



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 Polycarbonate Prismatic Lenses

Product Description

Comfort Lux Tubed Skylights with Double-Glazed Polycarbonate 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 Polycarbonate 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 Polycarbonate Prismatic Lenses are fabricated under the following specifications:

Upper lens: prismatic, vacuum-formed, 3mm thick, polycarbonate, crystal transparent color, 90% light transmittance;

Lower lens: prismatic, vacuum-formed, 3mm thick, polycarbonate, milky white color, 62% light transmittance;

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



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Properties of the Prismatic Polycarbonate

PHYSICAL-OPTICAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|--|-------------|-------------------|---------|
| Specific Gravity / Relative Density | GB/T 1033 | g/cm ³ | 1,20 |
| Optical Refractive Index | GB/T 2410 | % | 1,61 |
| Light Transmission – Crystal Transparent | ASTM D-1003 | % | 90 |
| Light Transmission – Milky White | ASTM D-1003 | % | 62 |
| Water Absorption | GB/T 1033 | % | 0,25 |

CHEMICAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|-----------------|-------------|-------|---------|
| Yellowing Index | GB/T | | 2,3 |

MECHANICAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|------------------------------|-------------|-------------------|---------|
| Tensile Strength | GB/T 1040 | psi | 87460 |
| Tensile Elongation – Maximum | GB/T 1040 | % | 108 |
| Flexural Strength | GB/T 9341 | psi | 104140 |
| Impact Strength | GB/T 1843 | KT/m ² | 6,2 |
| Shore Hardness | GB/T 9342 | HD | 85 |

FLAMMABILITY CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|--|-------------------------------|--------|---------------|
| Flammability (Burning Rate) | ASTM D-635 | In/min | 1.019 |
| Flame Spreading Index | NBR 9442 | | 14 (Classe A) |
| Flamability Pattern | UL 94 | | V2 |
| Smoke Specific Optical Density (Maximum) | ASTM E662 | | 130 |
| Fire Classification (Brazilian Norms) | Inst. Técnica 10/2011 CBPM/SP | | II-A |

THERMAL CHARACTERISTICS

| TESTED PROPERTY | TEST METHOD | UNITS | RESULTS |
|--|-------------|---------------------------------|---------|
| Thermal Conductivity – Crystal Transparent | W/m.K | BTU-ft/(hr.ft ² .°F) | 0,177 |
| Thermal Conductivity – Milky White | W/m.K | BTU-ft/(hr.ft ² .°F) | 0,177 |

Available Models



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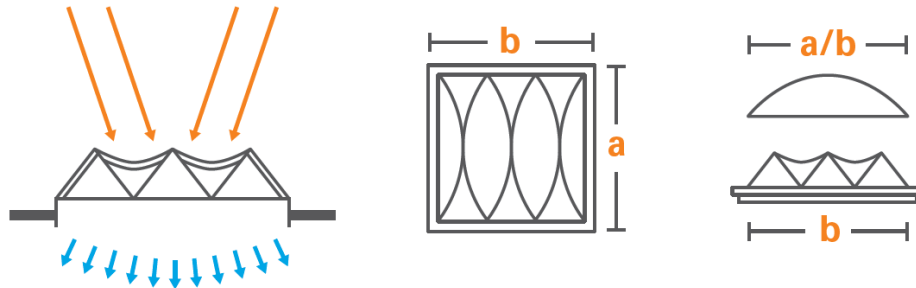
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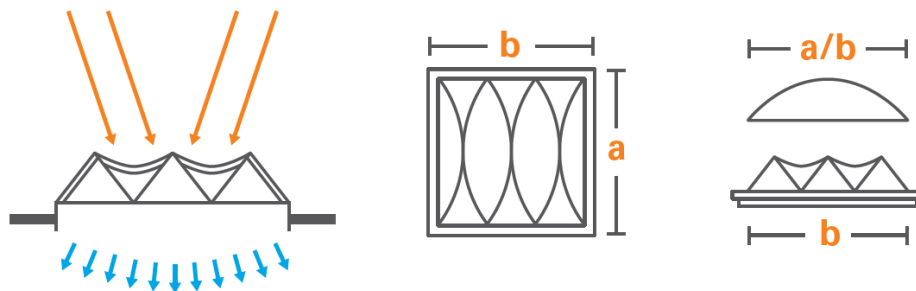
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COMFORT LUX UNTUBED 2X2 (0,66m x 0,66m)



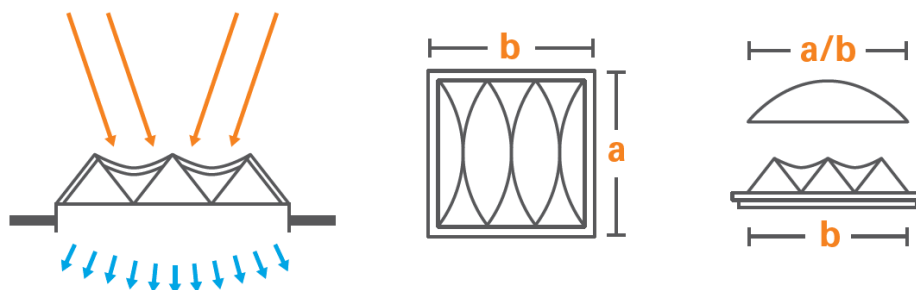
a = 655mm | b = 655mm
Weight = 17kg

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