US Department
of Transportation
Federal Aviation Administration

Advisory Circular

Subject: AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM

Date 5/15/95
Initiated by AAS-200

AC No 150/5345-53A
Change

1 PURPOSE This advisory circular (AC) describes the Airport Lighting Equipment Certification Program (ALECP) It provides information on how an organization can get Federal Aviation Administration (FAA) acceptance as a thud party certification body and how manufacturers may get equipment qualified under the program It includes a list of FAA accepted certification bodies and a list of products that have been certified under the program This AC does not impose requirements or mandate participation in the ALECP by any party The AC is intended only to describe the criteria that FAA will use to determine whether a certification body qualifies for participation and how equipment may be qualified

2 CANCELLATION AC 150/5345-53, Airport Lighting Eqmpment Certification Program, dated July 15, 1994, is cancelled

3 RACKGROUND Until December 31, 1989, the FAA administered the Airport Lighting Approval Program under the Federal airport grant program Under this program the FAA inspected equipment to confirm that it met FAA standards and to ensure quality control The program was discontinued as of December 31. 1989, as a result of declining FAA resources The listing of equipment in AC 150/5345-1, Approved Lighting Equipment, current edition, was no longer maintained

On January 1, 1990, a new program was established which named a commercial tesung laboratory under the oversight of an Industry Technical Advisory Committee (ITAC) as the program certification body Since the inception of the new program, the FAA realized that there were additional commercial laboratories that may want to participate as certification bodies This AC, therefore, has instituted and established the Airport Lighting Equipment Certification Program This program provides that any commercial laboratory meeting certain criteria may participate as a certification body and provides for FAA oversight and acceptance of certification bodies

Under the ALECP, the FAA will establish a list of accepted certification bodies The certification bodies will evaluate and certify airport lighting eqmpment and license suppliers to mark qualifying products The FAA will also maintain a list of certified equipment. This list will be provided to assist airport sponsors in discharging their duty to determine that equipment meets the applicable FAA specifications, and is, therefore, eligible for funding under the Federal grant assistance program for airports

AC 150/5345-l, current edition, will be cancelled July 15, 1995

4 COMPUTER BULLETIN BOARD The certified equipment list is available through the FAA Airports Bulletin Board System (BBS) which permits access to up-to-date listings Guidance on the use of the BBS is contained in AC 150/5000-8, Office of Airport Safety and Standards Electronic Bulletin Board, current edition The bulletin board may be accessed by calling (202) 267-5205

RAYMOND T UHL
Acting Director, Office of Airport Safety & Standards

AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM

1 GENERAL The Federal Aviation Administration (FAA) has established the Airport Lighting Equipment Certification Program This program is implemented by thud party certification bodies found acceptable by the FAA **and** is intended for equipment funded for installation under the FAA airport grant program The purpose of the program is to assist airport sponsors in discharging their duty to ensure that airport lighting equipment meets the applicable FAA standards for safety, performance, quality, and standardization

2. CERTIFICATION PROGRAM

a Procedures Manufacturers of lighting and visual aids equipment that desire to participate in the program may select any third party certification body from the list contained in Appendix 1, Third Party Certification Bodies A licensing agreement, as outlined in paragraph 7, detailing the relationship between the manufacturer and the third party certification body and their respective responsibilities is then developed A procedural guide, as outlined in paragraph 8. supplements the agreement and describes the operational aspects of the program Equipment is evaluated by the third party certification body under the procedures contained in Appendix 2, Equipment Qualification Procedures The manufacturer is issued a "Certificate of Conformance" by the third party certifier for each type of equipment that meets the applicable FAA standards A copy of each certificate of conformance shall be submitted to the FAA by the third party certification body The certified equipment will then be added to the "Certified Airport Lighting Equipment" list in Appendix 3 and entered into the computer bulletin board A" updated list will be published each January and July

b Costs The program is funded entirely out of fees paid by participating manufacturers The fee schedule may be obtained from the third party certification body(s) listed in Appendix 1

3 EQUIPMENT APPROVED PRIOR TO 1990 Manufacturers with equipment approved by the FAA prior to January 1, 1990, who participate in the Airport Lighting Equipment Certification Program are subject to the quality control audits, site production testing, and inspections contained in Appendix 2 This equipment will be listed in Appendix 3 for a period of 1 year after the effective date of this AC During that time, requalification testing of the equipment will be required to maintain its listing

4 ACCEPTANCE CRITERIA An entity may become a" FAA accepted third party certification body if it demonstrates conformance with the American National Standards Institute (ANSI) Z34 1, Third Party Certification Programs, for Products, Processes, and Services, and

a Has been in operation as a thud party certification body for a minimum of 3 years

b Has a permanent assigned staff, knowledgeable in photometrics, if required for the scope of services offered, and other disciplines related to testing **and** quality control

c Is under the supervision of a professional (Bachelor of Science Degree in related field, i e , engineering, physics, physical science, etc) with a minimum of 4 **years** experience **I"** interpreting testing standards/specifications, test **methods. evaluating test** reports and quality assurance programs

5 DUTIES OF THIRD PARTY CERTIFICATION **BODY** In addition to administering **the** qualification program (Appendix 2), a third party certification body must assure that the manufacturer provides and maintains a quality system in accordance with FAA-STD-013, Quality Control Program Requirements, or suitable alternative, such as ISO 9000 or Department of Defense quality standards (A" initial quality audit must be performed by the third party certification body to ensure adherence) It must also assure that testing laboratories which perform qualification testing conform to the requirements of the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) Guide 25, General Requirements for the Competence of Calibration and Testing Laboratories Semiannual inspections of manufacturers must also be conducted (see paragraph 7e)

6 **APPLICATION** In order to be listed as a third party certification body, the certification body must agree to undergo an assessment to determine if they qualify The FAA will provide application information upon request Requests should be submitted to

Federal Aviation Administration
Engineering & Specifications Division, AAS-200
800 Independence Ave , SW
Washington, DC 20591

The following information must be submitted with the application

a Summary of background as a third party certification body

b Resumes of permanent staff members that will be assigned to the certification program

c Draft copy of procedural guide and licensing agreement for the An-port Lighting Equipment Certification Program A schedule of fees does not have to lx Included in the licensing agreement

d Scope of certification activities for which it is seeking approval, if it is less than the total program

If the FAA determines that the third party certification body conforms to all criteria, a letter of acceptance will bc issued to that body and they will be listed in Appendix 1

7 LICENSING AGREEMENT The licensing agreement details the relationship between the manufacturer and the third party certification body, and their respective responsibilities in the program A schedule of fees for participation in the program, including the yearly Administrative Services fee and fees for quality control review, qualification testing, production testing, and challenge testing will bc part of the agreement

8 PROCEDURAL GUIDE The Procedural Guide describes the operational aspects of the third party certification program and addresses the elements listed below as a minimum (See Appendix 6 for Procedural Guide Outline)

a Scope Outlme generally how the Airport Lighting Equipment Certification Program functions It should discuss how the certifier will implement the Equipment Qualification Procedures contained in Append= 2

b Quality Control Program Outline procedures for assuring manufacturer's compliance with the provisions of FAA-STD.013, or alternative (see paragraph 5)

c Product **Qualification** Tests Outhne how product qualification tests will be conducted The third party certification body may witnesses tests conducted by a manufacturer at the manufacturer's laboratory or tests conducted at a third party laboratory All laboratories in which equipment is tested will be subject to inspection and audit to assure conformance with ISO/IEC Guide 25

d **Production Tests** Outline procedures for ensuring that routine production tests as required by advisory circulars have been conducted During the semiannual inspections (see paragraph 7e), the thud party certifier may request to witness some of the production testing It is intended that samples of all certified equipment produced in a given year be inspected at least once during these visits If equipment is not being produced during the semiannual visit, the third party certifier will review the production records and test data for that equipment

e **Semiannual Inspections** Outline procedures for conducting semiannual inspections at the manufacturing site of the participant to determine that the manufactured equipment is the same as the sample subjected to the qualification tests The inspections may be scheduled or unannounced, at the option of the third party certifier Nonconformance to specifications found during these inspections will result in suspension of the model, as certified, unless corrections are made If production test records are not available, the certificate will be suspended The third party certifier shall notify the FAA within 24 hours of any suspension or withdrawal of equipment

f Appeals **Procedure** Outhne procedures for conducting a" appeals program Under this procedure a manufacturer who is affected by a" adverse determination by the thud party certifier with respect to its certified equipment or its participation in the program, may appeal the determination to the third party certification body

g Challenge Procedure Outlme procedures for conducting a challenge program Under this program, if a manufacturer believes another manufacturers' equipment does not meet specification requirements, it may challenge that manufacturer's certification by submitting to the FAA a written statement of reasons for the challenge The statement shall specify the section(s) of the particular specification being challenged The FAA will submit the documents to the third party certifier of the challenged manufacturer, who will follow the challenge procedures developed The challenged manufacturer's equipment shall remain on the Certified Airport Lighting Eqmpment list while the challenge is underway

h Forms The use and function of forms to be used in administering the program should be addressed The "Certificate of Conformance" must follow the sample shown i" Appendix 7

9 INSPECTION OF FACILITIES Each participating third party certification body must agree to make facilities and program records available to the FAA, or its representatives, both initially and all reasonable times thereafter for inspection The FAA reserves the right to accompany the third party certification body to a manufacturers' facility or testing laboratory to witness qualification tests, quality control audits, site production tests or inspections The FAA also reserves the nght to have staff or designated representatives visit the third party certifier for review of its program

10 DURATION OF LETTER OF ACCEPTANCE A letter of acceptance by the FAA is valid for a period of 2 years However, a third party certification body which wishes to continue in the program may reapply by resubmitting the information called for in paragraph 6 above, plus a statement covering any problems experienced that may relate to safety and reliability of products certified However, should a thud party certifier make any changes in the program prior to that time, the FAA is to be notified and changes approved, before said changes are implemented

Any questions concerning this program or the operation of any of the accepted thud party certification bodies should be sent to

Federal Aviation Administration
Engineering & Specifications Division, AAS-200
800 Independence Ave , SW
Washington, DC 20591

11 WITHDRAWAL. OF LETTER OF ACCEPTANCE In the event the third party certification body does not meet the criteria of this AC, the FAA reserves the nght to withdraw the letter of acceptance

12 THIRD PARTY CERTIFICATION BODY CHALLENGE PROCEDURE If the FAA receives information that a thud party certification body believes another third party certification body is not performing in accordance with the minimum criteria of this AC, the FAA will notify the challenged party and investigate the charges If the challenge is upheld, and the third party certifier is not performing in accordance with the criteria set forth in this AC at the end of 30 days, the FAA reserves the right to withdraw the letter of acceptance

APPENDIX 1 - THIRD PARTY CERTIFICATION BODIES (As of May 1995)

The following Third Party Certification Bodies (Thud Party Certifiers) have met the requirements contained in this advisory circular and have been accepted as Third Party Certifiers under the Airport Lighting Equipment Certification Program

*ETL Testing Laboratories, Inc
Industrial Park
Cortland, New York 13045
(607) 7536711

* Provisional acceptance until July 15. 1995, pending determination of conformance to ANSI Z34 1

Detroit Testing Laboratory. Inc
7111 E Eleven Mile
Warren. Michigan 48092
(810) 754-9000

APPENDIX 2 - EQUIPMENT QUALIFICATION PROCEDURES

1 QUALIFICATION PROGRAM The purpose of the qualification program is to provide airport operators with a list of eqmpment that meets the required standards for safety, performance, quahty, and standardization Manufacturers are subject to a quahty audit and twice yearly manufacturing site production tests and inspections by the third party certifier Manufacturers submitting products for qualification must have a representative in North America to provide aftermarket services to purchasers of tbe equipment.

2 EQUIPMENT COVERED BY THE QUALIFICATION PROGRAM The eqmpment included in the 150 series of advisory circulars, as listed in the contents of this AC, is covered by the qualification program The eqmpment covered may be changed pendically to reflect changing needs in airport equipment.

3 SUBMITTAL OF QUALIFICATION REQUESTS Requests for qualification must be submitted in writing to a third party certifier listed in Appendix 1 of this AC 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 certification is requested A list of eqmpment options should also be included when so specified in individual eqmpment specifications

b Engineering assembly and schematic drawings of the eqmpment to permit determination of adherence to specification design requirements

c A copy of the proposed test procedures and test data sheets, and a statement as to whether the manufacturer proposes to conduct the tests at their own facility, or the name and location of a thud party testing laboratory where the tests are to be conducted Smce the thud party certifier reserves the nght to witness any or all tests, the manufacturer shall not commence the tests until consultation with the thud party certification body The third party certifier may elect to witness, or waive the option to witness, the tests The manufacturer shall give the third party certifier 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 eqmpment has been manufactured and will perform in accordance with applicable specifications and that any defect m design, materials, (excluding lamps), or workmanship which may occur durmg 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 manufacturers fob factory"

e A statement that the manufacturer agrees to provide and maintain a quahty control program in accordance with FAA-STD-913 or suitable alternative such as ISO 9000 or Department of Defense quahty standards The manufacturer shall provide a copy of the proposed quality control program

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

4 REVIEW PROCEDURE FOR QUALIFICATION REQUESTS After receipt by the third party certifier of the request for qualification, the manufacturer will be notified as to whether the proposed test procedures, test data sheets, and other documentation is acceptable A mutually acceptable schedule for conductmg tests shall be agreed upon at this time The manufacturer will be notified, in writing, after the last submittal of tbe required documentation or test results, of the results of the eqmpment qualification testing If the eqmpment qualifies, the manufacturer will be issued a Certificate of Conformance The review procedure and associated time frames shall be outlined by the third party certifier in the procedural guide The certification 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 fads to honor the guarantee (paragraph 3d) or does not maintain quahty control in accordance with the approved plan (paragraph 3e)

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

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

e Changes are made in the eqmpment without approval from the third party certifier (paragraph 7)

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

g The manufacturer is found not in conformance with the quality control requirements of paragraph 3e or other program requirements

5. TESTS

a **Qualification** Tests. The equipment must successfully pass all tests in the applicable specification The manufacturer shall bear all associated costs The tests may be witnessed by the thud party certifier at the manufacturer's laboratory or at a thud party laboratory Laboratories must conform to ISO/IEC Guide 25 Where the third party certifier waives the option to witness tests, the manufacturer must submit a certified copy of all test reports

b **Production** Tests In addition to qualification tests. each equrpment specification requires some tests to be conducted on production units The manufacturer must retain records of the production tests for 3 years, unless otherwise specified in the equipment specification, and permit the third party certifier to witness such tests or inspect previous records on request.

c Lamp Life Tests Lamp life tests shall be conducted in accordance with the procedures contained in Appendix 5, Lamp Life Test Procedure

6 UNACCEPTABLE FAILURE RATE Since reliable equipment is of prime importance to safety of airport operations, equipment which proves unreliable in use (as determined by the FAA) may be removed from the certified listing contained in this AC 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 by the FAA as to the basis for this determination The manufacturer shall then notify the FAA in writing within 15 working days as to us 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 equrpment will be removed from the certified listing The FAA reserves the nght to require the equipment to be subjected to any or all qualification tests when the equipment has been deemed unreliable

7 MODIFICATIONS TO EQUIPMENT Once an equipment type has been certified, the manufacturer may not make any changes in the equipment without submission of the changes to and recertification by the thud party certification body Requests for design or component changes most be submitted in writing to the third party certification body and must be accompanied by supporting documentation plus (if applicable) copies of the revised instruction manual pages which reflect the proposed change The thud party certifier will renew the modification If acceptable they wffl issue a revised Certificate of Conformance 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 is permissible Although such substitution does not require recertification, the manufacturer shall supply the thud party certifier a list of the substituted items for filing with the inspection records This exception does not apply to lamps

8. REVISION OF SPECIFICATIONS The FAA may, at times, 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 wrll contain a" effective date, normally 6 months, at which time the prior certification automatically expires unless the manufacturer has teen requalified to the revised specification Manufacturers will be 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 by the thud party certifier 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 equrpment specifications may not cover all specific design and operational applications and that equipment may be submitted for certification that does not meet all specification requirements If the proposed design is considered by the FAA to have merit, then the applicable equipment specification will be revised by the FAA 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 by the FAA on the proposed revision, the proposed design may be given an interim certification before final certification and publication of the revised specification I" such cases, other manufacturers of similar equipment will be notified of the certification and of the forthcoming specification revision

10 PUBLICATION OF CERTIFIED EQUIPMENT A listing of equipment that has ken certified by third party certification bodies will be published in this AC The list will be updated in January and July of each year Changes in the listings made between publication dates may be obtained from the Office of Airport Safety and Standards, Attention AAS-200, Federal Aviation Administration, 800 Independence Ave , SW, Washington, DC 20591, or from those FAA offices as listed in AC 150/5000-3, Address List for Regional Airports Divisions and Airports District/Field Offices, current edition

11 COMPUTER BULLETIN BOARD A current listing of equipment certified by third party certification bodies is available through the FAA Airports Bulletin System Guidance on the use of the BBS is contained in AC 150/5000-8 The bulletin board may be accessed by calling (202) 267-5205

APPENDIX 3 - CERTIFIED AIRPORT LIGHTING EQUIPMENT

NOTICE TO USERS

The specification for each piece of equipment in this document is contained in the AC given at the top of the product list. The equipment specification defines the type, class, and style classifications used in the listing Not all combinations of type, class. and style are permissible The equipment specification should be consulted for approved equipment configurations For the sake of brevity, manufacturers who have qualified an entire equipment series or product line have the equipment listed under a single general catalog number These general numbers are not intended for use in ordering equipment, and users should consult equipment manufacturers' catalogs or literature for complete ordering information, especially for equipment having optional features For each fixture, the number in parentheses ( ) after the manufacturer's catalog number indicates the specific lamp type used in testing the equipment A description of each lamp is given in Appendix 3

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		44D0793-X(88) 44D0221-X(88) 44D0414-X(67.89)		44D1032-X(88)		44D0808-X(88)
Appollo Lighting Co		0200 Series (85,86)		0200 Series (85,86)		
BF Goodrich/Godfrey Engineering	GEA30-2(88) GEA30-3(88)	GEA30-2(88) GEA30-3(88)			GEA30-1(87)	GEA30-1(87)
Crouse-Hinds Airport Lighting Products	801A1-1-XX	801A2-1-TR	80151-1-XX	80152-1-m	801H1-1-XX	801-H2-1-TR
Manarco, Inc		AB-1000D (88) AB-1000F (88)		AB-1000DS (88) AB-1000FS (88)		AB-500H (87)

L-802--Beacons, High Intensity
(AC 150/5345-12C)

Manufacturer	Manufacturer s catalog number					
	Type L 802A		Type L 802S		Type L-802H	
	Class 1	class 2	Class 1	Class 2	Class 1	Class 2
ADB	44D1500-1XX(67) 44112069 -XXXX(60 61)	44D1500- XXXX(94,95) 44D2069 -XXXX(60,61)	44D1500- 2XX(67)	44D1500- XXXX(94,95)		
Crouse-Hinds Airport Lighting Products	65000-G (60 61) 802A1-1-XX	65000-G-1 (60,61) 802A2-1-TR	65000-Y (60,61) 802S1-1-XX	65000-Y-1 (60,61) 802S2-1-TR	802H1-1- XX	802H2-1- TR

L-804--Light, Holding Position Edge
(AC 150/5345-46A)

Manufacturer	Mode	Manufacturer s catalog number
ADB	1 1, 2	44D1946-XXXX 44D1261, 44D1262 (31)
Crouse-Hinds Airport Lighting Products	1	41804 (71)

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

Manufacturer	Size	Manufacturer s catalog number	
		Lighted	Unlighted
ADB	1	44D1222-3, 4	44D1222-1, 2
BF Goodrich/Godfrey Engineering	1	GEA-45-FL Series	GEA-45 Series
Crouse-Hinds Airport Lighting Products	1	71043	71044
Manairco, Inc	1	18SLWCO	18SWC

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

Manufacturer	Size	Manufacturer's catalog number	
		Lighted	Unlighted
ADB	1	44D0941-X Series	44D0941-X Series
BF Goodrich/Godfrey Engineering	1	GEA-40-18-FL Series	GEA-40-18 Series
	2	GEA-40-36-FL Series	GEA-40-36 Series
Crouse-Hinds Airport Lighting Products	1	44481D. 44484B	44482A, 44483B
	2	48310B, 48313B	48311B, 48312B
Hughey & Phillips, Inc	2	LGW-3125,31250B	
Manarco, Inc	1	18LWCO	

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

Manufacturer		Manufacturer's catalog number	
		Single unit	Double unit
ADB	12	44C1005-X	44C1007-X 44C1532-1XXX (lamp out feature)
BF Goodrich/Godfrey Engineering	1,2	GEA-60-l-3 (11) GEA-60-2,-4 (30)(32)	GEA-61.l,-3 (11) GEA-61-2,-4 (30)(32)
Crouse-Hinds Airport Lighting Products	1,2	40940, 50033 (4)	50021 (4)
Hughey & Phillips, Inc	1	OB20A31L (4)	OB22A31L (4)
	1	OB20A41L (4)	OB22A41L (4)
	1	OB21A31L (4)	OB24A31L (4)
	1	OB21A41L (4)	OB24A41L (4)
	2	OB20H (32)	OB22H (32)
	2	OB21H (32)	OB24H (32)
	2	OB20A31H (32)*	OB22A31H (32)'
	2	OB20A41H (32)*	OB22A41H (32)*
	2	OB21A31H (32)*	OB24A31H (32)*
	2	OB21A41H (32)*	OB24A41H (32)'
	1	OB30*	
Hubbell Lighting, Inc		BYMB-3600-AHQ	BYMB-3602-AHQ
Litebeams, Inc		TRI-5	DTRI-5
		TR-6	DTRI-6
Manarco, Inc		0L-201(32)	OL-202(32)
Point Lighting Corporation		POL-20000 (32)	POL-20000-D (32)
TWR Lighting, Inc	2	OL-1 (32)	OL-2 (32)

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

Manufacturer	Type	Class	Style
AD3	I. II	F, S, W	1, 2, 3
Appollo Lighting Co, Inc	I,II	F, S, W	1, 2, 3
BF Goodrich/Godfrey Engineering	I, II	F, S, W	1, 3
Crouse-Hinds Airport Lighting Products	II	F	1
Mirla Miranda Co	I, II	F, S, W	1, 2, 3
Universe, Inc	I, II	F, S, W	1, 2, 3

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

Manufacturer	Type	Style	Class	Manufacturer's catalog number
Amerace Ltd	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
Crouse-Hinds Molded Products	I	3,10	B	X8077 Series
	I	3. 10	B	823KP Series
	II	9, 5, 11, 12	B	823KS Series
	II	1	A	CAS1M-P Series
	II	6	A	x8405 Series
	II	7	A	CAS1M-R Series
	II	8	A	CAS3M-R Series
	II	1	A	CAS 1M-P Series
	II	6	A	x8405 Series
	II	7	A	CAS1M-R Series
	II	8	A	CAS3M-R Series
Molded Electric Products. Inc	II	1	A	10518
	I	2	A	10949
	I	3	B	310XXX
	II	4	B	11254
	II	7	A	10519
	II	8	A	10875
	I	9	A	10950
	I	10	B	310XXX
	II	11	B	11255
	II	5	B	11432
	II	12	B	11433

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

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

L-828.-Regulators, Constant Current

(AC 150/5345-10E)

Manufacturer	Ratmg (kW)	Class	Style	Manufacturer's catalog number
ADB	4	1	1.2	44D10XX-X, 44D13XX-X Series
(Air-cooled)	7½	1	1,2	44D10XX-X, 44D13XX-X Series
	10	1	1,2	44D10XX-X, 44D13XX-X Series 44D1374-X, 44D1375-X
	15	1,(2)*	1,(2)*	44D10XX-X Series 44D13XX-X Series 44D1376-XXXX
	20	1,(2)*	1,(2)*	44D10XX-X Series 44D13XX-X Series 44D1378-XXXX
		1	1,2	44D2504-XXXX
	25	1,2	2	44D13XX-X
	30	1,(2)*	1,(2)*	44D11XX-X Series 44D13XX-X Series 44D1380-XXXX
(Oil-cooled)	50	2	2	44D136X-X Series
	70	2	2	44D136X-X Series
Crouse-Hinds Airport	4	1	1,2	82860-D-4-X-XXXX
Lighting Products	7½	1	1,2	82860-D-7 5-XXXX
(Au-cooled)	10	1	1,2	82860-D-10-XXX
	15	1,2	1,2	82860-D-15-X-XX-XX
	20	1,2	1,2	82860-D-20-X-XX-XX
	30	1,2	1,2	82860-D-30-X-XX-XX
(Oil-cooled)	10	1	2	31060-10-Series
	1s	1	2	31060-15-Series
	20	1,2	2	31060-20-,31060-21-Series
	30	1,2	2	31060-30-,31061-31-Series
	50	2	2	31060-50-Series
	70	2	2	31060-70-Series
Hevi-Duty Electric	4	1	1,2	4L828XXDX Series
(Air-Cooled)	7%	1	1,2	7L828XXDX Series
	10	1	1,2	10L828XXDX Series
	1s	1	1,2	15L828XXDX Series
	20	1	1	20L828XXDX
(Oil-cooled)	10	1	1,2	10L828XXLX Series
	1s	1	1,2	5L828XXLX Series
	20	1,2	1,2	20L828XXLX Series
	30	1.2	1,2	30L828XXLX Series
	50	2	2	50L828XXLX Series
	70	2	2	70L828XXLX Series

L-828--Regulators, Constant Current—Continued

(AC 150/5345-10E)

Manufacturer	Rating (kW)	Class	Style	Manufacturer's catalog number
Hughey & Phillips, Inc	4	1	1,2	W4L828W, 04L828W Series
	7½	1	1,2	W7L828W, 07L828W Series
	10	1	1,2	10L828W Series
(All units are au-cooled)	15	1	1,2	15L828W Series
	20	1,2	2	20L828W Series
	30	1.2	2	30L828W Series
	50	2	2	50L828W Series
	70	2	2	70L828W Series

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

L-829--Regulators, Monitored Constant Current

(AC 150/5345-10E)

Manufacturer	Rating (kw)	Class	Style	Manufacturer's catalog number
ADB	(Approved for use with all ADB-ALNACO L-828 regulators)			829XX-XXXX, 44D10XX-X Series 44D11XX-X Series, 44D13XX-X Series
Crouse-Hinds Airport Lighting Products	(Approved for use with all Crouse-Hinds L-828 regulators)			31060-CM Series
	4 kw	1	1,2	82960-D-4-XX-XX-XX
	7 5 kw	1	1,2	82960-D-7 5-XX-XX-XX
	10 kw	1	1,2	82960-D-10-XX-XX-XX
	10 kw	1	1,2	82960-D-11-XX-XX-XX
	15 kw	1,2	1,2	829XX-D-15-XX-XX-XX
	20 kw	1,2	1,2	829XX-D-20-XX-XX-XX
	30 kw	1,2	1,2	829XX-D-30-XX-XX-XX
Hevi-Duty Electric	(Approved for use with all Hevi-Duty L-828 regulators)			XXL829XXDX XXL829XXLX
Hughey & Phillips, Inc	(Approved for use with all Hughey & Phillips L-828 regulators)			XXL829W Series

L-830--Isolation Transformers, 60Hz

(AC 150/5345-47A)

L-830			Manufacturer's catalog number			
Type	Watts	Amperes Pri/Sec	Amerace Ltd	Crouse-Hinds Air-ort Lighting Products	ADB	Molded Elec tric Products
L-830-1	30/45	6 6/6 6	TA 045666-01 TA 04566D-01	33001	35C0077 35C0101	11337
L-830-2	30/45	20/6 6	TA 04526D-01 TA045266-01	33002	35C0102	11469
L-830-3	65	6 6/6 6	TA 065666-01 TA 06566D-01	33003	35C0079 35C0103	11414
L-830-4	100	6 6/6 6	TA 100666-01 TA 10066D-01	33004	35C0080 35C0104	11374
L-830-5	100	20/6 6	TA 100266-01	33005	35C0081 35C0105	11468
L-830-6	200	6 6/6 6	TA 200666-01	33006	35C0082 35C0106	11376
L-830-7	200	20/6 6	TA 200266-01	33007	35C0083 35C0107	11465
L-830-8	300	6 6/20	TA 300626-01	33008	35C0108	
L-830-9	300	20/20	TA 300226-01	33009	35C0109	
L-830-10	300	6 6/6 6	TA 300666-01	33010	35C0086 35C0110	11450
L-830-1 1	300	20/6 6	TA 300266-01	33011	35C0087 35C0111	11500
L-830-12	500	6 6/20	TA 500626-01	33012	35C0088 35C0112	
L-830-13	500	20/20	TA 500226-01	33013	35C0089 35C0113	11506

L-831--Isolation Transformers, 50Hz

(AC 150/5345-47A)

L 831			Manufacturer's catalog number		
Type	Watts	Amperes Pri/ Sec	Amerace Ltd	Crouse-Hinds Airport Lighting Products	Molded Electric Products
L-831-1	30/45	6 6/6 6	TA 045666-01 TA 04566D-01	33001	11347
L-831-2	30/45	20/6 6	TA 045266.01 TA 04526D-01		
L-831-3	65	6 6/6 6	TA 065666-01 TA 06566D-01	33003	
L-831-4	100	6 6/6 6	TA 100666-01 TA 10066D-01	33004	
L-831-5	100	20/6 6	TA 100266-01	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	TA 300625-01	33008	
L-831-9	300	20/20	TA 300225-01	33009	
L-831-10	300	6 6/6 6	TA 300665-01	33010	
L-831-11	300	2016 6	TA 300265-01	33011	
L-831-12	500	6 6/20	TA 500625-01	33012	
L-831-13	500	20/20		33013	

L-841--Cabinet, Auxiliary Relay

(AC 150/5345-13A)

Manufacturer	Manufacturer's catalog number
ADB	44D1047-X
BF Goodrich/Godfrey Engineering	GEA 57
Crouse-Hinds Airport Lighting Products	51503
Hughey & Phillips, Inc	RC41

L-847--Switch, Circuit Selector

(AC 150/5345-5A)

Manufacturer	Type	Class	Rating	Catalog no
ADB	1	A,B	1,2	44D0966
	2			44D0967
	3			44D0968
	4			44130969
Crouse-Hinds Airport Lighting Products	1,2,3,4	A,B	1,2	30847
	1,2,3,4	A,B	1,2	84700-X-XX

L-849--Lights, Runway End Identification

(AC 150/5345-51)

Manufacturer	Style	Manufacturer's catalog number
ADB	A	44A1161-1X
	C	44A1161-2X
	E	44A1161-3X
		(79, 80)
BF Goodrich/Godfrey Engineering	A	GEA-20- (0502, 0504.0508)
	B	GEA-20-0812
	C	GEA-25-100
	D	GEA-20-1012
	E	GE-3836.003
	F	GEA-20.0910
	F	GEA-20-0192
		(79)
Flash Technology Corporation	A,E	FTS-800 Class (79)
	B,F	FTS-400 Class (75.76)
Multi-Electric Mfg , Inc	A	551325-M, 551325-S
	E	551327-M, 551327-S
		(82)
Unitron International Systems	F	VGS-832 (81)

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

Manufacturer			Manufacturer's catalog number
ADB	A	1,2	44D1600-X1XX
			44D0464-XXXX (29, 52, 55, 56)
	A	1,2	44D1640-XXXX (70)
	A	1,2	44D2184-XXXX
	B	1,2	44D0469-XXX (34, 53, 62)
	B	1,2	44D1577-X1X0 (91)
	C	2	44D0988-XXX (21, 58, 59)
	D	2	44D1001-XXXX (21. 58.64)
	E	2	44E0496-XXX (21, 58)
	A	1,2	FRC-XXXX, 44D2510-XXXX (105)
	B	1,2	FTZ-XXXX, 44D2511-XXXX (105)
Cegelec Projects, Ltd.	A	2	ZA 141/xX(97)
	B	2	ZA 144/XX(97)
	C	2	ZA 143/xX(97)
	D	2	ZA 142/XX(97)
	D	2	ZA 145/XX(97,98)
Crouse-Hinds Airport Lighting Products	A	1,2	20065, 20075 (35) 20335 (15.54)
	A	1,2	20065-LW, 20075.LW (49)
	A	1,2	20560.20561 (65)
	B	1,2	20580, 20581 (65)
	B	1,2	20355, 20360 (34.40)
	B	1,2	20370.20365 (34, 40)
	C	1,2	850C2, 850C1-X-XXX-XX (40,54)
	D	1,2	850D2, 850D1-X-XXX-XX (40,54)
	E	1,2	850G1-X-XXX-XX (34,54)
	E	2	850EA-B-1-150
Hughey & Phillips	A	1,2	FCA 1300.WW, FCA 1301-WR
			FCA 1302-W, FCA 1303-R
	B	1,2	FCA 1304-LTW, FCA 1305-RTW
	D	1,2	FCA 1317.LTG (111)
			FCA 1318.RTG (111)
	C	1,2	FCA 1306-WW, FCA 1307.WY (111)
			FCA 1308-WR, FCA 1309-YR (111)
Multi-Electric Mfg. Inc	E	2	2856 (21)

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

Manufacturer	Type	Class	Manufacturer's catalog number
ADB	A	1,2	44D1101-XXXX (41, 57)
	B	1,2	44D1102-XXXX (41, 42)
	C	1,2	44D1103-XXXX (41, 42)
	C	1,2	44D2377-XXXX(91)
	D	1,2	44D1104-XXXX (42)
	D	1,2	44D2374-XXXX(91)
	E	2	44D1011-XXXX (21.36)
	E	2	44D1442-XXXX (33)
	F	2	44D1443-XXXX (21)
	A	1,2	FTS-W-XXXX, 44D2508-XXXX(105)
	C	1,2	FTS-N-XXXX, 44D2509-XXXX(106)
Cegelec Projects Ltd	A,C	1,2	ZA230/XX Series (96)
Crouse-Hinds Airport Lighting Products	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-m. 19506.DG, 19515-DG,
	C	1,2	19850-DG (43)
	D	2	19855-1D, 19855.DG, 19513-DG, 19509-DG, 19510-DG (44)
	E	2	20550, 20552 (40)
	A,B,C,D	2	852XX-XX-XX-XX (43,44,51)
	C,D	1,2	85218XX-XX-XX-XX(65)
	C	2	85205-X-X-XX-XXX(104)
Hughey & Phillips, Inc	A	1,2	FSA1500-GG, FSA1502-G
	B	1,2	FCB1504-GG, FCB1506-G
	C	1,2	FSC1508-GG, FSC1510-G
	A	1,2	FCA1400-GYD, FCA1403N-Y(103)
	B	1,2	FCA1404-GYD, FCA1407N-Y(103)
	C	1,2	FCA1408-GYD, FCA1411N-Y(102)
	D	1,2	FCA1412-GYD, FCA1415N-Y(102)
	A	1,2	FCA1400N-GG, FCA1402N-G(101)
	B	1,2	FCA1494N-GG, FCA1406N-G(101)
	C	1,2	FCA1408N-GG, FCA1410N-G(100)
	D	1,2	FCA1412N-GG, FCA1414N-G(101)

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

Manufacturer	Manufacturer catalog number		
	Centerline marker		Elevated marker
	Style I	Style II	
ADB			44D2075-XXXX
Carsonite International Corp			SDR-328 SMD-615 cm-380 CRM-375, with CVE-360
FlexStake, Inc			600 and 700 Series
Hughey & Phillips			L-111 series

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

Manufacturer	Type	Manufacturer's catalog number
ADB	I	RL-854, 44D0310-X
Control Industries, Inc	I	RC- 1T5A
BF Goodrich/Godfrey Engineering	I	GEA90

L-856--Lights, Obstruction, High Intensity, White, 40 FPM
(AC 150/5345-43D)

Manufacturer	System	Manufacturer's catalog number
Flash Technology Corp	A	FTB-205, 204 (77,78)
Hughey & Phillips, Inc	A	LS-158A
TWR Lighting, Inc		D-2A (TWR) (48430)

L-857--Lights, Obstruction, High Intensity, White, 60 FPM
(AC 150/5345-43D)

Manufacturer	System	Manufacturer's catalog number
Flash Technology	B	FIB-208 207 (77. 78)
Hughey & Phillips, Inc	B	LS-158B

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

Manufacturer	Type	Size	Style	Class	Mfgr's cat. no
ADB Inc	L-858Y,R,L,B	1,2,3,4,5	1,2,3,4,5	1,2	44D105X-XXX Series
	L-858Y,R,L	1,2,3	2,3	1,2	44D241X-XXXX
	L-858B	4.5	2,3	1,2	44D241X-XXXX
	L-858Y,R,L	1,2,3	2,3	1,2	44D105X-XXX
	L-858B	4.5	2,3	1,2	44D105X-XXX
Airport Systems International, Inc	L-858Y,RL	1,2,3	2,5	1,2	AS 713 Series (112. 114)
	L-858B	4,5	2,5	1,2	AS 713 DRM/Series (114)
	L-858Y,R,L	1	2,5	1,2	AS 713/A-XXX (112.114)
	L-858Y,R,L	2	2,3	1,2	AS 713/B-XXX (112, 114)
	L-858Y,R,L	3	2,3	1,2	AS 713/C-XXX (112, 114)
	L-858B	4	2,3	1,2	AS 713 DRM/D-XXX (112)
	L-858B	5	2,3	1,2	AS 713 DRM/E-XXX (112)
	L-858Y,R,L	1,2,3	1,2,3,5	1,2	ASQ 713 Series (120)(121)
	L-858B	4,5	1,2,3,5	1,2	ASQ 713 DRM/Series (121)
	L-858Y,R,L	1	1,2,3,5	1,2	ASQ 713/A-XXX (120)(121)
	L-858Y,R,L	2	1,2,3,5	1,2	ASQ 713/B-XXX (120)(121)
	L-858Y,R,L	3	1,2,3,5	1,2	ASQ 713/C-XXX (121)
	L-858B	3	1,2,3,5	1,2	ASQ 713 DRM/D-XXX (121)
	L-858B	4	1,2,3,5	1,2	ASQ 713 DRM/E-XXX (121)
		5			
Architectural Graphics, Inc	L-858Y,R,L	1,2,3	1,2,3,4,5	1,2	L858 XXXXXXXXXXX
	L-858B	4.5	1,2,3,5	1,2	L858 XXXXXXXXXXX
Crouse-Hinds Airport Lighting Products	L-858Y,R,L	1,2,3	1,2,3,4,5	1,2	858XX-X-X-XX
	L-858B	5	1,2,3,5	1,2	8585X-X-X-XX
	L-858B	4		2	858 41,42-XXX-X-X-XX-X
	L-858Y,R,L,B	1,2,3,4,5	2,3	1,2	858XX-XB-X-XX
	L-858Y,R,L,B	3,4,5	2,3,5	1	60915 Series (115, 116), 62055 Series (116. 117). 858BF Series (117)
Hughey & Phillips, Inc	L-858B	4	2,3,4,5	1,2	ATC L-858B-4
	L-858B	5	2,3,4,5	1,2	ATC L-858B-5
	L-858R,Y,L	1	2,3,4,5	1,2	ATC L-858-80-1
	L-858R,Y,L	2	2,3,4,5	1,2	ATC L-858-80-2
	L-858R,Y,L	3	2,3,4,5	1,2	ATC L-858-80-3
	L-858R,Y,L	3	2,3,4,5	1,2	ATC L-858-95-3
	L-858Y ,R,L	1,2,3	1,2,3,4,5	1,2	858-40 Series 858-45 Series
	L-858B	4,5	1,2,3,4,5	1,2	858-40 Series 85845 Series
Maria Miranda CO	L-858Y,R,L	1,2,3	1,2,3,4,5	1	GL-858 Flourescent Series
	L-858Y,R,L	1,2,3	1,2,3,4,5	2	GL-858 Incandescent Series
	L-858B	4,5	2,3,5	1	GL-858 FL-4-DM
	L-858B	4,5	2,3,5	2	GL-858 IL-5-DM
Standard Signs, Inc	L-858Y,R,L,B	1,2,3,4,5	1,2,3,4,5	1,2	CLT Series
	L-858Y,R,L,B	3	1,2	1	CLF Series
	L-858Y,R,L,B	1,2,3,4,5	2,3	1,2	CLV Series

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

Manufacturer	Manufacturer's catalog number	Remarks
BF Goodrich/Godfrey Engineering	GEA-20-0912	Style F
Flash Technology Corp	FTS-400 Class (75,76)	Style F
Unitron International Systems	VGS-837 (81)	Style F

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

Manufacturer	Manufacturer's catalog number	
	Type L 860	Type L-860E
BF Goodrich/Godfrey Engineering	GEA-05 (3)(24)	GEA-05 (24)
Cegelec Projects, Ltd	2B216/1 (108)	
Crouse-Hinds Airport Lighting Products	40650 (1)	40650-GR,RG (1)
Hughey & Phillips, Inc	LL33A(84)	LL33R(84)
Manarco, Inc	2100 (2)(3) 2125 (6)	2250 (5)

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

Manufacturer	Type	Manufacturer s catalog number
ADB	L-861	44C1081-XXXX(10,11,12,14,31,33) RWL-MIL (10),44C1752-XXXX(33)
	L-861E	RWL-MIE (11),44C1081-XXXX(11,33)
	L-861T	TWL-MIL (10),44C1081-XXXX(31), 44C1752-XXX(10,11,12,13,14,31,33)
	L-861SE	44C1485-XXXX(36)
Airport Lighting Co of CT	L-861	MRL-216,217 (10) MRL 216Q
	L-861E	MRL-216,217 (11) MRL 216Q
	L-861T	MRL-216 (10) MRL 216Q
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)
Avtech Lighting, Inc	L-861	1-1 (11,14,33)
	L-861E	1-3 (11,33)
	L-861T	1-2 (10,11,14,31,33)
Cegelec Projects, Ltd	L-861	ZA216/1 (109)
	L-861T	ZA216/2 (110)
BF Goodrich/Godfrey Engineering	L-861	GEA-01 (10,14)
	L-861E	GEA 01 (11)
	L-861T	GEA-01 (10,14)
	L-861SE	GEAIO-SE (36)
Crouse-Hinds Airport Lighting Products	L-861	48375(10,14,18) ERL Model 3,40938(18), 40939(10) Model 4
	L-861E	48375-RG(11,14,17) ERL Model 3. 40938-RG(17) ERL Model 4
	L-861SE	40690, 40775 (16) ERLQ
	L-861T	48375-B(10,14,18) ERL Model 3, 40938-B(18), 40939-B(10) ERL Model 4 40938-B-30-14-PG
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)
Manarco, Inc	L-861	7100 (10). 8100 (14), 8125 (12)
	L-861E	7250 (11)
	L-861T	7400 (10). 8400 (14), 8425 (13)
	L-861T	7400-Q(31), 7100Q(31), 7250Q(33)
Multi-Electric Manufacturing Inc	L-861	6183.6193 (10), 6183M,6193M (14), 6183H,6193H (31)
	L-861E	6187,6197 (11), 6187H, 6197H (33)
	L-861SE	6387SE, 6397SE(36)
	L-861T	6184.6194 (10),6184M,6194M (14),6184H,6194H (31)
Point Lighting Corporation	L-861	PEL-50000 (10.31)
	L-861T	PEL-50000 (10.31) PEL-50000-GR (11,33)

L-862--Lights, Runway Edge, High Intensity

(AC 150/5345-46A)

Manufacturer	Manufacturer's catalog number	
	Edge	Threshold/end
ADB	44C1201-XXXX(36) 44C0330-X(22) 44A2071-XXXX(22,36)	44A2071-XXXX(90)
Airport Lighting Co of CT	HRL-213 (22)	
BF Goodrich/Godfrey Engineering	GEA-10 (36)(26) GEA-15 (22)	
Crouse-Hinds Airport Lighting Products	48369 (22) 40722 (16,64) 862-4-X-E-XX-120XX 862-4-X-E-XX-150XX	40733-T-RG-200W L H (90) 40733-T-RG-200W P H (90) 862-4-T-RG-200-XX
Hughey & Phillips, Inc	HL-62 (22)	
Multi-Electric Manufacturing, Inc	6283, 6293 (22) 6383, 6393 (36)	6387,6397(90)

L-863--Lights, Portable Runway

(AC 150/5345-50A)

Manufacturer	Type	Manufacturer's catalog number
Litebeams, Inc	L-863W	E480-1W, LL480-1W, LL15-1W
	L-863Y	E480-2Y, LL480-2Y, LL15-2Y
	L-863R	E480-3R, LL480-3R, LL15-3R
	L-863G	E480-4G, LL480-4G, LL15-4G
	L-863B	E480-5B, LL480-5B, LL15-5B

L-864--Lights, Obstruction, Red, 20-40 FPM

(AC 150/5345-43D)

Manufacturer	Manufacturer's Catalog Number
Crouse-Hinds Airport Lighting Products	41257F, 412576 (48). 41257G-H
Flash Technology	FTB 312(75) FTB314(75)
Hughey & Phillips, Inc	KG114 Type R (48) KG1 14 Type F (48) KG114F0001 Type R (48) KG114F0000 Type F (48) 277-3000 (Red) 277.2008 (Red)
TWR Lighting, Inc	Type FB Beacon (48)

L-865--Lights, Obstruction, Medium Intensity, White, 40 FPM
(AC 150/5345-43D)

Manufacturer	Manufacturer s Catalog Number
Flash Technology Corporation	FTB-301 (75) FIB-302 (75) FIB-310 (75) FTB-311 FIB-312 (75) FIB-319 (75) FIB-330 (75) FIB-339 (75) FIB-340 (75)
Hughey & Phillips, Inc	KG225 Type W (100) LS-159 277.2000 (White) 277.2003 (White) 277.3000 (White/Red)
TWR Lighting, Inc	L-865-40 (83) D1, D2 controllers D-1A (TWR) (48Q30) D-2A (TWR) (48430) D1ADC (White) D-15V (107)

L-866--Lights, Obstruction, Medium Intensity, White, 60 FPM
(AC 150/5345-43D)

Manufacturer	Manufacturer s catalog number
Flash Technology Corporation	FTB-317 (75)
Hughey & Phillips, Inc	LS-161 (74)
TWR Lighting, Inc	L-866-60 (83) D1, D2 controllers D-1A160 (TWR) (48Q30)

L-867--Light Base, Non-load Bearing
L-868--Light Base, Load Bearing
L-869--Junction Box

(AC 150/5345-42C)

Manufacturer	Type	Size	Class	Manufacturer's catalog number								
				Base	Multiple section base			Extension	Conv Ring	Cover Plate	Spacer rings	Mud Plate
					Bottom	Middle	Top					
ADB	L-861	B	II	112C01-X2XXX								
Crouse-Hinds Airport Lighting Products	L-867	B	II	900062-B								
	L-868	A	II	900128-A				900122A				
		B	II	900128-B				900122B				
		C	II	900128-C				900122C				
Jaquith Industries Inc	L-867	B	I	2024T								5417
	L-867	B	I	2124				2006	5413	.000 series		
	L-867	B	I	2124Q				2007				
	L-867	B	II	8124				8007				
	L-861	D	I	6324				6003		:000 series		
	L-867	D	I	6324Q				6004				
	L-867	D	I	6024T								5517
	L-867	E	I	6334				6013		6000 series		
	L-867	E	I	6334Q				6014				
	L-867	E	I	6034T								5517
	L-868	A	I	1534	1120	4701	1529F	1529X	5113 5123	6000-12	5100 series	5117
	L-868	A	I	1534Q								5127
	L-868	B	I	2424	4420	4704	2419F	2419X	5423 5413	4000-12	5400 series	5417
	L-868	B	I	2424Q								5427
	L-868	C	I	3524	4520	4705	3519F	3519X	5513 5523	6000-20	5500 series	5517
	L-868	C	I	3524Q								5527
	L-869		I	7600				7602 to 7608	7599	7601		

L-867--Light Base, Non-load Bearing—Continued
L-868--Light Base, Load Bearing
L-869--Junction Box

(AC 150/5345-42C)

Manufac	Type	Size	Class	Manufacturer's catalog number								
				Base	Multiple section base			Extension	Conv.Rng	Cover Plate	Spacer rings	Mud Plate
					Bottom	Middle	Top					
Maria	L-867	B	II	I 224PVC				12S-EXT			12ER-	
Miranda	L-867	B	II	1224PVC-ADJ								
CO	L-867	B	I	1224S						12-1-CP-S		
	L-861	D	I	1624S				16S-EXT	67/68CR-D	16-1-a-s	16ER-	
	L-867	B	I	12-24/36-S-ADT-B								
	L-867	E	II	24-24/36-S-ADT-E								
	L-868	A	I	1024-2-s	1024MB	1024MC	1024MT	1024-2-EXT		10-2-CP	1075-SR	
	L-868	B	I	1224-2-S	1224MB	1224MC	1224MT	1224-2-EXT	68/68CR-B	12-2 CP	1275SR	
	L-868	C	I	1524-2-S	1524MB	1524MC	1524MT	1524-2-EXT	68/68CR-B	15-2-CP		
	L-867	B	II	1224FG								
	L-867	B	II	1224FG-ADJ								
	L-861	D	II	1624PVC-ADJ								
Olson	L-867	B	I	127AC24				127E(X)	128CR	127L(X)		
Industries	L-867	B	I	127CC24					0075			
Inc								127E(X)				
	L-861	B	I	127CG24				127E(X)				
	L-861	D	I	167CC24				167E(X)		167L(X)		
	L-867	D	I	167CG24				167E(X)				
	L-868	A	I	108CC24	108B S125	108MS (H)	108 TS(X)	108E(X)		108LO 075	108SM B(X)	108M 0825
	L-868	A	I	108CG24								108M 0925
	L-868	B	I	128CC24	128B S125	128M S(H)	128T S(X)	12E(X)	127CR 0075	128LO 075	128SM 3 0	128M 1025

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

Manufacturer	Type	Size	Class	Manufacturer's catalog number								
				Base	Multiple section base			Extension	Conv.Rng	Cover Plate	Spacer rings	Mud Plate
					Bottom	Middle	Top					
	L-868	B	I	128CG24								128M 1125
	L-868	C	I	158CC24	158B S125	158M S(H)	158T S(X)	158E(X)		158LO 125	158SM B(X)	158M 1325
	L-868	C	I	158CG24								158M 1425

LEGEND
Class I -Steel Base
Class II--Nonsteel Base

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

Manufacturer	Style		Manufacturer s Catalog Number
ADB	A	II	44A1418-1X(66)
	B	II	44A1401-1X(66)
B F Goodrich/Godfrey Engineering	A,B	II	GE35030 (Power control unit, Style A)
			TT35010 (Light housing assembly, Style A)
			TT35061-1 (Light housing assembly, **Style B)**
			TT35061-2 (Light housing assembly, **Style B)**
Cegelec Projects, Ltd.	A	II	ZA757/XA(98)
	A	II	ZA737/XA(98)
	B	II	ZA757/XB(98)
	B	II	ZA737/XB(98)
Crouse-Hinds Airport Lighting Products	A,B	I,II	26880 (Light unit) (68)
			26870 (Power and control unit for Style A systems)
	A	I	8802A-1-XX
	A	II	8802A-2-XX
	B	I	8802B 1-XX
	B	II	8802B-2-XX
	A	I	8803A-1-XX
	A	II	8803A-2-XX
	B	I	8803B-1-XX
	B	II	8803B-2-XX
Multi-Electric Manufacturing	A,B	II	**5902, 5903 (69)**

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

L-881--Abbreviated Precision Approach Path Indicator

(AC 150/5345-28D)

Manufacturer	Style	Class	Manufacturer s Catalog Number
ADB	A	II	44A1418-2X(66)
	B	II	44A1401-2X(66)
B F Goodrich/Godfrey Engineering	A,B	II	GE35030 (Power control unit, Style A)
			TT35010 (Light housmg assembly, Style A)
			TT35061-1 (Light housmg assembly, Style B)
			TT35061-2 (Light housmg assembly, Style B)
Cegelec Projects, Ltd.	A	II	ZA757/XA(98)
	A	II	ZA737/XA(98)
	B	II	ZA757/XB(98)
	B	II	ZA737/XB(98)
Crouse-Hinds Airport Lighting Products	A,B	I,II	26881 (Light unit) (68)
			26870 (Power and control unit for Style A systems
	A	I	8812A-1-XX
	A	II	8812A-2-XX
	B	I	8812B-1-XX
	B	II	8812B-2-XX
Multi-Electric Manufacturing	A,B	II	**5902, 5903 (69)**

L-882--Generic Visual Approach Descent Indicator

(AC 150/5345-52)

Manufacturer	Equipment Type	Manufacturer s Catalog Number		
		Lamp housmg	Adapter unit	Aiming bar
ADB	VASI	44B0521-1 44B0521-2	44C0701	44A0156
Crouse-Hinds Airport Lighting Products	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

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

L-883--Generic Visual Approach Descent Indicator

(AC 150/5345-52)

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

Light Structure, Lightweight

(AC 150/5345-45A)

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

LAMP DESCRIPTIONS

Lamp	Designation	Watts		Amps	Lamp manufacturer
(1)	8301	40	120		Yorkville Industries
(2)	15T6	15	120		General Elecmc. Philips
(3)	15T7C	15	120		Philips
(4)	69A21TS	69	120		General Electric, Sylvania, Philips
(5)	40C9½C/ST	40	120		Sylvania
(6)	25FC	25	120		General Elecmc, 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 Elecmc, Sylvania, Philips
(11)	6 6A/T10/P	45		6 6	General Elecmc, Sylvania, Philips
(12)	40A/TS	40	120		General Elecmc, Sylvania, Philips
(13)	25A/CL	25	120		General Elecmc. Sylvania
(14)	40T10P	40	120		General Elecmc, 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 Elecmc. Sylvania, Philips
(24)	25T8	25	120		General Elecmc
(26)	6 6ATSQ/CL2	115		6 6	Sylvania
(29)	48A0071	200		6 6	ADB
(30)	100A21/TS	100	120		General Elecmc
(31)	EXL	30		6 6	General Elecmc
(32)	116A21/TS	116	120		General Electric, Philips
(33)	EXM	45		6 6	General Elecmc
(34)	Q6 6A/T4/DCR	200		6 6	General Elecmc
(35)	20041-l	200		6 6	Crouse-Hinds
(36)	EVV	120		6 6	General Elecmc
(39)	55042	30		6 6	Sylvania
(40)	20496	115		6 6	Crouse-Hinds
(41)	48A0039	45		6 6	ADB
(42)	48A0040	65		6 6	ADB
(43)	19464	45		6 6	Crouse-Hinds
(44)	19484	65		6 6	Crouse-Hinds
(45)	55043	45		6 6	Sylvania
(48)	620PS40P	620	120		Philips, Sylvania, GE
(49)	20041-2	125		6 6	Crouse-Hinds
(50)	20521	34		6 6	Crouse-Hinds
(51)	19868	45		6 6	Crouse-Hinds
(52)	58809	125		6 6	Sylvania
(53)	58793	115		6 6	Sylvania
(54)	20538	185		6 6	Crouse-Hinds
(55)	58801	200		6 6	Sylvania
(56)	6965	200		6 6	Philips
(57)	6859	30		6 6	Philips
(58)	6292	150		6 6	Philips
(59)	8422	120		6 6	Philips
(60)	MS 400/Vert	400	120		Sylvania
(61)	MVR/VDB 400		120		GE

LAMP DESCRIPTIONS-Contmued

Lamp	Designation	Watts	Volts	Amps	Lamp manufacturer
(62)	58746	200		6 6	Sylvania
(63)	Q6 6A/T4/CL	200		6 6	Philips
(64)	40925	175		6 6	Sylvama, Crouse-Hinds
(65)	20624	62		6 6	Crouse-Hinds
(66)	54382	200		6 6	Osram
(67)	EGM/Q1000 CL/P	moo	120		GE
(68)	20531	200		6 6	Crouse-Hinds
(69)	T4DCR	200		6 6	Sylvania
(70)	44B1643	100		6 6	ADB
(71)	20056	45		6 6	Crouse-Hinds
(72)	3884				Amerıel
(73)	77-3295				EG&G
(74)	77-2818				EG&G
(75)	3843				Flash Technology
(76)	4410				Flash Technology
(77)	4663				Flash Technology
(78)	5877				Rash Technology
(79)	FT34HP				GE
(80)	GN34				Genesıs
(81)	UIS31603				Genesıs
(82)	550330.14				Multı-Electrıc
(83)	G01-007				TWR Lıghtıng
(84)	15TTN	15	120		GE
(85)	EGG	750	120		Sylvama
(86)	EGM	1000	120		Sylvama
(87)	Q500PAR56/NSP	500	120		GE, Phılıps, Sylvama
(88)	Q1000PAR64/NSP	1000	120		GE
(89)	EGG/Q750CL/P	750	120		GE
(90)	EZL	200		6 6	GE
(91)	48A0107	45		6 6	ADB
(92)	48A0006	30		6 6	ADB
(93)	48A0007	45		6 6	ADB
(94)	48A0085	30		6 6	ADB
(95)	48A0083	45		6 6	ADB
(96)	64321	45		6 6	Orsom
(97)	64346	100		6 6	Orsom
(98)	64386	200		6 6	Orsom
(99)	100A21/3	100	32		GE
(100)	C6A1004AA2				Hughey & Phillıps
(101)	HO43	45		7 5	GE
(102)	EZC	45			GE
(103)	EZC	30			GE
(104)	20794	45			Crouse-Hınds
(105)	48A0225	45		6 6	ADB
(106)	48A0226	45		6 6	ADB
(107)	STFLSMTB4				Advanced Strobe Products
(108)	J1/74	30			Osram
(109)	J1/57	45			Osram
(110)	J162/74	30			Osram
(111)	LA80C66, EEXB2				GE
(112)	SWD-5OW/LV/D	50			Phillıps "White SON"

LAMP DESCRIPTIONS—Continued

Lamp	Designation	Watts	Volts		Lamp manufacturer
(113)	Cold Cathode				Litebeams
(114)	LU/50/D/MED	50			GE "Lucalox"
(115)	F24T12/D/HO				GE Flourescent
(116)	F36T12/SGN/HO				GE Flouresent
(117)	F36T12/CW/HO				GE Flourescent
(118)	10VAC	10			General Electric
(119)	150PAR/WFL	150			General Electric
(120)	50TB/H				General Electric
(121)	90TB/H				General Electric

APPENDIX 4 ▪ ADDRESS LIST OF CERTIFIED AIRPORT LIGHTING EQUIPMENT MANUFACTURERS

ADB
977 Gahanna Parkway
P 0 Box 30829
Columbus, Ohio 43230
(614) 861-1304

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

Airport Systems International, Inc
11300 w 89th Street
Overland Park, Kansas 66214
(913) 492-0861

Amerace Ltd
77W Beaver Creek Rd
Richmond Hill, Ontario
Canada L4B 3A7
(416) 882-8008
U S REPRESENTATIVE
Amerace Corporation
Elastimold Division
Route 24
Hackettstown, New Jersey 07840
(908) 852-1122

Appollo Lighting Company
6794 Kilowatt Circle
Backlick, Ohio 43004
(614) 860-9999

Architectural Graphics, Inc
2655 International Parkway
Virginia Beach, Virginia 23452
(804) 427-1900

Avtech Lighting, Inc
6239 Third Street
San Francisco, CA 94124
(415) 794-4552

BF Goodrich/Godfrey Engineering
P 0 Box 260803
Tampa, Florida 33685
(813) 855.4428

Carsonite International Corp
1301 Hot Springs Road
Carson City, Nevada 89706
(702) 883-5104

Cegelec Projects, Ltd
Boughton Road
Rugby CV21 1BU
England
44(788) 563384

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

Crouse-Hinds Airport Lighting Products
1200 Kennedy Road
Windsor, Connecticut 06095
(203)683-4300

Crouse-Hinds Joy Molded Products
Route 4, Box 156
La Grange, North Carolina 28551
(919) 566-3014

DeVore Aviation Corporation
6104 Kircher Boulevard, NE
Albuquerque, New Mexico 87109
(505) 345.8713

Electro Fiber Optics Corp
56 Hudson Street
Northboro, MA 01532
(508) 393-3753

Flash Technology Corporation
P 0 Box 329
55 Lake street
Nashua, New Hampshire 03060
(603) 883.6500

FlexStake, Inc
3070 Palm Avenue
Ft Myers, FL 33901
(813) 334-3550

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

Hubbell Lighting, Inc
2000 Electric way
Christiansburg, VA 24073
(703) 382-6111

Hughey & Phillips, Inc
P 0 Box 2167
Simi Valley, California 93062
(805) 581-5591

Jaquith Industries, Inc
East Brighton and Glen Avenues
P 0 Box 780
Syracuse, New York 13205
(315) 478-5700

Litebeams, Inc
223 West Palm Avenue
Burbank, California 91502
(818) 843.2711

Manairco, Inc
28 Mansfield Industrial Park
Mansfield. Ohm 44903
(419) 52412121

Maria Miranda Co
8275 San Leandro Street
Oakland, California 94621
(510) 635-6551

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

Multi-Electric Manufacturing, Inc
4223.43 West Lake Street
Chicago, Illinois 60624
(312) 722.1900

Olson Industries, Inc
PO Box 758
Star Route 4
Atkmson, Nebraska 68713
(402) 925.5090

Point Lighting Corporation
540 Hopmeadow Street
PO Box 686
Simsbury, Connecticut 06070
(203) 658-0433

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

TWR Lighting, Inc
1630 Elmview
Houston, Texas 77080
(713) 973-6904

Unitron International Systems, Inc
1600 Roswell Street
Suite 12
Smyrna, Georgia 30080
(404) 438-1288

Universe, Inc
1833 West Hovey Avenue
Normal, Illinois 61761.4315
(309) 454-5665

APPENDIX 5 - LAMP LIFE TEST PROCEDURE

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

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

3 DEFINITIONS The followmg terms are defined for the purpose of this procedure

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

b LAMP USEFUL LIFE The portion of the lamp operating characteristic where the photomemc output of the lamp operating in the fixture is within specification requirements

c LAMP OPERATING TIME The tune that electrical service to the lighting system is on and contacts to lamp circuits are closed

d ACCELERATED TESTING Tbc testmg technique used to compress the time to operate a lamp to end of useful life while under test A correlation between performance of the lamp under normal operating conditions and the conditions for accelerated testmg must be established Note Accelerated testmg cannot be performed on tungsten halogen lamps

4 CONDITIONAL CERTIFICATION OF EQUIPMENT Equipment submitted for qualification testmg prior to completion of lamp life tests may be given a conditional certification if the following conditions have been met

a The hghtmg future manufacturer has submitted a written procedure for conducting the lamp life tests in accordance with paragraph 5

h A schedule for conductmg the tests has been established

c The procedure has ken reviewed and approved by a thud party certification body

If a conditional certification has been given for a piece of equipment and it subsequently does not pass the lamp life tests, the certification will be rescinded

5 TEST SPECIFICATION The test procedure is divided into two parts, normal and accelerated testmg Although normal testing is preferred, accelerated testing is acceptable under special circumstances When accelerated testmg is performed, the test shall be backed up with a normal test as soon as practical Accelerated test reports shall include a schedule indicating when normal testing will be completed Normal testmg may be waived by the third party certifier if a correlation, verified by test, exists

The lighting fixture manufacturer shall use the most conservative lamp designers life rating, derated by 15 percent, in determining lamp life No credit shall be given for any techniques or devices used to extend lamp life Lamp life shall be quoted as "Lamp life estimated" during this period

a Normal **Testing**

(1) The test shall consist of a minimum of 10 randomly selected lamps mstalled in the fixture for which life data is being established If additional lamps are to be tested, the tests shall be performed in multiples of 10 lamps

(2) Lamps shall be mstalled in the fixture and tested in the configuration which simulates the actual as installed condition of the light system (c g , in-pavement lights should be tested with lamp fixture mstalled on the smallest base can which in turn is buried in a nonheat absorbing medium, such as sand)

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

(4) Light system shall be operated at highest lamp manufacturer rated voltage or current using approved regulators or current supply having one percent regulation The duty cycle shall consist of 20 hours lamp operating time and 4 hours deenergized Voltage controlled system be operated from a supply having three percent regulation

(5) Testing shall continue until 90 percent of all lamps have reached end of lamp useful life

(6) Tests shall be performed in a controlled environment at an ambient temperature between 60 and 80 degrees fahrenheit

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

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

(9) The pulse train wave shapes shall be monitored continuously during the duty cycle for discharge type lamps Out-of-tolerance condition shall be logged As a minimum the following shall be monitored for out of tolerance conditions

Pulse tram wave shape
Pulse train frequency
Voltage or current to lamp circuits

b Accelerated Testing

(1) Accelerated tesung may be performed when normal testing is estimated to exceed 180 calendar days or to provide a basis for estimating lamp life on short notice, such as when evaluating new designs Under no circumstances should accelerated testing reduce the normal test ume by more than 1/3 of the normal test time based on lamp manufacturer hfe estimates All accelerated tests shall be followed by normal tesung in accordance with paragraph 5a to establish a correlation between accelerated and normal test rated lamp life test results

(2) Accelerated tests shall follow the procedure described in paragraph 5a with the exception that the appropriate parameters are increased so that the estimated test ume is reduced as specified above

(3) In addition to the documentation requirements defined below, the tesung authority should provide the rationale for selecting the parameters for the accelerated tests Lamp vendor data shall form the basis for the rationale

6. ANALYSIS OF DATA

a Form a list of the 90 percent of the lamps which have reached the end of lamp useful life The list should include lamp number and lamp operating ume as calculated below This information should be arranged in ascending order of lamp operating time

b Lamp operating time is calculated by multiplying the number of full days that the lamp was operating by 20 (hours)

c Delete the lamps with the 10 percent lowest lamp operaung times from the calculations below

d Calculate the mean and standard deviation for the 80 percent of the lamps remaining on the list

e If the standard deviation is greater than 50 percent of the mean, delete the lamps with the 10 percent highest and 10 percent lowest lamp operaung times from the table Recalculate the mean and standard deviation for the remaining 60 percent of the lamps on the list

f Lamp life is the mean calculated above, rounded to the nearest 50 hours

7 DOCUMENTATION

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

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

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

d Copy of all wave shapes recorded in paragraph 5a(9) with calibration markings

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

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

APPENDIX 6 ▪ PROCEDURAL GUIDE OUTLINE

1 SCOPE

a. Basis of Program

b Certifier's Role

c Manufacturer's Role

d FAA Role

2 LICENSE AGREEMENTS

3 EQUIPMENT QUALIFICATION PROCEDURES

Use procedures in Appendix 2 as a guide

4 SEMIANNUAL INSPECTIONS

a Timing of Inspections

b Production Records

c Inspection Review Report

d . Corrective Action

e F A A Notification

5 QUALITY CONTROL

a Audit Visits

b Rating System

6 PRODUCTION TESTING

7 APPEALS PROCEDURE

8 CHALLENGE PROCEDURE

a Written Challenge

b Documentation

c costs

d. Sample Product

e Testing

f. Corrective Acuon

g Payment

9 USE AND FUNCTION OF FORMS.

10. FORMS

APPENDIX 7 - SAMPLE CERTIFICATION

PROGRAM ADMINISTRATOR
(Name and address of Third party certifier)

DATE _____

AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM

CERTIFICATION OF CONFORMANCE

Name and Address of Manufacturer

The equipment listed below has been certified in accordance with the procedures contained in AC 150/5345-53, Airport Lighting Equipment Certification Program (ALECP), and the tests contained in AC 150/5345-xx The certification is based on successful completion of tests, in accordance with the specifications listed in AC 150/5345-xx and reporting to the Program Administrator the results of such tests, accompanied by related documents

ITEM NUMBER - ITEM NAME
(AC 150/5345-xx)

Type Rating Class Style Size watts Amps Lamps No. Mfgr's. Cat.No.

(NOTE Use headings appropriate for the equipment tested)

Indicate lamp designation (number, watts, volts, amps, as appropriate) and manufacturer

Number from AC 150/5345-53, Appendix 3.
If not listed, give description (designation, watts, volts, amps) and manufacturer

1 This equipment requires continuing validation in accordance with the requirements of AC 150/5345-53

2 Product tested and report issued by

(A) Report No _____

(B) Date of Report _____

(C) FAA Specification No _____

APPROVED FOR CERTIFICATION

BY Certifier's Signature

Certifier's Typed Name

DATE Date Signed

1 (and 2)

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