# LUMIFA LF1E

## LF1E Series

The LF1E illumination lights are designed to be used in freezers or refrigerated display cases where the ambient temperature is as low as -40ºC. These energy saving units, with a long service life, compact size and low heat generation make them perfect for illuminating areas with very low temperatures.

- Three types of light distribution: no-lens, condensing and dual
- Life: 70% of initial luminance at 40,000 Hrs
- Available in 4 lengths
- Plastic lens suitable for food industry
- IP54 protection against dust and water
- CE marked, UL Listed (damp locations)

### LED Optical Specifications

| Illumination Color | | Cool White | Warm White |
|---|---|---|---|
| Color Temperature | | 5000K | 3000K |
| **Lens Type** | **Unit Length** | **Reference Illumination** | |
| No Lens Note 1 | 550mm | 950lx | 750lx |
| | 808mm | 1100lx | 900lx |
| | 1066mm | 1200lx | 950lx |
| | 1450mm | 1250lx | 1000lx |
| Condensing Lens Note 1 | 550mm | 1950lx | 1500lx |
| | 808mm | 2000lx | 1550lx |
| | 1066mm | 2000lx | 1550lx |
| | 1450mm | 2000lx | 1550lx |
| Dual Lens | See Illumination Distrbution Chart next page | | |

Note 1: Measured at 0.3m directly below unit.

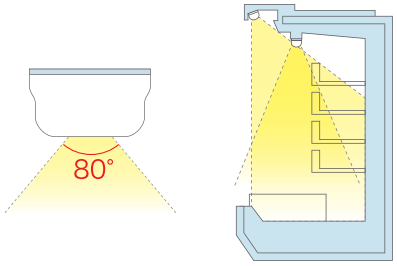
### General Specifications

| Model (length) | LF1E-B (550mm) | LF1E-C (808mm) | LF1E-D (1066mm) | LF1E-E (1450mm) |
|---|---|---|---|---|
| Rated Voltage | 24V DC | | | |
| Input Current (at rated voltage) - 24V DC | 350mA (404mA max) | 525mA (606mA max) | 700mA (807mA max) | 950mA (1004mA max) |
| Power Consumption (typ. at rated input) - 24V DC | 8.4W (9.7W max) | 12.6W (14.6W max) | 16.8W (19.4W max) | 22.8W (26.3W max) |
| Insulation Resistance | 100 MΩ minimum (500V DC megger) between input and housing | | | |
| Dielectric Strength | 500V AC, 1 minute | | | |
| Vibration Resistance (damage limits) | Frequency 5 to 55Hz, amplitude 0.17mm | | | |
| Shock Resistance (damage limits) | 300m/s$^2$ | | | |
| Operating Temperature | –40 to +40°C (no freezing) | | | |
| Operating Humidity | 45 to 85% RH (no condensation) | | | |
| Storage Temperature | –40 to +70°C (no freezing) | | | |
| Operating Environment | No corrosive gases | | | |
| Life | 40,000 hours (The illumination duration in which the illuminance maintains a minimum of 70% of the initial value at 25ºC.) | | | |
| Weight (approx.) (Note 1) | 275g | 390g | 515g | 690g |
| Degree of protection | IP54 | | | |
| Material | End cover, conduit: polyamide, Cover: polycarbonate, Cable: PVC, Mounting bracket: stainless steel | | | |

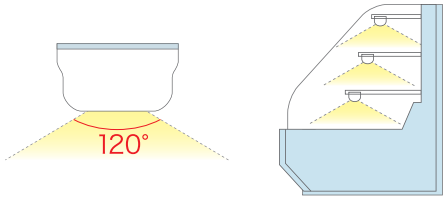
Note 1: Dual lens type.

### Application Examples

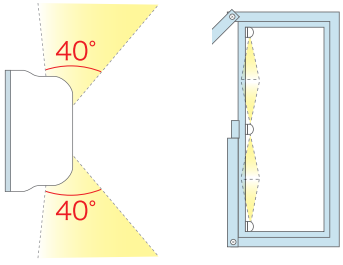
**Open Front Display Cases - use Condensing Lens type**




**Glass Front Display Cases - use No Lens type**

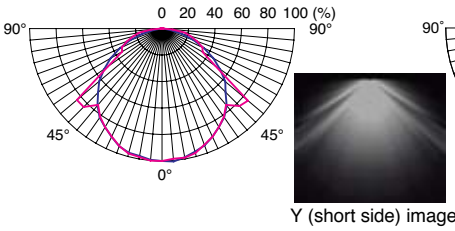



**Reach-in Display Cases - use Dual Lens type**



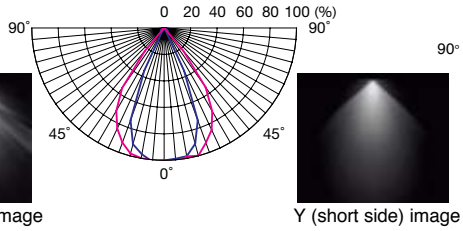
## Illuminance Distribution Chart

### No-lens



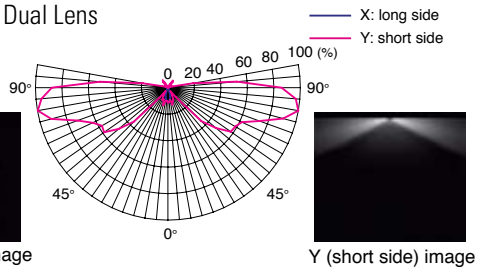

Y (short side) image

### Condensing Lens




Y (short side) image

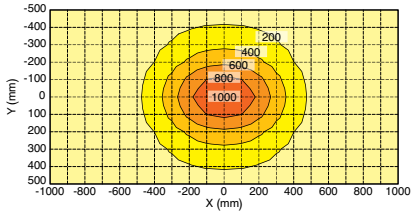
### Dual Lens



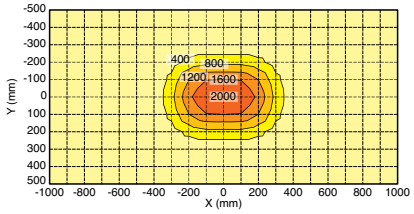

Y (short side) image

## Illuminance Chart

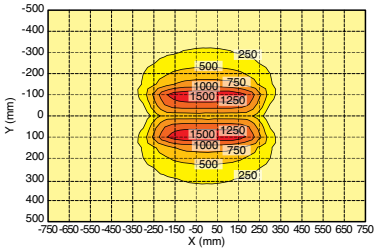
### No-lens (LF1E-B3S-2N)



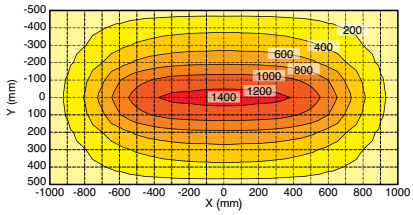

### Condensing Lens (LF1E-B3S-2NA)



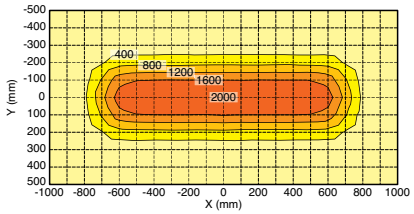

### Dual Lens (LF1E-B3S-2NB)



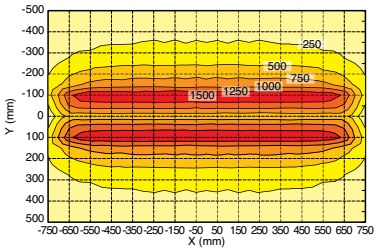

### No-lens (LF1E-E3S-2N)




### Condensing Lens (LF1E-E3S-2NA)

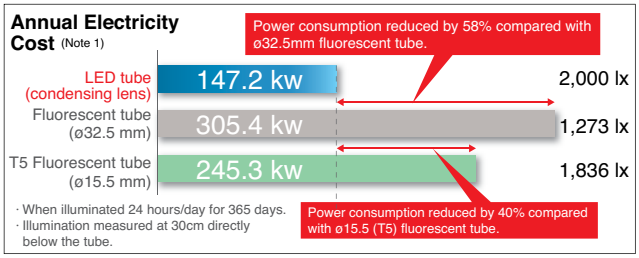


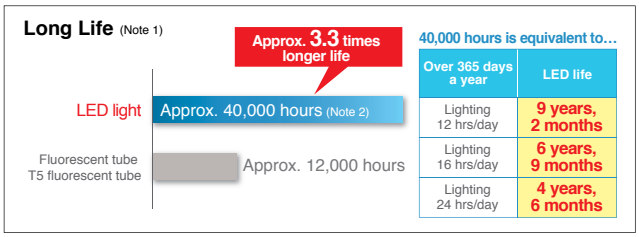

### Dual Lens (LF1E-E3S-2NB)

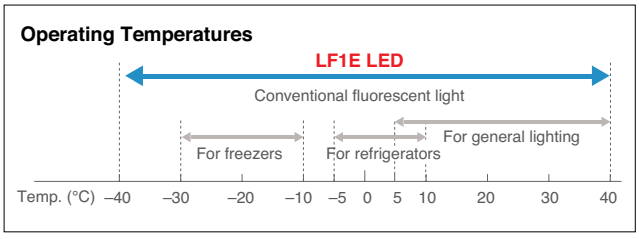



## LF1E - B 3 S - 2 N A

- Length (mm)
  - B: 550
  - C: 808
  - D: 1,066
  - E: 1,450
- Light Distribution (Lens type)
  - Blank: No lens
  - A: Condensing lens
  - B: Dual lens
- LED color
  - N: Cool White (5000 K equivalent)
  - L: Warm white (3000 K equivalent)




Note 1: Comparison among LED illumination unit LF1E-D3 (1,066mm), 40W fluorescent tube equivalent (1,198mm), and T5 fluorescent tube equivalent (1,200mm).

Note 2: The total illumination life in which the illuminance maintains a minimum of 70% of the initial value in 25°C environment. LED life depends on the operating environment and conditions.

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