

# ZENITH I ZB SERIES

## 2X2 Center Light Shield Indirect/Direct Luminaire

Fixture Type: \_\_\_\_\_

Job Information: \_\_\_\_\_

### SPECIFICATIONS:

- Recessed 2X2 fluorescent luminaire featuring a computer designed precision optical system that provides indirect/direct illumination. An optically correct double arched reflector enables precise indirect light distribution, while a center located perforated light shield provides the soft direct illumination.
- The system delivers comfortable illumination by filling the entire volume of space evenly. Broad angle illumination lights walls and vertical surfaces creating a more open and comfortable space. All components are recessed above the ceiling line. Install in ceilings as low as eight feet.
- Housing: Die formed from 20GA cold rolled steel and fabricated in a computer-controlled operation. Spot-welds and rivets hold all parts together for strength and unity. Pry-out style grid supports are located on the sides.
- Indirect reflector: Two-piece system is CAD designed to the optimum contour. One side is securely screwed into the housing with hidden hardware. The other side is held in place with quarter turn cam locks for easy ballast access.
- Center light shield: Die formed and fabricated from heavy gauge perforated steel and integrated with an internal white Mylar panel. Light shield is capable of swinging down for lamp access.
- Finish: A custom formulated non-glare white powder coating is applied to the reflector, light shield, and the housing after fabrication. Provides a reflectivity of at least 90%.
- T5 Lamps: Two or three 2Ft. linear fluorescent lamps; 14W-T5 or 24W-HO-T5.
- T8 Lamps: Two or three 2Ft. linear fluorescent lamps; 17W-T8. Others as specified.
- TT5 Lamps: One, two or three twin-tube compact fluorescent lamps; 40W-TT5, 50W-TT5, or 55W-TT5.
- Ballasts T5: Electronic programmed start, normal light output, high power factor, THD less than 10%. Up to 3-lamps per 14W-T5 ballast. Up to 2-lamps per 24W-HO-T5 ballast. Lutron or Advance dimming ballasts as specified.
- Ballasts T8: Electronic instant start, normal light output, high power factor, THD less than 10%. Up to 3-lamps per ballast. Optional T8 performances: rapid start circuit, high light output, or low-watt. Lutron or Advance dimming ballasts as specified.
- Ballasts 40W-TT5: Electronic instant start, normal light output, high power factor, THD less than 10%. Up to 3-lamps per ballast. Optional performances: rapid start circuit. Lutron or Advance dimming ballasts as specified.
- Ballasts 50W and 55W-TT5: Electronic programmed start, normal light output, high power factor, THD less than 10%. Up to 3-lamps per ballast. Lutron or Advance dimming ballasts as specified.
- Voltage: Multi-volt operates a range from 120V-277V, 50HZ-60HZ. Dedicated voltages on request.
- Emergency battery back up: Integrated packs range from 450 up to 1125 lumen output. Varies with lamp type.
- Air return: Optional air return slots allow room air to be circulated through housing and back into plenum.
- Installations: Designed for installation into NEMA Type G lay-in acoustical grid ceiling systems, 1" grid or 9/16" fine-line grid. Optional fit available for screw slot grid. For NEMA Type F dry wall applications an additional flange kit must be used with Type G housing. Four pullout type security clips, located in the housing, lock over the ceiling grid work. Four auxiliary suspension points are also provided for securing to building structure. A quick wiring access plate is located on back of the housing. Additional knockouts provided. Factory installed lamps and power whips as specified.
- UL and CUL listed 1598 and bears their label. Suitable for dry locations or optional damp locations with UL Damp Label. Union made and labeled.



Shield Detail



# ZB SERIES 2X2 Center Light Shield Indirect/Direct Luminaire

Fixture Type:

Job Information:

**ORDERING DATA:** Fill in boxes below with corresponding bold options.

Example: ZB-22S-A-240-BIAX-ELB-UNI-EMPK/I32-FLX

Series	Module Size/Ceiling	Optional Air Return	No. of Lamps/Wattage Ea. Lamp	Lamp Type	Ballast Type	Voltage	Misc
<b>ZB</b> Zenith I Center Shield	<b>22G</b> 2X2 Module/NEMA Type G/Lay-in Grid, 1" or 9/16" Fine Line.  <b>22S</b> 2X2 Module/NEMA Type G/Lay-in Grid, 9/16" Screw-Slot/ Bolt-Slot.	Leave Blank for No Function  <b>A</b> Air Return To Plenum	<b>240</b> 2-40W-TT5 Compact <b>250</b> 2-50W-TT5 Compact <b>255</b> 2-55W-TT5 Compact <b>340</b> 3-40W-TT5 Compact <b>350</b> 3-50W-TT5 Compact <b>355</b> 3-55W-TT5 Compact <b>214</b> 2-14W-T5 Linear. <b>224</b> 2-24W-H0-T5 Linear <b>314</b> 3-14W-T5 Linear <b>324</b> 3-24W-H0-T5 Linear <b>217</b> 2-17W-T8 Linear* <b>317</b> 3-17W-T8 Linear*	<b>BIAX</b> Twin Tube Compact TT5  <b>T5</b> Linear T5  <b>H0-T5</b> Linear High Output T5  <b>OCT</b> Linear T8	<b>ELB</b> 40W-TT5 Electronic Instant Start. Up to 3-Lamps/Ballast.  <b>ELBS</b> 40W-TT5 Electronic Rapid Start. Up to 3-Lamps/Ballast.  <b>ELB</b> 50W or 55W-TT5 Electronic Programmed Start. Up to 3-Lamps/Ballast.  <b>ELB</b> T5 or H0-T5 Electronic Programmed Start. Up to 3-Lamps/14W Ballast. Up to 2-Lamps/24W-H0 Ballast.  <b>ELB</b> T8 Electronic Instant Start. Up to 3-Lamps/Ballast.  <b>ELBL</b> T8 Electronic Instant Start Low Watt. Up to 3-Lamps/Ballast.  <b>ELBH</b> T8 Electronic Instant Start High Light Output. Up to 3-Lamps/Ballast.  <b>ELBS</b> T8 Electronic Rapid Start. Up to 3-Lamps/Ballast.  <b>ELBD</b> TT5, T5, H0-T5, or T8 Electronic Dimming. Lutron or Advance as Specified.  <b>ELB-</b> TT5, T5, H0-T5, or T8 Electronic As Specified.	<b>UNI</b> Universal Voltage. Multi-Volt 120V-277V, 50HZ-60HZ.  <b>120V</b> Dedicated Voltage 120V-60HZ.  <b>277V</b> Dedicated Voltage 277V-60HZ.	<b>EMPK/I32</b> I-32 or Equal 450 Lumens. One 40W-TT5 or 17W-T8 Lamp.  <b>EMPK/I48</b> I-48 or Equal 650 Lumens. One 40W-TT5, 50W-TT5, or 55W-TT5 Lamp. One or Two 17W-T8 Lamps.  <b>EMPK/I320</b> I-320 or Equal 1125 Lumens. One 40W-TT5, 50W-TT5, or 55W-TT5 Lamp. One 14W-T5 or 24W-H0-T5 Lamp. One or Two 17W-T8 Lamps.  <b>EMPK/I232</b> I-232 or Equal 1000 Lumens. Two 17W-T8 Lamps.  <b>EMPK/ISL28</b> ISL-28 or Equal 500 Lumens. One 14W-T5 or 24W-H0-T5 Lamp.  <b>EMPK/ISL54</b> ISL-54 or Equal 450 Lumens. One 14W-T5 or 24W-H0-T5 Lamp.  <b>EMPK/ISL540</b> ISL-540 or Equal 700 Lumens. One 14W-T5 or 24W-H0-T5 Lamp.  <b>FLX</b> 6Ft. Single Circuit Power Flex. (Specify Voltage).  <b>FLX2</b> 6Ft. 2-Circuit Power Flex. (Specify Voltage).  <b>2B</b> 2-Ballasts, 2-Circuits.  <b>DL</b> UL Lamp Label.  <b>L</b> Factory Lamps Installed, Specify Color. Ex: L741

\* NOTE: T8 Lamping  
for Individual  
Mounting Only.  
Not Capable of  
End-To-End  
Continuous Runs.

## PHOTOMETRICS:

ZB-22G-240-BIAX-ELB-UNI

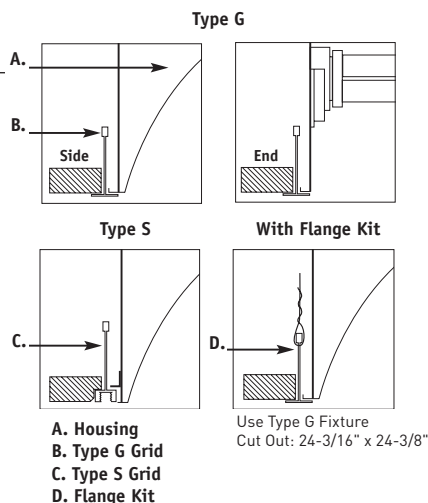
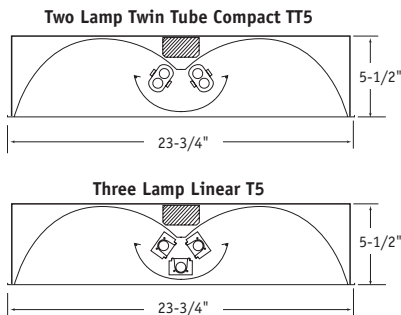
ZONAL CAVITY COEFFICIENTS OF UTILIZATION EFFECTIVE FLOOR CAVITY REFLECTANCE=0.20												
CEILING	80	70	50	30	10	0	0	0	0	0	0	0
WALL	70	50	30	10	0	0	0	0	0	0	0	0
FLOOR	70	50	30	10	0	0	0	0	0	0	0	0
0	.72	.72	.72	.71	.71	.71	.67	.67	.67	.65	.65	.65
1	.66	.64	.61	.59	.58	.58	.57	.56	.54	.55	.54	.53
2	.61	.56	.52	.48	.45	.44	.42	.40	.38	.39	.38	.37
3	.56	.49	.44	.42	.40	.39	.38	.36	.34	.35	.34	.33
4	.51	.44	.38	.34	.32	.31	.30	.28	.26	.27	.26	.25
5	.46	.38	.33	.29	.26	.25	.24	.22	.20	.21	.20	.19
6	.42	.34	.29	.25	.22	.21	.20	.18	.16	.17	.16	.15
7	.39	.31	.25	.22	.19	.18	.17	.15	.13	.14	.13	.12
8	.36	.27	.22	.19	.16	.15	.14	.12	.10	.11	.10	.09
9	.33	.25	.19	.16	.13	.12	.11	.09	.07	.08	.07	.06
10	.31	.22	.17	.14	.11	.10	.09	.07	.05	.06	.05	.04

ZONAL LUMEN SUMMARY												
ZONE	LUMENS	%LAMP	%FXT	TOTAL LUMINAIRE EFFICIENCY: 60.7%								
0-30	986	15.8	25.8	TOTAL REFLECTANCE OF PAINT: 90.0%								
0-40	1630	25.3	42.5	CIE TYPE: DIRECT								
0-60	2966	47.1	77.6	SPACING CRITERIA: 0-DEG 90-DEG								
0-90	3823	60.7	100.0	LUMINOUS LENGTH: 1.2 1.4								
90-180	0	0.0	0.0									
0-180	3823	60.7	100.0									

Other reports available upon request.

## CROSS SECTIONS:





# ZENITH I ZB SERIES

## 2X4 Center Light Shield Indirect/Direct Luminaire

Fixture Type: \_\_\_\_\_

Job Information: \_\_\_\_\_

### SPECIFICATIONS:

- Recessed 2X4 fluorescent luminaire featuring a computer designed precision optical system that provides indirect/direct illumination. An optically correct double arched reflector enables precise indirect light distribution, while a center located perforated light shield provides the soft direct illumination.
- The system delivers comfortable illumination by filling the entire volume of space evenly. Broad angle illumination lights walls and vertical surfaces creating a more open and comfortable space. All components are recessed above the ceiling line. Install in ceilings as low as eight feet.
- Housing: Die formed from 20GA cold rolled steel and fabricated in a computer-controlled operation. Spot-welds and rivets hold all parts together for strength and unity. Pry-out style grid supports are located on the sides.
- Indirect reflector: Two-piece system is CAD designed to the optimum contour. One side is securely screwed into the housing with hidden hardware. The other side is held in place with quarter turn cam locks for easy ballast access.
- Center light shield: Die formed and fabricated from heavy gauge perforated steel and integrated with an internal white Mylar panel. Light shield is capable of swinging down for lamp access.
- Finish: A custom formulated non-glare white powder coating is applied to the reflector, light shield, and the housing after fabrication. Provides a reflectivity of at least 90%.
- T5 Lamps: Two or three 4Ft. linear fluorescent lamps; 28W-T5 or 54W-HO-T5.
- T8 Lamps: Two or three 4Ft. linear fluorescent lamps; 32W-T8. Others as specified.
- TT5 Lamps: Two or four 2Ft. twin-tube compact fluorescent lamps; 40W-TT5, 50W-TT5, or 55W-TT5, end-on-end down the center.
- Ballasts T5: Electronic programmed start, normal light output, high power factor, THD less than 10%. Up to 2-lamps per 28W-T5 ballast. Up to 3-lamps per 54W-HO-T5 ballast. Lutron or Advance dimming ballasts as specified.
- Ballasts T8: Electronic instant start, normal light output, high power factor, THD less than 10%. Up to 3-lamps per ballast. Optional T8 performances: rapid start circuit, high light output, or low-watt. Lutron or Advance dimming ballasts as specified.
- Ballasts 40W-TT5: Electronic instant start, normal light output, high power factor, THD less than 10%. Up to 2-lamps per ballast. Optional performances: rapid start circuit. Lutron or Advance dimming ballasts as specified.
- Ballasts 50W and 55W-TT5: Electronic programmed start, normal light output, high power factor, THD less than 10%. Up to 4-lamps per ballast. Lutron or Advance dimming ballasts as specified.
- Voltage: Multi-volt operates a range from 120V-277V, 50HZ-60HZ. Dedicated voltages on request.
- Emergency battery back up: Integrated packs range from 500 up to 1400 lumen output. Varies with lamp type.
- Air return: Optional air return slots allow room air to be circulated through housing and back into plenum.
- Installations: Designed for installation into NEMA Type G lay-in acoustical grid ceiling systems, 1" grid or 9/16" fine-line grid. Optional fit available for screw slot grid. For NEMA Type F dry wall applications an additional flange kit must be used with Type G housing. Four pullout type security clips, located in the housing, lock over the ceiling grid work. Four auxiliary suspension points are also provided for securing to building structure. A quick wiring access plate is located on back of the housing. Additional knockouts provided. Factory installed lamps and power whips as specified.
- UL and CUL listed 1598 and bears their label. Suitable for dry locations or optional damp locations with UL Damp Label. Union made and labeled.



Shield Detail



**MERCURY  
LIGHTING**  
PRODUCTS CO. INC.



# ZB SERIES 2X4 Center Light Shield Indirect/Direct Luminaire

Fixture Type:

Job Information:

**ORDERING DATA:** Fill in boxes below with corresponding bold options.

Example: ZB-24G-A-332-OCT-ELB-UNI-EMPK/I320-FLX-LP835

Series	Module Size/Ceiling	Optional Air Return	No. of Lamps/Wattage Ea. Lamp	Lamp Type	Ballast Type	Voltage	Misc
<b>ZB</b> Zenith I Center Shield	<b>24G</b> 2X4 Module/NEMA Type G/Lay-in Grid, 1" or 9/16" Fine Line.  <b>24S</b> 2X4 Module/NEMA Type G/Lay-in Grid, 9/16" Screw-Slot/ Bolt-Slot.	Leave Blank for No Function  <b>A</b> Air Return To Plenum	<b>440</b> 4-40W-TT5 Compact <b>450</b> 4-50W-TT5 Compact <b>455</b> 4-55W-TT5 Compact <b>228</b> 2-28W-T5 Linear <b>254</b> 2-54W-H0-T5 Linear <b>328</b> 3-28W-T5 Linear <b>354</b> 3-54W-H0-T5 Linear <b>232</b> 2-32W-T8 Linear* <b>332</b> 3-32W-T8 Linear*	<b>BIAX</b> Twin Tube Compact TT5  <b>T5</b> Linear T5  <b>H0-T5</b> Linear High Output T5  <b>OCT</b> Linear T8	<b>ELB</b> 40W-TT5 Electronic Instant Start. Up to 2-Lamps/Ballast.  <b>ELBS</b> 40W-TT5 Electronic Rapid Start. Up to 2-Lamps/Ballast.  <b>ELB</b> 50W or 55W-TT5 Electronic Programmed Start. Up to 4-Lamps/Ballast.  <b>ELB</b> T5 or H0-T5 Electronic Programmed Start. Up to 2-Lamps/28W Ballast. Up to 3-Lamps/54W-H0 Ballast.  <b>ELB</b> T8 Electronic Instant Start. Up to 3-Lamps/Ballast.  <b>ELBL</b> T8 Electronic Instant Start Low Watt. Up to 3-Lamps/Ballast.  <b>ELBH</b> T8 Electronic Instant Start High Light Output. Up to 3-Lamps/Ballast.  <b>ELBS</b> T8 Electronic Rapid Start. Up to 3-Lamps/Ballast.  <b>ELBD</b> T5, T5, H0-T5, or T8 Electronic Dimming. Lutron or Advance as Specified.  <b>ELB-</b> TT5, T5, H0-T5, or T8 Electronic As Specified.	<b>UNI</b> Universal Voltage. Multi-Volt 120V-277V, 50HZ-60HZ.  <b>120V</b> Dedicated Voltage 120V-60HZ.  <b>277V</b> Dedicated Voltage 277V-60HZ.	<b>EMPK/I32</b> I-32 or Equal 500 Lumens. One 40W-TT5, 28W-T5, or 32W-T8 Lamp.  <b>EMPK/I48</b> I-48 or Equal 700 Lumens. One 40W-TT5, 50W-TT5, or 55W-TT5 Lamp. One or Two 32W-T8 Lamps.  <b>EMPK/I320</b> I-320 or Equal 1350 Lumens. One 40W-TT5, 50W-TT5, or 55W-TT5 Lamp. One 28W-T5 or 54W-H0-T5 Lamp. One or Two 32W-T8 Lamps.  <b>EMPK/I232</b> I-232 or Equal 1400 Lumens. Two 32W-T8 Lamps.  <b>EMPK/ISL28</b> ISL-28 or Equal 500 Lumens. One 28W-T5 Lamp.  <b>EMPK/ISL54</b> ISL-54 or Equal 825 Lumens. One 28W-T5 or 54W-H0-T5 Lamp.  <b>EMPK/ISL540</b> ISL-540 or Equal 1300 Lumens. One 28W-T5 or 54W-H0-T5 Lamp.  <b>FLX</b> 6Ft. Single Circuit Power Flex. (Specify Voltage).  <b>FLX2</b> 6Ft. 2-Circuit Power Flex. (Specify Voltage).  <b>2B</b> 2-Ballasts, 2-Circuits.  <b>DL</b> UL Lamp Label.  <b>L</b> Factory Lamps Installed, Specify Color. Ex: L741

\* NOTE: T8 Lamping  
for Individual  
Mounting Only.  
Not Capable of  
End-To-End  
Continuous Runs.

## PHOTOMETRICS:

### ZB-24G-440-BIAX-ELB-UNI

ZONAL CAVITY COEFFICIENTS OF UTILIZATION EFFECTIVE FLOOR CAVITY REFLECTANCE=0.20												
CEILING	80	70	60	50	40	30	20	10	0	80	70	60
WALL	70	50	30	10	50	30	10	50	30	10	50	30
FLOOR	10	50	30	10	50	30	10	50	30	10	50	30
0	.78	.78	.78	.78	.76	.76	.76	.73	.73	.69	.69	.69
1	.71	.68	.66	.63	.70	.67	.64	.62	.60	.58	.58	.57
2	.65	.60	.55	.52	.63	.58	.54	.51	.49	.52	.50	.48
3	.59	.53	.47	.43	.58	.52	.47	.43	.40	.46	.43	.41
4	.54	.47	.41	.37	.53	.46	.40	.36	.34	.39	.36	.33
5	.49	.41	.35	.31	.48	.40	.35	.30	.28	.34	.30	.28
6	.45	.37	.31	.26	.44	.36	.30	.26	.23	.30	.26	.24
7	.42	.33	.27	.23	.41	.32	.27	.23	.20	.27	.23	.21
8	.38	.29	.24	.20	.37	.29	.23	.20	.18	.24	.20	.18
9	.35	.26	.21	.17	.34	.26	.20	.17	.15	.21	.17	.15
10	.33	.24	.18	.15	.32	.23	.18	.15	.13	.19	.15	.13

CANDLEPOWER DISTRIBUTION												
180	165	150	135	120	105	90	75	60	45	30	15	0
0° Plane												
90° Plane												

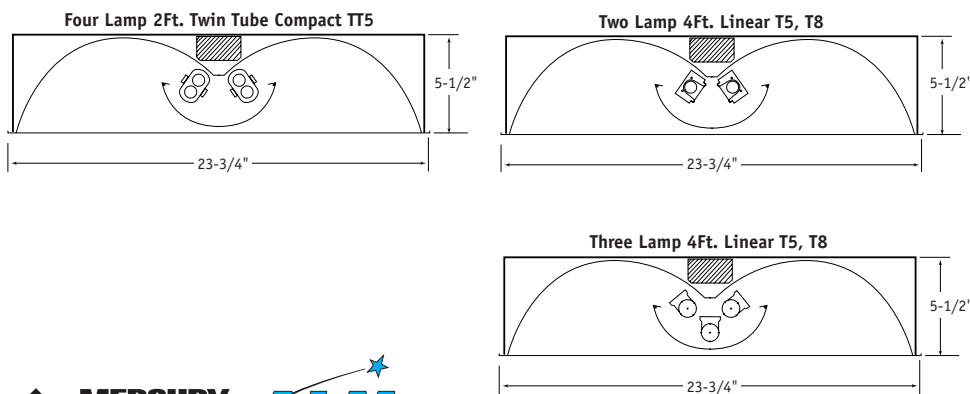
ZONE	LUMENS	%LAMP	%FXT
0-30	2067	16.4	25.1
0-40	3431	27.2	41.7
0-60	6297	50.0	76.5
0-90	8229	65.3	100.0
90-180	0	0.0	0.0
0-180	8229	65.3	100.0

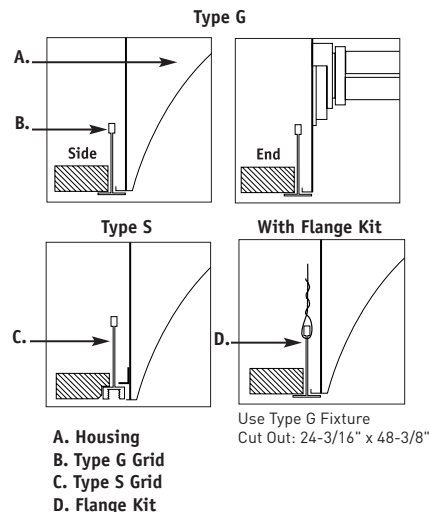
TOTAL LUMINAIRE EFFICIENCY: 65.3%	TOTAL REFLECTANCE OF PAINT: 91.7%
CIE TYPE: DIRECT	0-DEG 90-DEG
PLANE: 0-DEG 90-DEG	
SPACING CRITERIA: 1.2 1.4	
LUMINOUS LENGTH: 47.000	22.375

Other reports available upon request.

## CROSS SECTIONS:



## CEILING DETAIL:





M I N K A  
G R O U P®

*The Art of Lighting* MINKA-LAVERY®

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[» 663-PL](#)

## VA WOMENS 7TH FLOOR FEMALE TOILET

### 663-PL 2 Light Bath



**Family:** Other

**Dimensions:** 18 1/2" W x 5 3/4" H x 4 1/4" Ext.

**Glass/Shade:** White Acrylic

**Lamping (Watts/Bulb):** 2-18W 120V LVS Electronic G24q-1 Triple  
Tube (Bulb Not Included)

**Finish:** Silver

#### Related Products



4 Light Kitchen  
Flourescent



4 Light Fluorescent



2 Light Kitchen  
Flourescent



2 Light Kitchen  
Flourescent



4 Light Fluorescent



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### FEATURES

- Edgelit exit sign for surface mounted architectural and commercial applications
- Clear, injection molded, dual plaque acrylic with clear, white or mirror backgrounds
- High strength, extruded aluminum housing in multiple finishes
- Energy saving, long-life LED lamps exceeds brightness and uniformity requirements
- Custom printed, silk screened chevron arrows; 6" letters with  $\frac{3}{4}$ " stroke
- End/ceiling/wall mount and included die-cast aluminum canopy
- 120/277VAC 60Hz operation
- Temperature range: 20°C to 30°C (68°F to 86°F)
- UL 924 Listed



### ORDERING INFORMATION

LES	W		R		N	A	-	
MODEL	MOUNTING	FACES	LETTER COLOR	DIRECTIONAL ARROWS	TRIM/HOUSING FINISH	OPERATION		OPTIONS
LES	C Ceiling mount W Wall mount E End mount	S Single D Double* <small>*Not for use with wall mounted models.</small>	R Red G Green	X No arrows <b>EXIT</b> R Right arrow* <b>EXIT</b> L Left arrow* <b>&lt;EXIT</b> D Double arrows <b>&lt;EXIT&gt;</b> C L/R arrows** <b>&lt;EXIT/EXIT&gt;</b> <small>*Not for use with double face models. Use "C" L/R arrow designator ** Double face models only. Provides reversible right or left arrow indicator</small>	N Satin Aluminum W White C Chrome B Black S Satin brass Z Dark Bronze	A AC only		See "Options" section

### OPTIONS

MODEL	DESCRIPTION
SW	Special Wording <sup>4</sup>
W	White plaque background
M	Mirror plaque background <sup>1</sup>
8L	8 inch letter plaque (red letters only) <sup>2,3</sup>

<sup>1</sup> For use with single face models only. Standard on double face models.

<sup>2</sup> LES exit models with 8" plaques registered under NYC-BEC Calendar Number 42135 for use in New York City.

<sup>3</sup> Single face LES exit signs specified with the 8L option are supplied without backgrounds. Double face models specified with the 8L option are supplied with mirror backgrounds.

<sup>4</sup> Enter Special Wording choice from page 963; example: SW41. Special wording option not available with 8" letter plaque. Some special wording signs not available with directional arrows.

### POWER CONSUMPTION

	SINGLE FACE	DOUBLE FACE
Red AC Only Models	2.2W	3.4W
Green AC Only Models	2.5W	4.0W

Wattage figures include LED lamps, transformers and electronics power requirements.

Power factor, average: .15 (leading)

