

**RAY-O-LITE®**  
**2002 ARC II REFLECTIVE PAVEMENT**  
**MARKER SPECIFICATIONS**

**DESIGN & SHAPE:** THE REFLECTIVE PAVEMENT MARKER SHALL MEASURE 2.24 INCHES BY 4.66 INCHES (NOMINAL)". THE MAXIMUM HEIGHT SHALL BE .54 (NOMINAL)". THE REFERENCE ANGLE OF THE REFLECTIVE FACE SHALL BE 31 DEGREES (NOMINAL)". THE BOTTOM OF THE MARKER SHALL BE OF A ROUGHNESS COMPARABLE TO A FINE GRADE OF SANDPAPER.

**MATERIAL:** THE REFLECTIVE LENS AND THE HOUSING SHALL BE OF OPTIC GRADE METHYL METHACRYLATE. THE FILL MATERIAL SHALL CONSIST OF INERT THERMOSETTING COMPOUND WITH FILLER DESIGNED FOR IMPACT AND WEAR RESISTANCE. THE LENS SHALL BE COATED WITH AN OPTICALLY CLEAR HARD COAT THAT BECOMES AN INTEGRAL PART OF THE LENS SURFACE WITHOUT LOSS OF OPTICAL PROPERTIES.

**OPTICAL  
REQUIREMENTS:**

**DEFINITIONS:**

**HORIZONTAL ENTRANCE ANGLE SHALL MEAN THE ANGLE, IN A PLANE PARALLEL TO THE BASE OF THE MARKER, BETWEEN A LINE IN THE DIRECTION OF THE INCIDENT LIGHT AND A LINE PERPENDICULAR TO THE LEADING EDGE OF THE REFLECTIVE SURFACE.**

**DIVERGENCE ANGLE SHALL MEAN THE ANGLE AT THE REFLECTOR BETWEEN OBSERVER'S LINE OF SIGHT AND THE DIRECTION OF THE LIGHT INCIDENT ON THE MARKER.**

**SPECIFIC INTENSITY SHALL MEAN CANDLEPOWER OF THE RETURNED LIGHT AT THE CHOSEN DIVERGENCE ENTRANCE ANGLES FOR EACH FOOT-CANDLE LIGHT.**

**OPTICAL  
PERFORMANCE:**

**FOR THE PAVEMENT MARKERS THE SPECIFIC INTENSITY OF THE REFLECTING SURFACE AT 1/5 DEGREE DIVERGENCE ANGLE SHALL NOT BE LESS THAN THE FOLLOWING WHEN THE INCIDENT LIGHT IS PARRALLEL TO THE BASE OF THE MARKER. MINIMUM REFLECTIVE VALUES AFTER ABRASION TEST (ASTM D4280):**

<b>HOR. ENT. ANGLE</b>	<b>CRYSTAL</b>	<b>C.P. AMBER</b>	<b>RED</b>
<b>0 DEGREES</b>	<b>3.0</b>	<b>2.0</b>	<b>0.75</b>
<b>20 DEGREES</b>	<b>1.5</b>	<b>1.0</b>	<b>0.30</b>

**COMPRESSION  
STRENGTH:**

- 1. COMPRESSION TESTING MACHINE WITH A CAPACITY OF AT LEAST 5,000 LBS. AND A RATE CAPACITY OF 0.2 INCH PER MINUTE**
- 2. SOLID METAL PLUG 1" IN DIAMETER AND 1" HIGH.**
- 3. PROTECTIVE EYE GLASSES OR SHIELD.**

**TESTING  
PROCEDURE:**

- 1. PLACE THE BASE OF THE MARKER FLAT IN THE TESTING MACHINE.**
- 2. CENTER THE SOLID METAL PLUG ON TOP OF THE MARKER.**
- 3. AT A RATE OF 0.2" PER MINUTE, APPLY THE LOAD NECESSARY TO BREAK THE MARKER. USE PROTECTIVE EYE GLASSES OR SHIELD TO BREAK THE MARKER.**
- 4. RECORD THE STRENGTH BY COMPRESSIVE LOADING IN POUNDS.**

**MINIMUM LOAD SPECIFICATION SHOULD BE 4,000 POUNDS.**

**REVISED JULY 2002**