Metalux

DESCRIPTION

The WS Series is a specification wraparound luminaire featuring energy efficient performance. The luminaire's characteristic clean, low profile design is both appealing and practically functional. The WS Series utilizes a clear, low brightness, extruded acrylic refractor with injection molded end caps for high performance and good looks.

The efficient and stylish WS Series is the perfect wraparound for commercial spaces, schools, dormitories, offices and retail areas.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

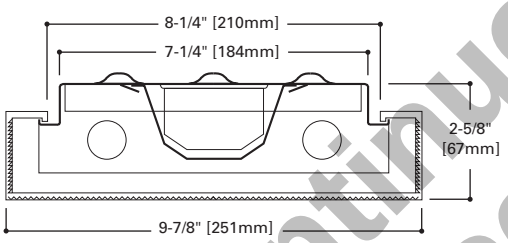
SPECIFICATION FEATURES

Construction
Housing die formed code gauge prime cold rolled steel. Six full length ribs for strength. Ballast cover easily removed without tools. Steel end plates with 7/8" KO and light-seal embossment. Couplers for continuous row mounting.

Electrical*
Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Pressure lock lampholders. UL/CUL listed. Suitable for damp locations.

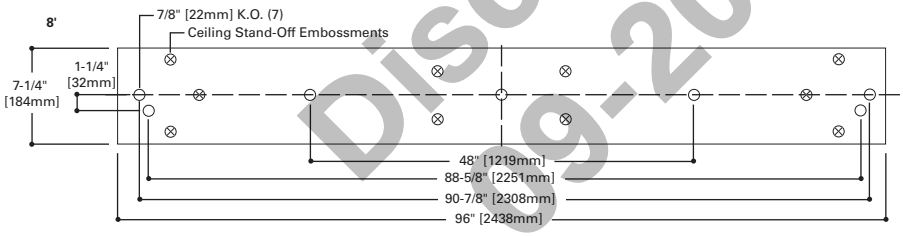
Finish
Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting grade, baked white enamel finish.

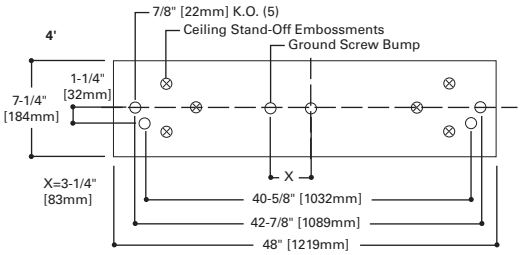
Frame/Shielding
100% clear full thickness virgin acrylic prismatic refractor/lens. Permanent luminous injection molded end caps. Sides have inside linear prisms and bottom has pyramidal prisms for low brightness control. Lens can be hinged from either side in a lift and shift manner.



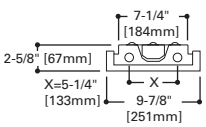
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MOUNTING DATA



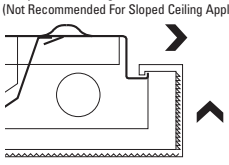


LAMP CONFIGURATIONS



LIFT & SHIFT REFRACTOR

Easily Removed. Hinges Either Side
(Not Recommended For Sloped Ceiling Applications.)





WS
232

4' OR 8' SURFACE
2 LAMPS

Specification Wrap

ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
417 (72)

ES Ballast & STD Lamps
417 (90)

Luminaire Efficacy Rating
LER = FW-72
Catalog Number: WS-232A
Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $3.33

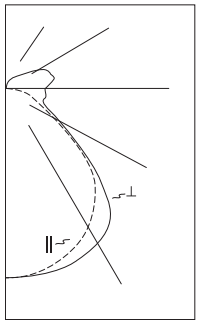
*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
Safe and convenient means of disconnecting power.

Powering Business Worldwide

PHOTOMETRICS



WS-232A
Energy Saving Ballast

F32T8/35L Lamps
2850 Lumens

Spacing criterion: (II) 1.3 x mounting height, (⊥) 1.4 x mounting height

Efficiency 80.5%

Test Report: WS232A.IES

LER = FW-72

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $3.33

Coefficients of Utilization

Effective floor cavity reflectance					20%															
rc	80%				70%				50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	92	92	92	92	88	88	88	88	81	81	81	75	75	75	69	69	69	66		
1	84	81	78	75	81	78	75	72	71	69	67	66	64	62	61	59	58	55		
2	77	71	66	62	74	69	64	60	63	60	57	59	56	53	54	52	50	47		
3	71	63	57	53	68	61	56	51	57	52	49	53	49	46	49	46	43	41		
4	66	57	50	45	63	55	49	44	51	46	42	47	43	40	44	41	38	36		
5	60	50	44	39	57	49	43	38	45	40	36	42	38	34	39	36	33	31		
6	55	45	39	34	53	44	38	33	41	36	32	38	34	30	36	32	29	27		
7	51	41	34	29	49	39	33	29	37	32	28	35	30	26	32	28	25	24		
8	47	37	30	26	45	35	29	25	33	28	24	31	26	23	29	25	22	20		
9	43	33	26	22	42	32	26	22	30	25	21	28	23	20	26	22	19	18		
10	40	30	24	19	39	29	23	19	27	22	18	25	21	18	24	20	17	15		

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1080	18.9	23.5
0-40	1810	31.8	39.4
0-60	3031	53.2	66.0
0-90	3748	65.7	81.7
90-180	842	14.8	18.3
0-180	4589	80.5	100.0

Typical VCP Percentages

	Height Along		Height Across	
Room Size (Ft.)	8.5′	10.0′	8.5′	10.0′
20 x 20	68	73	67	73
30 x 30	62	66	58	64
30 x 60	53	56	44	50
60 x 30	63	66	61	66
60 x 60	53	56	46	51

Candela

Angle	Along ⏥	45°	Across⊥
0	1337	1337	1337
10	1317	1326	1333
20	1250	1292	1324
30	1140	1230	1281
40	983	1107	1149
50	717	769	725
60	339	423	414
70	207	264	281
80	113	174	285
90	14	108	278
100	18	185	346
110	26	229	331
120	32	176	260
130	36	110	151
140	35	91	101
150	30	60	90
160	26	48	59
170	24	30	33
180	22	22	22

Discontinued 09-20-2016

ORDERING INFORMATION

SAMPLE NUMBER: WS-232A-120V-EB81-U

Tandem
Blank=4' Length
8T=8' Length

Series[1]
WS=Specification Surface Wrap

Width
Blank=Standard

Number of Lamps[2], [3]
2=2 Lamps
(Not Included)

Wattage
32=32W T8 (48")

Lens
A=Acrylic Refractor Lens

Voltage [4]
120V=120 Volt
277V=277 Volt
347V=347 Volt
UNV=Universal Voltage 120-277[5]

Options
GL=Single Element Fuse
GM=Double Element Fuse
EL=Emergency Installed

Ballast Type [4]
EB8__=T8 Electronic Instant Start. Total Harmonic Distortion < 20%
No. of Ballast: 1 or 2
EB8__/PLUS=T8 Electronic Instant Start. High Ballast Factor >1.13. Total Harmonic Distortion < 20%
No. of Ballast: 1 or 2
ER8__=T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%
No. of Ballast: 1 or 2
EB2__=T12 Electronic Rapid Start.
No. of Ballast: 1 or 2

Options
RLS=Rotor-Lock Socket (T8 Lamps Only)
(See options & accessories)

Packaging
U=Unit Pack

NOTES: [1]Steel endplates with 7/8" KO standard for continuous row mounting. [2]Stem mounting not available on 3-lamp fixtures. [3]2 point suspension recommended for 2 and 4-lamp fixtures. [4]Products also available in non-US voltages and frequencies for international markets. [5]Not available when specifying emergencies, voltage must be specific.

For complete product data, reference the Fluorescent Specification binder. Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

ACCESSORIES

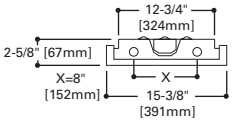
(Order Separately)

SCF=Fixed Stem Set (Specify Length)
SCS=Swivel Stem Set (Specify Length)
SCA=Adjustable 48" Stem Set
A1B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling (Use 2 per fixture)
Lengths Available: 6, 8, 12, 18, 24, 36, 48

(Additional Accessories Available. See Options and Accessories Section.)

LAMP SPACING (8")

(2 Lamp Housing with 8" lamp spacing also available).



Catalog Number
WS-A-232A (120V or 277V)

SHIPPING DATA

Catalog No.	Wt.
WS-232A	17 lbs.
8TWS-232A	33 lbs.

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.