



lamps
switched off



uniform
lighting



zero harmful
radiation



quality
guaranteed



thermal
comfort



full color
rendering

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PRODUCT DATASHEET

Group of Products: Comfort Lux Untubed (No-Drop, Regular Ceilings)

Subgroup of Products: Double Glazed Acrylic Prismatic Lenses

Product Description

Comfort Lux Tubed Skylights with Double-Glazed Acrylic Prismatic Lenses are applied to industrial, retail, commercial and logistic buildings, functioning as a gateway to external light, while substituting or complementing traditional electric lighting systems. Mechanical and optical filters are applied to the incoming daylight, which blocks most of the ultraviolet (98%) and infrared (65%) specters of sunlight, letting only pure, visible daylight through. While passing through the skylight, a significant share of external radiant heat is subtracted by the inner air chamber that prevents from increasing temperature and deterioration of indoor comfort. When reaching the second lens, sunlight is diffracted at a 45° angle, which allows better distribution and larger coverage area. These features make for more efficient daylighting and prevents from glare over the system's users. Comfort Lux Untubed Skylights with Double-Glazed Acrylic Prismatic Lenses can be installed in brand-new and existing buildings, without the need for structural reinforcement, while guaranteeing safe and leak-free results.

Specifications

Skylights found and specified in this datasheet are developed and registered by Comfort Lux Sistemas de Iluminação Ltda. and are manufactured at its headquarters at Rua Lauro Müller, 860, Prédios 4-5, CEP (ZIP Code) 90.240-130, Porto Alegre, Rio Grande do Sul, Brazil. Comfort Lux Untubed Skylights with Double-Glazed Acrylic Prismatic Lenses are fabricated under the following specifications:

Upper lens: prismatic, vacuum-formed, 3mm thick, 50% impact-modified virgin acrylic, crystal transparent color, 92% light transmittance;

Lower lens: prismatic, vacuum-formed, 3mm thick, 50% impact-modified virgin acrylic, milky white color, 70% light transmittance;

External aluminum frame, fixed with ¼ x 1 self-drilling screws.



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Properties of the Prismatic Acrylic

PHYSICAL-OPTICAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|--|-----------------|-------|---------|
| Specific Gravity / Relative Density | ASTM D-792 | | 1.19 |
| Optical Refractive Index | ASTM D-542 | | 1.49 |
| Light Transmission – Crystal Transparent | ASTM D-1003 | % | 92 |
| Light Transmission – Milky White | ASTM D-1003 | % | 70 |
| Sound Transmission | ASTM E90 / E413 | DB | 27 |
| Water Absorption | ASTM D-570 | % | 0.4 |

CHEMICAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|---|--------------------------------|-------|---------|
| Critical Cracking Stress to Isopropyl Alcohol | ARTC Modification of MIL-P6997 | psi | 900 |
| Critical Cracking Stress to Lacquer Thinner | ARTC Modification of MIL-P6997 | psi | 500 |
| Critical Cracking Stress to Toluene | ARTC Modification of MIL-P6997 | psi | 1300 |
| Critical Cracking Stress to Solvesso 100 | ARTC Modification of MIL-P6997 | psi | 1600 |

MECHANICAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|------------------------------|-------------|--------|---------|
| Tensile Strength | ASTM D-638 | psi | 11030 |
| Tensile Elongation – Maximum | ASTM D-638 | % | 5.8 |
| Flexural Strength | ASTM D-790 | psi | 17000 |
| IZOD Impact Strength | ASTM D-256 | ft-lb | 0.4 |
| Rockwell Hardness | ASTM D-785 | Esc. M | 95 |

FLAMMABILITY CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|-----------------------------|-------------|--------|---------|
| Flammability (Burning Rate) | ASTM D-635 | In/min | 1.019 |

THERMAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|--|-------------|---------------------------------|---------|
| Thermal Conductivity – Crystal Transparent | ASTM C-177 | BTU-ft/(hr.ft ² .°F) | 0.075 |
| Thermal Conductivity – Milky White | ASTM C-177 | BTU-ft/(hr.ft ² .°F) | 0.075 |
| Thermal Conductivity – Set of Two Lenses | ASTM C-518 | W/m ² .K | 2.38 |



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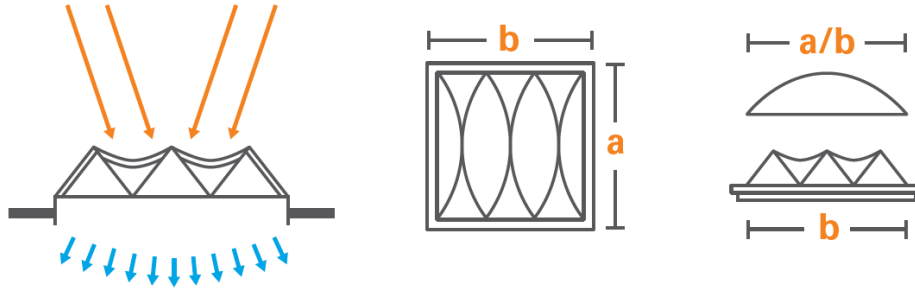


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Available Models

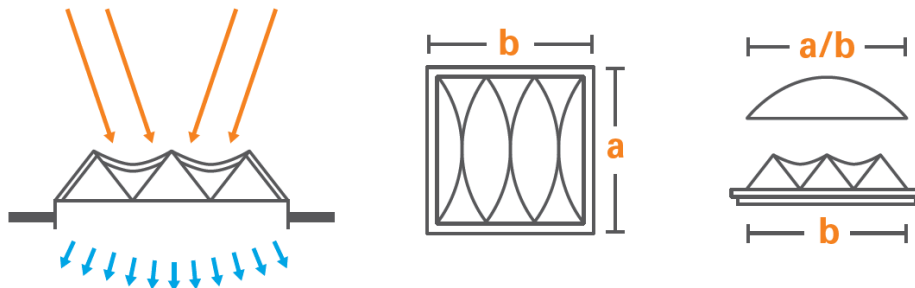
COMFORT LUX UNTUBED 2X2 (0,66m x 0,66m)



a = 655mm | b = 655mm

Weight = 17kg

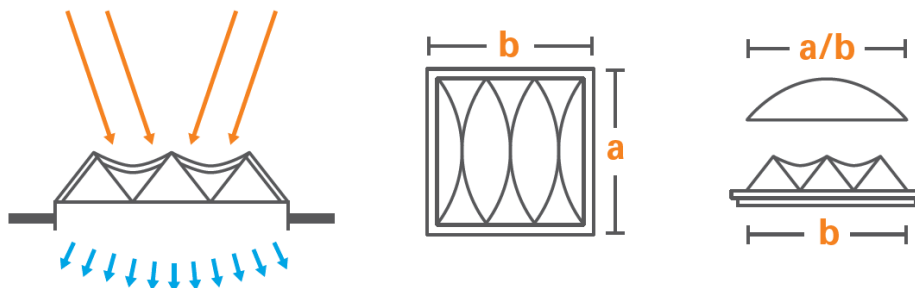
COMFORT LUX UNTUBED 4x4 (1,22m x 1,22m)



a = 1265mm | b = 1265mm

Weight = 28kg

COMFORT LUX UNTUBED 4x8 (1,22m x 2,44m)



a = 1265mm | b = 2485mm

Weight = 43kg