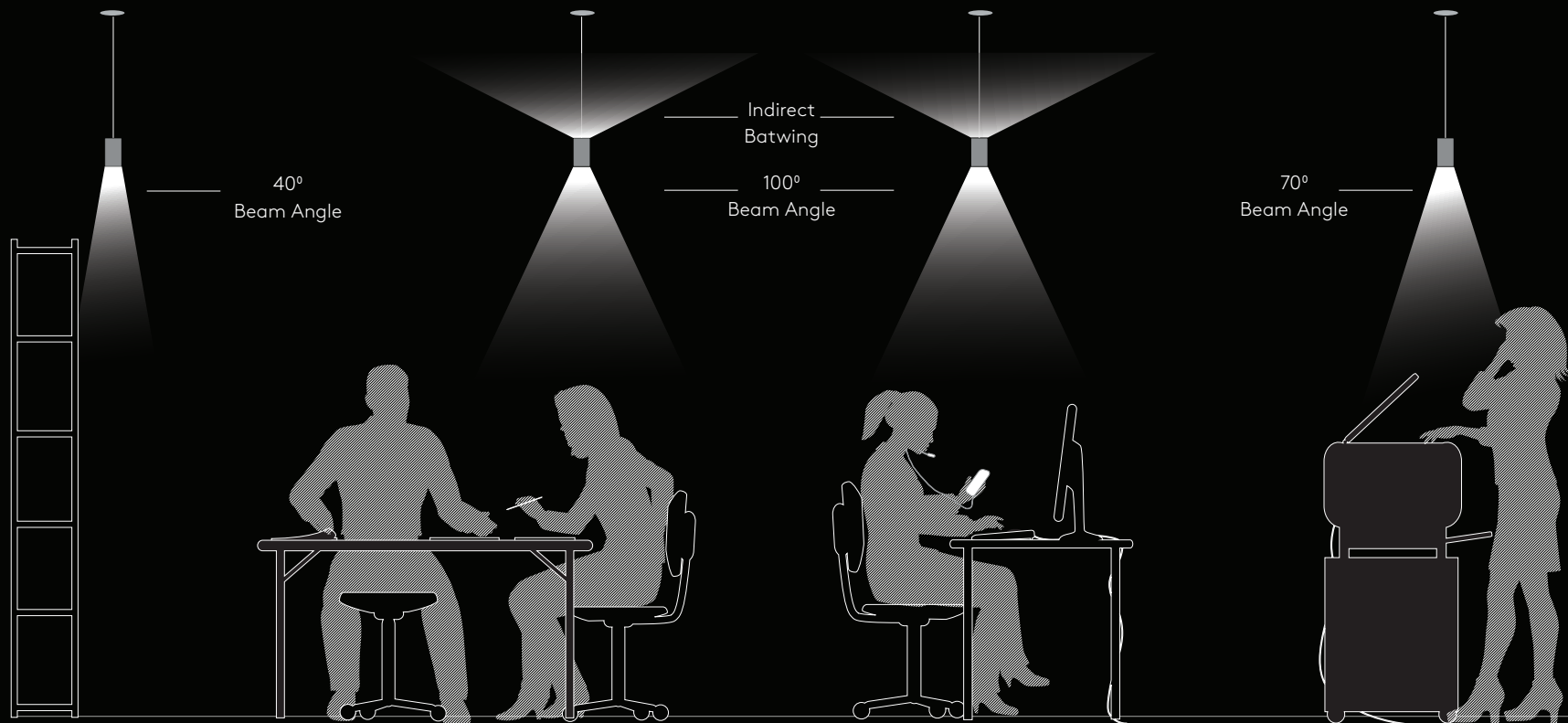
Optic (Beam Angle)	Secondary Optic	UGR
10° (20° Beam)	No secondary optic	10
	Clear Lens	10
	Lightly Diffuse / Diffuse Lens	10
20° (40° Beam)	No secondary optic	10
	Clear Lens	<b>10</b>
	Lightly Diffuse / Diffuse Lens	10
35° (70° Beam)	No secondary optic	10
	Clear Lens	<b>10</b>
	Lightly Diffuse / Diffuse Lens	<b>11</b>
50° (100° Beam)	No secondary optic	12
	Clear Lens	11
	Lightly Diffuse / Diffuse Lens	12

UGR Analysis: 40' x 40' x 10' space, Piix™ MRC 10' AFF, 80-50-20 reflectances and maintained 30fc avg

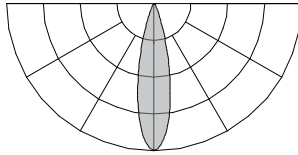


## Light where you need it

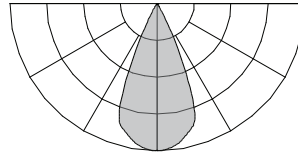
With a variety of optical distributions and the MRC technology, the Piix™ MRC family is ideal for a wide array of general illumination and task lighting applications. With precise light control, incredibly low glare, and a minimalistic form, Piix™ MRC is the perfect choice for educational, corporate, hospitality, healthcare, and residential applications.



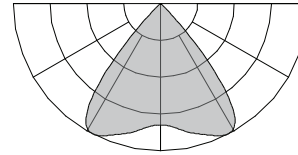
## Direct Distributions



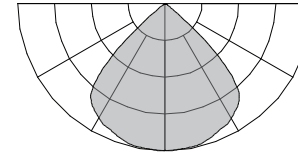
10° Reflector | No Lens  
Beam Angle: 20°  
UGR: 10



20° Reflector | No Lens  
Beam Angle: 40°  
UGR: 10

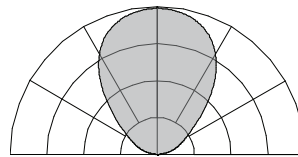


35° Reflector | No Lens  
Beam Angle: 70°  
UGR: 10

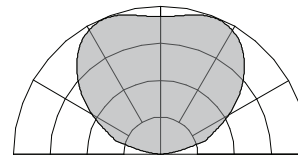


50° Reflector | No Lens  
Beam Angle: 100°  
UGR: 12

## Indirect Distributions

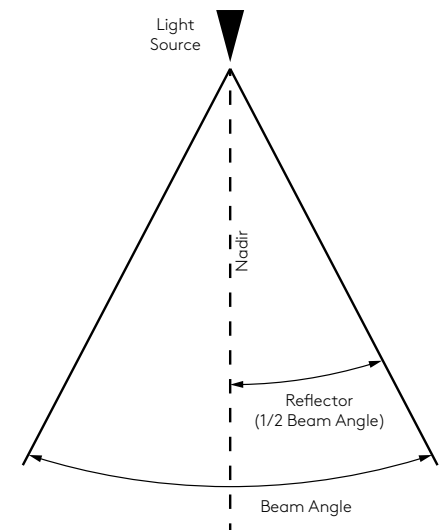


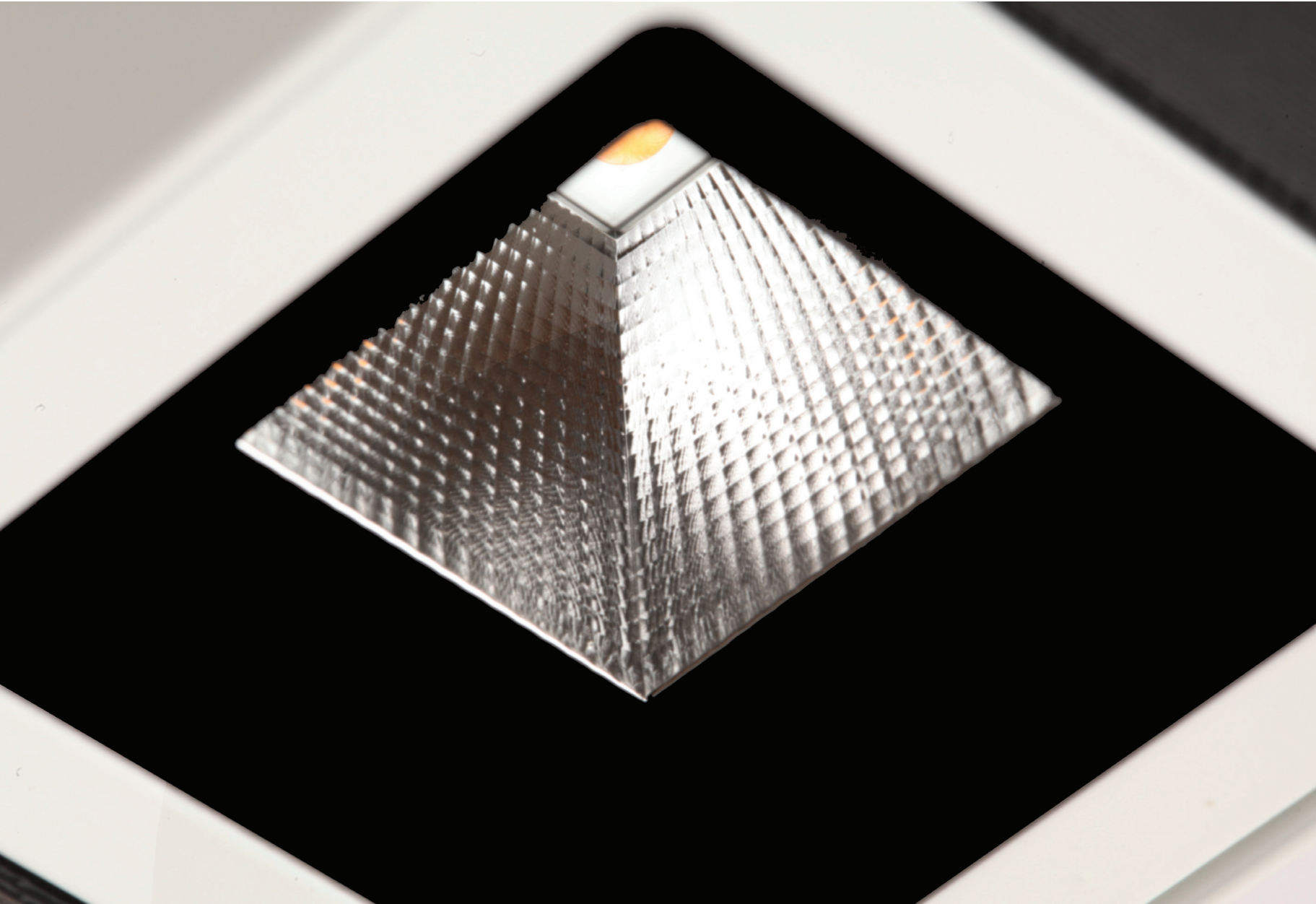
Indirect Diffuse Optic



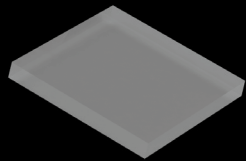
Indirect Batwing Optic

Pair the Indirect Diffuse or Indirect Batwing optic with any of the direct distributions to create comfortable task and ambient lighting.



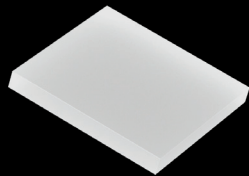


## Optional Secondary Optics, installed at the factory, allow for further control of the distribution



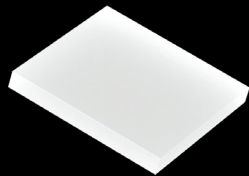
### Clear Lens (CL)

Use the Clear Lens (acrylic) where the application requires shielding of the LED source; provides Damp Location rating.



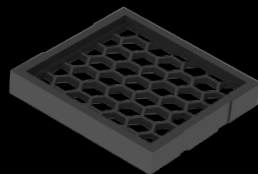
### Lightly Diffuse Lens (LF)

Use the Lightly Diffuse Lens (acrylic) where the application requires a softer beam edge; provides Damp Location rating.



### Diffuse Lens (DL)

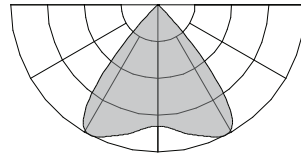
Use the Diffuse Lens (acrylic) where the application requires an even softer beam edge; provides Damp Location rating.



### Hexcell Louver (HX)

Use the Hexcell Louver (injection-molded polycarbonate) to minimize perceived lamp brightness and shield the light source, reducing glare even further.

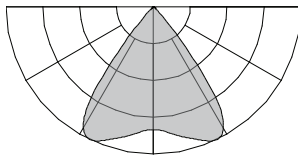
## Piix™ MRC without Secondary Optic



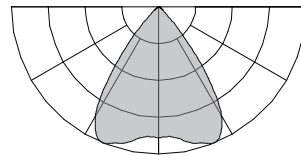
35° Reflector | No Lens  
Beam Angle: 70°  
UGR: 10

See the polar graphs below to understand how each secondary optic affects the standard distribution.

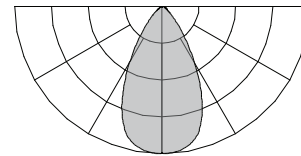
## Piix™ MRC with Secondary Optic



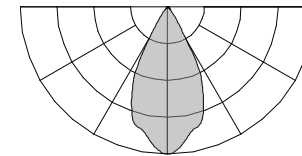
35° Reflector | Clear Lens  
UGR: 10



35° Reflector | Lightly Diffuse Lens  
UGR: 11



35° Reflector | Diffuse Lens  
UGR: 11



35° Reflector | Hexcell Louver  
UGR: 10



## Optical Flexibility and Cost Savings with Piix™ MRC Intervals

Piix™ MRC Intervals offers cost-savings compared with straight linear luminaires. Place 3 or 6 cell groups of Micro Reflector Cells wherever you need them in a run, allowing these precise distributions to be even more exact throughout the space. Combine these groups of cells with the Indirect Diffuse Optic or the Indirect Batwing Optic of Piix™ MRC Intervals for additional light and illumination on the ceiling.

Consult the factory for project-specific cell groups and locations.

### Advantages to Piix™ MRC Intervals

- Save on installation and luminaire cost
- Maintain one continuous luminaire and put light where you want it
- Create beautiful lighting within a space using direct and indirect optics



## High Color Rendition

CRI is a metric that observes how closely electric light can render colors like the sun, using eight (8) color samples. With high CRI lighting, colors are more vibrant, textures and finishes pop, and the lit environment becomes more lively. In addition to CRI, TM-30, a more comprehensive and better metric for color rendering, can be used. TM-30 is a metric that observes how closely electric light can render colors, relative to natural sunlight, and uses 99 color samples.

**Color Rendering Index, CRI** - how the observed light can render colors similar to the sun, using 8 color samples.

**Fidelity Index,  $R_f$  (TM-30)** - how the observed light can render colors similar to the sun, using 99 color samples.

**Gamut Index,  $R_g$  (TM-30)** - how saturated or desaturated colors are (how intense the colors are).

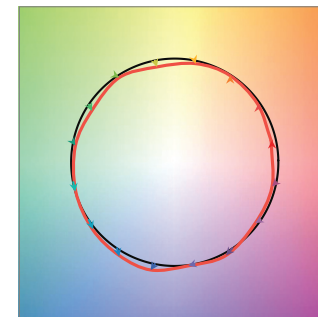
In combination with a high CRI value, Piix™ MRC offers a high fidelity index ( $R_f$ ) and high gamut index ( $R_g$ ). The CRI and TM-30 values for Piix™ MRC at 3500K are shown below. When creating a lighting design, attention should be paid to the Color Vector Graphic. A perfectly overlapping Color Vector Graphic indicates a light that perfectly matches the reference light (the sun).



Piix™ MRC  
CCT: 3500K  
CRI = 93

$R_f$  = 90  
 $R_g$  = 98  
 $R_y$  = 75

Color Vector Graphic





## Sleek, sophisticated and beautiful

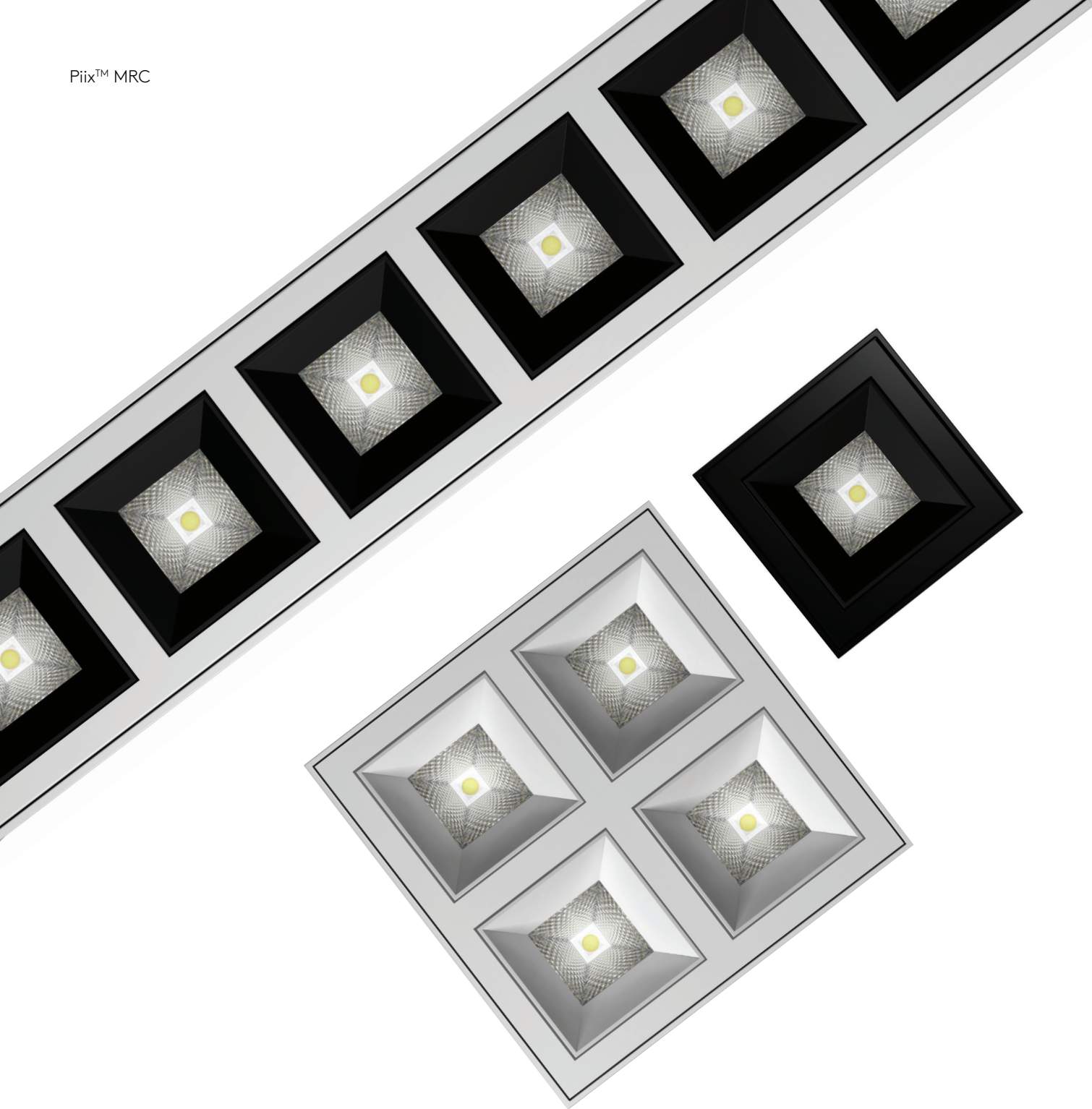
when used for task lighting over  
a reception desk



Piix™ MRC Array 2x2



Pix™ MRC



## WELL Building Standard® for glare control



The Piix™ MRC family meets the WELL building standard for glare control with a UGR of <19 in all available lumen outputs, primary optics, and secondary optics .

High Color Rendering,  
Low Glare, and High Efficacy

93 CRI | UGR as low as 10 | up to 111 lm/W



Piix™ MRC is Sleek and Versatile



Piix™ MRC Linear  
used for ambient lighting  
down corridor



Piix™ MRC Array  
used for general and  
task lighting

**Sleek, versatile, and efficient,** used in almost any space

Piix™ MRC is a sleek luminaire, only 2 ¼" in aperture, and has a notable efficacy up to 111lm/W. With the countless options available, Piix™ MRC can be used in almost any architectural space.

**Shapes and configurations** bring architectural environment to life

Use Piix™ MRC Linear to create various shapes and configurations to enhance and bring the architectural environment to life. Please consult the factory for your project-specific solution today.



## Design with Variety

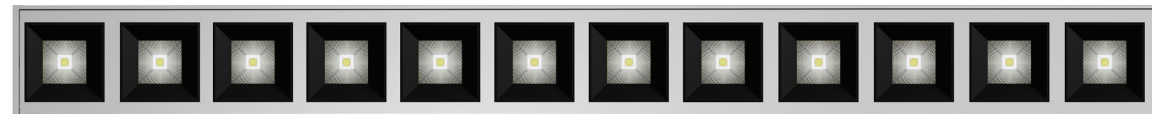
Piix™ MRC allows the designer to take control with an abundance of options. With a variety of LED engines, optics, baffle finishes, secondary optics, luminaire form factors, and finishes, you can create a space you've always imagined.



# Piix™ MRC Family Dimensions



**Piix™ MRC Intervals** - available standard in 3-Cell and 6-Cell configurations with a blank cover - consult factory for project specific configurations



**Piix™ MRC Linear** - available in continuous runs and configurations

# Piix™ MRC

## Technical Information

	Output <sup>1</sup>	Wattage <sup>1</sup>	Available CCTs <sup>2</sup>	Optics Refl. (Beam)	Secondary Optics	Mountings	Additional Options
Linear	Up to 1150 lm/ft	10.9W/ft	2700K 3000K 3500K 4000K Tunable White	10° (20°) 20° (40°) 35° (70°) 50° (100°)	Clear Lens Lightly Diffuse Lens Diffuse Lens Hexcell Louver	Recessed, Perimeter, Surface, Direct Wall, Direct/Indirect Wall, Direct Pendant, Direct/Indirect Pendant	Project-Specific Configurators, Sensor Options, Emergency Options

<sup>1</sup> Values calculated from a 4' fixture at 3500K, 90+CRI using 20° reflector, no secondary optics, black baffle, and DIM driver

<sup>2</sup> Consult factory for Tunable White

	Outputs <sup>1</sup>	Wattage <sup>1</sup>	Available CCTs	Optics Refl. (Beam)	Secondary Optics	Mountings	Additional Options
1-Cell Array	<u>192 lm</u> 332 lm	<u>1.8W</u> 3.5W	2700K 3000K 3500K 4000K	10° (20°) 20° (40°) 35° (70°) 50° (100°)	Clear Lens Lightly Diffuse Lens Diffuse Lens Hexcell Louver	Recessed, Surface, Direct Wall, Direct Pendant	Project-Specific Configurators, Sensor Options, Emergency Options, C-Channel Bars, Nailer Bars
2-Cell Array	<u>384 lm</u> 664 lm	<u>3.6W</u> 7W					
3-Cell Array	<u>576 lm</u> 996 lm	<u>5.4W</u> 10.5W					
4-Cell Array	<u>768 lm</u> 1328 lm	<u>7.2W</u> 14W					
6-Cell Array	<u>1152 lm</u> 1992 lm	<u>10.8W</u> 21W					
9-Cell Array	<u>1728 lm</u> 2988 lm	<u>16.2W</u> 31.5W					
2x2-Cell Array	<u>768 lm</u> 1328 lm	<u>7.2W</u> 14W					

<sup>1</sup> Values calculated from a 35G1 03-cell with 35K, 35° reflector, no lens, black baffle and DIM driver

	Output <sup>1</sup>	Wattage <sup>1</sup>	Available CCTs <sup>2</sup>	Optics Refl. (Beam)	Secondary Optics	Mountings	Additional Options
Intervals (3-Cell & 6-Cell)	<u>192 lm/cell</u> 332 lm/cell	<u>1.8W/cell</u> 3.5W/cell	2700K 3000K 3500K 4000K Tunable White	10° (20°) 20° (40°) 35° (70°) 50° (100°)	Clear Lens Lightly Diffuse Lens Diffuse Lens Hexcell Louver	Recessed, Perimeter, Surface, Direct Wall, Direct/Indirect Wall, Direct Pendant, Direct/Indirect Pendant	Project-Specific Configurators, Sensor Options, Emergency Options

<sup>1</sup> Values calculated from a 4' fixture at 3500K, 90+CRI using 20° reflector, no secondary optics, black baffle, and DIM driver

<sup>2</sup> Consult factory for Tunable White

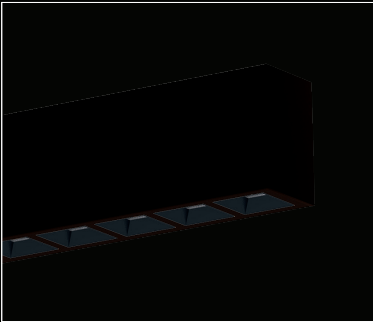
## Mix and match the baffles finishes with the metal finish to get the scheme you want



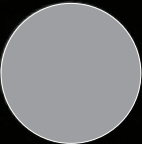
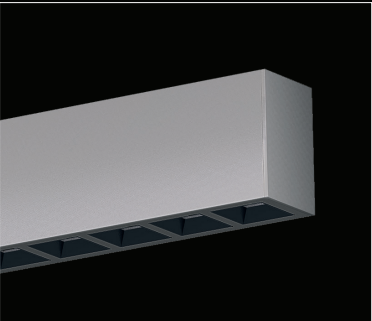
# Selux Metal Finishes



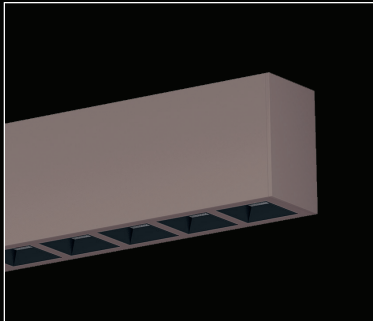
white



semi-matte  
black



silver



custom RAL  
finish

**Publisher**

Selux Corporation  
5 Lumen Lane  
Highland, NY 12528  
[www.selux.us](http://www.selux.us)

**Edited by (responsible)**

Selux Corporation

**Concept and Design**

Selux Corporation  
[www.selux.us](http://www.selux.us)

**Print**

Selux Corporation  
5 Lumen Lane  
Highland, NY 12528

Selux is a registered trademark of the Selux Corporation.  
Errors accepted and subject to change due  
to technical modifications. For conditions of sale  
and delivery please refer to [www.selux.us](http://www.selux.us).

The use of the text and images, even in part, is  
in breach of copyright without the consent of  
the Selux Corporation and punishable. This also applies to  
copies, translations, microfilming and processing  
with electronic systems.

05/2024

