COOPER LIGHTING SOLUTIONS - METALUX®

DESCRIPTION

The New Optica HP Retrofit Kit is an effective "Energy Savings Alternative" for today's environmentally conscious marketplace. The Optica Retrofit Kit is designed for installation into a 2' x 4' parabolic or troffer as low as 3.5" deep. This retrofit kit system has been developed to produce the maximum efficiency in the market, faster install time and full NEC compliance.

In a marketplace where economics, energy awareness and conservation are key product specifications, the Optica Retrofit Kit is the right solution for any commercial, educational or retail merchandising retrofit kit application.

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

OpticaHP Retrofit 2x4

232, 228T5
254T5

2 LAMP TROFFER AND PARABOLIC RETROFIT KIT

Patent Pending

stepup Advanced Retrofit Technologies

whiteoptics™ IMPROVING LIGHTING EFFICIENCY AND DESIGN

SPECIFICATION FEATURES

Construction

The retrofit kit assembly consists of four components and fits into most parabolics and troffers. Universal brackets are made from code gauge steel and come pre-wired to ballast and sockets. Kits are pre-assembled and ready for quick, easy install right out of the box. A one-piece high reflectance white reflector installs without any hardware, while a die formed steel louver provides the last component of this retrofit system.

Minimum housing depth = 3-1/2"

Ready-Set

Pre-installed self-tapping screws easily penetrates existing fixture body and ends. Leveling flange aligns, supports, and holds hardware in place, letting you hold the brackets with one hand while driving in screws. No parts bag or extra hardware needed.

Electrical

Standard Class "P" electronic ballast with captive hardware for ease of install. Push-in lamp holders. UL/cUL Listed. Suitable for damp locations. No junction box required.

Louver Finish

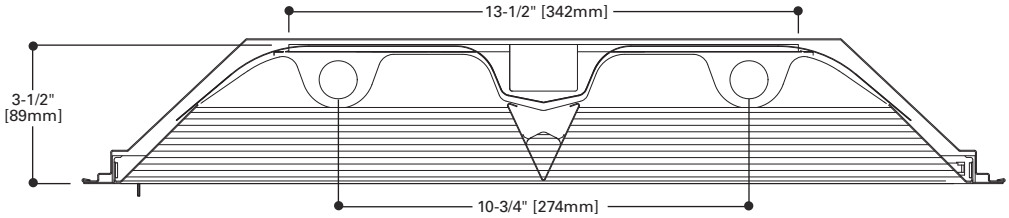
Cold rolled steel w/multistage iron phosphate pre-treatment for maximum bonding. Highly reflective matte white finish on all reflective surfaces for increased efficiency.

Hinge/Latch

Positive spring loaded, self locking, steel latching allows for easy opening and closing of louver or other shielding media. Hinging and latching can be done from either side of the retrofit kit for increased installation flexibility and ease of maintenance.

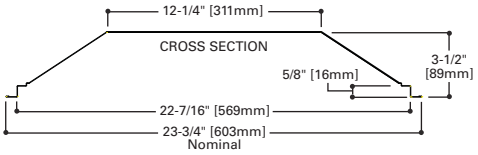
Optics

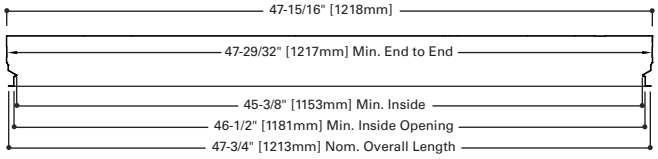
Die formed white louver w/faceted straight-blade cross members provides a clean edge with no hem, increasing overall optical efficiency to above 90%. Optional 97% reflective White Optics material is available to help maximize kit efficiency, distribution, energy savings and payback.



RETROFIT COMPATIBILITY

The *OpticaHP* retrofit kit was designed to upgrade troffer or parabolic fixtures from all major manufacturers that have the following minimum dimensions:





Before ordering refer to these dimensions as a reference or contact your local representative for a trial install prior to ordering large job quantities.

ENERGY DATA

Input Watts:

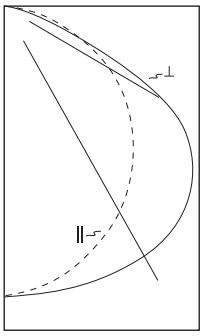
EB Ballast & STD Lamps
228T8=47
232=55

T5 Ballast & STD Lamps
228T5=62
254T5=74

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

LINEAR DISCONNECT
Safe and convenient means of disconnecting power.

PHOTOMETRICS



ART-2OP-232
Electronic Ballast

(2) 32WT8 lamps 2850 lumens.

Spacing criterion: (II) 1.2 x mounting height, (⊥) 1.5 x mounting height.

Efficiency = 91.7%

Test Report: ART-2OP-232.IES

LER = FL-86

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $2.79

Coefficients of Utilization

Effective floor cavity reflectance																				
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	109	109	109	109	107	107	107	107	102	102	102	97	97	97	94	94	94	92		
1	100	96	92	88	97	94	90	87	90	87	84	86	84	82	83	81	79	77		
2	91	83	77	72	89	82	76	71	78	74	70	75	71	68	73	69	66	64		
3	83	73	66	60	80	72	65	59	69	63	58	66	61	57	64	60	56	54		
4	76	65	56	50	73	63	56	50	61	54	49	59	53	49	57	52	48	46		
5	69	57	49	43	67	56	49	43	54	48	42	53	47	42	51	46	41	39		
6	64	52	43	37	62	51	43	37	49	42	37	47	41	36	46	40	36	34		
7	59	47	38	33	57	46	38	33	44	37	32	43	37	32	42	36	32	30		
8	55	42	34	29	53	42	34	29	40	34	29	39	33	29	38	33	28	27		
9	51	39	31	26	50	38	31	26	37	30	26	36	30	26	35	30	26	24		
10	48	36	28	23	47	35	28	23	34	28	23	33	27	23	33	27	23	21		

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1347	23.6	25.8
0-40	2260	39.6	43.3
0-60	4230	74.2	81.0
0-90	5224	91.7	100.0
0-180	5224	91.7	100.0

Luminance Data

Angle In Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2488	3021	3564
55	2370	3102	3762
65	2145	2859	2502
75	1666	1527	1343
85	1336	1166	903

Candela

Angle	Along II	45°	Across⊥
0	1687	1687	1687
5	1665	1679	1692
10	1631	1662	1693
15	1582	1638	1695
20	1523	1606	1693
25	1452	1566	1684
30	1371	1516	1666
35	1280	1458	1635
40	1181	1387	1593
45	1073	1303	1537
50	956	1204	1458
55	829	1085	1316
60	694	938	1048
65	553	737	645
70	408	473	302
75	263	241	212
80	156	141	121
85	71	62	48
90	1	1	1

ORDERING INFORMATION

SAMPLE NUMBER: ART-2OP-232-UNV-EB81-10B

Product
ART=Advanced Retrofit Technology

Width
2=2' Nominal

Series
OP=Optica Retrofit Kit

Number of Lamps
2=2 lamps (Not Included)

Wattage (Length)
32=32W T8 (48")
28T5=28W T5 (48")
254T5=54W T5HO (48")

Distribution
Blank=White (Medium)
WO=White Optics (General)

Voltage[1]
120V=120 Volt
277V=277 Volt
347V=347 Volt
UNV=Universal Voltage 120-277[2]
NB=No Ballast

Emergency Option
EL=Emergency Installed. Low Profile Battery Pack Only. (consult factory)

Ballast Type

T5 Ballasts
EBT__ =T5 or T5HO Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Standard Ballast Factor=1.0

Ballast/FactorType
EBT__N=T5 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Normal Ballast Factor=.90
EBT__H=T5 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. High Ballast Factor=1.15

T8 Ballasts
EB8__=T8 Electronic Start. Total Harmonic Distortion < 10%
EB8__/PLUS= T8 Electronic Start. Total Harmonic Distortion < 10%. High Ballast Factor > 1.15
ER8__=T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%

High Performance T8 Ballasts
HB8__=T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Standard Ballast Factor .86 – .88
HB8__L=T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Low Ballast Factor .77 – .82
HB8__N=T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Normal Ballast Factor 1.0
HB8__H=T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Normal Ballast Factor 1.15 – 1.20
HR8__T8 Electronic Program Rapid[3] Start. Total Harmonic Distortion < 10%. Standard Ballast Factor .86 – .88
HR8__DIM=T8 Electronic Program[3] Rapid Start. Total Harmonic Distortion < 10%. Step Dimming. Ballast Factor .88
HR8__L=T8 Electronic Program[3] Rapid Start. Total Harmonic Distortion < 10%. Low Ballast Factor .71 – .79
HR8__H=T8 Electronic Program[3] Rapid Start. Total Harmonic Distortion < 10%. High Ballast Factor 1.15 – 1.20

Number of Ballasts
1=1 Ballast
2=2 Ballasts
[Blank]=No Ballast (NB Option Only)

Packaging
10B=Bulk Pack
U=Unit Pack
(Consult factory for other packaging options)

NOTES: [1] Products also available in non-US voltages and frequencies for international markets. [2] Not available when specifying emergencies, voltage must be specific. [3] Recommended when using retrofits together with motion sensor, daylight harvesting or similar controls.

For complete product data, go to www.metalux-lighting.com. Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Solutions Representative for availability and ordering information.