

# COOPER LIGHTING - METALUX<sup>®</sup>

## DESCRIPTION

The WN Series is a specification wraparound luminaire featuring energy efficient performance. The luminaire's clean, low profile design is both appealing and functional. The WN Series utilizes a clear, low brightness, extruded acrylic refractor for high performance and aesthetics.

The efficient and stylish WN Series is the perfect wraparound for schools, offices and other commercial and retail spaces.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

## SPECIFICATION FEATURES

### Construction

Housing consists of die formed cold rolled steel. Ends formed with the housing for strength and provisions for continuous row aligners. Steel end plates with 7/8" KO and light-seal embossment. Ballast cover easily removed without tools.

### Electrical\*

Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolt. Rotor lock lampholders. UL/CUL listed. Suitable for damp locations.

### Lens

100% clear acrylic prismatic lens. Sides have inside linear prisms and bottom has pyramidal prisms for low brightness controls.

### Finish

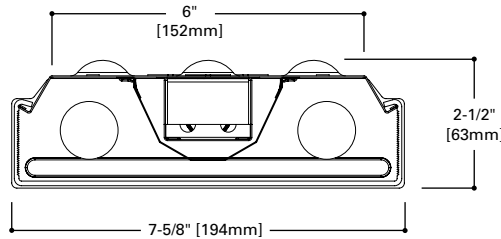
Multistage, prepaint ensures maximum bonding and rust prevention.



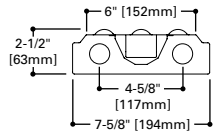
**WN**  
**217**  
**228T8**  
**232**

**2', 4' OR 8' SURFACE**  
**2 T8 LAMPS**

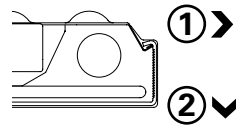
Commercial Wrap



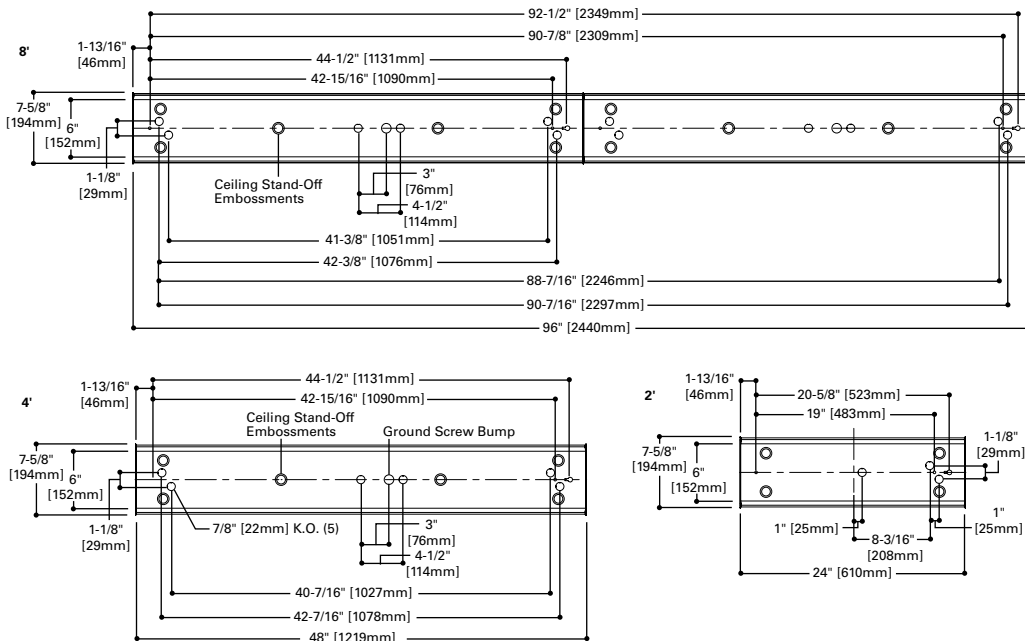
## LAMP CONFIGURATIONS



## LENS REMOVAL



## MOUNTING DATA



## ENERGY DATA

Input Watts:  
**EB Ballast & STD Lamps**  
217 (36)  
228T8 (48)  
232 (55)

Luminaire Efficacy Rating  
**LER = FW-80**  
**Catalog Number: WN-232A**  
**Yearly Cost of 1000 lumens,**  
**3000 hrs at .08 KWH = \$3.00**

**LER = FW-93**  
**Catalog Number: WN-228T8-HB81**  
**Yearly Cost of 1000 lumens,**  
**3000 hrs at .08 KWH = \$2.59**

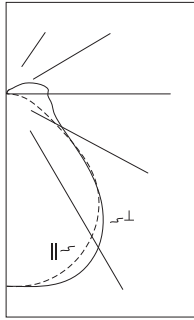
\*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

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

**LINEAR DISCONNECT**

Safe and convenient means of disconnecting power.

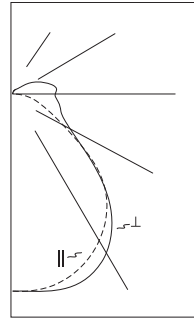
PHOTOMETRICS



**WN-232-EB81-U**  
Energy Saving Ballast  
F32T8/35K lamps  
3100 lumens  
Spacing criterion:  
(II) 1.3 x mounting  
height, (L) 1.4 x  
mounting height  
Efficiency = 82.0%  
Test Report:  
134P132  
LER = FW-80  
Yearly Cost of 1000  
lumens, 3000 hrs at  
.08 KWH = \$3.00

**Candlepower**

Angle	Along II	45°	Across L
0	1583	1583	1583
5	1588	1594	1591
10	1580	1597	1607
15	1554	1591	1618
20	1512	1573	1605
25	1454	1534	1563
30	1380	1473	1488
35	1291	1384	1375
40	1181	1258	1225
45	1043	1077	1030
50	848	851	809
55	602	655	626
60	429	518	512
65	317	413	444
70	240	333	409
75	180	270	390
80	123	223	369
85	62	185	347
90	3	155	332



**WN-228T8-HB81-U**  
Energy Saving Ballast  
F28T8 28W lamps  
2800 lumens  
Spacing criterion:  
(II) 1.3 x mounting  
height, (L) 1.4 x  
mounting height  
Efficiency = 90.2%  
Test Report:  
134P133  
LER = FW-93  
Yearly Cost of 1000  
lumens, 3000 hrs at  
.08 KWH = \$2.59

**Candlepower**

Angle	Along II	45°	Across L
0	1562	1562	1562
5	1566	1572	1569
10	1558	1576	1586
15	1532	1570	1597
20	1490	1552	1586
25	1432	1514	1545
30	1358	1453	1472
35	1270	1365	1361
40	1162	1242	1214
45	1025	1063	1022
50	833	841	803
55	590	648	623
60	422	512	510
65	312	408	442
70	236	328	407
75	178	267	389
80	121	221	367
85	61	184	345
90	3	152	332

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
	70	50	30	70	50	30	50	30	10	50	30	10	50	30	10	0		
0	95	95	95	95	92	92	92	85	85	85	80	80	80	74	74	74	72	
1	86	82	79	76	83	80	76	73	74	72	69	69	67	65	63	61	59	
2	79	72	67	62	76	70	65	61	65	61	58	61	58	55	57	54	52	50
3	72	64	57	52	69	62	56	51	58	53	49	54	50	47	51	47	45	42
4	66	57	50	45	64	55	49	44	52	46	42	49	44	40	46	42	39	37
5	61	51	44	39	59	49	43	38	47	41	37	44	39	35	41	37	34	32
6	57	46	39	34	54	45	38	33	42	36	32	40	35	31	38	33	30	28
7	52	42	35	30	50	41	34	29	38	33	29	36	31	28	34	30	27	25
8	49	38	31	27	47	37	31	26	35	30	26	33	28	25	32	27	24	22
9	46	35	28	24	44	34	28	24	32	27	23	31	26	22	29	25	22	20
10	43	32	26	22	41	31	26	22	30	25	21	29	24	20	27	23	20	18

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
	70	50	30	70	50	30	50	30	10	50	30	10	50	30	10	0		
0	105	105	105	105	101	101	101	101	94	94	94	87	87	87	81	81	81	78
1	95	91	87	83	91	87	84	81	81	78	76	76	74	71	71	69	67	65
2	87	79	73	68	83	77	71	66	72	67	63	67	63	60	62	60	57	54
3	79	70	63	57	76	68	61	56	63	58	53	59	55	51	56	52	49	46
4	73	62	55	49	70	60	53	48	57	51	46	53	48	44	50	46	42	40
5	67	56	48	42	64	54	47	42	51	45	40	48	43	39	45	41	37	35
6	62	50	43	37	60	49	42	36	46	40	35	44	38	34	41	36	33	31
7	58	46	38	33	55	45	37	32	42	36	31	40	34	30	38	33	29	27
8	54	42	34	29	52	41	34	29	39	32	28	37	31	27	35	30	26	25
9	50	38	31	26	48	37	31	26	36	30	25	34	28	25	32	27	24	22
10	47	35	29	24	45	35	28	24	33	27	23	31	26	22	30	25	22	20

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1304	21.0	25.6
0-40	2152	34.7	42.3
0-60	3544	57.2	69.7
0-90	4441	71.6	87.3
90-180	645	10.4	12.7
0-180	5086	82.0	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	52	58	44	53
30 x 30	43	48	31	39
30 x 60	36	40	15	21
60 x 30	40	46	35	42
60 x 60	32	37	17	22

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1286	23.0	25.5
0-40	2124	37.9	42.0
0-60	3498	62.5	69.2
0-90	4389	78.4	86.9
0-180	5052	90.2	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	52	58	44	54
30 x 30	43	48	31	40
30 x 60	36	40	15	21
60 x 30	41	47	35	43
60 x 60	33	37	17	22

ORDERING INFORMATION

SAMPLE NUMBER: WN-232A-UNV-EB81-U

<p><b>Length</b> Blank=2' or 4' Length 8T=8' (Tandem)</p>	<p><b>Series<sup>(1)</sup></b> WN=Commercial Surface Wrap</p>	<p><b>Number of Lamps<sup>(2)</sup></b> 2-2 Lamps (Not Included)</p>	<p><b>Wattage</b> 17=17W T8 (24") 28T8=28W T8 (48")<sup>(6)</sup> 32=32WT8 (48")</p>	<p><b>Options</b> GL=Single Element Fuse GM=Double Element Fuse EL=Emergency Installed<sup>(5)</sup></p>	<p><b>Ballast Type<sup>(3)</sup></b> EB8 = T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10% No. of Ballast 1 or 2 EB8 /PLUS= T8 Electronic Instant Start. High Ballast Factor &gt;1.13. Total Harmonic Distortion &lt; 20% No. of Ballast 1 or 2 REB1= T8 Electronic Instant Start Residential Ballast. ER8 = T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10% No. of Ballast 1 or 2 ER8 /PLUS= T8 Electronic Program Start. High Ballast Factor &gt;1.13. Total Harmonic Distortion &lt; 10% No. of Ballast 1 or 2 HPT8 Ballast HB8_L=T8 Electronic Instant Start. Low Ballast Factor .77 HB8 =T8 Electronic Instant Start. Ballast Factor .88 HB8_N=T8 Electronic Instant Start. Normal Ballast Factor 1.0 HB8_H=T8 Electronic Instant Start. High Ballast Factor 1.15-1.2 HB8_DIM=T8 Electronic Program Start Step Dimming. Ballast Factor .88 HR8_L=T8 Electronic Program Start. Low Ballast Factor .77 HR8 =T8 Electronic Program Start. Ballast Factor .88 HR8_H=T8 Electronic Program Start. High Ballast Factor 1.15-1.2</p>	<p><b>Options</b> DEC=Decorative End Cap CRA=Continuous Row Aligner</p>	<p><b>Packaging</b> U=Unit Pack</p>
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ACCESSORIES

SCF=Fixed Stem Set (Specify Length)  
SCS=Swivel Stem Set (Specify Length)  
SCA=Adjustable 48" Stem Set  
WN-2LT-DEC-ENDS=Decorative End  
Caps - 2 Lamps (2 pieces)  
WN-CRA=Continuous Row Aligner  
(1 only)

NOTES: <sup>(1)</sup>Steel endplates with 7/8" KO standard for continuous row mounting. <sup>(2)</sup>2 point suspension recommended for 2 and 4 lamp models. 3 point suspension recommended for 8 foot tandems. <sup>(3)</sup>Products also available in non-US voltage and frequencies for international markets. 120V must be specified with a residential ballast. <sup>(4)</sup>Not Available when specifying emergencies, voltage must be specified. <sup>(5)</sup>A low profile battery pack is required for installation with standard ballast cover (consult Cooper Lighting). <sup>(6)</sup>When utilizing 28WT8 lamps, HB Ballast must be specified. Other ballast restrictions may apply. Consult your Cooper Lighting Representative for availability and ordering information.

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.

SHIPPING DATA

Catalog No.	Wt.
WN-217A	6 lbs.
WN-228T8A	8 lbs.
8TWN-228T8A	15 lbs.
WN-232A	8 lbs.
8TWN-232A	15 lbs.