



AUTOMOTIVE MANUFACTURERS EQUIPMENT
COMPLIANCE AGENCY, INC.

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Notification Number: 230339

Test Report Date: February 7, 2023

Expiration Date: July 1, 2026

Applicant: Morimoto Lighting
2281 Defoor Hills Rd.
Atlanta, GA 30318

Item: "LF734 (Or LF735)" - Combination Stop, Tail, Turn Signal, Backup And Side Marker Lamp With Reflex Reflectors With Red or Smoke Lens - Red And White In Colour

Use: On 2021 Model Years Ford F150 Motor Vehicles

Jurisdictional Compliance Standard(S)
Identical To: United States FMVSS 571.108

Markings	
Lens	Housing
MORIMOTO DOT SAE A2(2)I6P3R2(2)S2T2 22	LF734 (Or LF735) 12V

Light Source: Tail/Side Marker Lamp: 198 LED's, 12V
Stop/Turn Signal Lamp: 48 LED's, 12V
Backup Lamp: 4 LED's, 12V

Test Lab: Zhejiang ATTC Automobile
Technology Service Co., Ltd.

Report Number: AT23XX1D49711


Executive Director



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Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

COMPLIANCE TEST REPORT

ACCORDING TO U.S. FMVSS 108

COVER PAGE



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

TEST DETAILS

APPLICANT'S NAME : Morimoto Lighting
ADDRESS : 2281 Defoor Hills Rd Atlanta GA 30318, United States

NO. OF DEVICES TESTED : 4 PCS
PART NUMBER : LF734; LF735
DESCRIPTION : Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
LIGHT SOURCE : LED

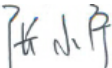
TEST LABORATORY : Zhejiang ATTC Automobile Technology Service Co., Ltd.
TEST PLACE : Building 3, Essence Adream of Space, No.350, Jinhua Road, Hi-tech Zone, Ningbo City, Zhejiang Province, P.R. China
TEST DATE: : January 30, 2023 - February 7, 2023

SUMMARY

TEST DESCRIPTION	TEST RESULTS	
	NUMBER PASSED	NUMBER FAILED
Physical Inspection	4	-
Photometric Test	4	-
Color Test	4	-
Vibration Test	2	-
Moisture Test	2	-
Dust Test	2	-
Corrosion Test	2	-
Plastic Optical Material Test	Not tested*	-

REMARKS:

*: Plastic optical material test is not carried out for this application because the applicant used the material already listed in "AMECA-List-of-Acceptable-Plastics-for-Optical-Lenses-and-Reflex-Reflectors- September-9-2022"

NAME AND SIGNATURE : Zhang Xiaoning

TITLE : Test Engineer
DATE : February 7, 2023



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 1) PHYSICAL INSPECTION

TEST COMPONENT : LF734; LF735

MANUFACTURED BY : Zhejiang Hongguan Lighting Technology Co., Ltd.

MARKINGS :

- LENS : "DOT SAE A2(2)I6P3R2(2)S2T2 22" "MORIMOTO"
- HOUSING : "LF734; LF735"
"Tail/SML:12V 9.2W", "Turn/Stop:12V 7.7W", "Backup:12V 3.5W"

OUTER LENS :

- MATERIAL : LF734 Red lens:
Chimei Corporation Zhenjiang China ACRYREX CM-205 Polymethyl Methacrylate Clear+Red
LF735 Smoke lens:
Chimei Corporation Zhenjiang China ACRYREX CM-205 Polymethyl Methacrylate Clear+Smoke
- COATING : ---
- METHOD OF : Hot Plate Welding

MOUNTING TO HOUSING

HOUSING :

- MATERIAL : ABS
- METHOD OF : Screw

MOUNTING TO VEHICLE

- GASKET : None

LIGHT SOURCE USED:

FUNCTION	QTY	TRADE NO.	RATED VOLTAGE
Tail Lamp/Side Marker Lamp	198 pcs	LED	12V
Stop Lamp /Rear Turn Signal Lamp	48 pcs	LED	12V
Backup Lamp	4 pcs	LED	12V

INSPECTION PERFORMED BY: Cao Wei

DATE: January 30, 2023



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 2) COLOR OF LIGHT

TEST COMPONENT : LF734 (Red lens) (Stop lamp)

COLOR REQUIREMENT : RED (CIE 1931)

the color of light emitted must fall within the following boundaries:

$y = 0.335$ (yellow boundary)

$y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS

TEST PERFORMED BY : Cao Wei

DATE : January 30, 2023

LAMP VOLTAGE : 12.8V

TEST DISTANCE : 3.236m

RESULTS :

HV point	Coordinate x	Coordinate y
Stop 01#	0.7058	0.2941
Stop 02#	0.7055	0.2944



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF735 (Smoke Lens) (Stop lamp)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 31, 2023

LAMP VOLTAGE : 12.8V
 TEST DISTANCE : 3.236m

RESULTS	HV point	Coordinate x	Coordinate y
	Stop 03#	0.7054	0.2945
	Stop 04#	0.7061	0.2938



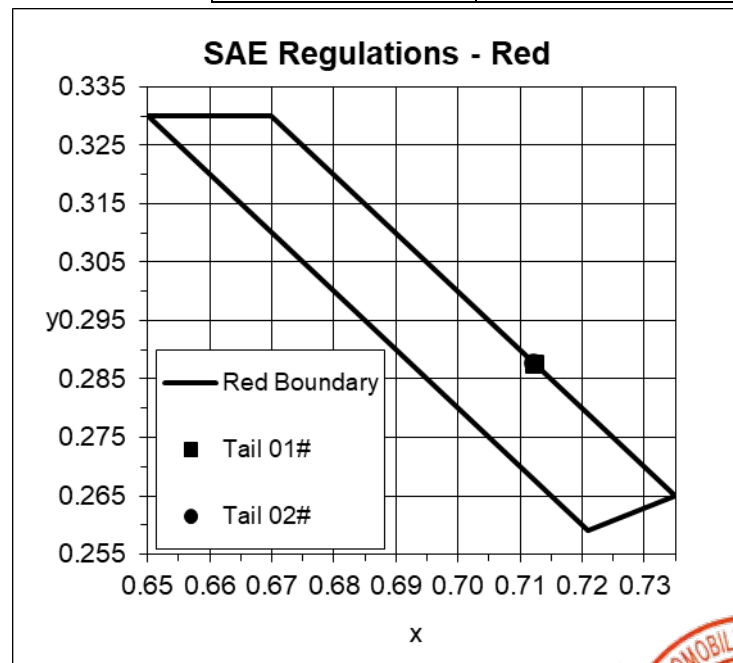
Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF734 (Red Lens) (Tail Lamp)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 30, 2023

LAMP VOLTAGE : 12.8V
 TEST DISTANCE : 3.236m

HV point	Coordinate x	Coordinate y
Tail 01#	0.7123	0.2876
Tail 02#	0.7121	0.2878



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

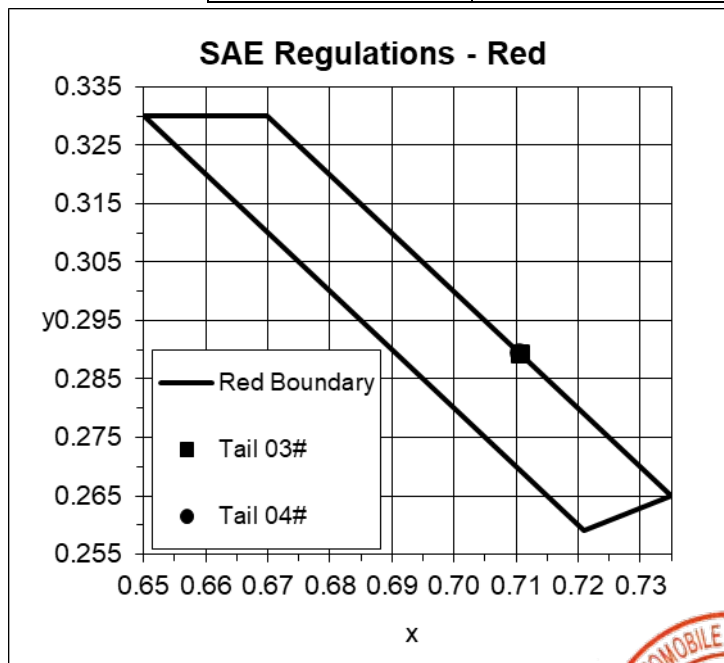
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF735 (Smoke Lens) (Tail Lamp)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 31, 2023

LAMP VOLTAGE : 12.8V
 TEST DISTANCE : 3.236m

HV point	Coordinate x	Coordinate y
Tail 03#	0.7106	0.2893
Tail 04#	0.7104	0.2895



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

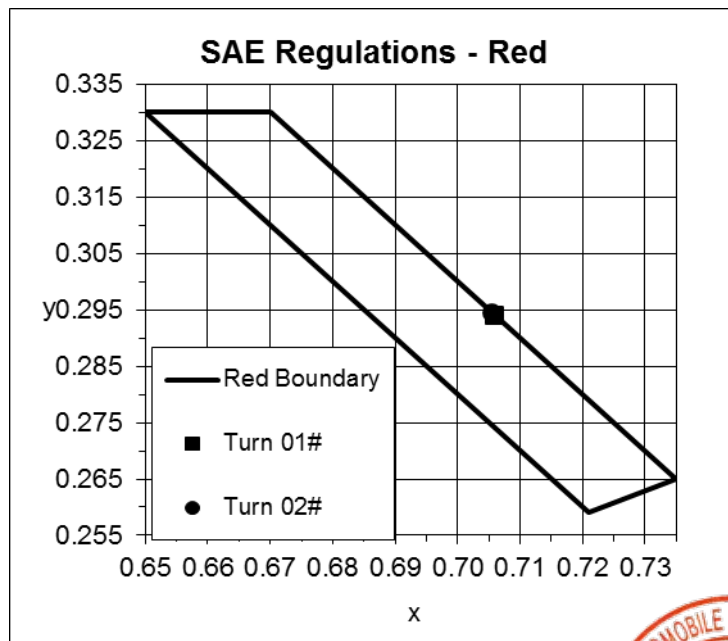
TEST COMPONENT : LF734 (Red Lens) (Rear turn signal lamp)
COLOR REQUIREMENT : RED (CIE 1931)
the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
TEST PERFORMED BY : Cao Wei
DATE : January 30, 2023

LAMP VOLTAGE : 12.8V
TEST DISTANCE : 3.236m

RESULTS :

HV point	Coordinate x	Coordinate y
Turn 01#	0.7058	0.2941
Turn 02#	0.7055	0.2944



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

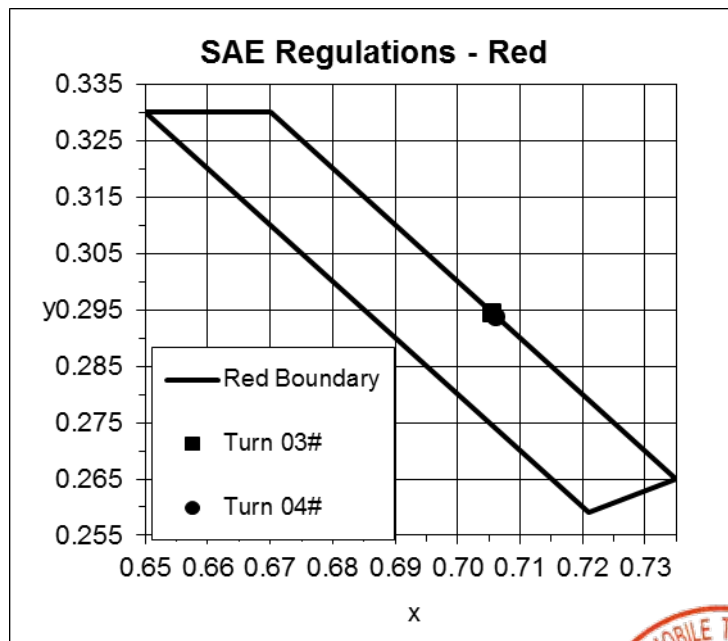
TEST COMPONENT : LF735 (Smoke Lens) (Rear turn signal lamp)
COLOR REQUIREMENT : RED (CIE 1931)
the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

LAMP VOLTAGE : 12.8V
TEST DISTANCE : 3.236m

RESULTS :

HV point	Coordinate x	Coordinate y
Turn 03#	0.7054	0.2945
Turn 04#	0.7061	0.2938



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF734 (Red Lens) (Backup Lamp)

COLOR REQUIREMENT : WHITE (CIE 1931)

the color of light emitted must fall within the following boundaries:

$x = 0.310$ (blue boundary)

$x = 0.500$ (yellow boundary)

$y = 0.150 + 0.640x$ (green boundary)

$y = 0.050 + 0.750x$ (purple boundary)

$y = 0.440$ (green boundary)

$y = 0.380$ (red boundary)

TEST METHOD : TRISTIMULOUS

TEST PERFORMED BY : Cao Wei

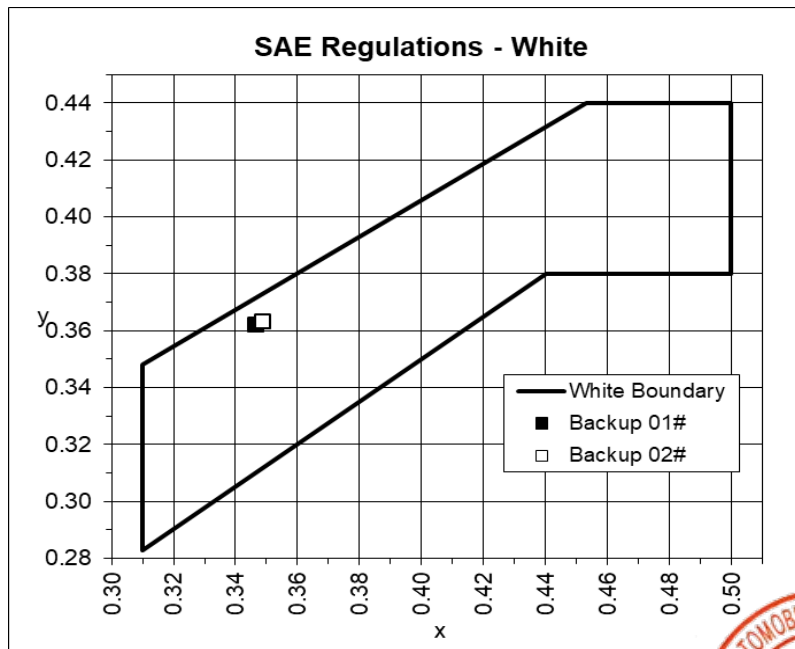
DATE : January 30, 2023

LAMP VOLTAGE : 12.8V

TEST DISTANCE : 3.236m

RESULTS :

HV point	Coordinate x	Coordinate y
Backup 01#	0.3464	0.3623
Backup 02#	0.3488	0.3632



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

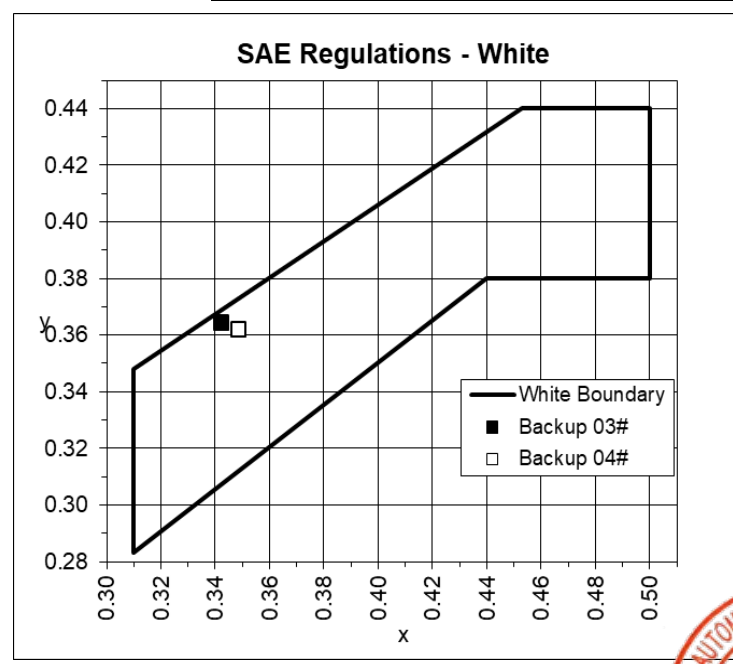
TEST COMPONENT : LF735 (Smoke Lens) (Backup Lamp)
 COLOR REQUIREMENT : WHITE (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $x = 0.310$ (blue boundary)
 $x = 0.500$ (yellow boundary)
 $y = 0.150 + 0.640x$ (green boundary)
 $y = 0.050 + 0.750x$ (purple boundary)
 $y = 0.440$ (green boundary)
 $y = 0.380$ (red boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 31, 2023

LAMP VOLTAGE : 12.8V
 TEST DISTANCE : 3.236m

RESULTS :

HV point	Coordinate x	Coordinate y
Backup 03#	0.3423	0.3644
Backup 04#	0.3485	0.3619

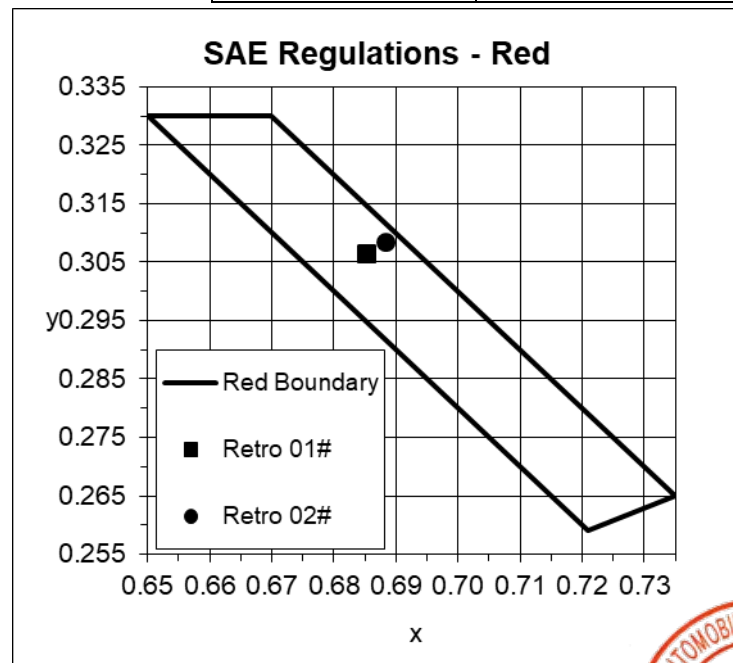


TEST COMPONENT : LF734 (Red Lens) (Side Reflex Reflectors)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 30, 2023

LAMP VOLTAGE : ---
 TEST DISTANCE : 2m

RESULTS	HV point	Coordinate x	Coordinate y
	Retro 01#	0.6852	0.3065
	Retro 02#	0.6884	0.3084



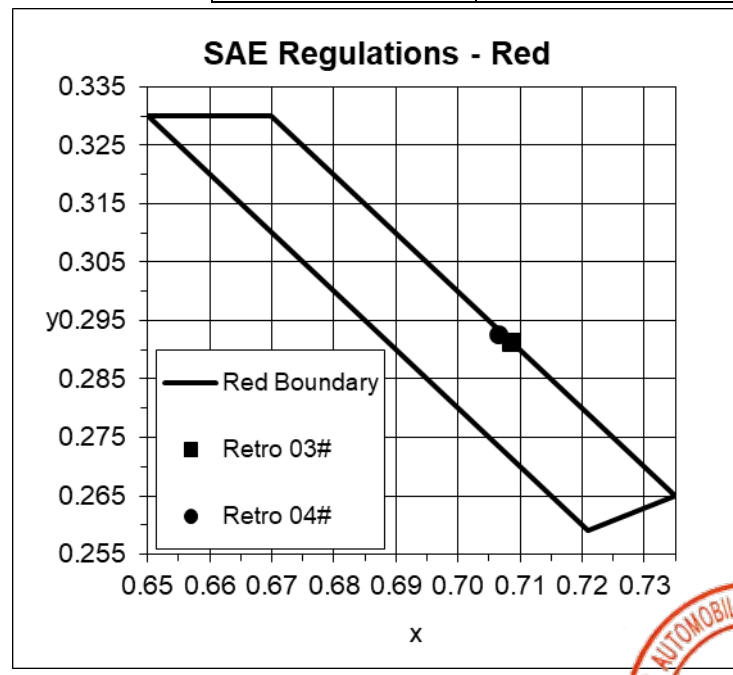
Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF735 (Smoke Lens) (Side Reflex Reflectors)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 31, 2023

LAMP VOLTAGE : ---
 TEST DISTANCE : 2m

RESULTS	HV point	Coordinate x	Coordinate y
	Retro 03#	0.7086	0.2912
	Retro 04#	0.7065	0.2925



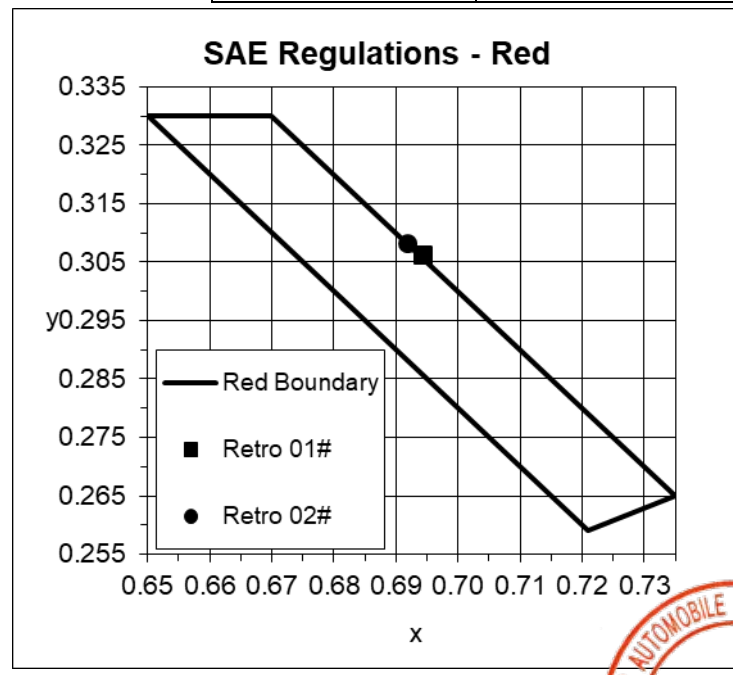
Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF734 (Red Lens) (Rear Reflex Reflectors)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 30, 2023

LAMP VOLTAGE : ---
 TEST DISTANCE : 2m

RESULTS	HV point	Coordinate x	Coordinate y
	Retro 01#	0.6943	0.3063
	Retro 02#	0.6918	0.3081



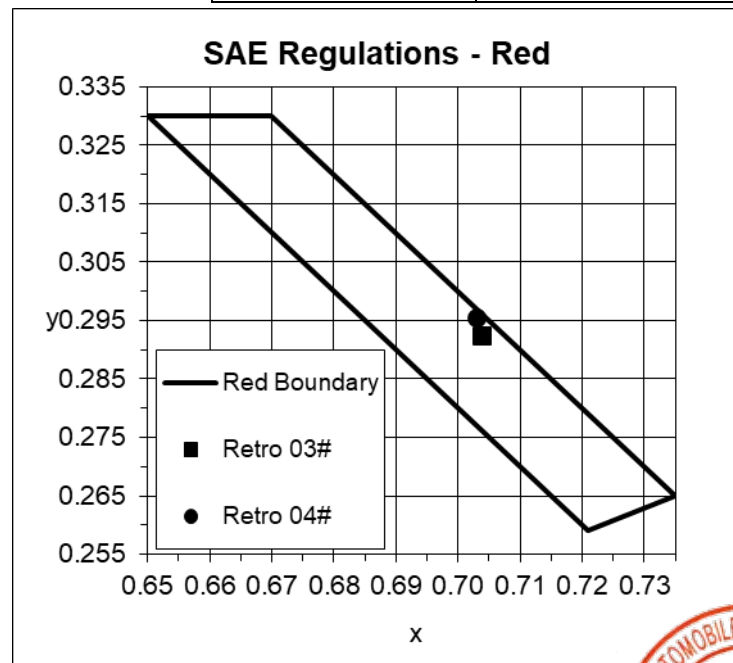
Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF735 (Smoke Lens) (Rear Reflex Reflectors)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 31, 2023

LAMP VOLTAGE : ---
 TEST DISTANCE : 2m

RESULTS	HV point	Coordinate x	Coordinate y
	Retro 03#	0.7038	0.2923
	Retro 04#	0.7031	0.2954



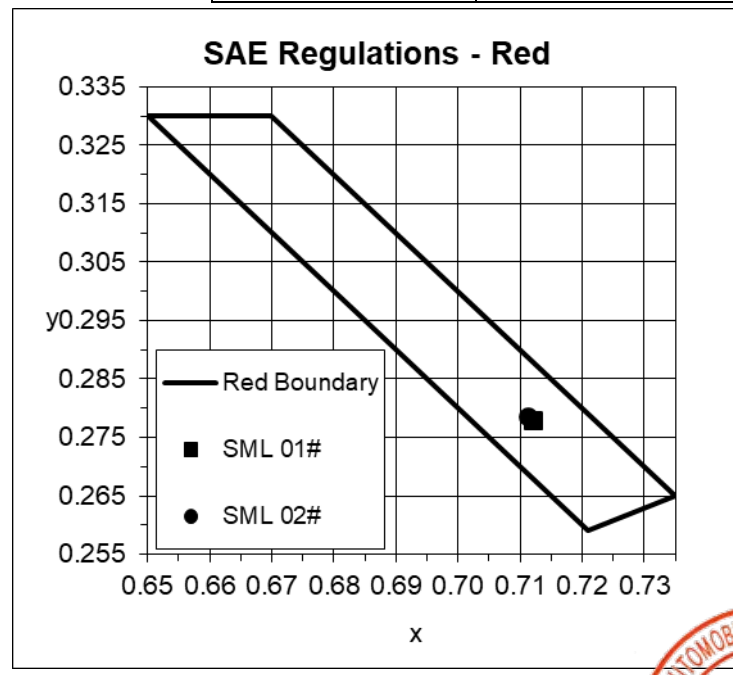
Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF734 (Red Lens) (Side Marker Lamp)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 30, 2023

LAMP VOLTAGE : 12.8V
 TEST DISTANCE : 3.236m

RESULTS	HV point	Coordinate x	Coordinate y
	SML 01#	0.7122	0.2778
	SML 02#	0.7114	0.2785



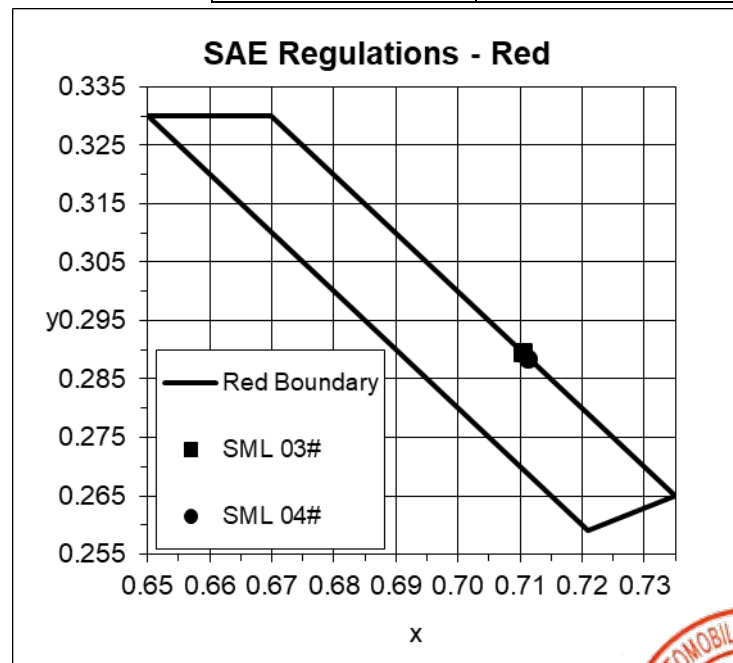
Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TEST COMPONENT : LF735 (Smoke Lens) (Side Marker Lamp)
 COLOR REQUIREMENT : RED (CIE 1931)
 the color of light emitted must fall within the following boundaries:
 $y = 0.335$ (yellow boundary)
 $y = 0.980 - x$ (purple boundary)

TEST METHOD : TRISTIMULOUS
 TEST PERFORMED BY : Cao Wei
 DATE : January 31, 2023

LAMP VOLTAGE : 12.8V
 TEST DISTANCE : 3.236m

RESULTS	HV point	Coordinate x	Coordinate y
	SML 03#	0.7105	0.2894
	SML 04#	0.7114	0.2885



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 3) EFFECTIVE PROJECTED LUMINOUS LENS AREA

TABLE IV-a.—EFFECTIVE PROJECTED LUMINOUS LENS AREA REQUIREMENTS

Lighting device	Passenger cars, multipurpose passenger vehicles, trucks, trailers, and buses of less than 2032 MM in overall width—Minimum effective projected luminous lens area (sq mm)			Multipurpose passenger vehicles, trucks, trailers, and buses 2032mm or more in overall width— Minimum effective projected luminous lens area each lamp (sq mm)	Motorcycles— Minimum effective projected luminous lens area (sq mm)
	Single compartment lamp	Multiple compartment lamp or multiple lamps			
		Each compartment or lamp	Combined compartments or lamps		
Front turn signal	2200	---	2200	7500	2258
Rear turn signal	5000	2200	5000	7500	2258
Stop lamp	5000	2200	5000	7500	⁽¹⁾ 5000

(1) A motor driven cycle whose speed attainable in 1 mile is 30 mph or less may be equipped with a stop lamp whose minimum effective projected luminous lens area is not less than 2258 sq mm.

TEST COMPONENT : LF734; LF735
 REQUIREMENTS : Rear turn signal: 7500mm², Stop lamp: 7500mm²
 EPLLA : Rear turn signal: 8400mm², Stop lamp: 8400mm²
 :
 INSPECTION PERFORMED BY : Cao Wei
 DATE : January 30, 2023



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY

TEST COMPONENT : LF734 (Red lens) (Stop lamp)
SAMPLE No : 01#, 02#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE : Ford F150 2021
- NUMBER OF COMPARTMENTS : 2
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : 2

TEST PERFORMED BY : Cao Wei
DATE : January 30, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m
BULB TRADE NO. :
TEST VOLTAGE : 12.8V
AIM NOTES : Reference center refer to the drawing on last page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

STOP LAMP PHOTOMETRY TEST RESULT UPON TIME (AT H=0/V=0 POINT)				
SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
01#	117.83	112.27	1.050	
02#	123.83	117.83	1.051	

STOP LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION (TABLE IX of FMVSS No. 108)								
GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 01#		Sample 02#	01#
1	20L	5U	12	46.78	24.39	60	190.21	122.33
		5D	12	56.95	24.18			
	5L	10U	19	36.04	37.67			
		10D ⁽³⁾	19	50.44	36.09			
2	10L	5U	35	58.66	56.17	115	187.44	179.13
		H	47	63.93	68.43			
		5D	35	64.85	54.53			
3	V	5U	82	103.59	101.33	445	535.69	551.44
	5L	H	95	105.56	115.92			
			95	117.83	123.83			
	V		95	110.93	111.63			
	V	5D	82	97.78	98.73			
4	10R	5U	35	49.87	56.11	115	166.01	166.97
		H	47	62.29	57.71			
		5D	35	53.85	53.15			
5	5R	10U	19	29.69	48.16	60	117.24	205.95
		10D ⁽³⁾	19	35.61	44.57			
	20R	5U	12	19.70	58.86			
		5D	12	32.24	54.36			
MAXIMUM PHOTOMETRIC INTENSITY ⁽³⁾			360	121.63	125.44			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

STOP LAMP PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION

(TABLE IX of FMVSS No. 108)

GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 01#		Sample 02#	01#
1	20L	5U	12	44.57	23.21	60	181.23	116.40
		5D	12	54.26	23.01			
	5L	10U	19	34.34	35.84			
		10D ⁽³⁾	19	48.06	34.34			
2	10L	5U	35	55.89	53.45	115	178.59	170.45
		H	47	60.91	65.11			
		5D	35	61.79	51.89			
3	V	5U	82	98.70	96.42	445	510.42	524.72
	5L	H	95	100.58	110.30			
	V		95	112.27	117.83			
	5R		95	105.70	106.22			
	V	5D	82	93.17	93.95			
4	10R	5U	35	47.52	53.39	115	158.18	158.87
		H	47	59.35	54.91			
		5D	35	51.31	50.57			
5	5R	10U	19	28.29	45.83	60	111.71	195.98
		10D ⁽³⁾	19	33.93	42.41			
	20R	5U	12	18.77	56.01			
		5D	12	30.72	51.73			
MAXIMUM PHOTOMETRIC INTENSITY ⁽³⁾			360	115.89	119.36			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF735 (Smoke Lens) (Stop lamp)
SAMPLE No : 03#, 04#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : 2
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : 2

TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m
BULB TRADE NO. :
TEST VOLTAGE : 12.8V
AIM NOTES : Reference center refer to the drawing on last page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

STOP LAMP PHOTOMETRY TEST RESULT UPON TIME (AT H=0/V=0 POINT)				
SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
03#	109.65	104.31	1.051	
04#	112.65	106.85	1.054	

STOP LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION (TABLE IX of FMVSS No. 108)								
GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 03#		Sample 04#	03#
1	20L	5U	12	43.97	22.26	60	176.20	111.71
		5D	12	50.73	22.08			
	5L	10U	19	35.69	34.56			
		10D ⁽³⁾	19	45.81	32.81			
2	10L	5U	35	54.84	42.77	115	166.65	149.35
		H	47	58.78	54.85			
		5D	35	53.03	51.73			
3	V	5U	82	94.41	97.63	445	496.90	522.25
	5L	H	95	103.84	109.62			
			95	109.65	112.65			
			95	101.34	107.06			
	V	5D	82	87.66	95.29			
4	10R	5U	35	36.93	51.79	115	126.09	153.95
		H	47	50.07	53.22			
		5D	35	39.09	48.94			
5	5R	10U	19	28.54	44.60	60	112.09	189.92
		10D ⁽³⁾	19	32.15	41.14			
	20R	5U	12	23.87	54.16			
		5D	12	27.53	50.02			
MAXIMUM PHOTOMETRIC INTENSITY ⁽³⁾			360	110.96	114.28			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

STOP LAMP PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION

(TABLE IX of FMVSS No. 108)

GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 03#		Sample 04#	03#
1	20L	5U	12	41.83	21.11	60	167.62	105.95
		5D	12	48.26	20.94			
	5L	10U	19	33.95	32.78			
		10D ⁽³⁾	19	43.58	31.12			
2	10L	5U	35	52.17	40.57	115	158.54	141.67
		H	47	55.92	52.03			
		5D	35	50.45	49.07			
3	V	5U	82	89.81	92.60	445	472.69	495.36
	5L	H	95	98.78	103.98			
	V		95	104.31	106.85			
	5R		95	96.40	101.55			
	V	5D	82	83.39	90.38			
4	10R	5U	35	35.13	49.12	115	119.95	146.02
		H	47	47.63	50.48			
		5D	35	37.19	46.42			
5	5R	10U	19	27.15	42.30	60	106.63	180.13
		10D ⁽³⁾	19	30.58	39.02			
	20R	5U	12	22.71	51.37			
		5D	12	26.19	47.44			
MAXIMUM PHOTOMETRIC INTENSITY ⁽³⁾			360	105.56	108.40			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF734 (Red lens) (Tail lamp)

SAMPLE No : 01#, 02#

FMVSS No. 108 REQUIREMENT :

VEHICLE TYPE/SIZE :

- NUMBER OF COMPARTMENTS : 1

- NUMBER OF LAMPS : 1

- NUMBER OF LIGHTED SECTIONS : 1

TEST PERFORMED BY : Cao Wei

DATE : January 30, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m

BULB TRADE NO. :

TEST VOLTAGE : 12.8V

AIM NOTES : Reference center refer to the drawing on last page

OTHER NOTES : ---

RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TAIL LAMP PHOTOMETRY TEST RESULT UPON TIME (AT H=0/V=0 POINT)				
SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
01#	17.14	16.40	1.045	
02#	17.54	16.74	1.048	

TAIL LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION (TABLE VIII of FMVSS No. 108)									
GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY(cd)				GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections		Calculated result		Required Minimum	Measured	
			1		Sample 01#	Sample 02#		01#	02#
			MINIMUM	MAXIMUM					
1	20L	5U	0.3	18	10.80	17.80	1.4	55.44	67.14
		5D	0.3	-	11.32	16.57			
	5L	10U	0.4	18	16.08	16.47			
		10D	0.4	-	17.24	16.30			
2	10L	5U	0.8	18	13.84	14.10	2.4	42.34	43.79
		H	0.8	18	14.09	14.68			
		5D	0.8	-	14.41	15.01			
3	V	5U	1.8	18	16.85	17.52	9.6	79.37	84.75
	5L	H	2	18	16.32	17.00			
			2	18	17.14	17.54			
			2	18	12.56	15.47			
	V	5D	1.8	-	16.50	17.22			
4	10R	5U	0.8	18	16.26	12.97	2.4	49.78	39.86
		H	0.8	18	16.62	13.31			
		5D	0.8	-	16.90	13.58			
5	5R	10U	0.4	18	17.11	15.05	7.4	63.37	51.92
		10D	0.4	-	13.23	15.75			
	20R	5U	0.3	18	17.15	10.24			
		5D	0.3	-	15.88	10.88			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

TAIL LAMP PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION

(TABLE VIII of FMVSS No. 108)

GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY(cd)				GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections		Measurements		Required Minimum	Measured	
			1		Sample 01#	Sample 02#		01#	02#
			MINIMUM	MAXIMUM					
1	20L	5U	0.3	18	10.33	16.99	2.4	53.05	64.12
		5D	0.3	-	10.83	15.81			
	5L	10U	0.4	18	15.39	15.72			
		10D	0.4	-	16.50	15.60			
2	10L	5U	0.8	18	13.24	13.46	4.2	40.51	41.80
		H	0.8	18	13.48	14.01			
		5D	0.8	-	13.79	14.33			
3	V	5U	1.8	18	16.12	16.72	16.8	75.95	80.87
	5L	H	2	18	15.62	16.22			
	V		2	18	16.40	16.74			
	5R		2	18	12.02	14.76			
	V		5D	1.8	-	15.79			
4	10R	5U	0.8	18	15.56	12.38	4.2	47.63	38.04
		H	0.8	18	15.90	12.70			
		5D	0.8	-	16.17	12.96			
5	5R	10U	0.4	18	16.37	14.36	2.4	60.63	49.54
		10D	0.4	-	12.66	15.03			
	20R	5U	0.3	18	16.41	9.77			
		5D	0.3	-	15.19	10.38			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF735 (Smoke Lens) (Tail lamp)
SAMPLE No : 03#, 04#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : 1
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : 1

TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m
BULB TRADE NO. :
TEST VOLTAGE : 12.8V
AIM NOTES : Reference center refer to the drawing on last
page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TAIL LAMP PHOTOMETRY TEST RESULT UPON TIME (AT H=0/V=0 POINT)				
SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
03#	10.86	10.28	1.056	
04#	10.84	10.21	1.062	

TAIL LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION (TABLE VIII of FMVSS No. 108)									
GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY(cd)				GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections		Calculated result		Required Minimum	Measured	
			2		Sample 03#	Sample 04#		03#	04#
			MINIMUM	MAXIMUM					
1	20L	5U	0.3	18	6.18	17.55	2.4	31.16	59.62
		5D	0.3	-	6.39	16.86			
	5L	10U	0.4	18	9.05	12.41			
		10D	0.4	-	9.54	12.80			
2	10L	5U	0.8	18	7.92	14.58	4.2	24.06	44.62
		H	0.8	18	8.01	14.93			
		5D	0.8	-	8.13	15.11			
3	V	5U	1.8	18	10.79	10.66	16.8	54.70	54.66
	5L	H	2	18	9.26	12.77			
			2	18	10.86	10.84			
			2	18	12.79	9.44			
			V	5D	1.8	-			
4	10R	5U	0.8	18	15.02	8.02	4.2	45.42	24.73
		H	0.8	18	15.13	8.35			
		5D	0.8	-	15.27	8.36			
5	5R	10U	0.4	18	12.52	9.42	2.4	59.14	32.38
		10D	0.4	-	13.05	9.87			
	20R	5U	0.3	18	17.17	6.48			
		5D	0.3	-	16.40	6.61			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

TAIL LAMP PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION

(TABLE VIII of FMVSS No. 108)

GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY(cd)				GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections		Measurements		Required Minimum	Measured	
			1		Sample 03#	Sample 04#		03#	04#
			MINIMUM	MAXIMUM					
1	20L	5U	0.3	18	5.85	16.53	2.4	29.51	56.16
		5D	0.3	-	6.05	15.88			
	5L	10U	0.4	18	8.57	11.69			
		10D	0.4	-	9.04	12.06			
2	10L	5U	0.8	18	7.49	13.73	4.2	22.76	42.02
		H	0.8	18	7.58	14.06			
		5D	0.8	-	7.69	14.23			
3	V	5U	1.8	18	10.21	10.04	16.8	51.78	51.48
	5L		2	18	8.77	12.03			
	V	H	2	18	10.28	10.21			
	5R		2	18	12.11	8.89			
	V	5D	1.8	-	10.41	10.31			
4	10R	5U	0.8	18	14.22	7.56	4.2	42.99	23.30
		H	0.8	18	14.32	7.87			
		5D	0.8	-	14.45	7.87			
5	5R	10U	0.4	18	11.85	8.87	2.4	55.97	30.51
		10D	0.4	-	12.35	9.30			
	20R	5U	0.3	18	16.25	6.11			
		5D	0.3	-	15.52	6.23			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF734 (Red Lens) (Rear turn signal lamp)

SAMPLE No : 01#, 02#

FMVSS No. 108 REQUIREMENT :

VEHICLE TYPE/SIZE :

- NUMBER OF COMPARTMENTS : 2

- NUMBER OF LAMPS : 1

- NUMBER OF LIGHTED SECTIONS : 2

TEST PERFORMED BY : Cao Wei

DATE : January 30, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m

BULB TRADE NO. :

TEST VOLTAGE : 12.8V

AIM NOTES : Reference center refer to the drawing on last page

OTHER NOTES : ---

RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

REAR (RED) TURN SIGNAL LAMP PHOTOMETRY TEST RESULT UPON TIME
(AT H=0/V=0 POINT)

SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
01#	117.83	112.27	1.050	
02#	123.83	117.83	1.051	

REAR (RED) TURN SIGNAL LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION
(TABLE VII of FMVSS No. 108)⁽⁶⁾

GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 01#		Sample 02#	01#
1	20L ⁽⁶⁾	5U	12	46.78	24.39	60	190.21	122.33
		5D	12	56.95	24.18			
	5L ⁽⁶⁾	10U	19	36.04	37.67			
		10D ⁽³⁾	19	50.44	36.09			
2	10L ⁽⁶⁾	5U	35	58.66	56.17	115	187.44	179.13
		H	47	63.93	68.43			
		5D	35	64.85	54.53			
3	V	5U	82	103.59	101.33	445	535.69	551.44
	5L ⁽⁶⁾	H	95	105.56	115.92			
			95	117.83	123.83			
	V	5R ⁽⁶⁾	95	110.93	111.63			
	V		5D	82	97.78			
4	10R ⁽⁶⁾	5U	35	49.87	56.11	115	166.01	166.97
		H	47	62.29	57.71			
		5D	35	53.85	53.15			
5	5R ⁽⁶⁾	10U	19	29.69	48.16	60	117.24	205.95
		10D ⁽³⁾	19	35.61	44.57			
	20R ⁽⁶⁾	5U	12	19.70	58.86			
		5D	12	32.24	54.36			
MAXIMUM PHOTOMETRIC INTENSITY ⁽⁴⁾			360	121.63	125.44			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

REAR (RED) TURN SIGNAL LAMP PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION

(TABLE VII of FMVSS No. 108)⁽⁶⁾

GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 01#		Sample 02#	01#
1	20L ⁽⁶⁾	5U	12	44.57	23.21	60	181.23	116.40
		5D	12	54.26	23.01			
	5L ⁽⁶⁾	10U	19	34.34	35.84			
		10D ⁽³⁾	19	48.06	34.34			
2	10L ⁽⁶⁾	5U	35	55.89	53.45	115	178.59	170.45
		H	47	60.91	65.11			
		5D	35	61.79	51.89			
3	V	5U	82	98.70	96.42	445	510.42	524.72
	5L ⁽⁶⁾	H	95	100.58	110.30			
	V		95	112.27	117.83			
	5R ⁽⁶⁾		95	105.70	106.22			
	V	5D	82	93.17	93.95			
4	10R ⁽⁶⁾	5U	35	47.52	53.39	115	158.18	158.87
		H	47	59.35	54.91			
		5D	35	51.31	50.57			
5	5R ⁽⁶⁾	10U	19	28.29	45.83	60	111.71	195.98
		10D ⁽³⁾	19	33.93	42.41			
	20R ⁽⁶⁾	5U	12	18.77	56.01			
		5D	12	30.72	51.73			
MAXIMUM PHOTOMETRIC INTENSITY ⁽⁴⁾			360	115.89	119.36			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF735 (Rear turn signal lamp)
SAMPLE No : 03#, 04#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : 2
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : 2

TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m
BULB TRADE NO. :
TEST VOLTAGE : 12.8V
AIM NOTES : Reference center refer to the drawing on last page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

REAR (RED) TURN SIGNAL LAMP PHOTOMETRY TEST RESULT UPON TIME (AT H=0/V=0 POINT)				
SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
03#	109.65	104.31	1.051	
04#	112.65	106.85	1.054	

REAR (RED) TURN SIGNAL LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION (TABLE VII of FMVSS No. 108) ⁽⁶⁾								
GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 03#		Sample 04#	03#
1	20L ⁽⁶⁾	5U	12	43.97	22.26	60	176.20	111.71
		5D	12	50.73	22.08			
	5L ⁽⁶⁾	10U	19	35.69	34.56			
		10D ⁽³⁾	19	45.81	32.81			
2	10L ⁽⁶⁾	5U	35	54.84	42.77	115	166.65	149.35
		H	47	58.78	54.85			
		5D	35	53.03	51.73			
3	V	5U	82	94.41	97.63	445	496.90	522.25
	5L ⁽⁶⁾	H	95	103.84	109.62			
			95	109.65	112.65			
			95	101.34	107.06			
	V	5D	82	87.66	95.29			
4	10R ⁽⁶⁾	5U	35	36.93	51.79	115	126.09	153.95
		H	47	50.07	53.22			
		5D	35	39.09	48.94			
5	5R ⁽⁶⁾	10U	19	28.54	44.60	60	112.09	189.92
		10D ⁽³⁾	19	32.15	41.14			
	20R ⁽⁶⁾	5U	12	23.87	54.16			
		5D	12	27.53	50.02			
MAXIMUM PHOTOMETRIC INTENSITY ⁽⁴⁾			360	110.96	114.28			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

REAR (RED) TURN SIGNAL LAMP PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION

(TABLE VII of FMVSS No. 108)⁽⁶⁾

GROUP NUMBER	TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽²⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
			Lighted Sections	Measurements		Required Minimum	Measured	
				2	Sample 03#		Sample 04#	03#
1	20L ⁽⁶⁾	5U	12	41.83	21.11	60	167.62	105.95
		5D	12	48.26	20.94			
	5L ⁽⁶⁾	10U	19	33.95	32.78			
		10D ⁽³⁾	19	43.58	31.12			
2	10L ⁽⁶⁾	5U	35	52.17	40.57	115	158.54	141.67
		H	47	55.92	52.03			
		5D	35	50.45	49.07			
3	V	5U	82	89.81	92.60	445	472.69	495.36
	5L ⁽⁶⁾	H	95	98.78	103.98			
	V		95	104.31	106.85			
	5R ⁽⁶⁾		95	96.40	101.55			
	V		5D	82	83.39			
4	10R ⁽⁶⁾	5U	35	35.13	49.12	115	119.95	146.02
		H	47	47.63	50.48			
		5D	35	37.19	46.42			
5	5R ⁽⁶⁾	10U	19	27.15	42.30	60	106.63	180.13
		10D ⁽³⁾	19	30.58	39.02			
	20R ⁽⁶⁾	5U	12	22.71	51.37			
		5D	12	26.19	47.44			
MAXIMUM PHOTOMETRIC INTENSITY ⁽⁴⁾			360	105.56	108.40			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF734 (Red lens) (Backup lamp)
SAMPLE No : 01#, 02#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : 1
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : N/A

TEST PERFORMED BY : Cao Wei
DATE : January 30, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m
BULB TRADE NO. :
TEST VOLTAGE : 12.8V
AIM NOTES : Reference center refer to the drawing on last page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

BACKUP LAMP PHOTOMETRY TEST RESULT UPON TIME (AT H=0/V=0 POINT)				
SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
01#	120.93	115.27	1.049	
02#	145.64	140.72	1.035	

BACKUP LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION(TABLE XII of FMVSS No. 108)									
GROUP NUMBER	TEST POINT (degrees)		MAXIMUM PHOTOMETRIC INTENSITY (cd) ANY SINGLE LAMP	TWO LAMP SYSTEM -EACH LAMP			MEASURED		
				MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽⁴⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
				Required Minimum	Measured		Required Minimum	Measured	
					01#	02#		01#	02#
1 ⁽²⁾⁽³⁾	45L	5U	300	15	18.47	18.14	45	57.96	55.63
		H	300	15	19.87	18.73			
		5D	-	15	19.62	18.76			
2 ⁽²⁾⁽³⁾	30L	H	300	25	38.55	44.28	50	77.40	88.51
		5D	-	25	38.85	44.23			
3	10L	10U	300	10	46.06	34.03	100	246.20	415.26
		5U	300	20	91.72	38.99			
	V	10U	300	15	31.11	59.23			
		5U	300	25	38.56	62.32			
	10R	10U	300	10	16.68	91.84			
		5U	300	20	22.07	128.85			
4	10L	H	300	50	118.97	71.68	360	612.05	674.66
		5D	-	50	116.45	68.70			
	V	H	300	80	120.93	145.64			
		5D	-	80	108.68	124.31			
	10R	H	300	50	68.86	134.86			
		5D	-	50	78.16	129.47			
5 ⁽²⁾⁽³⁾	30R	H	300	25	33.85	41.95	50	67.72	93.56
		5D	-	25	33.87	51.61			
6 ⁽²⁾⁽³⁾	45R	5U	300	15	17.46	18.50	45	54.10	56.42
		H	300	15	18.26	18.94			
		5D	-	15	18.38	18.98			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

BACKUP LAMP PHOTOMETRIY RESULT AFTER 30 MINUTES OF OPERATION(TABLE XII of FMVSS No. 108)

GROUP NUMBER	TEST POINT (degrees)		MAXIMUM PHOTOMETRIC INTENSITY (cd) ANY SINGLE LAMP	TWO LAMP SYSTEM -EACH LAMP			MEASURED		
				MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽⁴⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
				Required Minimum	Measured		Required Minimum	Measured	
					01#	02#		01#	02#
1 ⁽²⁾⁽³⁾	45L	5U	300	15	17.60	17.53	45	55.24	53.75
		H	300	15	18.94	18.09			
		5D	-	15	18.70	18.13			
2 ⁽²⁾⁽³⁾	30L	H	300	25	36.74	42.78	50	73.77	85.51
		5D	-	25	37.03	42.73			
3	10L	10U	300	10	43.90	32.88	100	234.68	401.23
		5U	300	20	87.43	37.67			
	V	10U	300	15	29.65	57.23			
		5U	300	25	36.76	60.21			
	10R	10U	300	10	15.90	88.74			
		5U	300	20	21.04	124.50			
4	10L	H	300	50	113.40	69.26	360	583.40	651.87
		5D	-	50	111.00	66.38			
	V	H	300	80	115.27	140.72			
		5D	-	80	103.59	120.11			
	10R	H	300	50	65.64	130.30			
		5D	-	50	74.50	125.10			
5 ⁽²⁾⁽³⁾	30R	H	300	25	32.26	40.53	50	64.55	90.39
		5D	-	25	32.29	49.86			
6 ⁽²⁾⁽³⁾	45R	5U	300	15	16.64	17.88	45	51.57	54.52
		H	300	15	17.41	18.30			
		5D	-	15	17.52	18.34			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF735 (Smoke lens) (Backup lamp)
SAMPLE No : 03#, 04#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : 1
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : N/A

TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m
BULB TRADE NO. :
TEST VOLTAGE : 12.8V
AIM NOTES : Reference center refer to the drawing on last page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

BACKUP LAMP PHOTOMETRY TEST RESULT UPON TIME (AT H=0/V=0 POINT)				
SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
03#	114.21	109.15	1.046	
04#	125.85	119.33	1.055	

BACKUP LAMP PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION(TABLE XII of FMVSS No. 108)									
GROUP NUMBER	TEST POINT (degrees)		MAXIMUM PHOTOMETRIC INTENSITY (cd) ANY SINGLE LAMP	TWO LAMP SYSTEM -EACH LAMP			MEASURED		
				MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽⁴⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
				Required Minimum	Measured		Required Minimum	Measured	
					03#	04#		03#	04#
1 ⁽²⁾⁽³⁾	45L	5U	300	15	17.11	16.41	45	51.18	50.35
		H	300	15	17.24	17.01			
		5D	-	15	16.83	16.93			
2 ⁽²⁾⁽³⁾	30L	H	300	25	29.73	34.57	50	58.77	70.13
		5D	-	25	29.04	35.56			
3	10L	10U	300	10	55.07	34.95	100	341.05	396.93
		5U	300	20	106.31	40.17			
	V	10U	300	15	54.43	59.78			
		5U	300	25	69.82	62.01			
	10R	10U	300	10	23.58	81.37			
		5U	300	20	31.84	118.65			
4	10L	H	300	50	147.64	62.75	360	620.36	606.25
		5D	-	50	149.42	59.95			
	V	H	300	80	114.21	125.85			
		5D	-	80	97.72	114.71			
	10R	H	300	50	56.16	124.34			
		5D	-	50	55.21	118.65			
5 ⁽²⁾⁽³⁾	30R	H	300	25	34.22	39.84	68.39	80.98	
		5D	-	25	34.17	41.14			
6 ⁽²⁾⁽³⁾	45R	5U	300	15	17.16	16.43	45	50.79	50.01
		H	300	15	16.81	16.80			
		5D	-	15	16.82	16.78			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

BACKUP LAMP PHOTOMETRIY RESULT AFTER 30 MINUTES OF OPERATION(TABLE XII of FMVSS No. 108)

GROUP NUMBER	TEST POINT (degrees)		MAXIMUM PHOTOMETRIC INTENSITY (cd) ANY SINGLE LAMP	TWO LAMP SYSTEM -EACH LAMP			MEASURED		
				MINIMUM PHOTOMETRIC INTENSITY ⁽¹⁾⁽⁴⁾ (cd)			GROUP MINIMUM PHOTOMETRIC INTENSITY (cd)		
				Required Minimum	Measured		Required Minimum	Measured	
					03#	04#		03#	04#
1 ⁽²⁾⁽³⁾	45L	5U	300	15	16.35	15.56	45	48.91	47.74
		H	300	15	16.47	16.13			
		5D	-	15	16.09	16.05			
2 ⁽²⁾⁽³⁾	30L	H	300	25	28.41	32.78	50	56.16	66.50
		5D	-	25	27.75	33.72			
3	10L	10U	300	10	52.63	33.14	100	325.95	376.36
		5U	300	20	101.60	38.09			
	V	10U	300	15	52.02	56.68			
		5U	300	25	66.73	58.80			
	10R	10U	300	10	22.54	77.15			
		5U	300	20	30.43	112.50			
4	10L	H	300	50	141.10	59.50	360	592.87	574.84
		5D	-	50	142.80	56.84			
	V	H	300	80	109.15	119.33			
		5D	-	80	93.39	108.77			
	10R	H	300	50	53.67	117.90			
		5D	-	50	52.76	112.50			
5 ⁽²⁾⁽³⁾	30R	H	300	25	32.70	37.78	50	65.36	76.79
		5D	-	25	32.66	39.01			
6 ⁽²⁾⁽³⁾	45R	5U	300	15	16.40	15.58	45	48.55	47.42
		H	300	15	16.07	15.93			
		5D	-	15	16.08	15.91			



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF734 (Red Lens) (Side Reflex Reflectors)

SAMPLE No : 01#, 02#

FMVSS No. 108 REQUIREMENT :

VEHICLE TYPE/SIZE :

- NUMBER OF COMPARTMENTS : ---

- NUMBER OF LAMPS : 1

- NUMBER OF LIGHTED SECTIONS : ---

TEST PERFORMED BY : Cao Wei

DATE : January 30, 2023

PHOTOMETRIC TEST DISTANCE : 30.5 m

BULB TRADE NO. : ---

TEST VOLTAGE : ---

AIM NOTES : Reference center refer to the drawing on last page

OTHER NOTES : ---

RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

REFLEX REFLECTOR PHOTOMETRY REQUIREMENTS
 (TABLE XVI-a of FMVSS No. 108)

OBSERVATION ANGLE (degrees)	ENTRANCE ANGLE (degrees)	MINIMUM PHOTOMETRIC INTENSITY	Measurements	
		RED	Sample 01#	Sample 02#
		(mcd/lx)		
0.2	0	420	528.68	492.84
	10U	280	363.03	359.98
	10D ⁽¹⁾	280	372.10	360.50
	20L	140	188.06	157.44
	20R	140	157.45	185.84
1.5	0	6	11.80	10.00
	10U	5	8.43	9.69
	10D ⁽¹⁾	5	10.92	11.06
	20L	3	31.61	7.98
	20R	3	5.04	36.04

(1) Where reflex reflectors are mounted with their axis of reference less than 750 mm. above the road surface photometry requirements below 5° down may be met at 5° down rather than at the required specified downward angle.



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF735 (Smoke Lens) (Side Reflex Reflectors)
SAMPLE No : 03#, 04#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : ---
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : ---

TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

PHOTOMETRIC TEST DISTANCE : 30.5 m
BULB TRADE NO. : ---
TEST VOLTAGE : ---
AIM NOTES : Reference center refer to the drawing on last
page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

REFLEX REFLECTOR PHOTOMETRY REQUIREMENTS

(TABLE XVI-a of FMVSS No. 108)

OBSERVATION ANGLE (degrees)	ENTRANCE ANGLE (degrees)	MINIMUM PHOTOMETRIC INTENSITY	Measurements	
		RED		
		(mcd/lx)	Sample 03#	Sample 04#
0.2	0	420	497.60	467.91
	10U	280	288.37	285.12
	10D ⁽¹⁾	280	286.24	308.95
	20L	140	174.73	147.57
	20R	140	149.09	156.02
1.5	0	6	9.15	8.32
	10U	5	7.76	6.84
	10D ⁽¹⁾	5	9.88	9.92
	20L	3	35.53	5.17
	20R	3	5.57	40.11

(1) Where reflex reflectors are mounted with their axis of reference less than 750 mm. above the road surface photometry requirements below 5° down may be met at 5° down rather than at the required specified downward angle.



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF734 (Red Lens) (Rear Reflex Reflectors)

SAMPLE No : 01#, 02#

FMVSS No. 108 REQUIREMENT :

VEHICLE TYPE/SIZE :

- NUMBER OF COMPARTMENTS : ---

- NUMBER OF LAMPS : 1

- NUMBER OF LIGHTED SECTIONS : ---

TEST PERFORMED BY : Cao Wei

DATE : January 30, 2023

PHOTOMETRIC TEST DISTANCE : 30.5 m

BULB TRADE NO. : ---

TEST VOLTAGE : ---

AIM NOTES : Reference center refer to the drawing on last page

OTHER NOTES : ---

RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

REFLEX REFLECTOR PHOTOMETRY REQUIREMENTS
 (TABLE XVI-a of FMVSS No. 108)

OBSERVATION ANGLE (degrees)	ENTRANCE ANGLE (degrees)	MINIMUM PHOTOMETRIC INTENSITY	Measurements	
		RED		
		(mcd/lx)	Sample 01#	Sample 02#
0.2	0	420	479.32	497.12
	10U	280	331.09	339.35
	10D ⁽¹⁾	280	337.86	348.00
	20L	140	173.11	163.04
	20R	140	155.82	183.48
1.5	0	6	24.36	24.14
	10U	5	8.55	8.68
	10D ⁽¹⁾	5	10.62	11.61
	20L	3	8.41	9.37
	20R	3	6.18	8.55

(1) Where reflex reflectors are mounted with their axis of reference less than 750 mm. above the road surface photometry requirements below 5° down may be met at 5° down rather than at the required specified downward angle.



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF735 (Smoke Lens) (Rear Reflex Reflectors)
SAMPLE No : 03#, 04#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : ---
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : ---

TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

PHOTOMETRIC TEST DISTANCE : 30.5 m
BULB TRADE NO. : ---
TEST VOLTAGE : ---
AIM NOTES : Reference center refer to the drawing on last
page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)
Reference standard: FMVSS 571.108
Report number: AT23XX1D49711, Date: February 7, 2023

REFLEX REFLECTOR PHOTOMETRY REQUIREMENTS
 (TABLE XVI-a of FMVSS No. 108)

OBSERVATION ANGLE (degrees)	ENTRANCE ANGLE (degrees)	MINIMUM PHOTOMETRIC INTENSITY	Measurements	
		RED		
		(mcd/lx)	Sample 03#	Sample 04#
0.2	0	420	467.20	466.47
	10U	280	295.70	338.83
	10D ⁽¹⁾	280	291.63	347.35
	20L	140	152.26	153.30
	20R	140	142.49	147.26
1.5	0	6	27.46	24.09
	10U	5	9.82	8.74
	10D ⁽¹⁾	5	12.42	10.51
	20L	3	9.01	11.07
	20R	3	12.79	8.06

(1) Where reflex reflectors are mounted with their axis of reference less than 750 mm. above the road surface photometry requirements below 5° down may be met at 5° down rather than at the required specified downward angle.



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF734 (Red Lens) (Side Marker Lamp)

SAMPLE No : 01#, 02#

FMVSS No. 108 REQUIREMENT :

VEHICLE TYPE/SIZE :

- NUMBER OF COMPARTMENTS : ---

- NUMBER OF LAMPS : 1

- NUMBER OF LIGHTED SECTIONS : ---

TEST PERFORMED BY : Cao Wei

DATE : January 30, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m

BULB TRADE NO. : ---

TEST VOLTAGE : 12.8V

AIM NOTES : Reference center refer to the drawing on last page

OTHER NOTES : ---

RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

**SIDE MARKER LAMPS PHOTOMETRY TEST RESULT UPON TIME
(AT H=0/V=0 POINT)**

SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
01#	75.48	73.13	1.032	
02#	74.40	72.13	1.031	

**SIDE MARKER LAMPS PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION
(TABLE X OF FMVSS No. 108)**

TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽²⁾ (cd)	Measurements	
		RED LAMPS	Sample 01#	Sample 02#
10U	45L ⁽¹⁾	0.25	54.35	36.29
	V	0.25	71.55	72.37
	45R ⁽¹⁾	0.25	26.49	52.70
H	45L ⁽¹⁾	0.25	55.62	35.84
	V	0.25	75.48	74.40
	45R ⁽¹⁾	0.25	23.41	53.64
10D ⁽³⁾	45L ⁽¹⁾	0.25	55.12	30.84
	V	0.25	66.63	72.66
	45R ⁽¹⁾	0.25	21.30	52.25



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

**SIDE MARKER LAMPS PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION
(TABLE X OF FMVSS No. 108)**

TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽²⁾ (cd)	Measurements	
			RED LAMPS	Sample 01#
10U	45L ⁽¹⁾	0.25	52.66	35.18
	V	0.25	69.32	70.16
	45R ⁽¹⁾	0.25	25.67	51.09
H	45L ⁽¹⁾	0.25	53.89	34.75
	V	0.25	73.13	72.13
	45R ⁽¹⁾	0.25	22.68	52.00
10D ⁽³⁾	45L ⁽¹⁾	0.25	53.40	29.90
	V	0.25	64.56	70.44
	45R ⁽¹⁾	0.25	20.64	50.66



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 4) PHOTOMETRY(CONTINUED)

TEST COMPONENT : LF735 (Smoke Lens) (Side Marker Lamp)
SAMPLE No : 03#, 04#
FMVSS No. 108 REQUIREMENT :
VEHICLE TYPE/SIZE :
- NUMBER OF COMPARTMENTS : ---
- NUMBER OF LAMPS : 1
- NUMBER OF LIGHTED SECTIONS : ---

TEST PERFORMED BY : Cao Wei
DATE : January 31, 2023

PHOTOMETRIC TEST DISTANCE : 3.16 m
BULB TRADE NO. : ---
TEST VOLTAGE : 12.8V
AIM NOTES : Reference center refer to the drawing on last
page
OTHER NOTES : ---
RESULTS : PASS



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

**SIDE MARKER LAMPS PHOTOMETRY TEST RESULT UPON TIME
(AT H=0/V=0 POINT)**

SAMPLE NO.	TEST RESULT (unit: cd)		RATIO	REMARK
	1 MIN	30 MIN	1MIN/30MIN	
03#	48.96	47.36	1.034	
04#	45.56	43.69	1.043	

**SIDE MARKER LAMPS PHOTOMETRY RESULT AFTER 1 MINUTE OF OPERATION
(TABLE X OF FMVSS No. 108)**

TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽²⁾ (cd)	Measurements	
		RED LAMPS	Sample 03#	Sample 04#
10U	45L ⁽¹⁾	0.25	33.64	20.81
	V	0.25	46.24	44.31
	45R ⁽¹⁾	0.25	18.54	30.74
H	45L ⁽¹⁾	0.25	34.59	20.73
	V	0.25	48.96	45.56
	45R ⁽¹⁾	0.25	16.16	31.63
10D ⁽³⁾	45L ⁽¹⁾	0.25	34.28	18.00
	V	0.25	43.52	44.65
	45R ⁽¹⁾	0.25	14.70	30.78



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

**SIDE MARKER LAMPS PHOTOMETRY RESULT AFTER 30 MINUTES OF OPERATION
(TABLE X OF FMVSS No. 108)**

TEST POINT (degrees)		MINIMUM PHOTOMETRIC INTENSITY ⁽²⁾ (cd)	Measurements	
			RED LAMPS	Sample 03#
10U	45L ⁽¹⁾	0.25	32.54	19.96
	V	0.25	44.73	42.49
	45R ⁽¹⁾	0.25	17.93	29.48
H	45L ⁽¹⁾	0.25	33.46	19.88
	V	0.25	47.36	43.69
	45R ⁽¹⁾	0.25	15.63	30.33
10D ⁽³⁾	45L ⁽¹⁾	0.25	33.16	17.26
	V	0.25	42.10	42.82
	45R ⁽¹⁾	0.25	14.22	29.52



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 5) PHYSICAL TESTS

VIBRATION TEST

	YES	NO
Devices completed test without evidence of material physical weakness or failure of parts which affects proper function	✓	
No evidence of lens or reflector rotation which affects proper function	✓	
Necessary to rephotometer test		✓
Additional photometric Data Sheet added to report		✓

MOISTURE TEST

	YES	NO
Devices accumulated less than 2 cc of Moisture	✓	

DUST TEST

	YES	NO
At completion of test, Max Candlepower Readings of Devices were within 10% of those prior to Dust Test	✓	
Necessary to rephotometer test		✓
Additional photometric Data Sheet added to report		✓

CORROSION TEST

	YES	NO
Device completed test without evidence of Corrosion	✓	
Necessary to rephotometer test		✓
Additional photometric Data Sheet added to report		✓

PLASTIC OPTICAL MATERIAL TEST

	YES	NO
Device completed test and meets applicable performance requirements specified in Appendix H of this test procedure		✓



SECTION 6) PHOTOGRAPHS OF TEST SAMPLE

Variant A: LF734 (Red Lens)

FRONT VIEW



SIDE VIEW



REAR VIEW



SECTION 6) PHOTOGRAPHS OF TEST SAMPLE (CONTINUED)

Variant B: LF735 (Smoke Lens)

FRONT VIEW



SIDE VIEW



REAR VIEW



Subjects: Rear Group Lamp (Stop, Tail, Rear Turn Signal Lamp, Backup Lamp, Side Reflex Reflectors, Rear Reflex Reflectors, Side Marker Lamp)

Reference standard: FMVSS 571.108

Report number: AT23XX1D49711, Date: February 7, 2023

SECTION 7) DRAWINGS

