



HRA-LED

Healthcare Surgical **LED** Asymmetrical / Symmetrical Grid / Flange 15/16 to 1.5 in. T Grid

PRODUCT SPECIFICATION

The HRA series is designed for dust-free operation in surgical suites where maximum illumination is required in the operating zone.

Mounting

Suitable for installation in recessed 15/16"–1.5" T-Grid or hard ceiling applications. Hard ceiling (flange) type mounts via swing arm brackets that extend and clamp with a single screw action. Swing arm bracket also serves as connection for earthquake cables.

Housing

18 gauge cold rolled steel die-formed to shape with seams welded, ground smooth, and caulked airtight. Aluminum and 304 stainless steel available.

Door

One-piece 18 gauge cold rolled steel, gasketed and sealed overlapping door. Freedom Hinge™ design permits removal and hinging from either side. Aluminum and 304 stainless steel available.

Optical System

Precisely engineered V-Shaped reflector provides perfect asymmetrical/symmetrical distribution.

Lens

Optic Plus lens (standard) completely hides diode image while providing greater than 90% light transmission.

Finish

Antimicrobial white powder-coat applied after phosphate pretreatment for superior adhesion and corrosion resistance. Brushed stainless steel door available.

Hardware

Stainless steel fasteners.

Driver

0-10Vdc 1% dimming, >0.9 PF, <20% THD
Factory programmable, Operating temp -40°C Min. to 50°C Max

Certifications

UL Listed wet location and IP65 rated.
Suitable for use in ISO-3 cleanrooms (209E Class 1).

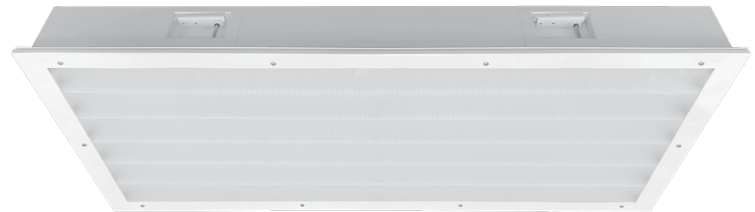
Job Name

Fixture Type

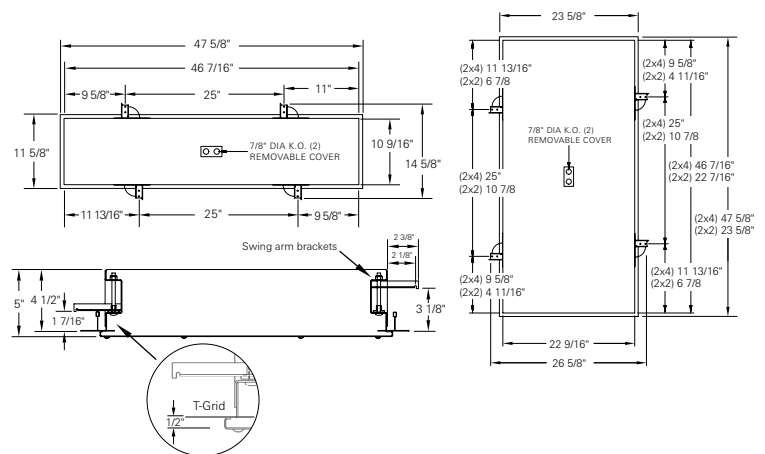
Catalog No.

Approval

Date



Ceiling Grid / Flange Design



| | one | two | three | four | five | six | seven | eight | nine | ten | eleven |
|----------------------------------|---------------------|-----|-------|------|--|-----|------------|-----------|---|-----|--------|
| HRA | - | | / | - | | - | VAR | DM | - | / | - |
| one Luminaire Size | 14 1 x 4 - two rows | | | | five Door Material | | | | nine Internal Lens | | |
| 22 2 x 2 - six rows | | | | | A Aluminum | | | | 122 Optic Plus diffusing acrylic, <u>standard</u> | | |
| 24 2 x 4 - six rows | | | | | C Cold rolled steel, <u>standard</u> | | | | 122R Optic Plus with RF grid* | | |
| | | | | | S Stainless steel | | | | <u>Must be used with RF filter</u> | | |
| two LED Source | | | | | six Door Finish | | | | 130 .125 in. LED diffusing Lexan | | |
| Refer to the LED Source Table on | | | | | R Brushed (Stainless steel only) | | | | ten External Lens | | |
| Page 2 for available options. | | | | | W White | | | | 00 No external lens | | |
| three Color Temperature | | | | | seven Voltage | | | | 33 .125 in. clear polycarbonate | | |
| 35 3500K | | | | | VAR Variable, 120-277 V, 50/60Hz | | | | eleven Options | | |
| 40 4000K | | | | | eight Driver | | | | CU Canadian UL Listing | | |
| 50 5000K | | | | | DM 0-10VDC 1% Dimming, <u>standard</u> | | | | CP CCEA Chicago | | |
| four CRI | | | | | | | | | EM Emergency ballast | | |
| 80 Min 80 CRI | | | | | | | | | FH Fuse and holder | | |
| 90 Min 90 CRI | | | | | | | | | RF Radio interference filter, one per circuit* | | |
| | | | | | | | | | Housing Material | | |
| | | | | | | | | | AH Aluminum | | |
| | | | | | | | | | SH Stainless steel | | |

Modifications are available to meet custom requirements.
Specifications and dimensions are subject to change without notice.

LED Life

>100,000

| LED Source (Box 2) | 4000K 80 CRI | | 4000K 90 CRI | | 5000K 80 CRI | | 5000K 90 CRI | | Input Watts |
|-----------------------|------------------|-----|------------------|-----|------------------|-----|------------------|-----|-------------|
| | Delivered Lumens | L/W | Delivered Lumens | L/W | Delivered Lumens | L/W | Delivered Lumens | L/W | |
| 1' x 4' Fixture | | | | | | | | | |
| 2W60 | 7536 | 126 | 6244 | 104 | 7751 | 129 | 6433 | 107 | 60 |
| 2W85 | 10309 | 126 | 8542 | 104 | 10604 | 129 | 8801 | 107 | 82 |
| 2W110 | 13215 | 121 | 10949 | 100 | 13592 | 125 | 11281 | 103 | 109 |
| 2' x 2' Fixture | | | | | | | | | |
| 6W60 | 7717 | 148 | 6394 | 123 | 7937 | 153 | 6588 | 127 | 52 |
| 6W90 | 10370 | 140 | 8592 | 116 | 10666 | 144 | 8853 | 120 | 74 |
| 6W100 | 13000 | 141 | 10771 | 117 | 13371 | 145 | 11098 | 121 | 92 |
| 2' x 4' Fixture | | | | | | | | | |
| 6W115 | 13833 | 149 | 11461 | 123 | 14228 | 153 | 11809 | 127 | 93 |
| 6W155 | 18093 | 145 | 14991 | 120 | 18610 | 149 | 15446 | 124 | 125 |
| 6W200 | 22850 | 143 | 18933 | 118 | 23503 | 147 | 19507 | 122 | 160 |
| 6W250 | 30095 | 139 | 24936 | 115 | 30955 | 143 | 25693 | 119 | 216 |
| 6W290 | 34813 | 135 | 28845 | 112 | 35807 | 139 | 29720 | 115 | 258 |
| 6W330 | 38900 | 133 | 32232 | 110 | 40012 | 137 | 33210 | 113 | 293 |

Specified Output Option

LC Doane programmable drivers allows us to deliver a specific lumen output. If none of the options in the chart above fit your application, let us know the desired lumen output and we will do the rest. See the example for a 2x4 on how this will be specified:

Example Model:

HRA24-**XX**¹SO-40/80-CW-VARDM-122/00-(**XX**²/**LUMENS**)

LUMENS = You provide the lumens.

XX¹ = We will determine the number of rows.

XX² = We will provide the wattage information.

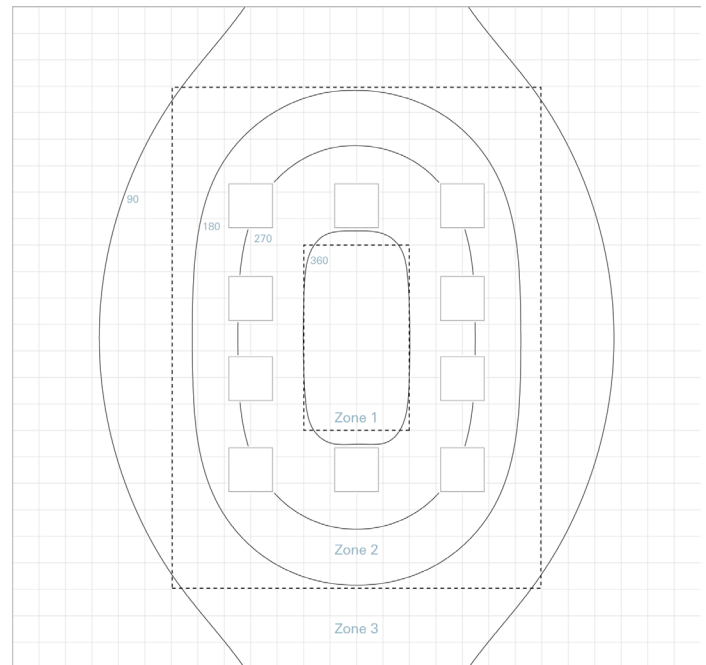
Photometric Data with 122 lens

33 lens multiplier

.86

Zone Values

| | | | | | | | | | | | | |
|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 37 | 46 | 60 | 80 | 103 | 121 | 128 | 122 | 104 | 81 | 60 | 46 | 37 |
| 44 | 55 | 78 | 112 | 144 | 172 | 191 | 198 | 192 | 173 | 144 | 112 | 43 |
| 50 | 67 | 99 | 143 | 190 | 233 | 259 | 268 | 260 | 233 | 191 | 143 | 50 |
| 56 | 76 | 118 | 172 | 235 | 288 | 322 | 334 | 323 | 288 | 233 | 172 | 56 |
| 60 | 83 | 128 | 192 | 260 | 322 | 359 | 371 | 359 | 321 | 260 | 192 | 60 |
| 62 | 86 | 133 | 204 | 275 | 326 | 370 | 379 | 370 | 355 | 275 | 204 | 62 |
| 62 | 86 | 133 | 208 | 278 | 337 | 366 | 375 | 368 | 336 | 279 | 209 | 62 |
| 60 | 82 | 128 | 210 | 280 | 355 | 366 | 371 | 366 | 335 | 280 | 210 | 60 |
| 56 | 76 | 118 | 209 | 279 | 336 | 368 | 375 | 366 | 337 | 278 | 208 | 56 |
| 50 | 66 | 99 | 204 | 275 | 334 | 370 | 379 | 370 | 336 | 275 | 204 | 50 |
| 43 | 55 | 78 | 192 | 260 | 321 | 359 | 371 | 360 | 322 | 260 | 192 | 43 |
| 37 | 46 | 60 | 172 | 235 | 288 | 323 | 334 | 322 | 288 | 233 | 172 | 37 |
| | | | 143 | 191 | 233 | 260 | 268 | 259 | 233 | 190 | 143 | |
| | | | 112 | 144 | 173 | 192 | 198 | 191 | 172 | 144 | 112 | |
| 37 | 46 | 60 | 81 | 104 | 122 | 128 | 121 | 103 | 81 | 60 | 46 | 37 |



| luminaire | Zone 1 | | Zone 2 | | Zone 3 | |
|-----------|---------------|--------|---------------|--------|---------------|--------|
| (10) HRA | average | 371 fc | average | 244 fc | average | 79 fc |
| | max | 379 fc | max | 371 fc | max | 133 fc |
| | min | 366 fc | min | 112 fc | min | 37 fc |
| | average / min | 1.01 | average / min | 2.18 | average / min | 2.14 |
| | max / min | 1.03 | max / min | 3.31 | max / min | 3.59 |