COOPER LIGHTING SOLUTIONS - METALUX®

DESCRIPTION

The New ArcDuo Retrofit Kit is an effective "Energy Savings Alternative" for today's environmentally conscious marketplace. This retrofit kit system provides customers the opportunity to upgrade their dated louver or lens to a more contemporary lens shielding that is highly efficient and quick to install, without the added renovation and disposal costs. The architectural retrofit kit is designed for installation into a 2' x 4' parabolic or troffer.

In a marketplace where aesthetics are still critical elements used to convey style, appearance and performance, the ArcDuo Retrofit Kit is the smart solution for any office, government, educational and retail retrofit kit application whose goal involves energy awareness and conservation.

Catalog #		Type
Project		
Comments		Date
Prepared by		

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 doorframe and architectural lens shielding 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 lampholders. UL/cUL Listed. Suitable for damp locations. No junction box required.

Door 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 doorframe and architectural lens shielding provides a modern architectural appearance similar to the Metalux accord. Lens overall optical efficiency is above 84%. Optional 97% reflective White Optics material is available to help further maximize kit efficiency, distribution, energy savings and payback.

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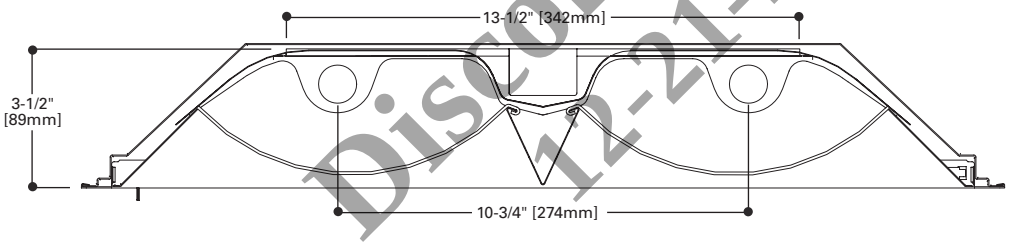
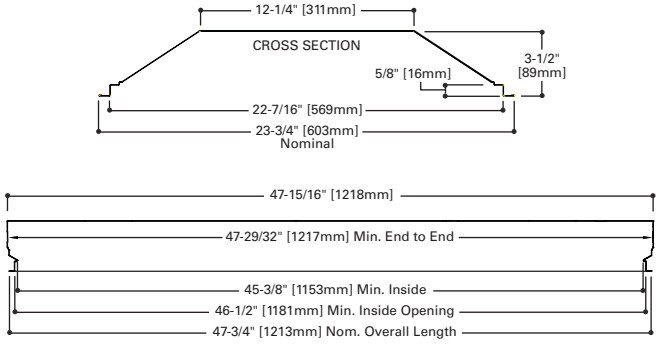
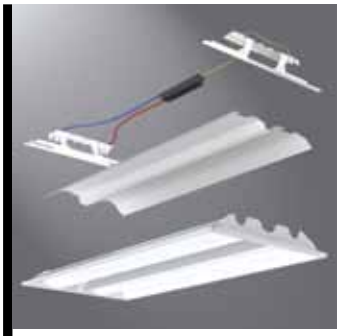


RETROFIT COMPATIBILITY

The ArcDuo 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.



ARCDUO RETROFIT 2X4
232, 228T5
254T5

2 LAMP TROFFER AND PARABOLIC ARCHITECTURAL RETROFIT KIT

Patent Pending

COOPER stepup
Advanced Retrofit Technologies

whiteoptics™
IMPROVING LIGHTING EFFICIENCY AND DESIGN

ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
228T8=47
232=55

T5 Ballast & STD Lamps
228T5=62
254T5=117

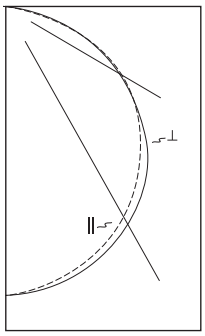
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
Safe and convenient means of disconnecting power.

ISO SYSTEMS CERTIFIED

COOPER Lighting Solutions

PHOTOMETRICS



ART-2ARC-232L
Electronic Ballast

(2) 32WT8 lamps 2850 lumens.

Spacing criterion: (||) 1.2 x mounting height, (⊥) 1.3 x mounting height.

Efficiency = 83.8%.

Test Report: ART-2ARC-232L.IES

LER = FL-79

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $3.04

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	100	100	100	100	97	97	97	97	93	93	93	89	89	89	86	86	86	84
1	91	87	84	80	89	85	82	79	82	79	77	78	76	74	75	74	72	70
2	83	76	70	65	81	74	69	65	71	67	63	69	65	62	66	63	60	58
3	75	67	60	54	73	65	59	54	63	57	53	60	56	52	58	54	51	49
4	69	59	51	46	67	58	51	45	56	50	45	54	48	44	52	47	44	42
5	63	53	45	39	62	52	44	39	50	43	39	48	43	38	47	42	38	36
6	58	47	40	34	57	46	39	34	45	39	34	43	38	33	42	37	33	31
7	54	43	35	30	53	42	35	30	41	34	30	40	34	30	38	33	29	28
8	50	39	32	27	49	38	32	27	37	31	27	36	31	26	35	30	26	25
9	47	36	29	24	46	35	29	24	34	28	24	33	28	24	33	27	24	22
10	44	33	26	22	43	33	26	22	32	26	22	31	25	22	30	25	21	20

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1282	22.5	26.8
0-40	2111	37.0	44.2
0-60	3781	66.3	79.1
0-90	4779	83.8	100.0
0-180	4779	83.8	100.0

Luminance Data

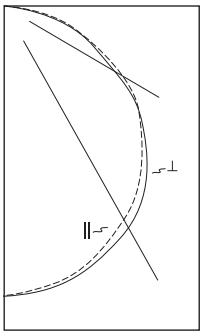
Angle In Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2567	2625	2681
55	2524	2561	2550
65	2409	2351	2250
75	2173	1939	1793
85	1656	1054	753

Candela

Angle	Along ||	45°	Across
0	1643	1643	1643
5	1626	1634	1638
10	1601	1613	1621
15	1563	1580	1593
20	1514	1535	1553
25	1451	1476	1496
30	1378	1406	1429
35	1297	1325	1352
40	1206	1234	1261
45	1107	1132	1156
50	998	1018	1035
55	883	896	892
60	757	758	737
65	621	606	580
70	482	454	425
75	343	306	283
80	208	171	149
85	88	56	40
90	0	0	0

Discontinued 12-21-2022

PHOTOMETRICS



ART-2ARC-WO-232L
Electronic Ballast

(2) 32WT8 lamps 2850 lumens.

Spacing criterion: (||) 1.3 x mounting height, (⊥) 1.3 x mounting height.

Efficiency = 88%.

Test Report: ART-2ARC-WO-232L.IES

LER = FL-82

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = $2.93

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	105	105	105	105	102	102	102	102	98	98	98	94	94	94	90	90	90	88
1	96	92	88	84	93	90	86	83	86	83	80	82	80	78	79	77	76	74
2	87	80	74	69	85	78	72	68	75	70	66	72	68	65	69	66	63	61
3	79	70	63	57	77	68	62	56	66	60	55	63	58	54	61	57	53	51
4	72	62	54	48	70	61	53	48	58	52	47	56	51	46	54	50	46	44
5	67	55	47	41	65	54	47	41	52	46	41	51	45	40	49	44	40	38
6	61	50	42	36	60	49	41	36	47	40	35	46	40	35	44	39	35	33
7	57	45	37	32	55	44	37	32	43	36	31	42	36	31	40	35	31	29
8	53	41	33	28	52	40	33	28	39	33	28	38	32	28	37	32	28	26
9	49	38	30	25	48	37	30	25	36	30	25	35	29	25	34	29	25	23
10	46	35	28	23	45	34	27	23	33	27	23	32	27	23	32	26	23	21

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1345	23.6	26.8
0-40	2216	38.9	44.2
0-60	3965	69.6	79.0
0-90	5017	88.0	100.0
0-180	5017	88.0	100.0

Luminance Data

Angle In Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2697	2757	2801
55	2656	2684	2641
65	2557	2464	2336
75	2325	2046	1869
85	1844	1185	828

Candela

Angle	Along ||	45°	Across
0	1723	1723	1723
5	1708	1715	1719
10	1681	1693	1701
15	1641	1658	1670
20	1589	1611	1628
25	1524	1550	1570
30	1449	1478	1498
35	1363	1392	1417
40	1268	1296	1321
45	1163	1189	1208
50	1051	1071	1078
55	929	939	924
60	799	793	765
65	659	635	602
70	513	477	443
75	367	323	295
80	225	183	156
85	98	63	44
90	6	5	1

COOPER Lighting Solutions

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Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

Specifications and dimensions subject to change without notice.

ORDERING INFORMATION

SAMPLE NUMBER: ART-2ARC-232L-UNV-EB81-10B

Product
ART=Advanced Retrofit Technology

Width
2=2' Nominal

Series
ARC=ArcDuo Retrofit Kit

Number of Lamps
2=2 lamps (Not Included)

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

Shielding
L=Acrylic Lens Shield (Standard)

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)

Discontinued 12-21-2022

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.