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Issue Date:October 04, 2018
Project No. G102890084
Quote No.:Qu-00754723

Contact: Alex Hazzard
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Report No. 102890084CRT-001

Smooth-On Inc

5600 Lower Macungie Road
Macungie
PA
18062

Standards

U.S. Department of Transportation, Federal Aviation Administration, Advisory Circular, Specification for Obstruction Lighting Equipment, AC No. 150/5345-43H dated 9/28/2016.

Test Purpose	Performance Testing on Plastic Material
Test Dates	January 20, 2017 to May 17, 2018

Jeffrey Davis
Engineering Supervisor
Lighting

Christopher W Metcalf
Engineering Supervisor
Lighting

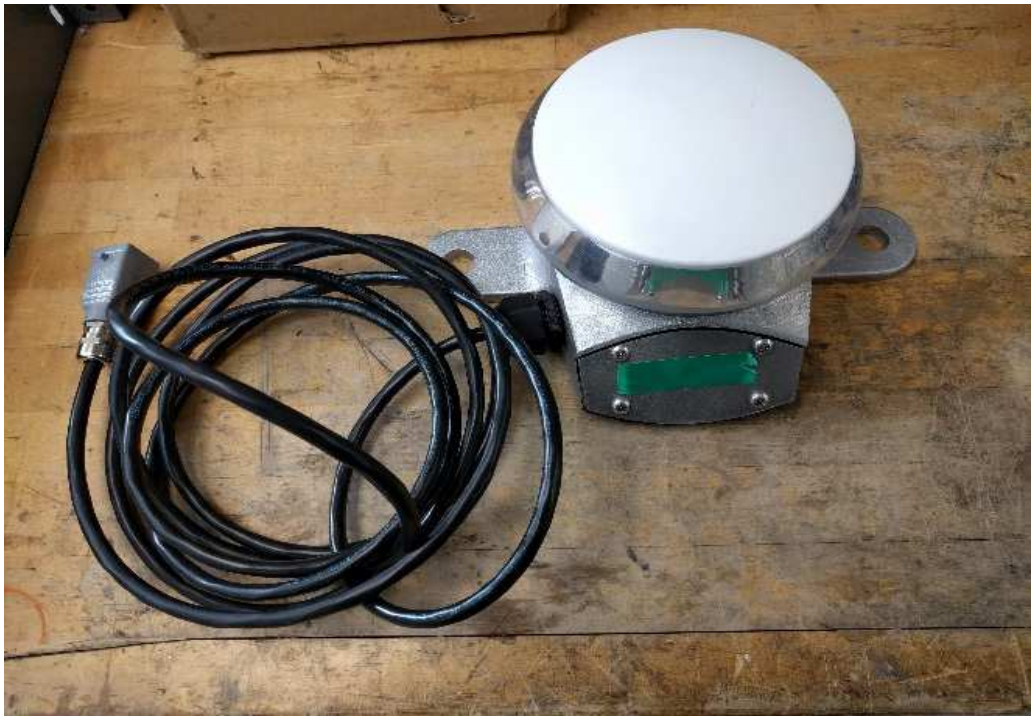
Test Plan and Datasheets			
Client	Smooth-On Inc	Engineer	Jeffrey Davis
Report #	102890084CRT-001A	Reviewer	Christopher W Metcalf
Product	L-864	Model(s)	NA
Standard	AC No. 150/5345-43H dated 9/28/2016		

Spec	Test name	Clause	Pass Fail NA
43H	Sunshine Test	4.2.8	Pass

Sample Information				
Date Rec.	**Intertek ID**	**Description**	**Condition**	**Model No.**
10/4/2017	CRT1710041126-001	Lens Material for L-864	Production	NA

Further Sample Description	
Type:	Lens Material for L-864
Options:	NA
Lens:	Smooth-On Crystal Clear Series Plastics (Clear Urethane Casting Resin)
Diameter:	Approx. 6.5"

Picture(s)



Sunshine Test

A sunshine test must be conducted per MIL-STD-810G, Method 505.5, paragraph 4.4.3, Procedure II, Steady State, for all obstruction lighting equipment with nonmetallic exterior parts or plastic/thermoplastic light covers

The equipment must be subjected to a minimum of 56 cycles.

Perform an operational test of the equipment after 56 cycles.

Any evidence of deterioration of plastic parts: chalking, bleaching, cracking, hazing, or color changes (yellowing) to the thermoplastic lenses of the test unit must be causes for rejection.

For plastic/thermoplastic optical lenses or covers, the photometric performance must be measured after this test.

Results

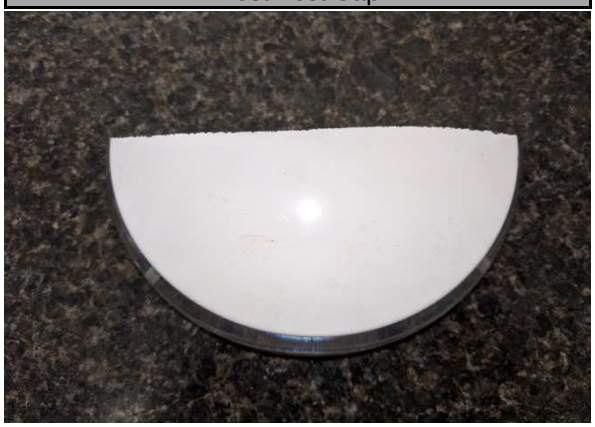
Test Set Up	
Duration	56, 24 hour cycles (1344 hrs.)
Light Segment (per cycle)	20 hrs
Dark segment (per cycle)	4 hrs.
Chamber setting	0.75 w/m2 @ 340nm.
Black Panel temperature	na
Chamber temperature	49 degrees C
Relative Humidity	na
Filter Outer	Cira on type S Boro
Filter Inner	Quartz
Filter combination recommended by Atlas for irradiance intensity of 1120 W/m2, Table 505.5-I MIL-STD 810G	

Test Parameters	
Xenon Lamp S/N	K19268
Hour Meter "Start"	57257.5
Hour Meter "Stop"	58601.5

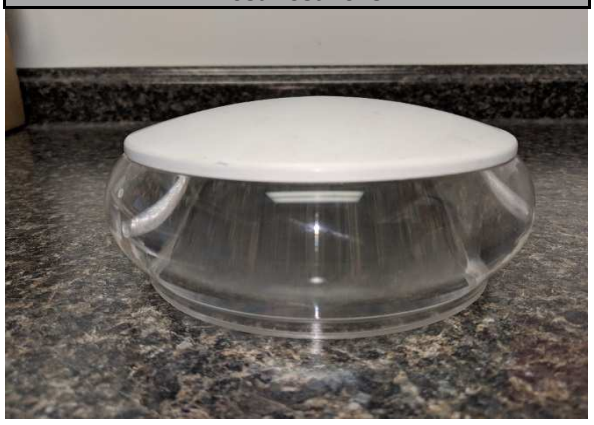
Post Test Inspection	
Item	Yes/No
Deterioration	No
Alteration	No
Noticable Change in Light Output	No
Change in Chomaticity	No

Post Test Pictures

Post Test Cap



Post Test Lens



Complies: ☑ YES ☐ NO

Tested By:	Mike Guy	Signature or initials:		Comp. Date	4/26/18
Reviewed By:	cwm	Signature or initials:			
Test Equipment Used:	45	Sample:	CRT1710041126-001		
Amb (ºC):	na RH% na	Solar Radiation Testing			

Sample	Type	Color	Input	x	y	z
CRT1710041126-001	L-864	Red	120 V	0.703	0.297	0.000

Boundary	Line Equation	Calc.
Purple Boundary	y ≥ 0.980 - x	0.277
Yellow Boundary	y ≤ 0.335	0.297

Sample	Type	Color	Input	x	y	z
Control	L-864	Red	120 V	0.703	0.297	0.000

Boundary	Line Equation	Calc.
Purple Boundary	y ≥ 0.980 - x	0.277
Yellow Boundary	y ≤ 0.335	0.297

Tested By:	Craig Small		Signature or initials:	Comp. Date	5/25/18
Reviewed By:	cwm		Signature or initials:		
Test Equipment Used:	51,52,53,54,55,56		Sample:	above	
Amb (ºC):	25.6	RH% 36	Post Test Color Performance		

Photometric Comparison	Voltage	Position	Measured	Factor
CRT1710041126-001	120.1	0,0	12800	NA
Control	120.1	0,0	14500	NA

Tested By:	Matthew Benninger		Signature or initials:	Comp. Date	5/21/18
Reviewed By:	cwm		Signature or initials:		
Test Equipment Used:	48,49,50		Sample:	CRT1710041126-001	
Amb (ºC):	25	RH% 49	Post Test Photometric Performance		

Equipment list

#	Intertek ID No.	Description	Manufacturer	Calibration Due
45	B035	Weather-o-meter	Atlas	13-Aug-2018
48	E235	Power Analyzer	Xitron	18-Apr-2018
49	M135	Multimeter	Fluke	12-Apr-2019
50	L061	IL1700	International Light	13-May-2018

Note: For measurement uncertainty, refer to the calibration certificates for all the test equipment located in the equipment files