

CATALOG #:

TYPE:

PROJECT:



FEATURES

- Amber LEDs provide safe lighting for photosensitive applications
- Seam-welded fixture housing and doorframe are designed for infection control
- Smooth surface doorframe and lens materials simplify cleaning and maintenance
- Optional MIL-STD-461G complies with radiated and conducted emission regulations
- NSF approved closed cell foam gasketing in three locations meets all required testing criteria for ISO 5, Class 100 certification
- Optimized for hospitals, medical facilities and containment sensitive manufacturing 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. standard. 18-gauge aluminum available.
- DOOR FRAME** – One-piece 20-gauge seam-welded C.R.S. 18-gauge aluminum available. Secured 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. 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 boards. L70 at 50,000 hours. 50/60hz, THD < 10%. 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
- Suitable for use in BSL 1-4 laboratories in most applications (consult CDC)
- 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)
- Build America, Buy America (BABA) and Buy American Act (BAA) compliant. Request certification at hew.com/buy-american
- WARRANTY** – 5-year limited fixture warranty, see hew.com/warranty

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

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'
	F Flange ^[2]	1 1'	2 2'	L29/AMB 2,900lm amber only
		2 2'	4 4'	L54/AMB 5,400lm amber only
	2x2	2 2'	4 4'	L29/AMB/L45 2,900lm amber/4,500lm white
				L52/AMB 5,200lm amber only
	2x2	2 2'	4 4'	L82/AMB 8,200lm amber only
				L28/AMB/L68 2,800lm amber/6,800lm white
	2x4	2 2'	4 4'	L56/AMB/L36 5,600lm amber/3,600lm white
				L114/AMB 11,400lm amber only
	2x4	2 2'	4 4'	L176/AMB 17,600lm amber only
				L60/AMB/L134 6,000lm amber/13,400lm white
	2x4	2 2'	4 4'	L98/AMB/L74 9,800lm amber/7,400lm white

CRI ^[4]	CCT	HOUSING	DOOR FRAME	SHIELDING
8 80	27 2700K	CS Cold rolled steel	S Cold rolled steel	AF12125 Pattern #12, .125" thick with acrylic underlay
9 90	30 3000K	AL Aluminum	F 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	DRIVER	VOLTAGE
EM/10W 10-watt emergency battery ^[5]	DRV Driver prewired for non-dimming applications	120 120V
EM/10WLP Low-profile 10-watt emergency battery ^[6]	DIM Dimming driver	277 277V
EQCLIPS Earthquake clips ^[7]		UNV 120V-277V
MIL Complies with MIL-STD-461G specifications ^[8]		347 347V ^[13]
NSWH Fixture provided without seam-welded housing ^[9]		
TP Tamper resistant stainless steel, Torx T-25 screws ^[10]		
2C Two circuit wiring ^[11]		
PA Plenum access ^[12]		

ACCESSORIES

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

NOTES

- Lumen output based on 80 CRI/3500K CCT. Actual performance may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA.
- See page 3 for CROSS SECTIONS.
- 2' width only.
- Specify for fixtures with white LEDs only.
- 2x2, 2x4 only, connected to white circuit if applicable.
- 1x4 only, connected to white circuit if applicable.
- G Ceiling Type only. 4 per fixture.
- Must specify 120 or 277 Voltage only. DIM, DIM1 and DRV Controls only. Power factor may be lower than typical due to MIL-SPEC requirements. Consult factory for actual fixture current.
- 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.
- Requires a tamper-resistant tool, see Accessories. When TP option is specified, fixture is not NSF/ANSI 2 certified.
- 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.
- 2x2 and 2x4 only. See page 4 for FIXTURE DETAILS.
- Not available with MIL or EM battery Options.
- Tamper-resistant tool must be ordered separately. Please specify quantity required per project.
- Only available with 1x4: L29/AMB, 2x2: L52/AMB, L28/AMB/L68, 2x4: L114/AMB, L60/AMB/L134.



FIXTURE PERFORMANCE DATA

AF12125 SHIELDING								AF125 SHIELDING				TOTAL AMP DRAW ⁽¹⁾							
LED PACKAGE		WATTAGE		DELIVERED LUMENS		EFFICACY (lm/W)		DELIVERED LUMENS		EFFICACY (lm/W)		STANDARD				MIL OPTION			
		AMBER	WHITE	AMBER	WHITE	AMBER	WHITE	AMBER	WHITE	AMBER	WHITE	120V		277V		120V		277V	
AMBER/WHITE								AMBER/WHITE				AMBER/WHITE							
1x4	L29/AMB/L45	31.7	39.1	2970	4546	94	116	2673	4091	84	105	Consult Factory				Consult Factory			
2x2	L28/AMB/L68	44.7	59.6	2787	6859	62	115	2506	6166	56	103								
	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								
	L98/AMB/L74	108.1	62.4	9886	7459	91	120	8888	6706	82	107	AMBER ONLY				AMBER ONLY			
AMBER ONLY								AMBER ONLY											
1x4	L29/AMB	32.3	—	2970	—	92	—	2670	—	83	—	Consult Factory				Consult Factory			
	L54/AMB	86.9	—	5437	—	63	—	4888	—	56	—								
2x2	L52/AMB	55.4	—	5210	—	94	—	4684	—	85	—								
	L82/AMB	126.5	—	8271	—	65	—	7436	—	59	—								
2x4	L114/AMB	118.2	—	11542	—	98	—	10376	—	88	—								
	L176/AMB	270.6	—	17550	—	65	—	15777	—	58	—								

¹ When specified with MIL Option, power factor may be lower than typical due to MIL-SPEC requirements. Consult factory for actual fixture current.

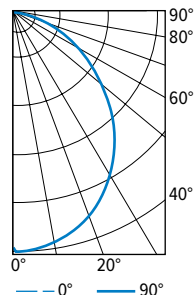
- Photometrics tested in accordance with IESNA LM-79. Results based on 80 CRI/3500K CCT, average wattage for 120V through 277V input, and 25°C ambient temperature. Actual performance may vary +/-5%.
- To calculate lumen output in emergency mode, multiply the battery wattage by the efficacy.
- Use multiplier table to calculate additional options.

MULTIPLIER TABLE

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

PHOTOMETRY

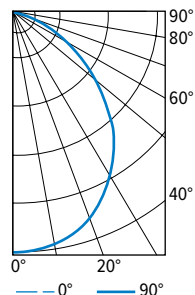
MCTG-22-L56/AMB/L36/835-SAF12125 (Amber Only) Total Luminaire Output: 5574 lumens; 86.9 Watts | Efficacy: 64.1 lm/W | 80 CRI; 3500K CCT



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	

LUMEN SUMMARY	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



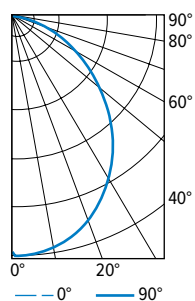
VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0°	45°	90°	
0	1635	1635	1635	
5	1631	1629	1626	155
15	1559	1565	1565	441
25	1415	1434	1433	659
35	1188	1218	1206	754
45	899	896	909	692
55	580	569	572	515
65	316	299	299	308
75	130	112	115	132
85	14	8	14	21
90	0	0	0	

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

PHOTOMETRY CONTINUED ON NEXT PAGE.



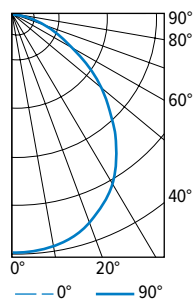
MCTG-24-L98/AMB/L74/835-SAF125 (Amber Only) Total Luminaire Output: 8888 lumens; 108.1 Watts | Efficacy: 82.2 lm/W | 80 CRI; 3500K CCT



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	

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

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

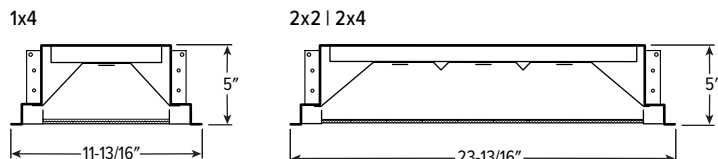


VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0°	45°	90°	
0	2900	2900	2900	
5	2911	2878	2869	274
15	2775	2742	2733	775
25	2509	2480	2469	1142
35	2130	2093	2065	1309
45	1662	1609	1591	1251
55	1154	1126	1091	1005
65	687	644	613	644
75	252	246	231	269
85	18	20	17	37
90	0	0	0	

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

G CEILING TYPE INSTALLATION



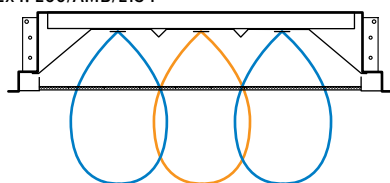
F CEILING TYPE INSTALLATION

	ROUGH-IN	FINISH TRIM SIZE
1x4	11\" x 46-7/8\"	13-13/16\" x 49-13/16\"
2x2	22-7/8\" x 22-7/8\"	23-13/16\" x 23-13/16\"
2x4	22-7/8\" x 46-3/4\"	23-13/16\" x 47-13/16\"

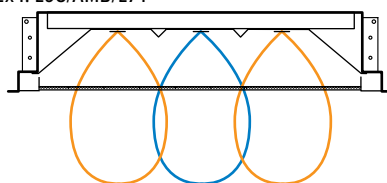
For continuous row mounting, add 47-13/16\" for each additional fixture to obtain ceiling opening. 3/4\" between end plates.

AMBER LED DETAILS

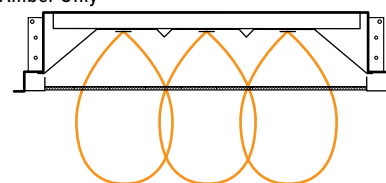
2x2: L28/AMB/L68
2x4: L60/AMB/L134



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



Amber Only



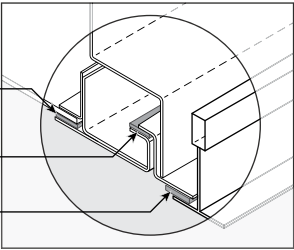
GASKETING DETAILS

T-BAR

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

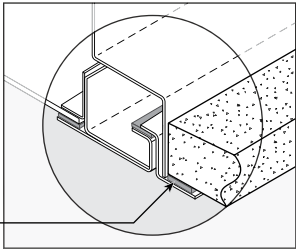
Door frame gasketing factory-installed between door frame and luminaire housing prevents light leak and reduces dust ingress.

Housing gasketing (supplied with fixture) field installed between bottom perimeter of fixture and T-bar ceiling seals plenum dust from the room.



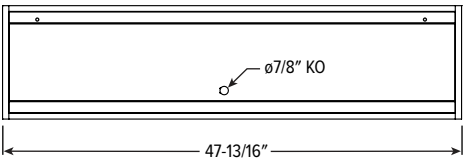
DRYWALL

Between perimeter of fixture and hardpan ceiling.

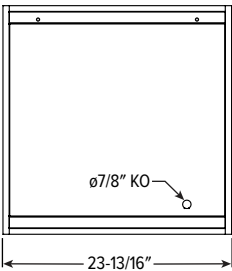


FIXTURE DETAILS

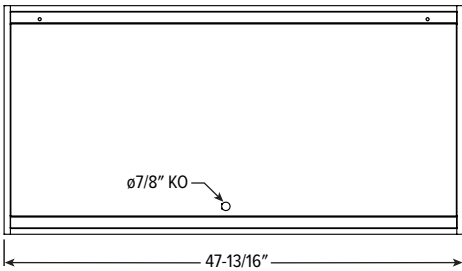
1x4



2x2



2x4



PA PTION

Backview

