

AIRCRAFT MAINTENANCE MANUAL

FLOOR PROXIMITY STRIP LIGHTS - ADJUSTMENT/TEST

EFFECTIVITY: ACFT MODEL(S) EMB-135

1. General

- A. This section gives the procedures to do the test of the Photoluminescent Floor-Proximity Strip Lights.
- B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
33-50-12-700-801-A	PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS - OPERATIONAL TEST	FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS
33-50-12-700-802-A	PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS - FUNCTIONAL TEST	FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS
33-50-12-700-803-A	PHOTOLUMINESCENT SAMPLE - FUNCTIONAL TEST	FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS



EMB145 – EMB135

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TASK 33-50-12-700-801-A

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS

2. PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do the operational test of the Photoluminescent Floor-Proximity Strip Lights.
- (2) To have light during a minimum of 4 hours when an electrical emergency occurs, charge the Photoluminescent Floor-Proximity Strip Lights for 15 minutes.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
231		Passenger cabin
241		Passenger cabin
242		Passenger cabin
251		Passenger cabin
252		Passenger cabin
261		Passenger cabin
262		Passenger cabin

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Passenger cabin

I. Preparation

SUBTASK 841-017-B

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS

- (1) Energize the aircraft with the External DC Power Supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (2) Make sure that these circuit breakers are closed:
 - CABIN LIGHTS 2 and 3, on the RH Electrical-Power Control/Distribution box.
 - CABIN LIGHT 1, on the LH Electrical-Power Control/Distribution box.

J. Operationally Test - Photoluminescent Floor-Proximity Strip Lights ([Figure 501](#)) ([Figure 502](#))

SUBTASK 710-008-B

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS

- (1) Do the test of the Photoluminescent Floor-Proximity Strip Light as follows:
 - (a) Set the cabin ceiling and sidewall lights switch, on the forward attendant control panel, to the ON position.

Result:

1 The ceiling and sidewall lights, along the passenger cabin, come on.
 - (b) Set the cabin ceiling and sidewall lights switch, on the forward attendant control panel, to the BRT position.

Result:

1 The ceiling and sidewall lights, along the passenger cabin, are set to full brightness.
 - (c) Close all the passenger curtains, main door and cockpit door, to isolate the aircraft interior from the external light.
 - (d) Keep the cabin ceiling and sidewall lights on during 15 minutes to charge the Photoluminescent Floor-Proximity Strip Lights.
 - (e) When the charging time expires, set the cabin ceiling and sidewall lights switch, on the forward attendant control panel, to the OFF position.

Result:

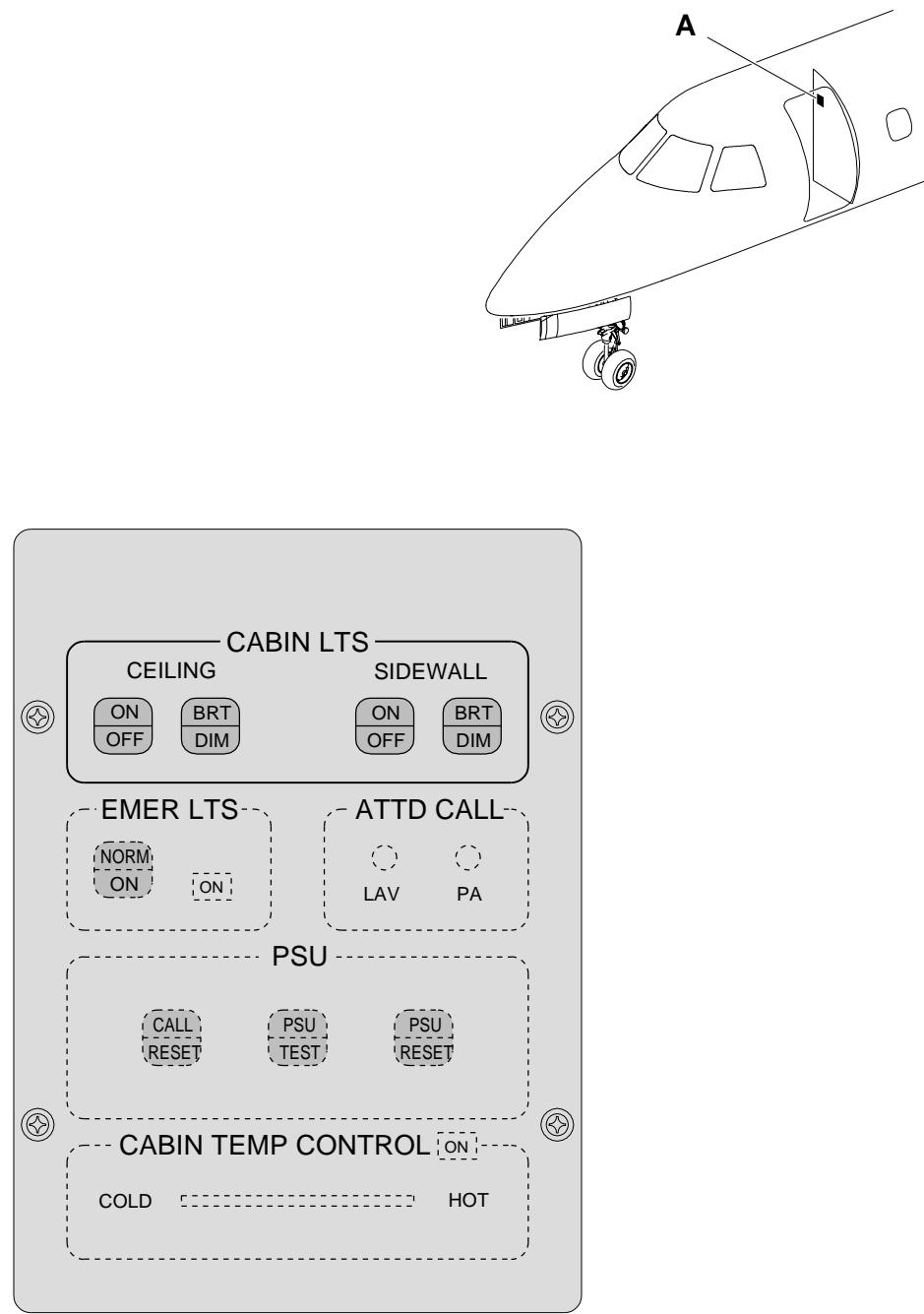
1 The ceiling and sidewall lights, along the passenger cabin, go off.
 - (f) Make sure that the Photoluminescent Floor-Proximity Strip Lights illuminate the aircraft aisle to guide the passengers in a possible electrical emergency condition.

K. Follow-on

SUBTASK 842-017-B

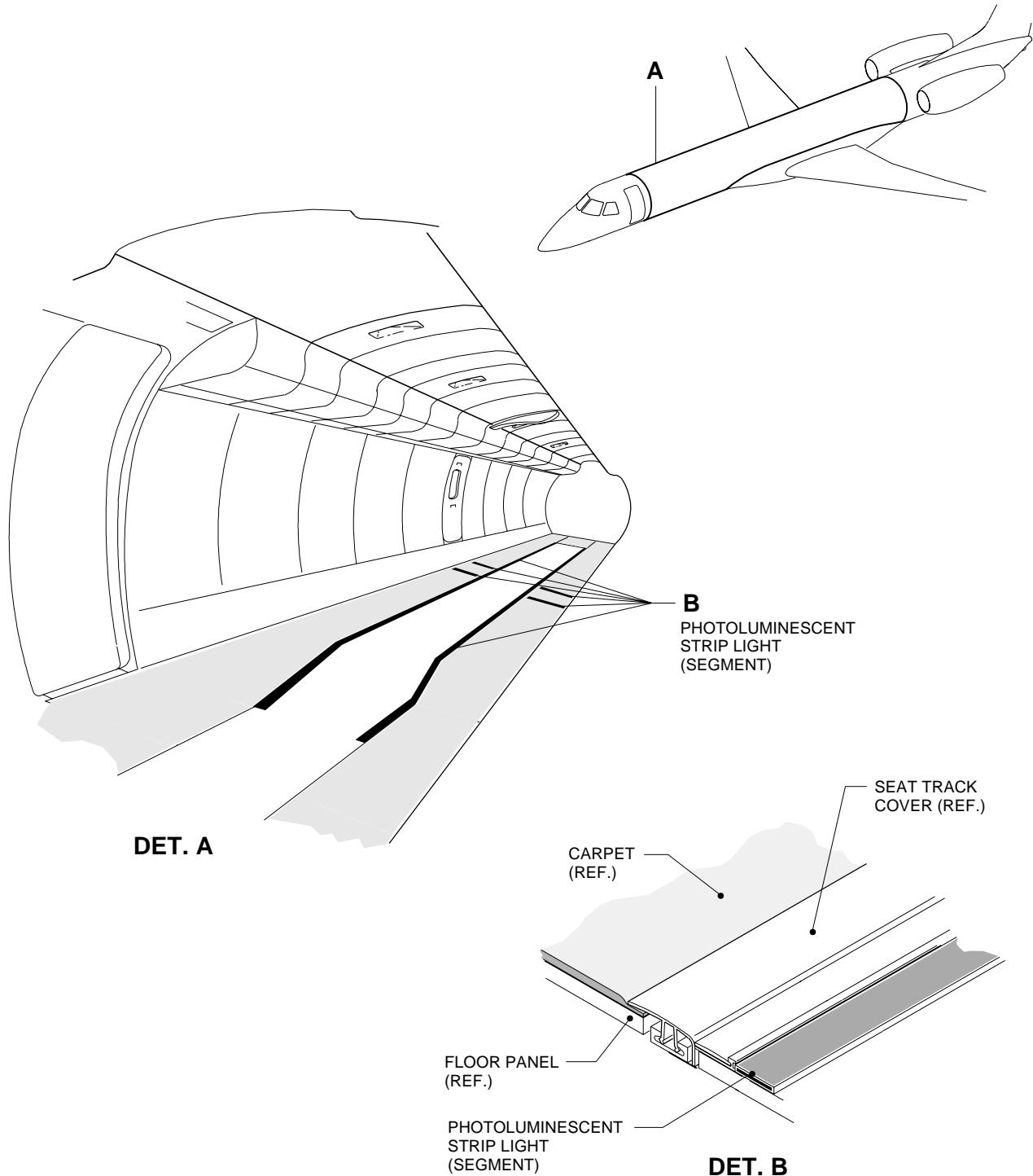
- (1) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS
Forward Attendant Control Panel
Figure 501



DET. A

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS
 Photoluminescent Floor-Proximity Strip Lights
 Figure 502



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TASK 33-50-12-700-802-A

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS

3. PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS - FUNCTIONAL TEST

A. General

- (1) This task gives the procedures to do the functional test of the Photoluminescent Floor-Proximity Strip Lights.
- (2) The aircraft interior must be serviceable, with all passenger provisions (seats, bins, galleys, etc.) correctly installed.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 33-21-06-000-802-A/400	PASSENGER-CABIN FLUORESCENT LAMPS - REMOVAL
AMM TASK 33-21-06-400-802-A/400	PASSENGER-CABIN FLUORESCENT LAMPS - INSTALLATION

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
231		Passenger cabin
241		Passenger cabin
242		Passenger cabin
251		Passenger cabin
252		Passenger cabin
261		Passenger cabin
262		Passenger cabin

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 447	Light Meter	To measure the interior lighting	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Passenger cabin

I. Preparation
SUBTASK 841-015-C

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS

- (1) Energize the aircraft with the External DC Power Supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (2) Make sure that these circuit breakers are closed:
 - CABIN LIGHTS 2 and 3, on the RH Electrical-Power Control/Distribution box.
 - CABIN LIGHT 1, on the LH Electrical-Power Control/Distribution box.
- (3) Set the cabin ceiling and sidewall lights switch, on the forward attendant control panel, to the ON position.
- (4) Set the cabin ceiling and sidewall lights switch, on the forward attendant control panel, to the BRT position.
- (5) Close all the passenger curtains, main door and cockpit door to isolate the aircraft interior from the external light.
- (6) Let the cabin lighting stabilize for 30 minutes.

J. Functionally Check - Photoluminescent Floor-Proximity Strip Lights System ([Figure 503](#)) ([Figure 504](#))
SUBTASK 720-009-C

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS

- (1) Measuring the interior cabin lighting as follows:
 - (a) Write down the lighting values at three locations along the aisle at a maximum longitudinal separation of 12 inches and fill in a table equivalent to Table 502. Start at the forward cabin door centerline and go aft.

NOTE: • Not all the spaces will be used.

- If readings are above 50 LUX, write 50.
- Do not shade the meter probe while you take the readings.

Table 501 - CABIN INTERIOR ILLUMINATION

Location			Original Values (LUX)			Minimum Values (LUX)	
Point	(INCHES)	(FEET)	Left	Center	Right	Left	Right
1	0						

Table 501 - CABIN INTERIOR ILLUMINATION (Continued)

Location		Original Values (LUX)	Minimum Values (LUX)
2	12		
3	24		
4	36		
5	48		
6	60	5	
7	72		
8	84		
9	96		
10	108		
11	120	10	
12	132		
13	144		
14	156		
15	168		
16	180	15	
17	192		
18	204		
19	216		
20	228		
21	240	20	
22	252		
23	264		
24	276		
25	288		
26	300	25	
27	312		
28	324		
29	336		
30	348		
31	360	30	
32	372		
33	384		
34	396		
35	408		
36	420	35	
37	432		
38	444		
39	456		

Table 501 - CABIN INTERIOR ILLUMINATION (Continued)

Location			Original Values (LUX)			Minimum Values (LUX)	
40	468						
41	480	40					
42	492						
43	504						
44	516						
45	528						
46	540	45					
47	552						
48	564						
49	576						
50	588						
51	600	50					
Totals							
Averages (Total/Number of Readings)							

- (b) Examine the table data to know where lighting in the cabin is at a minimum.
 - (c) Let the cabin have the minimum permitted lighting conditions for maintenance as follows, primarily in the areas with minimum lighting. Put off 10% of the total quantity of lights. Refer to [AMM TASK 33-21-06-000-802-A/400](#).
 - 1. The overhead ceiling and sidewall lighting can contain off lights. But there must not be more than 10 percent of the total quantity. No more than two adjacent lamps in the longitudinal or lateral direction can be off. All off lamps must be clear of galley, cabinets, and life-raft storage areas.
 - 2. All lamps in the liferaft storage areas must be on.
 - 3. Overhead lighting at the forward and aft cabin doors must operate in the 'BRIGHT' setting.
 - (d) Write down the minimum lighting level in the same table.
- NOTE: Before you do this step, do the Preparation again (refer to SUBTASK 33-50-12-841-002-A00).
- (e) Put the lighting equipment in the original configuration (to install the removed light lamps back, refer to [AMM TASK 33-21-06-400-802-A/400](#)).
 - (f) Make sure that all of the averages are more than 20 LUX.
- (2) Measure the emergency exit illumination as follows:
- (a) Set all interior lights to the off position and completely mask all self-luminous signs on the overwing hatches, overhead markings, and bulkhead markings.
- NOTE: Do not mask the exit markings.

- (b) Activate the emergency lighting and make sure that only the exit markers operate.
- (c) Write down the illumination level at four locations (A, B, C, and D) at all exits. Measurements must be 2.0 inches above, below, forward, and aft of a point at the door centerline and 48 inches from the floor. Hold the light meter sensor base against the exit panels to measure light on the exit. Write down the measurements in the Table 503.

NOTE:

- A small penlight can be necessary to read the meter.
- Do not shade the meter probe while you take readings.

Table 502 - CABIN INTERIOR ILLUMINATION

Exit Location		Illumination at Point (LUX)				Total	Average
		A	B	C	D	(A + B +C + D)	
FWD	Left						
	Right						
OVERWING	Left						
	Right						

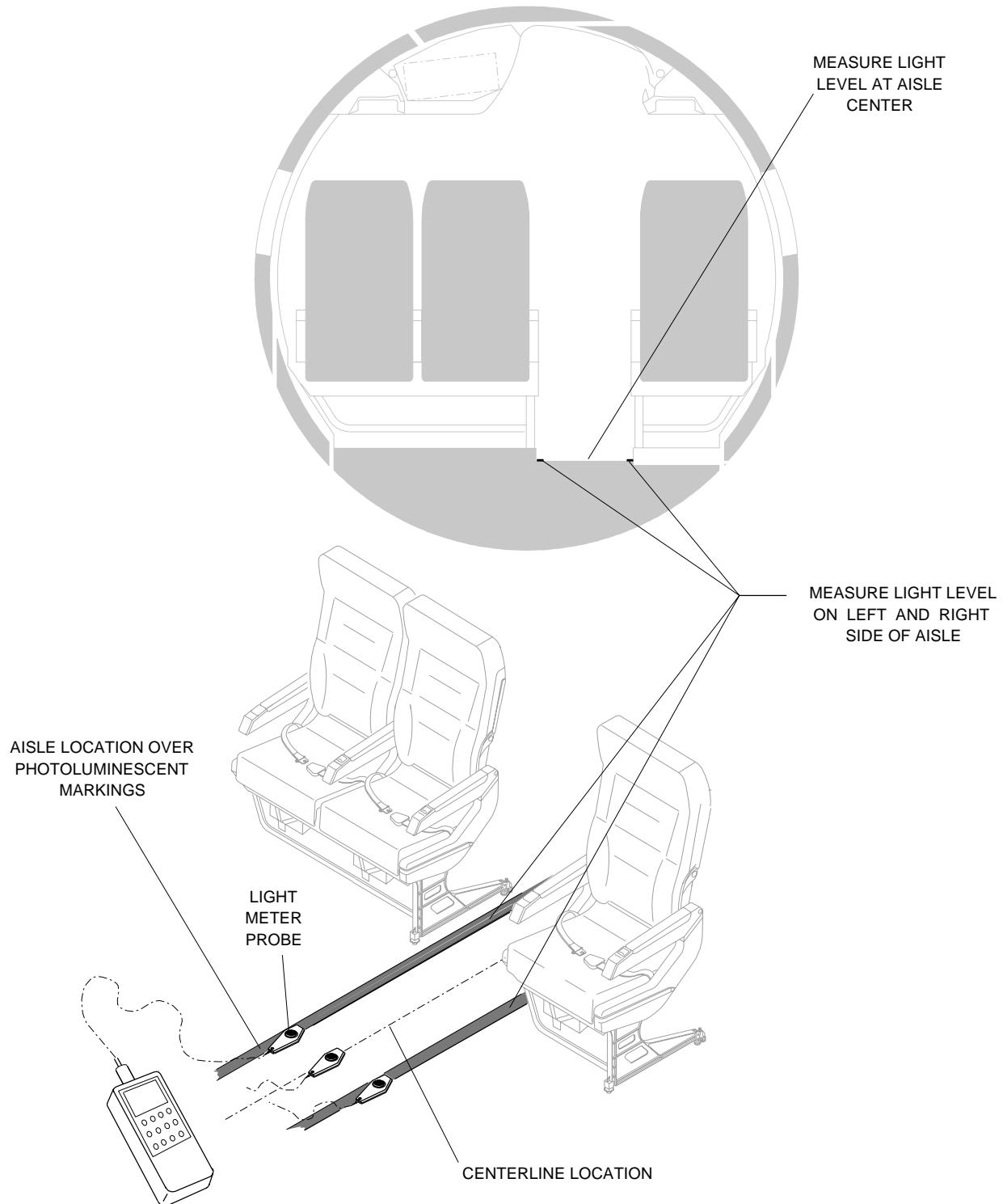
- (d) Make sure that all of the averages are more than 0.025 LUX.

K. Follow-on

SUBTASK 842-015-C

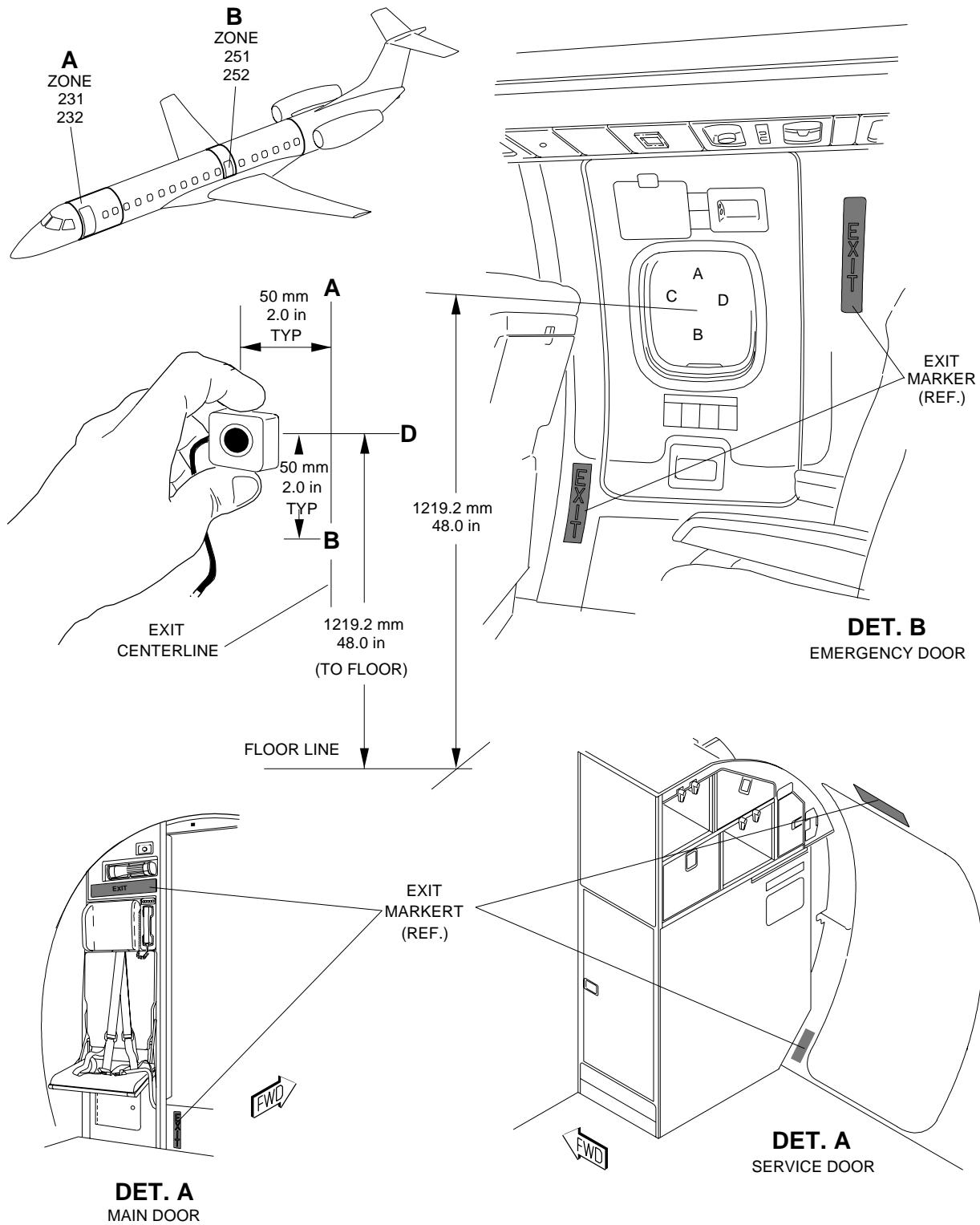
- (1) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS
Measuring Cabin Lighting
Figure 503



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EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS
 Measuring Emergency Exit Illumination
 Figure 504



TASK 33-50-12-700-803-A
EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS
4. PHOTOLUMINESCENT SAMPLE - FUNCTIONAL TEST
A. General

- (1) This task gives the procedures to do the functional test of the photoluminescent sample.

B. References

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM TASK 33-50-12-000-802-A/400	-
AMM TASK 33-50-12-400-802-A/400	-

C. Zones and Accesses

<i>ZONE</i>	<i>PANEL/DOOR</i>	<i>LOCATION</i>
231		Passenger cabin

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

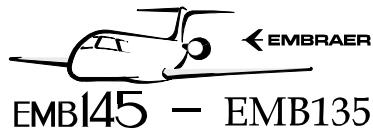
<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	Passenger cabin

I. Preparation
SUBTASK 841-016-C

- (1) Not applicable.

J. Functional Check - Photoluminescent Test Sample
SUBTASK 720-010-C
EFFECTIVITY: FOR AIRCRAFT WITH PHOTOLUMINESCENT FLOOR-PROXIMITY STRIP LIGHTS

- (1) Replace a photoluminescent segment with other in conditions for flight and use the removed one as a test sample . Refer to AMM TASK 33-50-12-000-802-A/400 to remove the test sample and AMM TASK 33-50-12-400-802-A/400 to install other segment in the aircraft.



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- NOTE:**
- The test sample is a section of the system used to monitor product performance over time in the aircraft environment.
 - The segment to be used as a sample test must be in the forward cabin on the RH side.
 - Always use the same segment to monitor the product performance.
 - After the test segment comes from the manufacturer, put this segment back to the original location, unless it is specified differently by the manufacturer.

- (2) Submit the removed segment to STG Aerospace for evaluation at the following address unless specified differently by operator specific warranty. Identify the segment with aircraft information and shipping tags. Put the segment in a protective wrap. Send the article to:
- STG Aerospace
EcoTech Innovation Business Park
Turbine Way
Swaffham, Norfolk PE37 7XD
United Kingdom
Phone +44 (0) 1760 723232
www.stgaerospace.com

K. Follow-on

SUBTASK 842-016-C

- (1) Not applicable.