



lamps
switched off



uniform
lighting



zero harmful
radiation



quality
guaranteed



thermal
comfort



full color
rendering

ENG.2016.CLUX.CD.DUP.PC

PRODUCT DATASHEET

Group of Products: Comfort Lux Tubed (Drop Ceilings Only)

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 lenses and tube, 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 Tubed 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 Tubed 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.

High resistance polypropylene flexible tube, layered with inner highly reflective aluminum foil;

White-colored fixing and finishing frame.



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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



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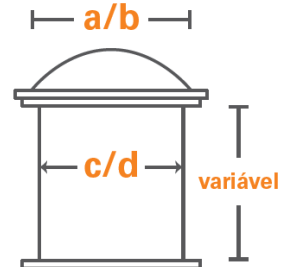
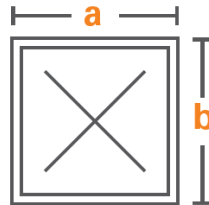
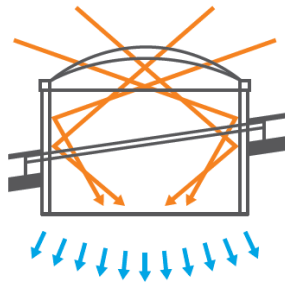


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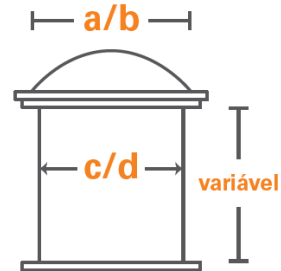
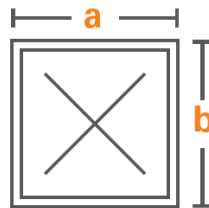
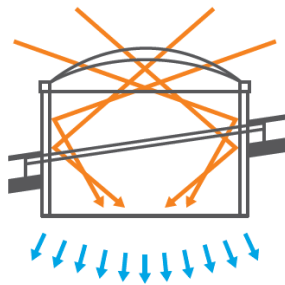
Available Models

COMFORT LUX TUBED 2x2 (0,66m x 0,66m)



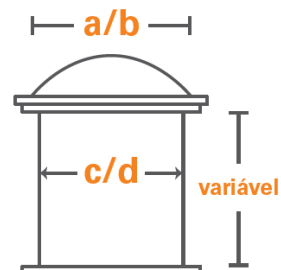
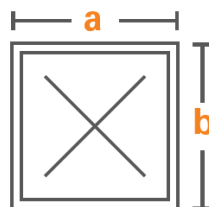
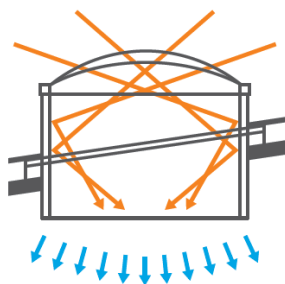
a = 655mm | b = 655mm | c = 582mm | d = 582mm
Weight = 17kg

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



a = 1265mm | b = 1265mm | c = 1192mm | d = 1192mm
Weight = 28kg

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



a = 1265mm | b = 2485mm | c = 1192mm | d = 2412mm
Weight = 43kg