

Product Overview (for complete specifications, see pages 2 & 3) ******NEW****** See last page for APPROVED CUT RELEASE.

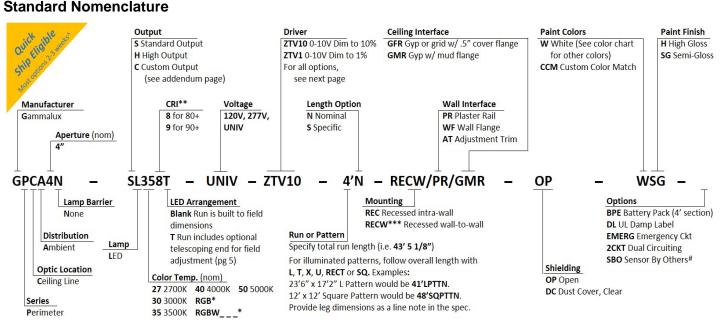
Quick Ship: Most product options are shippable within 2-3 weeks! Check our Quick Ship Guide for details.

Construction: I.C. rated. BABA, ARRA, RoHS, REACH and Prop 65 compliant. Extruded aluminum housing for superior fit and finish. Runs and patterns have a single item # and can be built to field dims.

Unbroken Illumination: Continuous illumination in custom-length runs and patterns with illuminated corners.

Electrical: LED components by major manufacturers, may be upgraded in the field to increase energy efficiency. Fixtures can be fitted with specialty LED and control components (consult factory). Standard Output, High Output and Custom Output options available.

Optical: Reflectors are formed to provide asymmetric distribution.



** 90+ CRI increases watts nom. 14.5%. # Sensor by Others (consult factory). *** Field dims. required. *Some restrictions apply. Check our Quick Ship Guide for details.



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G A M M A L U X°

Lighting Systems

Your design intent '

Specifications (continued on next page)

Electrical

Output: Standard (S) and high (H) options deliver a pre-set lumen package (see chart below). Custom-programmed output (C) is specified as LPF, WPF or % of High Output (see Custom Programmed Output page).

Static Driver: eldoLED Optotronic* programmable driver, wired for static operation (DVR).

0-10V Dimming: eldoLED Optotronic* programmable driver, wired for 0-10v control and dimming to 10% (ZTV10) or to 1% (ZTV1).

Step Dimming: Generic step dimming driver, two hot inputs for 100% and 50% output (SD2).

DALI Dimming: Generic DALI driver with two loose control wires exiting fixture at power feed location (DALI).

Lutron Dimming: Hi-Lume dim to 1% EcoSystem with Soft-On, Fade-to-Black (LDE1).

White Emitter: Nichia 757G emitters* binned within 3 MacAdam ellipses in Osram or Gammalux proprietary array. 90+ CRI option with extended lead time (CRI code 9) results in nominal 14.5% drop in efficacy; increase calculated watts 14.5%.

Battery Pack: Bodine BSL10T3* (BPE). 4W max input, 10W initial output, delivers min. 27% of High Output value per 4' length.

LED System: 70% lumen output (L70) at max 85 degrees C calculated at >60k hours. Fixtures are shipped with anti-static gloves to minimize the risk of damage to LEDs during installation. 5 year limited warranty.

Sensors: Sensors are as specified, confirmed by Gammalux prior to factory quote. Examples are Enlighted Micro Sensor, Lutron Athena Wireles Node, Lutron Vive, Wattstopper FS-205.

Upgrade Capability: LED assemblies can be replaced in the future with the latest factory-provided and fully warranted components. On-board sensors, control interface devices and alternate LED components may be specified (consult factory). Fixtures bear UL & cUL Dry Location label. Damp Location label available (**DL**).

*Subject to availability; may be substituted by Gammalux. Components and specifications may be changed without notice.

LUMENS AND WATTS BY OUTPUT OPTION AND LED COLOR @ 80+ CRI*											
STANDARD OUTPUT LED						HIGH OUTPUT LED					
OPEN APERTURE (OP)			DELIVERS: 559.3 LPF (estimated)			OPEN APERTURE (OP)		DELIVERS: 743.3 LPF (estimated)			
						4000 K	5000 K				
CCT	2700 K	3000 K	3500 K*	4000 K	5000 K	ССТ	2700 K	3000 K	3500 K*	4000 K	5000 K
WATTS / FT.	6.3	5.9	5.8	5.7	5.4	WATTS / FT.	8.6	8.2	8	7.8	7.4
* IES FILES WERE CREATED USING 3500 K DIODES @ 80+ CRI. WATTAGE IS MULTIPLIED BY 1.06 FOR 2700 K, 1.02 FOR 3000 K , .98 FOR 4000 K AND .93 FOR 5000 K DIODES TO MAINTAIN THE SAME DELIVERED LUMENS THROUGHOUT ALL COLOR TEMPERATURES. FOR 90+ CRI, INCREASE WATTAGE BY 14.5%. SEE ADDENDUM FOR CUSTOM PROGRAMMING.											

Construction

Housing: I.C. rated. BABA, ARRA, RoHS, REACH and Prop 65 compliant. Extruded aluminum body components and trim, 6063T5, 0.090" minimum thickness. Each housing is 8' max unless longer housings are pre-coordinated with the factory to reduce joints and installation labor. Fixtures are built per approved factory drawings and tested as a complete system at the factory. Continuous runs and patterns are ordered, built and shipped with a single item #. Fixtures ordered as individuals are not designed to be joined together in the field.

Joiner System: Automatic alignment, no loose parts, factory-supplied bolts are used to join fixture bulkheads in continuous runs. No light leaks.

Lamping: Patterns are fully illuminated. Runs ordered in Specific Length (Length Option **S**) will be built to the exact dimension shown on signature-approved shop drawings. Runs ordered in Nominal Length (Option **N**) may be factory-adjusted to accomodate standard mounting positions or grid centers. Factory drawings will show all dimensions of mounting and power feed locations. Fixtures built to less than 4' may require remote driver installation - consult factory.

Mounting: Shall be perimeter mounted to wall via Plaster Rail (**PR**), Wall Flange (**WF**) or Adjustment Trim (**AT**) and recessed into a ceiling system before the ceiling is finished.





Specifications (continued)

Optical

Reflectors: Shall be asymmetric formed diffuse white painted aluminum.

Finish

Acid etched or clear annodized housing electrostatically sprayed with high solids aliphatic two component polyurethane high (H) or semi-gloss (SG) to an avg. thickness of 2 mils. Unless specified otherwise, cable mount canopies are white semi-gloss and all other painted mounting components match the fixture finish. Custom finish, consult factory. Wood Finishes, back page.



Packing and Shipping

Fixtures built for continuous rows and patterns are given a specific location identifier, clearly identified on factory layout drawings, the fixture's ID Label, protective wrapping and on each end of fixture carton. Shipping pallets are built with 2" clearance, extending beyond the length and width of cartons, providing shipping protection.

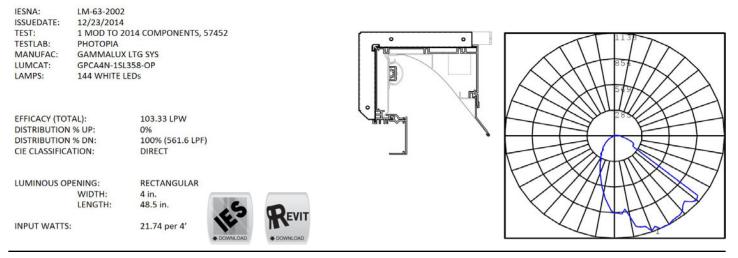
Approx. weight of 4' module is 21 lbs. including carton. Weight of pallet and supplemental packing materials not factored in.





Photometric Reports for STANDARD OUTPUT FIXTURES

FIXTURE HAS OPEN APERTURE (OP) AND 3500K LEDs @ 80+ CRI

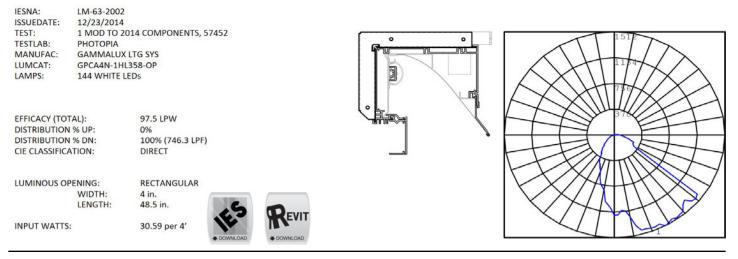






Photometric Reports for HIGH OUTPUT FIXTURES

FIXTURE HAS OPEN APERTURE (OP) AND 3500K LEDs @ 80+ CRI





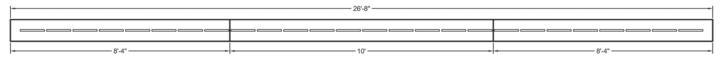


Factory Drawings: Fully dimensioned factory drawings will be provided upon receipt of purchase order.

Run Length

Specify fixtures in nominal run lengths. The level of detail required from the installing contractor is directly associated with the **LED Arrangement** selection:

Blank - Housings are built in custom lengths to create a perfect end-to-end installation of fixtures. However, the as-built field dimensions of the walls may not match the architect's designed dimensions exactly. Therefore, factory drawings will be produced showing the designed nominal run lengths and sent to the installing contractor for written verification or correction. Manufacturing of fixtures does not start until the final set of approved drawings (<u>with field dimensions</u>) comes back from the installing contractor. Dimensions must be measured at the wall height where the Wall Interface will be installed. Fixtures are built to exact length and have no field adjustment capability.



T - Exact field dimensions are NOT required. Factory drawings will show the run of fixtures and telescoping module in such a configuration that the specified (nominal) run length is located as close as possible to the center of the telescoping fixture's range of adjustability. This eliminates the need for accurate field dimensions and allows for some construction variance in the field.

26'-8"										
		6'	4' TELESCOPIC 							

Gammalux Lighting Systems reserves the right to change the details of fixture design and construction at any time.



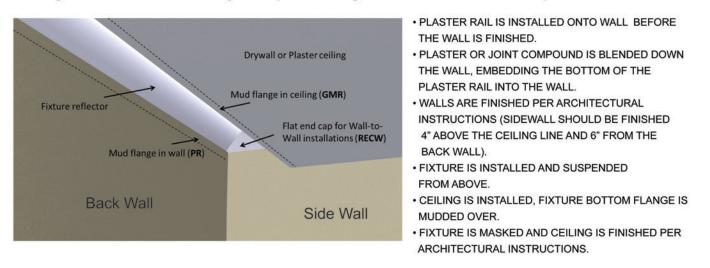


Factory Drawings:

Perimeter Series Mounting Styles

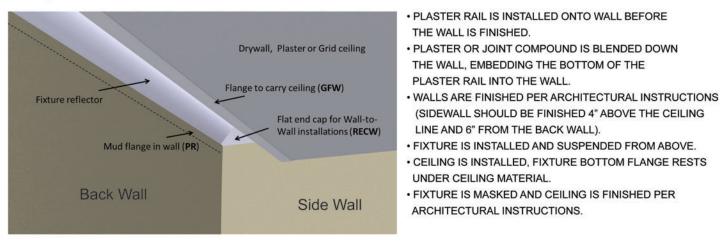
Mounting style from page 1: RECW/PR/GMR

Fixture is recessed above the ceiling line and against a side wall (**RECW**). The exposed portion of the side wall above the ceiling line should be finished to match the rest of the wall. The Plaster Rail (**PR**) is positioned with mud ribs facing down, allowing it to be 'mudded' into the face of the back wall. The fixture bottom features a mud flange (**GMR**), allowing it to be 'mudded' into the drywall or plaster ceiling. Exact field dimensions are required.



Perimeter Series Mounting Styles Mounting style from page 1: RECW/PR/GFW

Fixture is recessed above the ceiling line and against a side wall (**RECW**). The exposed portion of the side wall above the ceiling line a telescoping end fixture may be required, resulting should be finished to match the rest of the wall. The Plaster Rail (**PR**) is positioned with mud ribs facing down, allowing it to be 'mudded' into the face of the back wall. The fixture bottom features a 1" flange (**GFW**), allowing it to rest under the ceiling material. Exact field dimesions are required.



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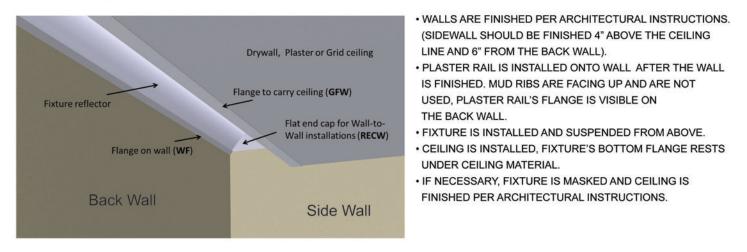


Factory Drawings:

Perimeter Series Mounting Styles

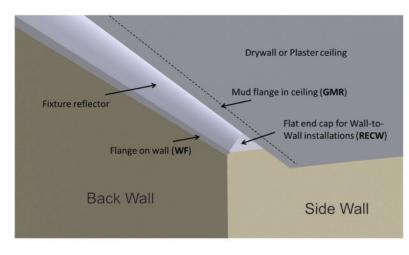
Mounting style from page 1: RECW/WF/GFW

Fixture is recessed above the ceiling line and against a side wall (**RECW**). The exposed portion of the side wall above the ceiling line should be finished to match the rest of the wall. The Wall Flange (**WF**) is positioned with mud ribs facing up and not used. The flange is visible on the back wall. The fixture bottom features a 1" flange (**GFW**), allowing it to rest under the ceiling material. Exact field dimensions are required.



Perimeter Series Mounting Styles Mounting style from page 1: RECW/WF/GMR

Fixture is recessed above the ceiling line and against a side wall (**RECW**). The exposed portion of the side wall above the ceiling should be finished to match the rest of the wall. The Wall Flange (**WF**) is positioned with mud ribs facing up and not used. The flange is visible on the back wall. The fixture bottom features a mud flange (**GMR**), allowing it to be 'mudded' into the drywall or plaster ceiling. Exact field dimensions are required.



- WALLS ARE FINISHED PER ARCHITECTURAL INSTRUCTIONS. (SIDE WALL SHOULD BE FINISHED 4" ABOVE THE CEILING LINE AND 6" FROM THE BACK WALL).
- PLASTER RAIL IS INSTALLED ONTO WALL AFTER THE WALL IS FINISHED. MUD RIBS ARE FACING UP AND ARE NOT USED, PLASTER RAIL'S FLANGE IS VISIBLE ON THE BACK WALL.
- FIXTURE IS INSTALLED AND SUSPENDED FROM ABOVE.
- CEILING IS INSTALLED, FIXTURE'S BOTTOM FLANGE IS MUDDED OVER.
- FIXTURE IS MASKED AND CEILING IS FINISHED PER ARCHITECTURAL INSTRUCTIONS.

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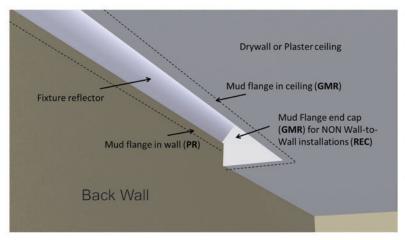


Factory Drawings:

Perimeter Series Mounting Styles

Mounting style from page 1: REC/PR/GMR

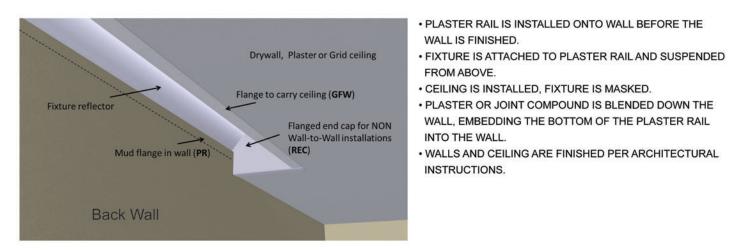
Fixture is recessed above the ceiling line and IS NOT touching a side wall (**REC**). The Plaster Rail (**PR**) is positioned with mud ribs facing down, allowing it to be 'mudded' into the face of the back wall. The fixture bottom features a mud flange (**GMR**), allowing it to be 'mudded' into the drywall or plaster ceiling.



- PLASTER RAIL IS INSTALLED ONTO WALL BEFORE THE WALL IS FINISHED.
- FIXTURE IS ATTACHED TO PLASTER RAIL AND SUSPENDED FROM ABOVE.
- CEILING IS INSTALLED, FIXTURE IS MASKED.
- PLASTER OR JOINT COMPOUND IS BLENDED DOWN THE WALL, EMBEDDING THE BOTTOM OF THE PLASTER RAIL INTO THE WALL.
- CEILING MUD FLANGE IS COVERED BY PLASTER OR JOINT COMPOUND.
- WALLS AND CEILING ARE FINISHED PER ARCHITECTURAL INSTRUCTIONS

Perimeter Series Mounting Styles Mounting style from page 1: REC/PR/GFW

Fixture is recessed above the ceiling line and IS NOT touching a side wall (**REC**). The Plaster Rail (**PR**) is positioned with mud ribs facing down, allowing it to be 'mudded' into the face of the back wall. The fixture bottom features a 1" flange (**GFW**), allowing it to rest under the ceiling material.



Gammalux Lighting Systems reserves the right to change the details of fixture design and construction at any time.



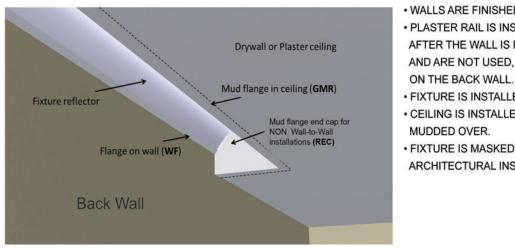


Alternate Mounting

Perimeter Series Mounting Styles

Mounting style from page 1: REC/WF/GMR

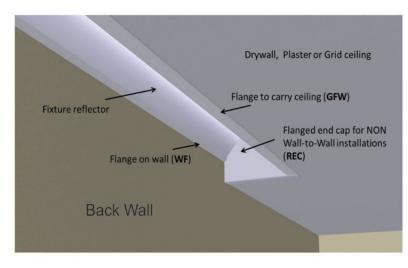
Fixture is recessed above the ceiling line and IS NOT touching a side wall (REC). The Wall Flange (WF) is positioned with mud ribs facing up and not used. The flange is visible on the back wall. The fixture's bottom trim and end caps feature a mud flange (GMR), allowing them to be 'mudded' into the drywall or plaster ceiling.



- WALLS ARE FINISHED PER ARCHITECTURAL INSTRUCTIONS.
- PLASTER RAIL IS INSTALLED ONTO WALL
 - AFTER THE WALL IS FINISHED. MUD RIBS ARE FACING UP AND ARE NOT USED, PLASTER RAIL'S FLANGE IS VISIBLE
- FIXTURE IS INSTALLED AND SUSPENDED FROM ABOVE.
- · CEILING IS INSTALLED, FIXTURE'S BOTTOM FLANGE IS
- FIXTURE IS MASKED AND CEILING IS FINISHED PER ARCHITECTURAL INSTRUCTIONS.

Perimeter Series Mounting Styles Mounting style from page 1: REC/WF/GFW

Fixture is recessed above the ceiling line and IS NOT touching a side wall (REC). The Wall Flange (WF) is positioned with mud ribs facing up and not used. The plaster rail flange is visible on the back wall. The fixture's bottom trim and end caps feature a 1" flange (GFW), allowing them to rest under the ceiling material.



- WALLS ARE FINISHED PER ARCHITECTURAL INSTRUCTIONS. (SIDE WALL SHOULD BE FINISHED 4" ABOVE THE CEILING LINE AND 6" FROM THE BACK WALL).
- PLASTER RAIL IS INSTALLED ONTO WALL AFTER THE WALL IS FINISHED. MUD RIBS ARE FACING UP AND ARE NOT USED, PLASTER RAIL'S FLANGE IS VISIBLE ON THE BACK WALL
- FIXTURE IS INSTALLED AND SUSPENDED FROM ABOVE.
- CEILING IS INSTALLED, FIXTURE'S BOTTOM FLANGE IS MUDDED OVER.
- FIXTURE IS MASKED AND CEILING IS FINISHED PER ARCHITECTURAL INSTRUCTIONS.





Wall Interface

PR The Plaster Rail* is a patented invention of Gammalux Lighting Systems (U.S. Patent # 8,562,168). This extruded aluminum element allows for the fixtures to be mounted directly to the wall while eliminating the gaps that are created by putting a perfectly straight housing along a built wall that is slightly imperfect. Using appropriate fasteners and hitting studs where possible, the Plaster Rail should be shimmed for a straight installation on the wall before the mud ribs are covered with plaster or other compound which is then feathered down the wall. This corrects minor inconsistencies in the wall's straightness and provides a mechanism for the fixture's reflector assembly to join directly to the wall. This results in Total Architectural Integration, a perfectly straight and clean look at the ceiling line. Because imperfections in a flat wall will be illuminated, Gammalux recommends a Level 5 wall finish.



1) Plaster Rail is affixed to wall at a predetermined location prior to finishing.



 The wall is textured and finished.
leaving a perfectly straight channel, ready to receive the fixture's reflector assembly.



2) Plaster or other compound is blended over the lower portion of the Rail and feathered down the wall, eliminating minor inconsistencies in wall straightness.



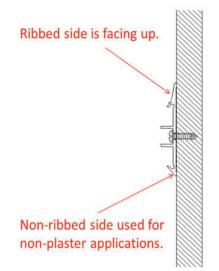
4) The run of fixtures and ceiling are installed. The fixture's reflector assembly snaps directly into the Plaster Rail just above the painted portion of the wall. Gaps between the fixtures and wall are eliminated, resulting in Total Architectural Integration.



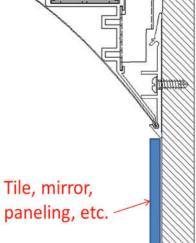


Wall Interface

WF The Wall Flange is made of the same material as the Plaster Rail. In applications where the flange is NOT to be mudded into the wall, the mud ribs should be facing up and not used.

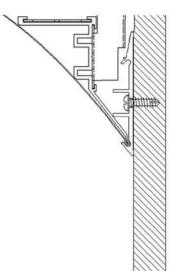


1) Wall Flange is installed with mud ribs facing up.



3) If required, materials can be added to wall and butted against the bottom of the Wall Flange. A bead of caulking or other filler material can be used to hide small gaps.





2) Fixture's reflector assembly is nested into groove in Wall Flange. Flange is visible on the wall.

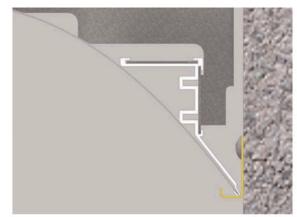


Wall Interface

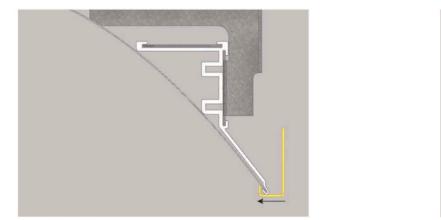
AT The Adjustment Trim is a supplemental flange that is affixed directly to the wall. It is flexible so that it can follow the unintentional inconsistencies of a built drywall construction wall. The Adjustment Trim eliminates the traditional gap found between most competitor fixtures and the wall.

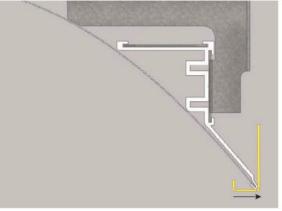


1) Adjustment Trim is added to the wall at a pre-determined height.

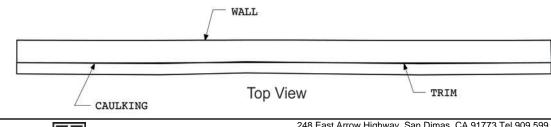


2) The bottom of the fixture's reflector assembly rests on the Adjustment Trim, providing 1/2" adjustability to allow for minor variances in wall straightness.





While this Adjustment Trim does accommodate for minor inconsistencies in wall straightness, it can not correct deep pits. In cases where there is a small gap created between the back of the Adjustment Trim and the wall, a thin bead of caulking or other compound should be used to fill in that gap.





Custom Programmed Output

Custom Programmed Output can be specified to produce approximate Delivered Lumens per Foot, Percentage of High Output Value or Maximum Watts per Foot.

Delivered Lumens Per Foot

Gammalux deals only in delivered lumens per foot. When working to match or exceed a competitor product's Lumens Per Foot package, be sure you are looking at their Delivered (through the lens) lumens per foot, not their System (bare board) lumens per foot.

In the Gammalux item #, use **C** as the Output designator and add a fixture description stating the required Lumens Per Foot value (ie: if you need 600 lumens per foot delivered by the fixture, the line note would read "Program = 600 LPF").

Percentage of High Output Value

If the required delivered lumens per foot are not known, run lighting calculations using our High Output IES file and identify the percentage of increase or decrease required to produce the correct lighting in the space.

In the Gammalux item #, use **C** as the Output designator and add a fixture description stating the required percentage of decrease from our High Output value (ie: for 60% of our High Output value, the line note would read "Program = 60% of High Output").

Maximum Watts Per Foot

In the Gammalux item #, use **C** as the Output designator and add a fixture description stating the required Maximum Watts per Foot (ie: if you need the fixtures capped at a maximum of 7 watts per foot, the line note would read "Program = 7 WPF").

For all three methods, custom programming capability is currently 25-200% of our High Output value. For requirements outside of this range, consult factory.





Approved Cut Release option

If offered for Approved Cut Release in the Gammalux factory quote, the product in the accompanying purchase order is authorized by the GC to be released to production without the need for factory drawings for approval.

I confirm that:

- all ordering options are clearly noted (highlighted, boxed, written in, etc.) on page 1 of this fixture cut sheet
- quoted leadtime begins upon Gammalux's confirmation that the P.O. and marked cut sheet match their quote.
- the order will be released to production and a "record only" drawing will be provided prior to product shipment
- changes after Gammalux's release to production will result in a minimum 25% change fee which increases as production progresses.

General Contractor

GC's authorized Signature (or stamp below)

Signatory's printed name_____

