ESG®
ECCO SAFETY GROUP

Engineering Test Summary
Warning Light Conformance - SAE J845
LIGHT MODELS: VTG48RB Lightbar

1. Rationale/Background:
This document summarizes conformance testing per SAE J845 (Jun 2013) on the above stated products as conducted by ESG's Test Laboratory.

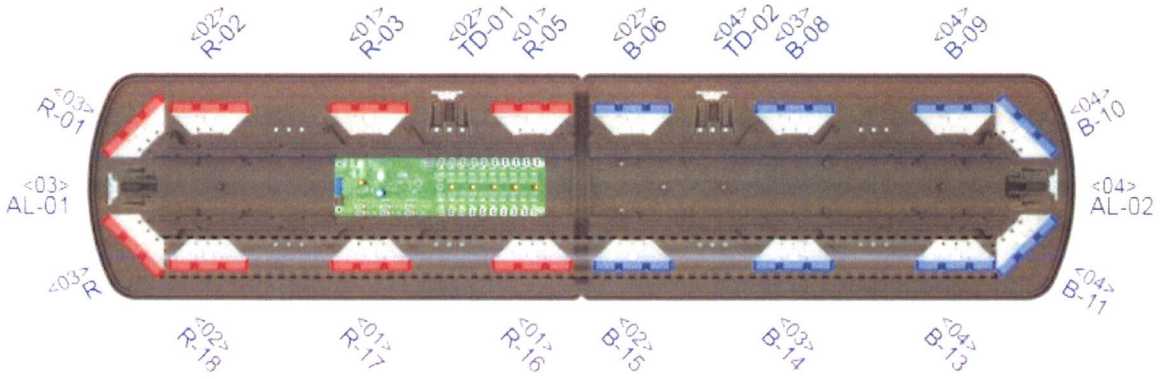
2. References:
SAE J845 (Jun 2013) - Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles
SAE J575 (Aug 2015) - Test Methods and Equipment for Lighting Devices for Use on Vehicles Less than 2032 mm in Overall Width
SAE J576 (Aug 2017) – Plastic Material or Materials for Use in Optical Parts Such as Lenses and Reflex Reflectors of Motor Vehicle Lighting Devices
SAE J578 (Mar 2016) - Color Specification
SAE J2139 (Dec 2014) – Tests for Signal and Marking Devices Used on Vehicles 2032 mm or More in Overall Width

3. Results:
This is to certify test units were subjected to requirements outlined in SAE J845. The test results show the test units **PASSED** the necessary requirements outlined in SAE J845.

4. Summary of Results:
The following summary references the test clauses outlined in SAE J845.

SAE J845 Test Requirement		Status
5.1	Vibration Test	Pass
5.2	Moisture Test	Pass
5.3	Dust Test	Pass
5.4	Corrosion Test	Pass
5.5	Warpage Test for Plastic Component	Pass
5.6	Photometry (See Photometric Summary Table)	Pass
5.7	Flash Rate and Flash Patterns (See Photometric Summary Table)	Pass
5.8	Color Test (See Photometric Summary Table)	Pass
5.9	High Temperature Flash Rate Test	Pass
5.10	Low Temperature Flash Rate Test	Pass
5.11	Durability Flash Rate Test	Pass
5.12	Materials Test	Pass

Test Engineering Supervisor
Date: 3 July 2018



Photometric Summary Table (Day Mode)				
Pattern	Description	FPM	Blue	Red
1	Double	75	CLASS 1A	CLASS 1A
2	Quad	65	CLASS 1A	CLASS 1A
3	Double	65	CLASS 1A	CLASS 1A
4	Quint	75	CLASS 1A	CLASS 1A
5	Pulse8	85	CLASS 1A	CLASS 1A
6	Single	120	CLASS 1A	CLASS 1A
7	Double	120	CLASS 1A	CLASS 1A
8	Triple	120	CLASS 1A	CLASS 1A
9	Quad	120	CLASS 1A	CLASS 1A
10	Burst	120	CLASS 1A	CLASS 1A
11	Single Alt	90	CLASS 1S	CLASS 1S
12	Double Alt	125	CLASS 1S	CLASS 1S
13	Triple Alt	90	CLASS 1S	CLASS 1S
14	Quad Alt	125	CLASS 1S	CLASS 1S
15	Burst Alt	90	CLASS 1S	CLASS 1S
16	Quad Alt	75	CLASS 1S	CLASS 1S
17	Quad Cross Alt	75	CLASS 1S	CLASS 1S
18	Double Alt	75	CLASS 1S	CLASS 1S
19	Double Cross Alt	75	CLASS 1S	CLASS 1S
20	Quint Hold Alt	75	CLASS 1S	CLASS 1S
21	Quint Hold Cross Alt	75	CLASS 1S	CLASS 1S
22	Quad Alt Front	75	CLASS 1S	CLASS 1S
23	Quad Alt Rear	75	CLASS 1S	CLASS 1S
24	Double Alt Front	75	CLASS 1S	CLASS 1S

25	Double Alt Rear	75	CLASS 1S	CLASS 1S
26	Quint Alt Front	75	CLASS 1S	CLASS 1S
27	Quint Alt Rear	75	CLASS 1S	CLASS 1S
28	Quad Alt Middle	75	CLASS 1S	CLASS 1S

Safety Director Photometric Summary Table (Day Mode)				
Pattern	Description	FPM	Blue	Red
1	Center Out Chase	75	N/A	N/A
2	Center Out Fill	65	N/A	N/A
3	Wig Wag	65	CLASS 1S	CLASS 1S
4	Alt Quad	75	CLASS 1S	CLASS 1S
5	Alt Quad w/center	85	CLASS 1S	CLASS 1S
6	Alt Single	120	CLASS 1S	CLASS 1S
7	Alt Single w/ center	120	CLASS 1S	CLASS 1S
8	Left Chase	120	N/A	N/A
9	Left Fill	120	N/A	N/A
10	Right Chase	120	N/A	N/A
11	Right Fill	90	N/A	N/A