

C insert shown

CATALOG #: _____

Type: _____

PROJECT: _____



FEATURES

- Meets the demanding requirements of behavioral health environments
- Durable polycarbonate lens and tamper-resistant screws provide protection in high-risk areas
- Ligature-resistant design with seam-welded fixture housing and inset door frame
- Smooth surface door frame and lens materials simplify cleaning and maintenance
- Closed cell foam gasketing in three locations meets all required testing criteria for ISO 5, Class 100 certification
- Tailor ambient, exam, reading and night light output with eight configurations
- Anti-microbial finish suppresses the spread of dangerous micro-organisms, mold, and bacterial growth
- Optional low-voltage controller allows for bedside lighting control
- 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 tamper-resistant stainless steel Torx T-25 screws, (1) tamper-resistant tool provided.
- SHIELDING** – Curved or straight diffuse acrylic insert with 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%
- MOUNTING** – Flanged installations in drywall or hardpan ceilings. See page 3 for FIXTURE WEIGHTS.
- LISTINGS** –
 - CCSAus certified as luminaire suitable for wet location under covered ceiling
 - IC-rated for direct contact with insulation
 - IK10 rated
 - IP65 rated
 - ISO 5, Class 100 rated
 - City of Chicago Environmental Air approved
 - Complies with the Buy American Act and other federal regulations. Request certification at hew.com/baa.
- WARRANTY** – 5-year limited warranty, see hew.com/warranty.

ORDERING EXAMPLE: MCTMB AERN F - 24 - L47/840 - CS - S C PC - OPTIONS - DRV - UNV

ORDERING INFO

SERIES	STYLE	CEILING TYPE	WIDTH	LENGTH	LUMENS ^[1]
MCTMB	AE Ambient, exam	F Flange	2 2'	2 2'	<i>Specified for ambient compartment only. See performance data on page 2 for reading and nurse lumen output.</i>
	AER Ambient, exam, reading				
	AEN Ambient, exam, night				
	AERN Ambient, exam, reading, night				
					2x2
					L26 2,600lm ambient, 4,600lm exam
					2x4
					L47 4,700lm ambient, 8,400lm exam

CRI	CCT	HOUSING	DOOR FRAME	INSERT	SHIELDING
8 80	27 2700K	CS Cold rolled steel	S Cold rolled steel	C Curved floating	PC Clear polycarbonate underlay, .250" thick
9 90	30 3000K	AL Aluminum	F Aluminum	S Straight floating	
	35 3500K				
	40 4000K				
	50 5000K				

OPTIONS

See page 4 for LOW-VOLTAGE CONTROLLER OPTIONS.

EM/10W	10-watt emergency battery ^[2]
AN	Amber night light
GLR	Fuse, fast blow, one per driver

CONTROL

DIM	Dimming driver, 0-10V
DRV	Non-dimming driver
DIM1	1% Dimming driver, 0-10V

VOLTAGE

UNV	120-277V
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NOTES

¹ Lumen output based on 80 CRI/4000K CCT. Actual performance may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA. ² Ambient compartment only.



FIXTURE PERFORMANCE DATA

	STYLE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)	SYSTEM TOTALS			
					DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)	
2x2	A	2667	24.1	111	AE	7319	61.6	119
	E	4652	37.5	124	AER	8743	74.3	118
	R	1425	12.7	112	AEN	7360	64.5	114
	N	41	2.9	14	AENR	8784	77.3	114
2x4	A	4747	39.0	122	AE	13210	101.1	131
	E	8463	62.1	136	AER	15326	120.9	127
	R	2116	19.8	107	AEN	13251	104.0	127
	N	41	2.9	14	AENR	15367	123.8	124

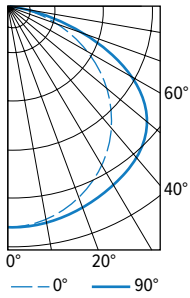
MULTIPLIER TABLE

	COLOR TEMPERATURE	
	CCT	CONVERSION FACTOR
80 CRI	2700K	0.94
	3000K	0.96
	3500K	0.97
	4000K	1.00
	5000K	1.03
90 CRI	2700K	0.77
	3000K	0.79
	3500K	0.80
	4000K	0.83
	5000K	0.86

- Photometrics tested in accordance with IESNA LM-79. Results based on 80 CRI/4000K 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

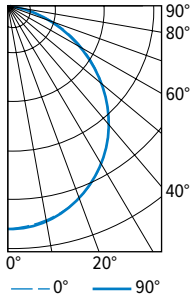
MCTMBAERNF-24-L47/840-CS-SSPC-DIM-UNV (Ambient Only) Total Luminaire Output: 4747 lumens; 39.0 Watts | Efficacy: 122 lm/W | 80 CRI; 4000K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
		0°	45°	90°	
	0	1564	1564	1564	
	5	1553	1555	1565	148
	15	1491	1509	1536	427
	25	1371	1419	1486	657
	35	1203	1294	1422	816
	45	993	1131	1322	883
	55	752	930	1132	835
	65	485	675	760	634
	75	212	315	311	304
	85	27	26	25	42
	90	0	0	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	1233	26
	0 - 40	2049	43
	0 - 60	3767	79
	0 - 90	4747	100
	90 - 180	0	0

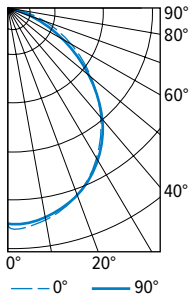
MCTMBAERNF-24-L47/840-CS-SSPC-DIM-UNV (Exam Only) Total Luminaire Output: 8463 lumens; 62.1 Watts | Efficacy: 136 lm/W | 80 CRI; 4000K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
		0°	45°	90°	
	0	3383	3383	3383	
	5	3350	3369	3368	320
	15	3202	3222	3223	907
	25	2917	2934	2934	1349
	35	2515	2532	2538	1581
	45	2025	2041	2052	1572
	55	1483	1496	1498	1333
	65	920	924	911	911
	75	395	392	395	423
	85	49	45	40	67
	90	0	0	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	2576	30
	0 - 40	4157	49
	0 - 60	7062	84
	0 - 90	8463	100
	90 - 180	0	0

MCTMBAERNF-24-L47/840-CS-SSPC-DIM-UNV (Reading Only) Total Luminaire Output: 2116 lumens; 19.8 Watts | Efficacy: 107.2 lm/W | 80 CRI; 4000K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
		0°	45°	90°	
	0	932	932	932	
	5	950	913	932	88
	15	896	869	891	248
	25	803	780	807	364
	35	670	654	683	415
	45	522	506	518	395
	55	367	349	335	313
	65	221	196	170	194
	75	100	72	61	83
	85	19	11	8	16
	90	0	0	0	

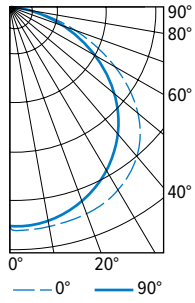
LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	700	33
	0 - 40	1115	53
	0 - 60	1823	86
	0 - 90	2116	100
	90 - 180	0	0

PHOTOMETRY CONTINUED ON NEXT PAGE.



MCTMB^{LED} Multi-Function Behavioral Health Troffer

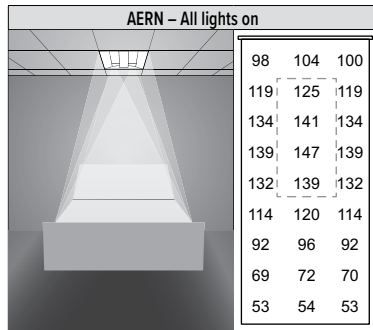
MCTMBAERNF-24-L47/840-CS-SSPC-DIM-UNV (Night Only) Total Luminaire Output: 41 lumens; 2.9 Watts | Efficacy: 14 lm/W | 80 CRI; 4000K CCT



CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
		0°	45°	90°	
	0	14	14	14	
	5	14	14	14	1
	15	14	14	14	4
	25	14	13	13	6
	35	13	12	11	7
	45	11	10	9	8
	55	9	7	7	7
	65	6	5	5	5
	75	3	2	2	2
	85	0	0	0	0
	90	0	0	0	0

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 30	11	27
	0 - 40	19	45
	0 - 60	33	81
	0 - 90	41	100
	90 - 180	0	0

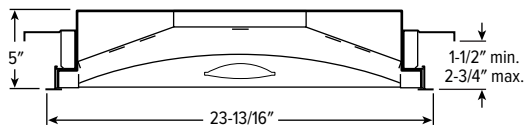
FOOTCANDLE ESTIMATOR & DISTRIBUTION



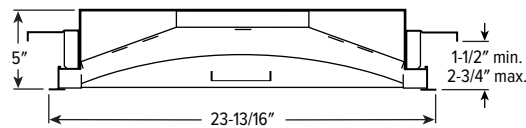
Footcandle calculations based on standard reflectance of 80/50/20 and a light loss factor of .85. Fixture centered over bed at 9' ceiling height, positioned 4' on center from wall. Values are for bed surface.

CROSS SECTIONS

C INSERT



S INSERT

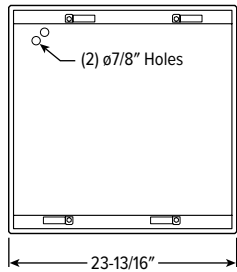


For continuous row mounting, add 47-13/16" for each additional fixture to obtain ceiling opening. 3/4" between end plates.

FIXTURE DETAILS

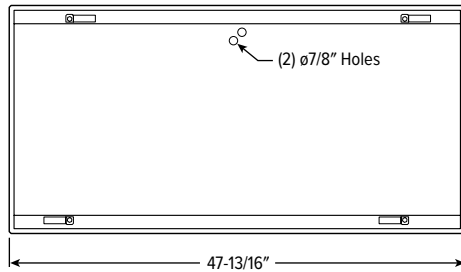
BACK VIEWS

2x2



Recommended Ceiling Opening: 22-15/16" x 22-13/16"

2x4



Recommended Ceiling Opening: 22-15/16" x 46-13/16"

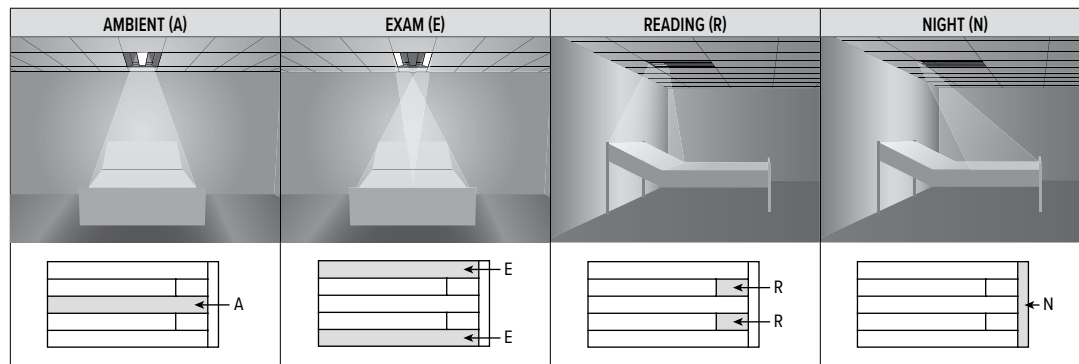
FIXTURE WEIGHTS

	HOUSING MATERIAL	DOOR MATERIAL	MAXIMUM WEIGHT
2x2	CS	CS	34 lb
		AL	32 lb
	AL	CS	28 lb
		AL	26 lb
2x4	CS	CS	56 lb
		AL	53 lb
	AL	CS	44 lb
		AL	41 lb

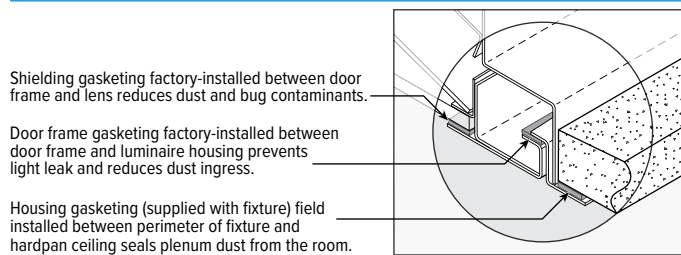


MCTMB^{LED} Multi-Function Behavioral Health Troffer

STYLE CONFIGURATION DETAILS



GASKETING DETAILS



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 perimeter of fixture and hardpan ceiling seals plenum dust from the room.

LOW-VOLTAGE CONTROLLER OPTIONS

LVC wall plate accessories available, see hew.com for details.

EXAMPLE: LVC3A/R/N				
CONTROLLER	LOAD 1		LOAD 2	LOAD 3
LVC1 1-circuit	A	Ambient		
	N	Night		
	R	Reading		
	E	Exam		
LVC2 2-circuit	A/	Ambient	A	Ambient
	R/	Reading	N	Night
			R	Reading
			E	Exam
LVC3 3-circuit or dimming control	A/	Ambient	A/	Ambient
	R/	Reading	N/	Night
	DIMA/	Ambient, 0-10 dimming ¹	R/	Reading
	DIMR/	Reading, 0-10 dimming ¹	E/	Exam
	DIMA/DIMR/	Ambient and reading, 0-10 dimming ¹		N
	SEQAR/	Ambient and reading, sequential switching ²		E

¹ Smooth dimming of the load utilizing a single, dry contact, momentary, normally open switch which will dim from 25% up to 100% while holding down the switch.

² Alternating off and on of (2) loads with multiple cycles of one switch.

