



Listing Constructional Data Report (CDR)

1.0 Reference and Address			
Report Number	101534480ATL-001A	Original Issued: 30-Apr-2014	Revised: 14-Feb-2017
Standard(s)	Standard for Safety for Luminaires (UL 1598 Issued: 2008/09/17 Ed:3 Rev: 2012/10/17)		
Applicant	<u>The Flag Company, Inc.</u>	Manufacturer	The Flag Company, Inc.
Address	3600 Cantrell Industrial Court Acworth, GA 30101	Address	3600 Cantrell Industrial Court Acworth, GA 30101
Country	USA	Country	USA
Contact	Mike Lawrence	Contact	Mike Lawrence
Phone	(770) 974-0507	Phone	(770) 974-0507
FAX		FAX	
Email	mike@flagco.com	Email	mike@flagco.com

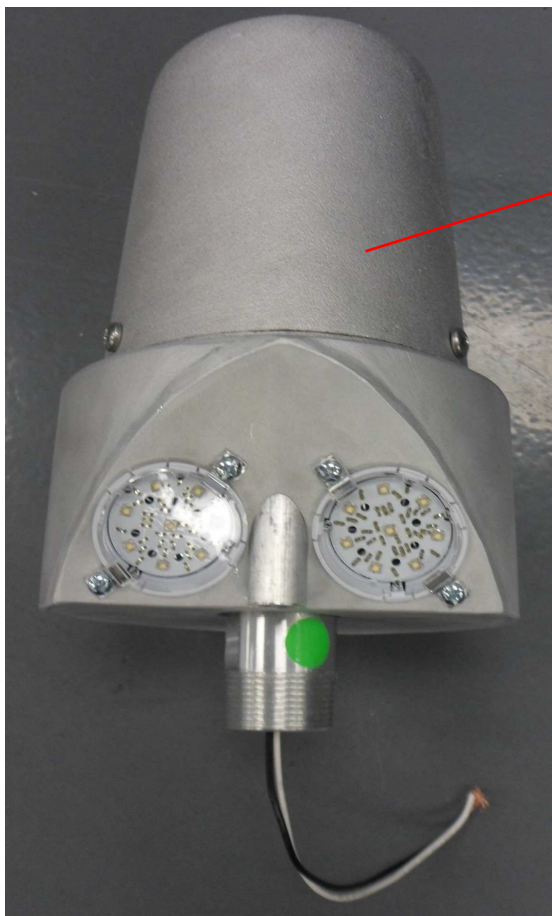
2.0 Product Description	
Product	Flag Pole Luminaire
Brand name	NA
Description	The product is a flag pole Luminaire. It is provided with means for permanent electrical connection in accordance with all applicable codes. The product is suitable for use in wet Locations
Models	ORN FPB-8-359-D-12V, ORN FPB-8-359-D-120V, ORN FPB-IH-6.5-D-12V ORN FPB-IH-6.5-D-120V, ORN FPB-IH-8-D-12V, ORN FPB-IH-8-D-120V ORN FPB-Cam-D-12V, ORN FPB-Cam-D-120V, ORN FPB-HDT-D-12V ORN FPB-HDT-D-120V
Model Similarity	All models have either 120V bulb or 12V bulb. All models are identical with different flag mouting variation. HDT, Cam, and American are all identical with 8" ball light. The IH 6.5 and 8 have the same casing.
Ratings	120Vac, 60Hz, (2) - 6 W lamps Max
Other Ratings	NA

3.0 Product Photographs

Photo 1 - External Beacon model ORN FPB



Photo 2 - Internal Beacon model ORN FPB IH



3.0 Product Photographs

Photo 3 - 120V bulb and bulb socket

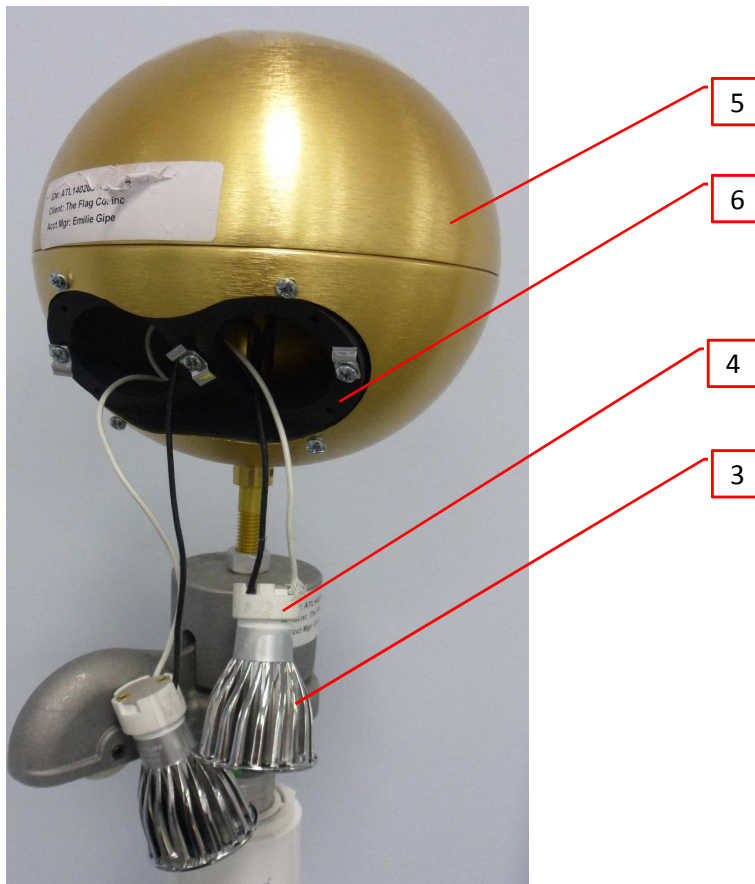
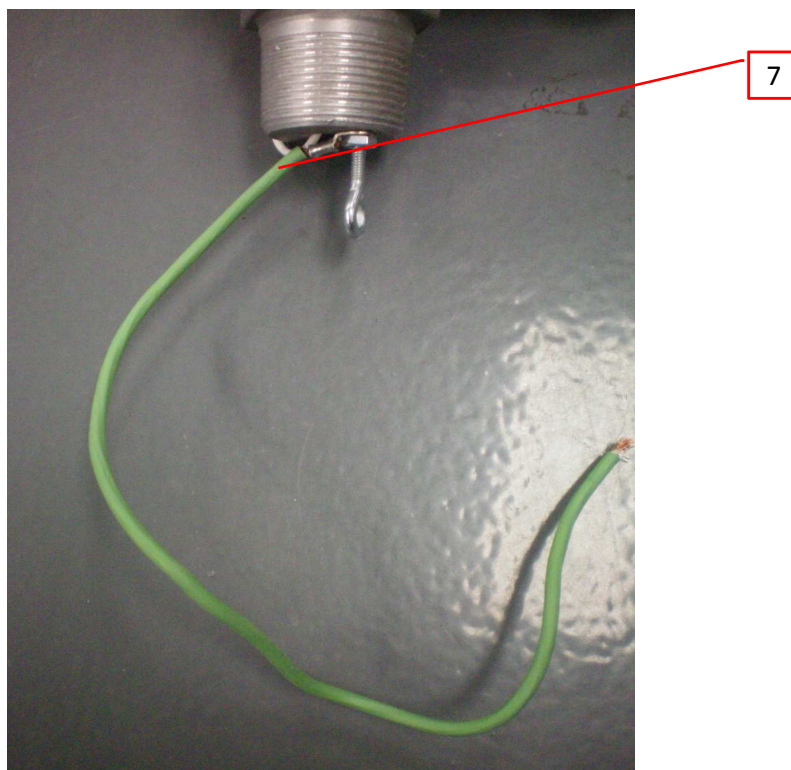


Photo 4 - Ground Pigtail connection



3.0 Product Photographs

Photo 5 - 12V bulb and bulb socket

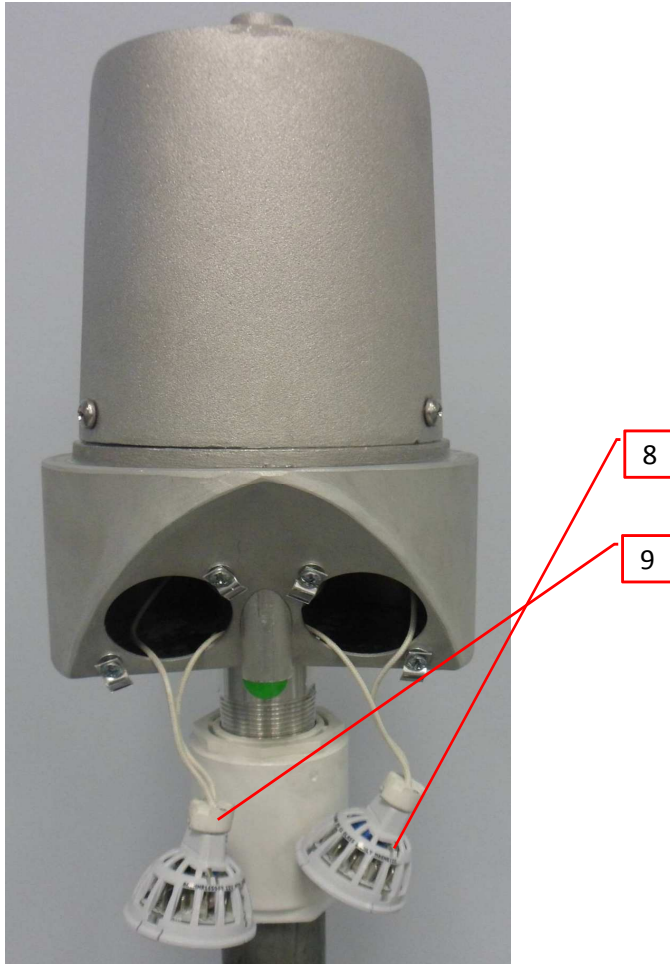
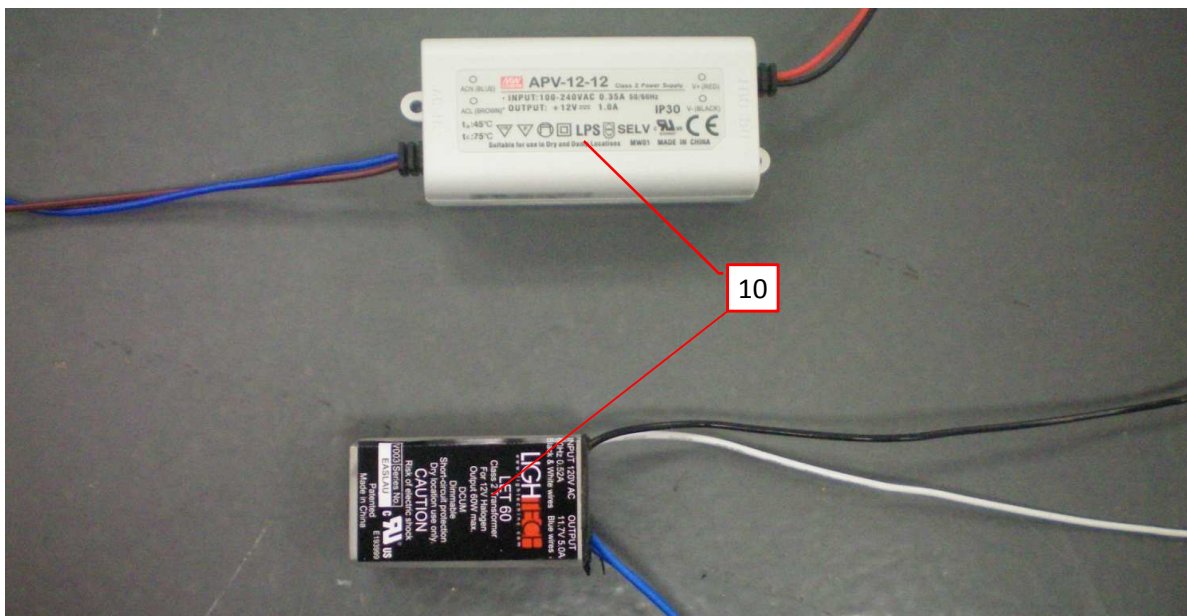


Photo 6 - LED drivers for 12V bulbs



4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
1	1	Marking and Labelling (not shown)	Various	Various	Suitable for affixing to the surface it is applied to with a Temperature of at least 90°C	UR, cUR
2	2	Enclosure	Various	Various	(For internal beacon model: ORN FPB IH)Dimensions:7" diameter 3.625" Height, minimum thickness:0.065", Type of material: Aluminum	NR
3	3	Self-ballasted LED Lamp	Various	Various	Ratings:120Vac, Max 6 watt Base Type: GU10	cUL, UL
3	4	Lamp Holder	Various	Various	250V, 1000W, GU-10, Integral leads rated Min. 200°C	cURus
3	5	Enclosure	Various	Various	(For external Beacon model: ORN FPB) Aluminum, Dimensions: 8" diameter, minimum thickness:0.050". Continuity between sections can be provided by masking section before iodized or by way of bonding jumper	NR
3	6	Enclosure	Various	Various	(For external Beacon model: ORN FPB) Minimum Flame rate: 5VA, Thickness: 3.0 min	cURus
4	7	Ground Lead	Various	Various	Size: 18 AWG min, Voltage: 600V min, Temp: 105°C, Closed ring crimped on connectors Pigtail is provided which is connected to the device by hook shown in photo 4. Additionally, for External Halyard beacon model ORN FPB 8-359-D-120V , optional ground wire is routed inside the gold head to provide the continuity between the ground pigtail and the gold head (Top part of enclosure)	cURus
5	8	Self-ballasted LED Lamp	Various	Various	Ratings: 12V, 6.5 Watts, Base Type: GU5.3	cUL, UL
5	9	Lamp Holder	Various	Various	250V, 750W, MR16 5.3pin	cURus

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
6	10	LED Driver for 12V bulbs	MeanWell	APV-12-12	Input: 100-240Vac, 50/60Hz, 0.35A. Output: 12Vdc, 1.0A Class 2. Located inside the beacon	cURus
			LIGHTECH	LET 60	Input: 120Vac, 60Hz, 0.52A. Output: 11.7V, 5.0A. Class 2. Located inside the beacon	cURus
<p>NOTES:</p> <p>1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.</p> <p>2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.</p> <p>3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.</p>						

5.0 Critical Unlisted CEC Components

No Unlisted CEC components are used in this report.

6.0 Critical Features
<p><u>Recognized Component</u> - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.</p>
<p><u>Listed Component</u> - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.</p>
<p><u>Unlisted Component</u> - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.</p>
<p><u>Critical Features/Components</u> - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.</p>
<p><u>Construction Details</u> - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.</p>
<p>1. <u>Spacing</u> - In primary circuits, minimum spacing are maintained through air and over surfaces of insulating material between current-carrying parts of opposite polarity and between such current-carrying parts and dead-metal parts or low voltage isolated circuits. See Illustration 1</p>
<p>2. <u>Mechanical Assembly</u> - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.</p>
<p>3. <u>Corrosion Protection</u> - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.</p>
<p>4. <u>Accessibility of Live Parts</u> - All uninsulated live parts in primary circuitry are housed within a metallic enclosure constructed with no openings other than those specifically described in Section 4.</p>
<p>5. <u>Grounding</u> - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed are connected to the equipment grounding lead or terminal</p>
<p>6. <u>Polarized Connection</u> - All single pole switches and fuses are connected only to the ungrounded supply circuit conductor</p>
<p>7. <u>Internal Wiring</u> - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. All primary wiring is minimum 18 AWG, with a minimum rating of 300V, 90°C.</p>
<p>8. <u>Schematics</u> - There are no schematics requiring verification during Field Representative Inspection Audits.</p>
<p>9. <u>Markings</u> - The product is marked on a labeling system as described in item no. 1 of Section 4.0 as follows: manufacturer's name, model number, date of manufacturer and electrical ratings in S16-L2 format. See Illustration 3 for format details.</p>
<p>10. <u>Cautionary Markings</u> - See Illustration 2 for markings and Illustration 3 for formatting</p>
<p>11. <u>Installation, Operating and Safety Instructions</u> - Instructions for installation and use of this product are provided by the manufacturer.</p>

7.0 Illustrations

Illustration 1 - Spacings

Voltage	Minimum Spacings, inch (mm)			
	Over surface		Through Air	
0-50	1/16 inches	1.6 mm	1/16 inches	1.6 mm
51-150	1/4 inches	6.4 mm	1/8 inches	3.2 mm
151 - 300	3/8 inches	9.5 mm	1/4 inches	6.4 mm
301-600	3/8 inches	9.5 mm	3/8 inches	9.5 mm

7.0 Illustrations

Illustration 2 - Markings

Model	Lamp Type	Mounting	Item
ORN FPB 8-359-D-120V and ORN FPB IH 6.5 D-120V	Listed Self ballasted LED Lamp GU10	Pole Mounted	1,2,3
ORN FPB 8-359-D-12V, ORN FPB IH 6.5-D-12V	Listed Self ballasted LED Lamp GU-5.3	Pole Mounted	1,2,3

Item	Marking	Text / Format
1	MAX 6 W TYPE _____	Verbatim S48-L1 for "MAX" & S24-L1 for remainder of marking test
2	CAUTION – RISK OF FIRE	Verbatim S24-L1
3	SUITABLE FOR WET LOCATIONS	Verbatim S24-L2

7.0 Illustrations

Illustration 3 - Markings Format

Format minimum size designation for marking height and typeface (clause 20.1.3)

Size Designation	Letter Height		Font Size (points)	Font typeface, upper case
	(mm)	(in)		
S16	1.6	0.062	6	Not specified
S24	2.4	0.094	10	Univers bold, Arial bold, Helvetica bold, Zurich BT bold
S32	3.2	0.125	12	Not specified
S48	4.8	0.188	19	Univers bold, Arial bold, Helvetica bold, Zurich BT Bold

Format Location Designation for Marking

Location Designation	Description	Label exposed to a dry/damp environment	Label exposed to a wet environment
L1	Visible during relamping, after installation	Type P	Type P
L2	Visible during installation	Type N	Type P
L3	Visible during installation and inspection of wire connections, located near the supply connections	Type N	Type P
L4	On the smallest unit package or carton	Type T	Type T
L5	On an instruction sheet or tag	Type T	Type T
L6	Visible during component replacement	Type P	Type P

Note:

Type P – Permanent label or nameplate

A label that is intended to remain in the applied position for the lifetime of the luminaire under conditions of intended use.

Uses: Information required for user maintenance over the expected life of the product.

Material: Metal, plastic, or other suitable material with an adhesive suitable for the temperature involved and comply with Clause 20.1.7.

Type N – Non-permanent label or nameplate

A label that is intended to remain in place only for the purpose of installation.

Uses: Certification mark, manufacturer's identification, product identification.

Material: Paper with an adhesive suitable for the temperature involved.

Type T – Temporary label or instruction sheet

A label, instruction sheet, or tag that is not required after installation.

Uses: Installation instructions, and information not required after installation.

Material: Printed matter with or without adhesive and/or attachment, intended to be included with or attached to the product.

8.0 Test Summary			
Evaluation Period	02/07/2014 to 02/20/2014, 03/28/2014, 04/14/2014		Project No. G101534480
Sample Rec. Date	02/06/2014, 04/07/2014	Condition Prototype	Sample ID. ATL1402061615-001-002, ATL1404071628-001-002
Test Location	INTERTEK, 1950 Evergreen Blvd, Suite 100, Duluth, GA 30096		
Test Procedure	Testing Lab		

Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria. These products were also evaluated to the Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products, (UL 8750, 1st Ed., issued 11/18/09, rev 09/19/13).

The following tests were performed:

Test Description	UL 1598 Issued: 2008/09/17 Ed:3 Rev: 2012/10/17) Clause		
Normal Temperature Test	14.2		
Rain Test	16.5.2		
Bond Impedance Test	17.2		
Evaluation Period	04/18/2014	Project No.	G101534480
Sample Rec. Date	18-Apr-2014	Condition Prototype	Sample ID. 1, 2
Test Location	The Flag Company, Inc., 3600 Cantrell Industrial Court, Acworth, GA 30101		
Test Procedure	Testing at Manufacturers Premises (TMP) - Level 1		

Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria. These products were also evaluated to the Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products, (UL 8750, 1st Ed., issued 11/18/09, rev 09/19/13).

The following tests were performed:

Test Description	UL 1598 Issued: 2008/09/17 Ed:3 Rev: 2012/10/17) Clause		
Normal Temperature Test	14.2		

8.1 Signatures

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.

Completed by:	Prashant Javia	Reviewed by:	Joni Law
Title:	Project Engineer	Title:	Senior Project Engineer
Signature:	<i>Signature on file</i>	Signature:	<i>Signature on file</i>

9.0 Correlation Page For Multiple Listings	
The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.	
BASIC LISTEE	The Flag Company, Inc.
Address	3600 Cantrell Industrial Court Acworth, GA 30101
Country	USA
Product	Flag Pole Luminaire

MULTIPLE LISTEE 1	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 1 MODELS	
BASIC LISTEE MODELS	

MULTIPLE LISTEE 2	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 2 MODELS	
BASIC LISTEE MODELS	

MULTIPLE LISTEE 3	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 3 MODELS	
BASIC LISTEE MODELS	

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issue by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

Note to Intertek Follow Up Inspector: The Component Evaluation Center, CEC, will notify you in writing when these components must be selected and sent to the CEC for re-evaluation

Ship the samples to:

Intertek Testing Services NA Inc.
ETL Component Evaluation Center
45000 Helm Street, Suite 150
Plymouth Twp., MI 48170 USA
Attn: Component Evaluation Center

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

Required Tests

Grounding Continuity Test

11.1 Grounding Continuity Test

Method

A grounding continuity test shall be performed on luminaries with:

- a) non-current-carrying metal parts that can become energized and are accessible during user maintenance; or
- b) snap-in lamp holders with integral grounding means.

The testing shall be performed as follows:

- a) at least once per production run per design for temperature-test-exempt luminaries; and
- b) at least once per quarter per design for all other luminaries.

The grounding continuity test apparatus shall be an ohmmeter or similar indicating instrument capable of measuring 0.1 ohms. The measured or calculated resistance between the point of connection of the grounding means and any non-current-carrying metal parts shall not exceed 0.1 Ω .

Grounding Continuity Test for Unassembled Luminaries

A grounding continuity test shall be performed on a representative design at least once per quarter. The grounding continuity test for a luminaire that is shipped with the enclosure unassembled, or with snap-in or tab-mounted parts, shall be conducted in the following manner:

- a) The luminaire shall be completely assembled in accordance with the assembly instructions. The grounding continuity test shall be performed after the applicable parts pull test specified in Items b) and c).
- b) The grounding continuity test apparatus is as noted above. The resistance between the two test points shall not exceed 0.1 Ω .
- b) If the assembled enclosure part is not provided with a knockout or conduit opening, the parts pull test shall be conducted. See Section above.
- c) If the assembled enclosure part is provided with a knockout or conduit opening, the parts pull test shall be conducted. See Section above.

Products Requiring Grounding Continuity Test:

All products covered by this Report.

