

CATALOG #: \_\_\_\_\_

TYPE: \_\_\_\_\_

PROJECT: \_\_\_\_\_

## FEATURES

- Multiple distribution options provide effective, application specific lighting performance
- Smooth surface doorframe and lens materials simplify cleaning and maintenance
- Optional green circuit provides enhanced visual clarity for operating room staff and reduces eye fatigue during videoscopic surgical procedures
- Designed exclusively for hospitals and medical facilities utilizing 15/16", 1-1/2", and 2" face T-bars
- Suitable for grid or flange installations
- Anti-microbial white finish standard
- Provides auxiliary illumination from the perimeter of the surgery or exam area
- Reduces intense contrast between surgical and preparatory work areas
- Supplies uniform ambient illumination for the remainder of the surgery room
- Optional triple gasket protects against contaminant ingress
- Made Right Here® in the USA

## SPECIFICATIONS

- HOUSING** – 20-gauge die-formed C.R.S.
- DOOR FRAME** – .050" extruded aluminum, flat with mitered corners. Fully enclosed spring-loaded cam latches and T-type hinges. Door frame and lens are grounded to the fixture housing.
- SHIELDING** –
  - Symmetric: one-piece frosted acrylic, pattern #12, .125" thick
  - Symmetric/Asymmetric: one-piece frosted acrylic, pattern #12, .125" thick
  - Asymmetric: one-piece clear acrylic asymmetric/symmetric lens with radio suppression grid (KSH-34RF), nominal .150" thick
- FINISH** – 92% minimum average reflective white anti-microbial powder coating bonded to phosphate-free, multi-stage pretreated metal. All parts painted after fabrication to facilitate installation, increase efficiency, and inhibit corrosion.
- ELECTRICAL** – High quality mid-power LED boards. Rated for 50,000 hours at 70% lumen maintenance (L70)
- MOUNTING** – NEMA Type "G" for 15/16", 1-1/2", and grid ceiling systems. NEMA Type "F" available. Four (4) earthquake clips standard.
- LISTINGS** –
  - cCSAus certified as luminaire suitable for dry or damp locations.
  - City of Chicago Environmental Air approved when specified with CP option.
- WARRANTY** – 5-year limited warranty, see [hew.com/warranty](http://hew.com/warranty).

## ORDERING EXAMPLE: MDSG - 24 - L32/GRN/L147/840 - SYM - OPTIONS - DRV - UNV

### ORDERING INFO

SERIES	CEILING TYPE	WIDTH	LENGTH	LUMENS <sup>(1)</sup>	CRI	CCT
MDS	G NEMA Type "G"	1 1' <sup>(3)</sup>	2 2' <sup>(4)</sup>	1x4	8 80	30 3000K
				L70		
	F NEMA Type "F" <sup>(2)</sup>	2 2'	4 4'	L100	40 4000K	50 5000K
				2x2		
	2x2	L100	10,000lm white only	L14/GRN/L36	1,400lm green/3,600lm white	
				L14/GRN/L67		1,400lm green/6,700lm white
	2x4	L116	11,600lm white only	L220	22,000lm white only	
				L32/GRN/L77		3,200lm green/7,700lm white
	2x4	L32/GRN/L147	3,200lm green/14,700lm white			

### SHIELDING

- SYM Symmetric
- SYM/ASY Symmetric/asymmetric <sup>(6)</sup>
- ASY Asymmetric <sup>(7)</sup>

### OPTIONS

- EM/10W 10-watt emergency battery <sup>(8)</sup>
- GLR Fuse, fast blow (specify voltage), one per driver
- (L\_\_ ) Additional lower lumen packages available.  
Example: 13,500 nominal lumens = MDSG-24-L220/840-(L135) <sup>(9)</sup>
- CP Chicago plenum (CCEA)
- TG Triple gasket <sup>(10)</sup>
- 2C Two circuit wiring <sup>(11)</sup>

### CONTROL <sup>(12)</sup>

CONTROL <sup>(12)</sup>	VOLTAGE
DRV Non-dimming driver	120 120V
DIM Dimming driver	277 277V
	UNV 120-277V

## NOTES

- Nominal lumen output based on 4000 CCT. Actual lumens may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA. Additional lumen packages available, see options.
- See page 3 for NEMA TYPE "F" INSTALLATION.
- 4' length only.
- 2' width only.
- Extended lead times may apply. Consult factory for availability.
- Reduces fixture output up to 5%.
- Reduces fixture output up to 23%.
- 120V-277V only.
- Specify in increments of 100 nominal lumens. Option must be specified with next higher lumen package.
- See page 4 for GASKETING DETAILS.
- Inboard-outboard wiring. Allows for independent dimming of each circuit when ordered with DIM driver. Fixture is wired as two circuit by default when specified with green circuit.
- See page 4 for ADDITIONAL CONTROL OPTIONS.



## FIXTURE PERFORMANCE DATA

LED PACKAGE	WATTAGE		SYMMETRIC				SYMMETRIC/ASYMMETRIC				ASYMMETRIC				
			DELIVERED LUMENS		EFFICACY (lm/W)		DELIVERED LUMENS		EFFICACY (lm/W)		DELIVERED LUMENS		EFFICACY (lm/W)		
	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	WHITE	GREEN	
WHITE															
1x4	L70	62	-	7105	-	115	-	6598	-	106	-	6073	-	99	-
	L100	86	-	10304	-	120	-	9745	-	114	-	8764	-	101	-
2x2	L54	42	-	5439	-	128	-	5318	-	125	-	4581	-	107	-
	L100	79	-	10089	-	127	-	9864	-	125	-	8530	-	109	-
2x4	L116	94	-	11626	-	123	-	11368	-	121	-	10593	-	112	-
	L220	171	-	22120	-	129	-	21680	-	126	-	19019	-	116	-
GREEN/WHITE															
2x2	L14/L36	28	31	3622	1334	128	45	3542	1173	125	43	3053	1072	107	35
	L14/L67	53	31	6720	1334	127	45	6569	1173	125	43	5681	1072	109	35
2x4	L32/L77	63	62	7743	3156	123	51	7571	2799	121	45	7054	2692	112	45
	L32/L147	114	62	14731	3156	129	51	14439	2799	126	45	12667	2692	116	45

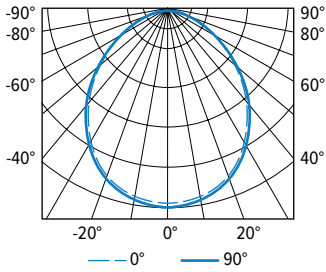
## MULTIPLIER TABLES

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

- Photometrics tested in accordance with IESNA LM-79. Results shown are based on 25°C ambient temperature.
- Wattage shown is average for 120V through 277V input.
- Results based on 4000K, 80 CRI, actual lumens may vary +/-5%
- Use multiplier table to calculate additional options.

## PHOTOMETRY

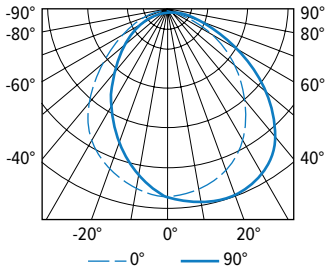
**MDSG-24-L220/840-SYM** Total Luminaire Output: 21764 lumens; 171 Watts | Efficacy: 129 lm/W | 82 CRI; 4000K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE					ZONAL LUMENS
		0°	45°	90°	135°	180°	
	0	9327	9327	9327	9327	9327	
	5	9357	9244	9233	9244	9357	880
	15	8890	8796	8796	8796	8890	2485
	25	7980	7890	7888	7890	7980	3640
	35	6694	6588	6574	6588	6694	4126
	45	5101	4990	4942	4990	5101	3857
	55	3480	3368	3318	3368	3480	3033
	65	2122	2036	2052	2036	2122	2059
	75	1140	1123	1214	1123	1140	1223
	85	400	414	484	414	400	460
	90	11	47	62	47	11	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	90 - 120	7005	32
	90 - 130	11131	51
	90 - 150	18021	83
	90 - 180	21764	100
	0 - 180	21764	100

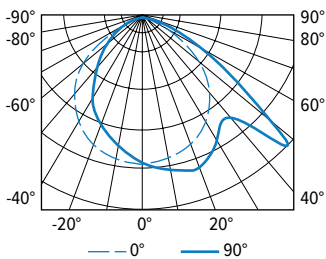
**MDSG-24-L220/840-SYM/ASY** Total Luminaire Output: 21143 lumens; 171 Watts | Efficacy: 126 lm/W | 82 CRI; 4000K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE					ZONAL LUMENS
		0°	45°	90°	135°	180°	
	0	8686	8686	8686	8686	8686	
	5	8977	8861	8701	8370	8288	820
	15	9264	8947	8300	7517	7237	2325
	25	9047	8550	7515	6334	5892	3436
	35	8309	7679	6377	4961	4432	3961
	45	6860	6217	4939	3606	3144	3803
	55	4849	4400	3438	2438	2135	3077
	65	2908	2660	2124	1535	1392	2107
	75	1508	1341	1117	881	844	1201
	85	481	405	367	325	343	412
	90	34	21	12	49	64	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	6582	31
	0 - 40	10543	50
	0 - 60	17423	82
	0 - 90	21143	100
	0 - 180	21143	100

**MDSG-24-L220/950-ASY** Total Luminaire Output: 15079 lumens; 165 Watts | Efficacy: 93 lm/W | 82 CRI; 4000K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE					ZONAL LUMENS
		0°	45°	90°	135°	180°	
	0	6195	6195	6195	6195	6195	
	5	6380	6304	6216	5984	5905	585
	15	6800	6452	5923	5352	5164	1671
	25	6450	6250	5381	4609	4398	2486
	35	5485	5387	4638	3766	3412	2847
	45	7446	4075	3641	2672	2360	2958
	55	4418	4229	2257	1618	1455	2369
	65	1705	1925	1063	1043	802	1345
	75	821	729	443	444	444	624
	85	320	208	99	130	130	193
	90	89	22	3	4	2	

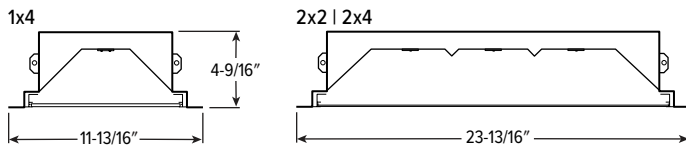
LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	90 - 120	4742	31
	90 - 130	7589	50
	90 - 150	12916	86
	90 - 180	15079	100
	0 - 180	15079	100



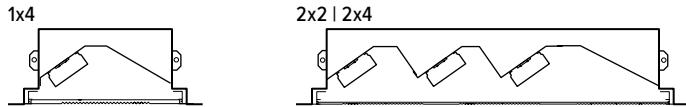
# MDS LED LED Medical/Surgical Troffer – Wide Grid

## FIXTURE DETAILS

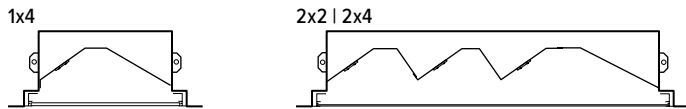
### SYM



### ASY

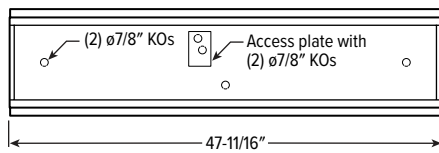


### SYM/ASY

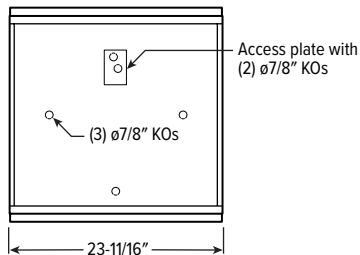


## BACK VIEW DETAILS

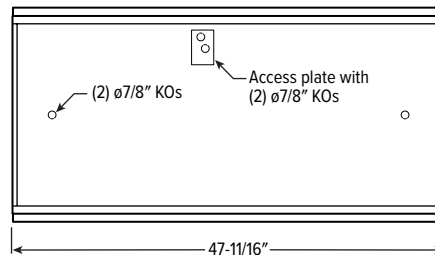
### 1x4



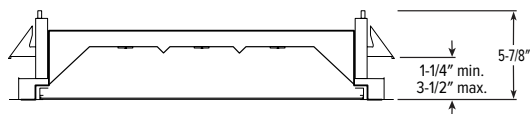
### 2x2



### 2x4



## NEMA TYPE "F" INSTALLATION



	ROUGH-IN	FINISH TRIM SIZE
1x4	12-3/8" x 48-3/8"	13-5/16" x 49-5/16"
2x2	24-3/8" x 24-3/8"	25-5/16" x 25-5/16"
2x4	24-3/8" x 48-3/8"	25-5/16" x 49-5/16"

For continuous row mounting, add finish trim size for each additional fixture.

MDSF fixtures can be field converted to work with 1-1/2" or 2" NEMA Type "G" ceiling systems.

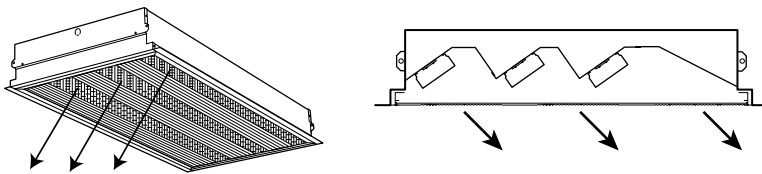


## ADDITIONAL CONTROL OPTIONS

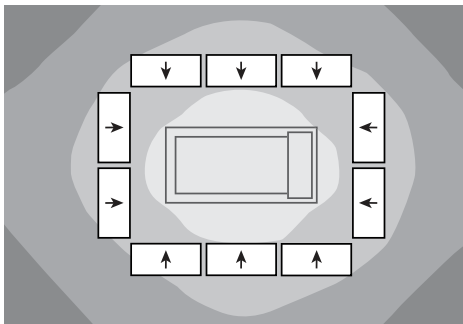
Note: Lumen restrictions apply, consult product builder at [hew.com/product-builder](http://hew.com/product-builder).

CATALOG NUMBER	DESCRIPTION
DRV	Driver prewired for non-dimming applications
DIM	Dimming driver prewired for 0-10V low voltage applications
DIM1	1% dimming driver prewired for 0-10V low voltage applications
DIM LINE	Line voltage dimming driver (Must specify 120V or 277V only)
SD40	40% step-dimming driver
SD50	50% step-dimming driver
DALI	DALI dimming driver
LTE LINE	Lutron Hi-lume 1% 2-wire dimming driver forward phase line voltage controls (120V only)
LDE1	Lutron Hi-lume 1% EcoSystem dimming LED driver
LDE5	Lutron 5-Series 5% EcoSystem dimming LED driver
ELDO SOLOB	EldoLED Solodrive, 0.1% dimming driver for 0-10V controls
ELDO SOLOB DALI	EldoLED Solodrive, 0.1% dimming driver for DALI controls
ELDO ECO1	EldoLED Ecodrive, 1% dimming driver for 0-10V controls
ELDO ECO1 DALI	EldoLED Ecodrive, 1% dimming driver for DALI controls

## DIRECTIONAL LENS DETAILS

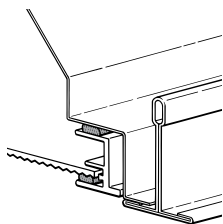


## TYPICAL SURGICAL SUITE LAYOUT



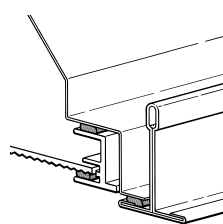
## GASKETING DETAILS

### DOUBLE GASKETING (STANDARD)



Gasketing is factory-installed continuously between door frame and luminaire housing; and between door frame and lens.

### TRIPLE GASKETING (TG)



Gasketing is factory-installed continuously between door frame and luminaire housing; and between door frame and lens. Gasketing between bottom perimeter of unit (adjacent to T-bar or hardpan ceiling) is provided by factory and field-installed.

