

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS

MAY 2010

ROADWAY (PENDANT), CUT-OFF OPTICS (FLAT GLASS),
STYLE LUMINAIRE WITH TYPE III DISTRIBUTION

1) PURPOSE

The purpose of these specifications is to provide minimum requirements for the design, manufacture, fabrication, finishing and delivery of a roadway, cut-off optics (flat glass) style luminaire with Type III distribution shall be made of a die-cast aluminum housing. The roadway, cut-off, style luminaire is intended for use along roadways in Montgomery County. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and the attached drawings.

2) DESCRIPTION

Each streetlight luminaire include the following:

- a) Die-cast aluminum housing and drop style door;
- b) 120 volt ballast;
- c) Lamp with adjustable Mogul style base socket;
- d) NEMA standard photoelectric control receptacle on the top of the luminaire;
- e) NEMA multi-volt standard photocell;
- f) Internal aluminum reflector (Type III);
- g) Removable flat glass lens;
- h) All necessary hardware required for mounting on bracket arm, as specified.

3) DESIGN CRITERIA

3.1) AASHTO Standards

The luminaire shall meet the requirements of AASHTO Standard, "Specification for Structural supports for Highway Signs, Luminaires and Traffic Signals," latest edition.

3.2) Shape and Minimum Size

- a) The luminaire shall be of a rounded rectangular shape. The minimum size for the luminaire shall 34.0 inches (sum of the length plus height), when viewed from the side.
- b) The luminaire shall be suitable to accommodate either 70 watt, 100 watt, 150 watt, or 250 watt, High Pressure Sodium Vapor (HPSV) ballast and lamp.

3.3) Effective Projected Area (EPA)

The luminaire shall have a maximum estimated allowable EPA for luminaire of two (2) square feet.

3.4) Finish

The luminaire have a gray polyester powder coat finish. During the finishing process, all critical openings shall be plugged to prevent contamination of the threads or reduction of other critical openings.

4) MATERIALS

4.1) Housing

The luminaire shall consist of a water tight housing fabricated from die-cast aluminum housing, with die-cast aluminum drop-style doors. The drop-style doors shall be hinged on one side and secured on the opposite side with a captive stainless steel latch or captive stainless steel screw. All castings used to fabricate the luminaire housing shall be clean and smooth, with details defined and true to pattern. The housing shall be suitable to accommodate 70 watt, 100 watt, 150 watt or 250 watt High Pressure Sodium Vapor (HPSV) ballast and lamp.

4.2) Ballast

The luminaire shall be mounted to facilitate easy removal for maintenance or conversion to a different ballast. All electrical connections shall be polarized and of plug-in design. The ballast shall be wired to receive 120 volt AC current. The ballast shall reliably start and operate the lamp in ambient temperatures down to minus 30 degrees.

4.3) Lamp

The luminaire may be used with any of four (4) lamp wattages as follows:

ANSI Code - 70 watt (HPSV), with Mogul base socket;
ANSI Code - 100 watt (HPSV), with Mogul base socket;
ANSI Code - 150 watt (HPSV), with Mogul base socket;
ANSI Code - 250 watt (HPSV), with Mogul base socket, or as specified.

4.4) Photoelectric Cell

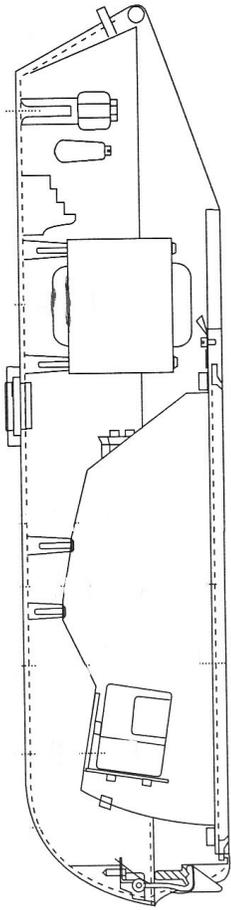
The luminaire photocell receptacle shall be mounted on the die-cast aluminum housing. The photocell shall be of the NEMA twist-lock type.

4.5) Reflector

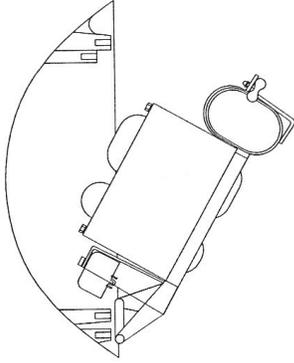
The luminaire shall contain a one-piece aluminum sheet reflector, on the die-cast aluminum housing. The reflector shall have a type III distribution pattern, with a anodized process finish (“Akzak” or equivalent type anodic process).

4.6) Mounting Bracket Arm

The luminaire shall be able to be mounted on bracket arms with 1 ½ or 2 inch slipfitter tenons. This may include two (2) or four (4) bolt slipfitter bracket assemblies. The mounting bracket area shall be protected with a bird-guard type gasket.



SWING-DOWN BALLAST MODULE



FRONT

