



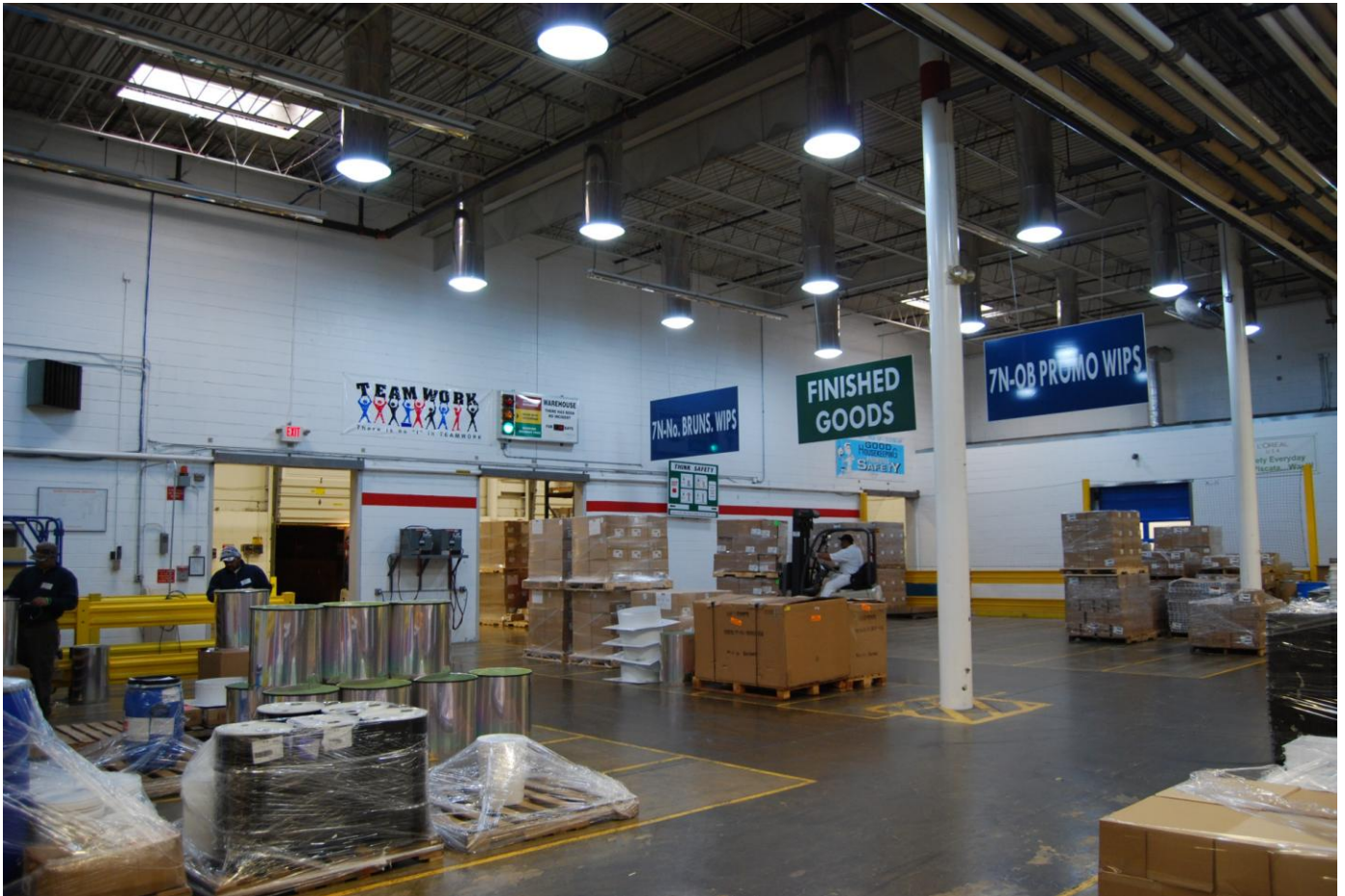
**Eco-Smart, Inc.**

TOLL FREE: (888)329-2705 FAX: (941)377-9460 [info@eco-smart.com](mailto:info@eco-smart.com)

# **Tubular Skylights**

## **A Green Building Product**

### **Cost Effective and Fast ROI**





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# Tubular Skylights

## Product Profile

### PROVIDING SOLUTIONS FOR ENERGY CONSERVATION

High quality tubular daylighting devices for all types of commercial and residential applications.

The tubular daylighting device is manufactured with the following basic components:

- Polycarbonate clear dome
- Aluminum roof flashing
  - Flashings for roof slopes ranging from flat to 8/12 to provide maximum light collection all day.
  - Upon request, custom flashings are available for steep slopes as well as metal roof applications.
  - All metal fabrication is manufactured to specification.
- Highly-reflective light-transfer tube with an adjustable option.
- Domed diffuser or troffer with flat or pyramidal lens.

Other parts are available, such as curb and cap options, troffers, and dimmers.

Units easily withstand exposure to ice, snow and hail in cooler climates. All units are tested and approved for small & large missile impact under Dade County protocol TAS-201/TAS-202/TAS-203/ ASTM F588-85 (Level 10), Miami-Dade County FL Approval number: NOA-07-0917.03. All units are HVHZ (High Velocity Hurricane Zone) approved. All units meet or exceed the Florida Building Code and comply with the new Florida Product Approval System 9B-72 that came into effect 10/1/03 FBC-#1628.1). The Certification Agency and Quality Assurance Entity is Miami-Dade County whose approval is accepted throughout the entire state of Florida as well as in most other states.

Manufacturer is NFRC certified, Minority/Woman-owned certified, and an Energy Star Partner. Optional units that qualify for Energy Tax Credit are available. All units are Green Building products.





## Tubular Skylights



Tubular Skylights are inconspicuous.  
The skylight flashing shown above is painted the same color as the tile roof.

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## Advantages of Tubular Skylights

- Save up to 90% daytime lighting costs with significant reduction in both A/C heat load and run time with tubular skylights.
- These high quality, cost-efficient tubular skylights assist in conserving energy and money. **0 WATTS PER LUMEN!**
- No extra directional device in the dome is required to obtain maximum sunlight capture because flashing mounts the roof dome in an upright position. Roof slopes ranging from flat to 8/12 can be accommodated.

Tubular skylights have been placed in numerous LEED Certified projects as well as other projects. Under LEED, units can be used to gain any of the following credits:

- Credit for daylight: The minimum daylight factor of 2% in 75% of all space occupied for critical visual work. (1 point)
- Energy optimization credit: Determined by minimizing the design energy cost as compared to the energy cost budget for energy systems regulated by ASHRAE/ESNA Standard 90.1-1999, this credit is factored using a whole building simulation according to the Energy Cost Budget Method. (1 - 10 points depending upon the energy simulation results)
- Recycled content: Scrap metal, polycarbonate, and acrylic materials are recycled throughout the manufacturing process. More than 5% of materials are recycled. (1 point)
- Controllability of systems (perimeter and nonperimeter): Credit is applicable if the Eclipse Daylight Dimmer is used to offer daylighting control. (1 or 2 points)

## Tubular Daylighting Devices Added To Masterformat

Source: ARCHITECTURAL LIGHTING Magazine, November 14, 2007

By Stephani L. Miller

At the urging of industry advocates, the Construction Specifications Institute (CSI) **MasterFormat**, a structured hierarchy of divisions and subsections that standardize information for construction project manuals, will now include a subsection on **Tubular Daylighting Devices** (TDDs): subsection 08 62 23. Formerly, TDD products were not given a separate designation under MasterFormat and frequently were grouped under unit skylights, roof accessories, or window openings, none of which accurately described the specification of TDDs. For more information on the new specification, visit [www.csinet.org](http://www.csinet.org).

## Useful Websites

[www.eco-smart.com](http://www.eco-smart.com)

Current Green Building market trends:

<http://www.Greensource.construction.com/resources/smartMarket.asp>

Investment tax credits: <http://www.edcmag.com>

Educational studies pertaining to natural light utilization: <http://www.ncpa.org>



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## Tubular Skylights Homes and Schools





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## Tubular Skylights Offices and Restrooms





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## Tubular Skylights

### Stores and Warehouses



This suspended installation at a wholesale grocery store saved over 31,000 watts of fluorescent lighting.



This convenience store takes advantage of free sunlight with tubular skylights in an acoustical, suspended ceiling.



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## Tubular Skylights

### Auto Body Shops and Manufacturing Facilities



Suspended tubular skylights in this auto body shop render natural light that is perfect for matching paint.



Suspended tubular skylights in this machine shop provide natural light for close-work visibility.



Suspended skylights in this warehouse allow workers to easily identify shelf items.





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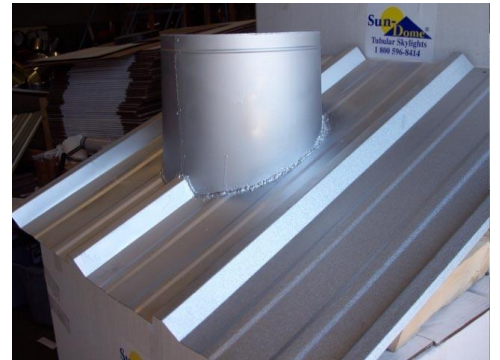
## Tubular Skylights

### Installations on Metal Roofs

See page 13 for illustration, "Reverse Mount Applications."



This installation is on a flat metal deck roof with insulation.



This is a custom-welded roof flashing for R Panel.



This is a custom-welded metal roof flashing for a Maxi-Rib Galvalume 24 gauge panel.



This installation is on a standing-seam metal roof.



This installation is on a corrugated metal roof.



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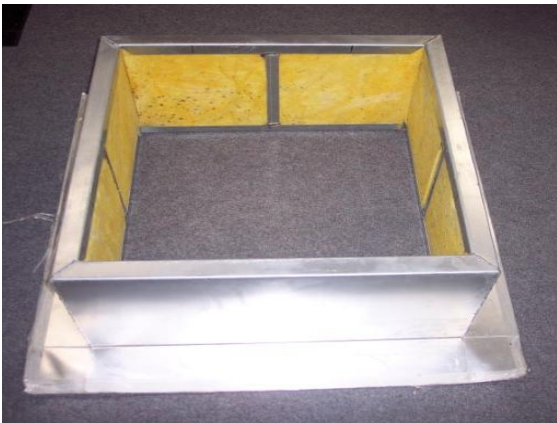
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## Tubular Skylights

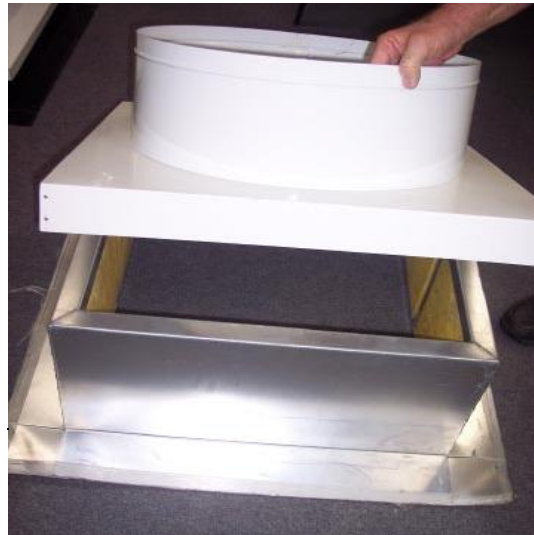
### Steel Curb Mount Installation



This is a steel curb, insulated installation. See page 14 for illustration, *Steel Curb Mount Installation (Lay-In Ceiling)*.



The Insulated curb is 18 gauge steel welded corners. The curb cap has 2-3/4 inch turn downs with boxed, riveted corners.





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## Tubular Skylights

### 2 ft. x 2 ft. Troffer Lens Options



Pyramidal Flat Apex Lens



Pyramidal Prismatic Lens



Flat Prismatic Lens



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## Tubular Skylights Eclipse Dimmer

The Eclipse Dimmer can be used in installations that require sunlight from the unit to be dimmed. See page 12 for CAD drawings of this option.

### **SPECIFICATIONS FOR ECLYPSE DIMMER SYSTEM**

The Eclipse Dimmer is supplied as an assembled unit ready for installation.

The unit is powered by a 24 volt motor with a step down transformer and conduit for hook up to a 110 volt power source.

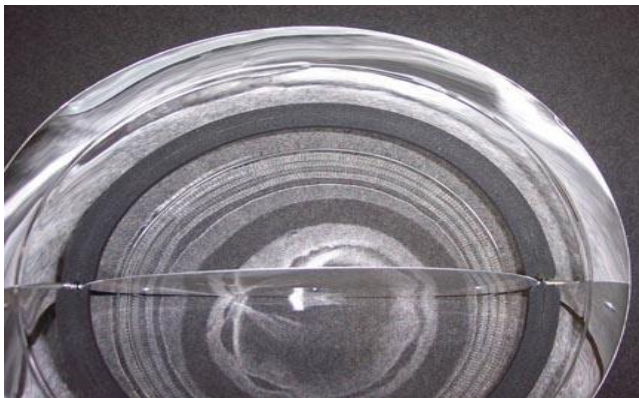
PF42440 Manufactured by Packard

CONTROL TRANSFORMER 24V 40VA  
120/208/240V PRIMARY

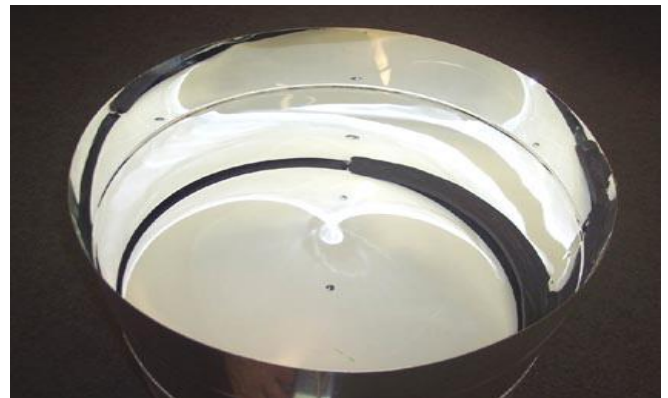
Honeywell M847D1012, 24 volt motor

Honeywell M847D1012 - DAMPER ACTUATOR FOR  
ARD AND ZD ZONE DAMPERS: 24 VAC. 60Hz 6W  
SPST TWO POSITION, SPRING RETURN, DIRECT  
MOUNT, W/ADJUSTABLE STOP. REPLACES  
RDMH, RDMZ, AND RDMA.

These items are UL approved and labeled.



Open position



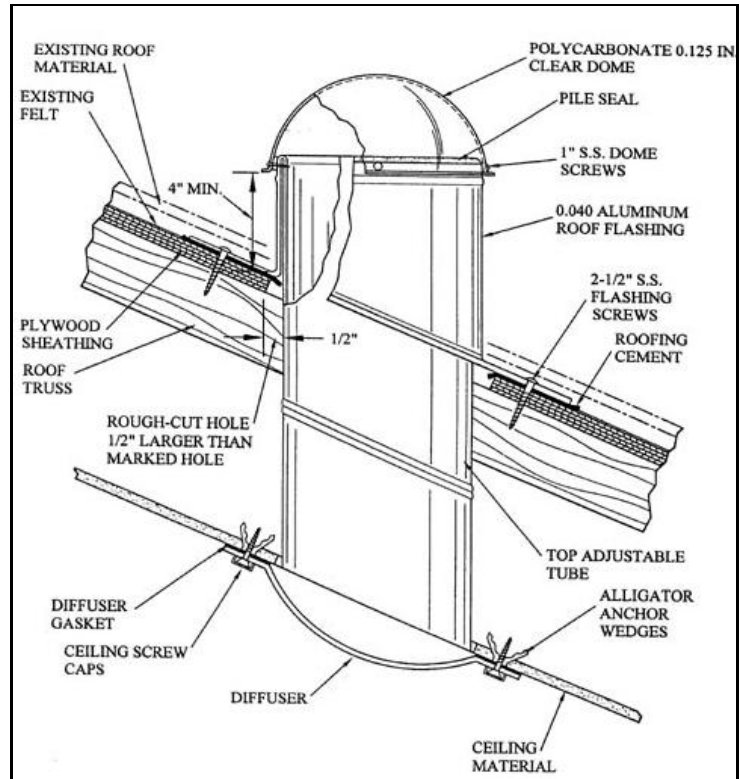
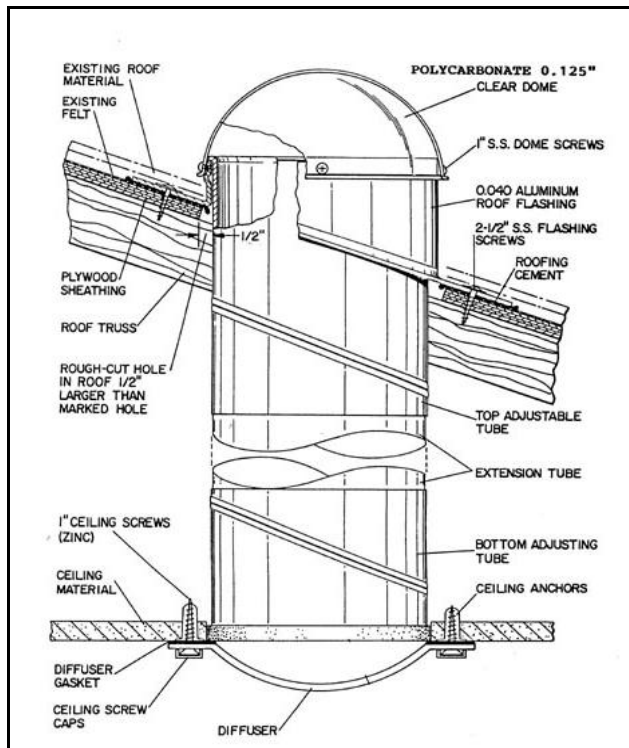
Closed position

**VAULTED CEILING INSTALLATION**

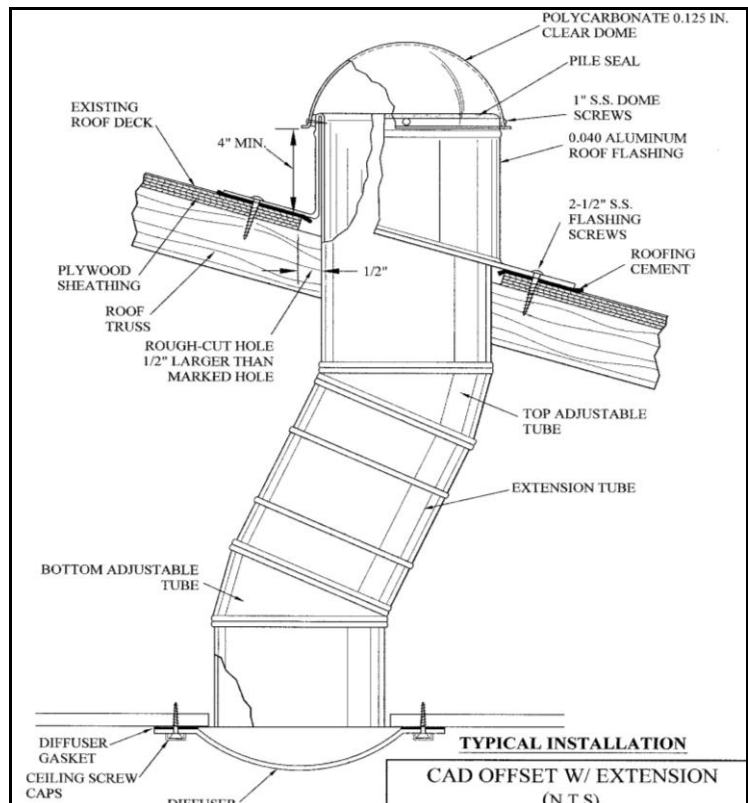
**Tubular Skylights**

**ILLUSTRATIONS**

**FLAT CEILING INSTALLATION**



**OFFSET WITH EXTENSION / FLAT CEILING**

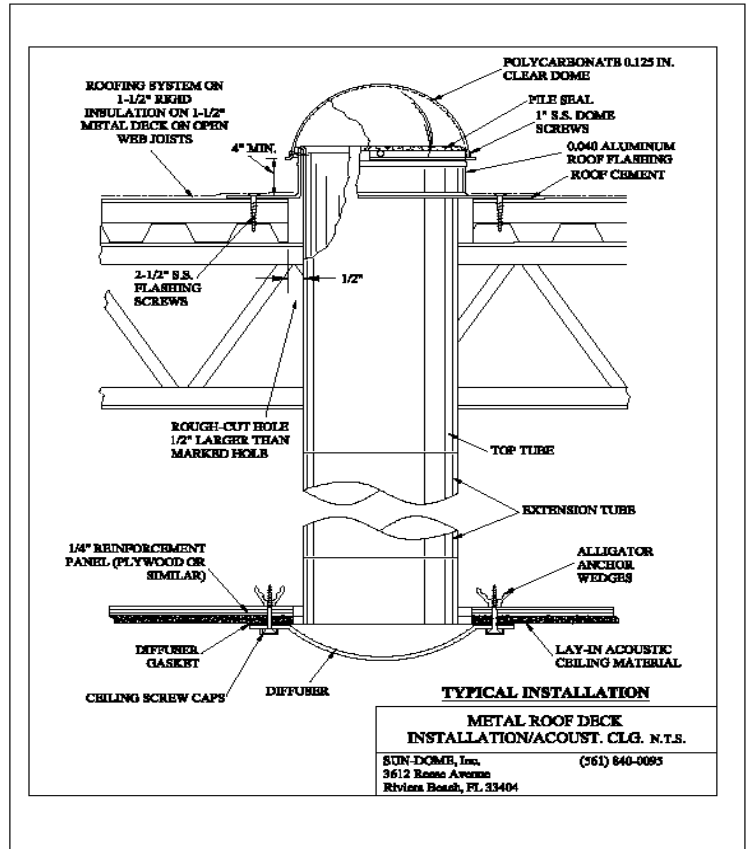
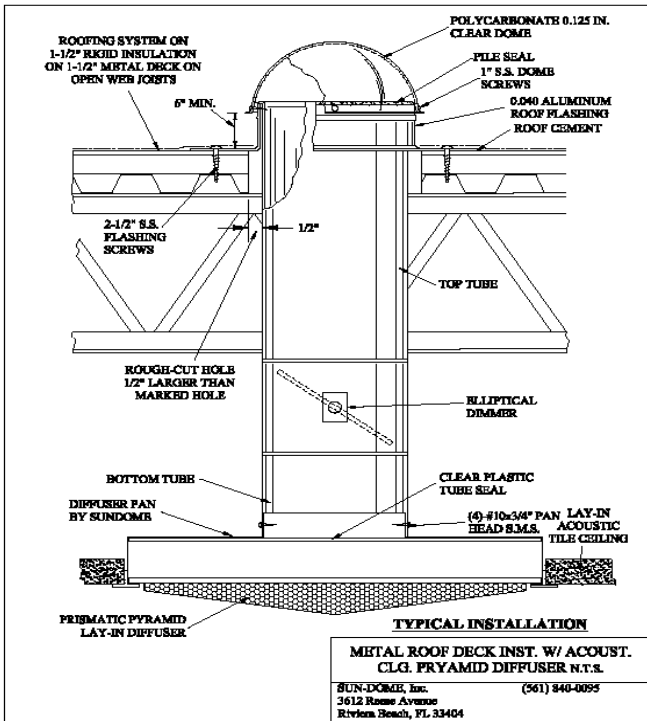


## Tubular Skylights

### ILLUSTRATIONS

#### METAL ROOF DECK LAY-IN W/ ACOUSTIC CEILING DOMED DIFFUSER

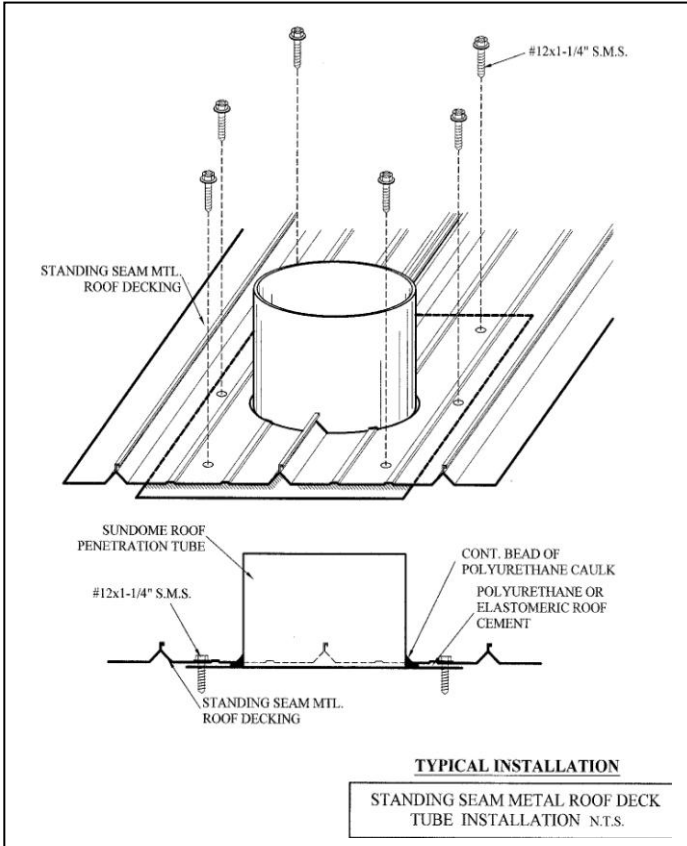
#### METAL ROOF DECK W/ ACOUSTIC CEILING PYRAMID DIFFUSER



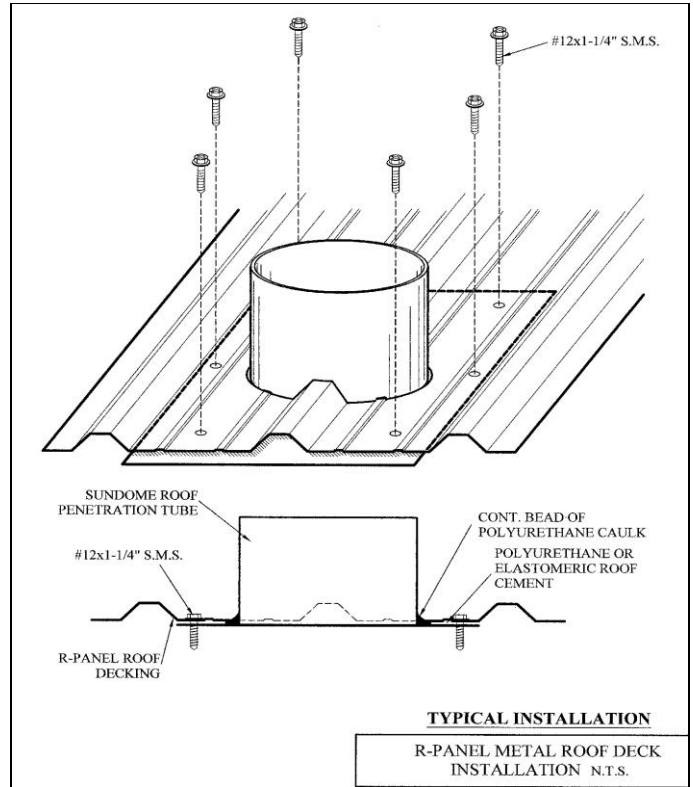
# Tubular Skylights

## ILLUSTRATIONS

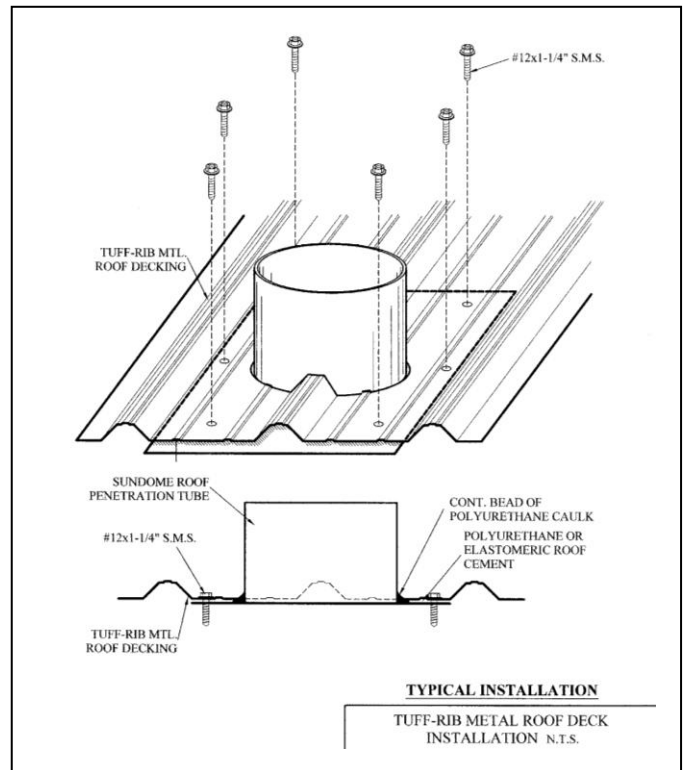
### STANDING SEAM METAL ROOF DECK



### R-PANEL / METAL ROOF DECK



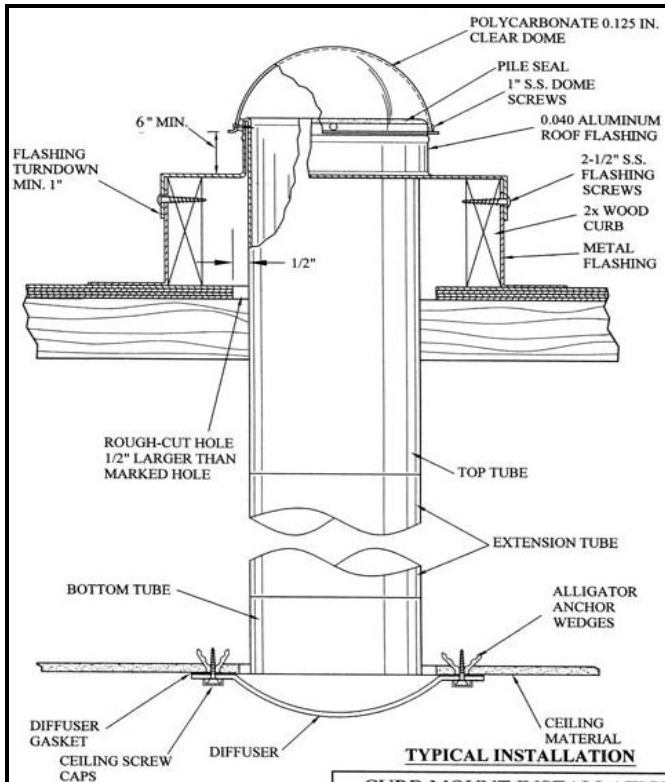
### TUFF-RIB METAL ROOF DECK



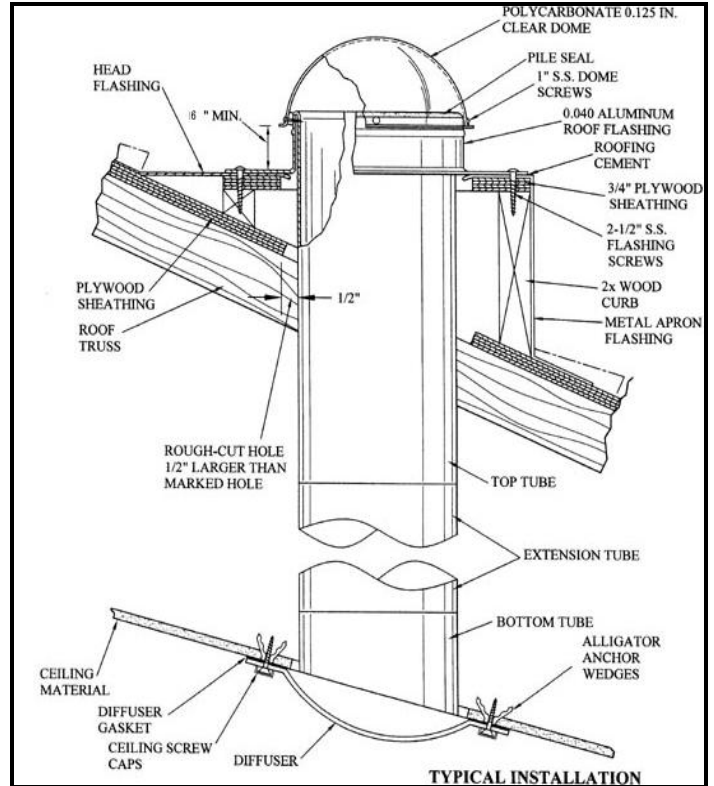
**Tubular Skylights**

**ILLUSTRATIONS**

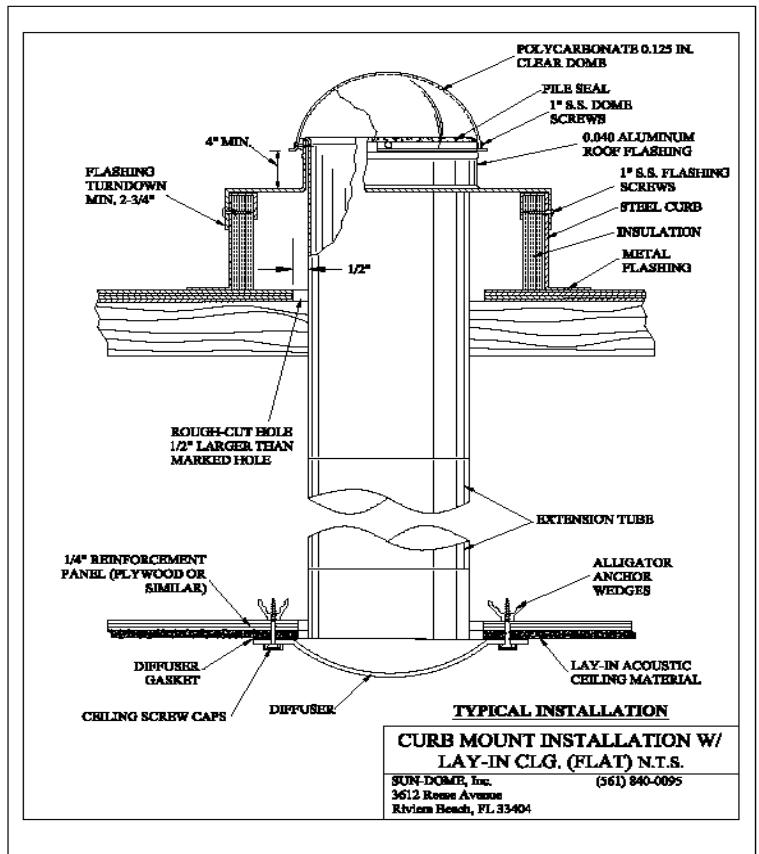
**WOOD CURB MOUNT (FLAT)**



**WOOD CURB MOUNT (SLOPED)**



**STEEL CURB MOUNT (LAY-IN CLG)**



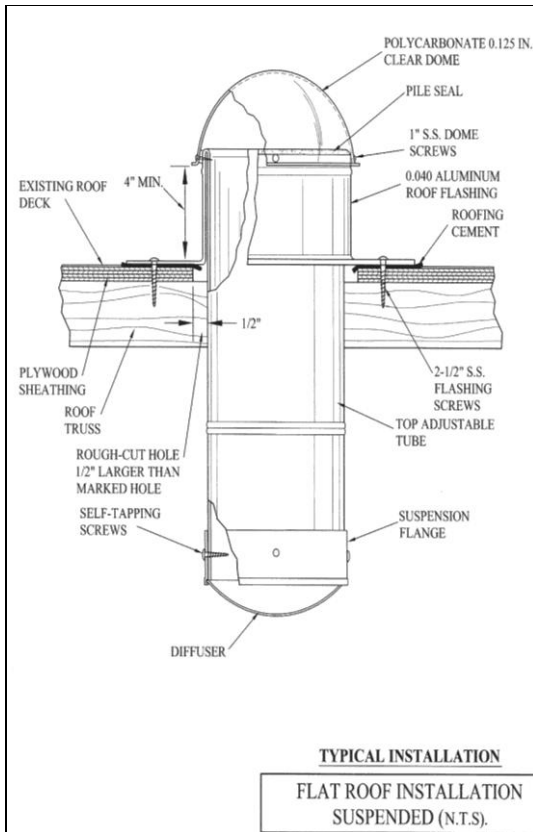
**TYPICAL INSTALLATION**  
**CURB MOUNT INSTALLATION W/  
 LAY-IN CLG. (FLAT) N.T.S.**  
 SUN-DOME, Inc. (561) 840-0695  
 3613 Romeo Avenue  
 Riviera Beach, FL 33404



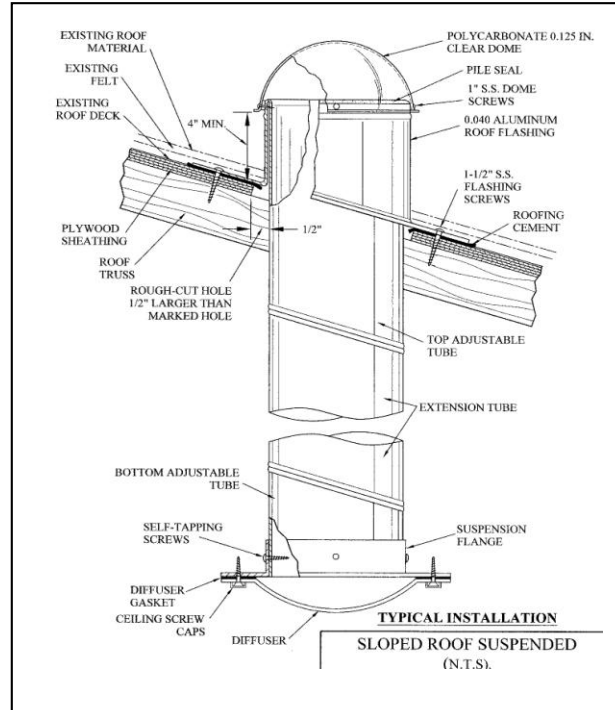
## Tubular Skylights

### ILLUSTRATIONS

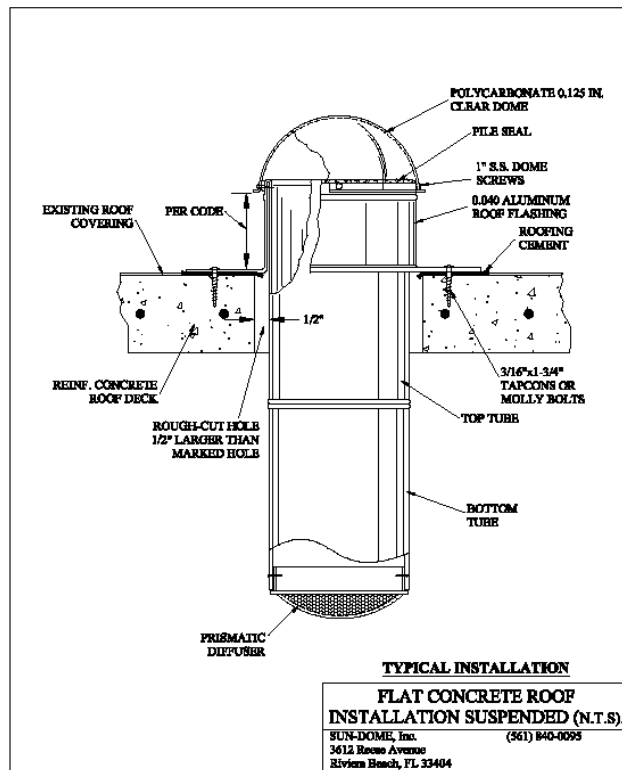
#### FLAT ROOF INSTALLATION (SUSPENDED)



#### SLOPED ROOF (SUSPENDED)



#### FLAT ROOF CONCRETE ROOF (SUSPENDED)





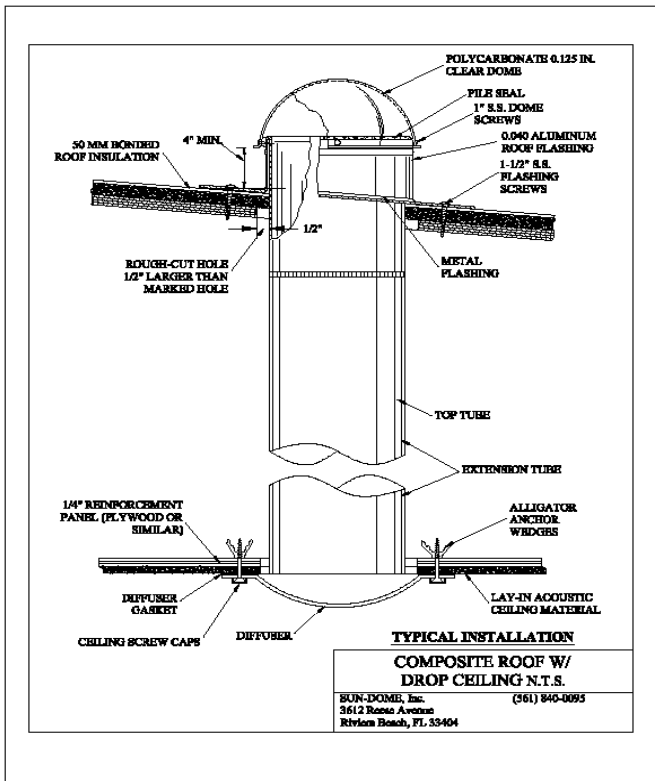
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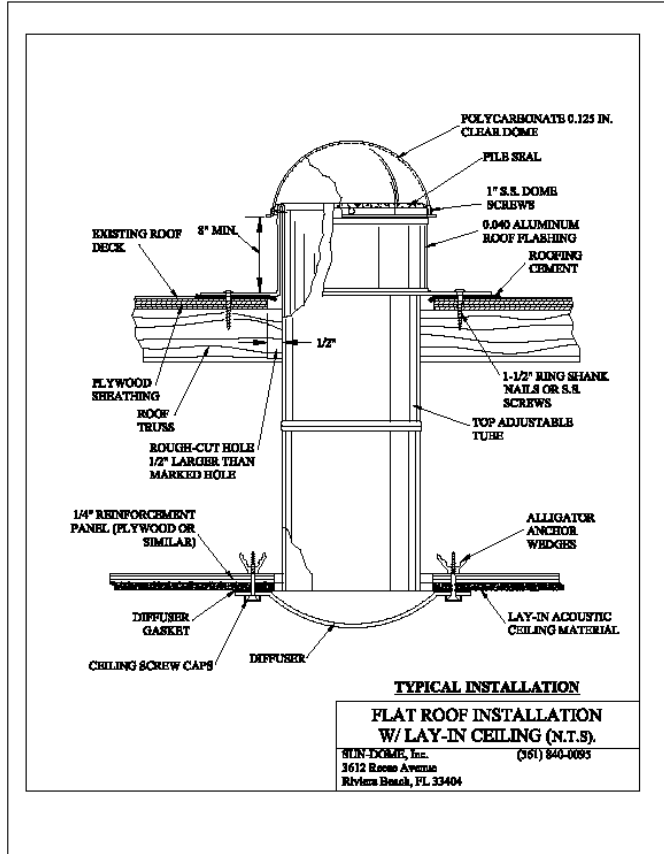
## Tubular Skylights

### ILLUSTRATIONS

#### COMPOSITE SLOPED ROOF WITH DROP CEILING



#### FLAT ROOF WITH LAY-IN CEILING

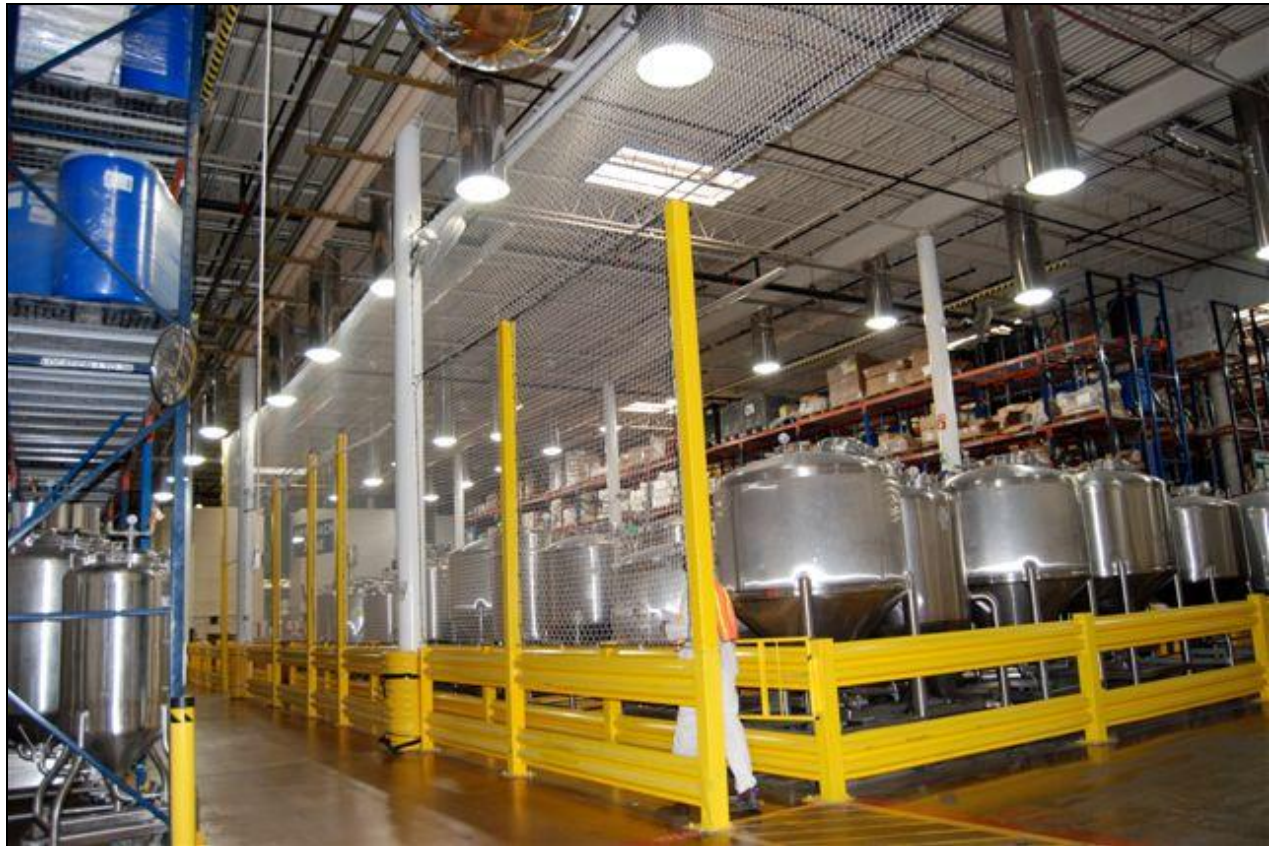




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## Suspended Unit Design is Fast & Easy to Install



See page 15 for illustration, *Flat Roof Installation (Suspended)*.

The Prismatic Diffuser for commercial applications is designed for easy installation into open areas. Because the units can be lowered directly into the flashing barrel from the roof, there is no need to access the inside of the building to attach the diffuser.

The installation is fast, cost-effective, and is less labor intensive. Because no tall ladders or platform scaffolds required, liability exposures are greatly reduced.