

SPECIFICATIONS 08 62 00

Unit Skylights

PART I - GENERAL

1.02 SECTION INCLUDES:

SUMMARY:

- A. The work of this Section includes unit skylights, fixed or operable, of the following types:
 - 1. Curb-mounted domed commercial/industrial unit skylights
- B. Related Sections: Other Specification Sections that directly relate to the work of this Section include, but are not limited to the following:
 - 1. Section 07510 - Built-Up Bituminous Roofing.
 - 2. Section 07525 - Modified Sheet Roofing.
 - 3. Section 07530 - Single Ply Membrane Roofing.
 - 4. Section 07600 - Flashing and Sheet Metal.
 - 5. Section 07610 - Sheet Metal Roofing.
 - 6. Section 077200 – Roof Accessories for manufactured metal roof curbs for unit skylights

1.03 REFERENCED STANDARDS

- A. General: The applicable referenced edition of references cited are the current edition published on the date of issue of Project specifications unless otherwise required by the current Building Code applicable and in force for the location of the project.
- B. Aluminum Association (AA): Specifications for Aluminum Structures.
- C. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 603.5, Voluntary Performance Requirements and Test Procedures for Pigmented Organic Coatings on Extruded Aluminum.
 - 2. AAMA 605.2 Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
 - 3. AAMA 1605.1 Voluntary Standard Uniform Load Test Procedure for Plastic Glazed Skylights by Uniform Static Air Pressure Difference.
 - 4. AAMA/NWDA/CSA 101/I.S.2. /NAFS-2017 Standard Specifications for Windows, Doors and Unit Skylights.
- D. American Society for Testing and Materials,
 - 1. ASTM: D4802 Specification for Poly(Methyl Methacrylate) Acrylic Plastic Sheet.
 - 2. ASTM E331 Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
 - 3. ASTM D1003 Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics
 - 4. ASTM D635-14 Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
 - 5. ASTM E108 Standard Test Method for Fire Tests of Roof Coatings
 - 6. ASTM E408 Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
 - 7. ASTM E547-00 (2026) Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference, ASTM International.

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- E. Illuminating Engineering Society of North America (IESNA): www.ies.org
 - 1. IESNA – The Lighting Handbook
- F. International Code Council (ICC).
 - 1. ICC-ES AC16 – 2020, Acceptance Criteria for Plastic Glazed Unit Skylights
 - 2. ICC-ES AC17, Acceptance Criteria for Glass Glazing, ICC-ES
 - 3. ICC-ES AC10 Acceptance Criteria for Quality Documentation
- G. International Code Council (ICC).
 - 1. International Building Code (IBC) 2021 and 2018.
 - 2. International Residential Code (IRC) 2021 and 2018
 - 3. International Energy Conservation Code (IECC) 2021 and 2018
- H. National Roofing Contractors Association (NRCA). Roofing and Waterproofing Manual
- I. National Fenestration Rating Council (NFRC) www.nfrc.org.
 - 1. NFRC 100 – Procedure for Determining Fenestration Product U-Factors
 - 2. NFRC 200 – Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Light Transmittance
 - 3. Light Transmittance
- J. Underwriters Laboratories (UL) UL 972 2020 - Burglar Resistant Glazing
- K. ASHRAE Handbook – Fundamentals 2021 Section 90.1

1.04 COORDINATION

- A. Coordinate dimension, locations and curb/mounting requirements as detailed on the Architectural drawings and in Section 07 72 00 Roof Accessories
- B. Coordinate the interior unit skylight details including structural layout, ceiling layouts and interior termination of the skylights

1.05 ACTION SUBMITTALS

- A. Product data: For unit skylights, include submittal drawings detailing standard construction details, product performance characteristics, skylight material descriptions, dimensions of skylight components, profiles and finishes.
- B. LEED SUBMITTALS:
 - 1. Credit MR 4 Recycled Content
 - 2. Credit MR 5 Regional Materials
- C. Shop drawings: For units skylight work, as applicable, to include plans, elevations, sections, details and connections to the supporting skylight substructure and related adjoining work.

1.06 CLOSEOUT DOCUMENTS

- A. Unit skylight operations and maintenance manual

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1.07 QUALITY ASSURANCE

- A. Manufacturer shall have experience in the US manufacturing of the unit skylight products listed in this section with successful use on similar projects and provide unit skylights which comply to the requirements of this specification.
- B. Manufacturers other than the specified manufacturer shall submit the following 10 days prior to bid date:
 - 1. Substitution Request, signed by an authorized representative of the skylight manufacturer
 - 2. Current ICC ES Report for Unit Skylights, Project data, including required test reports by an independent 3rd-party Testing Agency, indicating compliance with the specified performance requirements.
 - 3. Sample product Warranty demonstrating a minimum of a 10-year warranty.

1.08 WARRANTY

- A. Warranty period
 - 1. Aluminum frame - 10 years
 - 2. Polycarbonate domes – 10 years

PART 2 - PRODUCTS

2.01 Performance Requirements

- A. Plastic unit skylights shall conform to recommendations of the AA Specifications for Aluminum Structures and AAMA Publications as applicable to products specified: AAMA 603.8, 605.2, 606.1, 607.1 and 1605.1, and local building codes.
- B. Plastic unit skylights shall be ICC-ES Listed in accordance with ICC-ES Report #5273 and comply with the performance requirements of AC16, 2020.

2.02 Manufacturer

- A. Provide unit skylights by Taylon Skylights, 2111 S. Anne Street, Santa Ana, CA 92704, available exclusively through Logistics Lighting with an extended warranty and National Account pricing. Contact for quotes or product questions: Sales@LogisticsLighting.com or 307-633-9696 or Toll-Free at 844-455-7283 website: www.LogisticsLighting.com
- B. Or Approved ICC Listed Unit Skylight submitted as a documented equal, and subject to prior approval
- C. Alternative manufacturers must pre-qualify to bid not less than 10 days prior to bid date and provide a letter confirming that the model submitted is currently ICC-ES Listed and meets all performance requirements of AC16 2020.

2.03 Materials and Fabrication

- A. Curb Mounted (Model: 4896-ISP): Factory assembled units consisting of a polycarbonate white diamond series dome, 0.065" extruded aluminum frame with welded corners and 0.065" extruded aluminum welded dome retaining cap. Skylight frame shall have an integral condensate gutter with weep holes.
 - 1. Type: Model 4896-ISP single dome. ICC-ES Report #5273.
Outer Dome: polycarbonate white diamond series dome providing 80% Visible Light Transmission.
 - 2. Glazing: UL 972 Listed high-impact resistant white polycarbonate with a minimum haze factor of 90% or higher and have a Class A Fire Rating.

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5. Glazing Solar Heat Gain Coefficient (SHGC) to be .58 or less (Single dome)
Skylight U-Factor: (Single Dome 0.80)
6. Visible Light Transmittance (VLT) to be a minimum of 80% (single dome)
7. Unit Skylights shall be high-wind rated for high-wind climate zones
8. Skylight outer dome shall meet an 800 lb Impact Load and Class IV Hail Rating
9. Water drainage Control: (Unit shall have sufficient drainage slots to carry all moisture to the outside).
10. Size: Inside curb 48" x 96".
11. Curb: Curb Mounted (CM)
12. Finish: Standard mill finish aluminum for skylight frame.
13. Include ventilated louvered base to provide natural gravity ventilation for non-conditioned buildings. Model ISPV (galvanized steel Max Flow Vented base) and shall include a galvanized steel wire mesh bird screen and/or insect screen, as required to control birds and/or insects.

2.04 FABRICATION

- A. Fabricate free of visual distortions and defects. Welded corners and joints
- B. All fasteners and hardware shall be corrosion resistant.
- C. Provide integral gutter for removal of condensation.
- D. Provide a completely weather tight assembly.

2.05 DELIVERY, STORAGE AND HANDLING

- A. Handle, deliver and store in manufacturer's original packaging, follow the manufacturer's recommendations. Store in a manner as to prevent damage.
- B. Exercise caution when hoisting units to the roof so as not to scratch, bend or damage.

PART 3 - EXECUTION

3.01 Execution

- A. Obtain field dimensions and examine conditions of substrates, supports, and other conditions under which this work is to be performed and notify Contractor, in writing, of circumstances detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected.

3.02 Installation

- A. Strictly comply with manufacturer's instructions and recommendations. Match profiles, sizes and fastener spacing indicated on approved shop drawings.
- B. Coordinate installation with adjacent work such as roofing, sheet metal and other work to ensure creation of a complete weatherproof assembly. Anchor work securely to supporting structure but allow for differential and thermal movement.
- C. Isolate between aluminum and dissimilar metals with a protective coating or plastic strip to prevent electrolytic corrosion.

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3.03 Adjusting, Cleaning and Protection

- A. After installation, remove shipping labels and part number markings from components. DO NOT remove "RISK OF FALL" label from units. Skylights are not intended to withstand human impact or falling objects and should not be walked on.
- B. Do not store skylights with protective covering on the domes in the sun. The plastic covering should be removed as soon as possible. Failure to do so will void the warranty.
- C. Clean all exposed surfaces including metal and glazing using non-abrasive materials and methods recommended by manufacturer of material or product being cleaned. Remove and replace work that cannot be successfully cleaned.
- D. Re-clean as necessary to prevent damage. Cleaning shall be performed only with approved cleaning agents and in accordance with the Operation and Maintenance Manual. Cleaning skylight with cleaning agents other than those approved will void the warranty, and may result in rapid deterioration, cracking or crazing of the skylight dome due to adverse chemical reactions. Protect completed work from damage and deterioration and inspect immediately before final acceptance of a project.

END OF SECTION 08 62 00