



SKYLITES • SUNROOMS • RAILINGS

Crystalite, Inc.
3307 Cedar Street
Everett, WA 98201
phone: 425-259-6000
fax: 425-258-6734
1-800-666-6065

Spokane Distribution
3020 N. Sullivan Rd. Bldg. S6
Spokane Valley, WA 99216
phone: 509-291-9585
fax: 509-921-2137
1-800-382-5403

Salem Distribution
1452 McDonald St. NE
Salem, OR 97301
phone: 503-391-6000
fax: 503-391-0974
1-800-664-1257

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Doug Anderson
Project Director
Energy Star Home Improvement Program

Re: Draft 2, Version 6.0 Product Specification for Windows, Doors, and Skylights

Dear Doug,

Thank you for the opportunity to respond to the EPA response to comments submitted pertaining to Draft 1. We are specifically devoting our responses to the Skylight criteria and Skylight analysis (Number 73 through 83).

No. 73 The EPA response states that, "EPA is concerned about heat gain and possible consumer discomfort, especially in the summer months, because skylights receive more direct sun than windows.

Response: Heat gain should not be considered for only the summer months when determining energy savings, which is the Energy Star program's intent. Further, comfort is a subjective term. For example, my wife and I are rarely comfortable at the same time.

I can agree that skylights can receive more direct sun than windows if they are installed on a south sloping roof. This effect is more than offset by the fact that there are far fewer skylights than there are windows in a house. Consequently, a house will typically experience much more actual heat gain through the higher percentage of window area than through the skylight(s).

No. 74 Skylights are indeed different than windows, however, the only difference that actually effects the SHGC is the 20 degree slope of the skylight. The 20 degree slope will result in an SHGC of < 0.02 higher than the same product rated in the vertical position. The "strength of the frame is not relevant. It is the percentage of the frame which blocks the sunlight. Finally, annealed, heat strengthened, and tempered glass all have identical values.

No. 75 See the response to topic 73 above.

No. 76 EPA sees the low energy savings as a greater contributor to the longer payback periods for skylights.

Response: When the payback period is excessive, there is absolutely no incentive to purchase an Energy Star product. The obvious result is to purchase a non-Energy Star Product which is counter-productive to saving energy.

No. 77 The EPA response to the stakeholder suggestion that "the proposed specification dramatically and disproportionately affects curb-mount products" is untenable at best. The Response that "EPA realizes that many curb-mounted skylight products may no longer qualify for the program but the performance of these products are highly dependent on the performance of the curbs and assumptions made in the simulation of the curb during certification" is extremely troubling on many levels.

1. The current building code requires that skylights be installed a minimum of 4" above the roof when the pitch is 4/12 or less.
2. The curb-mount skylight manufacturer does not supply the curb and cannot dictate the type of curb that the skylight is installed on.

3. Even if the manufacturer could dictate the type of curb to install the product on, there is no way to obtain NFRC Certification with that curb. The only way that any curb other than wood can be NFRC certified is if that curb is an integral part of the skylight which in many cases is not what builders want since it changes how they need to approach making the interface weather tight.

Therefore, it is very troubling that EPA would knowingly disenfranchise curb-mount products based on the curb which is not supplied by the manufacturer and is outside of their control. Therefore, until such time as the NFRC Certification program can be developed to provide a cost effective way to accommodate this scenario, EPA should not knowingly disenfranchise curb-mount skylights.

Conclusions:

I like to follow the EPA Most Efficient program even though skylights are not part of that program. I follow it because it provides insight into the direction that EPA would like to see the industry go. So when I first saw the Energy Star maximum SHGC requirement for skylights in the Northern Zone I smiled because I thought it was a typo. The reason I thought it was a typo is because the Most Efficient program for windows includes a Minimum SHGC in the Northern zone. I believe that the minimum requirement was due at least in part due to studies by LBNL that higher SHGC in the Northern Zone reduces the annual energy usage. I would recommend that EPA utilize LBNL and their knowledge to determine annual energy saving rather than setting the requirements based on arbitrary concerns such as "possible consumer discomfort".

In the spirit of full disclosure, I will say that ALL of the unit skylights that Crystalite offers are curb-mount skylights. They are simply what the consumers in our area demand. I apologize if my comments have come across as being too harsh. Crystalite has been a part of and supporter of the Energy Star program for many years and hope to be able to continue this relationship. However, if EPA decides to knowingly disenfranchise curb-mount skylights based on the completely separate issue of the curb which is beyond our control, I am fearful that our relationship will be ending through no fault of our own.

Sincerely,
Randal J. Van Voorst
Regulatory Affairs & Code Compliance