

# Bristolite® Daylighting Systems

## *Coollite*

### Energy Efficient Solar Control Low-E Acrylic and Polycarbonate Glazed Skylights

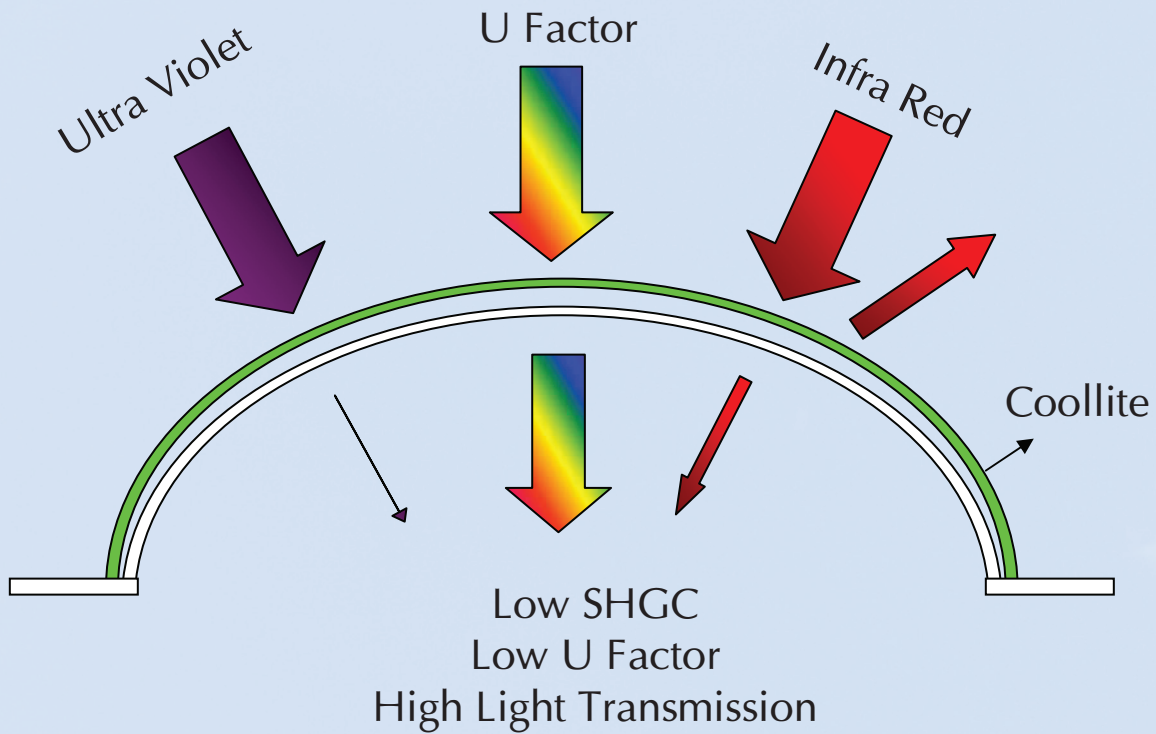


Coollite solar heat blocker outer dome



Coollite white prismatic inner dome

Bristolite Daylighting Systems' Coollite – for acrylic and polycarbonate skylights significantly reduce solar heat while offering high levels of light transmission, and reducing energy costs for cooling and lighting buildings. Unlike most glazing where heat blockage is achieved by translucent or opaque treatments which greatly reduce light transmission, Coollite lets in the entire spectrum of visible light. It also blocks up to 99.9% of UV light. Coollite provides the additional benefit of Low U Factor (thermal insulation).



Visible Light Transmitted.....	30% - 65%
Total Infrared Rejected.....	40% - 95%
UV Rejected.....	99.9%
Total Solar Energy Rejected.....	40% - 85%
Low U Factor.....	0.30



## Energy Savings Benefits of specifying Coollite Skylights:

The following study summarizes the energy performance of Coollite skylights compared to conventional clear dual acrylic glazed skylights. It also quantifies the potential cost savings Coollite skylights can provide for architects seeking to reduce the carbon footprint of their buildings.

### Key Findings:

Significant return on investment can be realized through the year over year energy cost saving Coollite provides. Referring to the chart (next page) savings can vary from \$6,915 in Seattle to \$18,300 in Phoenix. Over the life of the building these savings can amount to millions of dollars with the added benefit of comfort.

The study indicates that architects and building owners who invest in Coollite skylights can anticipate quick and substantial returns on their investments. Solar control, Low-E Coollite skylights provide the architectural community access to much needed acrylic or polycarbonate glazing that transmit high levels of visible light while blocking a significant percentage of solar heat.

The first attribute minimizes the need for artificial lighting while the second helps to manage the spiraling energy costs related to HVAC operations.

### Environmental Benefits

Beyond its energy cost savings, Coollite dramatically reduce the level of CO2 emissions associated with the heating and cooling of commercial and residential structures.



Coollites on the roof



Coollite transmits uniform highly diffused white light to the building interior

## Building Prototype Descriptions and Characteristics

Building Type: One Story Retail Warehouse Sales

Total area: 150,000 sq. ft.

No. of Skylights: 16/4 (3.5% of roof area)

Skylight size: (4' x 8' dual acrylic glazing domes with aluminum frame w/o break)

City	Annual HVAC Expenses	Operating (kWh)	Electricity (kWh Saving)	1 <sup>st</sup> Year Savings
	Clear	Coollite		
Atlanta	968,500	890,100	96,400	\$ 14,460
Boston	547,800	495,200	52,600	\$ 7,890
Charlotte	938,300	866,300	72,000	\$ 10,800
Chicago	647,100	587,400	59,700	\$ 8,995
Dallas	1,214,800	1,134,300	80,500	\$ 12,075
Las Vegas	1,201,600	1,089,000	112,600	\$ 16,890
Los Angeles	643,000	567,500	75,500	\$ 11,325
Memphis	1,085,000	998,800	86,200	\$ 12,930
New Orleans	1,328,300	1,240,900	87,400	\$ 13,110
San Francisco	442,900	375,600	67,300	\$ 10,095
Seattle	405,200	359,100	46,100	\$ 6,915
Miami	1,676,000	1,577,900	98,100	\$ 14,715
Phoenix	1,478,000	1,356,200	122,000	\$ 18,300

Double Acrylic LT 77% U Factor .44% SHGC .69

Coollite VE35 LT 27% U Factor .32 SHGC .20