How do you avoid buying the wrong LED High Bay?

Temperatures in High Bay applications are higher than the 25°C specified on spec-sheets.

Poorly designed luminaires will fade quickly, **leaving you in the dark.**

MOST SPEC-SHEETS DO NOT TELL THE WHOLE STORY, LOOK FOR:

Lumens and Efficacy at the Ambient Temperature of your Environment

How long the LED driver will last in your environment

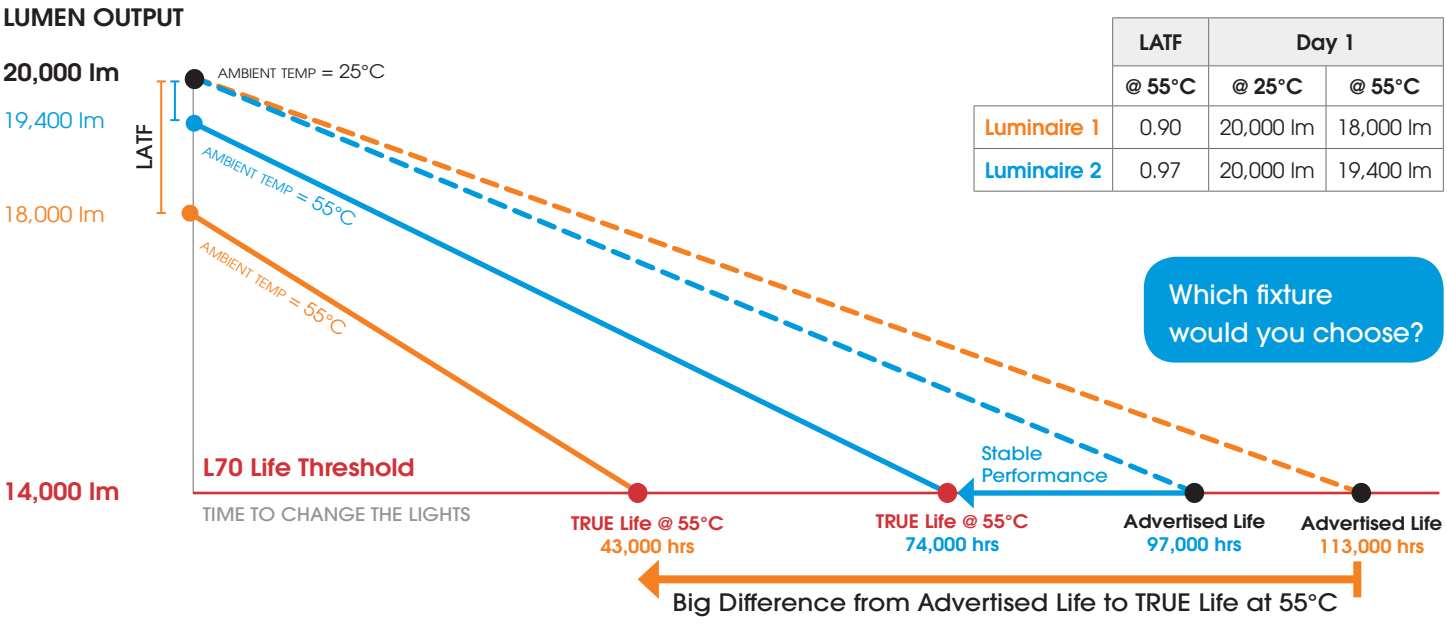
TRUE Life by applying all light losses to TM-21 L70
(CRI, CCT, lens, ambient temp.)

Aluminum Heatsinks

Dissipate heat from the PCB

Higher ambient temperatures impact the initial lumen output, in addition to L70

This effect is addressed by the Luminaire Ambient Temperature Factor (LATF)



	LATF	Day 1	
	@ 55°C	@ 25°C	@ 55°C
Luminaire 1	0.90	20,000 lm	18,000 lm
Luminaire 2	0.97	20,000 lm	19,400 lm

Which fixture would you choose?

CALCULATE REAL PERFORMANCE

1 Measure the Ambient Temperature
at the height of the luminaire, as heat rises

°C

2 Ask for LATF at measured Amb. Temp.
Luminaire Ambient Temperature Factor
Found in spec-sheets, if not there, ask the manufacturer

3 Look for Applicable Multipliers
Found in spec-sheets, if not there, ask the manufacturer

CCT | CRI | Lens

4 Apply LATF and Multipliers to Spec-Sheet Values
to know the REAL Lumens and Efficacy in your application

How do you make sure a luminaire meets your application requirements?

Example: LED High Bay with 35,000lm and 166LPW

- Spec-sheet values given at 25°C, 5000K, 70 CRI, No Lens
- Application requirements: 55°C, 4000K, 80 CRI, Frosted Lens

SPEC-SHEET VALUES		MULTIPLIERS					REAL PERFORMANCE
35,000 lm 166 LPW	x	0.93 LATF	x 0.96 CCT	x 0.93 CRI	x 0.94 Lens	=	27,317 lm 129 LPW

Multipliers used in the example do not represent any specific luminaire. Look for the actual values of your luminaire in the spec-sheet or ask the manufacturer.

CALCULATE TRUE LIFE

1 Ask for TM-21 Lumen Maintenance
AT ACTUAL AMBIENT TEMPERATURE (not 25°C)

Lxx xx = % of real lumens	DAY 1	50,000 hrs	100,000hrs
	L100	L _ _	L _ _
REAL Lumens	_____ x 1.00	_____ x 0._ _	_____ x 0._ _

Anything lower than L70 means end of life.

How many drivers will you need?
Do not underestimate how costly is to replace drivers

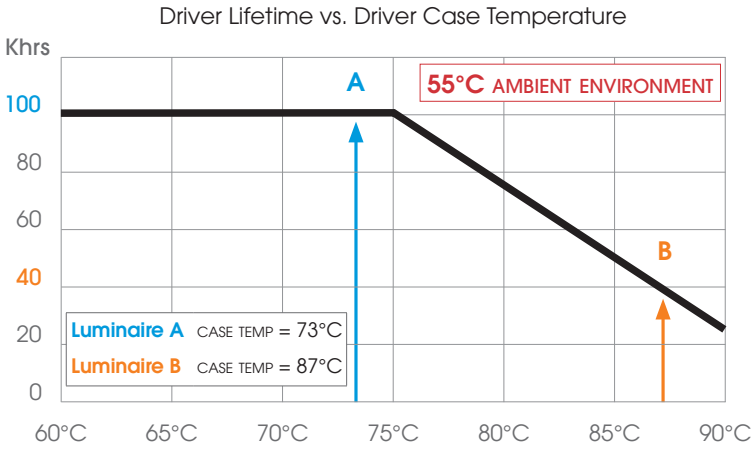
2 Ask for Driver Life at Actual Ambient Temp.
in certain environments and luminaires the driver is the weakest link and you may need to replace it before L70

hrs

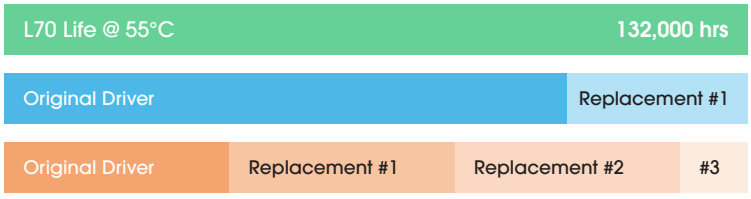
Aluminum Wireway
Dissipate heat from the LED Driver

Tip: For best reliability, choose a fixture that has an ambient rating 10°C greater than your measured maximum ambient conditions.

Will an LED luminaire really last as long as promised?



What good does it do if the LEDs are projected to last for 100,000 hours if the driver will only last 40,000 hours?



Blue and Orange represent two different luminaires, both running at an ambient temperature of 55°C with the same L70 of 132,000 hours and same driver, but with a different thermal design.

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