



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

Advisory Circular

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Subject: APPROVED AIRPORT LIGHTING
EQUIPMENT

Date: 7/19/85
Initiated by: AAS-200

AC No: 150/5345-1P
Change:

1. PURPOSE. This advisory circular contains a listing of manufacturers that have obtained qualification approval to specifications for airport lighting equipment. This equipment may be funded for installation under Federal grant assistance programs for airports.
2. CANCELLATION. This advisory circular cancels AC 150/5345-1N, Approved Airport Lighting Equipment, dated February 11, 1985.
3. PRINCIPAL CHANGES. Several additions and deletions have been made to the lists of qualified manufacturers. The revised list reflects changes made through June 30, 1985. In addition, a change has been made to Appendix 2, Qualification Procedures, requiring that all product qualification testing be conducted in the United States.
4. REQUESTS FOR INFORMATION. Further information concerning qualification approval may be obtained from the Federal Aviation Administration, Office of Airport Standards, Attention: AAS-200, 800 Independence Ave. S.W., Washington, D.C. 20591, telephone (202) 426-3824.

LEONARD E. MUDD
Director, Office of Airport Standards

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 manufacturer's catalogs or literature for complete ordering information, especially for equipment having optional features.

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 16 and 17.

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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 80114 80116		80132		80123
Appollo Lighting Co.		0200 Series		0200 Series		
Manairco, Inc.		AB-1000D AB-1000F				AB-500H
National Airport Equipment Co.		N-1000A N-1000A4		N-1000S		

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
Crouse-Hinds Lighting	65000-G (60,61)	65000-G-1 (60,61)	65000-Y (60,61)	65000-Y-1 (60,61)		

L-806 - Wind Cones, Frangible
(AC 150/5345-27B)

Manufacturer	Size	Manufacturer's catalog number	
		Lighted	Unlighted
Crouse-Hinds Lighting	1	71043	71044
Godfrey Engineering Inc.	1	GEA-45-FL Series	GEA-45 Series

L-807 - Wind Cones, Rigid
(AC 150/5345-27B)

Manufacturer	Size	Manufacturer's catalog number	
		Lighted	Unlighted
ADB-ALNACO, Inc.	1	80708-1000 Series	80708-2000 Series
	2	80712-1000 Series	80712-2000 Series
Crouse-Hinds Lighting	1	44481D, 44484B	44482A, 44483B
	2	48310B, 48313B	48311B, 48312B
Godfrey Engineering Inc.	1	GEA-40-18-FL Series	GEA-40-18 Series
		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(4)	81002-1000 (4)
	81001-2000(11)	81002-2000 (11)
Crouse-Hinds Lighting	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)
Hubbell, Harvey, Inc.	BYMB-3600-AHQ (30)	BYMB-36002-AHQ (30)
TWR Lighting, Inc.	OL-1 (32)	OL-2 (32)

L-821 - Panel, Airport Lighting Control
(AC 150/5345-3C)

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
Autotronic Products, Inc.	II	S	3
Eaton Corporation	I, II	F, S, W	2, 3
Godfrey Engineering Inc.	I	F, S	1
Universe, Inc.	I, II	F, S, W	1, 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
	II	4	B	X8405-249
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

L-824 - Cable, Underground Electrical
(AC 150/5345-7D)

Manufacturer	Conductors		Type	Rating (volts)	Manufacturer's identification marking
	S	M			
American Insulated Wire Co.	X	X	A,B	600	FAA-L824 Type A,B
	X		As,Bs	5000	FAA-L824 Type A,B
	X		B	5000	FAA-L824 Type B
	X	X	C	600	FAA-L824 Type C
	X		Cs	5000	FAA-L824 Type C
Anaconda-Ericsson, Inc.	X		B	600	Durasheath EP
	X		B	5000	Durasheath EP
	X		C	600	Durasheath XLP
	X		C	5000	XLP Type MV-90
ASEA Kabel AB	X		C	5000	ASEA Kabel FXEK

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L-824 - Cable, Underground Electrical
(AC 150/5345-7D)
(cont'd)

Manufacturer	Conductors		Type	Rating (volts)	Manufacturer's identification marking
	S	M			
Canada Wire and Cable, Ltd	X		B	5000	Canada Wire EPR/Neoprene
		X	C	600	Exelene Airport Series
	X		C	5000	Exelene Airport Series
Carol Cable Co.	X		C	600	L-824-C
	X		C	5000	L-824-C
CCS Hatfield Wire & Cable Co.	X		Cs	5000	Hatfield Permalene XP
	X		C	600	Permalene XP
Collyer Insulated Wire Co.	X	X	Cs	5000	XLP
	X	X	C	600	XLP
Dainichi-Nippon Cables, Ltd.	X	X	C	5000	Dainichi-Nippon, Type C
	X		C	600	Dainichi-Nippon, Type C
Essex Group	X		C	600	L-824 Type C
	X		C	5000	L-824 Type C
General Electric Co.	X		C	600	Vulkene
		X	C	600	Vulkene Flamenol
	X		C	5000	Vulkene
		X	Cs	5000	Vulkene Flamenol
Hendrix Wire & Cable Corp.	X		C	600	FAA L-824 Type C
	X		C	5000	FAA L-824 Type C
The Kerite Co.	X	X	A	5000	Kerite HTK
North American Phillips Corp.	X		C	5000	Dravulteen (XLPE)
Pirelli Cable Corp.	X		B	600	EPR/PVC & EPR/N
	X		B	5000	EPR unshielded
	X	X	Bs	5000	EPR
	X		C	600	Type USE, RHH, RHW
		X	C	600	XLPE
	X		C	5000	XLPE unshielded
	X	X	Cs	5000	XLPE
Reynolds Metals Co.	X	X	Cs	5000	XLP

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L-824 - Cable, Underground Electrical
(AC 150/5345-7D)
(cont'd)

Manufacturer	Conductors		Type	Rating (volts)	Manufacturer's identification marking
	S	M			
Rockbestos Co., The	X		A	600	L-824 Type A
	X		B	5000	L-824 Type B
	X		C	600	L-824 Type C
	X		C	5000	L-824 Type C
Rome Cable Co.	X		B	600	Rome EPR
	X	X	C	600	Rome XLP, FR-XLP, XHHW Cond.
	X	X	Cs	5000	Rome XLP
	X		B	5000	Rome EPR
Royal Electric	X		C	5000	FAA L-824 Type C
Southwire Co.	X		C	600	FAA L-824 Type C
	X		C	5000	FAA L-824 Type C
Triangle PWC, Inc.	X		C	600	Everene
		X	C	5000	Everene

NOTES:

- (1) Conductors of 5000-volt cable may be either 7-strand or 19-strand.
- (2) In the column "Conductors", s indicates single conductor and m indicates multiple conductor.
- (3) All cables are nonshielded except s after the "Type" letter indicates both nonshielded and shielded.

L-827 - Monitors, Regulator
(AC 150/5345-10E)

Manufacturer	Manufacturer's catalog number	Remarks

L-828 - Regulators, Constant Current
(AC 150/5345-10E)

Manufacturer	Rating (kW)	Class	Style	Manufacturer's catalog number	
ADB-ALNACO, Inc. (All units are air-cooled)	4	1	1	82804-1110	
	7½	1	1	82807-1110	
	10	1	2	82810-1120	
	20	1	2	82820-1120	
Crouse-Hinds Co. (Air-cooled)	4	1	1,2	31000-4 Series, 313XX Series	
	7½	1	1,2	31000-7.5 Series, 313XX Series	
	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 (Air-cooled)	4	1	1	4L82810D Series
7½		1	1	7L82810D Series	
(Oil-cooled)		10	1	1,2	10L82810D Series
		15	1	1,2	15L82810D Series
		20	1,2	2	20L82810D Series
		30	1,2	2	30L82810D Series
		50	2	2	50L82810D Series
		70	2	2	70L82810D Series
Westinghouse Canada, Inc. (All units are air-cooled)		4	1	1,2	W4L828W, 04L828W Series
		7½	1	1,2	W7L828W, 07L828W Series
	10	1	1,2	10L828W Series	
	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		

L-829 - Regulators, Monitored Constant Current
(AC 150/5345-10E)

Manufacturer	Rating	Class	Style	Manufacturer's catalog number

L-830 - Isolation Transformers, 60 Hz
(AC 150/5345-47)

L-830			Manufacturer's catalog number		
Type	Watts	Amperes Pri/Sec	Amerace Corp. (Elastimold Div.)	Crouse-Hinds Lighting	ADB-ALNACO, Inc.
L-830-1	30/45	6.6/6.6	TA 045666-01 TA 045666-01(1)	33001	83001-111
L-830-2	30/45	20/6.6	TA 045266-01		
L-830-3	65	6.6/6.6	TA 065666-01	33003	83003-111
L-830-4	100	6.6/6.6	TA 100666-01	33004	83004-111
L-830-5	100	20/6.6	TA 100266-01	33005	83005-1130
L-830-6	200	6.6/6.6	TA 200666-01	33006	83006-111
L-830-7	200	20/6.6	TA 200266-01	33007	83007-1130
L-830-8	300	6.6/20	TA 300626-01	33008	
L-830-9	300	20/20	TA 300226-01	33009	
L-830-10	300	6.6/6.6	TA 300666-01	33010	83010-1110
L-830-11	300	20/6.6	TA 300266-01		83011-1130
L-830-12	500	6.6/20	TA 500626-01		83012-1120
L-830-13	500	20/20	TA 500226-01	33013	83013-1110

L-831 - Isolation Transformers, 50 Hz
(AC 150/5345-47)

L-831			Manufacturer's catalog number	
Type	Watts	Amperes Pri/Sec	Amerace Corp. (Elastimold Div.)	Crouse-Hinds Lighting
L-831-1	30/45	6.6/6.6	TA 045666-01	33001
L-831-2	30/45	20/6.6	TA 045266-01	
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		
L-831-9	300	20/20	TA 300225-01	
L-830-10	300	6.6/6.6	TA 300665-01	

L-841 - Cabinet, Auxiliary Relay
(AC 150/5345-13)

Manufacturer	Manufacturer's catalog number
ADB-ALNACO, Inc.	84100-0000
Airport Lighting Control Co.	6300, 6301, 6302, 6303
Associated Engineering Co.	714-841
Crouse-Hinds Lighting	51503
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	8470X-0000 (X=1,2,3, or 4)
Crouse-Hinds Lighting	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
	C	84930-0000
	E	84950-0000
AMERIEL, Inc.	B	AL-849B
	F	AL-849F
Flash Technology Corporation	F	FTS-412
	F	FTS-422
Godfrey Engineering Co.	A	GEA-20- (0502, 0504, 0508)
	C	GEA-25-100
	E	GE-3836-003
Multi-Electric Mfg., Inc.	A	551325-M, 551325-S
	E	551327-M, 551327-S
Unitron International Systems	F	VGS-832

L-850 - Lights, Runway, Inpavement
(AC 150/5345-46A)

Manufacturer	Type	Class	Manufacturer's catalog number
ADB-ALNACO, Inc.	A	1,2	850X1-XXXX (29, 52, 55, 56)
	B	1,2	850X2-XXXX (34, 53, 62)
	C	2	85023-XXXX (21, 58, 59)
	D	2	85024-XXXX (21, 58)
	E	2	85025-XXX3 (21, 58)
	E	2	85025-XXX4 (63, 64)
Crouse-Hinds Lighting	A	1,2	20065, 20075 (35) 20335 (15)
	A	1,2	20065-LW, 20075-LW (49)
	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)

L-852 - Lights, Taxiway, Inpavement
(AC 150/5345-46A)

Manufacturer	Type	Class	Manufacturer's catalog number
ADB-ALNACO, Inc.	A	1,2	852X1-XXXX (41, 57)
	B	1,2	852X1-XXXX (41, 42)
	C	1,2	85203-1XXX (41)
Crouse-Hinds Lighting	A	1	19505, 19506 (43)
	A	1	19505-LW, 19506-LW (50)
	B	1	19509, 19510 (44)
	B	1	19509-LW, 19510-LW (51)
	A	2	19515 (43), 19515-LW (50)
	A	1,2	19850 (43), 19850-LW (50)
	B	2	19513 (44), 19513-LW (51)
	B	1,2	19855 (44), 19855-LW (51)
	C	1,2	19505-DG, 19506-DG, 19515-DG,
	C	1,2	19850-DG (43)
	D	2	19855-1D, 19855-DG, 19513-DG,
	E	2	19509-DG, 19510-DG (44) 20550, 20552 (40)

L-853 - Markers, Retroreflective
(AC 150/5345-39B)

Manufacturer	Manufacturer's catalog number	
	Centerline marker	Elevated marker
Amerace Corporation (Signal Products Division)	Models 88,96LP,325, 911, and 947	
Behrens Construction Co.		112 series
Carsonite International Corp.		SMD-300-A
National Airport Equipment Co.		RM series
Safe-Hit Corp.		SH318 SMA & GP3 series
Safe-Way Sign Co.		1A & 600 series
Unipar, Inc.		EVA series
Valley Illuminators, Inc.		AR-100 series

L-854 - Radio Controls
(AC 150/5345-49)

Manufacturer	Type	Manufacturer's catalog number
ADB-ALNACO, Inc.	I	RL-854
Control Industries, Inc.	I	RC-1T5A
Godfrey Engineering Inc.	I	GEA90

L-856 - Lights, Obstruction, High Intensity
(AC 150/5345-43C)

Manufacturer	System	Manufacturer's catalog number
Flash Technology Corporation	A	FTB-205A-1
	A	FTB-205A-2
	B	FTB-205B-1
	B	FTB-205B-2
EG&G, Inc.	A	LS-158A
	B	LS-158B

L-858 - Signs, Runway and Taxiway
(AC 150/5345-44D)

Manufacturer	Type	Size	Style	Class	Mfgr's cat. no.
ADB-ALNACO, Inc.	L-858Y, R	1,2,3	1,2,3,4	1,2	858 XX-XXXX Series
	L-858B	4,5	1,2,3,4	1,2	858 XX-XXXX Series
ATC International, Inc	L-858Y, R	1,2,3	2,3,4	1,2	80 Series
Crouse-Hinds Co.	L-858Y, R	1,2,3,	1,2,3	1,2	60,000 Series
	L-858B	4,5	1,2,3	1,2	60,000 and 62,000 Series
Gardner, T.J., Co.	L-858Y,R	1,2,3	1,2,3,4	1,2	G-L-858 Series
	L-858B	4	1,2,3	1,2	G-L-858 Series
	L-858B	5	2	2	DM-5-IN
Standard Signs, Inc.	L-858Y,R	1	1,2,3,4	1,2	S858CLT
	L-858Y,R	2	1,2,3,4	1,2	M858CLT
	L-858Y,R	3	1,2,3,4	1,2	L858CLT
	L-858B	4	1,2	1	D858CLT(fluor)
	L-858B	4	1,2,3	1,2	D858CLT(incd)

L-859 - Lights, Flashing, Omnidirectional
(AC 150/5345-51)

Manufacturer	Manufacturer's catalog number	Remarks
AMERIEL, Inc.	AL-859F	Style F
Flash Technology Corp	FTS-427	Style F
Unitron International Systems	VGS-837	Style F

L-860 - Lights, Runway Edge, Low Intensity
(AC 150/5345-46A)

Manufacturer	Manufacturer's catalog number	
	Type L-860	Type L-860E
Crouse-Hinds Lighting	40650 (1)	40650-GR, RG (1)
Godfrey Engineering Inc.	GEA-05 (3)(24)	GEA-05 (24)
Manairco, Inc.	2100 (2)(3)	2250 (5)
	2125 (6)	
National Airport Equipment Co.	L-500C (7)	L-500R/G (8)
	L-510C (8)	L-510R/G (9)

L-861 - Lights, Runway & Taxiway Edge, Medium Intensity
(AC 150/5345-46A)

Manufacturer	Type	Manufacturer's catalog number
ADB-ALNACO, Inc.	L-861	86102-0000 (33)
	L-861	L-861-1,-3 (10); L-861-2,-4 (12); RWL-MIL (10)
	L-861E	L-861-1,-3 (11); RWL-MIE (11)
	L-861T	L-861T-1,-3 (10); L-861T-2,-4 (13,14); TWL-MIL (10) 86100-0000 (31)
Airport Lighting Co.	L-861	MRL-216,217 (10)
	L-861E	MRL-216,217 (11)
	L-861T	MRL-216 (10)
Appollo Lighting Co.	L-861	0300-2 (10,11,14); 0300-4 (12)
	L-861E	0300-2 (11)
	L-861T	0300-2 (10,14); 0300-4 (12,13)
Crouse-Hinds Lighting	L-861	ERL Model III (10,14); 40675E, 40680E (17); 40938 (18), 40939 (10)
	L-861E	ERL Model III (11); 40727, 40770 (17)
	L-861SE	40690, 40775 (16)
	L-861T	ERL Model III (10,14); 40675T, 40680T (18); 40938-B (18); 40939-B (10)
Godfrey Engineering, Inc.	L-861	GEA-01 (10,14)
	L-861E	GEA-01 (11)
	L-861T	GEA-01 (10,14)
	L-861SE	GEA10-SE (36)
Hughey & Phillips, Inc.	L-861	MS-61 (10); MP-61 (12,14)
	L-861E	MS-61 (11)
	L-861T	MS-61 (10); MP-61 (12,13,14)
Manairco, Inc.	L-861	7100 (10); 8100 (14); 8125 (12)
	L-861E	7250 (11)
	L-861T	7400 (10); 8400 (14); 8425 (13)
Multi-Electric Manufacturing Inc.	L-861	6183,6193 (10); 6183M,6193M (14); 6183H,6193H (19)
	L-861E	6187,6197 (11); 6187H, 6197H (20)
	L-861SE	6387,6397 (36)
	L-861T	6184,6194 (10);6184M,6194M (14);6184H,6194H (19)
National Airport Equipment Co.	L-861	SL-861 (10); ML-861 (14); MLS-700S,MLS-700B (12) SLQ-700S, SLQ-700B (31,33,39,45)
	L-861E	SL-861 (11);SLQ-700 RSG, SLQ-700BRG (33,45)
	L-861SE	SLQ-910 SRG,SLQ-910 BRG (36)
	L-861T	SL-861T (10); ML-861T (14); MLS-700SB, MLS-700BB (12,13); SLQ-700SB,SLQ-700BB (31,33,39,45)

L-862 - Lights, Runway Edge, High Intensity
(AC 150/5345-46A)

Manufacturer	Manufacturer's catalog number	
	Edge	Threshold/end
ADB-ALNACO, Inc.	L-862 (22)	
Airport Lighting Co.	HRL-213 (22)	
Crouse-Hinds Lighting	48369 (22) 40722 (16)	
Godfrey Engineering, Inc.	GEA-10 (36)(26) GEA-15 (22)	
Hughey & Phillips, Inc.	HL-62 (22)	
Multi-Electric Manufacturing, Inc.	6283, 6293 (22) 6383, 6393 (36)	
National Airport Equipment Co.	H-900 (22) H-910 (36)	

L-866 - Lights, Obstruction, Medium Intensity
(AC 150/5345-43C)

Manufacturer	Manufacturer's catalog number	
	White lights	Red lights
Crouse-Hinds Co.		41257F
EG&G, Inc.	LS-161	
Flash Technology Corporation	FTB-301 FTB-301-2 FTB-317 FTB-119 FTB-319-2,-3	
TWR Lighting, Inc.		Type FB Beacon (48) A1, A2/3, A4/5 controllers

L-880 - Precision Approach Path Indicator *
(AC 150/5345-28D)

* (All approved equipment must be requalified by November 23, 1985)

Manufacturer	Style	Class	Manufacturer's Catalog Number
ADB-ALNACO, Inc.	B	II	88000-0000
Multi-Electric Mfg.	A,B	II	5902, 5903

L-882 - Visual Approach Descent Indicator (Rotary Wing) *

* (PAPI systems may also be used for visual glidepath information on heliports)

Manufacturer	Equipment Type	Manufacturer's Catalog Number		
		Lamp housing	Adapter unit	Aiming bar
ADB-ALNACO, Inc.	VASI	85100-1000 85100-2000 85100-3000	85101-0000	85102-0000
Crouse-Hinds Lighting	VASI	25950-A 26000-A 25950-AV	26005-A 26600	26041-A
Hughey & Phillips, Inc.	VASI	VA382, VA384 VA38ST, VA38S	VA38A2 VA38A4	VACB6114
Multi-Electric Manufacturing	VASI	5556C	5562C	5559
Devore Aviation	PLASI HELI-PLASI	DA1001 DA2001		

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

LAMP DESCRIPTIONS

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
(1)	8301	40	120		Yorkville Industries
(2)	15T6	15	120		General Electric, Westinghouse
(3)	15T7C	15	120		Westinghouse
(4)	69A21TS	69	120		General Electric, Sylvania, West.
(5)	40C9 $\frac{1}{2}$ C/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, West.
(11)	6.6A/T10P	45		6.6	General Electric, Sylvania, West.
(12)	40A/TS	40	120		General Electric, Sylvania, West.
(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, West.
(23)	6.6A/T14/3P	210		6.6	General Electric
(24)	25T8	25	120		General Electric
(25)	40925	175		6.6	Crouse-Hinds
(26)	6.6ATSQ/CL2	115		6.6	Sylvania
(27)	6.6A2PPF	150		6.6	Sylvania
(28)	Q200T4/CL	200		6.6	General Electric
(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, Westinghouse
(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
(37)	T4Q/CL/2PPF	115		6.6	Sylvania
(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		Westinghouse, Sylvania, GE
(49)	20041-2	125		6.6	Crouse-Hinds
(50)	20521	34		6.6	Crouse-Hinds
(51)	19868	45		6.6	Crouse-Hinds

(Continued next page)

LAMP DESCRIPTIONS (continued)

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
(52)	58809	125		6.6	Sylvania
(53)	58793	115		6.6	Sylvania
(54)	20538	185		6.6	Crouse-Hinds
(55)	58801	200		6.6	Sylvania
(56)	6965	200		6.6	Phillips
(57)	6859	30		6.6	Phillips
(58)	6292	150		6.6	Phillips
(59)	8422	120		6.6	Sylvania
(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	Phillips
(64)	40925	175		6.6	Sylvania

APPENDIX 1. ADDRESS LIST OF EQUIPMENT MANUFACTURERS

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

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) 628-3233

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

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

American Insulated Wire Co.
Central Avenue and Freeman Street
Pawtucket, Rhode Island 02862
(401) 726-0700

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

Anaconda-Ericsson, Inc.
Wire and Cable Division
East 8th Street
Marion, Indiana 46952
(317) 664-2321

Appollo Lighting Company
2635 Johnstown Road
Columbus, Ohio 43219
(614) 471-9490

ASEA Kabel AB
P.O. Box 42108
S-126 12 Stockholm
Sweden
46 8 744 60 00

Associated Engineering
11791 Monarch Street
Garden Grove, California 92641
(714) 897-7441

ATC International, Inc.
3250 N. Sheridan
Tulsa, Oklahoma 74115
(918) 583-7184

Autotronic Products, Inc.
3300 Lawson Blvd.
Oceanside, N.Y. 11572
(516) 536-6765

Behrens Construction
Country Club Road
Minot, North Dakota 58701
(701) 839-5643

Carol Cable Co.
1900 North Fifth Avenue
River Grove, Illinois 60171
(312) 456-4000

Canada Wire and Cable, Ltd.
22 Commercial Road
Toronto, Ontario M4G 1Z4
Canada
(464) 235-4424

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

Collyer Insulated Wire Co.
100 Higginson Avenue
Lincoln, Rhode Island 02865
(401) 723-7800

CCS Hatfield Wire and Cable Co.
12 Commerce Drive
Cranford, New Jersey 07016
(201) 272 3850

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

Crouse-Hinds Lighting
Aviation Products Division
P.O. Box 1200
Windsor, Connecticut 06095
(203) 683-4300

Dainichi-Nippon Cables, Ltd.
New Kokusai Building
4-1, Marunouchi 3-Chome
Chiyodaku
Tokyo, 100, Japan
Telephone: Tokyo (03) 216-1551

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
(617) 745-3200

Essex Group
Power Conductor Division
2601 South Adams Street
Marion, Indiana 46952
(317) 664-6211

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

Gardner, T.J., Co.
699B Castro Street
San Leandro, California 94577
(415) 483-0694

General Electric Co.
1285 Boston Avenue
Bridgeport, Connecticut 06602
(203) 334-1012

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

Hendrix Wire & Cable Corporation
Milford, New Hampshire 03055
(603) 673-2040

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

Hubbell, Harvey, Inc.
Electric Way
Christiansburg, Virginia 24073
(703) 382-6111

Hughey & Phillips, Inc.
3050 North California Street
Burbank, California 91504
(213) 849-1104

Jaquith Industries, Inc.
Syracuse, New York 13205
(315) 478-5701

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

The Kerite Co.
49 Day Street
Seymour, Connecticut 06483
(203) 888-2591

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

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.
5910 Wayzata Boulevard
Minneapolis, Minnesota 55416
(612) 545-4157

North American Phillips Corporation
100 E. 42nd Street
New York, New York 10017
(212) 697-3600

Pirelli Cable Corporation
800 Rahway Avenue
Union, New Jersey 07083
(201) 687-0250

Reynolds Metal Co.
Richmond, Virginia 23261
(804) 281-2000

Rockbestos Co., The
860 N. Main St. Ext.
Wallingford, Connecticut 06492
(203) 772-2250

Rome Cable Co.
421 Ridge Street
Rome, New York 13440
(315) 337-3000

Royal Electric
Division of FL Industries, Inc.
95 Grand Avenue
Pawtucket, Rhode Island 02862
(401) 722-8600

Safe-Way Sign Co.
Box 324
West Springfield, Massachusetts 01089
(413) 737-6991

Safe-Hit Corporation
1930 West Winton Ave., Bldg. 11
Hayward, California 94545
(415) 783-6550

Southwire Company
Carrollton, Georgia 30117
(404) 832-6311

Standard Signs, Inc.
3190 East 65th Street
Cleveland, Ohio 44127
(216) 341-5611

Triangle PWC, Inc.
Box 711
New Brunswick, New Jersey 08903
(201) 745 5500

TWR Lighting, Inc.
P.O. Box 55606
Houston, Texas 77255
(713) 973-6904

Unipar, Inc.
Box 1056
State College, Pennsylvania 16801
(814) 238-6481

Universe, Inc.
Box 495
1107 W. Chestnut Street
Bloomington, Illinois 61701
(309) 829-3478

Unitron International Systems, Inc.
P.O. Box 1105
Norcross, Georgia 30091
(404) 923-3185

Valley Illuminators, Inc.
Box 88866
Tuckwila, Washington 98188
(206) 564-2067

APPENDIX 2. QUALIFICATION PROCEDURES

1. QUALIFICATION PROGRAM. A qualification program has been established by the Federal Aviation Administration (FAA) for certain equipment components which are unique to aviation and are used in airport lighting and visual aid systems. This program is administered by the Office of Airport Standards and is intended solely for that equipment funded for installation under Federal grant assistance programs for airports. The purpose of the qualification program is to insure that the equipment meets the required standards for safety, performance, quality, and standardization.

2. EQUIPMENT COVERED BY THE QUALIFICATION PROGRAM. The equipment included in the 150/5345 series of advisory circulars, as listed in the contents of this advisory circular, is covered by the qualification program. The equipment covered may be changed periodically to reflect changing needs in airport lighting systems and equipment.

3. SUBMITTAL OF QUALIFICATION REQUESTS. Requests for qualification approval must be submitted in writing to the Office of Airport Standards, Attention: AAS-200, Federal Aviation Administration, Washington, D.C., 20591. This request must include:

a. A list of the types, classes, styles, and sizes of equipment, along with the manufacturer's catalog numbers, for which qualification approval is requested. A list of equipment options should also be included when so specified in individual equipment specifications.

b. Engineering drawings of the equipment to permit determination of adherence to specification design requirements.

c. A copy of proposed test procedures and test data sheets and a statement as to whether the manufacturer proposes to conduct the tests or name and location of an independent testing laboratory where the tests are to be conducted. Since the FAA reserves the right to witness any or all tests, the manufacturer should not commence the tests until advised whether the FAA elects to witness, or waives the option to witness, the tests. The manufacturer shall give the FAA at least 2 weeks' notice prior to starting tests.

d. A statement that the manufacturer agrees to provide the following minimum guarantee for the equipment:

"That the equipment has been manufactured and will perform in accordance with the applicable specifications and that any defect in design, materials, (excluding lamps), or workmanship which may occur during proper and normal use during a period of 1 year from date of installation or a maximum of 2 years from date of shipment will be corrected by repair or replacement by the manufacturer f.o.b. factory."

e. A statement that the manufacturer agrees to provide and maintain a quality control program in accordance with FAA-STD-013, Quality Control Program Requirements (copies of this document may be obtained from the Federal Aviation Administration, Systems Engineering Service, Washington, D.C. 20591). The manufacturer shall also provide a copy of the proposed quality control plan.

f. A copy of the proposed instruction manual for the equipment.

4. REVIEW PROCEDURE FOR QUALIFICATION REQUESTS. The manufacturer will be notified within 1 week after receipt of the qualification request whether the FAA elects or waives the option to witness tests and whether the proposed test procedures and test data sheets are acceptable. Notification of acceptance, or of changes required for acceptance, of the quality control plan, instruction manual, and the equipment design will be made within 30 days. The manufacturer will be notified in writing within 2 weeks after the last submittal of the required documentation or test results, if acceptable, that the equipment is approved. The manufacturer must provide 10 copies of the approved instruction manual within 30 days after approval of the equipment. These manuals are required by various FAA field offices in monitoring the approval of equipment. The approval will be subject to the condition that it may be rescinded if:

a. The manufacturer fails to provide the required instruction manuals.

b. The manufacturer fails to honor the guarantee (paragraph 3d) or does not maintain quality control in accordance with the approved plan (paragraph 3e).

c. The equipment has an unsatisfactory failure rate (paragraph 6).

d. The manufacturer fails to perform the required production tests (paragraph 5).

e. Changes are made in the equipment without FAA approval (paragraph 7).

f. The equipment specification is cancelled or is revised and the manufacturer fails to requalify (paragraph 8).

5. TESTS. The manufacturer must successfully pass all tests in the applicable specification. The manufacturer shall provide all necessary equipment and bear all testing costs. All tests shall be performed at facilities located within the United States of America. Where the FAA waives the option to witness tests, the manufacturer must submit a certified copy of all test reports. In addition to qualification tests, each equipment specification requires some tests to be conducted on each, or a sampling of, production units. The manufacturer must retain records of the production tests for at least 3 years and permit the FAA (approving office) to witness such tests or inspect previous records on request.

6. UNACCEPTABLE FAILURE RATE. Since reliable equipment is of prime importance to safety of aircraft operations, equipment which proves unreliable in use must be removed from the approval listing. The determination of unreliability must be based on judgment and experience with equipment of a like nature. Where any such equipment is deemed to have an unsatisfactory failure rate or is deficient in workmanship or materials, the manufacturer will be notified in writing as to the basis for this determination. The manufacturer shall then notify the FAA in writing as to its plan of action for correcting the problem. If the manufacturer does not resolve the problem within a reasonable time (the time frame will, of necessity, be based on safety considerations and/or the nature of the problem), the equipment will be removed from the approval listing. The FAA reserves the right to require the equipment to be subjected to any or all qualification tests when the equipment has been deemed unreliable or deficient in materials or workmanship.

7. MODIFICATIONS TO EQUIPMENT. Once the equipment has been approved, the manufacturer may not make any changes in the equipment without prior FAA approval. Requests for design or component changes must be submitted to the office listed in paragraph 3 and must be accompanied by supporting documentation plus 10 copies of the revised instruction manual pages which reflect the proposed change. Substitution of stock electrical items such as resistors, capacitors, transistors, etc., which are identical in rating and size and which are equal or better in quality does not require FAA approval. This exception does not apply to lamps.

8. REVISION OF SPECIFICATIONS. It may be necessary at times to revise the specification for a particular equipment to reflect changing needs of aviation or of new technology. In such a case the revised equipment specification will contain an effective date, normally 6 months, at which time the prior approval automatically expires unless the manufacturer has been requalified to the revised specification. Manufacturers are informed by letter and supplied a copy of the revised specification within a few days of its issuance. The procedure for requalification is the same as for the original qualification as discussed in paragraph 3 with the following exceptions:

a. The manufacturer does not have to resubmit the quality control plan.

b. Depending on the nature of the equipment modification it may not be necessary to perform all qualification tests. Exemption from certain tests may be granted when requested and justified by the manufacturer that the test is not applicable to the modified design.

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.

U.S. Department
of Transportation

**Federal Aviation
Administration**

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Washington, D.C. 20591

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