



neoray™

STRAIGHT & NARROW 22 / 23

Narrow Aperture LED & Fluorescent Lighting System

Innovation you can rely on™

 **COOPER** Lighting

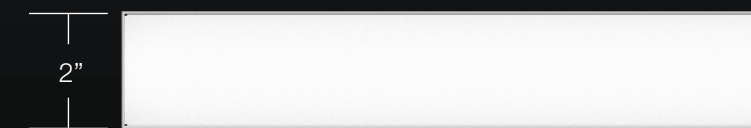


STRAIGHT & NARROW

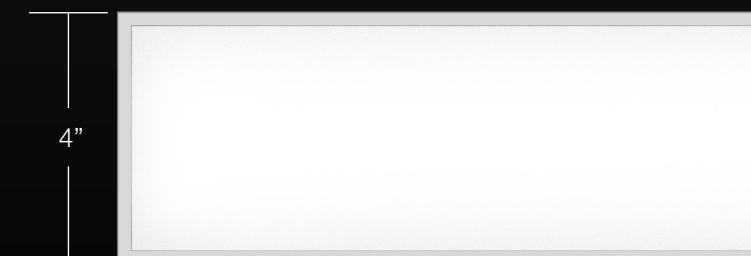
22 / 23

Narrow aperture, unlimited flexibility.

Since 1942 Neo-Ray has provided precision luminaires with a refined architectural sensibility. Driven by performance and a clean modern aesthetic, the Straight & Narrow series 22 and 23, available in Fluorescent or LED, represent the ultimate in simplicity; a thin line of light. With virtually unlimited applications, the Straight & Narrow family allows architects and designers the freedom to experiment with their designs without exceeding ever decreasing energy budgets.



Series 22



Series 23

Form follows performance

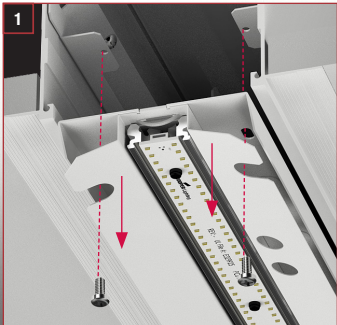
Designed from the inside out, the Straight and Narrow family elegantly synthesizes premium materials with industry leading technology. Utilizing precision optics with the highest quality reflective materials, the Series 22 & 23 provides unmatched performance in an elegant, fully extruded profile. The Straight & Narrow luminaires allow easy access from below the plenum, requiring only standard tools for maintenance. Compatible with nearly every ceiling type in recessed, pendant and surface mount, the Series 22 and 23 provide exceptional design flexibility with industry leading performance.

Solutions Integrated

In conjunction with Cooper Controls, Neo-Ray's Straight and Narrow family easily integrates into any digitally controlled application. With control packages by Greengate, Illumin and now Fifth Light, Cooper Controls and Neo-Ray can provide integrated control solutions from a private office to an entire building campus.



Serviceability



Fully accessible from below the ceiling plenum for maintenance and easy upgrades.

Robust Housing



Housings are made of lightweight, durable 6063 extruded aluminum. All components are RoHs compliant and fully recyclable.

Performance Optics



High reflectance optical materials with fully recyclable aluminum substrate to provide uniform illumination.

Ultimate Versatility



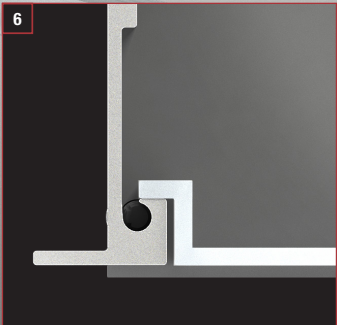
Available in T5, T5HO, T8 and LED, the Straight and Narrow series provides multiple lumen and wattage options.

Precision Alignment



Alignment pins and engineered joining system keep luminaires straight and make installation easy.

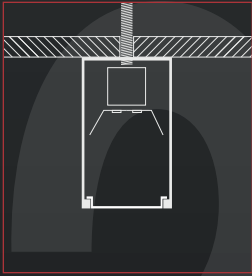
Lens Options



With a variety of louvers and lenses, Series 22 and 23 can be installed in virtually every surface to match any aesthetic.

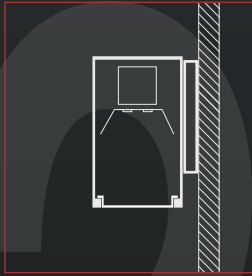
Straight & Narrow Family

Surface



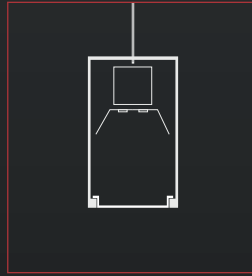
22 DS

Wall

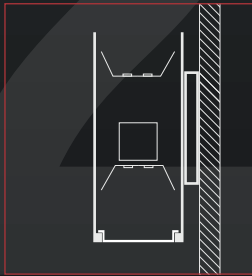


22 DW / IW

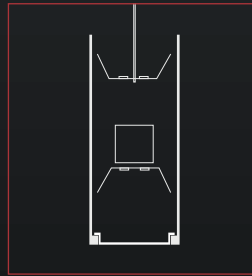
Pendant



22 DP / IP



22 DIW



22 DIP

Recessed

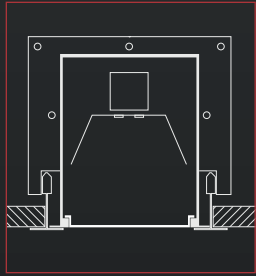


22DR ETG
(15/16" Grid)

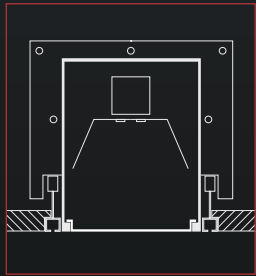


22DR STG / FTG
(9/16" Slot / 9/16" Standard Grid)

Recessed



23DR ETG
(15/16" Grid)

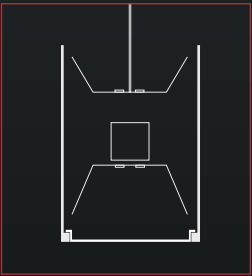


23DR STG / FTG
(9/16" Slot / 9/16" Standard Grid)

Pendant

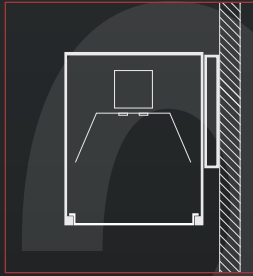


23 DP / IP

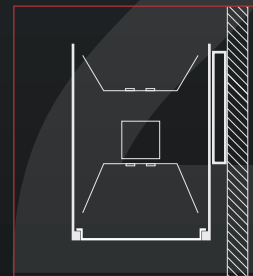


23 DIP

Wall

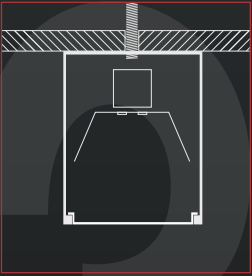


23 DW / IW



23 DIW

Surface



23 DS

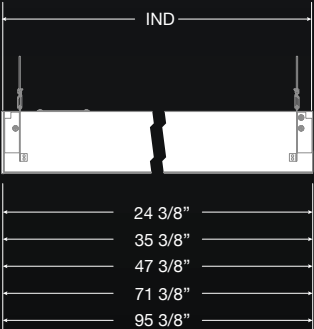


Flexibility in design and source

Representing the ultimate in design and technological flexibility, The Straight and Narrow series is available in all mounting applications whether LED or Fluorescent. No matter the end goal of the designer; be it maintenance, power density, budget, or aesthetics, the Series 22 and 23 adapts to any requirement.

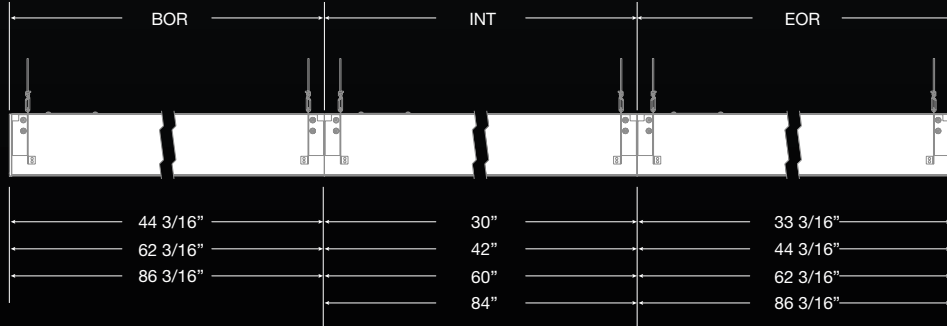
Straight & Narrow Family

Individual Luminaires

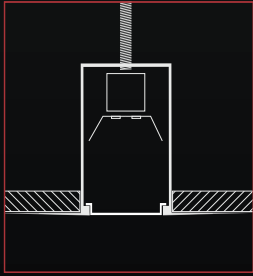


Both fluorescent and LED luminaires are available in individual lengths of 2, 3, 4, 6 and 8 feet. For configurable runs, fluorescent luminaires utilize 4" lamps staggers to ensure uniform illumination to the nearest foot. LED luminaires utilize Cooper lighting's most advanced LED technology and are available to the nearest foot.

Configurable Runs



22DR SR
Flanged Sheetrock



22DR FSR
Flangless Sheetrock



23DR SR
Flanged Sheetrock



23DR FSR
Flangless Sheetrock



23XR
Asymmetric Recessed

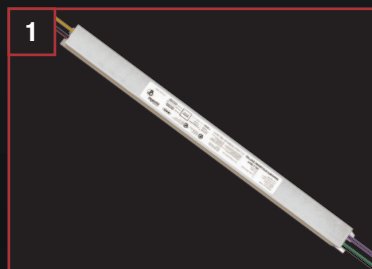


COOPER Controls



Cooper Controls brings energy savings, control, and addressability to Neo-Ray

The future of lighting lies in smart controls in combination with smart light fixtures. From small private offices to large-scale building management systems, Cooper Controls has a fully integrated solution for any project. Cooper Controls now offers a complete line of digital addressable control products as part of the Fifth Light brand which ensures 2-way communication with every component in the building. Fifth Light hardware consists of multi-sensors, user interfaces, personal controls, ballasts, drivers, and more. Fifth Light also offers a wide array of software that can work with VOIP phones, computers, tablets, and mobile phones so you can have complete control at your fingertips.



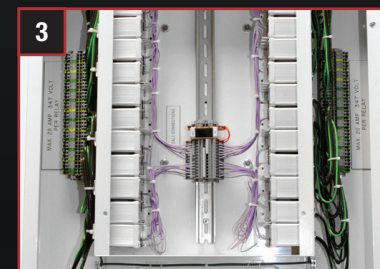
The Controls are Inside

Fifth Light dimmable ballasts and drivers provide continuous dimming control along with programmable group and scene settings. The ballasts and drivers can even report the lamp status through the Digital Addressable Lighting Interface (DALI).



Sensors

The Fifth Light Multi-Sensor allows for daylight harvesting, occupancy detection, and temperature control in a single unit. The DALI communication bus can even communicate to most standard mechanical building management systems.



Scalable Panels

Fifth Light Lighting Control Panels (LCP) are scalable and modular in order to accommodate any lighting application. The LCP can communicate on a shared IP network for a fully converged solution.



Control on your Computer

Fifth Light Lighting Management Software (LMS) allows you to manage large lighting systems through an easy to use web interface. The graphical interface allows for visual control over which lights are being controlled. The LMS can even allow you to control multiple facilities from a single web page.



Control on your IP Phone

Fifth Light VOIP Lighting Software turns your telephone into a versatile lighting control device. Easily adjust the light levels on a single fixture or multiple fixtures from the key pad or touch screen. The VOIP Light Software is ideal for conference rooms, offices, and common areas.



Control at your Fingertips

Fifth Light Mobile Lighting Software provides advanced control and sophisticated management of the lighting system in the palm of your hand using your smart phone or tablet. Set light levels, track energy consumption, and receive status reports using native applications running on your mobile device.

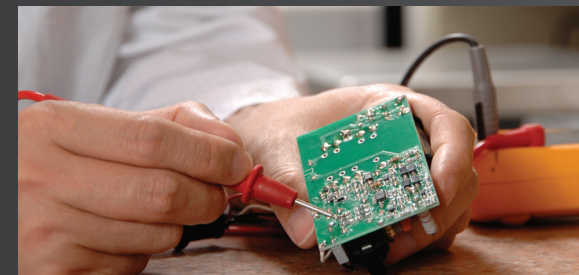
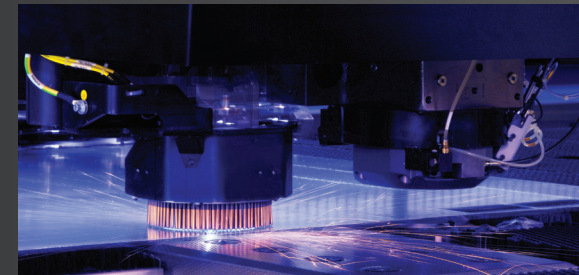
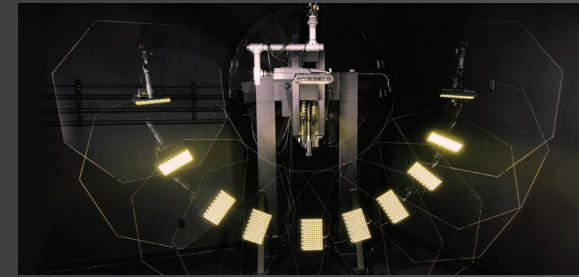
Innovation you can rely on™

neonay



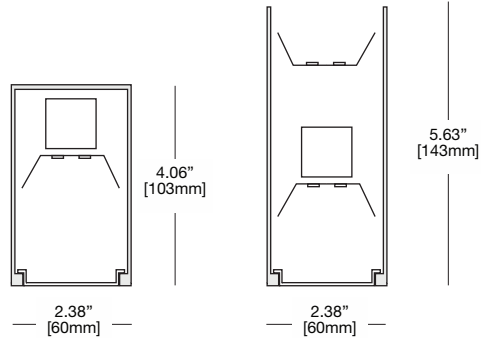
Cooper Lighting is at the forefront in transforming the lighting industry and setting an unmatched standard for **innovation** and **reliability**. No one will do more to empower you with the innovations, technology and resources you need to meet the challenges of the future.

- Integrated control options
- LM79 and LM80 compliant
- 0-10V dimming standard
- 50,000 Hour lifetime using TM-21-11 standards
- 85+ Color Rendering Index (CRI)
- 5 Year warranty including the LED and driver
- Independently certified photometric lab





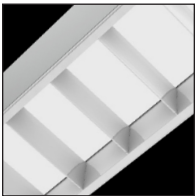
Series 22 Ordering



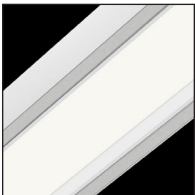
SHIELDING OPTIONS - FLUORESCENT ONLY



S91
High performance louver
S91P
High performance louver w/ acrylic overlay



S91W
White painted louver
S91WP
White painted louver w/ acrylic overlay



S22R
Satin white regressed lens

SHIELDING OPTIONS - LED OR FLUORESCENT

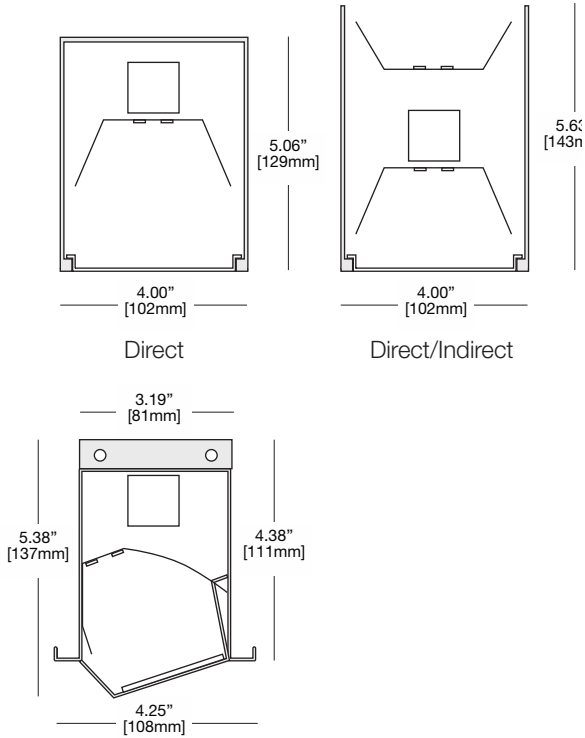


S92
Satin white lens
S92HT
Lay-in high transmission lens
S92HTS
Snap-in high transmission lens

FIXTURE			
S22		Series 22 - 2" Slot	
FIXTURE TYPE			
DP	Direct pendant		
IP	Indirect pendant		
DIP	Direct/indirect pendant		
DR	Direct recessed		
DS	Direct surface		
DW	Direct wall		
IW	Indirect wall		
DIW	Direct/indirect wall		
LAMP QTY - LED*		LAMP QTY - FLUORESCENT	
1L	Light level 1	1	1 lamp down
	1750 lms 28W	2	2 lamps down
2L	Light level 2	1x1	1 up / 1 down ¹
	2250 lms 37W		
*Per 4 foot fixture			
LAMP TYPE - LED		LAMP TYPE - FLUORESCENT	
L30	LED 3000K ³	T5	T5 normal output
L35	LED 3500K	T5HO	T5 high output
L40	LED 4000K ⁴	T8	T8 normal output
MOUNTING			
ETG	Recessed 15/16" Exposed T-grid		
FTG	Recessed 9/16" Exposed T-grid		
STG	Recessed Slot T-grid		
SR	Recessed Sheet rock		
SC	Pendant single cable		
SCETG	Single cable with ETG mount		
SCFTG	Single cable with FTG mount		
SCSTG	Single cable with STG mount		
SCST	Single cable with structure ceiling mount		
FIXTURE / RUN LENGTH			
2	2 foot fixture		
3	3 foot fixture		
4	4 foot fixture		
6	6 foot fixture		
8	8 foot fixture		
XX	Continuous run ⁵		
VOLTAGE			
1	120V		
2	277V		
U	Universal 120V-277V		
BALLAST OPTIONS			
EB	Electronic ballast		
DB	Dimming ballast		
CIRCUITING			
SI	Single circuit		
DU	Dual circuit		
FUSING			
GLR	Single circuit		
GMF	Dual circuit		
SHIELDING OPTIONS			
S91	High performance louver (fluorescent only)		
S91P	High performance louver w/ acrylic overlay (fluorescent only)		
S91W	White painted louver (fluorescent only)		
S91WP	White painted louver w/ acrylic overlay (fluorescent only)		
S92	Satin white lens		
S22R	Satin white regressed lens (fluorescent only)		
S92HT	Lay-in high transmission lens		
S92HTS	Snap-in high transmission lens		
ORDERING EXAMPLE			
S22-DR-2L35-ETG-4-U-DD-SI-S92HTS			
1. Not all options available. Please consult your local Cooper Lighting Rep for availability.			
2. Specification and dimensions subject to change without notice.			
3. 10% less than 3500K light levels			
4. 10% more than 3500K light levels			
5. For continuous runs please refer to website for exact lengths and dimensions			



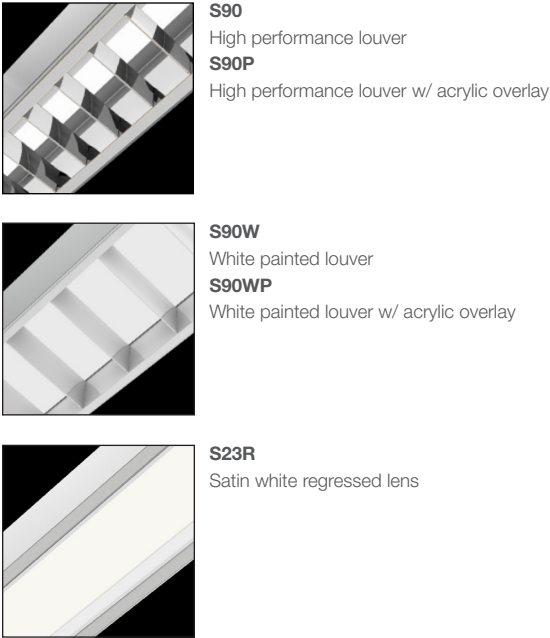
Series 23 Ordering



XR - Asymmetric Recessed
Not available with T8 lamp option



SHIELDING OPTIONS - FLUORESCENT ONLY



SHIELDING OPTIONS - LED OR FLUORESCENT



FIXTURE			
S23		Series 23 - 4" Slot	
FIXTURE TYPE			
DP	Direct pendant		
IP	Indirect pendant		
DIP	Direct/indirect pendant		
DR	Direct recessed		
DS	Direct surface		
DW	Direct wall		
IW	Indirect wall		
DIW	Direct/indirect wall		
XR	Asymmetric recessed		
LAMP QTY - LED*		LAMP QTY - FLUORESCENT	
1L	Light level 1	1	1 lamp down
	2061 lms 28W	2	2 lamps down
2L	Light level 2	1x1	1 up / 1 down ¹
	2635 lms 37W	1x2	1 up / 2 down ¹
	*Per 4 foot fixture	2x1	2 up / 1 down ¹
LAMP TYPE - LED		LAMP TYPE - FLUORESCENT	
L30	LED 3000K ³	T5	T5 normal output
L35	LED 3500K	T5HO	T5 high output
L40	LED 4000K ⁴	T8	T8 normal output ⁶
MOUNTING			
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FTG	Recessed 9/16" Exposed T-grid		
STG	Recessed Slot T-grid		
SR	Recessed Sheet rock		
SC	Pendant single cable		
SCETG	Single cable with ETG mount		
SCFTG	Single cable with FTG mount		
SCSTG	Single cable with STG mount		
SCST	Single cable with structure ceiling mount		
FIXTURE / RUN LENGTH			
2	2 foot fixture		
3	3 foot fixture		
4	4 foot fixture		
6	6 foot fixture		
8	8 foot fixture		
XX	Continuous run ⁵		
VOLTAGE			
1	120V		
2	277V		
U	Universal 120V-277V		
BALLAST OPTIONS			
EB	Electronic ballast		
DB	Dimming ballast		
CIRCUITING			
SI	Single circuit		
DU	Dual circuit		
FUSING			
GLR	Single circuit		
GMF	Dual circuit		
SHIELDING OPTIONS			
S90	High performance louver (fluorescent only)		
S90P	High performance louver w/ acrylic overlay (fluorescent only)		
S90W	White painted louver (fluorescent only)		
S90WP	White painted louver w/ acrylic overlay (fluorescent only)		
S93	Satin white lens		
S23R	Satin white regressed lens (fluorescent only)		
S93HT	Lay-in high transmission lens		
S93HTS	Snap-in high transmission lens		

1. Not all options available. Please consult your local Cooper Lighting Rep for availability.
2. Specification and dimensions subject to change without notice.
3. 10% less than 3500K light levels
4. 10% more than 3500K light levels
5. For continuous runs please refer to website for exact lengths and dimensions
6. XR not available with T8 lamp option.

Neo-Ray

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The Cooper Lighting Family

Halo
Metalux
Lumark
Sure-Lites
Neo-Ray
Corelite
Portfolio
Iris
Shaper
io
Lumière
Invue
McGraw-Edison
Streetworks
Fail-Safe
MWS
DLS
RSA
Ametrix

Domestic Facilities

Cranbury, New Jersey
Elk Grove Village, Illinois
Irving, Texas
Ontario, California
Peachtree City, Georgia

Canadian Facilities

Calgary, Alberta T2E 7V9

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