

# 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 2' 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.

## 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

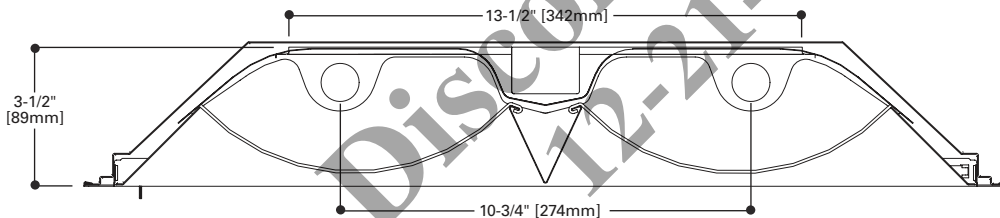
Cold rolled steel w/multistage iron phosphate pre-treatment for maximum bonding. Highly reflective matte white finish on all reflective surfaces for increased efficiency.

### 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.

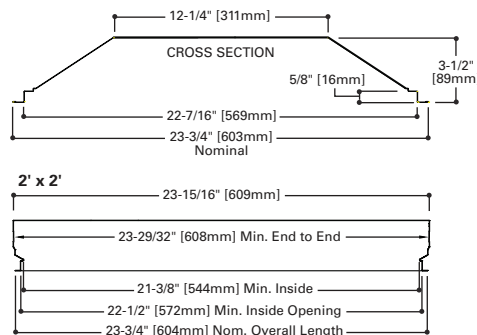
### Optics

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.



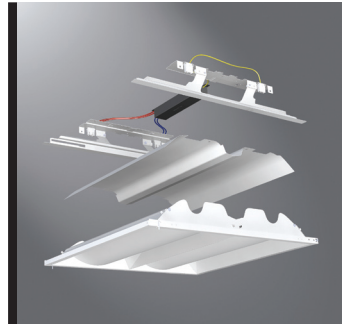
## RETROFIT COMPATIBILITY

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.

Catalog #		Type
Project		
Comments		Date
Prepared by		



## ARCDUO RETROFIT 2X2 217, 214T5 224T5

2 LAMP TROFFER AND  
PARABOLIC ARCHITECTURAL  
RETROFIT KIT

Patent Pending



## ENERGY DATA

Input Watts:  
EB Ballast & STD Lamps  
217=36

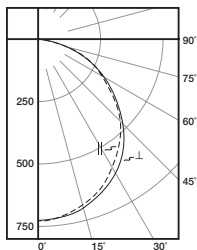
T5 Ballast & STD Lamps  
214T5=34  
224T5=52

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



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PHOTOMETRICS



**ART-2ARC-217L-UNV-EB81**

Electronic Ballast  
(2) 17WT8 Lamps  
1350 Lumens

Spacing criterion:  
(H) 1.2 x mounting height,  
(L) 1.3 x mounting height

Efficiency 73.0%

Test Report:  
ART-2ARC-217L-UNV-EB81.IES

LER = 53

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.87

**Coefficients of Utilization**

rc rv RCR	Effective floor cavity reflectance 20%																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	87	87	87	87	85	85	85	85	81	81	81	78	78	78	74	74	74	73						
1	80	76	73	70	78	75	72	69	71	69	67	69	67	65	66	65	63	62						
2	73	67	62	58	71	65	61	57	63	59	56	60	57	54	58	55	53	52						
3	66	59	53	48	64	57	52	48	55	51	47	53	49	46	51	48	45	44						
4	61	52	46	41	59	51	45	40	49	44	40	47	43	39	46	42	39	37						
5	56	46	40	35	54	46	40	35	44	39	35	43	38	34	41	37	34	32						
6	52	42	35	31	50	41	35	31	40	34	30	39	34	30	37	33	30	28						
7	48	38	32	27	46	37	31	27	36	31	27	35	30	27	34	30	26	25						
8	44	35	28	24	43	34	28	24	33	28	24	32	27	24	31	27	24	22						
9	42	32	26	22	41	31	26	22	31	25	22	30	25	22	29	25	21	20						
10	39	29	24	20	38	29	23	20	28	23	20	28	23	20	27	23	19	18						

**Zonal Lumen Summary**

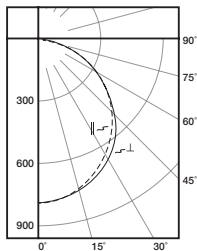
Zone	Lumens	% Lamp	% Fixture
0-30	558	20.6	28.3
0-40	909	33.7	46.1
0-60	1590	58.9	80.7
0-90	1970	73.0	100.0
0-180	1970	73.0	100.0

**Luminance Data**

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2276	2320	2385
55	2175	2193	2211
65	1954	1920	1912
75	1615	1561	1520
85	1008	806	605

**Candlepower**

Angle	Along H	45°	Across
0	724	724	724
5	720	718	722
10	707	708	712
15	688	689	697
20	661	667	676
25	630	637	650
30	592	603	616
35	550	568	576
40	506	517	532
45	458	467	480
50	406	415	423
55	355	358	361
60	297	298	297
65	235	231	230
70	177	172	169
75	119	115	112
80	67	63	59
85	25	20	15
90	0	0	0



**ART-2ARC-217L-WO-UNV-EB81**

Electronic Ballast  
(2) 17WT8 Lamps  
1350 Lumens

Spacing criterion:  
(H) 1.2 x mounting height,  
(L) 1.3 x mounting height

Efficiency 79.3%

Test Report:  
ART-2ARC-217L-WO-UNV-EB81.IES

LER = 56

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.60

**Coefficients of Utilization**

rc rv RCR	Effective floor cavity reflectance 20%																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	94	94	94	94	92	92	92	92	88	88	88	84	84	84	81	81	81	79						
1	87	83	80	77	84	81	78	75	78	75	73	75	73	71	72	70	69	67						
2	79	72	67	63	77	71	66	62	68	64	60	66	62	59	63	60	58	56						
3	72	64	57	52	70	62	57	52	60	55	51	58	54	50	56	52	49	47						
4	66	57	50	44	64	55	49	44	53	48	43	52	47	43	50	46	42	41						
5	61	51	43	38	59	50	43	38	48	42	38	46	41	37	45	40	37	35						
6	56	46	38	33	55	45	38	33	43	37	33	42	37	33	41	36	32	31						
7	52	41	34	30	51	41	34	29	39	34	29	38	33	29	37	32	29	27						
8	48	38	31	26	47	37	31	26	36	30	26	35	30	26	34	29	26	24						
9	45	35	28	24	44	34	28	24	33	28	24	32	27	23	32	27	23	22						
10	42	32	26	22	41	32	26	21	31	25	21	30	25	21	29	25	21	20						

**Zonal Lumen Summary**

Zone	Lumens	% Lamp	% Fixture
0-30	608	22.5	28.4
0-40	991	36.7	46.3
0-60	1730	64.1	80.8
0-90	2142	79.3	100.0
0-180	2142	79.3	100.0

**Luminance Data**

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2469	2519	2599
55	2352	2389	2401
65	2120	2087	2053
75	1751	1683	1629
85	1088	847	645

**Candlepower**

Angle	Along H	45°	Across
0	790	790	790
5	786	785	787
10	772	772	777
15	751	753	761
20	722	727	737
25	687	695	707
30	647	657	671
35	600	613	627
40	551	562	577
45	497	507	523
50	443	450	460
55	384	390	392
60	324	323	322
65	255	251	247
70	191	185	181
75	129	124	120
80	73	67	63
85	27	21	16
90	0	0	0

ORDERING INFORMATION

SAMPLE NUMBER: ART-2ARC-217L-UNV-EB81-10B

<p><b>Product</b> ART=Advanced Retrofit Technology</p>	<p><b>Width</b> 2=2' Nominal</p> <p><b>Series</b> ARC=ArcDuo Retrofit Kit</p>	<p><b>Number of Lamps</b> 2=2 lamps (Not Included)</p> <p><b>Wattage (Length)</b> 17=17W T8 (24") 14=14W T5 (24") 24=24W T5HO (24")</p>	<p><b>Distribution</b> Blank=White (Medium) WO=White Optics (General)</p>	<p><b>Voltage<sup>(1)</sup></b> 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120-277<sup>(2)</sup> NB=No Ballast</p> <p><b>Emergency Option</b> EL=Emergency Installed. Low Profile Battery Pack Only. (consult factory)</p>	<p><b>Ballast Type</b></p> <p><b>T5 Ballasts</b> EBT___=T5 or T5HO Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. Standard Ballast Factor=1.0</p> <p><b>Ballast/Factor Type</b> EBT__N=T5 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. Normal Ballast Factor=.90 EBT__H=T5 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. High Ballast Factor=1.15</p> <p><b>T8 Ballasts</b> EB8__=T8 Electronic Start. Total Harmonic Distortion &lt; 10%</p> <p>EB8__/PLUS= T8 Electronic Start. Total Harmonic Distortion &lt; 10%. High Ballast Factor &gt; 1.15</p> <p>ER8__=T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%</p> <p><b>High Performance T8 Ballasts</b> HB8__=T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10%. Standard Ballast Factor .86 - .88 HB8__L=T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10%. Low Ballast Factor .77 - .82 HB8__N=T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10%. Normal Ballast Factor 1.0 HB8__H=T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10%. Normal Ballast Factor 1.15 - 1.20 HR8__T8 Electronic Program Rapid<sup>(3)</sup> Start. Total Harmonic Distortion &lt; 10%. Standard Ballast Factor .86 - .88 HR8__DIM=T8 Electronic Program<sup>(3)</sup> Rapid Start. Total Harmonic Distortion &lt; 10%. Step Dimming. Ballast Factor .88 HR8__L=T8 Electronic Program<sup>(3)</sup> Rapid Start. Total Harmonic Distortion &lt; 10%. Low Ballast Factor .71 - .79 HR8__H=T8 Electronic Program<sup>(3)</sup> Rapid Start. Total Harmonic Distortion &lt; 10%. High Ballast Factor 1.15 - 1.20</p>	<p><b>Packaging</b> 10B=Bulk Pack U=Unit Pack (Consult factory for other packaging options)</p>
					<p><b>Number of Ballasts</b> 1=1 Ballast 2=2 Ballasts [Blank]=No Ballast (NB Option Only)</p>	

Discontinued  
12-21-2016

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

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