Project		Catalog #		Type	
Prepared by		Notes		Date	

ArcMED

Red 630nm

Green 520nm

Narrow spectrum LEDs available

Fail-Safe

ArcMED
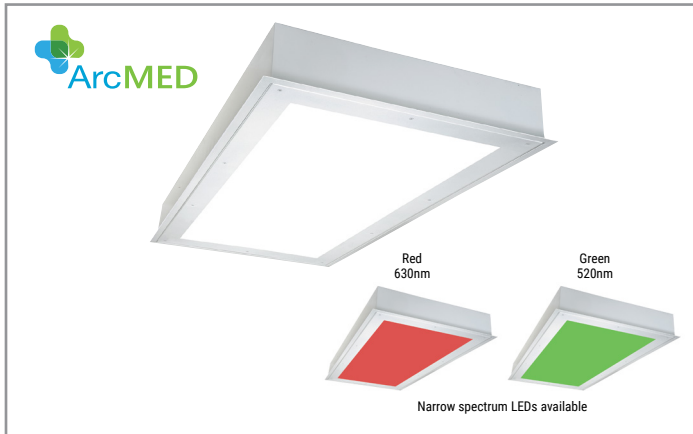
ORL

Operating Room
Recessed Grid, Flange
1x2 / 1x4 / 2x2 / 2x4

Typical Applications:

Healthcare • Operating Rooms • Surgical Suites

Interactive Menu

• Order Information page 2
• Product Specifications page 3
• Product Warranty

Product Certification

UL CERTIFIED · RoHS COMPLIANT · NSF · IP66 · ISO3-9 CLASS 1 · BSL 1-4 · BAA BUY AMERICAN ACT

Product features

wet location · IALDLIRC · LINEAR DISCONNECT Designed to provide safe and convenient means of disconnecting power

Top Product Features

• Asymmetric/symmetyric distribution illumination ideal around the perimeter of an operating room table
• Multiple lumen packages up to 32,000+ lumens; Multiple lenses available
• Die-formed steel housing and door; stainless steel and aluminum available
• IP66 rated, NSF listed, ISO3-9 certified, and MILSTD 461G compliant
• Green (520nm) and Red (630nm) LEDs available
• 2000K, 2700K, 3000K, 3500K, 4000K and 5000K CCT; 80 and 90 CRI
• Options to meet Buy American Act requirements

Input Watts/Delivered Lumens

2' x 2'			
No. of Modules	Input Watts	Delivered Lumens	LPW
1LO	11.7	1450	123.9
1STD	16.65	1942	116.6
1HI	22	2383	108.3
2LO	23.4	2901	124.0
2STD	33.3	3884	116.6
2HI	44	4765	108.3
3LO	35.1	4352	124.0
3STD	49.95	5827	116.7
3HI	66	7148	108.3
4LO	46.8	5802	124.0
4STD	66.6	7770	116.7
4HI	88	9530	108.3
5LO	58.5	7253	124.0
5STD	83.25	9712	116.7
5HI	110	11913	108.3
6LO	70.2	8703	124.0
6STD	99.9	11655	116.7
6HI	132	14296	108.3

2' x 4'			
No. of Modules	Input Watts	Delivered Lumens	LPW
1LO	23.4	3327	142.2
1STD	33.3	4456	133.8
1HI	44	5465	124.2
2LO	46.8	6654	142.2
2STD	66.6	8911	133.8
2HI	88	10930	124.2
3LO	70.2	9981	142.2
3STD	99.9	13366	133.8
3HI	132	16395	124.2
4LO	93.6	13308	142.2
4STD	133.2	17822	133.8
4HI	176	21860	124.2
5LO	117	16635	142.2
5STD	166.5	22277	133.8
5HI	220	27325	124.2
6LO	140.4	19962	142.2
6STD	199.8	26733	133.8
6HI	264	32790	124.2

1' x 4'			
No. of Modules	Input Watts	Delivered Lumens	LPW
1LO	23.4	3273	139.9
1STD	33.3	4383	131.6
1HI	44	5376	122.2
2LO	46.8	6546	139.9
2STD	66.6	8766	131.6
2HI	88	10752	122.2
3LO	70.2	9819	139.9
3STD	99.9	13149	131.6
3HI	132	16128	122.2

View IES files

additional product diagrams

COOPER Lighting Solutions
a Signify business

Order Information

SAMPLE ORDER NUMBERS: **ORLF-24-4-ALH-INA-ASY2-LD4-4HI-40-120-ED1D2**   **White only**
ORLG-24-2-ALH-INA-OPL-LD4-4HI40/2HIG52-277-ED1D2   **White/Green**
ORLG-24-4-ALH-INA-ASY2R-LD4-4STDR63-120-ED1D2   **Red only**

Domestic Preferences [1]	Product Family	Width	Length	Housing Material	Door Type	Lens	LEDs	No of LEDs [6]
[Blank]=Standard **BAA**=Buy American Act	**ORLF**=Recessed Flange [2] **ORLG**=Recessed Grid (1", 1-1/2", NEMA G) [3]	**24**=24" Wide **12**=12" Wide	**2**=2' Length **4**=4' Length	**[Blank]**=Cold Rolled Steel, painted antimicrobial matte white **ALH**=Aluminum Housing, Painted antimicrobial matte white **SHB**=Stainless Steel, Brushed (antimicrobial matte white, not available brushed) **SHP**=Stainless Steel, painted antimicrobial matte white	**Inset Die Formed, One Piece** **INS**=Inset Door,Die-formed Steel, Painted antimicrobial matte white **INA**=Inset Door,Die-formed [5] Aluminum, Painted Painted antimicrobial matte white **INSSP**=Inset Door,Die-formed Stainless Steel, Painted antimicrobial matte white **INSSB**=Inset Door, Die-formed Stainless Steel,Brushed (antimicrobial matte white not available on brushed)	**OPL**=Opal Acrylic Lens, 0.080" thick (add "C" to OPL, for clear acrylic underlay 0.125" thick) **A125**=Pattern 12 Acrylic, 0.125" thick, Inverted (add "C" to end of lens to include .125" clear acrylic underlay. Ex. A125C) **89BC**=0.125" thick KSH19 RFI Symmetrical Lens (add "C" to end of lens to include .125" clear acrylic underlay. Ex. 89BCC) **ASY2**=Asymmetric/symmetric Lens (add "C" to end of lens to include .125" clear acrylic underlay. Ex. ASY2C) **ASY2R**=Asymmetric/symmetric Lens, RFI grid (add "C" to end of lens to include .125" clear acrylic underlay. Ex. ASY2RC)	**LD4**=Linear LED, Version 4.0	**1**=(1) LED Module in X-section **2**=(2) LED Modules in X-section **3**=(3) LED Modules in X-section **4**=(4) LED Modules in X-section (2' Width Only) **5**=(5) LED Modules in X-section (2' Width Only) **6**=(6) LED Modules in X-section (2' Width Only)
Notes (1) Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	**Notes** (2) Flange ships standard with (4) brackets for quick and easy installation. (3) Hard metric grid fixtures available (600mm x 600mm, 300mm x 1200mm, 600mm x 1200mm) with PDR. Consult product technical support to verify ceiling compatibility (Main-T height and width, Cross-T height and width, other related specifications).				**Notes** (5) CPH option is not available with the INA (Inset Aluminum Door). CPH is available with INS, INSSP, & INSSB door options.			**Notes** (6) Thermal protectors installed on side of fixture, located approximately 2-1/4" inches from bottom of fixture. (See thermal protector table and detail below). ** Please specify voltage in the catalog ordering logic.

Illumination Level [7]	Color Temperature [12]	Voltage	Driver	No. of Circuits	Options	Accessories (Ordered Separately) [15]
STD=Standard **LO**=Low **HI**=High	**20**=White LED, 2000K **27**=White LED, 2700K **30**=White LED, 3000K **35**=White LED, 3500K **40**=White LED, 4000K **50**=White LED, 5000K **G52**=Green LED, 520nm, (defaults to the 2 outboard rows) **R63**=Red, 630nm (defaults to the 2 outboard rows)	**Specify Voltage 120**=120V **277**=277V	**EDC**=Electronic Driver, Non-Dimming **EDD**=Electronic Driver, 0-10V Dimming,10% **ED1D**=Electronic Driver, 0-10V Dimming,1%	**1**=1 Circuit **2**=2 Circuits **3**=3 Circuits [8] **4**=4 Circuits	**EL10W**=10W EM Pack [9], [10], [14] **EL20W**=20W EM Pack [9], [10], [14] **EMRA**=Emergency installed for room-side access [9], [10] **MSB4**=Mounting Safety Brackets (4) with hardware **CPH**=Continuous Piano Hinge. Not available with the INA, Inset [5] Aluminum Door type **MIL1**=MILSTD 461G compliant, one filter for single circuit [10], [11], [12], [13] **MIL2**=MILSTD 461G compliant, two filters for dual circuits [10], [11], [12], [13] **MIL3**=MILSTD 461G compliant, three filters for 3 circuits [10], [11], [12], [13] **90**=90CRI	**MSB4-PK**=Mounting Security Brackets. Use to secure fixtureto grid or to attach tie-wires. **DFCL-2448W-U***=2' x 4' gasketed drywall framing kit. Ships with gasket to be applied in field. Cut out dimension 24.25" x 48.25" **DFCL-1248W-U***=1' x 4' gasketed drywall framing kit. Ships with gasket to be applied in field. Cut out dimension 12.25" x 48.25" **DFCL-2424W-U***=2' x 2' gasketed drywall framing kit. Ships with gasket to be applied in field. Cut out dimension 24.25" x 24.25"
Notes (7) Thermal protectors installed on side of fixture, located approximately 2-1/4" inches from bottom of fixture. (See thermal protector table and detail next page). ** Please specify voltage in the catalog ordering logic.	**Notes** (12) Standard 80CRI. For 90CRI, specify "90" in options.			**Notes** (8) Outermost two modules on one circuit, next outermost modules on 2nd circuit, remaining module(s) on 3rd circuit.	**Notes** (9) Emergency battery pack is mounted on back of fixture, adding 3" to fixture height. Emergency not accessible from room-side of fixture. For room-side access, specify the EMRA option. (10) Thermal protectors installed on side of fixture, located approximately 2-1/4" inches from bottom of fixture. (See thermal protector table and detail below). ** Please specify voltage in the catalog ordering logic. (11) ASYR or 89BC lens options must be used for MILSTD 461G compliance. (12) MILSTD 461G is the latest MILSTD version. MILSTD 461G supercedes all other versions (A-F). (14) EL10W, EL20W transfer time from normal to EM power is <1 second.	*Change W to AMW for antimicrobial matte white finish (15) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

Approximate Lumen Multipliers Red and Green LEDs	
Color	**Multiplier from White 4000K**
White, 4000K	1.00
Red, 630nm	0.29
Green, 520nm	0.68

Ordering logic for multi-color LED application in combination.
***Red or Green LEDs always on separate circuit.**
Specify as follows, per the sample numbers below:

White/Green: ORLG-24-4-INS-A12125-LD4-4STD40/2HIG52-277-EDC2
  (4 White LED modules and 2 Green LED modules)
White/Green: ORLG-24-4-INS-A12125-LD4-3STD35/2LOG52-277-EDC2
  (3 White LED modules and 2 Green LED modules)
Red only: ORLG-24-4-INS-A12125-LD4-4STDR63-277-EDC1
  (4 Red LED modules)
Green only: ORLG-24-4-INS-A12125-LD4-4HIG52-277-EDC1
  (4 Green LED modules)

* Illumination level (LO,STD,HI) and color temperature chosen randomly in examples.

Product Specifications

Application
- Designed for use in operating rooms/surgical suites

Housing
- Die-formed heavy gauge steel, seam-welded construction
- Optional stainless steel or aluminum
- Electrostatically applied, antimicrobial matte white powder coat finish

Fasteners
- Captive, countersunk, stainless steel Phillips-head screws secure door to housing
- Screws are painted to match door finish

Gasketing
- **Lens to Door Frame**: Closed cell gasket seals lens to door frame
- **Door Frame to Housing or Ceiling**: One-piece continuous closed-cell gasket
- **Housing to Grid**: Closed-cell gasket

Door
- One-piece inset, fully gasketed, die-formed steel, stainless steel or aluminum
- Two stainless steel aircraft cables to attach door to housing is provided

Lens
- One-piece asymmetric/symmetric acrylic lens
- RFI 3/8" square metalized grid, grounded to housing
- Other lenses available, refer to Ordering Information

Mounting
- Recessed grid for 1" or 1 ½" NEMA G T-bar system
- Recessed flange for use with hard ceiling pan ceilings
- 4 mounting safety brackets (MSB4-PK), available as an accessory - order on separate line item

LEDs
- Available in 2000K, 2700K, 3000K, 3500K, 4000K and 5000K; 80 or 90 CRI
- Choice of Standard, Low or High illumination levels
- Projected life is 50,000 hours at 70% lumen maintenance
- Red (630nm) and green (520nm) LEDs available

Electrical
- Electronic driver 120-277V, dimming driver standard
- 0-10V dimming, 1% or 10%

Compliance
- cULus listed for wet locations under covered ceilings
- Tested for ISO 5 compliance. IS03 and ISO4 environments typically employ uni-directional vertical air-flow and a ventilated raised floor to remove airborne particles. Not uncommon for the entire ceiling to be either HEPA or ULPA filters. Filtered air is continually directed downward, passing through the ventilated raised floor, and recirculated – to remove more of the airborne particles than are created. Often, laminar-flow surface mount luminaires are used to illuminate the space. With proper air flow and air exchanges, This product is acceptable for use in ISO3+ environments.
- IP66 rated
- MILSTD 461G compliant for conducted and radiated emissions
- NSF2 listed. NSF rated, splash, non-food zone -Typical rating for lighting equipment not subjected to direct food contact. (e.g. ceiling mount luminaires). Examples of equipment in direct food contact would be cutting boards, work-tables, mixers, can-openers, other).

Warranty
- Five-year warranty on LEDs and electrical, consult website for details. www.cooperlighting.com/legal

Lumen Calculator

Approximate CCT Multiplier	80 CRI	90 CRI
2000K	0.67	0.56
2700K	0.89	0.75
3000K	0.94	0.82
3500K	0.99	0.83
4000K	1.00	0.84
5000K	1.02	0.88

Lens	Multiplier
A125	1.000
89BC	0.875
ASY	1.070
ASYR	1.012
ASY2	0.987
ASYR2	0.923
OPL	0.957

* Delivered Lumens shown were tested with 4000K LEDs and ASY (asymmetric) lens.

Thermal Protectors Required [4] [5]		
Size	NO EBP , NO MIL	EBP or MIL
2x2	6HI	3 STD to 6 HI *
2x4	6HI	3 STD to 6 HI *
1x4	3HI	2 STD to 3 HI **

* Includes 3STD, 4LO, 4STD, 4HI, 5LO, 5STD, 5HI, 6LO, 6STD, 6HI
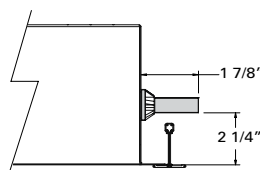** Includes 2HI, 3LO, 3STD, 3HI
 Please specify voltage 120V or 277V in ordering logic.

(4) The installed thermal protector is on the side and is located approximately 2-1/4" inches from bottom of fixture.
5) No insulation can be put on fixture with thermal protector.
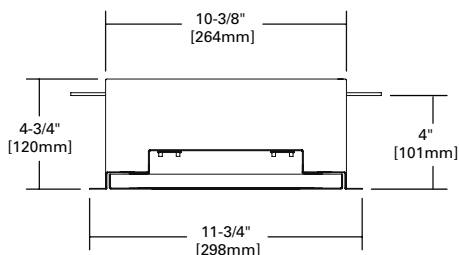
Thermal Protector Detail
Factory wired on the side of fixture. Customer must remove split bushing and insert TP in housing in the field.

1 7/8"

2 1/4"

Dimensional and Mounting Details
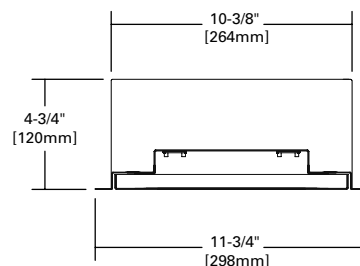
Flange

1' Wide, Inset Door

10-3/8"
[264mm]

4-3/4"
[120mm]

4"
[101mm]

11-3/4"
[298mm]

2' Wide, Inset Door

22-3/8"
[568mm]

4-3/4"
[120mm]

4"
[101mm]

23-3/4"
[603mm]

Grid

1' Wide, Inset Door

10-3/8"
[264mm]

4-3/4"
[120mm]

11-3/4"
[298mm]

2' Wide, Inset Door

22-3/8"
[568mm]

4-3/4"
[120mm]

23-3/4"
[603mm]

Mounting Bracket - Standard (ORL-F)

4"
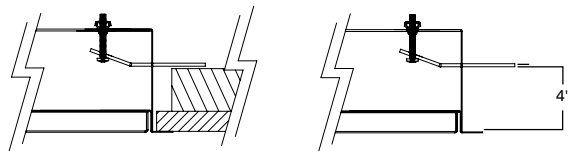
Cut-Out Dimensions	
1x4	10-5/8" x 46-5/8"
2x4	22-5/8" x 46-5/8"
2x2	22-5/8" x 22-5/8"

COOPER
Lighting Solutions
a signify business

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Specifications and dimensions
subject to change without notice.

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