

# Aluminum Poles



## RTA ROUND TAPERED ALUMINUM

Catalog #		Type
Project		
Comments		Date
Prepared by		

### FEATURES

- Tapered aluminum shaft with polished finish
- Anchor bolt per ASTM A576 with (1) nut, (1) flat washer
- Cast aluminum alloy base with aluminum bolt covers
- Three-bolt and four-bolt anchorage configurations
- 10'-45' mounting heights
- Drilled or tenon (specify)

### DESIGN CONSIDERATIONS - VIBRATIONS AND NON-GROUND MOUNTED INSTALLATIONS

The information contained herein is for general guidance only and is not a replacement for professional judgment. Design considerations for wind-induced vibrations and non-ground mounted installations (e.g., installations on bridges or buildings) are not included in this document. Consult with a professional, and local and federal standards, before ordering to ensure product is appropriate for the intended purpose and installation location. Refer to the Cooper Lighting Solutions Light Pole White Paper for risk factors and design considerations. [Learn more.](#)

**NOTE:** The Limited Warranty for this product specifically excludes fatigue failure or similar damage resulting from vibration, harmonic oscillation or resonance.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutions or visit [www.cooperlighting.com](http://www.cooperlighting.com) for available options, accessories and ordering information.

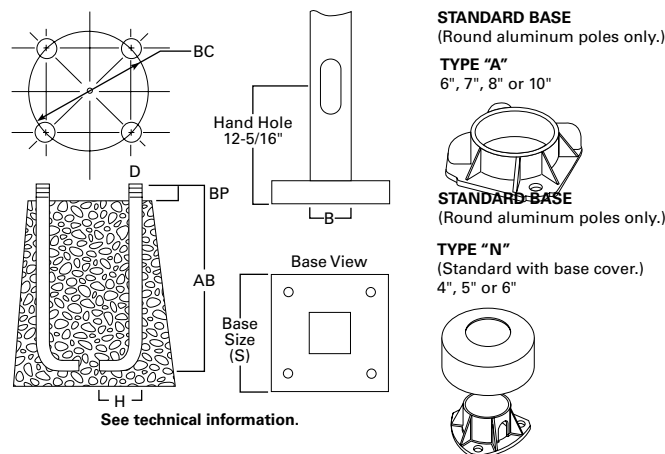
### ORDERING INFORMATION

**SAMPLE NUMBER:** RTA5T20NAG1V

Product Family	Shaft Size (Inches) <sup>1</sup>	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Options (Add as Suffix)
RTA=Round Tapered Aluminum	4=4" 5=5" 6=6" 7=7" 8=8" 0=10"	T=0.125" L=0.156" M=0.188"	10=10' 12=12' 15=15' 18=18' 20=20' 25=25' 30=30' 35=35' 40=40'	A=Aluminum (4-Bolt) <sup>2</sup> N=Aluminum (3-Bolt)	A=Satin Brushed Aluminum B=Clear Anodized C=Dark Bronze Anodized D=Black Anodized E=Medium Bronze Anodized F=Dark Bronze J=Summit White K=Carbon Bronze L=Dark Platinum R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color BK=Black Smooth BT=Black Textured	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 9=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling N=Type N Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple <sup>3</sup> 4=4 at 90° 5=2 at 90° 6=3 at 90° 7=2 at 120° X=None	A=1/2" Tapped Hub <sup>4</sup> B=3/4" Tapped Hub <sup>4</sup> C=Convenience Outlet <sup>5</sup> D=Base Cover for "A" Base E=GFCI Convenience Outlet <sup>5</sup> F=Vibration Pad G=Ground Lug H=Additional Hand Hole <sup>6</sup> V=Vibration Dampener

**NOTES:** 1. All shaft sizes nominal. 2. Base cover not included (order as option). 3. Square poles are 3 at 90°, round poles are 3 at 120°. 4. Tapped Hub is located 5' below the pole top and on the same side of pole as hand hole, unless specified otherwise. 5. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 6. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

### ANCHORAGE DATA



Pole	Anchor Bolt and Template Package	Template Only	Bolt Circle (inches)	Number of Bolts	Anchor Bolt Size (inches)
RTA4TxxN	317RB304	214346D	6-3/4	3	3/4 x 17 x 3
RTA5TxxN	317RB305	214354D	7-3/4	3	3/4 x 17 x 3
RTA6LxxA	317RB406	227872D	9-3/8	4	3/4 x 17 x 3
RTA7LxxA	436RB407	227875D	10-1/2	4	1 x 36 x 4
RTA8LxxA	436RB408	227878D	11-1/2	4	1 x 36 x 4
RTA8MxxA	436RB408	227878D	11-1/2	4	1 x 36 x 4
RTA0LxxA	436RB410	227881D	14-1/2	4	1 x 36 x 4
RTA0XxxA	542RB410HD	401258D	14-1/2	4	1 1/4 x 42 x 6

**Effective Projected Area (At Pole Top)**

Mounting Height (Feet)	Catalog Number <sup>1,2</sup>	Wall Thickness (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection <sup>3</sup> (Inches)	Shaft Taper <sup>3</sup> (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) <sup>4</sup>				Max. Fixture Load - Includes Bracket (Pounds)
								70 mph	80 mph	90 mph	100 mph	
MH			BC	BP	B	D x AB x H						
10	RTA4T10N	0.125	6-3/4	3-1/4	4 x 3	3/4 x 17 x 3	22	13.0	9.5	7.2	5.6	100
12	RTA4T12N	0.125	6-3/4	3-1/4	4 x 3	3/4 x 17 x 3	25	10.1	7.3	5.3	4.0	100
15	RTA4T15N	0.125	6-3/4	3-1/4	4 x 3	3/4 x 17 x 3	30	7.0	4.8	3.3	2.3	100
15	RTA5T15N	0.125	7-3/4	3-1/4	5 x 3	3/4 x 17 x 3	33	12.7	9.1	6.7	5.1	100
18	RTA5T18N	0.125	7-3/4	3-1/4	5 x 3	3/4 x 17 x 3	39	8.8	6.0	4.3	3.1	100
20	RTA5T20N	0.125	7-3/4	3-1/4	5 x 3	3/4 x 17 x 3	43	7.0	4.6	3.1	2.1	100
20	RTA6L20A	0.156	9-3/8	3-1/2	6 x 4	3/4 x 17 x 3	64	14.7	10.6	7.9	6.2	150
25	RTA6L25A <sup>5</sup>	0.156	9-3/8	3-1/2	6 x 4	3/4 x 17 x 3	81	8.8	5.9	4.1	3.0	150
25	RTA8L25A	0.156	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	106	20.3	15.0	11.5	9.0	200
30	RTA7L30A <sup>5</sup>	0.156	10-1/2	4-1/8	7 x 4	1 x 36 x 4	108	9.0	5.9	4.1	3.0	150
30	RTA8L30A <sup>5</sup>	0.156	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	117	13.5	9.6	7.2	5.5	200
30	RTA0L30A <sup>5</sup>	0.156	14-1/2	4-3/4	10 x 6	1 x 36 x 4	152	25.8	19.3	14.8	11.5	250
35	RTA8L35A <sup>5</sup>	0.156	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	140	9.0	6.0	4.3	3.1	150
35	RTA0L35A <sup>5</sup>	0.156	14-1/2	4-3/4	10 x 6	1 x 36 x 4	180	19.0	14.0	10.5	8.0	200
40	RTA8M40A <sup>5</sup>	0.188	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	210	8.2	5.3	3.7	2.6	100
40	RTA0L40A <sup>5</sup>	0.156	14-1/2	4-3/4	10 x 6	1 x 36 x 4	209	14.2	10.2	7.4	5.3	150

**Effective Projected Area (18" Above Pole Top)**

Mounting Height (Feet)	Catalog Number <sup>1,2</sup>	Wall Thickness (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection <sup>3</sup> (Inches)	Shaft Taper <sup>3</sup> (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) <sup>4</sup>				Max. Fixture Load - Includes Bracket (Pounds)
								70 mph	80 mph	90 mph	100 mph	
MH			BC	BP	B	D x AB x H						
10	RTA4T10N	0.125	6-3/4	3-1/4	4 x 3	3/4 x 17 x 3	22	11.2	8.3	6.3	4.8	100
12	RTA4T12N	0.125	6-3/4	3-1/4	4 x 3	3/4 x 17 x 3	25	8.9	6.4	4.7	3.5	100
15	RTA4T15N	0.125	6-3/4	3-1/4	4 x 3	3/4 x 17 x 3	30	6.2	4.3	2.9	2.0	100
15	RTA5T15N	0.125	7-3/4	3-1/4	5 x 3	3/4 x 17 x 3	33	11.2	8.1	6.0	4.5	100
18	RTA5T18N	0.125	7-3/4	3-1/4	5 x 3	3/4 x 17 x 3	39	7.9	5.4	3.9	2.8	100
20	RTA5T20N	0.125	7-3/4	3-1/4	5 x 3	3/4 x 17 x 3	43	6.4	4.2	2.8	1.9	100
20	RTA6L20A	0.156	9-3/8	3-1/2	6 x 4	3/4 x 17 x 3	64	13.4	9.6	7.2	5.6	150
25	RTA6L25A <sup>5</sup>	0.156	9-3/8	3-1/2	6 x 4	3/4 x 17 x 3	81	8.1	5.4	3.8	2.8	150
25	RTA8L25A	0.156	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	106	18.8	13.8	10.6	8.3	200
30	RTA7L30A <sup>5</sup>	0.156	10-1/2	4-1/8	7 x 4	1 x 36 x 4	108	8.1	5.3	3.7	2.6	150
30	RTA8L30A <sup>5</sup>	0.156	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	117	12.7	9.0	6.7	5.2	200
30	RTA0L30A <sup>5</sup>	0.156	14-1/2	4-3/4	10 x 6	1 x 36 x 4	152	24.2	18.1	13.9	10.8	250
35	RTA8L35A <sup>5</sup>	0.156	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	140	8.5	5.7	4.0	2.9	150
35	RTA0L35A <sup>5</sup>	0.156	14-1/2	4-3/4	10 x 6	1 x 36 x 4	180	18.0	13.2	10.0	7.5	200
40	RTA8M40A <sup>5</sup>	0.188	11-1/2	4-1/8	8 x 4-1/2	1 x 36 x 4	210	7.8	5.1	3.5	2.4	100
40	RTA0L40A <sup>5</sup>	0.156	14-1/2	4-3/4	10 x 6	1 x 36 x 4	209	13.3	9.6	6.9	5.0	150

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.
5. Factory installed vibration damper.

## VIBRATION

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Vibrations may cause damage to structures, including poles. Vibrations are unpredictable, and there are many factors and variables that can cause damaging vibrations. Many wind conditions exist that can create damaging vibrations to poles and luminaires, such as constant winds between 10-30 mph. Although all pole types can experience vibration, straight square poles seem to be most prone. Vibration dampers and/or a round tapered design may be used to mitigate damage from vibrations, but there is no guarantee damaging vibrations will be prevented. Vibration dampers are not included with this pole but can be ordered separately. Consult with a professional, and local and federal standards, to ensure this pole is appropriate for the intended purpose and installation location. Refer to Cooper Lighting Solutions' Light Pole White Paper for risk factors and design considerations.

## MAINTENANCE

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Perform inspections periodically. A prudent inspection schedule would be: one week after installation, one month after installation, yearly after installation, and following any major wind event. During the inspection, check the poles for cracks. If cracks are detected, remedial action is required. Recheck anchor bolt torques and re-tighten according to the recommended torque values. Check for missing covers and pole caps and replace as necessary. Check the pole for corrosion and deterioration of the finish. Should there be corrosion or deterioration, take remedial action to correct.

**WARNING:** Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutions or visit [www.cooperlighting.com](http://www.cooperlighting.com) for available options, accessories and ordering information.

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