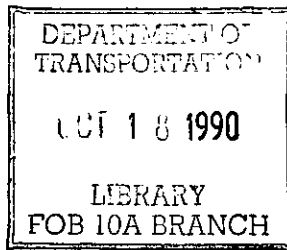




U.S. Department
of Transportation
**Federal Aviation
Administration**



Advisory Circular

Subject: APPROVED AIRPORT EQUIPMENT

Date: 2/20/89

Initiated by: AAS-200

AC No: 150/5345-1U

Change:

- 1. PURPOSE.** This advisory circular (AC) contains a listing of manufacturers that have obtained qualification approval to specifications for airport equipment. This equipment may be funded for installation under Federal grant assistance programs for airports.
- 2. CANCELLATION.** This advisory circular cancels AC 150/5345-1T, Approved Airport Lighting Equipment, dated July 19, 1988.
- 3. PRINCIPAL CHANGES.** Several additions and deletions have been made to the lists of qualified manufacturers. The revised list reflects changes made through December 31, 1988.

NOTICE: The Approval Listing for Cables (AC 150/5345-7D) will no longer be listed in this Advisory Circular.

- 4. APPROVED EQUIPMENT BULLETIN BOARD.** The approval list is now available through a computer bulletin board which permits access to up-to-date listings. The communication software used must emulate the Data General. Two known communication packages are "Softerm" and "Smarterm." The log-on procedure is as follows:

PHONE: 202-426-0477

When connected enter (return)

NAME: AAS200_ SCOOP

PASSWORD: AIRPORT__88

Leonard E. Mudd
Director, Office of Airport Safety & Standards

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NOTICE TO USERS

The specification for each piece of equipment in this document is contained in the advisory circular given at the top of the product list. The equipment specification defines the type, class, and style classifications used in the listing. Not all combinations of type, class, and style are permissible--the equipment specification should be consulted for approved equipment configurations. For the sake of brevity, manufacturers who have qualified an entire equipment series or product line have the equipment listed under a single general catalog number. These general numbers are not intended for use in ordering equipment, and users should consult equipment manufacturers' catalogs or literature for complete ordering information, especially for equipment having optional features.

For airport lighting fixtures, the number in parentheses () after the manufacturer's catalog number indicates the specific lamp type approved for use in the equipment. A description of each lamp is given on pages 21 and 22.

SECTION I - AIRPORT LIGHTING EQUIPMENT

L-801--Beacons, Medium Intensity

(AC 150/5345-12C)

Manufacturer	Manufacturer's catalog number					
	Type L-801A		Type L-801S		Type L-801H	
	Class 1	Class 2	Class 1	Class 2	Class 1	Class 2
ADB- ALNACO, Inc.		80112, 44D0793- X(88) 80114, 44D0221- X(88) 80116, 44D0414- X(67,89)		80132, 44D1032- X(88)		80123, 44D0808- X(88)
Appollo Lighting Co.		0200 Series (85,86)		0200 Series (85,86)		
Godfrey Engineer- ing, Inc.	GEA30-2(88) GEA30-3(88)	GEA30-2(88) GEA30-3(88)			GEA30-1(87)	GEA30-1(87)
Manairco, Inc.		AB-1000D (88) AB-1000F (88)		AB-1000DS (88) AB-1000FS (88)		AB-500H (87)
National Airport Equipment Co.		N-1000A(88) N-1000A4(88)		N-1000S(88)		

L-802--Beacons, High Intensity

(AC 150/5345-12C)

Manufacturer	Manufacturer's catalog number					
	Type L-802A		Type L-802S		Type L-802H	
	Class 1	Class 2	Class 1	Class 2	Class 1	Class 2
ADB-ALNACO, Inc.	802XX, 44D1500- 1XX(67)		802XX, 44D1500- 2XX(67)			
Crouse-Hinds Navigation Aids	65000-G (60,61)	65000-G-1 (60,61)	65000-Y (60,61)	65000-Y-1 (60,61)		
National Airport Equipment Co.	N-36(60,61)	N-36(60,61)				

L-804—Light, Holding Position Edge

(AC 150/5345-46A)

Manufacturer	Mode	Manufacturer's catalog number
ADB-ALNACO, Inc. Crouse-Hinds Navigation Aids	1, 2 1	804XX-XXXX, 44D1261, 44D1262 (31) 41804 (71)

L-806--Wind Cones, Frangible

(AC 150/5345-27C)

Manufacturer	Size	Manufacturer's catalog number	
		Lighted	Unlighted
ADB-ALNACO, Inc.	1	44D1222-3, 4 80600-1000 Series	44D1222-1, 2 80600-2000 Series
Crouse-Hinds Navigation Aids	1	71043	71044
Godfrey Engineering Inc.	1	GEA-45-FL Series	GEA-45 Series

L-807--Wind Cones, Rigid

(AC 150/5345-27C)

Manufacturer	Size	Manufacturer's catalog number	
		Lighted	Unlighted
ADB-ALNACO, Inc.	1	44D0941-X Series	44D0941-X Series
	2	80708-1000 Series	80708-2000 Series
Behrens Construction, Inc.	2	80712-1000 Series	80712-2000 Series
	2	LGW312S, LGW-312S-OB	
Crouse-Hinds Navigation Aids	1	44481D, 44484B	44482A, 44483B
	2	48310B, 48313B	48311B, 48312B
Godfrey Engineering Inc.	1	GEA-40-18-FL Series	GEA-40-18 Series
	1	GEA-40-36-FL Series	GEA-40-36 Series

L-810--Lights, Obstruction

(AC 150/5345-43C)

Manufacturer	Manufacturer's catalog number	
	Single unit	Double unit
ADB-ALNACO, Inc.	81001-1000, 44C1005-X (4)	81002-1000, 44C1007-X (4)
	81001-2000 (11)	81002-2000, 44C1532-1XXX (11)
Crouse-Hinds Navigation Aids	40940, 50033 (4)	50021 (4)
Godfrey Engineering Inc.	GEA-60-1,-3 (11)	GEA-61-1,-3 (11)
	GEA-60-2,-4 (30)(32)	GEA-61-2,-4 (30)(32)
Hughey & Phillips, Inc.	OB20(32)	OB22(32)
	OB21(32)	OB24(32)
Killark Electric Mfg. Co.	BYMB-3600-AHQ (30)	BYMB-36002-AHQ (30)
TWR Lighting, Inc.	OL-1 (32)	OL-2 (32)

L-821--Panel, Airport Lighting Control

(AC 150/5345-3D)

Manufacturer	Type	Class	Style
ADB-ALNACO, Inc.	I, II	F, S, W	1, 2, 3
Airport Lighting Control Co.	I	F, S, W	1, 2
Appollo Lighting Co., Inc.	I, II	F, S, W	1, 2, 3
Associated Engineering Co.	I, II	F, S, W	1, 2, 3
Crouse-Hinds Navigation Aids	II	F	1
Eaton Corporation	I, II	F, S, W	2, 3
Godfrey Engineering Inc.	I, II	F, S, W	1, 3
Universe, Inc.	I, II	F, S, W	1, 2, 3

L-823--Connectors, Cable

(AC 150/5345-26B)

Manufacturer	Type	Style	Class	Manufacturer's catalog number
Amerace Corporation (Elastimold)	I	2	A	54MP
	I	3,10	B	54KIT
	I	9	A	54MR
	II	8	A	93MR
	II	4	B	90P
	II	11	B	90R
	II	5	B	91P
	II	12	B	91R
Joy Manufacturing Co.	I	3,10	B	X8077-257A
				X8077-301A
				X8077-387A
				X8077-467
	II	4	B	X8405-249
	II	11	B	5000112
Molded Electric Products, Inc.	II	1	A	10518
	I	2	A	10949
	I	3	B	310XXX
	II	7	A	10519
	II	8	A	10875
	I	9	A	10950
	I	10	B	310XXX
OY ENSTO AB	I	3,10	B	KD510
	I	3,10	B	KD510.1
	I	3,10	B	KD510.5
	II	4	B	KD503
	II	11	B	KD502
	II	4	B	KD501
	II	4	B	KD5501.1

L-827--Monitors, Regulator

(AC 150/5345-10E)

Manufacturer	Manufacturer's catalog number	Compatible regulator types
ADB-ALNACO, Inc.	44D1282-XX 827XX-XXXX	ADB-ALNACO, Inc.
Crouse-Hinds Navigation Aids	31400	Crouse-Hinds Lighting (formerly Sepco), all models, wet and dry Hevi-Duty Electric, dry models GE P/N C901G5XXX
Hevi-Duty Electric	RSML 827AC5 RSML 827AC3 RSML 827AC3R	Hevi-Duty SCR3B series Hevi-Duty CCR3B series
Multi-Electric Manufacturing	7750-10 and 7750-11	Hevi-Duty Electric, oil cooled Westinghouse Canada, Inc. all-dry models

L-828--Regulators, Constant Current

(AC 150/5345-10E)

Manufacturer	Rating (kW)	Class	Style	Manufacturer's catalog number
ADB-ALNACO, Inc.	4	1	1,2	82804-XXXX, 828T4-XXXX, 44D10XX-X, 44D13XX-X Series
(Air-cooled)	7½	1	1,2	82807-XXXX, 828T7-XXXX 44D10XX-X, 44D13XX-X Series
	10	1	1,2	82810-XXXX, 44D10XX-X, 44D13XX-X Series
	15	1,(2)*	1,(2)*	82815-XXXX, 44D10XX-X Series 44D13XX-X Series
	20	1,(2)*	1,(2)*	82820-XXXX, 44D10XX-X Series 44D13XX-X Series
	30	1,(2)*	1,(2)*	82830-XXXX, 44D11XX-X Series 44D13XX-X Series
(Oil-cooled)	50	2	2	82850-XXXX, 44D136X-X Series
	70	2	2	82870-XXXX, 44D136X-X Series
Crouse-Hinds Co.	4	1	1,2	31000-4 Series, 313XX Series
Navigation Aids	7½	1	1,2	31000-7.5 Series, 313XX Series
(Air-cooled)	10	1	1,2	31000-10 Series, 313XX Series
(Oil-cooled)	10	1	2	31060-10-Series
	15	1	2	31060-15-Series
	20	1,2	2	31060-20-, 31060-21-Series
	30	1,2	2	31060-30-, 31061-31-Series
	50	2	2	31060-50-Series
	70	2	2	31060-70-Series
Hevi-Duty Electric	4	1	1,2	4L828XXDX Series
(Air-Cooled)	7½	1	1,2	7L828XXDX Series
	10	1	1,2	10L828XXDX Series
(Oil-cooled)	10	1	1,2	10L828XXLX Series
	15	1	1,2	5L828XXLX Series
	20	1,2	2	20L828XXLX Series
	30	1,2	2	30L828XXLX Series
	50	2	2	50L828XXLX Series
	70	2	2	70L828XXLX Series
Westinghouse	4	1	1,2	W4L828W, 04L828W Series
Canada, Inc.	7½	1	1,2	W7L828W, 07L828W Series
	10	1	1,2	10L828W Series
(All units are air-cooled)	15	1	1,2	15L828W Series
	20	1,2	2	20L828W Series
	30	1,2	2	30L828W Series
	50	2	2	50L828W Series
	70	2	2	70L828W Series

*Designation following class number means class has only the * style approved.

L-829--Regulators, Monitored Constant Current

(AC 150/5345-10E)

Manufacturer	Rating	Class	Style	Manufacturer's catalog number
ADB-ALNACO, Inc.	(Approved for use with all ADB-ALNACO L-828 regulators)			829XX-XXXX, 44D10XX-X Series 44D11XX-X Series, 44D13XX-X Series
Crouse-Hinds Navigation Aids				31060-CM Series
Hevi-Duty Electric				XXL829XXDX XXL829XXLX
Westinghouse Canada, Inc.				XXL829W Series

L-830--Isolation Transformers, 60Hz

(AC 150/5345-47)

L-830			Manufacturer's catalog number		
Type	Watts	Amperes Pri/ Sec	Amerace Corp. (Elastimold Div.)	Crouse-Hinds Navigation Aids	ADB-ALNACO, Inc.
L-830-1	30/45	6.6/6.6	TA 045666-01 TA 045666-01(1)	33001	83001-1XXX, 35C0077 83001-211X, 35C0101
L-830-2	30/45	20/6.6	TA 045266-01		83002-221X, 35C0102
L-830-3	65	6.6/6.6	TA 065666-01	33003	83003-111, 35C0079 83003-211X, 35C0103
L-830-4	100	6.6/6.6	TA 100666-01	33004	83004-111, 35C0080 83004-211X, 35C0104
L-830-5	100	20/6.6	TA 100266-01	33005	83005-1130, 35C0081 83005-221X, 35C0105
L-830-6	200	6.6/6.6	TA 200666-01	33006	83006-1XXX, 35C0082 83006-211X, 35C0106
L-830-7	200	20/6.6	TA 200266-01	33007	83007-1XXX, 35C0083 83007-221X, 35C0107
L-830-8	300	6.6/20	TA 300626-01	33008	83008-212X, 35C0108
L-830-9	300	20/20	TA 300226-01	33009	83009-222X, 35C0109
L-830-10	300	6.6/6.6	TA 300666-01	33010	83010-1110, 35C0086 83010-211X, 35C0110
L-830-11	300	20/6.6	TA 300266-01		83011-1130, 35C0087 83011-221X, 35C0111
L-830-12	500	6.6/20	TA 500626-01		3012-1120, 35C0088 83012-212X, 35C0112
L-830-13	500	20/20	TA 500226-01	33013	83013-1XXX, 35C0089 83013-222X, 35C0113

L-831--Isolation Transformers, 50Hz

(AC 150/5345-47)

L-831			Manufacturer's catalog number	
Type	Watts	Amperes Pri/Sec	Amerace Corp.(Elastimold Div.)	Crouse-Hinds Navigation Aids
L-831-1	30/45	6.6/6.6	TA 045666-01	33001
L-831-2	30/45	20/6.6		
L-831-3	65	6.6/6.6	TA 065666-01	33003
L-831-4	100	6.6/6.6	TA 100666-01	33004
L-831-5	100	20/6.6		33005
L-831-6	200	6.6/6.6	TA 200665-01	33006
L-831-7	200	20/6.6	TA 200265-01	33007
L-831-8	300	6.6/20		33008
L-831-9	300	20/20	TA 300225-01	
L-830-10	300	6.6/6.6	TA 300665-01	33010

L-841--Cabinet, Auxiliary Relay

(AC 150/5345-13A)

Manufacturer	Manufacturer's catalog number
ADB-ALNACO, Inc.	84100-0000, 44D1047-X
Airport Lighting Control Co.	6300, 6301, 6302, 6303
Associated Engineering Co.	714-841
Crouse-Hinds Navigation Aids	51503
Godfrey Engineering, Inc.	GEA 57
Hughey & Phillips, Inc.	RC41

L-847--Switch, Circuit Selector

(AC 150/5345-5A)

Manufacturer	Type	Class	Rating	Catalog no.
ADB-ALNACO, Inc.	1,2,3,4	A,B	1,2	44B1035-X 8470X-0000 (X=1,2,3, or 4)
Crouse-Hinds Navigation Aids	1,2,3,4	A,B	1,2	30847

L-849--Lights, Runway End Identification

(AC 150/5345-51)

Manufacturer	Style	Manufacturer's catalog number
ADB-ALNACO, Inc.	A	84910-0000, 44A1161-1X
	C	84930-0000, 44A1161-2X
	E	84950-0000, 44A1161-3X (79, 80)
AMERIEL, Inc.	B	AL-849B
	F	AL-849F (72)
Flash Technology Corporation	F	FTS-412-X, FTS-432, FTS-442, FTS-452
	F	FTS-422-x, FTS-434, FTS-444, FTS-454 (76)
Godfrey Engineering Co.	A	GEA-20- (0502, 0504, 0508)
	C	GEA-25-100
	E	GE-3836-003 (79)
Multi-Electric Mfg., Inc.	A	551325-M, 551325-S
	E	551327-M, 551327-S (82)
Unitron International Systems	F	VGS-832 (81)

L-850--Lights, Runway, Inpavement

(AC 150/5345-46A)

Manufacturer	Type	Class	Manufacturer's catalog number
ADB-ALNACO, Inc.	A	1,2	850X1-XXXX, 44D1600-X1XX 44D0464-XXXX (29, 52, 55, 56)
	A	1,2	850X1-3XXX, 44D1640-XXXX (70)
	B	1,2	850X2-XXXX, 44D0469-XXX (34, 53, 62)
	B	1,2	850L2-XXXX, 44C1577-X1X0 (91)
	C	2	85023-XXXX, 44D0988-XXX (21, 58, 59)
	D	2	85024-XXXX, 44D1001-XXXX (21, 58, 64)
	E	2	850X5-1XXX, 44E0496-XXX (21, 58)
	E	2	850X5-2XXX (64)
	E	2	850X5-3XXX (63)
Crouse-Hinds Navigation Aids	A	1,2	20065, 20075 (35) 20335 (15,54)
	A	1,2	20065-LW, 20075-LW (49)
	A	1,2	20560, 20561 (65)
	B	1,2	20580, 20581 (65)
	B	1,2	20355, 20360 (34, 40)
	B	1,2	20370, 20365 (34, 40)
	C	1,2	20250 20255 (40, 54)
	D	1,2	20260, 20265 (40, 54)
	E	1,2	20480 (34,54)
Multi-Electric Mgf., Inc.	E	2	2856 (21)

9. EXEMPTION FROM SPECIFICATION REQUIREMENTS. No exemptions from the specifications, except as specified in paragraph 8, will be granted. However, it is recognized that equipment specifications may not cover all specific design and operational applications and that equipment may be submitted for approval that does not meet all specification requirements. If the proposed design is considered to have merit, then the applicable equipment specification will be revised to reflect the proposed design and submitted for comment through the normal coordination process with the aviation community. If no valid adverse comments are received on the proposed revision, then the proposed design may be given an interim approval before final approval and publication of the revised specification. In such cases, other manufacturers of similar equipment will be notified of the approval and of the forthcoming specification revision.

10. PUBLICATION OF APPROVAL LISTINGS. A listing of approved manufacturers will be published in this advisory circular which will be updated in January and July of each year. Changes in approval listings made between publication dates may be obtained from the office listed in paragraph 3 or from those FAA offices as listed in AC 150/5000-3, Address List for Regional Airports Divisions and Airport District/Field Offices, current edition.

11. FREEDOM OF INFORMATION ACT. Documentation submitted to the FAA for qualification approval may be made available to the public upon request through the Freedom of Information Act. Material marked "proprietary" will not be accepted under this approval process.

L-867--Light Base, Non-load Bearing--Continued

(AC 150/5345-42B)

Manufacturer	Type	Size	Class	Manufacturer's catalog number								
				Base	Multiple section base			Extension	Conv. Ring	Cover Plate	Spacer rings	Mud Plate
					Bottom	Middle	Top					
anda	L-869		I	7600				7602 to 7608	7599	7601		
	L-867	B	II	1224PVC				12S-EXT			12ER-	
	L-867	B	II	1224PVC-ADJ								

2/20/89

L-867--Light Base, Non-load Bearing--Continued

(AC 150/5345-42B)

Manufacturer	Type	Size	Class	Manufacturer's catalog number								
				Base	Multiple section base			Extension	Conv. Ring	Cover Plate	Spacer rings	Mud Plate
					Bottom	Middle	Top					
	L-868	C	I	158CC24	158B S125	158M S(H)	158T S(X)	158E(X)		158LO 125	158SM B(X)	1125
	L-868	C	I	158CG24								158M 1325 158M 1425

LEGEND:

Class I--Steel Base

Class II--Nonsteel Base

AC 150/5345-1U

L-880--Precision Approach Path Indicator

(AC 150-5345-28D)

Manufacturer	Style	Class	Manufacturer's Catalog Number
ADB-ALNACO, Inc.	A	II	8801X-XXXX,44A1418-1X(66)
	B	II	8802X-XXXX,44A1401-1X(66)
Crouse-Hinds Navigation Aids	A,B	I,II	26880 (Light unit) (68) 26870 (Power and control unit for Style A systems)
Multi-Electric Manufacturing	A,B	II	5902, 5903 (69)

NOTE:

Multi-Electric L-880 or L-881, made before April 1987, require the FAA-accepted modification from the manufacturer.

L-881--Abbreviated Precision Approach Path Indicator

(AC 150/5345-28D)

Manufacturer	Style	Class	Manufacturer's Catalog Number
ADB-ALNACO, Inc.	A	II	8811X-XXXX,44A1418-2X(66)
	B	II	8812X-XXXX,44A1401-2X(66)
Crouse-Hinds Navigation Aids	A,B	I,II	26881 (Light unit) (68) 26870 (Power and control unit for Style A systems)
Multi-Electric Manufacturing	A,B	II	5902, 5903 (69)

L-882--Generic Visual Approach Descent Indicator

(AC 150/5345-52)

Manufacturer	Equipment Type	Manufacturer's Catalog Number		
		Lamp housing	Adapter unit	Aiming bar
ADB- ALNACO, Inc.	VASI	85100-1000,44D0107	85101-0000, 44C0120.....	85102-0000, 44A0156
		85100-2000,44D0152		
		85100-3000,44D0154		
Crouse-Hinds Navigation Aids	VASI	25950-A	26005-A.....	26041-A
		26000-A	26600.....	
		25950-AV		
Hughey & Phillips, Inc.	VASI	VA382, VA384	VA38A2	VACB6114
		VA38ST, VA38S	VA38A4	
Multi-Electric Manufacturing	VASI	5556C	5562C.....	5559

NOTE:

PAPI Systems L-880 and L-881 are also approved as Type L-882 systems

L-883--Generic Visual Approach Descent Indicator

(AC 150/5345-52)

Manufacturer	Equipment Type		Manufacturer's Catalog Number		
	(For Airport installation)	(For Heliport installation)	Lamp housing	Adapter unit	Aiming bar
Devore Aviation	PLASI I		DA1001-5		
	PLASI II		DA2001-5		
		PLASI I (HELI- PLASI)	DA1001-7		
		PLASI II (HELI- PLASI)	DA2001-7		

Light Structure, Lightweight

(AC 150/5345-45)

Manufacturer	Type	Class	Manufacturer's catalog number
Jaquith Industries, Inc.	1	A	FAM

Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)

(FAA-E-2325d)

Manufacturer	Component	Manufacturer's catalog number
ADB-ALNACO, Inc.	ALL	44A1788
Godfrey Engineering, Inc.	ALL	GEA20-2325
Multi-Electric Mfg., Inc.	ALL	FA-9994

LAMP DESCRIPTIONS

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
(1)	8301	40	120		Yorkville Industries
(2)	15T6	15	120		General Electric, Philips
(3)	15T7C	15	120		Philips
(4)	69A21TS	69	120		General Electric, Sylvania, Philips
(5)	40C9½C/ST	40	120		Sylvania
(6)	25FC	25	120		General Electric, Sylvania
(7)	15A15/CL	15	120		Sylvania
(8)	25A19/GR/CL	25	120		Sylvania
(9)	40A21/GR/CL	40	120		Sylvania
(10)	6.6A/T10/1P	30		6.6	General Electric, Sylvania, Philips
(11)	6.6A/T10/P	45		6.6	General Electric, Sylvania, Philips
(12)	40A/TS	40	120		General Electric, Sylvania, Philips
(13)	25A/CL	25	120		General Electric, Sylvania
(14)	40T10P	40	120		General Electric, Sylvania
(15)	6.6AQ CL/DCR	200		6.6	Sylvania
(16)	20058	115		6.6	Crouse-Hinds
(17)	40732	45		6.6	Crouse-Hinds
(18)	40737	30		6.6	Crouse-Hinds
(19)	HG132PPF	30		6.6	Sylvania
(20)	HG112PPF	45		6.6	Sylvania
(21)	EWR	150		6.6	General Electric
(22)	6.6A/T14/2P	204		6.6	General Electric, Sylvania, Philips
(24)	25T8	25	120		General Electric
(26)	6.6ATSQ/CL2	115		6.6	Sylvania
(29)	48A0071	200		6.6	ADB
(30)	100A21/TS	100	120		General Electric
(31)	EXL	30		6.6	General Electric
(32)	116A21/TS	116	120		General Electric, Philips
(33)	EXM	45		6.6	General Electric
(34)	Q6.6A/T4/DCR	200		6.6	General Electric
(35)	20041-1	200		6.6	Crouse-Hinds
(36)	EVV	120		6.6	General Electric
(39)	55042	30		6.6	Sylvania
(40)	20496	115		6.6	Crouse-Hinds
(41)	48A0039	45		6.6	ADB
(42)	48A0040	65		6.6	ADB
(43)	19464	45		6.6	Crouse-Hinds
(44)	19484	65		6.6	Crouse-Hinds
(45)	55043	45		6.6	Sylvania
(48)	620PS40P	620	120		Philips, Sylvania, GE
(49)	20041-2	125		6.6	Crouse-Hinds
(50)	20521	34		6.6	Crouse-Hinds
(51)	19868	45		6.6	Crouse-Hinds
(52)	58809	125		6.6	Sylvania
(53)	58793	115		6.6	Sylvania
(54)	20538	185		6.6	Crouse-Hinds

LAMP DESCRIPTIONS—Continued

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
(55)	58801	200		6.6	Sylvania
(56)	6965	200		6.6	Philips
(57)	6859	30		6.6	Philips
(58)	6292	150		6.6	Philips
(59)	8422	120		6.6	Philips
(60)	MS 400/Vert	400	120		Sylvania
(61)	MVR/VDB 400	400	120		GE
(62)	58746	200		6.6	Sylvania
(63)	Q6.6A/T4/CL	200		6.6	Philips
(64)	40925	175		6.6	Sylvania, Crouse-Hinds
(65)	20624	62		6.6	Crouse-Hinds
(66)	64382	200		6.6	Osram
(67)	EGM/Q1000 CL/P	1000	120		GE
(68)	20531	200		6.6	Crouse-Hinds
(69)	T4DCR	200		6.6	Sylvania
(70)	44B1643	100		6.6	ADB-ALNACO, Inc.
(71)	20056	45		6.6	Crouse-Hinds
(72)	3884				Ameriel
(73)	77-3295				EG&G
(74)	77-2818				EG&G
(75)	3843				Flash Technology
(76)	4410				Flash Technology
(77)	4663				Flash Technology
(78)	5877				Flash Technology
(79)	FT34HP				GE
(80)	GN34				Genesis
(81)	UIS31603				Genesis
(82)	550330-14				Multi-Electric
(83)	G01-007				TWR Lighting
(84)	15TTN	15	120		GE
(85)	EGG	750	120		Sylvania
(86)	EGM	1000	120		Sylvania
(87)	Q500PAR56/NSP	500	120		GE
(88)	Q1000PAR64/NSP	1000	120		GE
(89)	EGG/Q750CL/P	750	120		GE
(90)	EZL	200		6.6	GE
(91)	48AD107	45		6.6	ADB-ALNACO, Inc.

SECTION II - FRICTION MEASURING DEVICES

(AC 150/5320-12)

Manufacturer	Friction measuring equipment
Airport Equipment Company AB	Skiddometer BV-11 trailer
K.J. Law Engineers, Inc.	M 6800 Runway Friction Tester Van
Bison Instruments, Inc.	Mark IV Mu Meter Trailer
Saab-Scania AB	Mark II Saab Friction Tester Automobile

SECTION III - AUTOMATIC WEATHER OBSERVING SYSTEMS (AWOS)

(AC 150/5220-16)

Manufacturer	Type	Configuration Identification
ARTAIS	AWOS-I	WEATHER CHECK V-I-B
	AWOS-II	WEATHER CHECK V-2-A
	AWOS-III	WEATHER CHECK V-2-B WEATHER CHECK V-3-A WEATHER CHECK V-3-B
HANDAR, Inc.	AWOS-I	HANDAR AWOS-I-1
	AWOS-II	HANDAR AWOS-II-2
	AWOS-III	HANDAR AWOS-IIIA-1; AWOS IIIB-1 HANDAR AWOS-IIIA-2; AWOS IIIB-2
QUALIMETRICS	AWOS-I	120-A, 120-B, 130-A, 130-B, 210, 220, 230
	AWOS-II	121-A, 121-B, 131-A, 131-B, 211, 221, 231
	AWOS-III	123-A, 123-B, 133-A, 133-B, 213, 223, 233

Control Industries, Inc.
409 Lafayette Avenue
Urbana, Ohio 43078
(513) 653-7694

Crouse-Hinds Navigation Aids
1200 Kennedy Road
Windsor, Connecticut 06095
(203) 683-4300

DeVore Aviation Corporation
6104 Kircher Boulevard, N.E.
Albuquerque, New Mexico 87109
(505) 345-8713

Eaton Corporation
9475 Center Road
Fenton, Michigan 48430
(313) 629-5361

EG&G, Inc.
35 Congress Street
Salem, Massachusetts 01970
(508) 745-3200

Fields & Associates
8626 G Street
P.O. Box 6007
Oakland, California 94603
(415) 569-7929

Flash Technology Corporation
55 Lake Street
Nashua, New Hampshire 03060
(603) 883-6500

Gafner Machine, Inc.
103 North 12th Street
P.O. Box 401
Gladstone, Michigan 49837-0401
(906) 428-4800

Godfrey Engineering Inc.
P.O. Box 260803
Tampa, Florida 33685
(813) 855-4428

HANDAR, Incorporated
1188 Bordeaux Drive
Sunnyvale, California 94089-1281
(408) 734-9640

Hevi-Duty Electric Co.
Box 268
Goldsboro, North Carolina 27530-0046
(919) 734-8900

Hughey & Phillips, Inc.
2162 Union Place
Simi Valley, California 93065
(805) 581-5591

Jaquith Industries, Inc.
East Brighton and Glen Avenues
P.O. Box 780
Syracuse, New York 13205
(315) 478-5700

Joy Industrial Equipment Company
Molded Rubber Products Division
Route 4, Box 156
La Grange, North Carolina 28551
(919) 566-3014

Killark Electric Manufacturing Company
A Subsidiary of Hubbell Incorporated
Electric Way
Christianburg, Virginia 24073
(703) 382-6111

K.J. Law Engineers, Inc.
23660 Research Drive
Farmington Hills, Michigan 48024
(313) 478-3150

Manairco, Inc.
Box 111
Mansfield, Ohio 44901
(419) 524-2121

Maria Miranda Co.
8275 San Leandro Street
Oakland, California 94621
(415) 635-6551

Molded Electric Products Corp.
464 Pratt Street
Meriden, Connecticut 06450
(203) 235-4424

Multi-Electric Manufacturing, Inc.
4223-43 West Lake Street
Chicago, Illinois 60624
(312) 722-1900

National Airport Equipment Co.
5920 Wayzata Boulevard
Minneapolis, Minnesota 55416
(612) 545-4157

APPENDIX 1—ADDRESS LIST OF EQUIPMENT MANUFACTURERS

ADB-ALNACO, Inc.
997 Gahanna Parkway
P.O. Box 30829
Columbus, Ohio 43230
(614) 861-1304

Airport Equipment Company AB
P.O. Box 20079
Bromma, Sweden S-161 20
Telephone: 08871432

U.S. REPRESENTATIVE:
Airteco Equipment, Inc.
P.O. Box 10721
Marina Del Ray, California 90291
(213) 827-7333

Airport Lighting Co.
8 Flintlock Ridge
Simsbury, Connecticut 06070
(203) 658-0401

Airport Lighting Control Co.
P.O. Box 1316
Winter Park, Florida 32790
(305) 629-4402

Amerace Corporation
Elastimold Division
10 Esna Park Drive
Markham, Ontario L3R 1E1
Canada
(416) 475-6000

U.S. REPRESENTATIVE:
Amerace Corporation
P.O. Box 300
Newburgh Road
Hackettstown, New Jersey 07840
(201) 852-1122

Amerace Corporation
Signal Products Division
7542 North Natchez Street
Niles, Illinois 60648
(312) 647-7717

AMERIEL, Inc.
4110 Shawnee Lane
Atlanta, Georgia 30319
(404) 457-6760

Appollo Lighting Company
3047 E. 14th Street
Columbus, Ohio 43219
(614) 252-4444

ARTAIS
4660 Kenny Road
Columbus, Ohio 43220
(614) 451-8388

Associated Engineering
1629 E. Sunnyview Avenue
Visalia, California 93291
(209) 732-0760

ATC International, Inc.
3250 N. Sheridan
Tulsa, Oklahoma 74115
(918) 836-1938

Behrens Construction, Inc.
RR #6, Box 227
Country Club Road
Minot, North Dakota 58701
(701) 839-5643

U.S. REPRESENTATIVE:
Hughey & Phillips, Inc.
2162 Union Place
Simi Valley, California 93065
(805) 581-5591

Bison Instruments, Inc.
5708 West 36th Street
Minneapolis, Minnesota 55416
(612) 926-1846

Carsonite International Corp.
2900 Lockheed Way
Carson City, Nevada 89701
(702) 883-5104

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Appendix 3

APPENDIX 3—SPECIFICATION FOR LAMP LIFE TEST PROCEDURE

1. **PURPOSE.** This appendix specifies a test method for establishing lamp life for airport lighting fixtures. This procedure shall be accomplished on each new fixture design or on any design change which will affect lamp life.

2. **SCOPE.** This procedure shall be performed on all lamps having a specified lamp useful life of 17,500 hours or less.

3. **DEFINITIONS.** The following terms are defined for the purpose of this procedure:

3.1 **RATED LAMP LIFE.** The mean life of the lamp while installed and operated in a lighting fixture as established by test and calculation described in this procedure.

3.2 **LAMP USEFUL LIFE.** The portion of the lamp operating characteristic where the photometric output of the lamp operating in the fixture is within specification requirements.

3.3 **LAMP OPERATING TIME.** The time that electrical service to the lighting system is on and contacts to lamp circuits are closed.

3.4 **ACCELERATED TESTING.** The testing technique used to compress the time to operate a lamp to end of useful life while under test. A correlation between performance of the lamp under normal operating conditions and the conditions for accelerated testing must be established. Note: Accelerated testing can not be performed on tungsten halogen lamps.

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where lighting system power conditioning equipment is located remote from lamp units in the field, the distance between lamp and system components shall be shortest allowed by design.

The lighting system shall be operated at highest lamp manufacturer rated voltage or current using transformers or current supply having 1 percent regulation. The duty cycle shall consist of 20 hours operating time and 4 hours de-energized. Voltage controlled system be operated from a supply having 1 percent regulation.

Testing shall continue until 90 percent of all lamps have reached end of lamp useful life.

Tests shall be performed in a controlled environment at an ambient temperature between 60 and 80 degrees Fahrenheit.

Electrical service voltage and current; lamp voltage and current; and for discharge type lights, waveform shape and frequency shall be randomly recorded using calibrated instruments during the test to verify that control circuits are functioning and that input energy is maintained within tolerance. Minimum these parameters shall be checked twice a week.

A daily log shall be maintained at the test site. The log shall record lamp condition (e.g., whether lamp output of the lamp exceeds minimum specification requirements), date, time, comments and test results.

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Appendix 3

7. DOCUMENTATION.

- a. A test report documenting the test results and containing a copy of the calculations shall be prepared. As a minimum, the report shall include the information listed below.
- b. A drawing or sketch of the test setup indicating installation of the test fixture(s), instrumentation, and a block diagram indicating all electrical interconnections. This drawing shall be of sufficient detail so that an independent laboratory may perform the test and replicate the test results.
- c. A calculation sheet indicating number of days each lamp operated, lamp operating hours and data used in calculating the mean and standard deviation.
- d. Copy of all wave shapes recorded in 4.0 with calibration markings.
- e. A description of all malfunctions which occurred during the test period including type of malfunction, date of occurrence, corrective action taken, and QA concurrence on resolution.
- f. A summary of the pulse train out of tolerance conditions shall be included. The summary shall list specific type of out of tolerance condition, number of times occurred and frequency of occurrence.

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Appendix 3

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 - 3.3 **LAMP OPERATING TIME.** The time that electrical service to the lighting system is on and contacts to lamp circuits are closed.

c. Where lighting system power conditioning equipment is located remote from lamp units in the field, cabling between lamp and system components shall be shortest allowed by design.

d. Light system shall be operated at highest lamp manufacturer rated voltage or current using approved regulators or current supply having 1 percent regulation. The duty cycle shall consist of 20 hours lamp operating time and 4 hours de-energized. Voltage controlled system be operated from a supply having 3 percent regulation.

e. Testing shall continue until 90 percent of all lamps have reached end of lamp useful life.

f. Tests shall be performed in a controlled environment at an ambient temperature between 60 and 80 degrees fahrenheit.

g. Electrical service voltage and current; lamp voltage and current; and for discharge type lights, pulse train wave shape and frequency shall be randomly recorded using calibrated instruments during the test period to verify that control circuits are functioning and that input energy is maintained within tolerance. As a minimum these parameters shall be checked twice a week.

h. A daily log shall be maintained at the test site. The log shall record lamp condition (e.g., whether the photometric output of the lamp exceeds minimum specification requirements), date, time, comments and person performing the check.

i. The pulse train wave shapes shall be monitored continuously during the duty cycle for discharge type lamps. Out of tolerance condition shall be logged. As a minimum the following shall be monitored for

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Appendix 3

7. DOCUMENTATION.

a. A test report documenting the test results and containing a copy of the calculations shall be prepared. As a minimum, the report shall include the information listed below.

b. A drawing or sketch of the test setup indicating installation of the test fixture(s), instrumentation, and a block diagram indicating all electrical interconnections. This drawing shall be of sufficient detail so that an independent laboratory may perform the test and replicate the test results.

c. A calculation sheet indicating number of days each lamp operated, lamp operating hours and data used in calculating the mean and standard deviation.

d. Copy of all wave shapes recorded in 4.0 with calibration markings.

e. A description of all malfunctions which occurred during the test period including type of malfunction, date of occurrence, corrective action taken, and QA concurrence on resolution.

f. A summary of the pulse train out of tolerance conditions shall be included. The summary shall list specific type of out of tolerance condition, number of times occurred and frequency of occurrence.