MCT Amber LED Medical Clean Room Troffer

Williams

CATALOG #: _____

TYPE: _____

PROJECT: _____

5"

23-13/16"

2x2 | 2x4 shown

BUY AMERICAN ACT COMPLIANT · CCEA Approved · IP65 Rated · ISO 5 Class 100 · MIL STD 461G · NSF COMPONENT

FEATURES

- 590nm Amber LEDs provide safe lighting for photosensitive applications
- Seam-welded fixture housing and doorframe are designed for infection controlled environments
- Smooth surface doorframe and lens materials simplify cleaning and maintenance
- Optional MIL-STD-461G for environments requiring conducted emission mitigation
- NSF approved closed cell foam gasketing meets all required testing criteria for ISO 5, Class 100 certification
- Optimized for hospitals, medical facilities and containment sensitive manufacturing facilities that utilize 15/16" and 1-1/2" face T-bars
- Made Right Here® in the USA

SPECIFICATIONS

- HOUSING – 20-gauge die-formed, seam-welded C.R.S. Aluminum available.
- DOOR FRAME – One-piece 20-gauge seam-welded C.R.S. Hinged from one side with stainless steel safety cables. Attached to fixture using captive, stainless steel screws.
- SHIELDING – Choice of frosted acrylic lens with smooth clear acrylic or polycarbonate underlay.
- 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). Available with amber LEDs only, or amber and white LEDs. Dedicated driver for each color included to allow dimming of the two circuits individually.
- MOUNTING – NEMA Type "G" 15/16" or 1-1/2" grid standard. Drywall flange type available.
- LISTINGS –
  - cCSAus certified as luminaire suitable for wet location under covered ceiling.
  - IC-rated for direct contact with insulation. [15]
  - IP65 rated
  - ISO 5, Class 100 rated
  - NSF/ANSI 2
  - Complies with MIL-STD-461G with DIM or DRV drivers.
  - City of Chicago Environmental Air approved (not available when specified with NSWH)
  - Complies with the Buy American Act and other federal regulations. Request certification at hew.com/baa.
- WARRANTY – 5-year limited fixture warranty, see hew.com/warranty.

ORDERING EXAMPLE: MCTG - 24 - L61/AMB/L134/835 - CS - SAF12125 - OPTIONS - DRV - UNV

ORDERING INFO

SERIES	CEILING TYPE	WIDTH	LENGTH	LUMENS [1]	
MCT	G 15/16" or 1-1/2" grid	1 1'	2 2' [3]	**1x4**	
	F Flange [2]	2 2'	4 4'	L29/AMB	2,900lm amber only
				L54/AMB	5,400lm amber only
				L29/AMB/L45	2,900lm amber/4,500lm white
				2x2	
				L52/AMB	5,200lm amber only
				L82/AMB	8,200lm amber only
				L28/AMB/L68	2,800lm amber/6,800lm white
				L56/AMB/L36	5,600lm amber/3,600lm white
				2x4	
				L114/AMB	11,400lm amber only
				L176/AMB	17,600lm amber only
				L60/AMB/L134	6,000lm amber/13,400lm white
				L98/AMB/L74	9,800lm amber/7,400lm white

CRI [4]	CCT	HOUSING	DOOR FRAME	SHIELDING	
8 80	27 2700K	CS 20-gauge C.R.S.	S Flat white steel	AF12125	Pattern #12, .125" thick with acrylic underlay
9 90 [5]	30 3000K	AL Flat white aluminum	F Flat white aluminum	AF125	.125" thick with acrylic underlay
	35 3500K			AF19156	Pattern #19, .156" thick with acrylic underlay
	40 4000K			AF12125/PC	Pattern #12, .125" thick with polycarbonate
	50 5000K			AF125/PC	.125" thick with polycarbonate
				AF19156/PC	Pattern #19, .156" thick with polycarbonate

OPTIONS

EM/10W	10-watt emergency battery [6]
EM/10WLP	Low-profile 10-watt emergency battery [7]
EQCLIPS	Earthquake clips [8]
MIL	Complies with MIL-STD-461G specifications
TG	Triple gasket [9]
NSWH	Fixture provided without seam-welded housing [10]
TP	Tamper resistant stainless steel, Torx T-25 screws [11]
2C	Two circuit wiring [12]

CONTROL

DRV	Driver prewired for non-dimming applications
DIM	Dimming driver prewired for 0-10V low voltage applications

VOLTAGE

UNV	120-277V
347	347V [13]

ACCESSORIES

TPTX-25 TOOL Tamper-resistant tool for Torx T-25 screws. [14]

NOTES

1. Lumen output based on 80 CRI/3500K CCT. Actual performance may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA.
2. See page 3 for CROSS SECTIONS.
3. 2' width only
4. Specify for fixtures with white LEDs only.
5. Extended lead times may apply. Consult factory for availability..
6. 120V-277V only; 2x2, 2x4 only, connected to white circuit if applicable.
7. 120V-277V only; 1x4 only, connected to white circuit if applicable.
8. G Ceiling Type only. 4 per fixture.
9. Field installed. See page 3 for GASKETING DETAILS.
10. NSWH option does not affect NSF, ISO, IP65, or MIL-STD461G listings. Fixture is not City of Chicago Environmental Air approved when specified with NSWH.
11. Requires a tamper-resistant tool, see Accessories. When TP option is specified, fixture is not NSF/ANSI 2 certified.
12. Inboard-outboard wiring where applicable unless specified otherwise. Allows for independent dimming of each circuit when ordered with DIM driver configuration. Consult factory for additional wiring configurations. Fixture is wired as two circuit by default when specified with the "amber circuit" and does not require that the "2C" option be specified.
13. Not available with MIL or EM options.
14. Tamper-resistant tool must be ordered separately. Please specify quantity required per project.
15. Only available with 1x4: L29/AMB, 2x2: L52/AMB, L28/AMB/L68, 2x4: L114/AMB, L60/AMB/L134.

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FIXTURE PERFORMANCE DATA

LED PACKAGE	AF12125 SHIELDING						AF125 SHIELDING			
	WATTAGE		DELIVERED LUMENS		EFFICACY (lm/W)		DELIVERED LUMENS		EFFICACY (lm/W)	
	AMBER	WHITE	AMBER	WHITE	AMBER	WHITE	AMBER	WHITE	AMBER	WHITE
AMBER/WHITE										
1x4 L29/AMB/L45	31.7	39.1	2970	4546	94	116	2673	4091	84	105
2x2 L28/AMB/L68	44.7	59.6	2787	6859	62	115	2506	6166	56	103
2x2 L56/AMB/L36	86.9	33.3	5575	3677	64	110	5012	3306	58	99
2x4 L60/AMB/L134	89.4	101.7	5850	13496	65	133	5259	12133	59	119
2x4 L98/AMB/L74	108.1	62.4	9886	7459	91	120	8888	6706	82	107
AMBER ONLY										
1x4 L29/AMB	32.3	–	2970	–	92	–	2670	–	83	–
1x4 L54/AMB	86.9	–	5437	–	63	–	4888	–	56	–
2x2 L52/AMB	55.4	–	5210	–	94	–	4684	–	85	–
2x2 L82/AMB	126.5	–	8271	–	65	–	7436	–	59	–
2x4 L114/AMB	118.2	–	11542	–	98	–	10376	–	88	–
2x4 L176/AMB	270.6	–	17550	–	65	–	15777	–	58	–

MULTIPLIER TABLES

COLOR TEMPERATURE

	CCT	CONVERSION FACTOR
80 CRI	2700K	0.97
	3000K	0.99
	3500K	1.00
	4000K	1.03
	5000K	1.06
90 CRI	2700K	0.80
	3000K	0.82
	3500K	0.83
	4000K	0.86
	5000K	0.89

- Photometrics tested in accordance with IESNA LM-79. Results based on 80 CRI/3500K 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.
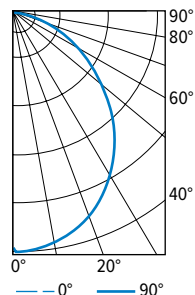- Use multiplier table to calculate additional options.

PHOTOMETRY

MCTG-22-L56/AMB/L36/835-SAF12125 (Amber Only) Total Luminaire Output: 5574 lumens; 86.9 Watts | Efficacy: 64.1 lm/W | 80 CRI; 3500K CCT

VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0°	45°	90°	
0	2360	2360	2360	
5	2390	2335	2334	223
15	2277	2231	2236	632
25	2056	2019	2030	934
35	1745	1715	1727	1076
45	1352	1333	1341	1031
55	934	921	928	828
65	548	542	554	544
75	233	236	253	257
85	33	36	43	49
90	1	2	2	

| ZONE	LUMENS	% FIXTURE
0 - 30	1789	32
0 - 40	2865	51
0 - 60	4724	85
0 - 90	5574	100
0 - 180	5574	100

MCTG-22-L56/AMB/L36/835-SAF12125 (White Only) Total Luminaire Output: 3677 lumens; 33.3 Watts | Efficacy: 110.5 lm/W | 80 CRI; 3500K CCT
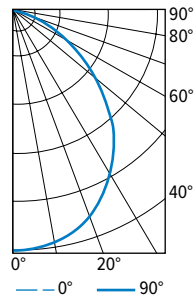
VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0°	45°	90°	
0	1635	1635	1635	
5	1631	1629	1626	155
15	1559	1565	1565	441
25	1415	1434	1433	659
35	1188	1218	1206	754
45	899	896	909	692
55	580	569	572	515
65	316	299	299	308
75	130	112	115	132
85	14	8	14	21
90	0	0	0	

ZONE	LUMENS	% FIXTURE
0 - 30	1255	34
0 - 40	2009	55
0 - 60	3215	88
0 - 90	3677	100
0 - 180	3677	100

MCTG-24-L98/AMB/L74/835-SAF125 (Amber Only) Total Luminaire Output: 8888 lumens; 108.1 Watts | Efficacy: 82.2 lm/W | 80 CRI; 3500K CCT
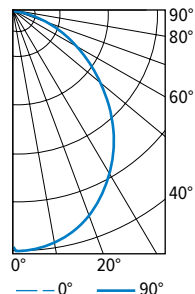
VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0°	45°	90°	
0	3863	3863	3863	
5	3888	3825	3820	364
15	3689	3639	3639	1028
25	3326	3276	3291	1514
35	2790	2760	2782	1733
45	2168	2145	2166	1662
55	1509	1486	1497	1336
65	855	852	857	852
75	313	321	313	351
85	25	25	23	49
90	0	0	0	

ZONE	LUMENS	% FIXTURE
0 - 30	2906	33
0 - 40	4639	52
0 - 60	7636	86
0 - 90	8888	100
0 - 180	8888	100

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MCTG-24-L98/AMB/L74/835-SAF125 (White Only) Total Luminaire Output: 6706 lumens; 62.4 Watts | Efficacy: 107.5 lm/W | 80 CRI; 3500K CCT
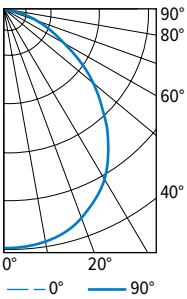
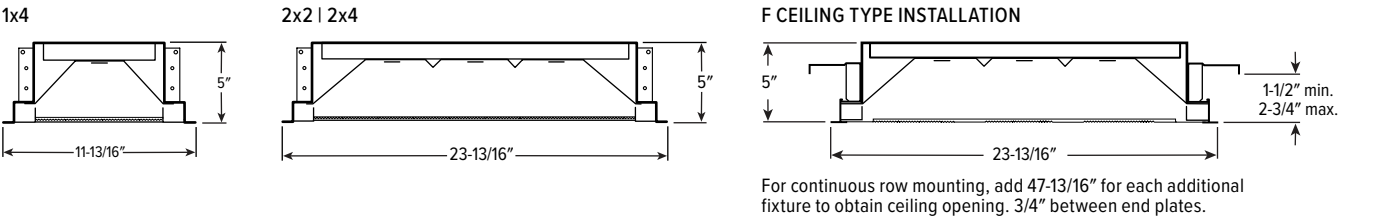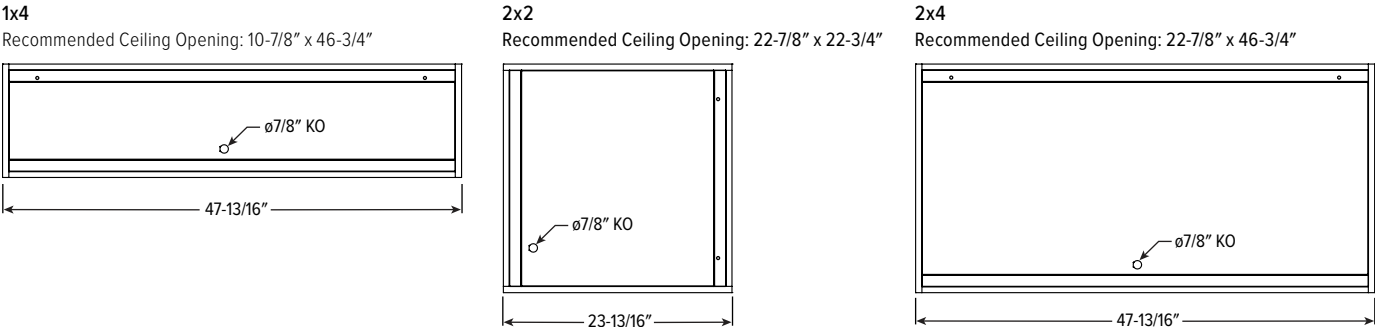| CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
		0°	45°	90°	
	0	2900	2900	2900	
	5	2911	2878	2869	274
	15	2775	2742	2733	775
	25	2509	2480	2469	1142
	35	2130	2093	2065	1309
	45	1662	1609	1591	1251
	55	1154	1126	1091	1005
	65	687	644	613	644
	75	252	246	231	269
	85	18	20	17	37
	90	0	0	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	2191	33
	0 - 40	3500	52
	0 - 60	5756	86
	0 - 90	6706	100
	0 - 180	6706	100

CROSS SECTIONS

1x4

5″ — 11-13/16″

2x2 | 2x4

5″ — 23-13/16″

F CEILING TYPE INSTALLATION

5″ — 23-13/16″ — 1-1/2″ min. 2-3/4″ max.

For continuous row mounting, add 47-13/16″ for each additional fixture to obtain ceiling opening. 3/4″ between end plates.

FIXTURE DETAILS

1x4
Recommended Ceiling Opening: 10-7/8″ x 46-3/4″

ø7/8″ KO — 47-13/16″

2x2
Recommended Ceiling Opening: 22-7/8″ x 22-3/4″

ø7/8″ KO — 23-13/16″

2x4
Recommended Ceiling Opening: 22-7/8″ x 46-3/4″

ø7/8″ KO — 47-13/16″

AMBER LED DETAILS

2x2: L28/AMB/L68
2x4: L60/AMB/L134

2x2: L56/AMB/L36
2x4: L98/AMB/L74

Amber Only

GASKETING DETAILS

DOUBLE GASKETING (STANDARD)

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

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

TRIPLE GASKETING (TG OPTION)

T-bar

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

Drywall

Between bottom perimeter of fixture and hardpan ceiling.

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