



The Engineering
Resource For
Advancing Mobility

400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE RECOMMENDED PRACTICE

ARP 881B

Superseding ARP 881A

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LAMPS FOR AIRCRAFT LIGHTING

1. **PURPOSE AND SCOPE:** This Aerospace Recommended Practice (ARP) lists the lamps that are recommended for the type of service indicated. This list is not intended as a catalog and does not include many types that are now in use. It does, however, reflect current practice.
2. **DEFINITIONS:**
 - 2.1 **Trade No.:** The trade number is recorded with the American National Standards Institute and is uniform throughout the industry. It completely identifies a lamp and is sufficient identification for ordering.
 - 2.2 **Design Volts:** "Design Volts" shows the voltage at which a lamp is designed for the tabulated ampere, candlepower, and rated laboratory life characteristics.
 - 2.3 **Rated Average Laboratory Life:** "Rated average laboratory life" is the average life obtained in closely controlled laboratory life testing of groups of lamps at their design voltage. It is not necessarily the same as service life, where conditions such as shock, vibration, voltage fluctuations, and environment may result in a shorter average attained life.
 - 2.4 **Bulb, Base, Filament, and Light Center Length:** Refer to SAE standard, J573 (published in the SAE Handbook).
 - 2.5 **Marginal Indicia:** The phi (ϕ) symbol is used to indicate technical changes from the previous issue of this specification.

PREPARED BY SUBCOMMITTEE A-20B, EXTERIOR
OF
SAE COMMITTEE A-20, AIRCRAFT LIGHTING

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Service	Design Trade Volts Number	Amps or Watts	Mean Spherical Candelas	Bulb	Base	Fila- ment	Light Center Length in. mm	Maximum Overall Length in. mm	Amp(a) At Design Volts	Rated Average Lab. Life (hr.)	Approx. Weight lb. g	National Stock Number	Military Standard
Landing	13 4509(b)	100W		PAR-36	Scr. Term.	C-6		2-3/4	69.8	7.69	0.52	236	237-7867 MS25243-4509
	13 4537(b)	100W		PAR-46	Scr. Term.	C-6		3-1/8	79.4	7.69	0.92	417	946-9636
	13 4313(b)	250W		PAR-36	Scr. Term.	C-6		2-3/4	69.8	19.23	0.52	236	946-4807
	13 4522(b)	250W		PAR-46	Scr. Term.	C-2		3-1/8	79.4	19.23	0.92	417	155-7920 MS25241-4522
	28 4553(b)	250W		PAR-46	Scr. Term.	CC-8		3-1/8	79.4	8.92	0.92	47	725-4683 MS25241-4553
	28 4557	600											
	28 4557(b)	1000W		PAR-64	Scr. Term.	CC8/C6		95.2	35.70	25/100	2.00	907	519-2131
	28 4559(b)	600W		PAR-64	Scr. Term.	CC-8		3-3/4	95.2	21.41	2.00	907	145-1110 MS25242-Q4559
	28 4559X(b)	600W		PAR-64	Scr. Term.	CC-6		3-3/4	95.2	21.41	2.00	907	
	28 4581(b)(c)	450W		PAR-46	Scr. Term.	CC-8		3-1/8	79.4	16.08	0.92	417	557-3065 MS25241-4581
	28 4596(b)	250W		PAR-36	Scr. Term.	CC-8		69.8	8.92	25	0.52	236	577-8450
Taxiing													
	28 1986	250W	600	T-4	Wire Term.	CC-6		2	50.8	8.92	0.031	14	
	28 4551(b)	250W		PAR-46	Scr. Term.	CC-6		3-3/4	95.2	8.92	0.92	417	583-3334 MS24517-4551
	28 4570(b)	150W		PAR-46	Scr. Term.	CC-6		3-3/4	95.2	5.36	0.92	417	132-5328 MS28926-4570
Navigation													
	6 1680	4.1A	32	S-B	S.C. Bay.	C-6	1-1/4 31.8	2	50.8	4.1	0.021	10	870-7778 MS35478-1680
	6.2 600(d)	26W		GG-10	S.C. Index	C-2R		2-3/16	55.6	4.19	0.019	9	MS25309-600
	6.2 1163(d)	40W		GG-12	S.C. Index	C-6		2-1/2	63.5	6.45	0.025	11	MS24513-1163
	6.2 1687(d)	40W		GG-12	S.C. Index	C-6		2-1/2	13.5	6.45	0.025	11	870-0799 MS25338-1687
	10 1978X	100W	130	T-3	Spec.	C-8		2.025	51.43	10.0	0.016	7	
	10 1988	100W	130	T-3	Spec.	C-8		2.15	54.6	10.00	0.019	9	548-3978
	12.8 1777	1.52A	26	S-8	S.C. Bay.	C-2R	1-1/8 28.57	2	50.8	1.52	0.021	10	941-2701
	13 7512-12(d)	26W		GG-10	S.C. Index	C-2R		2-3/16	55.8	2.0	0.019	9	
	14 4174-12(d)	40W		GG-12	S.C. Index	C-6		2-1/2	63.5	3.08	0.05	11	
	14 7079B-12(d)	40W		GG-12	S.C. Index	C-6		2-1/2	63.5	3.08	0.025	11	
	28 7079(d)	40W		GG-12	S.C. Index	CC-6		2-3/16	63.5	1.43	0.025	11	789-2260 MS25338-7079
	28 7512(d)	26W		GG-10	S.C. Index	CC-6		2-3/16	55.6	1.93	0.015	9	504-2090 MS25309-7512
	28 4174(d)	40W		GG-12	S.C. Index	CC-6		2-1/2	63.5	1.43	0.025	11	519-0854 MS24513-4174
	28 1683	1.02A	32	S-8	S.C. Bay.	CC-6	1-1/4 31.8	2	50.8	1.02	0.021	10	044-6914 MS35478-1683
	28 1970X	100W	140	T-3	Spec.	CC-8		2-1/4	57.2	3.57	0.016	7	
	28 1967	150W	210	T-3	Spec.	CC-8		2-1/4	57.2	5.36	0.016	7	045-7173
Wing													
Inspection	13 Q4631(b)	250W		PAR-36	Scr. Term.	C-6		2-3/4	69.8	19.23	0.52	236	
	28 4502(b)	50W		PAR-36	Scr. Term.	CC-6		2-3/4	69.8	1.78	0.52	236	196-4518 MS25243-4502
Interior													
	12.8 1141	1.44A	21	S-8	S.C. Bay.	C-6	1-1/4 31.8	2	50.8	1.44	0.021	10	155-7799 MS35478-1141
	13 89	.58A	6	G-6	S.C. Bay.	C-2R	3/4 19.0	1-7/16	36.5	.58	0.012	6	143-3159 MS15570-89
	28 1308	.56A	16	B-6	S.C. Bay.	CC-8	1-1/16 27.0	1-3/4	44.5	.56	0.016	7	
	28 456	.17A	2	G-4 1/2	Min. Bay.	C-2F	9/16 14.3	1-1/16	27.0	.17	0.012	6	941-8479
	28 301	.17A	3	G-5	S.C. Bay.	C-2F	11/16 17.3	1-3/8	34.9	.17	0.012	6	155-7947 MS25238-301
	28 303	.30A	6	G-6	S.C. Bay.	C-2F	3/4 19.0	1-7/16	36.5	.30	0.012	6	155-7848 MS15570-303
	28 1309	.52A	15	B-6	S.C. Bay.	C-2F	1-1/16 27.0	1-3/4	44.5	.52	0.016	7	060-4707
	28 305	.51A	15	S-8	S.C. Bay.	C-2V	1-1/8 28.6	2	50.8	.51	0.021	10	155-7791 MS35478-305
	28 1691	.61A	15	S-8	S.C. Bay.	CC-8	1-1/8 28.6	2	50.8	.61	0.021	10	295-2666 MS35478-1691
	28 3051F(e)	.51A	15	S-81F	S.C. Bay.	C-2V	1-1/8 28.6	2	50.8	.51	0.021	10	295-2666 MS35478-1691
	28 16911F(e)	.61A	15	S-81F	S.C. Bay.	C-2V	1-1/8 28.6	2	50.8	.61	0.021	10	441-2708

Service	Design	Trade Number	Amps or Watts	Mean Spherical Candelas	Bulb	Base	Fila-ment	Light Center in. mm	Maximum Overall Length in. mm	Amp(a) At Design Volts	Rated Average Lab. Life (hr.)	Approx. Weight Lb.	National Stock Number	
Interior	28	2232	.643A	18	S-8	S.C. Bay.	CC-8	1-3/16 30.6	2	50.8	.643	2000	0.021 10 MS35478-2232	
	28	307	.67A	21	S-8	S.C. Bay.	C-2V	1-1/8 28.6	2	50.8	.67	300	0.021 10 MS35478-307	
	28	3071F(e)	.67A	21	S-81F	S.C. Bay.	C-2V	1-1/8 28.6	2	50.8	.67	300	0.021 10 122-0264	
	28	1665	.80A	21	S-8	S.C. Bay.	C-2V	1-1/8 28.6	2	50.8	.80	1000	0.021 10 241-9703	
	28	16651F(e)	.80A	21	S-81F	S.C. Bay.	C-2V	1-1/8 28.6	2	50.8	.80	1000	0.021 10 941-2709	
	28	2233	.766A	21	S-8	S.C. Bay.	CC-8	1-3/16 30.0	2	50.8	.766	2000	0.021 10 MS35478-16651F	
	28	3011	1.29A	44	S-11	S.C. Bay.	C-2V	1-1/4 31.8	2	60.3	1.29	1000	0.021 10 MS35478-2233	
	28	705	.51A	15	S-8	S.C. Bay.	CC-6	1.12 28.4	2	50.8	.51	900	0.021 10 MS25235-3011	
	β	(g)	5004WW(g)	4W		T-5	Min. Pinless			6(m)	152		7500(l)	0.045 20 053-8273
		(g)	5008WW(g)	8W		T-5	Min. Pinless			12(m)	305		7500(l)	0.075 34 955-9174
(g)		5013WW(g)	13W		T-5	Min. Pinless			21(m)	533		7500(l)	0.125 57 880-7800	
(g)		5104WW(g)	4W		T-5	Min. Bi Pin			6(m)	152		7500(l)	0.045 20 916-8196	
(g)		5106WW(g)	6W		T-5	Min. Bi Pin			9(m)	228		7500(l)	0.06 27 691-1397	
(g)		5108WW(g)	8W		T-5	Min. Bi Pin			12(m)	305		7500(l)	0.075 34 955-9173	
(g)		5113WW(g)	13W		T-5	Min. Bi Pin			21(m)	533		7500(l)	0.125 57 955-9164	
(g)		F14T12WW(g)	14W		T-12	Med. Bi Pin			15.0(m)	381		9000(e)	0.200 91	
(g)		F15T12WW(g)	15W		T-12	Med. Bi Pin			18.0(m)	457		9000(e)	0.247 112	
(g)		F20T12WW(g)	20W		T-12	Med. Bi Pin			24.0(m)	610		9000(e)	0.320 145	
β	(g)	F30T12WWS(g)	30W		T-12	Med. Bi Pin			36.0(m)	914		13000(e)	0.478 217	
	Indicator	5	680	.06A	.03	T-1	Wire Term.	C-2R	3/16 4.7	1/4	6.35	.06	(j)	0.0004 .2 878-1965
		5	682	.06A	.03	T-1	Sub-Mid Fl.	C-2R	3/16 4.7	3/8	9.14	.06	(j)	0.0006 .3 879-4980
		5	683	.06A	.05	T-1	Wire Term.	C-2R	3/16 4.7	1/4	6.35	.06	(k)	0.0004 .2 060-2941
		5	685	.06A	.05	T-1	Sub-Mid Fl.	C-2R	3/16 4.7	3/8	9.14	.06	(k)	0.0006 .3 752-2581
		5	715	.115A	.15	T-1	Wire Term.	C-2R	3/16 4.7	1/4	6.35	.115	(k)	0.0004 .2 080-4508
	or	5	718	.115A	.15	T-1	Sub-Mid Fl.	C-2R	3/16 4.7	3/8	9.14	.115	(k)	0.0006 .3 764-8237
		6	316	.7A	3.4	T-3-1/4	Min. Bay.	C-2R	5/8 15.8	1-3/16 30.0	.7	500	0.006 3 817-9803	
		6	328	.2A	3.4	T-1-3/4	Mid. Flange	C-6	5/8 15.8	5/8 15.8	.2	1000(m)	0.012 5 155-7857	
		13	89	.58A	6	G-6	S.C. Bay.	C-2R	3/4 19.0	1-7/16 36.5	.58	750	0.012 5 143-3159	
13		1816	.33A	3	T-3-1/4	Min. Bay.	C-2V	5/8 15.8	1-3/16 30.0	.33	1000	0.006 3 155-7949		
Instrument	14	330	.08A	0.5	T-1-3/4	Mid. Flange	C-2F	3/8 9.5	5/8 15.8	.08	750	0.0012 5 196-4491		
	28	301	.17A	3	G-5	S.C. Bay.	C-2F	11/16 17.3	1-3/8 34.9	.17	500	0.012 5 155-7947		
	28	303	.30A	6	G-6	S.C. Bay.	C-2F	3/4 19.0	1-7/16 36.5	.30	500	0.012 5 155-7848		
	28	313	.17A	3.5	T-3-1/4	Min. Bay.	C-2F	5/8 15.8	1-3/16 30.0	.17	500	0.006 3 155-8714		
	28	1864	.17A	3.0	T-3-1/4	Min. Bay.	C-2F	5/8 15.8	1-3/16 30.0	.17	1500	0.006 3 765-8443		
β	28	387	.04A	0.3	T-1-3/4	Mid. Flange	C-2F	3/8 9.5	5/8 15.8	.04	7000	0.0012 5 763-7744		
	28	327	.04A	.34	T-1-3/4	Mid. Flange	C-2F	3/8 9.5	5/8 15.8	.04	4000	0.0012 5 155-7836		
	28	1495	.30A	6	T-4-1/2	Min. Bay.	C-2F	5/8 15.8	1-3/8 34.9	.30	500	0.006 3 299-4742		
	28	1495X	.30A	6	T-4-1/2	Min. Bay.	C-2F	5/8 15.8	1-3/8 34.9	.30	500	0.006 3 MS25069-1495		