

REPORT OF CALIBRATION

DESCRIPTION: ABRASION TESTING FOR WHITE AND YELLOW LED REFLECTIVE MARKERS (PRE/POST-ABRASIVE, LEDS-OFF) MODEL: MS 200 C MANUFACTURER: SOLARMARKERS CALIBRATION DATE: 5 APR 2005 CUSTOMER: SOLARMARKERS TEMP(°C): 23	SERIAL NUMBER: C TECHNICIAN: FJV RECALL DATE: 5 APR 2006 SALES ORDER/RMN: 23389/6962 REL HUMIDITY(%): 40
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PROCEDURE: These samples were measured at Gamma Scientific in accordance with test methods outlined in FTMS 370 and ASTM D4061. In general all equipment meets the requirements of ASTM E809 (Standard Practice for Measuring Photometric Characteristics of Retroreflection), E810 (Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting) In general ASTM E809, Standard Practice for Measuring Photometric Characteristics of Retroreflection, Procedure A the ratio method is used to determine the retroreflection values of customer submitted samples.

INCOMING INSPECTION: NA

RESULTS:

Coefficient of luminous intensity $R_l = \text{cd} / \text{lux}$

MS 200 C WHITE C

RPM	OBSERVATION ANGLE	ENTRANCE ANGLE	Pre-Abrasion R_l	Post-Abrasion R_l	Post-Abrasion R_l Minimum Req.	Post-Abrasion R_l Percent
	0.2	20.0	0.1021	0.0688	0.0511	67.38
		0	0.2006	0.1549	0.1003	77.22
		-20.0	0.0976	0.0644	0.0488	66.01

MS 200 C YELLOW C

RPM	OBSERVATION ANGLE	ENTRANCE ANGLE	Pre-Abrasion R_l	Post-Abrasion R_l	Post-Abrasion R_l Minimum Req.	Post-Abrasion R_l Percent
	0.2	20.0	0.0505	0.0325	0.0253	64.31
		0	0.0952	0.0676	0.0476	71.02
		-20.0	0.0374	0.0290	0.0187	77.46



Pre-Abrasion



Post-Abrasion

All calibrations are performed using internationally recognized standards calibrated by the National Institute of Standards and Technology (NIST) for use at Gamma Scientific. The NIST test numbers for each standard used are listed below. Gamma Scientific certifies that this instrument was adjusted to the nominal calibration value in accordance with ANSI/NCSS Z540-1-1994. The information shown on this certificate applies only to the instrument identified above and may not be reproduced, except in full, without prior written consent from Gamma Scientific.

SPECIAL NOTES: MEETS ASTM D 4280 - 04 ABRASION SPECIFICATIONS.

Quality Assurance Manager

STANDARDS: 5000-16 S/N:GS982
 NIST #844/268926-03/3
 NIST #844/269064-03/1

Accept	Reject