

MSO - microgroove spotless lens



MAL - microgroove aluminum

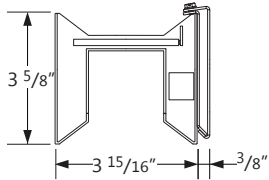
SO - spotless lens

Project _____

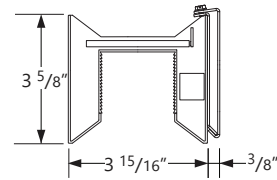
Type _____

Notes _____

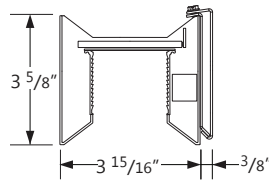
SO - spotless lens



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Ordering Guide

ZESQWD		SL 0/100						
PRODUCT ID		LIGHT ENGINE		NOMINAL LUMENS/FT		CRI	COLOR TEMP.	SHIELDING
ZESQWD	Zen Square Wall Direct	SL 0/100	surroundlite 0%up100%down	300	300 lm/ft - Minimum	80	2700 K	SO spotless lens
				600	600 lm/ft - Maximum for 90 CRI	90	3000 K	MSO microgroove spotless lens
				800	800 lm/ft - Maximum for 80 CRI		3500 K	MAL microgroove aluminum *
							4000 K	
Consult factory for other lumen packages								* Standard white

SHIELDING FINISH (OPT.)	FIXTURE LENGTH	FINISH	VOLTAGE	DRIVER	CIRCUITS
W white - standard	2 2'	AP aluminum paint	UNV universal	MD integral mini driver 0-10V dimming 2%	1 1 circuit
C custom	3 3'	W white	DC low voltage*	POE(#) POE drivers*	+E(#) emergency section
	4 4'	BLK black			
	5 5'	C custom			
	6 6'				
	7 7'				
	8 8'				
	12 12'				
	S(L) system run				
Shielding finish option is for MAL option only.	All lengths in 1' increments		Consult factory for 347 V * Only available with POE drivers.	* Specify system, see page 3 Only integral 0-10V mini driver available	

BATTERY (OPTIONAL)	END CAP (OPTIONAL)	REMOTE CONTROLS (OPTIONAL)	CUSTOM
B(#) remote battery pack	SE slotted end cap	DS(#) daylight sensor DOS(#) daylight & occupancy sensor	C custom
Please consult factory	Comes with regular end cap. as standard; See page 2 for more details.	Remote only.	Please specify



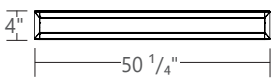
● LIGHT GUIDE

High precision light guide made of PMMA material, allows distribution of controlled light in all 3-dimensions to put light on both vertical and horizontal planes within the space. Patented lightguide design featuring molecular optics and precision-coupled optic components yield a high efficiency luminaire. In-plane mixing maximizes color uniformity while light emitting area is uniform and diffuse without 'head lighting' from the LED's.

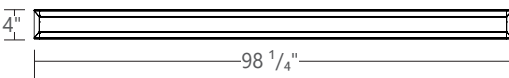
● LENGTHS

2' to 12' in 1 foot increments

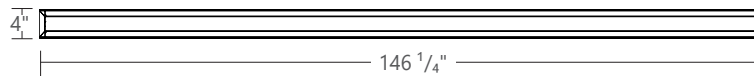
H 4ft



H 8ft



H 12ft



● SYSTEMS (S#)

Runs of H that are greater than 12ft in length are designated as systems (S#). This means that the run is comprised of a combination 4ft and/or 8ft sections to be assembled on site using our joining system.


● WEIGHT

- H 4 ft** 9 lbs / 4.1 kg
- H 8 ft** 18 lbs / 8.2 kg
- H 12 ft** 27 lbs / 12.3 kg

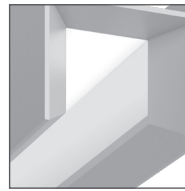
● FINISH

White, black, aluminum paint, powder coated and custom finishes are also available.

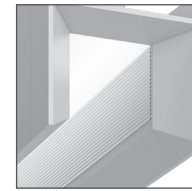
● APPROVALS

Certified to UL and CUL standards  Suitable for damp locations.

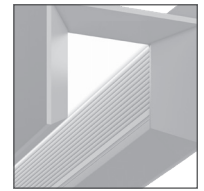
● OPTICS



SO spotless lens



MSO microgroove spotless lens

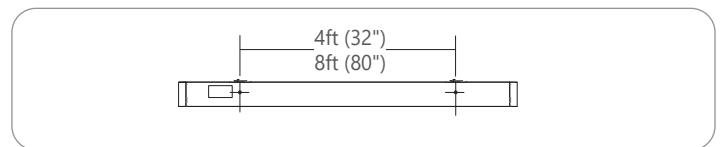


MAL microgroove aluminum

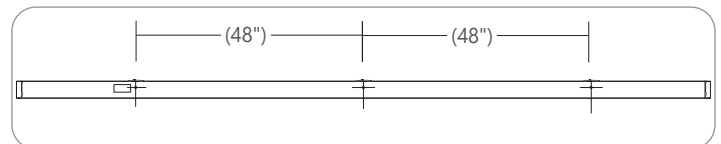
● MOUNTING SPACING

Distance Between Mounting Points:

- H 4ft** 32"
- H 8ft** 80"
- H 12ft** 48"

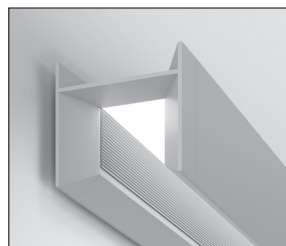


For 4' to 8' luminaires.

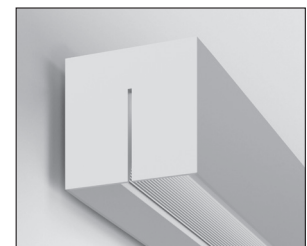


For 9' to 12' luminaires.

● END CAP OPTIONS



Regular end cap
Standard

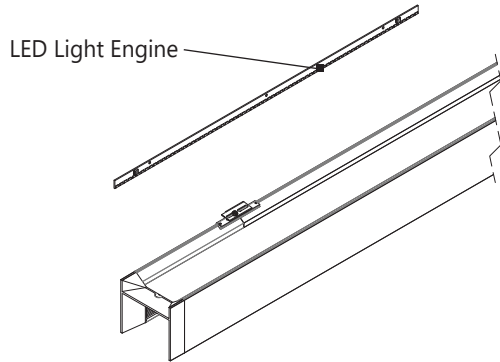


Slotted end cap
Optional



● LED UPGRADE / REPLACEMENT

All LED light engines used are field replaceable and upgradable to ensure the lighting system will last for years. Future-proof design comes with easy access to LED light engines from above using quick connectors (included in luminaire) and a screwdriver.



● CONSTRUCTION

Housing	Extruded aluminum (0.06" nominal)
End Cap	Die cast aluminum (0.10" nominal)
Joiners	Die cast aluminum (0.10" nominal)
Interior Bracket	Die formed zintec (20 gauge)
Lens	Uniform frosted acrylic lens
Microgroove Lens	Uniform frosted acrylic lens
Microgroove Aluminum	White painted aluminum material
Mounting Brackets	Cold rolled sheet painted (16 gauge)

● ELECTRICAL

Power over Ethernet	MOLEX
POE drivers*	IGOR
UL2108 certified for integral or remote driver	O - Other (Consult factory)

Emergency	Remote emergency battery pack or emergency circuit optional.
Input Voltage	UNV (120-277 V)

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● LED SYSTEM

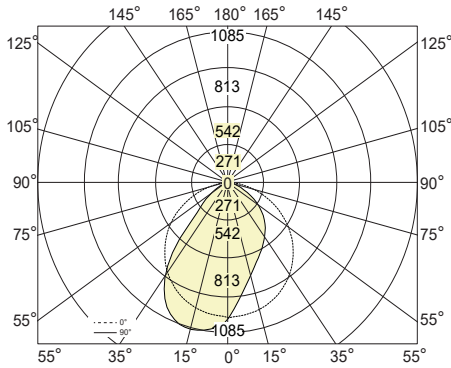
CRI	Minimum 80 or 90 color rendering index
CCT	Choice of 3000K, 3500K and 4000K color temperature with a great color consistency (within 3-step MacAdam ellipse). Both within fixture and fixture to fixture.
LED life	Minimum 50,000h with 85% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal Management	Aluminum housing acting as the heat sink to maximize life.
Environment	Dry and damp rated in operating ambient temperatures of 0-40°C (32-104F)



Microgroove Aluminium (MSO)

HWD-SL0/100-550-80-35-MSO-4.IES
0% up / 100% down at 550 lm/ft

PHOTOMETRIC CURVE



Lumens up: 0 lm
Lumens down: 2198 lm
Total lumens: 2198 lm (for 4ft)
Input Watts: 32.06 W
Efficacy: 69 lm/W

CRI:80 shown
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	964	964	964	964	964
5	955	909	873	850	846
15	931	804	721	679	669
25	879	697	604	568	557
35	796	589	506	477	470
45	682	476	410	385	377
55	540	363	307	270	257
65	375	247	186	138	125
75	197	127	65	31	24
85	41	18	10	4	3
90	3	11	7	2	2

ZONAL LUMENS

Zone	Lumens
0	90
0-10	253
10-20	379
20-30	442
30-40	412
40-50	318
50-60	203
60-70	85
70-80	17
80-90	0
90	0

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	15245	5710	4593
55	14662	4514	3212
65	13465	2977	1657
75	10974	1178	354
85	5385	214	55