

**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

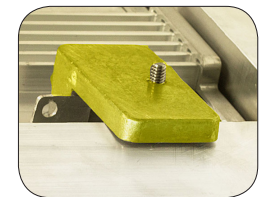
- Independent Lab (NRTL) tested for leakage – IP66 (IEC60598)
- Independent Lab tested for ease of cleanability, corrosion resistance and toxicity – National Sanitation Foundation (NSF2/Splash Zone)
- Class I, Division 2 and Class II, Division 2 listed to assure safe operation in hazardous locations
- 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*

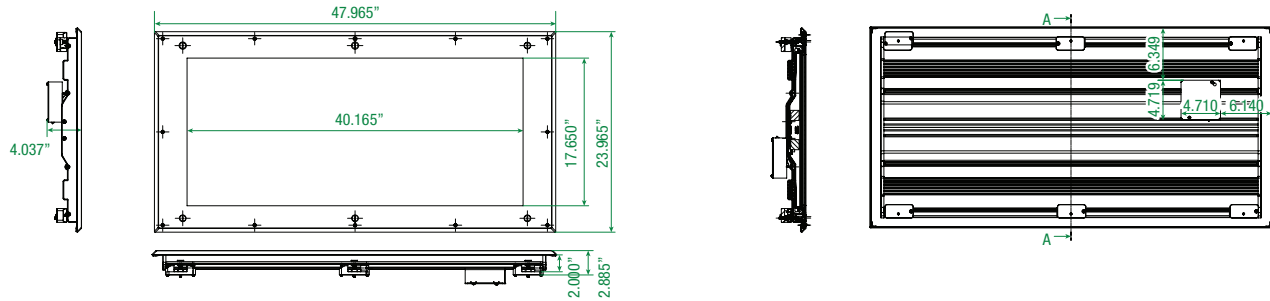


*The sealed swing-lock mounting brackets are adjustable without removing the lens frame, greatly reducing installation time. LED boards (shown in green) are mounted directly to integral heat sink/heat fins maximizing conducted heat dissipation*



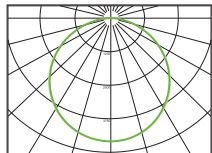
*One-piece overlapping lens frame fasteners are positioned very close to the perimeter of the lens frame, facilitating consistent ceiling structure contact*

**DIMENSIONAL DATA** – Housing requires a ceiling cutout of 21.75" x 45.75"



**PHOTOMETRICS**

**POLAR GRAPH**



Catalog No.: CLF24-S1-C-UV  
Test Number: 1219173  
Lumens: 5345

RC	70	80	30	10	70	70	30	10	50	50	10	50	30	10	50	10	0
RW	70	50	30	10	70	50	30	10	50	50	10	50	30	10	50	10	0
0	6363	6363	6363	6363	6215	6215	6215	6215	5938	5938	5938	5686	5686	5686	5454	5454	5345
1	5863	5629	5419	5230	5720	5508	5318	5145	5283	5126	4983	5076	4949	4831	4885	4783	4579
2	5362	4949	4607	4319	5224	4849	4535	4268	4661	4397	4169	4488	4268	4075	4329	4147	3874
3	4907	4373	3959	3629	4778	4289	3906	3597	4132	3804	3533	3987	3707	3473	3852	3616	3301
4	4506	3892	3442	3099	4386	3822	3402	3078	3690	3325	3036	3567	3251	2995	3452	3180	2843
5	4152	3489	3026	2684	4042	3430	2995	2670	3318	2935	2641	3214	2877	2613	3117	2822	2475
6	3840	3150	2686	2354	3740	3100	2662	2344	3004	2614	2323	2916	2568	2303	2832	2524	2176
7	3564	2861	2406	2086	3473	2818	2386	2079	2737	2347	2064	2661	2310	2049	2589	2274	1931
8	3321	2615	2171	1866	3238	2578	2155	1860	2508	2123	1849	2442	2093	1838	2380	2064	1727
9	3104	2403	1973	1683	3030	2371	1960	1678	2310	1934	1670	2253	1908	1661	2200	1884	1557
10	2912	2219	1084	1528	2844	2191	1793	1525	2139	1771	1518	2089	1750	1511	2042	1730	1413

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Fixt
0-40	2641	49.4 %
0-60	4470	83.6 %
0-90	5344	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	OPTIONS
CLF24			UV	HAL				
CLF24= cleanLED recessed flange or 2.0" T-bar grid 2x4	S1=55 W/ 5,000 lm M1=80 W/ 7,500 lm H1=110 W/ 10,000 lm VH1=165 W/ 15,000 lm	W=3,500K 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 Back-up	MS= MIL STD 461F C1D2= Class I, Div 2 C2D2= Class II, Div 2

*\*All lumens initial*

**PROJECT INFORMATION**

Project Name/Location \_\_\_\_\_

Fixture Type \_\_\_\_\_

Fixture Quantity \_\_\_\_\_

Catalog Number \_\_\_\_\_