

FEATURES

- Tuned system delivers more lumens than conventional 2-lamp recessed indirect fixtures
- Uses tuned 1.04 ballast factor NEMA Premium fixed and step dim ballasts
- Precision optical design produces high efficiency in a high visual comfort architecturally styled direct/indirect distribution.
- Custom perforated metal basket is backed by a high transmission lamp obscuring overlay.
- Optimized coating process and unique paint formulation provide exceptional reflectivity in a matte finish for a soft visual image and balanced basket and reflector illumination.
- Completely recessed, provides a clean ceiling with uniform illumination at mounting heights as low as 8 feet.
- Optional acrylic dust guard pivots to close lamp compartment against contaminants especially for schools, medical facilities and public spaces.
- Companion Louvered (STEL), side basket (STS) and pendant (STP) models available.
- Available with exclusive wiHUBB technology preinstalled
 - Peer to peer, self-healing wireless mesh network
 - Integrated control system for 0-10VDC or step dimming, or On/Off

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Luminaire housing and end caps are die formed code gauge cold rolled steel. The sturdy reflector is stiffened with linear forms, profiled to a precision curve. Perforated basket is backed by high transmission overlay for improved optical efficiency plus lamp obscuration. Basket and all reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform indirect illumination.

Thermoplastic light traps snap into the housing at both ends of the basket to prevent light leaks. Basket hinges down for easy access to center wireway.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access from the plenum. No need to open fixture.

ELECTRICAL

NEMA Premium "P", thermally protected, auto-resetting HPF ballast, sound rated A is standard. All ballast leads extend a minimum of 6" through access location. NEC/CEC-compliant ballast disconnect is standard.

CEILING COMPATIBILITY

NEC-compliant T-Bar clips supplied with all grid trim fixtures. See ceiling details on reverse. For type SG ceilings order G trim. Fixture will be regressed 3/8" from the face of the ceiling tee. For hard ceilings order G trim and FK flange accessory. Assemble then support FK accessory at the ceiling plane using tie wires (by others). Contact your Columbia representative for compatibility information for specific ceiling types or for continuous row applications in hard ceilings.

CERTIFICATION

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Emergency-equipped fixtures labeled UL 924.

ORDERING INFORMATION

EXAMPLE EMSE24-232G-MPO-E104U

EMSE		24 - 2		- MPO -		U -	
MODEL	NO. OF LAMPS	CEILING TYPE	BALLAST	VOLTAGE	OPTIONS		
EMSE EnergyMax® Stratus® E-Series Recessed Indirect Luminaire	2 Two	G Grid Lay-in SM Surface Mount <small>For hard ceilings use flange kit.</small>	E104 Electronic T8, 1.04 Ballast Factor, Instant Start ESD104 Electronic T8, Step Dimming, 1.04 Ballast Factor, Programmed Start ¹	U 120V-277V	F0730	30K 75CRI T8 Lamps Installed	
					F0735	35K 75CRI T8 Lamps Installed	
					F0741	41K 75CRI T8 Lamps Installed	
					F0830	30K 82CRI T8 Lamps Installed	
					F0835	35K 82CRI T8 Lamps Installed	
					F0841	41K 82CRI T8 Lamps Installed	
					PLUS30	30K 82CRI 28W T8 Lamps Installed ¹	
					PLUS35	35K 82CRI 28W T8 Lamps Installed ²	
					PLUS41	41K 82CRI 28W T8 Lamps Installed ²	
					EL	Emergency Battery Pack	
					GLR	Fast Blow Fuse	
					GMF	Slow Blow Fuse	
					DG	Dust Guard Clear Acrylic	
					NYC	NYC Compliant	
					NYCU	NYC Compliant, Union Made	
					WIH	wiHUBB Enabled ³	
	SIZE	LAMP TYPE	SHIELDING				
	24 2' x 4'	32 4', T8: 32, 30, 28 or 25 Watt	MPO Metal Perf w/Overlay				

ACCESSORIES

- FK24 2' x 4' Single Flange Kit
- FKCR Flange Kit Row Adaptor

¹ Not compatible with T8 25, 28, or 30 watt energy savings lamps.
² Not recommended for use with step or full dimming.
³ Not available with Surface Mount Ceiling Types



PHOTOMETRIC DATA

Test ITL67662 Test Date 3/07/11

LUMINAIRE DATA

Luminaire	EMSE24-232G-MPO-E104U EMS EnergyMax Stratus, Recessed Architectural 2 x 4 2-lamp with perforated metal basket and opal overlay
Ballast	B232IUNV104-A
Ballast Factor	1.04
Lamp	F28T8
Lumens per Lamp	2750
Watts	55
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.23 90° = 1.32
Luminous Opening in Feet	Length: 3.93 Width: 1.91 Height: 0.00

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1231	22.4	26.3
0-40	2028	36.9	43.3
0-60	3656	66.5	78.1
0-90	4680	85.1	100.0
0-180	4680	85.1	100.0

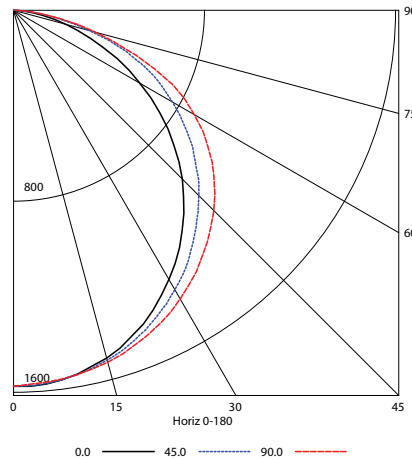
ENERGY DATA

Total Luminaire Efficiency	85.1%
Luminaire Efficacy Rating (LER)	89
IESNA RP-1-1993 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.70 based on 3000 hrs. and \$0.08 per KWH

COEFFICIENTS OF UTILIZATION (%)

RCR	RC	80				70				50				0				
		RW	70	50	30	10	70	50	30	10	50	30	10	0	50	30	10	0
1	92	88	85	81	90	86	83	80	83	80	77	71	71	80	83	80	77	71
2	84	77	71	66	82	75	70	65	72	68	64	59	59	68	72	68	64	59
3	76	67	60	54	74	66	59	54	63	58	53	49	49	63	58	53	49	
4	70	59	52	46	68	58	51	46	56	50	45	42	42	56	50	45	42	
5	64	53	45	39	62	52	45	39	50	44	39	36	36	50	44	39	36	
6	59	48	40	34	57	47	39	34	45	39	34	31	31	45	39	34	31	
7	55	43	35	30	53	42	35	30	41	35	30	28	28	41	35	30	28	
8	51	39	32	27	50	39	32	27	38	31	27	25	25	38	31	27	25	
9	48	36	29	24	46	35	29	24	34	28	24	22	22	34	28	24	22	
10	45	33	26	22	43	33	26	22	32	26	22	20	20	32	26	22	20	

INDOOR CANDELA PLOT



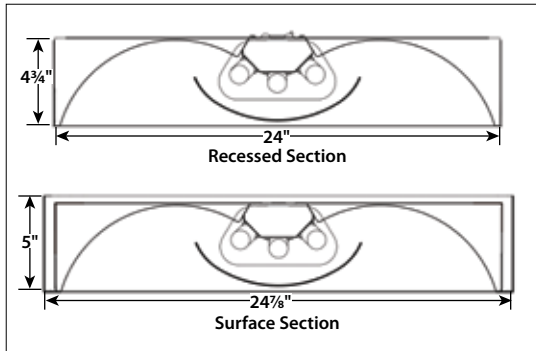
AVG. LUMINANCE (Candela/Sq. M.)

Average Luminance Angle	0.0	22.5	45.0	67.5	90.0
0	2257	2257	2257	2257	2257
30	2154	2177	2237	2288	2310
40	2076	2115	2226	2319	2364
45	2028	2077	2225	2354	2405
50	1954	2030	2218	2385	2443
55	1868	1975	2218	2415	2483
60	1749	1901	2203	2418	2504
65	1625	1819	2192	2396	2487
70	1438	1715	2105	2172	2264
75	1258	1623	1839	1917	1972
80	1041	1387	1503	1536	1602
85	740	905	1086	1069	1086

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

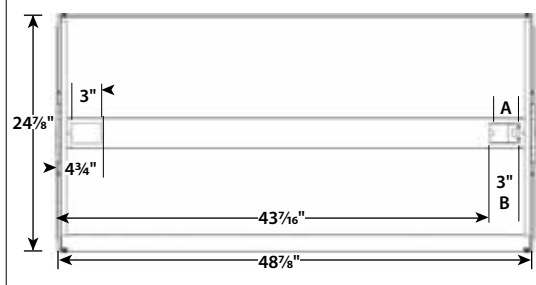
DIMENSIONAL DATA



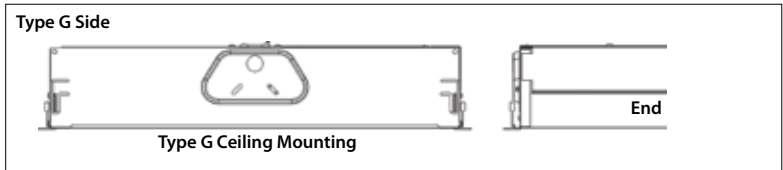
Top View

Surface K.O. Dimensions

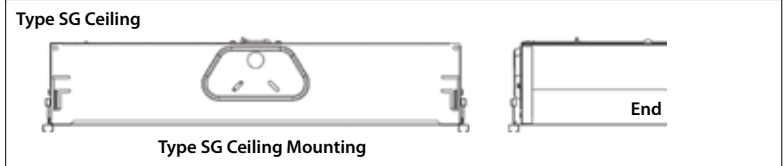
- A: 7/8" K.O. Mount
- B: 2" x 3" Access (Cover Removed)
- C: 2" x 3" Rectangular Knockout



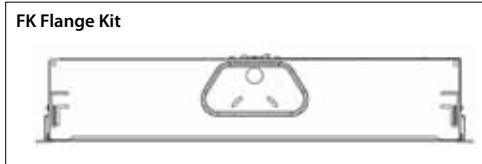
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum heights of 1 1/2" allowed.



For 7/8" slot grid type ceilings. Luminaire will be regressed 3/8" horizontal surface of the tee. Slot grid tees must be field installed all around the fixture.



For hard ceiling applications, fixtures must be ordered with a flange kit that wires directly into the concealed ceiling opening for a clean finished appearance. For row configurations contact your local Columbia Representative.

Flange kit cut out dimension for single FK22 only: 24 3/8" x 48 3/8"

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.