

U.S. Department of Transportation

Federal Aviation Administration



Subject:

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AC No: 150/5345-1M

Change:

APPROVED AIRPORT LIGHTING EQUIPMENT

1. PURPOSE. This advisory circular contains a listing of manufacturers that have obtained qualification approval to specifications for airport lighting equipment which are used for projects funded under Federal assistance programs.

- CANCELLATION. This advisory circular cancels AC 150/5345-1L, Approved Airport Lighting Equipment, dated January 30, 1984.
- 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, 1984.
- 4. REQUESTS FOR INFORMATION. Further information concerning qualification approval may be obtained from the Federal Aviation Administration, Office of Airport Standards, Attention: AAS-200, Washington, D.C. 20591, telephone (202) 426-3824.

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 are not intended for use in ordering equipment. 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 15 and 16.

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<u>L-801 - Beacons</u> (AC 150/5345-12C)

Manufacturer	Manufacturer's catalog number							
	Type I	-801A	Type I	-801S	Type L-801H			
	Class 1	Class 2	Class 1	Class 2	Class 1	Class 2		
ADB-ALNACO, Inc.		RB2,RB4 RB6-750 RB6-1000		RB2/ 1000S		RB-3 044D0808		
Appollo Lighting Co.		0200 Series		0200 Series				
Manairco, Inc.		AB-1000D AB-1000F				AB-500H		
National Airport Equipment Co.		N-1000A N-1000A4		ห-1000s				

<u>L-807 - Wind Cones</u> (AC 150/5345-27B)

		Manufacturer's catalog number				
Manufacturer	Size	Lighted	Unlighted			
ADB-ALNACO, Inc.	1	80708-1000 Series	80708-2000 Series			
	2	80712-1000 Series	80712-2000 Series			

<u>L-810 - Lights, Obstruction</u> (AC 150/5345-43C)

Manufacturer	Manufacturer's catalog number					
	Single unit	Double unit				
Crouse-Hinds Lighting	40940, 50033 (4)	50021 (4)				
Godfrey Engineering Co.	GEA-60-1,-3 (11) GEA-60-2,-4 (30) (32)	GEA-61-1,-3 (11) GEA-61-2,-4 (30)(32)				
Harvey Hubbell, Inc.	вумв-3600-Ано (30)	вумв-36002-АНО (30)				
TWR Lighting, Inc.	OL-1 (32)	OL-2 (32)				

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

Manufacturer	Manufacturer's catalog number
ADB-ALNACO, Inc.	L-821 - all types, classes, styles
Airport Lighting Control Co.	L-821 - type I, all classes, styles 1 & 2
Associated Engineering Co.	201-204 (821 series) - type I, all classes, style 1; type I, Class F, S, style 2; type II, class F, styles 1,3.
Eaton Corporation	L-821 - type I, II, all classes, styles 2,3
Godfrey Engineering Co.	L-821 - type I, classes S & F, style l
Universe, Inc.	821-1 - type I, all classes, style 1 821-F - type II, all classes, style 3

L-823 - Connectors, Cable (AC 150/5345-26B)

Manufacturer	Туре	Style	Class	Manufacturer's catalog number
Amerace Corporation (Elastimold)	II II II II II	2 3,10 9 8 4 11 5	A B A B B B	54MP 54KIT 54MR 93MR 90P 90R 91P 91R
Joy Manufacturing Co.	I	3,10	В	X8077-257A X8077-301A X8077-387A
Molded Electric Products, Inc.	II II II	1 2 7 8 9	A A A A	10518 10949 10519 10875 10950

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

	Condu	ctors		Rating	Manufacturer's
Manufacturer	S	М	Туре		identification
				(volts)	marking
American Insulated Wire Co.	Х	X	A,B	600	FAA-L824 Type A,B
	X		As,Bs		FAA-L824 Type A,B
	X		В	5000	FAA-L824 Type B
	Х	X	C	600	FAA-L824 Type C
	Х		Cs	5000	FAA-L824 Type C
Angenda Wriggen Inc	х		В	600	Durasheath EP
Anaconda-Ericsson, Inc.	x		В	5000	Durasheath EP
	X		Ĉ	600	Durasheath XLP
	^			800	burasueacu nur
Carol Cable Co.	х		С	600	L-824-C
calor capic co.	X		Ċ	5000	L-824-C
				3000	021 0
Canada Wire and Cable, Ltd		x	С	600	Exelene Airport Series
Canada Wasa and Canada y 200	х		Ċ	5000	Exelene Airport Series
				0000	
CCS Hatfield Wire & Cable Co.	х		Cs	5000	Hatfield Permalene XP
	х		С	600	Permalene XP
Collyer Insulated Wire Co.	х	X	С	600	XLP
_	Х	X	Cs	5000	ΧĽĎ
Dainichi-Nippon Cables, Ltd.	Х	X	С	5000	Dainichi-Nippon, Type C
	Х		С	600	Dainichi-Nippon, Type C
	.,			600	T 934 W C
Essex Group	X X		C C	600 5000	L-824 Type C L-824 Type C
	X	:	C	5000	L-824 Type C
General Electric Co.	х		С	600	Vulkene
General Electric Co.		х	Ċ	600	Vulkene Flamenol
	х		Ċ	5000	Vulkene
		х	Cs	5000	Vulkene Flamenol
Hendrix Wire & Cable Corp.	Х		С	600	FAA L-824 Type C
	х		С	5000	FAA L-824 Type C
					
ITT Royal Electric Division	X		С	5000	FAA L-824 Type C
_					:
The Kerite Co.	Х	x	A	5000	Kerite HTK
					_
North American Phillips Corp.	Х		С	5000	Dravulteen (XLPE)

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

	Conductors			Rating	Manufacturer's
Manufacturer	S	M	Туре		identification
				(volts)	marking
Pirelli Cable Corp.	Х		В	600	EPR/PVC & EPR/N
	Х		В	5000	EPR unshielded
	Х	X	Bs	5000	EPR
	Х		С	600	Type USE, RHH, RHW
		X	С	600	XLPE
	Х		С	5000	XLPE unshielded
	Х	X	Cs	5000	XLPE
	}				
Reynolds Metals Co.	Х	X	Cs	5000	XLP
Rockbestos Co., The	X		Α	600	L-824 Type A
	Х		В	5000	L-824 Type B
	Х	j	С	600	L-824 Type C
	Х	l	С	5000	L-824 Type C
			I	I	
Rome Cable Co.	Х	ł	В	600	Rome EPR
	X	х	С	600	Rome XLP, FR-XLP,
1	l	1		1	XHHW Cond.
	Х	Х	Cs	5000	Rome XLP
	Х	1	В	5000	Rome EPR
		1			
Southwire Co.	Х	I	С	600	FAA L-824 Type C
	Х	1	С	5000	FAA L-824 Type C
_	1	1		l	1
Triangle PWC, Inc.	Х	1	С	600	Everene
	1	X	С	5000	Everene
		1			1
	1		J .	I	

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

	Ra	ting	Bright-		
Manfacturer	KW	Out	ness	Primary	Manufacturer's
		Amps	steps	switch	catalog number
Crouse-Hinds Lighting	4	6.6	3,5	Yes	31000-4-Series
(Air-cooled)	7월	6.6	3,5	Yes	31000-7.5-Series
	10	6.6	3,5	Yes	31000-10-Series
(Oil-cooled)	10	6.6	5	Option	31060-10-Series
	15	6.6	5	Option	31060-15-Series
	20	6.6	5	Option	31060-20-Series
	20	20	5	Option	31060-21-Series
	30	6.6	5	Option	31060-30-Series
	30	20	5	Option	31060-31-Series
	50	20	5	Option	31060-50-Series
	70	20	5	Option	31060-70-Series
Hevi-Duty Electric	4	6.6	3	Yes	4L82810D Series
(Air-cooled)	7월	6.6	3	Yes	7L82810D Series
(Oil-cooled)	10	6.6	3,5	Yes	10L82810D Series
	15	6.6	3,5	Yes	15L82810D Series
	20	6.6	5	Yes	20L82810D Series
	20	20	5	Yes	20L82810D Series
	30	6.6	5	Yes	30L82810D Series
	30	20	5	Yes	30L82810D Series
	50	20	5	Yes	50L82810D Series
	70	20	5	Yes	70L82810D Series

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

	L-830		Manufacturer's catalog number				
Туре	Watts	Amperes	Amerace Corp.	Crouse-Hinds	ADB-ALNACO,		
		Pri/Sec	(Elastimold Div.)	Lighting	Inc.		
L-830-1	30/45	6.6/6.6	TA 045666-01	33001	83001-111		
			TA 045666-01(1)				
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			
Ն-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			
Туре	Watts	Amperes Pri/Sec	Amerace Corp. (Elastimold Div.)	Crouse-Hinds Lighting		
L-831-1 L-831-2	30/45 30/45	6.6/6.6 20/6.6	TA 045666-01 TA 045266-01	33001		
L-831-3 L-831-4	65 100	6.6/6.6 6.6/6.6	TA 065666-01 TA 100666-01	33003 33004		
L-831-5 L-831-6	100 200	20/6.6 6.6/6.6	TA 200665-01	33005 33006		
L-831-7 L-831-8 L-831-9	200 300 300	20/6.6 6.6/20 20/20	TA 200265-01 TA 300225-01	33007		
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
Airport Lighting Control Co.	6300, 6301, 6302, 6303
Associated Engineering Co.	714-841
Crouse-Hinds Lighting	51503
Hughey & Phillips, Inc.	RC41

7/20/84 AC 150/5345-1M

L-847 - Switch, Circuit Selector (AC 150/5345-5A)

Manufacturer	Туре	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
Flash Technology Corporation	F	FTS-412
riash lecinology corporation	F	FTS-422
Godfrey Engineering Co.	A	GEA-20-100
	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	Туре	Manufacturer's catalog number
ADB-ALNACO, Inc.	L-850A	85000-1000 (29,55,56) 85000-2000 (52)
-	L-850B	85000-1000(34),85000-2000(53)
	L-850E	44E0496 (21)
Crouse-Hinds Lighting	L-850A	20065, 20075 (35) 20335 (15) 20065-LW, 20075-LW (49)
	L-850B	20355, 20360 (34)(40) 20370, 20365 (34)(40)
	L-850C	20250, 20255 (34)(40)
	L-850D*	20260, 20265 (34)
	L-850E	20480 (34)
Multi-Electric Manufacturing, Inc.	L-850C*	2950-300 (38)

^{*} Approval effective through December 7, 1984

L-851 - Visual Approach Slope Indicators
(AC 150/5345-28C)

	Manufacturer's catalog number			
Manufacturer	Lamp housing	Adapter unit	Aiming bar	
ADB-ALNACO, Inc.	44DO107A 44DO154A 44DO152A	44CO120A	44A0156A	
Crouse-Hinds Lighting	25950-A 26000-A 25950-AV	26005-A 26600	26041-A	
Hughey & Phillips, Inc.	VA382, VA384 VA38ST, VA38S	VA38A2 VA38A4	VACB6114	
Multi-Electric Manufacturing, Inc.	5556C	5562C	5559	

Pulsed Light Approach Slope Indicator

Manufacturer	Manufacturer's catalog number			
DeVore Aviation Corporation	DA1001			
	DA2001			

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

Manufacturer	Type	Class	Manufacturer's catalog number
ADB-ALNACO, Inc.	A	1	44DO422 (41), 852D0-2000 (57) 44DO423 (41)
	В	1	44DO422 (42), 44DO423 (42)
	A	2	44DO424 (41)
	A	1,2	44DO452 (41), 852DO-2000 (57)
	В	2	44DO424 (42)
	В	1,2	44DO452 (42)
Crouse-Hinds Lighting	A	1	19505, 19506 (43)
	В	1	19505-LW, 19506-LW (50) 19509, 19510 (44)
	A	2	19509-LW, 19510-LW (51) 19515 (43); 19515-LW (50)
	A	1,2	19850 (43); 19850-LW (50)
	В	2	19513 (44); 19513-LW (51)
	В	1,2	19855 (44); 19855-LW (51)
	c	1,2	19505-DG,19506-DG,19515-DG,
]		19850-DG (43)
	D	2	19855-1D (44)
	E	2	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.		lA & 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.	1	RL-854
Control Industries, Inc.	Ĭ	RC-1T5A

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

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

L-858 - Signs, Guidance (AC 150/5345-44D)

Manufacturer	Туре	Size	Style	Class	Mfgr's cat. no.
ATC International, Inc	L-858Y,R	1,2,3	2,3,4	1,2	80 series
Crouse-Hinds Lighting	L-858Y,R,B	1,2,3,4	1,2,3	1	60,000 series
Gardner, T.J., Co.	L-858Y,R,B	1,2,3,4	1,2,3,4	1,2	G-L-858 series
Standard Signs, Inc.	L-858Y,R L-858Y,R L-858Y,R L-858B L-858B	1 2 3 4	1,2,3,4 1,2,3,4 1,2,3,4 1,2 1,2,3	1,2	S858CLT M858CLT L858CLT D858CLT(fluor) D858CLT(incd)

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

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

L-860 - Lights, Runway & Taxiway 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 Co.	GEA-05 (3)(24)	GEA-05 (24)				
Manairco, Inc.	2100 (2)(3), 2125 (6)	2250 (5)				
National Airport Equipment Co.	L-500C (7) L-510C (8)	L-500R/G (8) L-510R/G (9)				

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

34		Van Carly and a setal or number
Manufacturer	Type	Manufacturer's catalog number
ADB-ALNACO. Inc.	L-861 L-861E L-861T	L-861-1,-3 (10); L-861-2,-4 (12); RWL-MIL (10) L-861-1,-3 (11); RWL-MIE (11) L-861T-1,-3 (10);L-861T-2,-4(13,14); TWL-MIL(10)
Airport Lighting Co.	L-861 L-861E L-861T	MRL-216,217 (10) MRL-216,217 (11) MRL-216 (10)
Appollo Lighting Co.	L-861 L-861E L-861T	0300-2(10,11,14); 0300-4 (12) 0300-2 (11,54) 0300-2 (10,14); 0300-4 (12,13)
Crouse-Hinds Lighting	L-861 L-861 L-861E L-861SE L-861T L-861T	ERL Model III (10,14); 40675E, 40680E(17); 40938 (18), 40939 (10) ERL Model III (11); 40727, 40770 (17) 40690, 40775 (16) ERL Model III (10,14); 40675T,40680T(18); 40938-B (18); 40939-B (10)
Godfrey Engineering, Inc.	L-861 L-861E L-861T	GEA-01 (10,14) GEA-01 (11) GEA-01 (10,14)
Hughey & Phillips, Inc.	L-861 L-861E L-861T	MS-61 (10); MP-61 (12,14) MS-61 (11) MS-61 (10); MP-61 (12,13,14)
Manairco, Inc.	L-861 L-861E L-861T	7100 (10), 8100 (14), 8125 (12) 7250 (11) 7400 (10), 8400 (14), 8425 (13)
Multi-Electric Manufacturing, Inc.	L-861 L-861E L-861SE L-861T	6183,6193 (10);6183м,6193м (14);6183н,6193н (19) 6187, 6197 (11); 6187н, 6197н (20) 6387, 6397 (36) 6184, 6194 (10);6184м,6194м (14);6184н,6194н (19)
National Airport Equipment Co.	L-861 L-861 L-861E L-861SE L-861T L-861T	SL-861 (10); ML-861 (14); MLS-700S,MLS-700B(12) SLQ-700S, SLQ-700B (31,33,39,45) SL-861 (11); SLQ-700 RSG, SLQ-700 BRG (33,45) SLQ-910 SRG, SLQ-910 BRG (36) 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.	Ն−862 (22)	Ն- 862 (23)			
Airport Lighting Co.	HRL-213 (22)	HRL-213 (23)			
Crouse-Hinds Lighting	48369 (22) 40722 (16)	48371 (23) 40722 (25)(28)			
Godfrey Engineering, Inc.	GEA-10 (36)(26) GEA-15 (22)	GEA-10 (21) GEA-15 (23)			
Hughey & Phillips, Inc.	HL-62 (22)	HL-62 (23)			
Multi-Electric Manufacturing, Inc.	6283, 6293 (22) 6383, 6393 (36)	6287, 6297 (23) 6387, 6397 (21)			
National Airport Equipment Co.	н-900 (22) н-910 (36)	ਸ-900 (23) ਸ-910 (21)			

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-317 FTB-119 FTB-319-2,-3				
TWR Lighting, Inc.		Type FB Beacon (48) Al, A2/3, A4/5 controllers			

L-867 - Light Base, Non-load Bearing L-868 - Light Base, Load Bearing

1624S

1024-2-S

1224-2-S

L-867

L-868

L-868

В

والانا تهلك تهو فالمكافراته فللتراريك والمواسدانجوا

Cover

plate

12-1-CP-S

16-1-CP-S

10-2-CP-S

12-2-CP-S

16S-EXT

1024-2-

1224-2-

EΧŢ

Mu

Spacer

12ER-

16ER-

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						69 - Jun C 150/53		<u>x</u>			
-						Man	ufacture	r's catal	og numb	er	
	Manufacturer	Туре	Туре 5	pe Size		Multiple section base Exter				Conv.	
				Base	Bottom	Middle	Тор	sion	ring	F	
	Gardner,	L-867	В	1224PVC				12S-EXT			
	T.J., Co.	L-867	В	1224PVC-							
	Ì			ADJ					İ	1	
		L-867	В	12245						12-	

Light Structure, Lightweight (AC 150/5345-45)

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

Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) (FAA-E-2325)

Manufacturer	Component	Manufacturer's catalog number
Crouse-Hinds Lighting	Remote optical head Flasher power supply Control cabinet Power transformer Junction box PAR-38 lampholder Lampholder aiming device Optical head aiming device	41001 41007 41010 41005 41006 41003 41020 41002
Multi-Electric Manufacturing, Inc.	Flashing light Power panel Control cabinet Power Transformer PAR-38 lampholder Aiming device	FA-9425/1, FA-9994 FA-9425/2, FA-9994 FA-9426/1, FA-9994 FA-9426/2, FA-9994 FA-9426/3, FA-9994 FA-9426/4, FA-9994

LAMP DESCRIPTIONS

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
Ciliana	Debignation				
(1)	8301	40	120		Yorkville Industries
(2)	15T6	15	120		General Electric, Westinghouse
(3)	15T7C	15	120	i i	Westinghouse
(4)	69A21TS	69	120		General Electric, Sylvania, West.
(5)	40C9ኒC/ST	40	120		Sylvania
(6)	25FC	25	120		General Electric, Sylvania
(7)	15A15/CL	15	120		Sylvania
(8)	25A19/GR/CL	25	120	i i	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	i	General Electric, Sylvania
(14)	40T10P	40	120	j l	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	
(22)	6.6A/T14/2P	204		6.6	General Electric, Sylvania, West.
(23)	6.6A/T14/3P	210	300	6.6	General Electric
(24)	25T8	25	120		General Electric
(25)	40925	175 115	·	6.6 6.6	Crouse-Hinds
(26) (27)	6.6ATSQ/CL2	150		6.6	Sylvania Sylvania
(28)	6.6A2PPF Q200T4/CL	200		6.6	General Electric
(29)	48A0042	200	ļ	6.6	ADB
(30)	100A21/TS	100	120	0.0	General Electric
(31)	EXL	30	220	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
(38)	Q20A PAR 56/2	300		6.6	General Electric
(39)	55042	30		6.6	Sylvania
(40)	20496	115	1	6.6	Crouse-Hinds
(41)	48A0039	45		6.6	ADB
(42)	48A0040	65	ì	6.6	ADB
(43)	19464	45	l	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	<u>L</u>	6.6	Crouse-Hinds

LAMP DESCRIPTIONS (continued)

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
(52) (53) (54) (55) (56) (57)	58809 58793 100/T10/2P 58801 6965 6859	125 115 100 200 200 30	120	6.6 6.6 6.6 6.6	Sylvania Sylvania General Electric Sylvania Phillips Phillips

APPENDIX 1. ADDRESS LIST OF EQUIPMENT MANUFACTURERS

ADB-ALNACO, Inc. 977 Gahanna Parkway P.O. Box 30829 Columbus, Ohio 43230 (614) 861-1304

Airport Lighting Co. 1923 Central Avenue Hot Springs, Arkansas 71901 (501) 624-5488

Airport Lighting Control Co. P.O. Box 1316
Winter Park, Florida 32790 (305) 628-3233

Amerace Corporation Elastimold Division P.O. Box 503 Hackettstown, New Jersey 07840 (201) 852-1122

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

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

Appollo Lighting Company, Inc. 4920 East Fifth Avenue Columbus, Ohio 43219 (614) 237-8888

Associated Engineering 11791 Monarch Street Garden Grove, California 92641 (714) 897-7441 ATC International, Inc. 3250 N. Sheridan Tulsa, Oklahoma 74115 (918) 583-7184

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 AC 150/5345-1M Appendix 1

> 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. Albuqerque, 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) 754-3200

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

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

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

ITT Royal Electric Division 95 Grand Avenue Pawtucket, Rhode Island 02862 (401) 722-8600

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

Joy Manufacturing Co.
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

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

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

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. 1923 Antoine B-4 Houston, Texas 77055 (713) 688-6904

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. <u>EQUIPMENT COVERED BY THE QUALIFICATION PROGRAM</u>. 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. <u>SUBMITTAL OF QUALIFICATION REQUESTS</u>. 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. <u>TESTS</u>. The manufacturer must successfully pass all tests in the applicable specification. The manufacturer shall provide all necessary equipment and bear all testing costs. 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 forth-coming specification revision.
- 10. <u>PUBLICATION OF APPROVAL LISTINGS</u>. 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

800 Independence Ave S W Washington, D C 20591

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Advisory Circular

DOT LIBRARY TOA TECH PUB UNIT 800 INDEPENDENCE AVE SW WASHINGTON, DC 20591

Subject:

Initiated by: AAS-200

Date: 7/20/84

AC No: 150/5345-1M

Change:

APPROVED AIRPORT LIGHTING EQUIPMENT

- 1. PURPOSE. This advisory circular contains a listing of manufacturers that have obtained qualification approval to specifications for airport lighting equipment which are used for projects funded under Federal assistance programs.
- CANCELLATION. This advisory circular cancels AC 150/5345-1L, Approved Airport Lighting Equipment, dated January 30, 1984.
- 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, 1984.
- 4. REQUESTS FOR INFORMATION. Further information concerning qualification approval may be obtained from the Federal Aviation Administration, Office of Airport Standards, Attention: AAS-200, Washington, D.C. 20591, telephone (202) 426-3824.

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 are not intended for use in ordering equipment. 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 15 and 16.

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<u>L-801 - Beacons</u> (AC 150/5345-12C)

Manufacturer	Manufacturer's catalog number						
	Type I	-801A	Type I	-801S	Type L-801H		
	Class 1	Class 2	Class 1	Class 2	Class 1	Class 2	
ADB-ALNACO, Inc.		RB2,RB4 RB6-750 RB6-1000		RB2/ 1000S		RB-3 044D0808	
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			

<u>L-807 - Wind Cones</u> (AC 150/5345-27B)

		Manufacturer's catalog number						
Manufacturer	Size	Lighted	Unlighted					
ADB-ALNACO, Inc.	1	80708-1000 Series	80708-2000 Series					
	2	80712-1000 Series	80712-2000 Series					

L-810 - Lights, Obstruction (AC 150/5345-43C)

Manufacturer	Manufacturer's catalog number					
	Single unit	Double unit				
Crouse-Hinds Lighting	40940, 50033 (4)	50021 (4)				
Godfrey Engineering Co.	GEA-60-1,-3 (11) GEA-60-2,-4 (30)(32)	GEA-61-1,-3 (11) GEA-61-2,-4 (30)(32)				
Harvey Hubbell, Inc.	ВУМВ-3600-АНО (30)	вумв-36002-Ано (30)				
TWR Lighting, Inc.	OL-1 (32)	OL-2 (32)				

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

Manufacturer	Manufacturer's catalog number					
ADB-ALNACO, Inc.	L-821 - all types, classes, styles					
Airport Lighting Control Co.	L-821 - type I, all classes, styles 1 & 2					
Associated Engineering Co.	201-204 (821 series) - type I, all classes, style 1; type I, Class F, S, style 2; type II, class F, styles 1,3.					
Eaton Corporation	L-821 - type I, II, all classes, styles 2,3					
Godfrey Engineering Co.	L-821 - type I, classes S & F, style 1					
Universe, Inc.	821-1 - type I, all classes, style 1 821-F - type II, all classes, style 3					

L-823 - Connectors, Cable (AC 150/5345-26B)

Manufacturer	Туре	Style	Class	Manufacturer's catalog number
Amerace Corporation (Elastimold)	II II II II II II	2 3,10 9 8 4 11 5	A B A B B B	54MP 54KIT 54MR 93MR 90P 90R 91P 91R
Joy Manufacturing Co.	Ι	3,10	В	X8077-257A X8077-301A X8077-387A
Molded Electric Products, Inc.	II II II	1 2 7 8 9	A A A A	10518 10949 10519 10875 10950

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

	Conductors Rating		Rating	Manufacturer's	
Manufacturer	s	М	Туре	10002119	identification
			4 .	(volts)	marking
American Insulated Wire Co.	X X	х	A,B	600 5000	FAA-L824 Type A,B FAA-L824 Type A,B
	X		As,Bs B	5000	FAA-L824 Type B
	X	х	č	600	FAA-L824 Type C
	X		Cs	5000	FAA-L824 Type C
Anaconda-Ericsson, Inc.	x x x		B B C	600 5000 600	Durasheath EP Durasheath EP Durasheath XLP
	^			000	batabataan nii
Carol Cable Co.	X X		C	600 5000	L-824-C L-824-C
Canada Wire and Cable, Ltd	x	x	C C	600 5000	Exelene Airport Series Exelene Airport Series
CCS Hatfield Wire & Cable Co.	x x		Cs C	5000 600	Hatfield Permalene XP Permalene XP
Collyer Insulated Wire Co.	x x	x x	C Cs	600 5000	XLP XLP
Dainichi-Nippon Cables, Ltd.	x x	x	C C	5000 600	Dainichi-Nippon, Type C Dainichi-Nippon, Type C
Essex Group	x x		c c	600 5000	L-824 Type C L-824 Type C
General Electric Co.	x		С	600	Vulkene
300000000000000000000000000000000000000		х	С	600	Vulkene Flamenol
	х		С	5000	Vulkene
		Х	Cs	5000	Vulkene Flamenol
Hendrix Wire & Cable Corp.	x x		c c	600 5000	FAA L-824 Type C FAA L-824 Type C
ITT Royal Electric Division	x		С	5000	FAA L-824 Type C
The Kerite Co.	x	х	A	5000	Kerite HTK
North American Phillips Corp.	х		С	5000	Dravulteen (XLPE)

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

	Conductors			Rating	Manufacturer's
Manufacturer	S	M	Туре		identification
				(volts)	marking
Pirelli Cable Corp.	X		В	600	EPR/PVC & EPR/N
	X		В	5000	EPR unshielded
	Х	Х	Bs	5000	EPR
	Х		С	600	Type USE, RHH, RHW
		Х	С	600	XLPE
	X		С	5000	XLPE unshielded
	Х	Х	Cs	5000	XLPE
Reynolds Metals Co.	Х	Х	Cs	5000	XĽP
	1	l	•	İ	
Rockbestos Co., The	Х		A	600	L-824 Type A
	Х	ł	В	5000	L-824 Type B
	Х	•	С	600	L-824 Type C
	Х	1	С	5000	L-824 Type C
	1	1	ł		
Rome Cable Co.	Х	ļ	В	600	Rome EPR
	Х	Х	С	600	Rome XLP, FR-XLP,
]	1	ŀ	XHHW Cond.
	Х	Х	Cs	5000	Rome XLP
	Х	1	В	5000	Rome EPR
		1		}	
Southwire Co.	Х	I	С	600	FAA L-824 Type C
	Х	1	С	5000	FAA L-824 Type C
		I	Ī		
Triangle PWC, Inc.	Х	1	С	600	Everene
1	1	Х	С	5000	Everene
1	1				
	L	L	1 .	.1	1

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

	Rating		Bright-		
Manfacturer	KW	Out	ness	Primary	Manufacturer's
		Amps	steps	switch	catalog number
Crouse-Hinds Lighting	4	6.6	3,5	Yes	31000-4-Series
(Air-cooled)	7월	6.6	3,5	Yes	31000-7.5-Series
	10	6.6	3,5	Yes	31000-10-Series
(Oil-cooled)	10	6.6	5	Option	31060-10-Series
	15	6.6	5	Option	31060-15-Series
	20	6.6	5	Option	31060-20-Series
	20	20	5	Option	31060-21-Series
	30	6.6	5	Option	31060-30-Series
	30	20	. 5	Option	31060-31-Series
	50	20	5	Option	31060-50-Series
	70	20	5	Option	31060-70-Series
Hevi-Duty Electric	4	6.6	3	Yes	4L82810D Series
(Air-cooled)	7戈	6.6	3	Yes	7L82810D Series
,			<u>'</u>		
(Oil-cooled)	10	6.6	3,5	Yes	10L82810D Series
· ·	15	6.6	3,5	Yes	15L82810D Series
	20	6.6	5	Yes	20L82810D Series
	20	20	5	Yes	20L82810D Series
	30	6.6	5	Yes	30L82810D Series
	30	20	5	Yes	30L82810D Series
Į į	50	20	5	Yes	50L82810D Series
	70	20	5	Yes	70L82810D Series

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

	L-830		Manufactur	er's catalog n	umber
Type	Watts	Amperes	Amerace Corp.	Crouse-Hinds	ADB-ALNACO,
		Pri/Sec	(Elastimold Div.)	Lighting	Inc.
]					
L-830-1	30/45	6.6/6.6	TA 045666-01	33001	83001-111
			TA 045666-01(1)		
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	
Ն-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		
Туре	Watts	Amperes	Amerace Corp.	Crouse-Hinds	
		Pri/Sec	(Elastimold Div.)	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		

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

Manufacturer	Manufacturer's catalog number		
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	Туре	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
Flash Technology Corporation	F	FTS-412
	F	FTS-422
Godfrey Engineering Co.	A	GEA-20-100
	С	GEA-25-100
	E	GE-3836-003
Multi-Electric Mfg., Inc.	A	551325-M, 551325-S
marca greenate magny mor	E	551327-M, 551327-S
Haiter Tatovantional Customs	F	TICC_022
Unitron International Systems	- '	VGS-832

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

Manufacturer	Туре	Manufacturer's catalog number
		05000 2000 (00 55 56)
ADB-ALNACO, Inc.	L-850A	85000-1000 (29,55,56)
		85000-2000 (52)
	L-850B	85000-1000(34),85000-2000(53)
	L-850E	44EO496 (21)
Crouse-Hinds Lighting	L-850A	20065, 20075 (35) 20335 (15)
		20065-LW, 20075-LW (49)
	L-850B	20355, 20360 (34)(40)
		20370, 20365 (34)(40)
	L-850C	20250, 20255 (34)(40)
	L-850D*	20260, 20265 (34)
	L-850E	20480 (34)
Market was a few to see the second	7 05054	2050 200 4201
Multi-Electric Manufacturing, Inc.	L-850C*	2950-300 (38)

^{*} Approval effective through December 7, 1984

L-851 - Visual Approach Slope Indicators (AC 150/5345-28C)

	Manufacturer's catalog number				
Manufacturer	Lamp housing	Adapter unit	Aiming bar		
ADB-ALNACO, Inc.	44DO107A 44DO154A 44DO152A	44CO120A	44A0156A		
Crouse-Hinds Lighting	25950-A 26000-A 25950-AV	26005 ~ A 26600	26041-A		
Hughey & Phillips, Inc.	VA382, VA384 VA38ST, VA38S	VA38A2 VA38A4	VACB6114		
Multi-Electric Manufacturing, Inc.	5556C	5562C	5559		

Pulsed Light Approach Slope Indicator

Manufacturer	Manufacturer's catalog number
DeVore Aviation Corporation	DA1001
	DA2001

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

Manufacturer	Туре	Class	Manufacturer's catalog number
ADB-ALNACO, Inc.	A	1	44DO422 (41), 852D0-2000 (57) 44DO423 (41)
	В	1	44D0422 (42), 44D0423 (42)
	A	2	44D0424 (41)
	A	1,2	44D0452 (41), 852D0-2000 (57)
	В	2	44D0424 (42)
	В	1,2	44DO452 (42)
Crouse-Hinds Lighting	A	1	19505, 19506 (43)
			19505-LW, 19506-LW (50)
	В	1	19509, 19510 (44)
			19509-LW, 19510-LW (51)
	A	2	19515 (43); 19515-LW (50)
	A	1,2	19850 (43); 19850-LW (50)
	В	2	19513 (44); 19513-LW (51)
	В	1,2	19855 (44); 19855-LW (51)
	С	1,2	19505-DG,19506-DG,19515-DG,
			19850-DG (43)
	D	2	19855-ID (44)
	B	2	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.		ll2 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		Manufacturer's catalog number
ADB-ALNACO, Inc.	I	RL-854
Control Industries, Inc.		RC-1T5A

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

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

L-858 - Signs, Guidance (AC 150/5345-44D)

Manufacturer	Type	Size	Style	Class	Mfgr's cat. no.
ATC International, Inc	L-858Y,R	1,2,3	2,3,4	1,2	80 series
Crouse-Hinds Lighting	L-858Y,R,B	1,2,3,4	1,2,3	1	60,000 series
Gardner, T.J., Co.	L-858Y,R,B	1,2,3,4	1,2,3,4	1,2	G-L-858 series
Standard Signs, Inc.	L-858Y,R L-858Y,R L-858Y,R L-858B L-858B	1 2 3 4 4	1,2,3,4 1,2,3,4 1,2,3,4 1,2 1,2,3		S858CLT M858CLT L858CLT D858CLT(fluor) D858CLT(incd)

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

Manufacturer	Manufacturer's catalog number	Remarks
Flash Technology Corp.	FTS-427	Style F
Unitron International Systems	vgs-837	Style F

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

3

Manufacturer	Manufacturer's catalog number				
	Type L-860	Type L-860E			
Crouse-Hinds Lighting	40650 (1)	40650-GR,RG (1)			
Godfrey Engineering Co.	GEA-05 (3)(24)	GEA-05 (24)			
Manairco, Inc.	2100 (2)(3), 2125 (6)	2250 (5)			
National Airport Equipment Co.	L-500C (7) L-510C (8)	L-500R/G (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 L-861E L-861T	L-861-1,-3 (10); L-861-2,-4 (12); RWL-MIL (10) L-861-1,-3 (11); RWL-MIE (11) L-861T-1,-3 (10);L-861T-2,-4(13,14); TWL-MIL(10)
Airport Lighting Co.	L-861 L-861E L-861T	MRL-216,217 (10) MRL-216,217 (11) MRL-216 (10)
Appollo Lighting Co.	L-861 L-861E L-861T	0300-2(10,11,14); 0300-4 (12) 0300-2 (11,54) 0300-2 (10,14); 0300-4 (12,13)
Crouse-Hinds Lighting	L-861 L-861 L-861E L-861SE L-861T L-861T	ERL Model III (10,14); 40675E, 40680E(17); 40938 (18), 40939 (10) ERL Model III (11); 40727, 40770 (17) 40690, 40775 (16) ERL Model III (10,14); 40675T,40680T(18); 40938-B (18); 40939-B (10)
Godfrey Engineering, Inc.	L-861 L-861E L-861T	GEA-01 (10,14) GEA-01 (11) GEA-01 (10,14)
Hughey & Phillips, Inc.	L-861 L-861E L-861T	MS-61 (10); MP-61 (12,14) MS-61 (11) MS-61 (10); MP-61 (12,13,14)
Manairco, Inc.	L-861 L-861E L-861T	7100 (10), 8100 (14), 8125 (12) 7250 (11) 7400 (10), 8400 (14), 8425 (13)
Multi-Electric Manufacturing, Inc.	L-861 L-861E L-861SE L-861T	6183,6193 (10);6183M,6193M (14);6183H,6193H (19) 6187, 6197 (11); 6187H, 6197H (20) 6387, 6397 (36) 6184, 6194 (10);6184M,6194M (14);6184H,6194H (19)
National Airport Equipment Co.	L-861 L-861 L-861E L-861SE L-861T L-861T	SL-861 (10); ML-861 (14); MLS-700S,MLS-700B(12) SLQ-700S, SLQ-700B (31,33,39,45) SL-861 (11); SLQ-700 RSG, SLQ-700 BRG (33,45) SLQ-910 SRG, SLQ-910 BRG (36) 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	
	Edge	Threshold/end
ADB-ALNACO, Inc.	Ա-862 (22)	L-862 (23)
Airport Lighting Co.	HRL-213 (22)	HRL-213 (23)
Crouse-Hinds Lighting	48369 (22) 40722 (16)	48371 (23) 40722 (25) (28)
Godfrey Engineering, Inc.	GEA-10 (36)(26) GEA-15 (22)	GEA-10 (21) GEA-15 (23)
Hughey & Phillips, Inc.	HL-62 (22)	Ht-62 (23)
Multi-Electric Manufacturing, Inc.	6283, 6293 (22) 6383, 6393 (36)	6287, 6297 (23) 6387, 6397 (21)
National Airport Equipment Co.	н-900 (22) н~910 (36)	H-900 (23) H-910 (21)

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-317 FTB-119 FTB-319-2,-3				
TWR Lighting, Inc.		Type FB Beacon (48) A1, A2/3, A4/5 controllers			

L-867 - Light Base, Non-load Bearing L-868 - Light Base, Load Bearing L-869 - Junction Box (AC 150/5345-42B)

1024-2-S

1224-2-S

catalog number

1024-2-

1224-2-

EXT

ring

Cover

plate

12-1-CP-S

16-1-CP-S

10-2-CP-S

12-2-CP-S

Spacer

12ER-

16ER-

1275FR

rings pla

			(AC 150/5345-42B)					
	Type			ufacture	er's catal			
Manufacturer		Type	Size		Multipl	e sectio	n base	Exten-
			Base	Bottom	Middle	Тор	sion	l
Gardner,	L-867	В	1224PVC				12S-EXT	
T.J., Co.	L-867	В	1224PVC- ADJ					
	L-867 L-867	B	12245 16245				16S-EXT	
1	- 007	, ~	T 1 2 3 17	ľ	B 3	l	TODDV	1

L-868

L-868

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-2325)

Manufacturer	Component	Manufacturer's catalog number
Crouse-Hinds Lighting	Remote optical head Flasher power supply Control cabinet Power transformer Junction box PAR-38 lampholder Lampholder aiming device Optical head aiming device	41001 41007 41010 41005 41006 41003 41020 41002
Multi-Electric Manufacturing, Inc.	Plashing light Power panel Control cabinet Power Transformer PAR-38 lampholder Aiming device	FA-9425/1, FA-9994 FA-9425/2, FA-9994 FA-9426/1, FA-9994 FA-9426/2, FA-9994 FA-9426/3, FA-9994 FA-9426/4, FA-9994

LAMP DESCRIPTIONS

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
	0001	40	3.00		Yorkville Industries
(1)	8301	40	120		General Electric, Westinghouse
(2)	15T6	15	120		
(3)	15T7C	15 69	120 120		Westinghouse General Electric, Sylvania, West.
(4)	69A21TS	40	120		Sylvania
(5) (6)	40C9½C/ST 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	120	6.6	General Electric, Sylvania, West.
(11)	6.6A/T10P	45		6.6	General Electric, Sylvania, West.
(12)	40A/TS	40	120	0.0	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	120	6.6	Sylvania
(16)	20058	115		6.6	Crouse-Hinds
(17)	40732	45		6.6	Crouse-Hinds
(18)	40737	30		6.6	Crouse-Hinds 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	220	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)	48A0042	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	<u> </u>
(38)	Q20A PAR 56/2	300		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	1	6.6	Crouse-Hinds
(44)	19484	65	I	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

LAMP DESCRIPTIONS (continued)

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
(52) (53) (54) (55) (56) (57)	58809 58793 100/T10/2P 58801 6965 6859	125 115 100 200 200 30	120	6.6 6.6 6.6 6.6	Sylvania Sylvania General Electric Sylvania Phillips Phillips

APPENDIX 1. ADDRESS LIST OF EQUIPMENT MANUFACTURERS

ADB-ALNACO, Inc. 977 Gahanna Parkway P.O. Box 30829 Columbus, Ohio 43230 (614) 861-1304

Airport Lighting Co. 1923 Central Avenue Hot Springs, Arkansas 71901 (501) 624-5488

Airport Lighting Control Co. P.O. Box 1316 Winter Park, Florida 32790 (305) 628-3233

Amerace Corporation
Elastimold Division
P.O. Box 503
Hackettstown, New Jersey 07840
(201) 852-1122

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

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

Appollo Lighting Company, Inc. 4920 East Fifth Avenue Columbus, Ohio 43219 (614) 237-8888

Associated Engineering 11791 Monarch Street Garden Grove, California 92641 (714) 897-7441 ATC International, Inc. 3250 N. Sheridan Tulsa, Oklahoma 74115 (918) 583-7184

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 AC 150/5345-1M Appendix 1

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. Albuqerque, 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) 754-3200

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

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

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

ITT Royal Electric Division 95 Grand Avenue Pawtucket, Rhode Island 02862 (401) 722-8600

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

Joy Manufacturing Co.
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

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

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

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. 1923 Antoine B-4 Houston, Texas 77055 (713) 688-6904

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. <u>SUBMITTAL OF QUALIFICATION REQUESTS</u>. 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. 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 forth-coming specification revision.
- 10. <u>PUBLICATION OF APPROVAL LISTINGS</u>. 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

800 Independence Ave. S.W. Washington, D.C. 20591

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