



MICROLINEA RECESSED SERIES 3

MLR3 is ideal for spaces requiring clean lines and contemporary design. MLR3 combines excellent light performance with improved energy efficiency, making it the perfect lighting design tool.

MLR3 fits into most grid ceiling systems, including the Armstrong TechZone™ system. In addition, the MLR3 offers multiple mounting and lens options, allowing for greater intelligent design.

Note: The MLR3 Series is also available in an outdoor, IP54-rated wet location version called MLR3WL54. Visit:

<https://pal-lighting.com/products/wet-location/item/228-microlinea-recessed-series-3-wet-location-grid-ceiling>

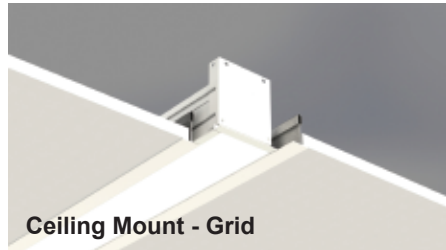
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Type:

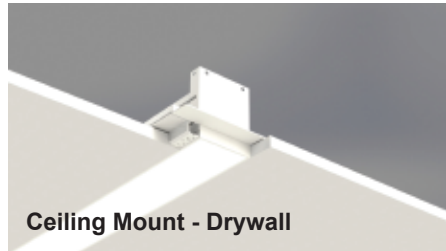
Project Name:

Catalog Number:

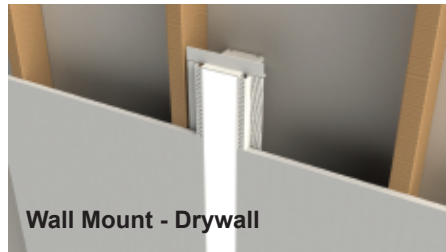
SPECIFICATIONS



Ceiling Mount - Grid



Ceiling Mount - Drywall



Wall Mount - Drywall

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.

(BW) Batwing lens. Translucent acrylic snap-in lens with internal prisms creating a batwing shape distribution.

(WW) Wall Wash lens. Translucent acrylic snap-in lens with internal prisms creating an asymmetric shape distribution.

(AL1) Accent lens - 3/8" drop. White acrylic snap-in lens extends 3/8" below ceiling line.

(AL2) Accent lens - 1-3/8" drop. White acrylic snap-in lens extends 1-3/8" below ceiling line.

Reflector

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

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.

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 MLR3 Series are available by visiting:

https://pal-lighting.com/files/Microlinea_Recessed_3/MLR3-LED_Revit_Content.zip

MLR3 - Fixture Performance

Lumen Outputs Available	Standard High Output						Standard Medium Output					
Fixture / Lens Style	MLR3 ¹ Flush Lens	MLR3 ⁵ Batwing Lens	MLR3 ⁵ Wall Wash Lens	MLR3RG ¹ Regress Lens (1" Regress)	MLR3 - AL1 ¹ Accent Lens (3/8" Drop)	MLR3 - AL2 ¹ Accent Lens (1-3/8" Drop)	MLR3 ¹ Flush Lens	MLR3 ⁵ Batwing Lens	MLR3 ⁵ Wall Wash Lens	MLR3RG ¹ Regress Lens (1" Regress)	MLR3 - AL1 ¹ Accent Lens (3/8" Drop)	MLR3 - AL2 ¹ Accent Lens (1-3/8" Drop)
Delivered Lumens/Foot - Standard	746	806	768	620	990	1032	463	549	523	386	646	670
Input Watts/Foot - Standard	7	7	7	7	9	9	4	5	5	4	6	6
Lumens/Watt (Efficacy) - Standard	104	119	113	97	114	118	108	121	116	99	119	123
Custom Lumen Outputs Available												
Custom Lumens/Ft - Minimum thru Maximum Available*	300 - 1500	480 - 1150	480 - 1150	300 - 1500	300 - 1500	300 - 1500	300 - 1500	480 - 1150	480 - 1150	300 - 1500	300 - 1500	300 - 1500

Notes:

¹Data listed above is based on using 3500K CCT and 80 CRI LED modules.

⁵Data listed above is based on using 4000K CCT and 80 CRI LED modules.

*PAL uses fully programmable drivers. Questions? Contact us at specs@pallighting.com

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



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ORDERING GUIDE

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Series		Outputs		Color Temp. (CCT)		Color Render		Fixture Lengths			Ceiling Type or Wall Type ¹¹	
MLR3	Microlinea Recessed Series 3	HO	High Output	K27	2700 Kelvin	80	80 CRI	2'	2 Ft	XX' XX" : For continuous or custom row lengths, specify in increments down to 1". Example: 13' 5"	FT	Flush Tile Clg. - 15/16" or 9/16" Grid
		MO	Medium Output	K30	3000 Kelvin	90	90 CRI	3'	3 Ft		TT	Tegular Tile Clg. - 15/16" or 9/16" Grid
MLR3RG	Microlinea Recessed Series 3 - Regress Lens	*See chart on page 1 for standard Lms/Ft outputs.		K35	3500 Kelvin			4'	4 Ft		SG	Screw Slot Grid Clg.
				K40	4000 Kelvin			5'	5 Ft		OF	Drywall Clg. - Overlap Flange
				K50	5000 Kelvin			6'	6 Ft		SF1	Drywall Clg. - Spackle Flange - 1/2"
				TW	2700K thru 6500K (Tunable White)			7'	7 Ft	SF5	Drywall Clg. - Spackle Flange - 5/8"	
				RGBW	Red/Green/Blue/White (Color Changing)			8'	8 Ft	blank	Vertical Wall - (Recessed In Drywall)	

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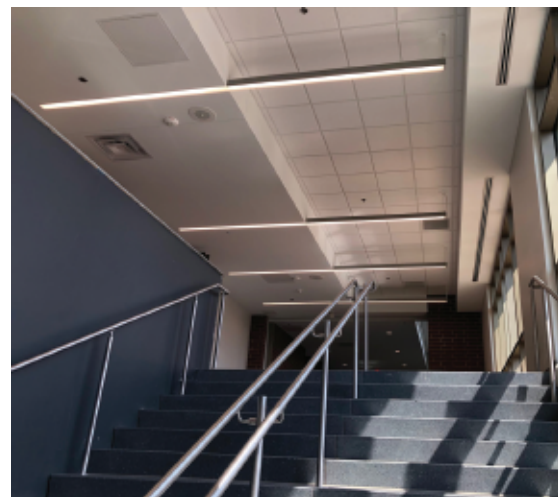
Flange Color	Mounting - Ceiling & Wall	Lenses / Distribution	Voltage
F01M Matte White (Standard)	TR 1/4-20 Threaded Rod - Overlap or Spackle Flange ⁸ (By Others)	LOH LED Optimized Acrylic Snap-in Lens - (Standard Distribution)	120 120V
FXXX PAL Premium Colors: (F01G thru F22)	YK Yoke Mount Bracket - Overlap or Spackle Flange ⁸	BW Translucent Acrylic Snap-in Lens - (Batwing Distribution)	277 277V
FCC Custom Color Match Provide RAL Color# _____	AC Adjustable Cable Assy - Overlap Flange	WW Translucent Acrylic Snap-in Lens - (Wall Wash Distribution)	UNV Universal Voltage (120V thru 277V)
	VOF Vertical Wall Mount - Overlap Flange	AL1 White Acrylic Snap-in Accent Lens - 3/8" Drop	347 347V
	VSF1 Vertical Wall Mount - Spackle Flange - 1/2" ⁸	AL2 White Acrylic Snap-in Accent Lens - 1-3/8" Drop	
	VSF5 Vertical Wall Mount - Spackle Flange - 5/8" ⁸		
	blank Leave blank if fixture is Grid Ceiling mount		

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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)	nLIGHT nLight Enabled
DIM1 Dimming 100% to 1%	EldoLED DUALdrive	DS Daylight/Photocell Sensor ¹² (Integral Mount)	EMCKT Emergency Circuit (Sep. Hot & Neutral)	nLAIR nLight Air (Wireless 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)	SD Step-Dimming System
DIM10 Dimming 100% to 10%	DMX DMX protocol driver - (RGBW) ⁶ EldoLED POWERdrive		GTD Generator Transfer Device (Integral Mount)	
			FS Slow-Blow Fuse & Fuse Holder (Integral Mount)	
			CP Chicago Plenum Listing	

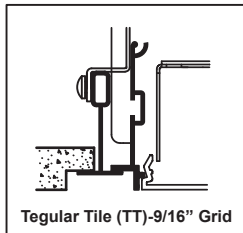
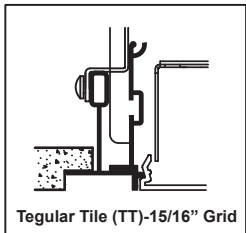
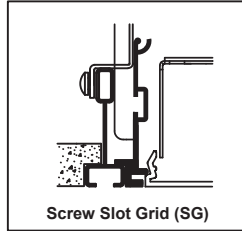
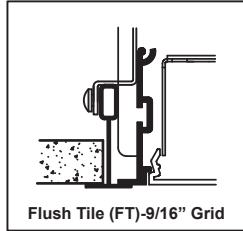
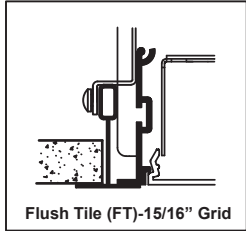
Notes:

- 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 MLR3 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.
- MLR3 fits into Armstrong TechZone™ ceiling systems.
- Unless otherwise specified, PAL routinely uses the following integral-mount sensors:
 - nLight AIR #ES7 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.

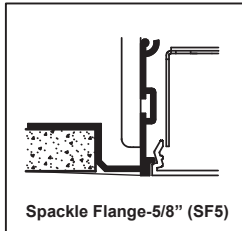
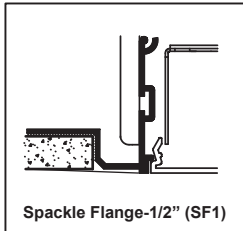
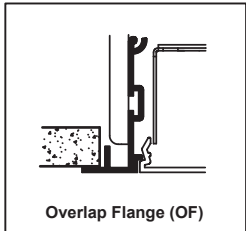


CEILING & VERTICAL WALL TRIMS

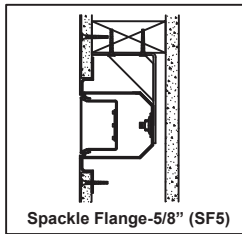
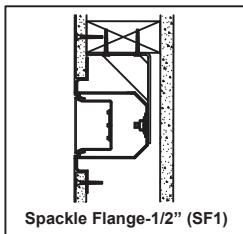
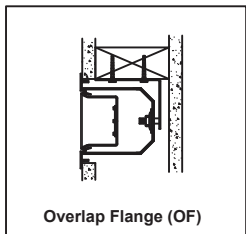
Grid Ceiling Mount



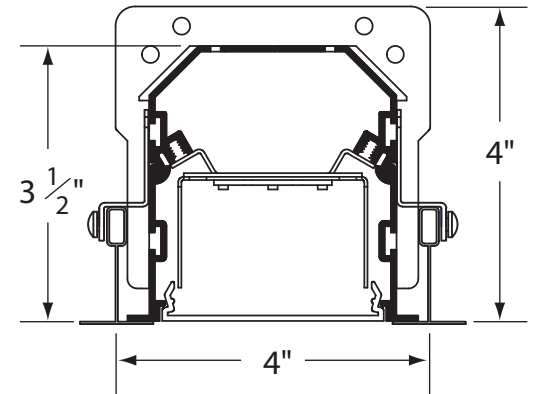
Drywall Ceiling Mount



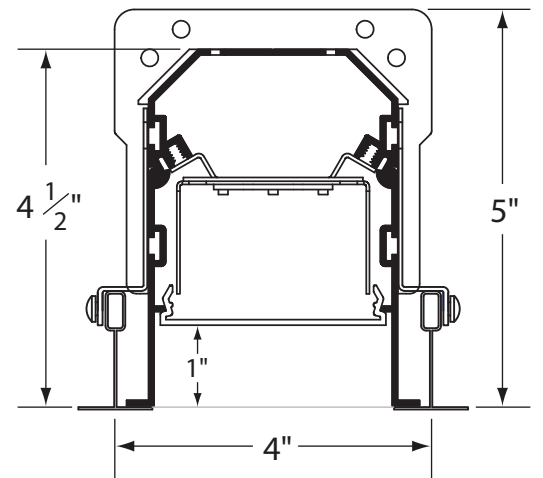
Drywall - Wall Mount



TECHNICAL DRAWINGS

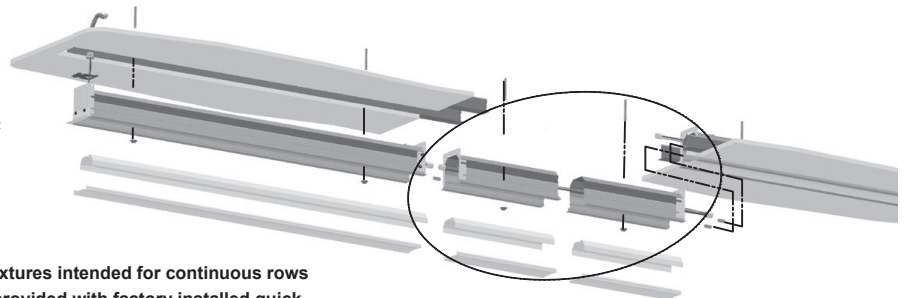
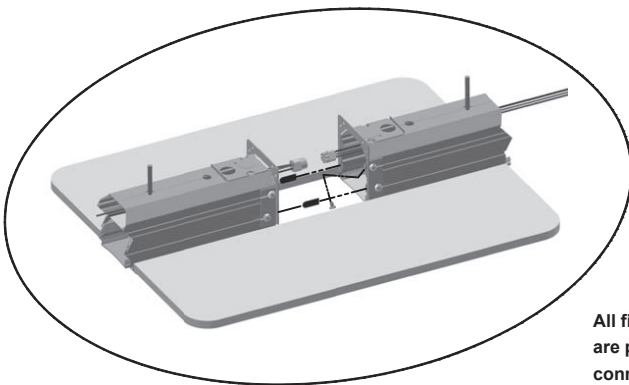


MLR3 - Flush or Accent Lens
(Shown with Flush Lens)



MLR3RG - Regressed Lens

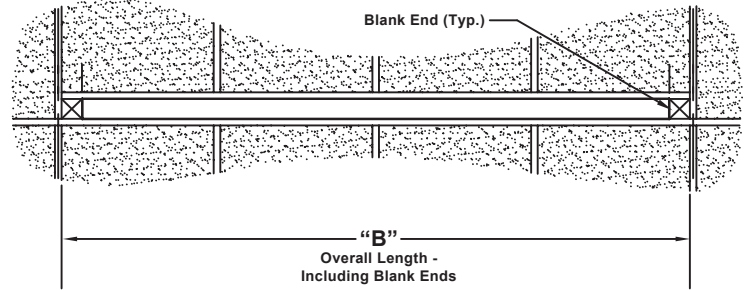
QUICK-CONNECT WIRING



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

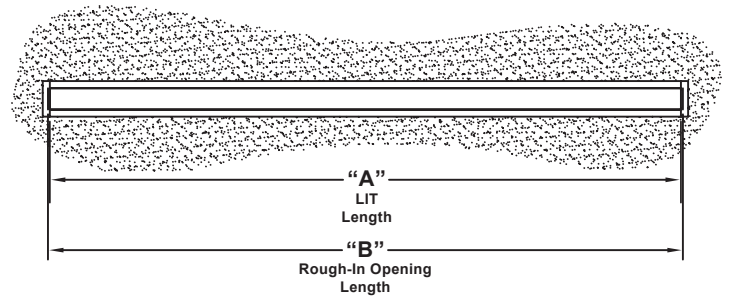
ROW GUIDES - SINGLE FIXTURES & CONTINUOUS ROWS

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)
10'	119-3/4"	(4) (3) (3)
12'	143-3/4"	(3) (3) (3) (3)
14'	167-3/4"	(4) (4) (3) (3)
16'	191-3/4"	(4) (3) (3) (3) (3)
Contact specs@pallighting.com For Rows Longer Than 16'		



To view the GRID CEILING MOUNT installation sheet, visit:
[Grid Ceiling Installation Sheet - Click Here](#)

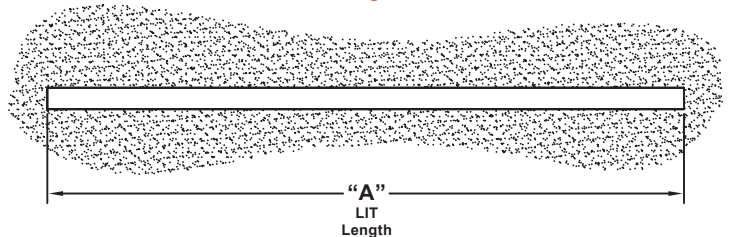
NOMINAL LENGTH	DIM "A" LIT LENGTH	DIM "B" ROUGH-IN OPENING	ROW ARRANGEMENT - DRYWALL - OVERLAP FLANGE MOUNT
2'	22-13/16"	23-9/16"	(2) Single Fixture Housing
3'	34-13/16"	35-9/16"	(3) Single Fixture Housing
4'	46-13/16"	47-9/16"	(4) Single Fixture Housing
5'	57-5/8"	58-3/8"	(3) (2) Single Fixture Housing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



To view the DRYWALL - OVERLAP FLANGE MOUNT installation sheets, visit:
[Drywall Ceiling-Overlap Flange Installation Sheet - Click Here](#)
[Vertical Wall-Overlap Flange Installation Sheet - Click Here](#)

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)
10'	118-3/4"	(4) (3) (3)
12'	142-3/4"	(3) (3) (3) (3)
14'	166-3/4"	(4) (4) (3) (3)
16'	190-3/4"	(4) (3) (3) (3) (3)
Contact specs@pallighting.com For Rows Longer Than 16'		

Spackle Flange Mount fixtures must be installed PRIOR to ceiling installation.



To view the DRYWALL - SPACKLE FLANGE MOUNT installation sheets, visit:
[Drywall Ceiling-Spackle Flange Installation Sheet - Click Here](#)
[Vertical Wall-Spackle Flange Installation Sheet - Click Here](#)

Indicates Nominal LED Module Length in Feet Indicates Joint Between Fixture Housings

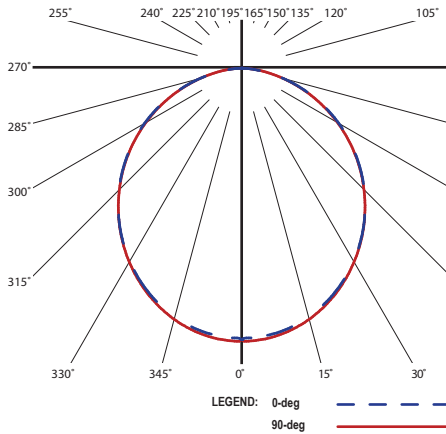
LIGHT DISTRIBUTIONS

MLR3-HO-LOH

High Output - FLUSH LENS



Catalog Number:
MLR3-HO-K40-80-4'-X-LOH-120
Report Number:
#LLIA000773-001.ies
Total Efficacy: 103.9 Lms/W
Input Power per 4': 28.72 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 82

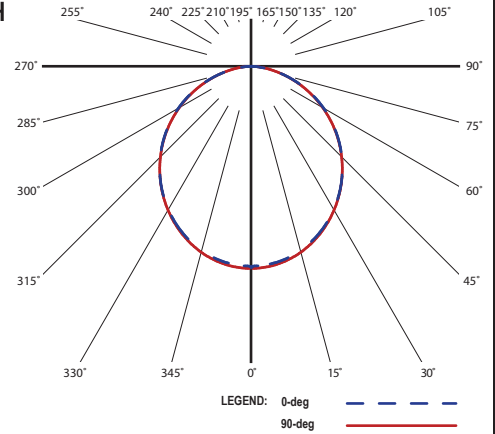


MLR3-MO-LOH

Medium Output - FLUSH LENS



Catalog Number:
MLR3-MO-K40-80-4'-X-LOH-120
Report Number:
#LLIA001201-001.ies
Total Efficacy: 107.5 Lms/W
Input Power per 4': 17.24 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 82

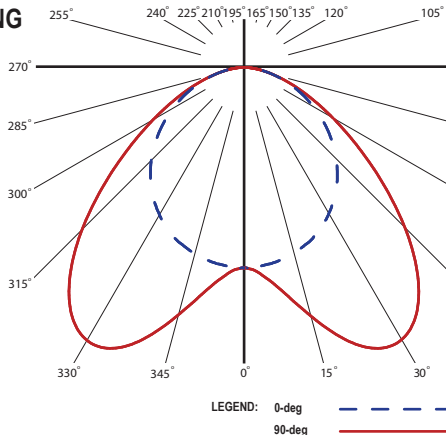


MLR3-HO-BW

High Output - BATWING LENS



Catalog Number:
MLR3-HO-K40-80-4'-X-BW-120
Report Number:
#LLIA001849-001.ies
Total Efficacy: 118.5 Lms/W
Input Power per 4': 27.20 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 84

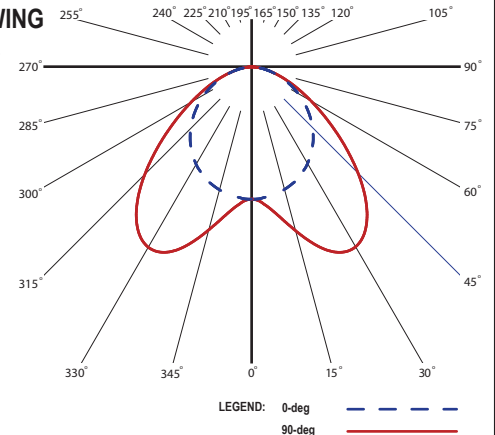


MLR3-MO-BW

Medium Output - BATWING LENS



Catalog Number:
MLR3-MO-K40-80-4'-X-BW-120
Report Number:
#LLIA001849-002.ies
Total Efficacy: 121.3 Lms/W
Input Power per 4': 18.09 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 84

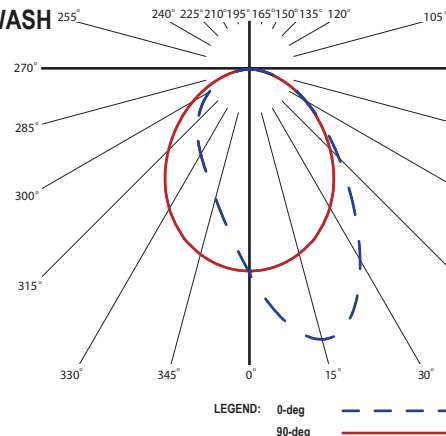


MLR3-HO-WW

High Output - WALL WASH LENS



Catalog Number:
MLR3-HO-K40-80-4'-X-WW-120
Report Number:
#LLIA001939-003.ies
Total Efficacy: 113.3 Lms/W
Input Power per 4': 27.13 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 83

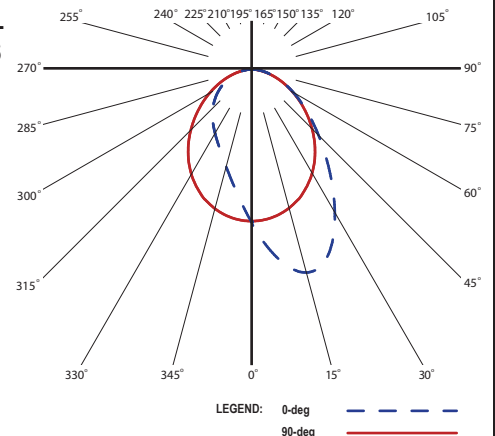


MLR3-MO-WW

Medium Output - WALL WASH LENS



Catalog Number:
MLR3-MO-K40-80-4'-X-WW-120
Report Number:
#LLIA001939-004.ies
Total Efficacy: 115.9 Lms/W
Input Power per 4': 18.06 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 83



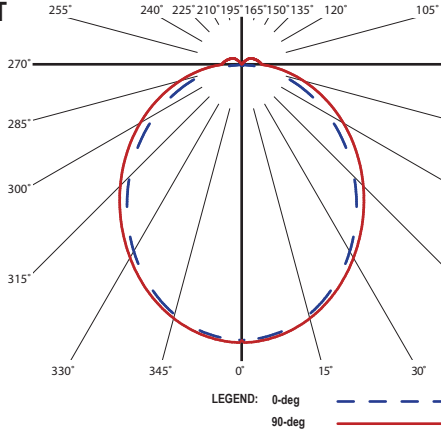
LIGHT DISTRIBUTIONS

MLR3-HO-AL1 (3/8" DROP LENS)

High Output - ACCENT LENS



Catalog Number:
MLR3-HO-K35-80-4'-X-AL1-120
Report Number:
#LLIA001159-006.ies
Total Efficacy: 113.8 Lms/W
Input Power per 4': 34.78 Watts
5% Up 95% Down
Color Rendering Index (CRI) = 82

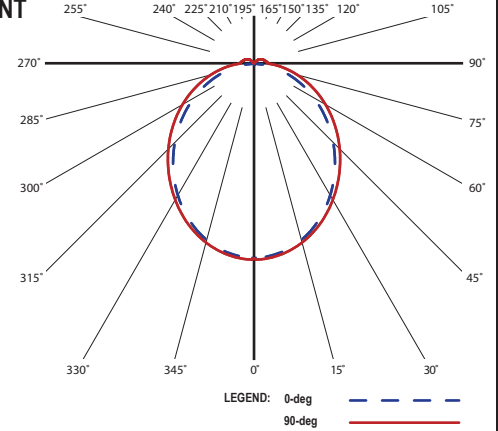


MLR3-MO-AL1 (3/8" DROP LENS)

Medium Output - ACCENT LENS

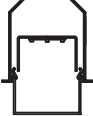


Catalog Number:
MLR3-MO-K35-80-4'-X-AL1-120
Report Number:
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Total Efficacy: 118.6 Lms/W
Input Power per 4': 21.77 Watts
5% Up 95% Down
Color Rendering Index (CRI) = 83

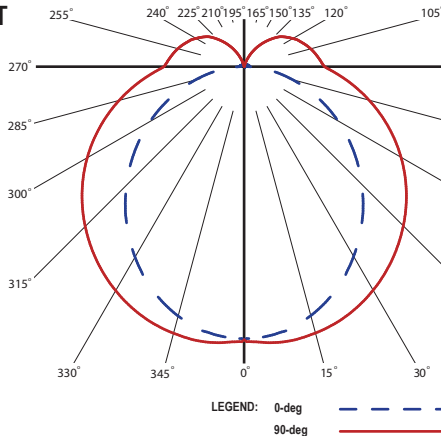


MLR3-HO-AL2 (1-3/8" DROP LENS)

High Output - ACCENT LENS



Catalog Number:
MLR3-HO-K35-80-4'-X-AL2-120
Report Number:
#LLIA001159-009.ies
Total Efficacy: 118.0 Lms/W
Input Power per 4': 34.95 Watts
16% Up 84% Down
Color Rendering Index (CRI) = 82

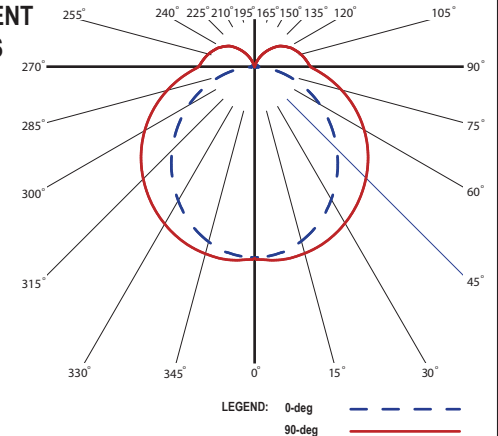


MLR3-MO-AL2 (1-3/8" DROP LENS)

Medium Output - ACCENT LENS

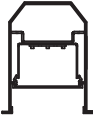


Catalog Number:
MLR3-MO-K35-80-4'-X-AL2-120
Report Number:
#LLIA001159-010.ies
Total Efficacy: 122.8 Lms/W
Input Power per 4': 21.83 Watts
16% Up 84% Down
Color Rendering Index (CRI) = 83

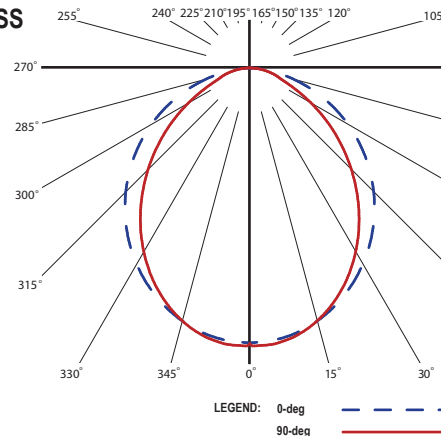


MLR3RG-HO-LOH

High Output - REGRESS LENS



Catalog Number:
MLR3RG-HO-K35-80-4'-X-LOH-120
Report Number:
#LLIA001168-004.ies
Total Efficacy: 97.2 Lms/W
Input Power per 4': 25.51 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 82

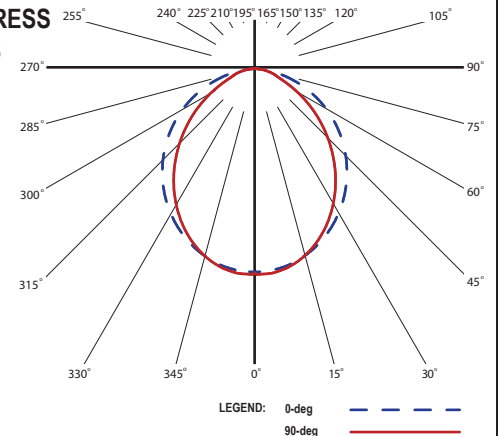


MLR3RG-MO-LOH

Medium Output - REGRESS LENS

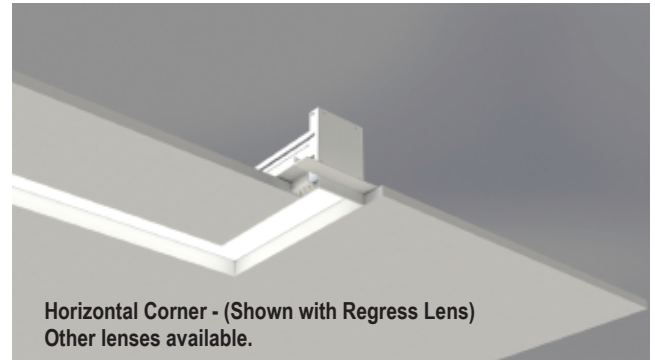
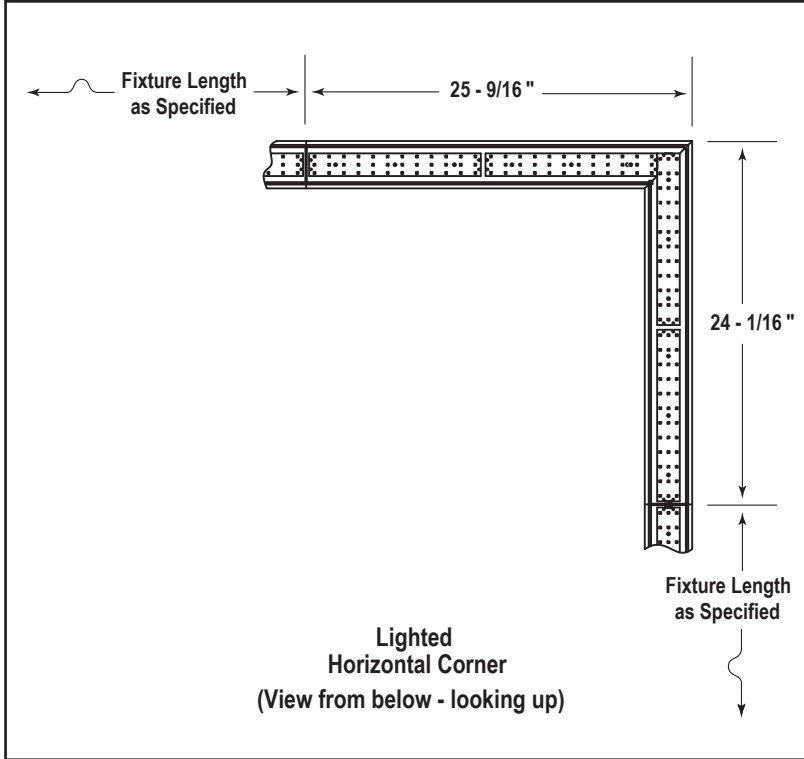


Catalog Number:
MLR3RG-MO-K35-80-4'-X-LOH-120
Report Number:
#LLIA001168-003.ies
Total Efficacy: 98.5 Lms/W
Input Power per 4': 15.65 Watts
0% Up 100% Down
Color Rendering Index (CRI) = 82



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.

