

LED RETROFIT CONVERSION KITS

Our LED RetroFit Conversion Kits come with a complete Gear Tray Assembly to convert older 4-foot and 8-foot T8 or T12 “strip-type” fixtures into energy efficient LED luminaires.

- High quality components and attractive design makes the retrofit look like a new LED luminaire at a fraction of the cost.
- Improves the quality, integrity, and sustainability of your lighting system.
- A complete LED lighting upgrade solution reduces energy consumption and improves energy management.
- Delivers high performance lumen output; no need to purchase a new LED luminaire.
- Provides the contractor with ultimate “installation” flexibility.
- The retrofit is fast and easy regardless of “strip-type” fixture brand.



LED RETROFIT CONVERSION KIT
(STRIP LED OR T5 OR T8 LED)

BENEFITS

- ETL Listed to UL Standard 1598C.
- DLC Listed and approved (standard wattage driver only).
- Reduced energy consumption compared to older fluorescent lighting systems.
- High system efficacy.
- 100% Tested and certified before shipping ensures out of the box performance.
- Assembled in the United States.
- Five (5) Year Warranty. 50,000 hours, minimum at L₇₀. For warranty information visit www.engproducts.com.
- Minimal part numbers. Other companies require separate part numbers for various “strip-type” fixture housing widths.

FEATURES

- One-piece construction, compact design, fast and trouble free installation.
- Integral “adjustable” installation brackets accommodate 4.25” (107.95mm) or 5.0” (127mm) “strip-type” fixture housing widths.
- Multi-Voltage Operation — 120/277V input.
- Available in 4000K and 5000K color temperatures.
- Pre-wired at the factory for 0-10V dimming.
- Color Rendering Index (CRI): 80+
- Available in two (2) or three (3) T8 fluorescent lamp equivalents.
- Kits are available with or without the frosted diffuser to meet your application needs.

TYPICAL APPLICATIONS:

- Commercial Facilities
- Industrial Facilities
- Storage Rooms
- Warehouses
- Retail Stores
- And more...



LED RETROFIT CONVERSION KITS

ACCESSORIES/OPTIONS

LED RetroFit Installation Tool: The LED RetroFit Installation Tool Kit includes two (2) "labor and time saving" magnetic suspension devices to expedite installation of the gear tray assembly. Supports one man installation when installing 8-foot fixtures.

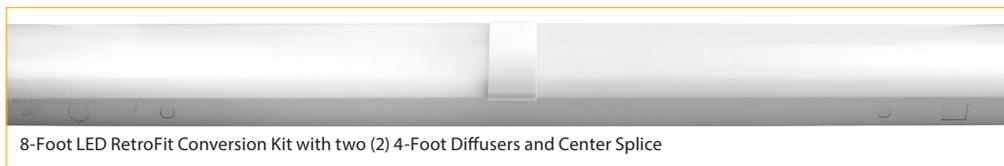
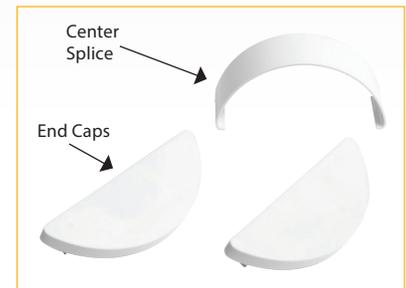
The "round" magnetic end of the tool is attached to the outer ends of the strip fixture housing. The "arrowed" end of the tool is inserted through the slotted holes on each end of the retrofit gear tray, then rotated 90 degrees to hold the gear tray in place while the contractor completes termination of the supply wires to the gear tray.

100% reusable for multiple installation projects, the tool eliminates the use of string, tie wire, nylon straps, or other temporary suspension methods.

Diffuser: The one-piece, "snap-on" polycarbonate UV stabilized frosted diffuser features 2.25" (57.15mm) high contoured shape design that provides even lumen distribution without glare, shadows, or hot spots. Includes two (2) end caps with screws.

- The edges of the diffuser in conjunction with the end caps assure a solid attachment to luminaire's housing with no light leakage.
- The diffuser is easily removable for maintenance or cleaning.

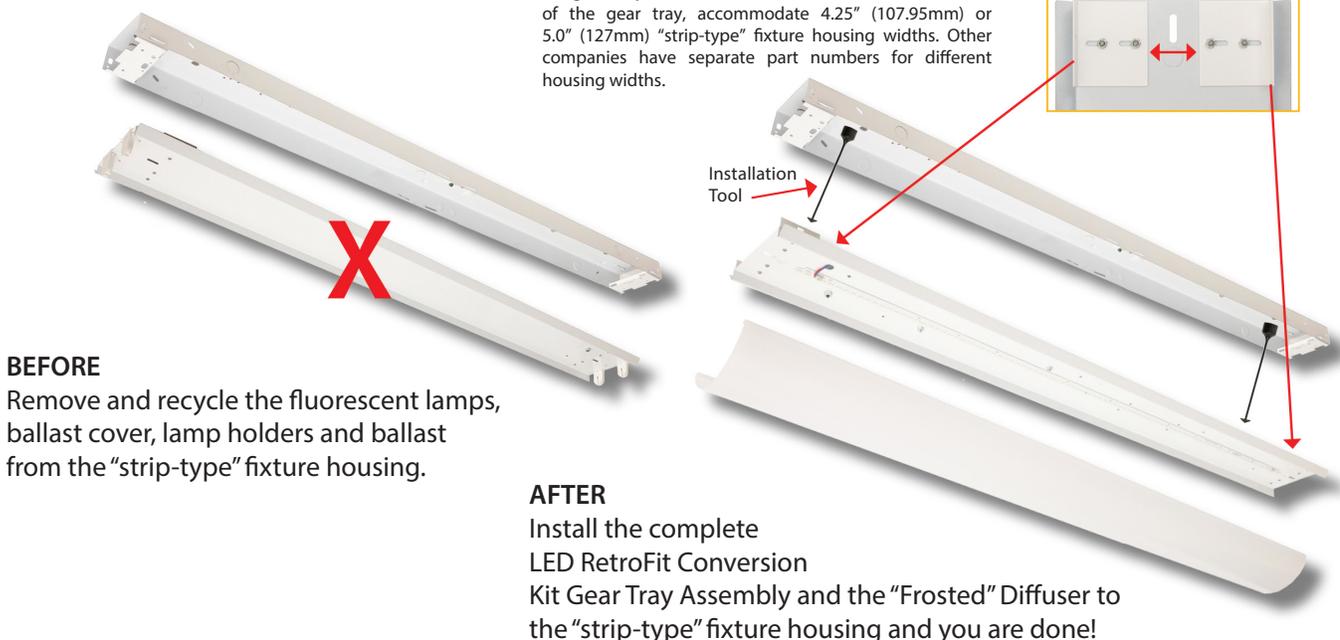
Note: The 8-Foot Diffuser includes two (2) 4-Foot Diffusers, two (2) end caps and a center splice that connects the two (2) Diffusers for a complete install.



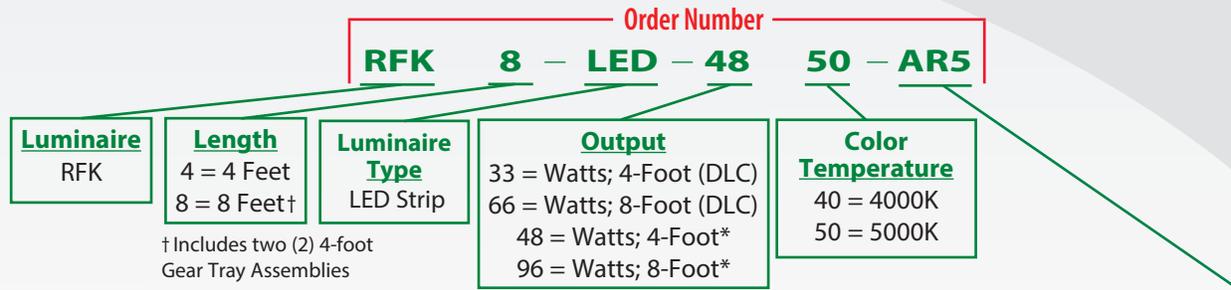
Emergency LED Backup Driver: Meets life safety code requirements for Emergency Illumination; provides 90 minutes of emergency egress lighting.

RETROFITTING WITH THE LED RETROFIT CONVERSION KIT (COMPLETE GEAR TRAY ASSEMBLY)

Integral "adjustable" installation brackets, on each end of the gear tray, accommodate 4.25" (107.95mm) or 5.0" (127mm) "strip-type" fixture housing widths. Other companies have separate part numbers for different housing widths.



CONFIGURATION EXAMPLE — LED STRIP

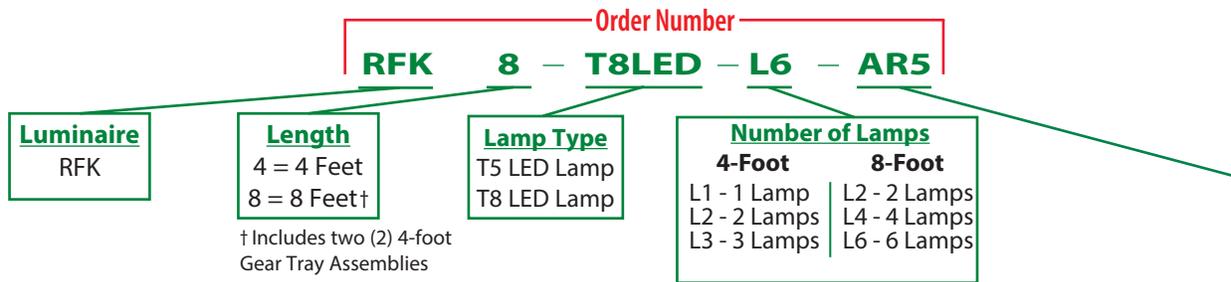


Watts	Lamp Equivalent	Lumens No Lens	Lumens With Lens	Efficacy No Lens	Efficacy With Lens
33 = Watts - 4-Foot Luminaire	(2) F32 T8	4,393	3,954	141	127
66 = Watts - 8-Foot Luminaire	(4) F32 T8	8,787	7,909	141	127
48 = Watts - 4-Foot Luminaire*	(3) F32 T8	5,600	4,920	111	98
96 = Watts - 8-Foot Luminaire*	(6) F32 T8	11,200	9,840	111	98

*Indicates High Wattage LED Driver

CONFIGURATION EXAMPLE — T5 AND T8 LED LAMPS

Note: We recommend using only Type B Single-End Powered Bi-Pin T5 or T8 LED Lamps.



LED RetroFit Conversion Kit Options	
The LED RetroFit Conversion Kit Luminaire can be built to your specifications by adding the respective option codes as "part" of your order number.	
Option	Notes
A. 4-Foot Frosted Diffuser with End Caps	The "Frosted Diffuser" is an option for all LED RetroFit Conversion Kits and is strongly recommended for ceiling heights less than 15-feet. Two (2) "End Caps" are included with the Diffuser.
E. Emergency LED Backup Driver	Non-stock; long lead time.
FH4. 4-Foot Fixture Housing	
FH8. 8-Foot Fixture Housing	
R4. Microwave Occupancy Sensor (On/Off Only) R5. Microwave Occupancy Sensor (0-10V Dimming 30%) R6. Microwave Occupancy Sensor (0-10V Dimming 50%)	Recommended for ceiling heights 15-feet or lower. The microwave sensor detects the slightest movement in the occupancy zone. Detection is sensed through doors, glass, or thin walls.
Z. Bulk Packaging	25 or 50 per skid (eliminates individual carton packaging on the job site)

LED RETROFIT CONVERSION KITS

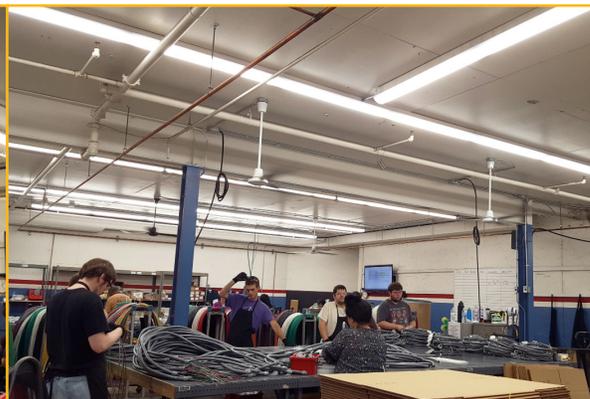
LED DRIVER SPECIFICATIONS		
Electrical Specifications	Standard Wattage*	High Wattage
Input Voltage	120 - 277 VAC	120 - 277 VAC
Input Frequency	60/50 Hz	60/50 Hz
Power Factor	> 0.9 @ Full Load; 120 through 277V	> 0.9 @ Full Load; 120 through 277V
Inrush Current	20 Amps @ 230 Volts	10.3 Amps @ 120 Volts; 17.5 Amps @ 277 Volts
Output Power	35-Watts	55-Watts
Total Harmonic Distortion	20% or less	20% or less
Protection	Overvoltage, Over Current and Short Circuit	Overvoltage, Over Current and Short Circuit
Dimming Capability	10% of Total Output Power; 0 through 10V	10% of Total Output Power; 0 through 10V
Environmental Specifications		
Operating Temperature	-4°F (-20°C) to 122°F (50°C)	-4°F (-20°C) to 122°F (50°C)
Applications	Damp and Dry Locations	Damp and Dry Locations
Certifications		
Underwriters Laboratories (UL)	UL 8750	UL 8750
FCC Part 15	Class B Consumer Limits	Class A Non-Consumer Limits

*DLC Listed and Approved.

CASE STUDY - LIGHT LEVELS FOR EPCO PRODUCTION AND PACKAGING AREA			
Location	Pre-Retrofit	Post-Retrofit (with Lens)	Change
Fixture Whip Table	8.3 FC	9.0 FC	8% Increase
Floor	9.1	8.3	33% increase
AC Whip Assembly Table #1	8.0	9.3	16% Increase
AC Whip Assembly Table #2	7.6	8.6	13% Increase
Stairs	3.0	6.2	200% Increase



Fixture Whip Table



AC Whip Assembly Table



Stairs

LED RETROFIT CONVERSION KIT PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Order Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
LED RetroFit Conversion Kits LED Strip										
RFK4-LED-3340	14036	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 4000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	9
RFK4-LED-3340-A	14037	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 4000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK4-LED-3350	14034	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 5000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	9
RFK4-LED-3350-A	14035	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 5000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK4-LED-4840	14006	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 4000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	9
RFK4-LED-4840-A	14007	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 4000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK4-LED-4850	14004	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 5000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	9
RFK4-LED-4850-A	14005	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 5000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK8-LED-6640	14030	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 4000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	18
RFK8-LED-6640-A	14031	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 4000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
RFK8-LED-6650	14032	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 5000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	18
RFK8-LED-6650-A	14033	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 5000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
RFK8-LED-9640	14028	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 4000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	18
RFK8-LED-9640-A	14029	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 4000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
RFK8-LED-9650	14014	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 5000K, Adjustable Width: 4.25" to 5".	EA	1	BX	1	1	1	No	18
RFK8-LED-9650-A	14015	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 5000K, Adjustable Width: 4.25" to 5". Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
LED RetroFit Conversion Kits Using T8 LED Lamps										
RFK4-T8LED-L1*	14008	T8 LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, one (1) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	7
RFK4-T8LED-L2*	14010	T8 LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, two (2) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	7
RFK4-T8LED-L3*	14009	T8 LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, three (3) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	7
RFK8-T8LED-L2*	14012	T8 LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, two (2) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	13
RFK8-T8LED-L4*	14011	T8 LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, four (4) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	13
RFK8-T8LED-L6*	14013	T8 LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, six (6) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	13

Note: Also available for T5 LED Lamps. Contact our Inside Sales Department (sales@engproducts.com or 800.336.1976).

LED RetroFit Conversion Kit Accessories/Options

RFK-TOOL	14019	LED RetroFit Conversion Kit Installation Tool	EA	1	BG	2	2	2	Yes	1
RFK4-LENS	14039	Replacement Frosted Acrylic Diffuser: for 4-FT Strip Fixture	EA	1	BX	1	1	1	Yes	2
RFK8-LENS	14038	Replacement Frosted Acrylic Diffuser: for 8-FT Strip Fixture. Includes two (2) 4-FT Diffusers jointed together by two (2) Tinnerman Clips	EA	1	BX	1	1	1	Yes	3

***Note:** We recommend using only Type B Single-End Powered Bi-Pin T5 or T8 LED Lamps.

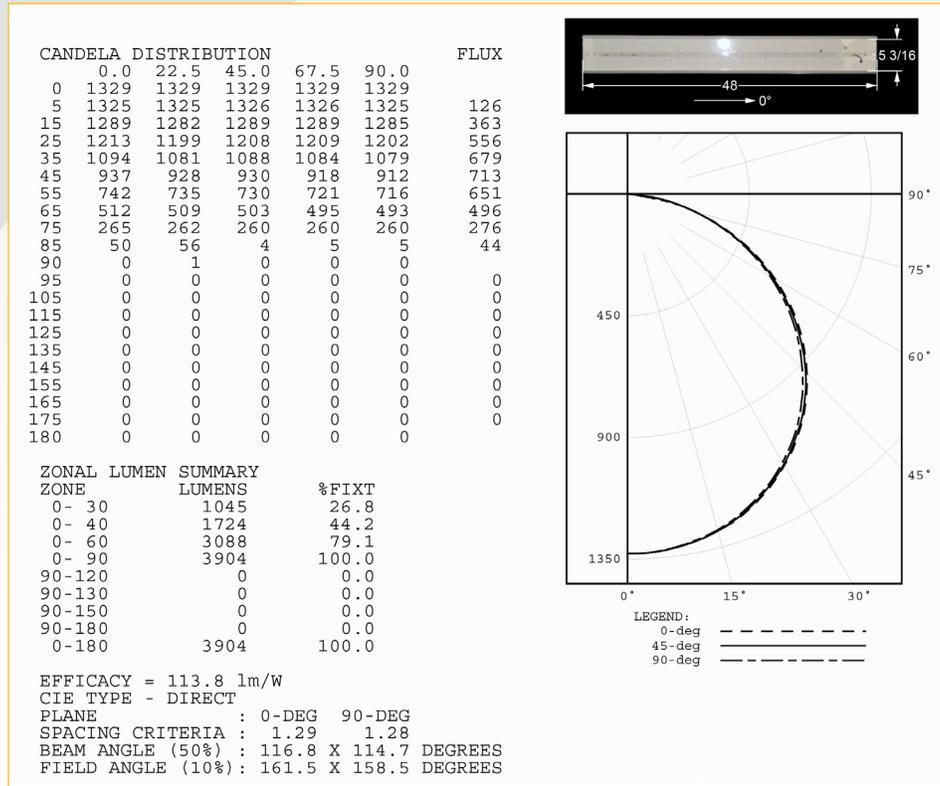
UNITS OF MEASURE KEY

Order Unit: The Unit to be ordered; Order Qty: Number of pieces in each Unit; Unit Pkg: Packaging types - BG (Bag), BX (Box), BN (Bulk); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton
Specifications subject to change without prior notice.

LED RETROFIT CONVERSION KITS

PHOTOMETRICS FOR LED RETROFIT CONVERSION KITS

LED RetroFit Conversion Kit — LED Strip without Frosted Diffuser



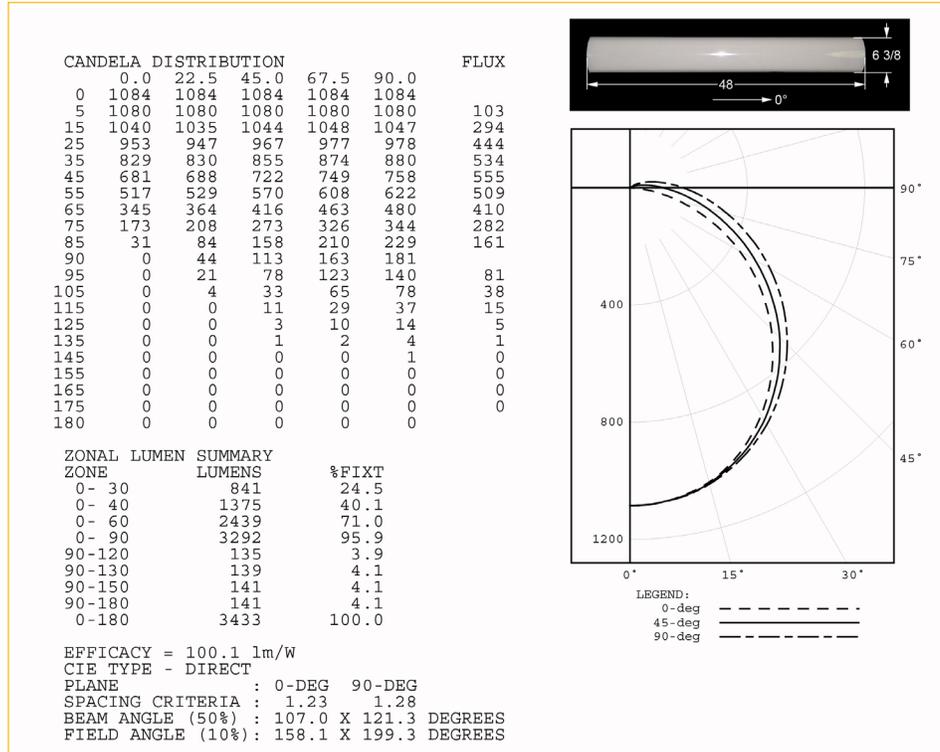
Luminaire Quality Metrics LM-79 Report

EPCO's LM-79 Report captures the LED RetroFit Conversion Kit's overall electrical characteristics and photometric measurements (lumen output) performance. This report is a snapshot of spatial distribution of light and color attributes under specified operating conditions. This report does not address lifetime ratings for the LED RetroFit Conversion Kit, or changing performance over time (e.g., lumen maintenance).

Most important, EPCO's LM-79 data is intended to provide you with objective retrofit product evaluation comparisons relative to the LED RetroFit Conversion Kit's performance requirements.

LM-80 and TM-21 Reports available upon request!

LED RetroFit Conversion Kit — LED Strip with Frosted Diffuser



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