



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).
Certified to MIL-STD-461F: CE101, CE102, CS101, CS106, CS114, CS116, RE101, RE102, RS101, RS103, RS103, MIL-STD-1399-300B: 5.3.1 through 5.3.9.

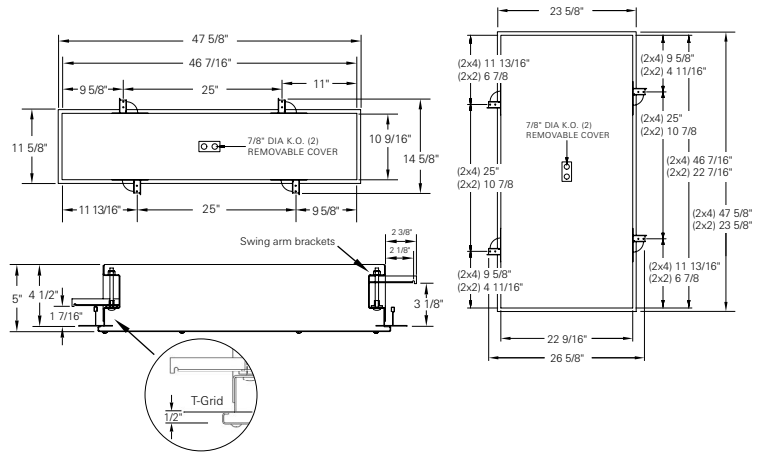


Job Name	
Fixture Type	
Catalog No.	
Approval	Date



Ceiling Grid / Flange Design

Green Row



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

* Conducted and radiated emissions controlled as per MIL461 with the use of 122R lens and RF Filter.
For **Tested and Certified** MIL461 performance, refer to HRAM Series.

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

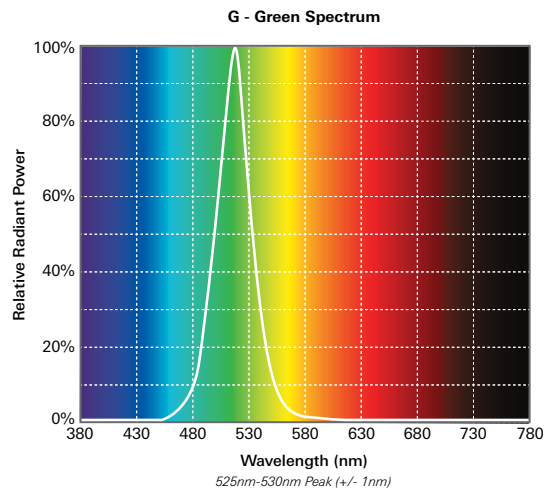
LED Life
>100,000

White LED

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

Green/White LED

LED Source (Box 2)	Delivered Lumens	L/W	Input Watts
1' x 4' Fixture			
1G56	5642	129	43.8
2' x 2' Fixture			
1G28	2850	129	22.1
2' x 4' Fixture			
1G57	5765	138	41.7



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-XX¹SO-40/80-CW-VARDM-122/00-(XX²/LUMENS)

LUMENS = You provide the lumens.

XX¹ = We will determine the number of rows.

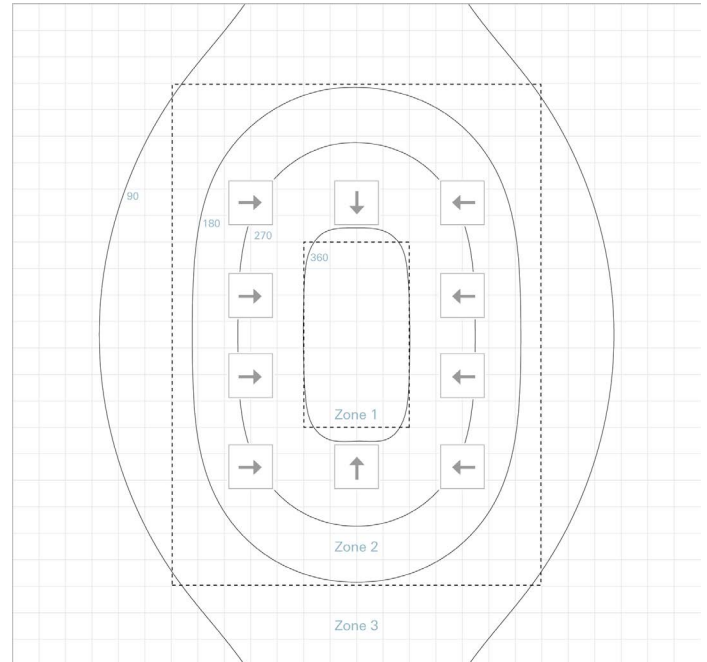
XX² = We will provide the wattage information.

Photometric Data with 122 lens

33 lens multiplier	.86
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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	78	55	43
50	67	99	143	190	233	259	268	260	233	191	143	99	66	50
56	76	118	172	235	288	322	334	323	288	233	172	117	76	56
60	83	128	192	260	322	359	371	359	321	260	192	117	76	56
62	86	133	204	275	336	370	379	370	355	275	204	128	82	60
62	86	133	208	278	337	366	375	368	336	279	209	133	86	62
62	86	133	210	280	365	366	371	366	335	280	210	133	86	62
60	82	128	209	279	336	368	375	366	337	278	208	133	86	62
56	76	118	204	275	334	370	379	370	336	275	204	133	83	60
50	66	99	192	260	321	359	371	360	322	260	192	118	76	56
43	55	78	172	235	288	323	334	322	288	233	172	99	67	50
37	46	60	143	191	233	260	268	259	233	190	143	99	67	50
37	46	60	112	144	173	192	198	191	172	144	112	78	55	44
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
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