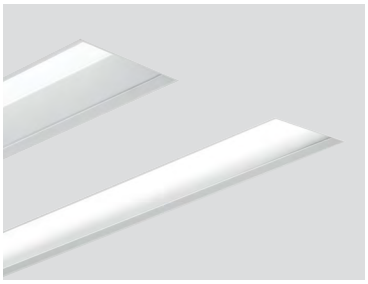
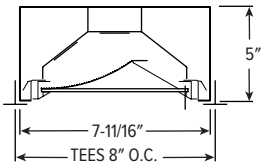
# MD4 LED
## Architectural Multi-Function Medical






CATALOG #:

Type:

PROJECT:

BAA & BABA COMPLIANT

## FEATURES

- Specify as a single fixture or in pairs to customize ambient, exam, and reading light output
- Illuminate exam surfaces asymmetrically when installed in pairs and meet IESNA guidelines
- Smooth, calming ambient lighting enhances patient comfort
- Fixtures can be installed to allow maintenance access without working directly over patient beds
- Optional low-voltage controller allows for bedside lighting control
- Double-gasketed sani-shield protects fixture from dust, bugs and other contaminants while simplifying maintenance and cleaning
- Anti-microbial finish suppresses the spread of dangerous micro-organisms, mold, and bacterial growth
- Quick-wire access plate in back of fixture housing for easy attachment of incoming power supply
- Made Right Here® in the USA

## SPECIFICATIONS

- HOUSING – 20-gauge die-formed and welded C.R.S.
- DOOR FRAME – .050″ extruded regressed aluminum frame with curved diffuse acrylic lens and clear acrylic sani-shield. Fully enclosed spring-loaded cam latches.
- SHIELDING – Internal curved diffuse ribbed acrylic with external clear, non-prismatic sani-shield lens.
- FINISH – 92% minimum average reflective white anti-microbial powder coat, bonded to phosphate-free, multi-stage pretreated metal. Salt spray tested, 1,000 hours (ASTM B117). All parts painted after fabrication to facilitate installation, increase efficiency, and inhibit corrosion.
- ELECTRICAL – High-quality mid-power LED board. L70 at 50,000 per IES TM-21. 25°C maximum ambient operating temperature. 50/60 Hz constant current driver.
- MOUNTING – NEMA Type “G” 15/16″ or 1″ grid standard. For NEMA Type “NFG” and “SG” 9/16″ grid installations, specify EQCLIPS option. Drywall flange kit available, shipped separately, see options. Fixture must be installed prior to Drywall Kit.
- LISTINGS –
  - cCSAus certified as luminaire suitable for dry or damp locations.
  - Build America, Buy America (BABA) and Buy American Act (BAA) compliant. Request certification at hew.com/buy-american
- WARRANTY – 5-year limited warranty, see hew.com/warranty

## ORDERING EXAMPLE: MD4+4AEG - 4 - L52/L132/840 - A - OPTIONS - DIM - UNV

| SERIES | STYLE | CEILING TYPE | LENGTH | LUMENS [1] | CRI | CCT | SHIELDING |
|---|---|---|---|---|---|---|---|
| **MD** | See table below | **G** 9/16″, 15/16″, or 1″ grid [2] | **4** 4′ | See table below | **8** 80<br>**9** 90 | **30** 3000K<br>**35** 3500K<br>**40** 4000K<br>**50** 5000K | **A** Curved diffuse ribbed acrylic with clear, acrylic lens<br>**A/PC080** Clear, non-prismatic polycarbonate lens, .080″ thick |

### OPTIONS

*See page 4 for LOW-VOLTAGE CONTROLLER OPTIONS.*

| | |
|---|---|
| **GLR** | Fuse, fast blow [3] |
| **EM/10W** | 10-watt emergency battery |
| **EQCLIPS** | Earthquake clips [4] |
| **TG** | Triple gasket [5] |
| **(___E)** | Color temperature in Exam (E) light compartment different than Ambient or Reading. Example: MD4AEG-4-L21/835-A-(840E).[6] |
| **DFK-0848AMW** | Drywall kit, 8″ x 48″, anti-microbial white [7] |
| **TP** | Tamper resistant tri-groove screws [8] |

### DRIVER

*See page 5 for ADDITIONAL DRIVER OPTIONS.*

**DRV** Non-dimming driver
**DIM** Dimming driver 0-10V

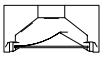
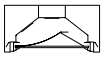
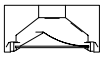
### VOLTAGE

**120** 120V
**277** 277V
**UNV** 120-277V

### ACCESSORIES

**TPTG TOOL** Tamper-resistant tool for tri-groove screws. [9]

### CONFIGURATIONS [10]

| STYLE | DESCRIPTION | AMBIENT LUMENS | EXAM LUMENS | READING LUMENS | CONFIGURATION |
|---|---|---|---|---|---|
| 4A | Single fixture, ambient only | **L55** 5,500 | — | — |  |
| 4AR_ | Single fixture, ambient & reading<br>Specify fixture direction: **L** for Left and **R** for Right | | | 900 | |
| 4E | Single fixture, exam only | — | **L80** 8,000 | — | |
| 4ER_ | Single fixture, exam & reading<br>Specify fixture direction: **L** for Left and **R** for Right | | | 900 | |
| 4AE | Single fixture, ambient & exam | **L22** 2,200<br>**L26** 2,600 | **L52** 5,200<br>**L66** 6,600 | — | |
| 4AER_ | Single fixture, ambient, exam & reading<br>Specify fixture direction: **L** for Left and **R** for Right | | | 900 | |
| 4+4A | Pair of fixtures, ambient only | **L110** 11,000 | — | — |   |
| 4+4AR | Pair of fixtures, ambient & reading | | | 1,900 | |
| 4+4E | Pair of fixtures, exam only | — | **L160** 16,000 | — | |
| 4+4ER | Pair of fixtures, exam & reading | | | 1,900 | |
| 4+4AE | Pair of fixtures, ambient & exam | **L44** 4,400<br>**L52** 5,200 | **L104** 10,400<br>**L132** 13,200 | — | |
| 4+4AER | Pair of fixtures, ambient, exam & reading | | | 1,900 | |

### NOTES

1. Lumens based on A shielding, 80 CRI/4000K CCT. Actual performance may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA.
2. Must specify EQCLIPS option when 9/16″ grid mounting.
3. Specify voltage, one fuse required per driver.
4. 2 clips per fixture. Optional for 1″ grid installations. Required for 9/16″ grid mounting.
5. Field-installed. See page 4 for GASKETING DETAILS.
6. Must specify CRI (80 or 90) and color temperature (30, 35, 40, or 50).
7. 2 kits required for 4+4 style fixtures. Fixture must be installed prior to Drywall Kit. See page 4 for DRYWALL KIT (DFK) OPTIONS.
8. Requires a tamper-resistant tool, see Accessories.
9. Tamper-resistant tool must be ordered separately. Please specify quantity required per project.
10. For additional lumen packages or configurations, consult factory.

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### FIXTURE PERFORMANCE DATA

| | STYLE | LED PACKAGE | DELIVERED LUMENS | WATTAGE | EFFICACY (lm/W) | SYSTEM WATTAGE | SYSTEM EFFICACY |
|---|---|---|---|---|---|---|---|
| MD4A | A | L55 | 5,594 | 61.0 | 92 | 61.0 | 92 |
| | R | — | 938 | 10.1 | 93 | — | — |
| MD4+4A | A | L110 | 11,188 | 121.9 | 92 | 121.9 | 92 |
| | R | — | 1,875 | 20.2 | 93 | — | — |
| MD4AE | A | L22/L52 | 2,311 | 23.1 | 100 | 71.3 | 107 |
| | E | | 5,303 | 48.2 | 110 | | |
| | A | L22/L66 | 2,311 | 23.1 | 100 | 80.5 | 111 |
| | E | | 6,606 | 57.4 | 115 | | |
| | A | L26/L52 | 2,645 | 26.2 | 101 | 74.4 | 107 |
| | E | | 5,303 | 48.2 | 110 | | |
| | A | L26/L66 | 2,645 | 26.2 | 101 | 83.6 | 111 |
| | E | | 6,606 | 57.4 | 115 | | |
| | R | — | 938 | 10.1 | 93 | — | — |
| MD4+4AE | A | L44/L104 | 4,622 | 46.2 | 100 | 142.7 | 107 |
| | E | | 10,607 | 96.5 | 110 | | |
| | A | L44/L132 | 4,622 | 46.2 | 100 | 161.1 | 111 |
| | E | | 13,212 | 114.9 | 115 | | |
| | A | L52/L104 | 5,290 | 52.4 | 101 | 148.9 | 107 |
| | E | | 10,607 | 96.5 | 110 | | |
| | A | L52/L132 | 5,290 | 52.4 | 101 | 167.3 | 111 |
| | E | | 13,212 | 114.9 | 115 | | |
| | R | — | 1,875 | 20.2 | 93 | — | — |
| MD4E | E | L80 | 8,061 | 71.8 | 112 | 71.8 | 112 |
| | R | — | 938 | 10.1 | 93 | — | — |
| MD4+4E | E | L160 | 16,123 | 143.7 | 112 | 143.7 | 112 |
| | R | — | 1,875 | 20.2 | 93 | — | — |

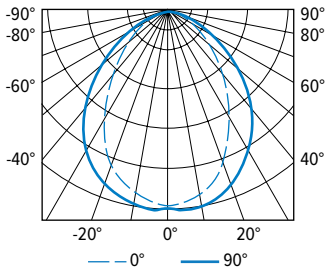
### MULTIPLIER TABLE

| COLOR TEMPERATURE | | |
|---|---|---|
| CCT | CONVERSION FACTOR | |
| | 80 CRI | 90 CRI |
| 3000K | 0.96 | 0.79 |
| 3500K | 0.97 | 0.80 |
| 4000K | 1.00 | 0.83 |
| 5000K | 1.03 | 0.86 |

- Photometrics tested in accordance with IESNA LM-79. Results based on A shielding, 80 CRI/4000K CCT, average wattage for 120V through 277V input, and 25°C ambient temperature. Actual performance may vary +/-5%.
- To calculate lumen output in emergency mode, multiply the battery wattage by the efficacy.
- When specifying fixtures with Reading compartment, add R wattage to system wattage to find total fixture wattage.
- Use multiplier table to calculate additional options.
- POE PR fixture efficacy is typically 10-12% higher than shown at same lumen level. Consult factory during project design phase for details.

### PHOTOMETRY

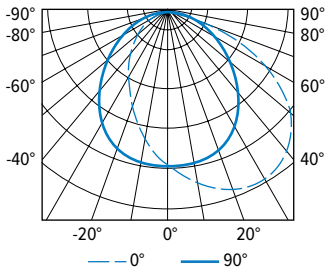
**MD4AEG-4-L22/L52/840-A-DIM-UNV** Ambient Only Total Luminaire Output: 2311 lumens; 23.1 Watts | Efficacy: 100 lm/W | 80 CRI; 4000K CCT




| CANDLEPOWER DISTRIBUTION | | | | | | | |
|---|---|---|---|---|---|---|---|
| VERTICAL ANGLE | HORIZONTAL ANGLE | | | | | ZONAL LUMENS |
| | 0° | 45° | 90° | 135° | 180° | |
| 0 | 1199 | 1199 | 1199 | 1199 | 1199 | |
| 5 | 1179 | 1200 | 1218 | 1192 | 1182 | 114 |
| 15 | 1083 | 1144 | 1180 | 1122 | 1095 | 319 |
| 25 | 884 | 1011 | 1066 | 980 | 904 | 453 |
| 35 | 655 | 823 | 902 | 747 | 647 | 485 |
| 45 | 458 | 601 | 665 | 493 | 404 | 425 |
| 55 | 294 | 388 | 412 | 261 | 213 | 304 |
| 65 | 122 | 198 | 216 | 109 | 66 | 160 |
| 75 | 28 | 49 | 79 | 15 | 12 | 48 |
| 85 | 0 | 2 | 6 | 1 | 1 | 4 |
| 90 | 0 | 0 | 0 | 0 | 0 | |

| LUMEN SUMMARY | | |
|---|---|---|
| ZONE | LUMENS | % FIXTURE |
| 0 - 30 | 885 | 38 |
| 0 - 60 | 2099 | 91 |
| 0 - 90 | 2311 | 100 |
| 0 - 180 | 2311 | 100 |

**MD4AEG-4-L22/L52/840-A-DIM-UNV** Exam Only Total Luminaire Output: 5303 lumens; 48.2 Watts | Efficacy: 110 lm/W | 80 CRI; 4000K CCT




| CANDLEPOWER DISTRIBUTION | | | | | | | |
|---|---|---|---|---|---|---|---|
| VERTICAL ANGLE | HORIZONTAL ANGLE | | | | | ZONAL LUMENS |
| | 0° | 45° | 90° | 135° | 180° | |
| 0 | 2037 | 2037 | 2037 | 2037 | 2037 | |
| 5 | 2184 | 2152 | 2066 | 1876 | 1939 | 193 |
| 15 | 2420 | 2326 | 2008 | 1557 | 1543 | 552 |
| 25 | 2538 | 2376 | 1856 | 1216 | 1138 | 839 |
| 35 | 2499 | 2289 | 1607 | 930 | 816 | 1015 |
| 45 | 2280 | 2012 | 1295 | 669 | 561 | 1045 |
| 55 | 1771 | 1560 | 888 | 420 | 382 | 895 |
| 65 | 870 | 978 | 503 | 223 | 189 | 562 |
| 75 | 180 | 292 | 173 | 55 | 55 | 189 |
| 85 | 0 | 3 | 3 | 2 | 3 | 13 |
| 90 | 0 | 0 | 0 | 0 | 0 | |

| LUMEN SUMMARY | | |
|---|---|---|
| ZONE | LUMENS | % FIXTURE |
| 0 - 30 | 1584 | 30 |
| 0 - 60 | 4538 | 86 |
| 0 - 90 | 5303 | 100 |
| 0 - 180 | 5303 | 100 |

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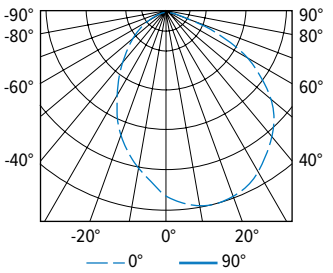
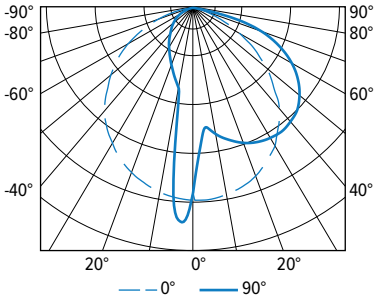
**MD4AEG-4-L22/L52/840-A-DIM-UNV Ambient & Exam** Total Luminaire Output: 7615 lumens; 71.4 Watts | Efficacy: 107 lm/W | 80 CRI; 4000K CCT




| CANDLEPOWER DISTRIBUTION | VERTICAL ANGLE | HORIZONTAL ANGLE 0° | 45° | 90° | 135° | 180° | ZONAL LUMENS |
|---|---|---|---|---|---|---|---|
| | 0 | 3167 | 3167 | 3167 | 3167 | 3167 | |
| | 5 | 3300 | 3304 | 3229 | 3005 | 3067 | 301 |
| | 15 | 3389 | 3394 | 3176 | 2691 | 2567 | 860 |
| | 25 | 3248 | 3304 | 2957 | 2215 | 1978 | 1275 |
| | 35 | 2971 | 3010 | 2562 | 1707 | 1436 | 1477 |
| | 45 | 2553 | 2533 | 2054 | 1175 | 966 | 1448 |
| | 55 | 1977 | 1964 | 1427 | 755 | 613 | 1208 |
| | 65 | 1055 | 1283 | 881 | 379 | 244 | 767 |
| | 75 | 223 | 452 | 299 | 68 | 58 | 259 |
| | 85 | 5 | 9 | 13 | 0 | 4 | 19 |
| | 90 | 0 | 0 | 0 | 0 | 0 | |

| LUMEN SUMMARY | ZONE | LUMENS | % FIXTURE |
|---|---|---|---|
| | 0 - 30 | 2436 | 32 |
| | 0 - 60 | 6569 | 86 |
| | 0 - 90 | 7615 | 100 |
| | 0 - 180 | 7615 | 100 |

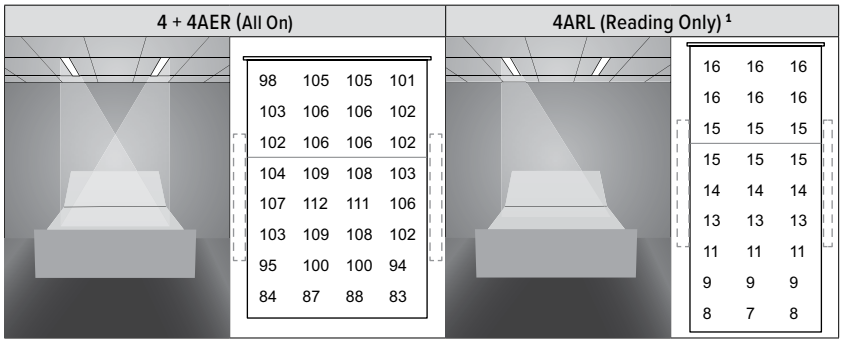
**MD4AERRG-4-L26/L66/840-A Reading Only** Report #: 13362267.01; 05/27/20 | Total Luminaire Output: 933.5 lumens; 10.7 Watts | Efficacy: 87.3 lm/W | 80 CRI; 4000K CCT




| CANDLEPOWER DISTRIBUTION | VERTICAL ANGLE | HORIZONTAL ANGLE 0° | 45° | 90° | 135° | 180° | ZONAL LUMENS |
|---|---|---|---|---|---|---|---|
| | 0 | 474 | 474 | 474 | 474 | 474 | |
| | 5 | 314 | 345 | 492 | 578 | 525 | 29 |
| | 15 | 349 | 324 | 475 | 219 | 183 | 52 |
| | 25 | 379 | 350 | 438 | 175 | 139 | 70 |
| | 35 | 389 | 348 | 379 | 135 | 107 | 83 |
| | 45 | 375 | 309 | 294 | 102 | 79 | 85 |
| | 55 | 329 | 267 | 200 | 70 | 57 | 76 |
| | 65 | 252 | 193 | 99 | 41 | 35 | 53 |
| | 75 | 120 | 94 | 27 | 17 | 14 | 19 |
| | 85 | 2 | 2 | 0 | 3 | 3 | 1 |
| | 90 | 0 | 0 | 0 | 0 | 0 | |

| LUMEN SUMMARY | ZONE | LUMENS | % FIXTURE |
|---|---|---|---|
| | 0 - 40 | 424 | 46 |
| | 0 - 60 | 752 | 81 |
| | 0 - 90 | 934 | 100 |
| | 0 - 180 | 934 | 100 |

## FOOTCANDLE ESTIMATOR & DISTRIBUTION




[1] Left side shown. 4ARR is opposite.

Footcandle calculations based on standard reflectance of 90/60/30 and a light loss factor of 1.0. Fixtures spaced 3′ 6″ O.C. over 3′ wide bed. Values are for bed surface.

## ADDITIONAL DRIVER OPTIONS

Note: Restrictions may apply, consult product builder at hew.com/product-builder

| CATALOG NUMBER | DESCRIPTION |
|---|---|
| DRV [1] | Driver without external dimming wires prewired for non-dimming applications |
| DIM | Driver with external dimming wires prewired for 0-10V low voltage applications (tunable white: (1) 0-10V signal controls dimming and (1) 0-10V signal controls CCT) |
| DIM1 | 1% driver with external dimming wires prewired for 0-10V low voltage applications |
| DIM LINE [1] | Line voltage dimming driver (TRIAC and ELV compatible, 120V only) |
| DIM TRC [1] | Line voltage dimming driver (TRIAC compatible, 120V only) |
| DA | Driver with 12V auxiliary power, without external dimming wires (not available with 347V) |
| DSR | DALI-2 sensor-ready driver without external dimming wires (Not available with 347V. Static CCTs use D4i DALI-2 driver) |
| DALI | DALI dimming driver |
| DMX | Driver prewired for DMX applications |
| SD40 [1] | 40% step-dimming driver |
| SD50 [1] | 50% step-dimming driver |
| LDE1 [1] | Lutron Hi-lume 1% EcoSystem dimming driver |
| LD2 | Lutron DALI-2 digital driver, 1% |
| PoE PR | Power over Ethernet-ready, fixture powered and controlled by remote UL- or CSA-listed PoE driver |

[1] Single CCT only.

# MD4 LED
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## LOW-VOLTAGE CONTROLLER OPTIONS

| EXAMPLE: LVC2A/E | | | |
|---|---|---|---|
| CONTROLLER | LOAD 1 | LOAD 2 | LOAD 3 |
| **LVC1** 1-circuit | **A** Ambient<br>**R** Reading<br>**E** Exam | | |
| **LVC2** 2-circuit | **A/** Ambient<br>**R/** Reading | **R** Reading<br>**E** Exam | |
| **LVC3** 3-circuit or dimming control | **A/** Ambient<br>**R/** Reading<br>**DIMA/** Ambient, 0-10 dimming [1]<br>**DIMR/** Reading, 0-10 dimming [1] | **A/** Ambient<br>**R/** Reading<br>**E/** Exam | **E** Exam |
| | **DIMA/DIMR** Ambient and reading, 0-10 dimming [1]<br>**SEQAR/** Ambient and reading, sequential switching [2] | | |

120V-277V only. LVC wall plate accessories available, see hew.com/LVCWP for details.

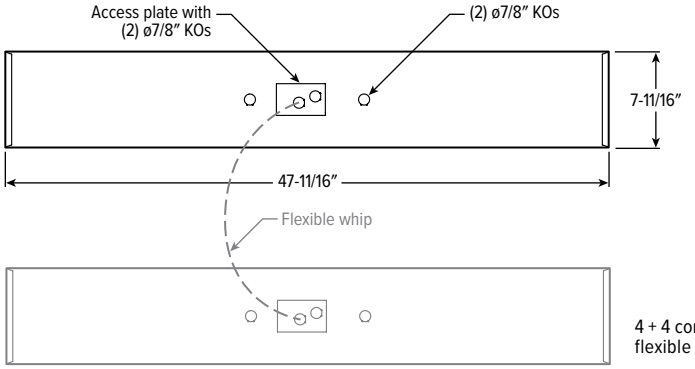
[1] Smooth dimming of the load utilizing a single, dry contact, momentary, normally open switch which will dim from 25% up to 100% while holding down the switch.

[2] Alternating off and on of (2) loads with multiple cycles of one switch.

## FIXTURE DETAILS

See hew.com/power-entry for power entry details.

### BACK VIEW



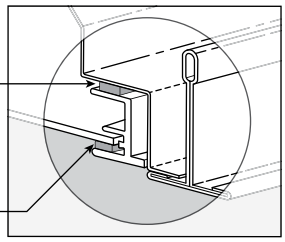

4 + 4 combinations supplied with 9′ flexible whip between fixture pairs.

## GASKETING DETAILS

### DOUBLE GASKETING (STANDARD)

Door frame gasketing factory-installed between door frame and luminaire housing prevents light leak and reduces dust ingress.

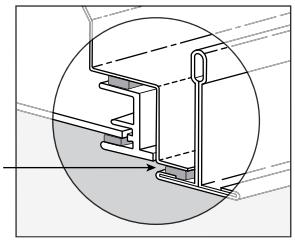
Shielding gasketing factory-installed between door frame and lens reduces dust and bug contaminants.



### TRIPLE GASKETING (TG OPTION)

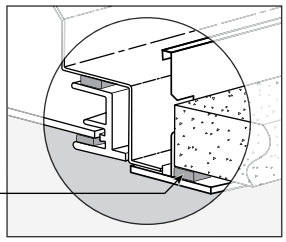
T-bar

Ceiling gasketing field installed between bottom perimeter of fixture and T-bar ceiling seals plenum dust from the room.



Drywall (DFK option)

Between bottom perimeter of fixture and hardpan ceiling.



## DRYWALL KIT (DFK) OPTIONS

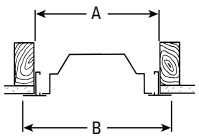
### ORDERING INFO

| EXAMPLE: DFK - 08 48 W | | | |
|---|---|---|---|
| SERIES | WIDTH | LENGTH | FINISH |
| **DFK** Drywall kit | **08** 8″ | **48** 4′ | **W** White<br>**AMW** Anti-microbial white |

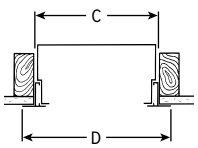
### INSTALLATION DIMENSIONS

| NOMINAL SIZE | ROUGH-IN | | FINISH TRIM SIZE | |
|---|---|---|---|---|
| | WIDTH (A) | LENGTH (C) | WIDTH (B) | LENGTH (D) |
| 8″ x 4′ | 8-3/8″ | 48-3/8″ | 9-5/16″ | 49-5/16″ |

### TYPICAL INSTALLATION




Width




Length