SECTION 26 52 00

COMBINATION INTERIOR LED LIGHTING AND HVAC AIR DIFFUSER

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

*Copyright 2024 - 2024 ARCAT, Inc. - All rights reserved*

\*\* NOTE TO SPECIFIER \*\* Fusion Air Lighting Partners; Comfy LED Light
This section is based on the products of Fusion Air Lighting Partners, which is located at:1201 N.E. 117th St. Vancouver, WA 98685Tel: 360-721-3129Email: [request info (sales@fusionairlighting.com)](https://arcat.com/rfi?action=email&company=Fusion%252BAir%252BLighting%252BPartners&message=RE%253A%2520Spec%2520Question%2520(16520six)%253A%2520&coid=53945&spec=16520six&rep=&fax=)
Web: <https://fusionairlighting.com>
 [ [Click Here](https://arcat.com/company/fusion-air-lighting-partners-53945) ] for additional information.
Pacific 6 Innovations is a company focused on air diffusers and modernized grilles for HVAC systems and LED lighting. Our patented product has low profile look to blend discreetly into the interior design to distribute air unlike anything else on the market today.
Founded by HVAC professionals with a combined experience of over 30 years in the industry, they saw firsthand what was missing from the HVAC market. Pacific 6 Innovations is a team composed of a wide variety of professionals, ranging from high end construction, to HVAC, to product development, manufacturing, and plastic injection molding. We are partnered with some of the most well-known manufacturers, suppliers, and distributors who are based in the United States. Pacific 6 keeps a high standard and is committed to creating American made/manufactured products.

1. GENERAL
	1. SECTION INCLUDES
		1. Combination LED light fixture and HVAC diffuser.
	2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06 10 00 - Rough Carpentry.
		2. Section 23 37 13 - Diffusers, Registers, and Grilles.
		3. Section 26 51 19 - LED Interior Lighting.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
			1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
		2. Intertek Electrical Testing Laboratories (ETL):
			1. ETL Listed
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
		2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. The intent of a mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If the mock-up is not acceptable, rebuild the mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
		2. Protect from damage due to weather, excessive temperature, and construction operations.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. WARRANTY
		1. Manufacturer's standard limited warranty unless indicated otherwise.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Fusion Air Lighting Partners, which is located at:1201 N.E. 117th St. Vancouver, WA 98685Tel: 360-721-3129Email: [request info (sales@fusionairlighting.com)](https://arcat.com/rfi?action=email&company=Fusion%252BAir%252BLighting%252BPartners&message=RE%253A%2520Spec%2520Question%2520(16520six)%253A%2520&coid=53945&spec=16520six&rep=&fax=);Web: <https://fusionairlighting.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.
	1. COMBINATION LED LIGHT FIXTURES AND HVAC DIFFUSERS
		1. Basis of Design: Comfy-Light as manufactured by Pacific 6 Innovations. HVAC air and light, all-in-one recessed lighting fixture. Includes a built-in ceiling air diffuser creating an all-in-one, discrete ceiling unit. Eliminates the need for traditional registers and/or diffusers.
			1. Intended Use: New Construction.
			2. Rated for use in Insulated Ceilings (IC) or Non Insulated Ceiling.
			3. Standards compliance and Certifications:
				1. Listing: ETL.
			4. Enclosure: Galvanized steel. Air-tight, pan, cylindrical can, and junction box with knockouts.
				1. Operational Temperature Rating: 194 degrees F (90 degrees C).
				2. Captive Bar Hangers: Factory-installed. Span: Up to 24 inches (610 mm) O.C.

Stepped shank nail with integral T-bar locks.

* + - * 1. Two locking screws hold fixture position.
				2. Socket: Clips to trim to ensure proper and consistent lamp position.
				3. Ceiling Thickness: Up to 1-1/2 inch (38 mm).
			1. Diffuser: True 360 degrees horizontal throw along with center vertical throw.
				1. Secured in place with spring wire retainers.
			2. Duct Size: 6 inches (152 mm).
				1. Orientation: Vertical. End of enclosure. In line with diffuser.
				2. Orientation: Horizontal: Side of Enclosure. Perpendicular to diffuser.

\*\* NOTE TO SPECIFIER \*\* Delete trim color options not required.

* + - 1. Trim Color: White.
			2. Trim Color: Black.
			3. Trim Color: \_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete material option not required.

* + - * 1. Material: Aluminum.
			1. LED: 4 inch (102 mm).
				1. Input Voltage: 120 VAC / 1 phase / 60 hertz.
				2. Input Power: 14 W.
				3. Lumens: 1,200.
				4. Lamp Life: 50,000 hours.
				5. Color: 5 CCT (27/30/35/40/50K).
				6. Beam Angle: 120 degrees.
			2. Double Side Reflective Duct Wrap:
				1. Insulating R Value: R8.
				2. Foam Core: 1/4 inch (6 mm) thick.
				3. Fire Rating per ASTM E84: Class 1 Class A.
			3. Warranty:
				1. LED Bulb: 5-years.
				2. Housing and Diffuser: Limited lifetime.
			4. Diffuser Performance:
				1. Air Volume: 50 cfm.

Pressure Loss, inches wg: 0.047.

Sound, NC db: 25.

Vertical Throw, ft: 5/7/11.

Horizontal Throw, ft: 0.7/0.9/1.9.

* + - * 1. Air Volume: 60 cfm.

Pressure Loss, inches wg: 0.069.

Sound, NC db: 23.

Vertical Throw, ft: 5.7/8/13.

Horizontal Throw, ft: 0.9/1.1/2.1

* + - * 1. Air Volume: 70 cfm.

Pressure Loss, inches wg: 0.09.

Sound, NC db: 26.

Vertical Throw, ft: 6.3/9/15.

Horizontal Throw, ft: 1/1.1/2.4.

* + - * 1. Air Volume: 80 cfm.

Pressure Loss, inches wg: 0.117.

Sound, NC db: 25.

Vertical Throw, ft: 7/10/17.

Horizontal Throw, ft: 1.2/1.6/2.7.

* + - * 1. Air Volume: 90 cfm.

Pressure Loss, inches wg: 0.129.

Sound, NC db: 24.

Vertical Throw, ft: 7.7/11/19.

Horizontal Throw, ft: 1.4/1.8/3.

* + - * 1. Air Volume: 100 cfm.

Pressure Loss, inches wg: 0.173.

Sound, NC db: 27.

Vertical Throw, ft: 8.3/12/21.

Horizontal Throw, ft: 1.5/2.1/3.4.

* + - * 1. Air Volume: 110 cfm.

Pressure Loss, inches wg: 0.215.

Sound, NC db: 30.

Vertical Throw, ft: 9/13/23.

Horizontal Throw, ft: 1.7/2.3/3.7.

* + 1. Basis of Design: Fusion-Air as manufactured by Pacific 6 Innovations. 2-in-1 LED light fusion air unit. 2 x 2 ft (610 x 610 mm) direct/indirect recessed troffer for commercial spaces.
			1. Intended Use: New construction and remodel.
			2. Enclosure: Aluminum lighting fixture.

\*\* NOTE TO SPECIFIER \*\* Other flange types are available. Contact manufacturer for details.

* + - * 1. Troffer Flange: Fits standard grid types.
			1. Pre-mounted driver in a high-efficiency, maintenance-free LED chamber.
			2. Customizable wattage and color temperature options.
			3. Light: Center lens with soft natural glow, uniform illumination, and minimal glare.
				1. Input Volt: 120 to 277 V / 50 to 60 Hz.
				2. Input power: 30 W at 4000 L.
				3. Efficacy: 131 LM / W.
				4. Lamp life: L90. 37,000 hours.

\*\* NOTE TO SPECIFIER \*\* Delete total lumens, color, dimming, and style options not required.

* + - * 1. Total Lumens: 2000 L.
				2. Total Lumens: 2500 L.
				3. Total Lumens: 3000 L.
				4. Total Lumens: 3500 L.
				5. Total Lumens: 4000 L.
				6. Color: 2000 k.
				7. Color: 2500 k.
				8. Color: 3000 k.
				9. Color: 3500 k.
				10. Color: 4000 k.
				11. Color: Tunable.
				12. Dimming: 0 to 10 V, triac controls.
				13. Dimming: 0 to 10 V, integrated controls.
				14. Style: Lay.
				15. Style: Slot.
			1. Duct Size: 10 inches (254 mm).
			2. Diffuser Performance:
				1. Air Volume: 225 cfm.

Pressure Loss, inches wg: 0.129.

Sound, NC db: .5.

Vertical Throw, ft: 2.5/4/5.

* + - * 1. Air Volume: 250 cfm.

Pressure Loss, inches wg: 0.158.

Sound, NC db: 3.7.

Vertical Throw, ft: 3/4/5.5.

* + - * 1. Air Volume: 275 cfm.

Pressure Loss, inches wg: 0.193.

Sound, NC db: 41.

Vertical Throw, ft: 3/4/5.5.

* + - * 1. Air Volume: 300 cfm

Pressure Loss, inches wg: 0.232.

Sound, NC db: 42.

Vertical Throw, ft: 3/4/6.

* + - * 1. Air Volume: 325 cfm.

Pressure Loss, inches wg: 0.270.

Sound, NC db: 45.

Vertical Throw, ft: 3.5/4.5/6.

* + - * 1. Air Volume: 350 cfm.

Pressure Loss, inches wg: 0.311.

Sound, NC db: 47.

Vertical Throw, ft: 3.75/4.5/6.

* + - * 1. Air Volume: 375 cfm.

Pressure Loss, inches wg: 0.357.

Sound, NC db: 49.

Vertical Throw, ft: 3.75/4.5/6.

\*\* NOTE TO SPECIFIER \*\* Delete finish options not required. Contact the manufacturer for custom colors.

* + - 1. Finish: Powder Coat: White.
			2. Finish: Powder Coat: \_\_\_\_\_\_\_\_.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until the substrates have been properly constructed and prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
			1. Aadd other items such as tolerances if applicable; do not include step-by-step installation instructions.
	4. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturers recommendations.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION