SECTION 08620
UNIT SKYLIGHTS
Quasar ALIT Self Flashing

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preformed plastic skylights with integral metal frame and insulated metal curb.

1.2 RELATED REQUIREMENTS

A. Section 05 5000 - Metal Fabrications: Miscellaneous steel framing for rough opening and burglar bars.

B. Section 07 5400 - Thermoplastic Membrane Roofing: Roofing system and base flashing at skylight curb.

1.3 REFERENCE STANDARDS

A. ASTM B 209 - standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate;2007.

B. Aluminum Association (AA): Specifications for Aluminum Structures.

C. North American Fenestration Standard / WDMAICSA 101/I.S.2/A440 (NAFS). Standard skylight testing for air, water, and structural performance.

D. NFRC 102: Certified U-Factor: Test procedure for measuring the steady-state thermal transmittance of fenestration systems.

E. NFRC 201: Certified Solar Heat Gain Coefficient

1.4 PERFORMANCE REQUIREMENTS

A. Unit Skylights must be tested to **NFRC and AAMA/WDMA/CSA 101/I.S.2/A440-08 and AAMA/WDMA/CSA 101/I.S.2/A440-05.**

1. Performance Class: CW
2. Performance Grade (load capacity): 30 positive and negative

B. Air Infiltration per ASTM E283@ 6.27 PSF shall be <0.01.

c. Water Penetration per ASTM E331 @ 10 PSF shall be 0.0.

D. Skylight must comply with OSHA FED and CA – CFR's for fall protection.

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide NFRC thermal performance values, and NAFS testing.

C. Shop Drawings: Indicate configurations, dimensions, locations, fastening methods, and installation details.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.

1.7 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Manufacturer's Warranty: Provide written warranty signed by manufacturer, agreeing to repair or replace work which exhibits defects in materials or workmanship and guaranteeing weather tight and leak free performance. "Defects" is defined as uncontrolled leakage of water and abnormal aging or deterioration. Warranty period shall be 5 years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Unit Skylights:
1. Bristolite Daylighting Systems, Santa Ana, CA 92707, tele: 714.540.8950; fax: 714.540.5415: web; www.bristolite.com, model Bristolite Quasar Prismatic - XXXX-ALIT-2-CPM-WPM-12-INS-DW-WN-MF; NO SUBSTITUTIONS ALLOWED.

2.2 COMPONENTS

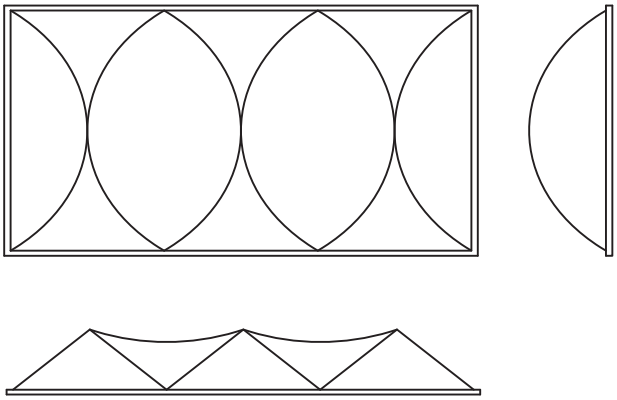
A. Aluminum Frame and Frame Cap:
1. 6063-T5 architectural grade aluminum.
2. The frame dimensions must be a minimum of 0.075 inch thick, 2.25 inches in depth on the horizontal leg and 2.0 inches in depth on the vertical leg.
3. The Frame must have an AAMA compliant thermal break whereas the aluminum on the outside of the frame is completely separated from the aluminum on the inside of the frame (Poured and Debridged design). The bridge between the exterior and the interior of the frame must be a long life, polyurethane thermal barrier. *"Insulated Thermal Breaks"* using Styrofoam and PVC insulation is not an acceptable substitute for an AAMA compliant "poured and debridged" thermal break and will not be accepted. "*Thermalized*" condensation resistant designs are also not to be accepted. The frame must be squared (90 degree corners) and flat (on one plane) by the insertion of corner stabilizers prior to full heli-arc welding. The frame must have a full perimeter condensation trough measuring a minimum of .0625 inches wide and 0.375 inches deep with a minimum of six non-clog weep holes routed to the outside of the frame.
4. Frame cap dimensions must be a minimum of 0.050 inch thick, 1.75 inches in depth on the horizontal leg and 2.0 inches in depth on the vertical leg.
5. Frame cap must be squared and flat prior to full heli-arc welding.
6. The integral curb shall consist of a single 0.062 inch thick extruded internal

aluminum wall, 1" x 4" treated wood nailer (optional) and 1.0" thick polyisocyanurate insulation adhered to the metal curb. The outside wall of the curb shall consist of a single 0.032 inch thick aluminum sheet.

7. Glazing shall be sealed and bonded to frame using Exxon/Monsanto's UL Listed, engineered thermoplastic Santoprene for complete air and water tightness.

B. Double Glazing:

1. Outer glazing: must be formed with Plaskolite, flawless, K12 prism pattern, 100% impact modified, clear, Duraplex prismatic and must be a minimum thickness of 0.177 inches.
2. Inner glazing: must be formed from Plaskolite, flawless, K12 prism pattern, 25% impact modified, white, Duraplex prismatic and must be a minimum thickness of 0.118 inches.
3. Both the outer and inner glazings must be of a similar contour as shown in illustration 1.0 below and may not have a rib shaped design with tight radii to eliminate shadowing and the resultant restriction of light into the interior of the building.
4. To achieve maximum light transmission to the interior of the building the inside curb dimension of the skylight may not be less than 46.25 inches by 89.5 inches.
5. The dome material must be tested for and PASS: A) UBC-26-7 and ASTM D635-06 Rate-of-Burn achieving a minimum CC2 rating. B) ASTM D-2843-99 Smoke Density Test C) ASTM D1929-96 Ignition Temperature Test (Self Ignition).
6. ***Illustration 1.0 Triarch Shape Outer and Inner Domes***



2.3 FABRICATION

A. Fabricate free of visual distortion and defects.

B. Fabricate to achieve leak-proof, weather tight assembly.

C. Fabricate components to allow for expansion and contraction with minimum clearance and shim spacing around perimeter of assembly.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work

B. Verify that openings and substrate conditions are ready to receive work of this section.

3.2 PREPARATION

A Apply protective back coating on aluminum surfaces of skylight units that will be in contact with cementitious materials or dissimilar metals.

3.3 INSTALLATION

A Curb / Skylight – Seal**:** Foam weather stripping or genral practice caulking supplied by others applied to roof deck prior to setting skylight.

B. Anchoring: Fasteners supplied by others: With the Skylight centered and flat on to curb, use #12 sheet metal or tech screw – 1 ½" in length minimum to anchor (apply Fasteners to all predrilled anchor holes).

3.4 CLEANING

A. Remove protective material from prefinished aluminum surfaces and glazing where applicable.

B. Wash down exposed surfaces; wipe surfaces clean.

C. Remove excess sealant.

END OF SECTION