

Pharmaceutical • Biotech Biosafety • Research Facilities • Hazardous Locations



Clear-Vu Lighting's cleanLED™ luminaires are designed to maximize the effectiveness/efficiency of LED technology and protect the integrity of clean room (ISO3-ISO8) and containment area (BSL3 and BSL4) environments.

cleanLED is the first lighting fixture series designed and tested to National Sanitation Foundation's new protocol (P442) "Lighting Fixtures for Controlled Environments" – clean room, containment area and surgical suites. P442 addresses three types of leakage (plenum to room, room to plenum, and plenum/room to lighting fixtures interior), ease of cleanability, corrosion, toxicity and interface with ceiling structure. Listings, ratings, certifications and protocols include: IP66 (ISO60598); Hazardous Locations – Optional Class I, Division 2; Class II, Division 2; NSF2 (Splash Zone); LM79; LM80; DLC Qualified. Optional MIL STD 461F.

First-time innovations include: deep-draw stainless steel lens frame with no surface welding; universal installation design (gypsum, 2.0" walkable ceiling panels and 2.0" T-Bar); edge-lit LED optics; one-piece mono-gasket system; wire and install without removing lens frame; LED heat sink/heat fin aluminum housing design; factory leakage testing and registration of every lighting fixture – 100%.

FEATURES AND BENEFITS:

BEST-IN-CLASS LED LIGHT ENGINE

- Edge-Lit optical system produces even facial luminance and glare free uniform lighting distribution
- DLC qualified
- 80,000 hour design life – 5 year warranty

HIGH-TECH ENCLOSURE

- Heavy duty, low-profile (2.0") extruded aluminum housing and die-cast end caps maximize conducted heat dissipation and produce a housing strong enough for walkable ceilings
- One-piece, deep-draw stainless steel lens frame is free of surface welding. 60° beveled edge produces a progressive surface with the ceiling
- One-piece Mono-Gasket System™ seals housing to ceiling structure and lens frame to housing

UNMATCHED CONTROLLED ENVIRONMENT PERFORMANCE

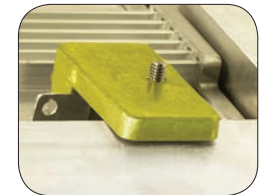
- Independent Lab (NRTL) tested for leakage – IP66 (IEC60598)
- Independent Lab tested for ease of cleanability, corrosion resistance and toxicity – National Sanitation Foundation (NSF2/Splash Zone)
- Class I, Division 2 and Class II, Division 2 listed to assure safe operation in hazardous locations
- Optional MIL STD 461F
- IP66 sealed wire-way junction and swing-lock mounting brackets protect the housing interior from plenum space contaminants

EASE OF INSTALLATION

- Lens frame does not need to be removed for wiring or installation
- Lighting fixture designed for universal installation (gypsum, 2.0" walkable ceiling panels and 2.0" T-Bar)



Patent-pending Mono-Gasket System™ (shown in black) insulates controlled environments from the plenum space and provides and provides IP66 protection for the interior of the lighting fixture



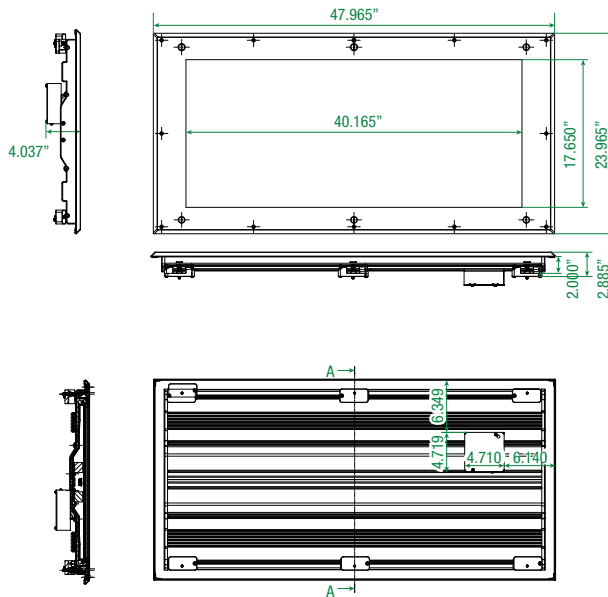
The sealed swing-lock mounting brackets are adjustable without removing the lens frame, greatly reducing installation time. LED boards (shown in green) are mounted directly to integral heat sink/heat fins maximizing conducted heat dissipation



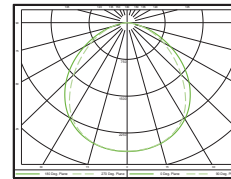
One-piece overlapping lens frame fasteners are positioned very close to the perimeter of the lens frame, facilitating consistent ceiling structure contact

DIMENSIONAL DATA

Housing requires a ceiling cutout of 21.75" x 45.75"

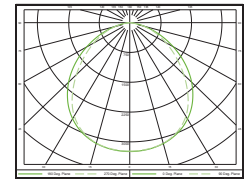


POLAR PLOTS — Test #: 11563064



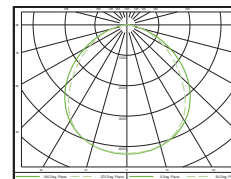
CLF24-S1-C-UV / Lumens: 6618

Zone	Lumens	% of Luminaire
0-40	5392	50.5%
0-60	8992	84.2%
0-90	10678	100.0%
90-180	0	0%



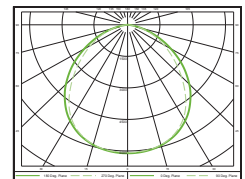
CLF24-M1-C-UV / Lumens: 8165

Zone	Lumens	% of Luminaire
0-40	4122	50.5%
0-60	6873	84.2%
0-90	8165	100.0%
90-180	0	0%



CLF24-H1-C-UV / Lumens: 10680

Zone	Lumens	% of Luminaire
0-40	5159	51.4%
0-60	8514	84.9%
0-90	10030	100.0%
90-180	0	0%



CLF24-VH1-C-UV / Lumens: 15370

Zone	Lumens	% of Luminaire
0-40	7754	50.4%
0-60	12933	84.1%
0-90	15363	100.0%
90-180	0	0%

SPECIFICATIONS

Housing: Low-profile (2.0") extruded aluminum housing with die-cast aluminum end caps. Extrusion profile produces internal heat sink and external heat fins to conduct/dissipate heat away from LED junction point to the housing exterior. Housing will support 1,000 pounds for walkable ceiling applications.

Lens Frame: One-piece, deep-draw fabricated Type 304 or Type 316 stainless steel lens frame free of surface welding. 60 degree beveled edge produces a progressive surface with the ceiling.

Optics: Edge lit LED optics. Light guide panel provides even facial illuminates and eliminates glare. Available in 4,000K, 5,000K and UV filtering amber.

Electrical: 100-277 VAC integral high efficiency driver and power supply (>0.90 power factor). Dimmable (0-10V). Optional 1100 Lumens Flash 90-minute battery back-up (regular and Class I, Division 2/ Class II, Division 2).

Installation: Integral junction box with hermetically sealed wireway junction. Designed for universal installation – 2.0 T-Bar grid, modular ceiling panel (2"-3") and stick-built gypsum ceilings. Wiring and installation does not require removal of lens frame.

Listings, Ratings, Certifications and Protocols: IP66 (ISO60598); Hazardous Locations – Class I, Division 2; Class II, Division 2; NSF2 (Splash Zone); LM79; LM80; DLC Qualified. Optional MIL STD 461F.

ORDERING INFORMATION

SERIES	LIGHT ENGINE	COLOR TEMP.	VOLTAGE	HOUSING	LENS FRAME	LENS	BACKUP	CERTS	OPTIONS
CLF24			UV	HAL					
CLF24=	S1= cleanLED 60 W/ 6,600 lm	N= 4,000K C= 5,000K A= Amber UV Filtering	UV= Universal Voltage (100-277 VAC)	HAL= Extruded aluminum with die- cast end caps	LFSS304= 18-gauge Type 304 Stainless Steel LFSS316= 18-gauge Type 316 Stainless Steel	CTG= .125" Clear Tempered Glass CIA= .125" Clear Impact Acrylic	NB= No Backup IBB= Integral Battery Back-up HBB= Class I, Div 2 Battery Backup	MS= MIL STD 461F C1D2= Class I, Div 2 C2D2= Class II, Div 2	SMA= Surface Mount Adapter CRB= Continuous Row Bracket IB= Installation Bracket

*All lumens initial

PROJECT INFORMATION

Project Name/Location _____

Fixture Type _____

Fixture Quantity _____

Catalog Number _____