

MICROLINEA RECESSED SERIES 5

Qty:	Type:
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Project Name:

Catalog Number:



MLR5 is ideal for spaces requiring clean lines and contemporary design, but in a larger form factor. MLR5 combines excellent light performance with improved energy efficiency, making it an excellent lighting design tool.

MLR5 fits into most grid ceiling systems, including the Armstrong TechZone™ system. In addition, the MLR5 offers multiple mounting and lens options, allowing for greater intelligent design.

SPECIFICATIONS

Housing

Constructed of three-piece extruded aluminum and available in single sections of 2', 3', 4', 5', 6', 7' and 8' long. Continuous rows, custom lengths and patterns are available in increments down to 1". Standard flange finish is white. Custom flange colors are also available.

Lens/Distribution

(LOH) LED-optimized high transmittance acrylic snap-in lens. Standard distribution. *Available for both Flush Mount and Regressed Mount lens applications.

Reflector

Precision die-formed aluminum reflector finished with a high reflectance white enamel.

Driver (Standard)

Power supply is UL/CUL recognized, 0-10V dimming available, 120 thru 277V universal voltage. 347V is available.

Driver (Tunable White)

EldoLED power supply is UL recognized, available for DALI, 0-10V or DMX systems, and 120 thru 277 universal voltage.

Certifications

Fixtures are ETL listed for use in 'Dry or Damp Applications'. Fixtures conform to UL Standard #1598 and to CAN/CSA #C22.2NO.250.0. Fixtures are IC (Insulation Contact) rated.

Light Engines - Color Temperatures/CRI

LED light sources are available for the following Co-ordinated Color Temperatures (CCT):

Standard: 2700K, 3000K, 3500K, 4000K, & 5000K

Tunable White: Variable CCT range from 2700K thru 6500K.

RGBW: (Red, Green, Blue, White) color-changing logic module is rated at max. 10 watts/ft, and available in standard High and Medium Outputs. Contact factory for available custom outputs.

Color Rendering Index (CRI): Standard: 80
Optional: 90

Warranty

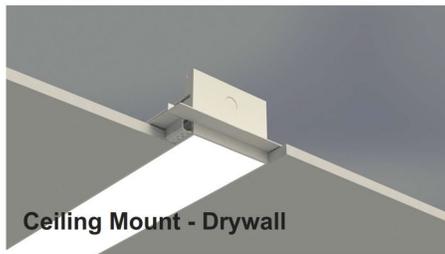
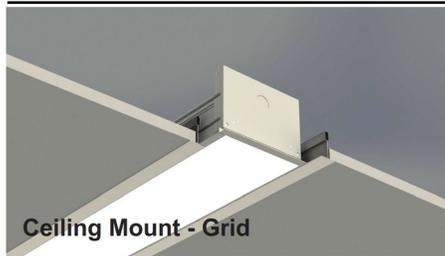
10-year limited warranty. No other warranty is expressed or implied. Complete warranty terms can be accessed by visiting:

<https://pal-lighting.com/company/warranty>

Revit Files

Revit model (BIM) files for the MLR5 Series are available by visiting:

https://pal-lighting.com/files/Microlinea_Recessed5/MLR5_Recessed_LED_GRID_CEILINGS_MO_HO.zip



MLR5 - Fixture Performance

Lumen Outputs Available:	Standard High Output - (HO)		Standard Medium Output - (MO)	
	MLR5 Flush Lens	MLR5RG - Regress Lens (1" Regress)	MLR5 Flush Lens	MLR5RG - Regress Lens (1" Regress)
Delivered Lumens/Foot - Standard	908	869	558	519
Input Watts/Foot - Standard	8	7	5	4
Lumens/Watt - (Efficacy) - Standard	117	118	122	121
Custom Lumen Outputs Available:				
Custom Lumens/Ft - Minimum thru Maximum Available*	114 thru 1675	114 thru 1675	114 thru 1675	114 thru 1675

Notes:

- Data listed above is based on using 3500K CCT and 80 CRI LED modules.

*PAL uses fully programmable drivers. Questions? Contact us at specs@pal-lighting.com

-All values are based on calculated LM-79 photometric reports.



ORDERING GUIDE



Series	Outputs	Color Temp. (CCT)	Color Render	Fixture Lengths	Ceiling Type or Wall Type ¹¹
MLR5 Microlinea Recessed Series 5	HO High Output	K27 2700 Kelvin	80 80 CRI	2' 2 Ft	FT Flush Tile Clg. - 15/16" or 9/16" Grid TT Tegular Tile Clg. - 15/16" or 9/16" Grid SG Screw Slot Grid Clg. OF Drywall Clg. - Overlap Flange SF1 Drywall Clg. - Spackle Flange - 1/2" SF5 Drywall Clg. - Spackle Flange - 5/8" blank Vertical Wall - (Recessed In Drywall)
	MO Medium Output	K30 3000 Kelvin	90 90 CRI	3' 3 Ft	
MLR5RG Microlinea Recessed Series 5 - Regress Lens	*See chart on page 1 for standard Lms/Ft outputs.	K35 3500 Kelvin		4' 4 Ft	
	CO _____ **Custom Output	K40 4000 Kelvin		5' 5 Ft	
	**Enter requested Lumens/Ft	K50 5000 Kelvin		6' 6 Ft	
		TW 2700K thru 6500K (Tunable White)		7' 7 Ft	
		RGBW Red/Green/Blue/White (Color Changing)		8' 8 Ft	



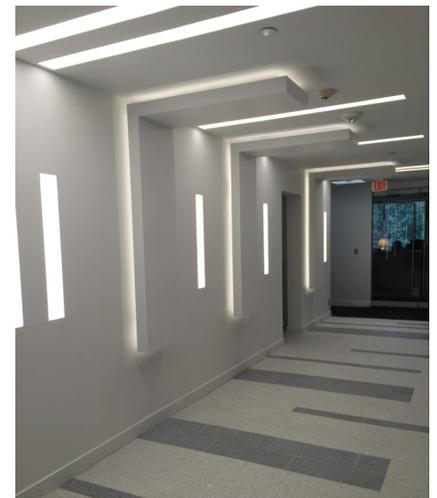
Flange Color	Mounting - Ceiling & Wall	Lenses / Distribution	Voltage
F01M Matte White (Standard)	TR 1/4-20 Threaded Rod - Overlap or Spackle Flange ³ (By Others)	LOH LED Optimized Acrylic Snap-in Lens - (Standard Distribution)	120 120V
FXXX PAL Premium Colors: (F01G thru F22)	YK Yoke Mount Bracket - Overlap or Spackle Flange ³	Note: LOH lenses are used for both Flush Mount and Regressed Mount configurations.	277 277V
FCC Custom Color Match Provide RAL Color# _____	AC Adjustable Cable Assy - Overlap Flange		UNV Universal Voltage (120V thru 277V)
	VOF Vertical Wall Mount - Overlap Flange		347 347V
	VSF1 Vertical Wall Mount - Spackle Flange - 1/2" ⁸		
	VSF5 Vertical Wall Mount - Spackle Flange - 5/8" ⁸		
	blank Leave blank if fixture is Grid Ceiling mount		



Drivers - Dimming ^{2,4}	Drivers - Tun. White / RGBW ²	Sensor Options	Emergency / Rating Options	Control Systems ¹³
DIM0 Dimming 100% to 0%	DALI DALI protocol driver - (TW) ⁵	OCC Occupancy/Motion Sensor ¹² (Integral Mount)	NLCKT Night-Light Circuit (Common Neutral)	CS CASAMBI Blue-Thread Wireless System
DIM1 Dimming 100% to 1%	EldoLED DUALdrive	DS Daylight/Photocell Sensor ¹² (Integral Mount)	EMCKT Emergency Circuit (Sep. Hot & Neutral)	nLIGHT nLight Enabled
DIM5 Dimming 100% to 5%	0-10V 0-10V protocol driver - (TW) ⁵		EBPHST Emergency Battery Pack - 10 Watt ⁹ Self-Testing. (Integral Mount)	nLAIR nLight Air (Wireless Enabled)
DIM10 Dimming 100% to 10%	DMX DMX protocol driver - (RGBW) ⁶		GTD Generator Transfer Device (Integral Mount)	SD Step-Dimming System
	EldoLED POWERdrive		FS Slow-Blow Fuse & Fuse Holder (Integral Mount)	
			CP Chicago Plenum Listing	

Notes:

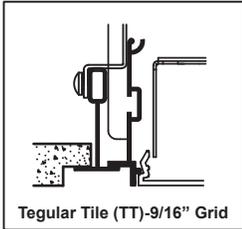
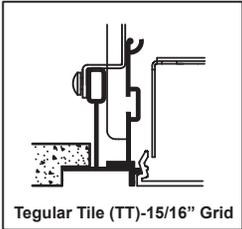
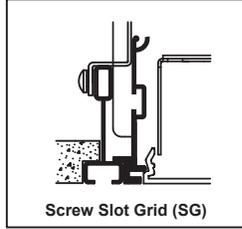
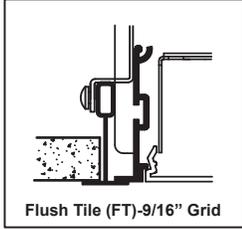
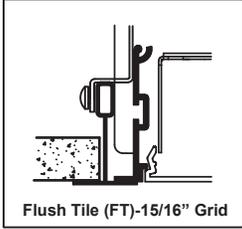
- All fixtures are factory pre-wired for a single circuit. Provisions for multiple switching/circuiting is optional.
- Unless otherwise requested, all fixtures contain integral-mount "power-on-board" drivers and emergency battery packs.
- All fixtures intended for continuous rows are provided with factory installed quick-connect wiring.
- Standard power supply (driver) is UL/CUL recognized, and is available with 0-10V dimming capability and 120 thru 277 universal voltage.
- Tunable White power supply (driver) by EldoLED is UL recognized, and is compatible with DALI, DMX, and 0-10V protocols.
- RGBW power supply (driver) by EldoLED is UL recognized, and is compatible with DALI and DMX protocols.
- All MLR5 recessed fixtures carry an "IC" - Insulation Contact Rating.
- Note: Spackle Flange fixtures are not intended for post-ceiling or wall installation. (Fixtures must be mounted prior to installation of the ceiling or wall.)
- Standard emergency battery pack is a 10 Watt constant power, self-testing, UL 924 listed pack from either Iota Engineering or Philips/Bodine, providing a minimum of 1000 lumens of light for approximately 90 minutes. Battery packs are integral mount unless otherwise notified. *Note: Remote mounted battery packs are not wet location listed.
- Custom length fixtures and fixtures rows may require a longer lead time. Questions? Contact specs@pallighting.com.
- MLR5 fits into Armstrong TechZone™ ceiling systems.
- Unless otherwise specified, PAL routinely uses the following integral-mount sensors:
 - nLight AIR #RES7 sensor by nLight/Acuity Brands
 - Vertex sensor by SensorSwitch/Acuity Brands
 - SensiLUM sensor by Encelium/LeGrand
 - FS-205 and FD-301 sensors by WattStopper/LeGrand
 Sensors listed above are either occupancy/motion type, daylight/photocell type, or are a combination of the two.
- Other Control Systems are available. Questions? Contact specs@pallighting.com for more information.



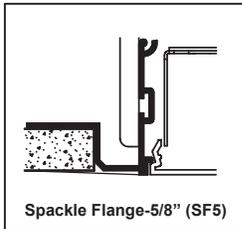
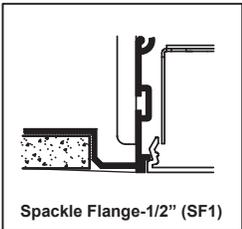
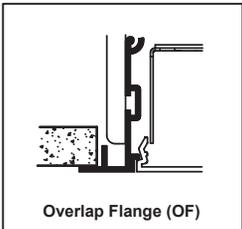
CEILING & VERTICAL WALL TRIMS

TECHNICAL DRAWINGS

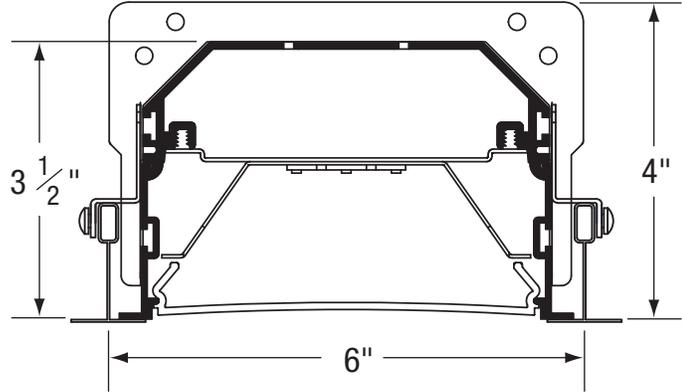
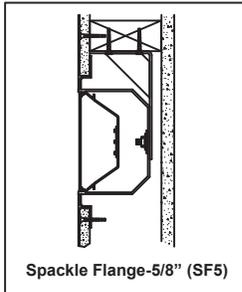
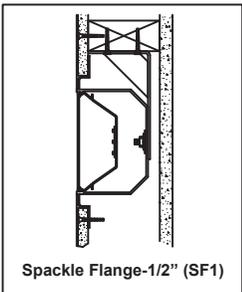
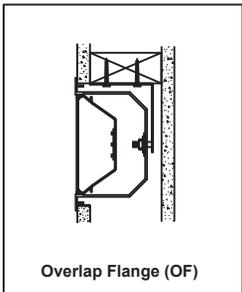
Grid Ceiling Mount



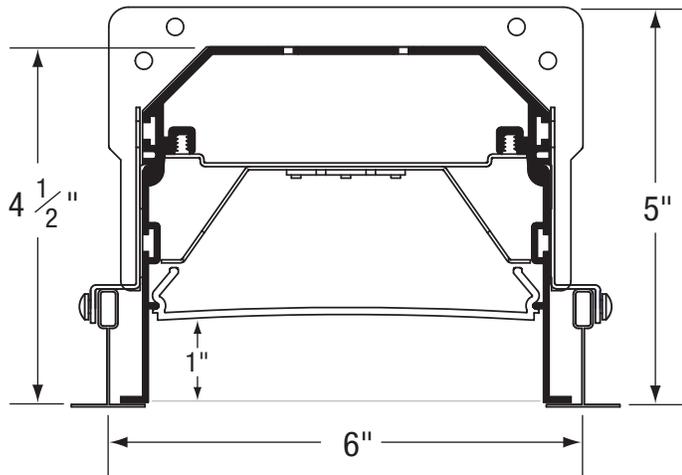
Drywall Ceiling Mount



Drywall - Wall Mount

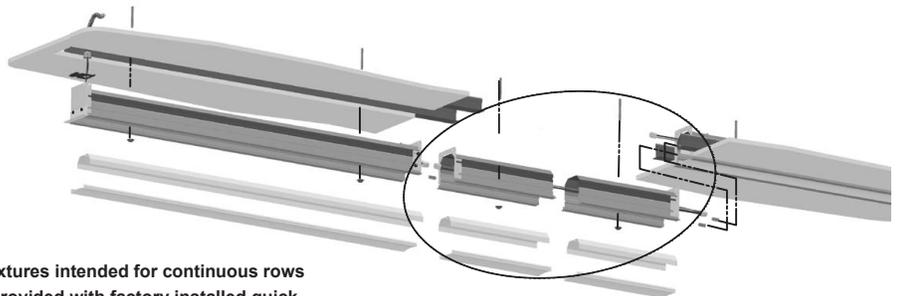
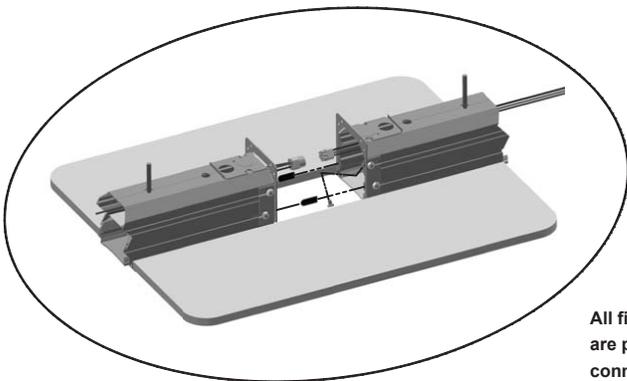


**MLR5 - Flush or Accent Lens
(Shown with Flush Lens)**



MLR5RG - Regressed Lens

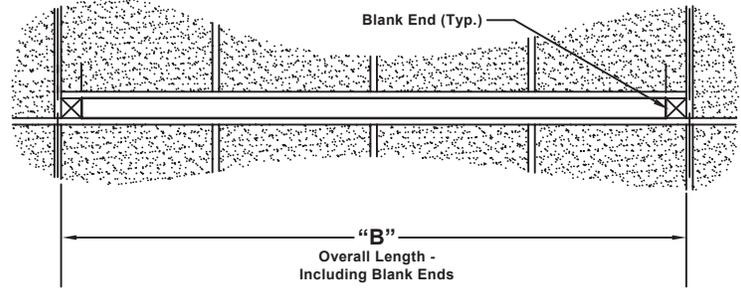
QUICK-CONNECT WIRING



All fixtures intended for continuous rows are provided with factory installed quick-connect wiring systems.

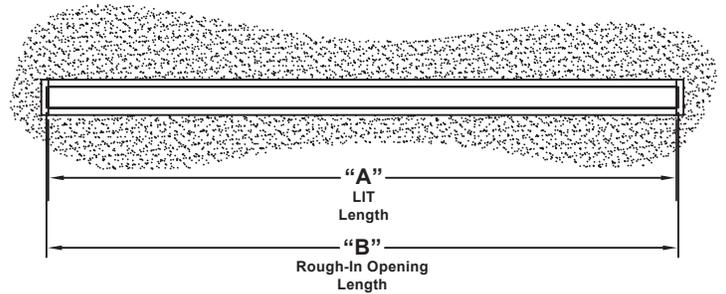
ROW GUIDES - SINGLE FIXTURES & CONTINUOUS ROWS

NOMINAL LENGTH	DIM "B" INCLUDES BLANK ENDS	ROW ARRANGEMENT - GRID CEILING MOUNT
2'	23-13/16"	(2) Single Fixture Housing
3'	35-13/16"	(3) Single Fixture Housing
4'	47-13/16"	(4) Single Fixture Housing
5'	59-11/16"	(3) (2) Single Fixture Housing
6'	71-11/16"	(3) (3) Single Fixture Housing
7'	83-11/16"	(4) (3) Single Fixture Housing
8'	95-11/16"	(4) (4) Single Fixture Housing
9'	107-3/4"	(3) (3) (3) Single Fixture Housing
10'	119-3/4"	(4) (3) (3) Single Fixture Housing
12'	143-3/4"	(3) (3) (3) (3) Single Fixture Housing
14'	167-3/4"	(4) (4) (3) (3) Single Fixture Housing
16'	191-3/4"	(4) (3) (3) (3) (3) Single Fixture Housing
Contact specs@pallighting.com For Rows Longer Than 16'		



To view the GRID CEILING MOUNT installation sheet, visit:
https://pal-lighting.com/files/Microlinea_Recessed/3750114_PG_1-2-3-4_MLR2-3-5_LED-GRID.pdf

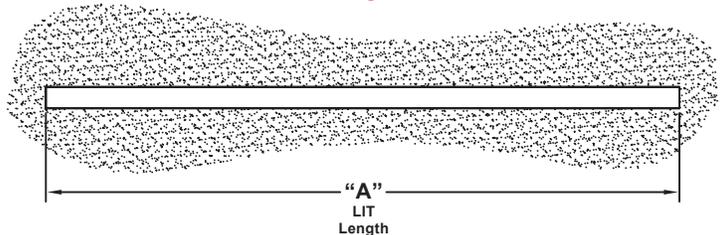
NOMINAL LENGTH	DIM "A" LIT LENGTH	DIM "B" ROUGH-IN OPENING	ROW ARRANGEMENT - DRYWALL - OVERLAP FLANGE MOUNT
2'	22-13/16"	23-9/16"	(2) Single Fixture Housing
3'	34-13/16"	35-9/16"	(3) Single Fixture Housing
4'	46-13/16"	47-9/16"	(4) Single Fixture Housing
5'	57-5/8"	58-3/8"	(3) (2) Single Fixture Housing
6'	69-5/8"	70-3/8"	(3) (3) Single Fixture Housing
7'	81-5/8"	82-3/8"	(4) (3) Single Fixture Housing
8'	93-5/8"	94-3/8"	(4) (4) Single Fixture Housing
9'	106-3/4"	107-1/2"	(3) (3) (3) Single Fixture Housing
10'	118-3/4"	119-1/2"	(4) (3) (3) Single Fixture Housing
12'	142-3/4"	143-1/2"	(3) (3) (3) (3) Single Fixture Housing
14'	166-3/4"	167-1/2"	(4) (4) (3) (3) Single Fixture Housing
16'	190-3/4"	191-1/2"	(4) (3) (3) (3) (3) Single Fixture Housing
Contact specs@pallighting.com For Rows Longer Than 16'			



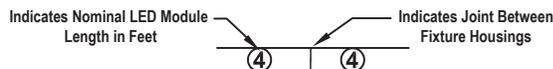
To view the DRYWALL - OVERLAP FLANGE MOUNT installation sheets, visit:
https://pal-lighting.com/files/Microlinea_Recessed/3750115_Page_1-2-3-4_MLR2-3-5_OVERLAP_FLANGE.pdf
- and -
https://pal-lighting.com/files/Microlinea_Recessed/3750117_PG_1-2_MLR_VERT_OF_WALL_INSTALL.pdf

NOMINAL LENGTH	DIM "A" LIT LENGTH	ROW ARRANGEMENT - DRYWALL - SPACKLE FLANGE MOUNT
2'	22-13/16"	(2) Single Fixture Housing
3'	34-13/16"	(3) Single Fixture Housing
4'	46-13/16"	(4) Single Fixture Housing
5'	57-5/8"	(3) (2) Single Fixture Housing
6'	69-5/8"	(3) (3) Single Fixture Housing
7'	81-5/8"	(4) (3) Single Fixture Housing
8'	93-5/8"	(4) (4) Single Fixture Housing
9'	106-3/4"	(3) (3) (3) Single Fixture Housing
10'	118-3/4"	(4) (3) (3) Single Fixture Housing
12'	142-3/4"	(3) (3) (3) (3) Single Fixture Housing
14'	166-3/4"	(4) (4) (3) (3) Single Fixture Housing
16'	190-3/4"	(4) (3) (3) (3) (3) Single Fixture Housing
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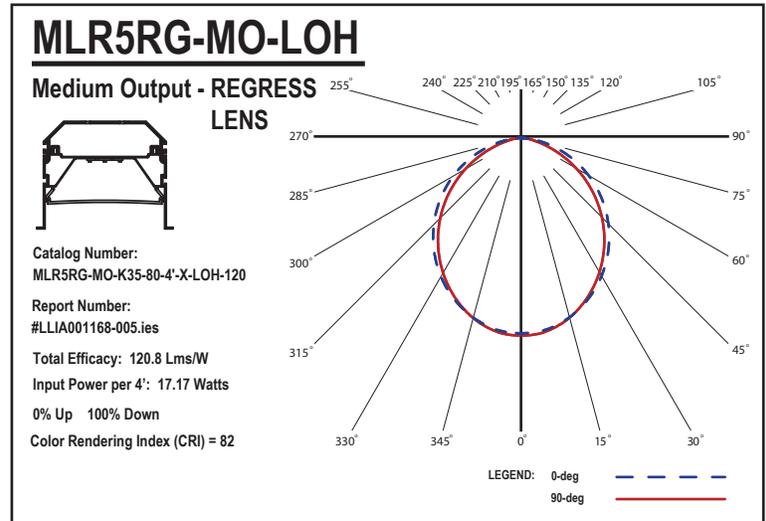
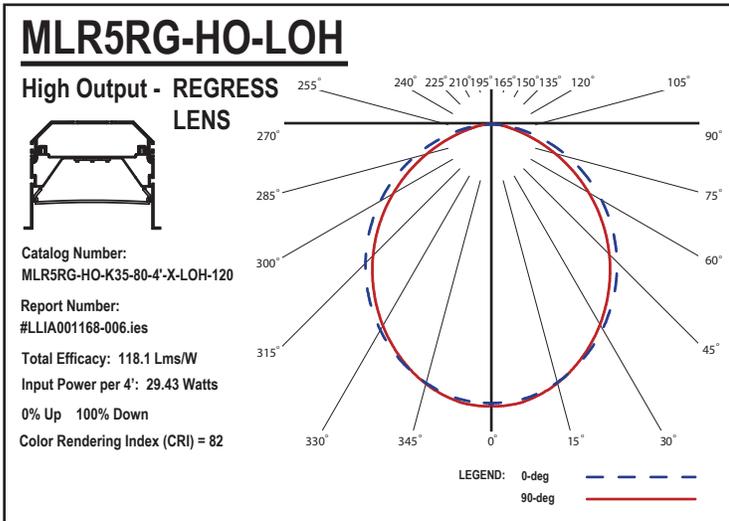
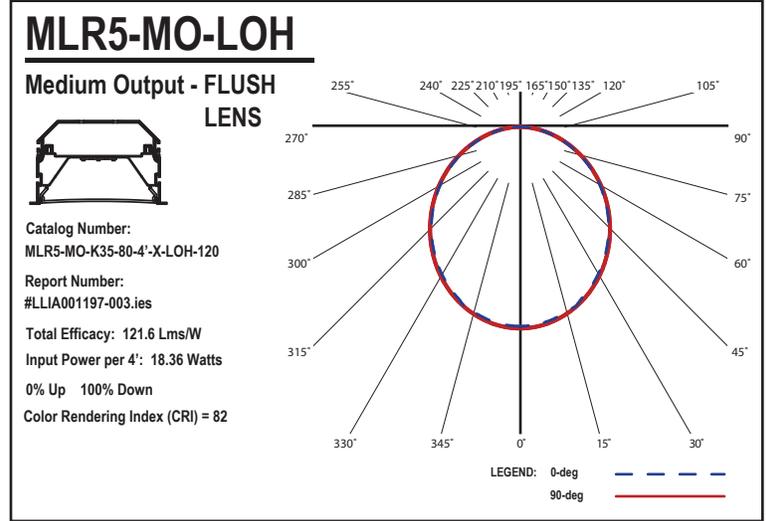
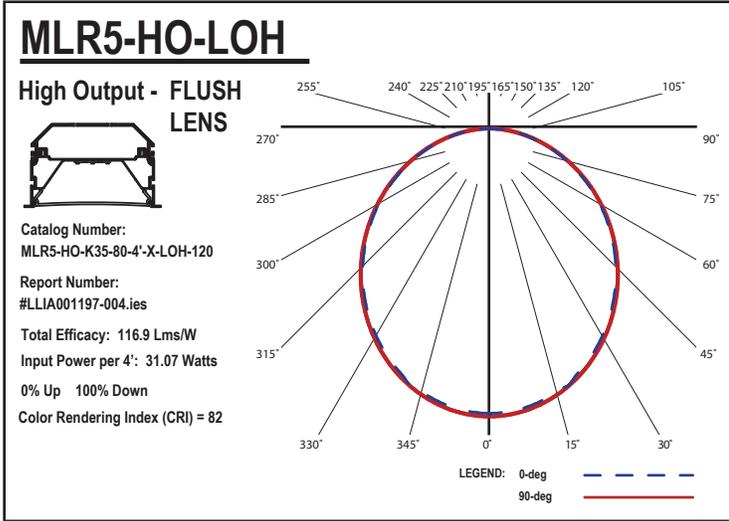
Spackle Flange Mount fixtures must be installed PRIOR to ceiling installation.



To view the DRYWALL - SPACKLE FLANGE MOUNT installation sheets, visit:
https://pal-lighting.com/files/Microlinea_Recessed/3750116_Page_1-2-3-4_MLR_SPACKLE_FLANGE_INSTALL-4_PAGES.pdf
- and -
https://pal-lighting.com/files/Microlinea_Recessed/3750118_PG_1-2_MLR_VERT_SF_WALL_INSTALL.pdf

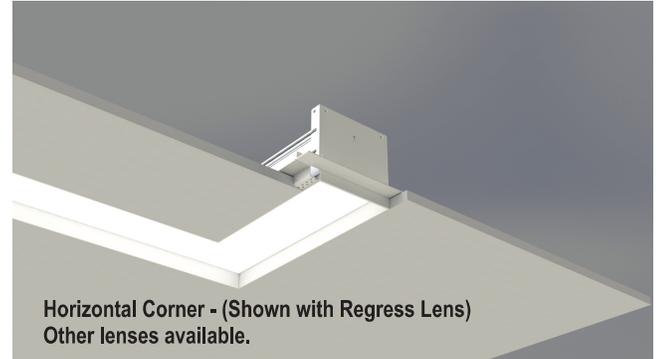
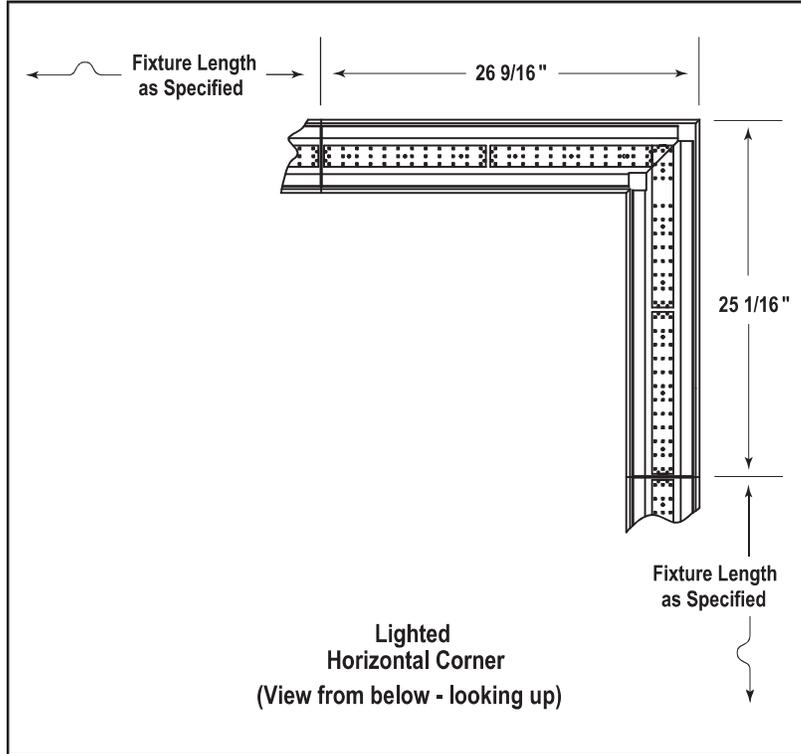


LIGHT DISTRIBUTIONS



LIGHTED CORNERS

Horizontal extruded aluminum 90° corners are available for use when ceiling mounted recessed fixture patterns are desired. Standard corners are available in nominal 2' X 2' long continuously lit configurations. Vertical wall-to-ceiling 90° corners are also available.



*Note: Custom angle corners are available. Contact specs@pallighting.com for more information.

