

A-Lamp Omnidirectional Beam Pattern Analysis – Report Draft

Prepared for: PG&E and CLASP

Prepared by:
California Lighting Technology Center

The data in this presentation is considered confidential and is not intended for publication or distribution beyond the company or institution to which it has been provided by the CLTC. It is for development and verification only and not intended as a substitute for data generated by an Independent Testing Lab. Distribution or publication of this data is forbidden without the express written consent of the CLTC. CLTC makes no claim as to the accuracy of this data beyond the specific test conditions and parameters under which the data was obtained.

Notes – Goniophotometer Type C

- Power measurements taken on a Xitron 2802 power analyzer
- Photometric measurements made with a T-10 Konica Minolta Illuminance meter
- Measurements presented in accordance with LM-63-2002
- Stray light correction applied

DO NOT DISTRIBUTE

LED A-Lamp Selection Criteria

- Lumen Package: 600 Lumens or Greater
- Minimum CRI: 80
- CCT: 2700 – 3000
- Lamp Shape: A19 – A21
- Lamp Base: E26

DO NOT DISTRIBUTE

LED A-Lamp Selection Criteria

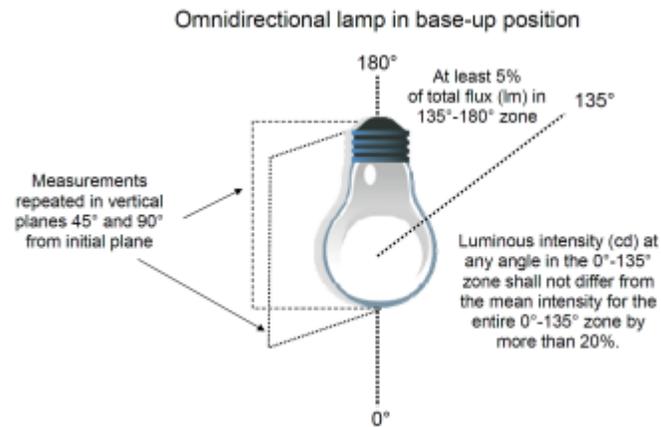
- This test report present the results of LED A-Lamp Replacement lamp testing performed in a gonio-photometer and a 2-meter integrating sphere.
- Gonio-Photometer Testing
 - One sample each of the twenty products selected for this testing program were tested in the gonio-photometer.
 - Gonio-photometer tests were done with the lamp in the base-up position.
 - Gonio-photometer tests were done with the lamp in open air conditions.

Omnidirectional Beam Pattern - Summary

Serial #	Pass	Fail
Omni-01	X	
Omni-02		
Omni-03	X	X
Omni-04	X	
Omni-05	X	
Omni-06	X	
Omni-07	X	
Omni-08		X
Omni-09		X
Omni-10		X
Omni-11		X
Omni-12		X
Omni-13		X
Omni-14	X	
Omni-15		X
Omni-16		X
Omni-17		X
Omni-18		X
Omni-19		X
Omni-20	X	
Total	8	12

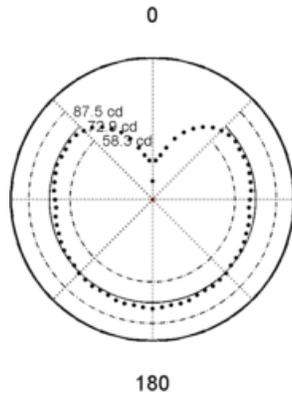
The data in this presentation is considered confidential and is not intended for publication or distribution beyond the company or institution to which it has been provided by the CLTC. It is for development and verification only and not intended as a substitute for data generated by an Independent Testing Lab. Distribution or publication of this data is forbidden without the express written consent of the CLTC. CLTC makes no claim as to the accuracy of this data beyond the specific test conditions and parameters under which the data was obtained.

LED A-Lamp Omnidirectional Beam Pattern Criteria

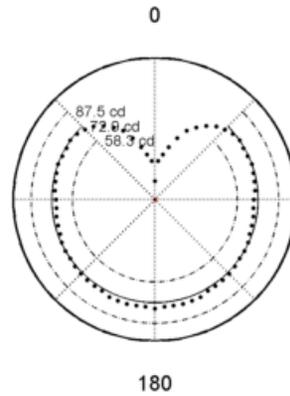


OMNI-01-01

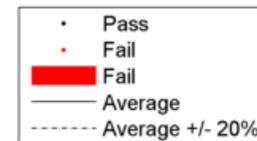
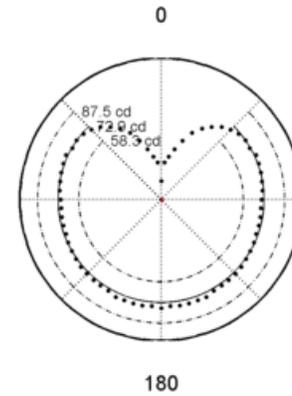
Horizontal Plane: 0
Intensity Test: Pass
Luminous Flux Test: Pass



Horizontal Plane: 45
Intensity Test: Pass
Luminous Flux Test: Pass

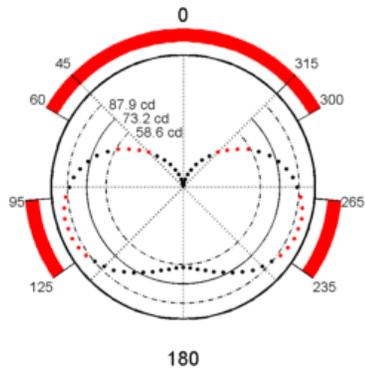


Horizontal Plane: 90
Intensity Test: Pass
Luminous Flux Test: Pass

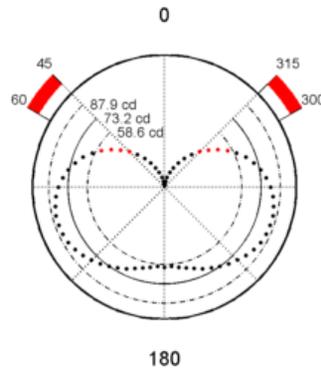


OMNI-02-01

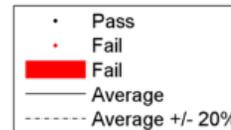
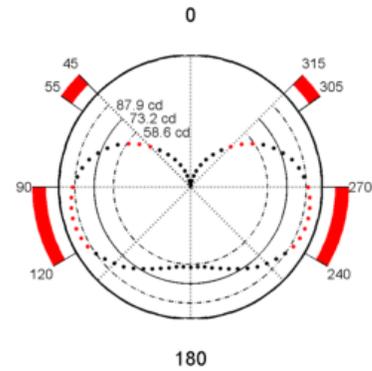
Horizontal Plane: 0
 Intensity Test: Fail
 Luminous Flux Test: Fail



Horizontal Plane: 45
 Intensity Test: Fail
 Luminous Flux Test: Pass

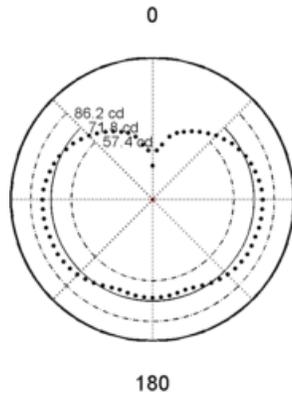


Horizontal Plane: 90
 Intensity Test: Fail
 Luminous Flux Test: Pass

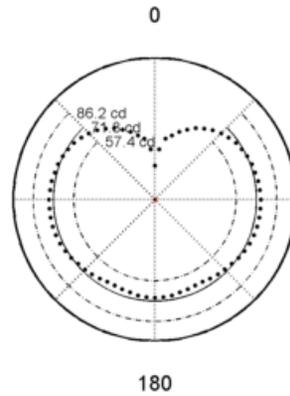


OMNI-03-01

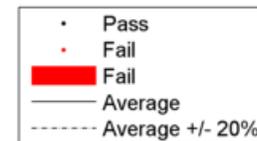
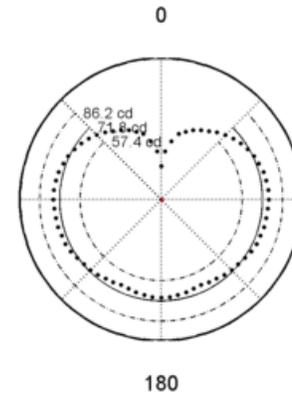
Horizontal Plane: 0
Intensity Test: Pass
Luminous Flux Test: Pass



Horizontal Plane: 45
Intensity Test: Pass
Luminous Flux Test: Pass

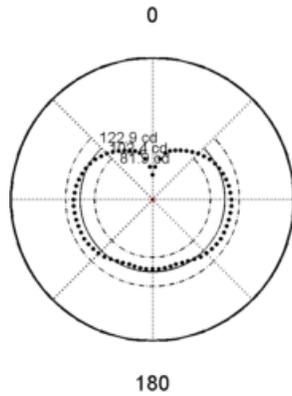


Horizontal Plane: 90
Intensity Test: Pass
Luminous Flux Test: Pass

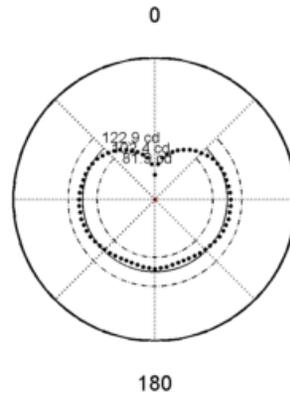


OMNI-04-01

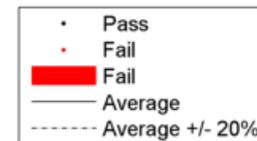
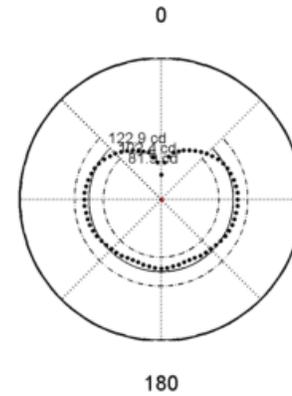
Intensity Test: Pass
Luminous Flux Test: Pass
Horizontal Plane: 0



Intensity Test: Pass
Luminous Flux Test: Pass
Horizontal Plane: 45

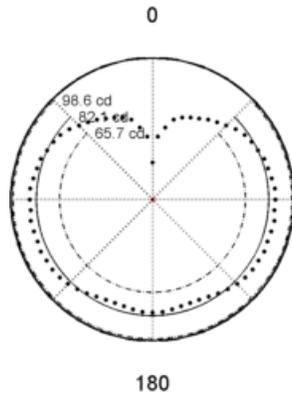


Intensity Test: Pass
Luminous Flux Test: Pass
Horizontal Plane: 90

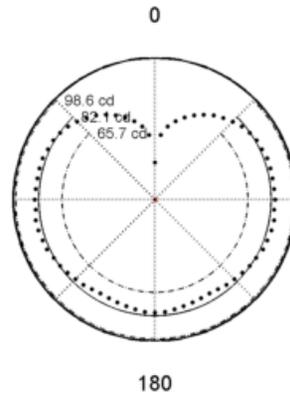


OMNI-05-01

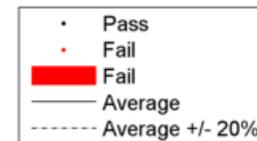
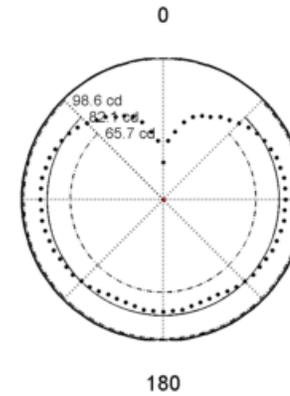
Horizontal Plane: 0
Intensity Test: Pass
Luminous Flux Test: Pass



Horizontal Plane: 45
Intensity Test: Pass
Luminous Flux Test: Pass

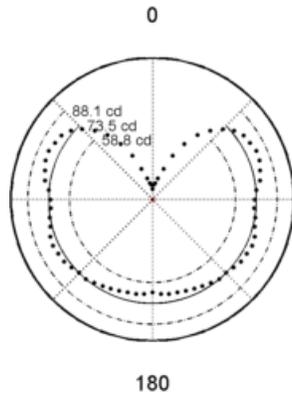


Horizontal Plane: 90
Intensity Test: Pass
Luminous Flux Test: Pass

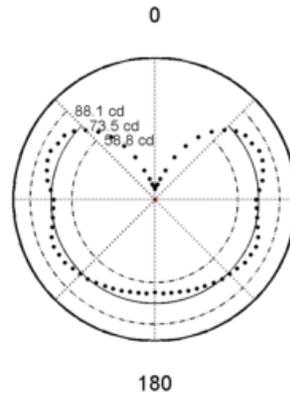


OMNI-06-01

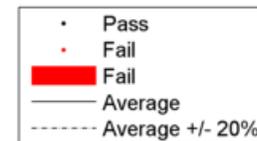
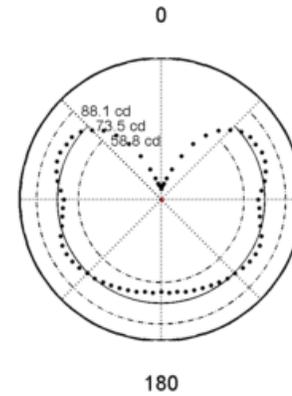
Horizontal Plane: 0
Intensity Test: Pass
Luminous Flux Test: Pass



Horizontal Plane: 45
Intensity Test: Pass
Luminous Flux Test: Pass

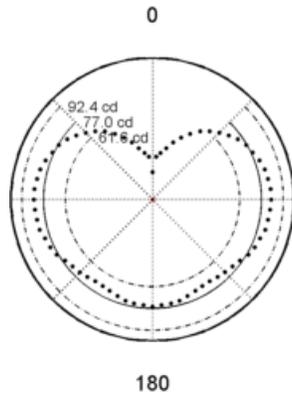


Horizontal Plane: 90
Intensity Test: Pass
Luminous Flux Test: Pass

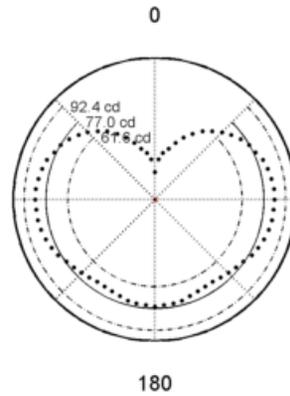


OMNI-07-01

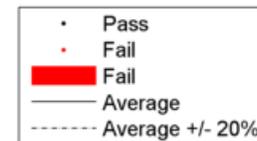
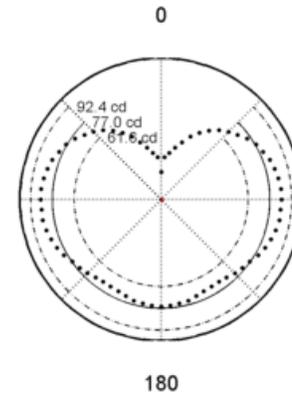
Horizontal Plane: 0
Intensity Test: Pass
Luminous Flux Test: Pass



Horizontal Plane: 45
Intensity Test: Pass
Luminous Flux Test: Pass

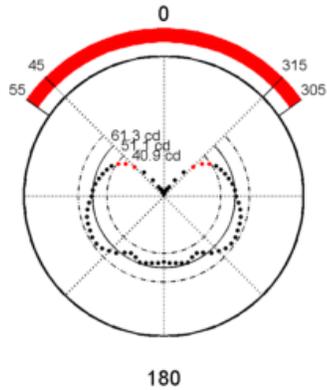


Horizontal Plane: 90
Intensity Test: Pass
Luminous Flux Test: Pass

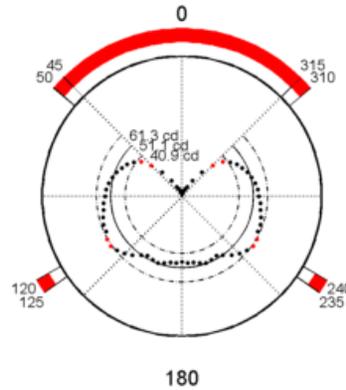


OMNI-08-01

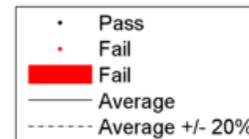
Horizontal Plane: 0
Intensity Test: Fail
Luminous Flux Test: Fail



Horizontal Plane: 45
Intensity Test: Fail
Luminous Flux Test: Fail



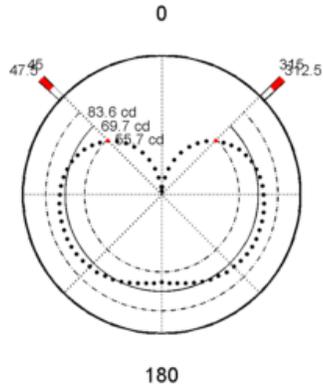
Horizontal Plane: 90
Intensity Test: Fail
Luminous Flux Test: Fail



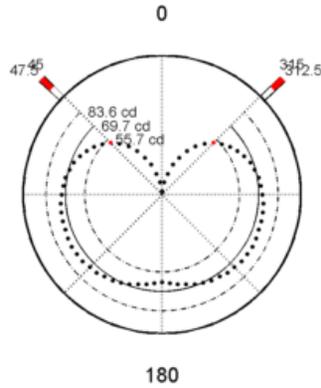
The data in this presentation is considered confidential and is not intended for publication or distribution beyond the company or institution to which it has been provided by the CLTC. It is for development and verification only and not intended as a substitute for data generated by an Independent Testing Lab. Distribution or publication of this data is forbidden without the express written consent of the CLTC. CLTC makes no claim as to the accuracy of this data beyond the specific test conditions and parameters under which the data was obtained.

OMNI-09-01

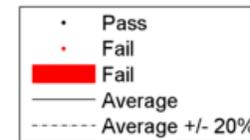
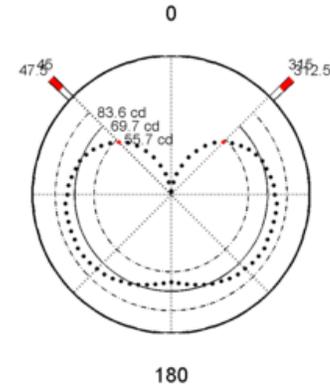
Horizontal Plane: 0
Intensity Test: Fail
Luminous Flux Test: Pass



Horizontal Plane: 45
Intensity Test: Fail
Luminous Flux Test: Pass



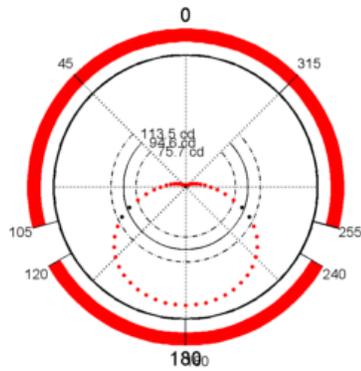
Horizontal Plane: 90
Intensity Test: Fail
Luminous Flux Test: Pass



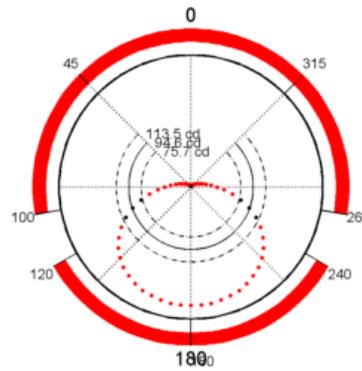
The data in this presentation is considered confidential and is not intended for publication or distribution beyond the company or institution to which it has been provided by the CLTC. It is for development and verification only and not intended as a substitute for data generated by an Independent Testing Lab. Distribution or publication of this data is forbidden without the express written consent of the CLTC. CLTC makes no claim as to the accuracy of this data beyond the specific test conditions and parameters under which the data was obtained.

OMNI-10-01

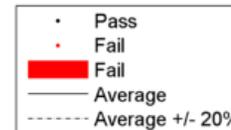
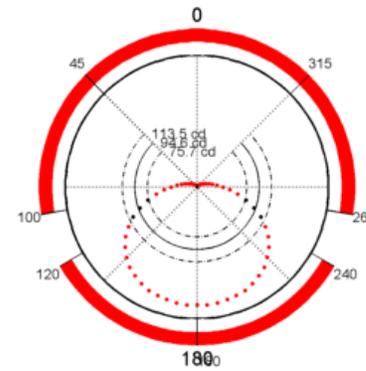
Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 0



Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 45

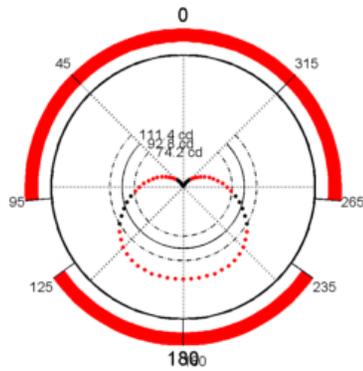


Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 90

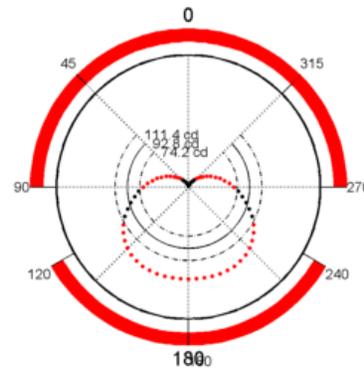


OMNI-11-01

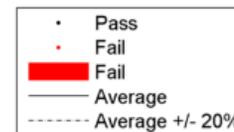
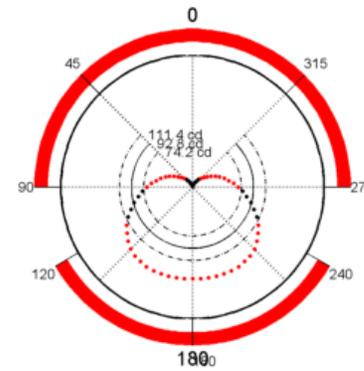
Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 0



Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 45

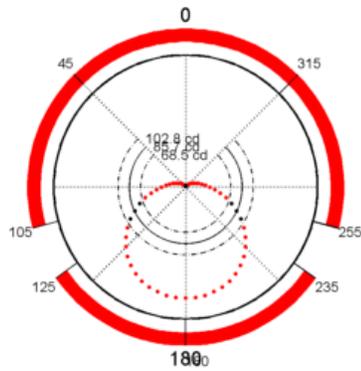


Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 90

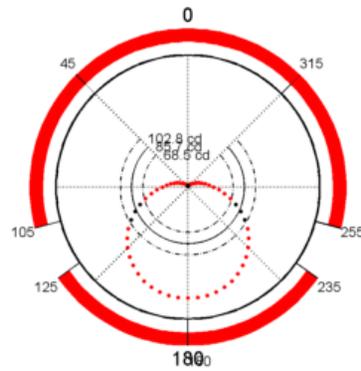


OMNI-12-01

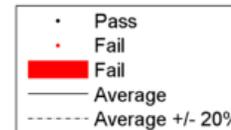
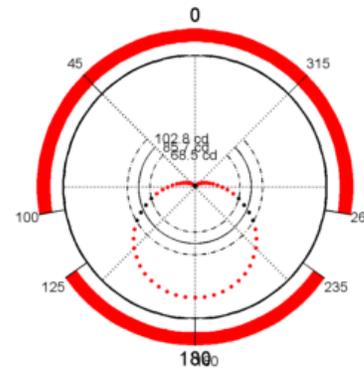
Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 0



Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 45

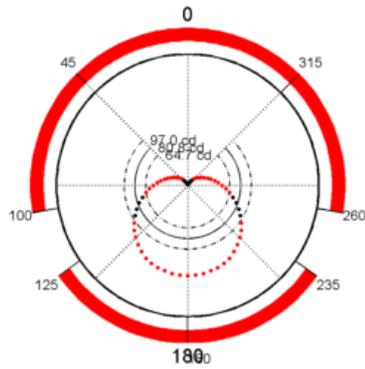


Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 90

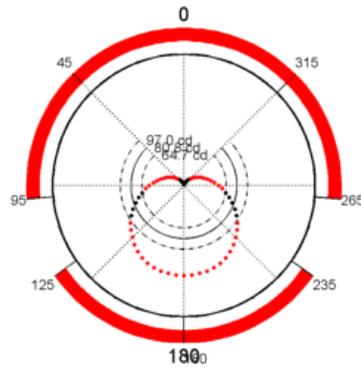


OMNI-13-01

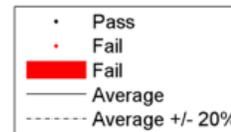
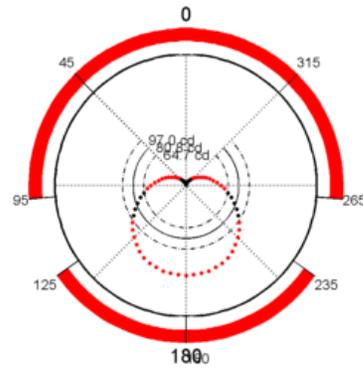
Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 0



Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 45

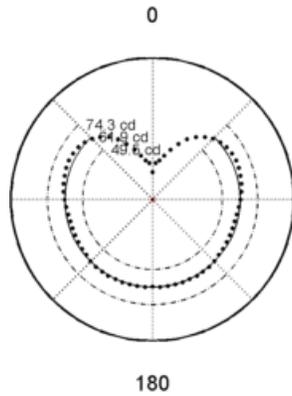


Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 90

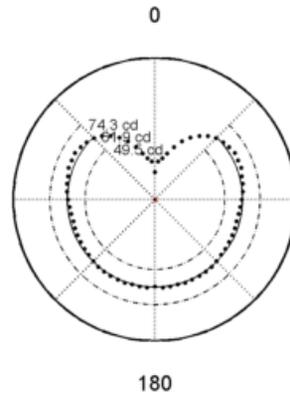


OMNI-14-01

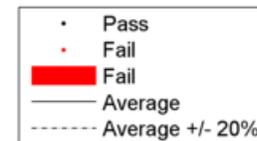
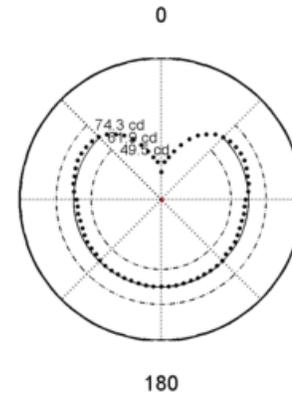
Horizontal Plane: 0
 Intensity Test: Pass
 Luminous Flux Test: Pass



Horizontal Plane: 45
 Intensity Test: Pass
 Luminous Flux Test: Pass

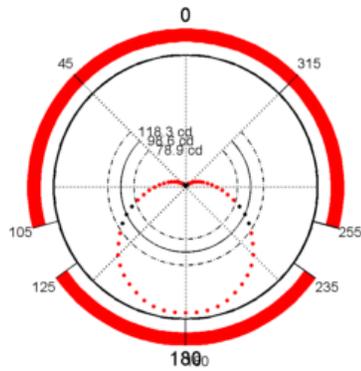


Horizontal Plane: 90
 Intensity Test: Pass
 Luminous Flux Test: Pass

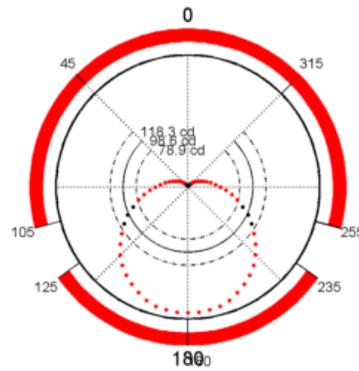


OMNI-15-01

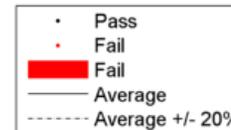
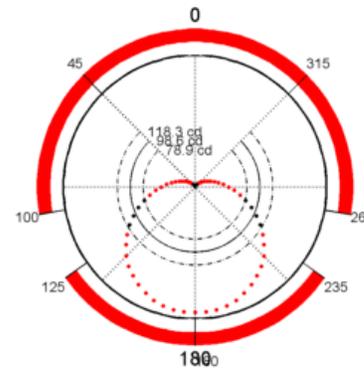
Intensity Test: Fail
 Luminous Flux Test: Fail
 Horizontal Plane: 0



Intensity Test: Fail
 Luminous Flux Test: Fail
 Horizontal Plane: 45

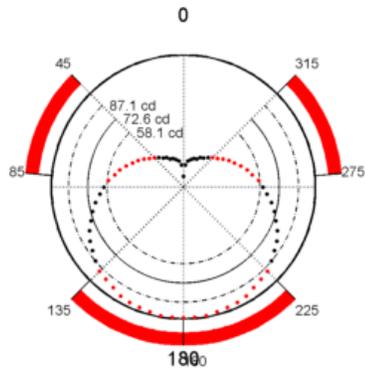


Intensity Test: Fail
 Luminous Flux Test: Fail
 Horizontal Plane: 90

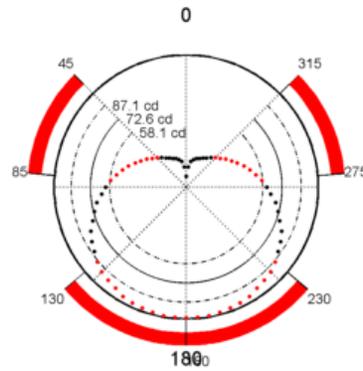


OMNI-16-01

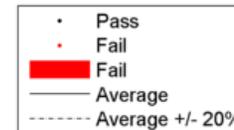
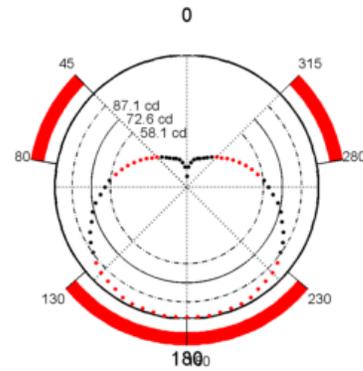
Horizontal Plane: 0
Intensity Test: Fail
Luminous Flux Test: Pass



Horizontal Plane: 45
Intensity Test: Fail
Luminous Flux Test: Pass



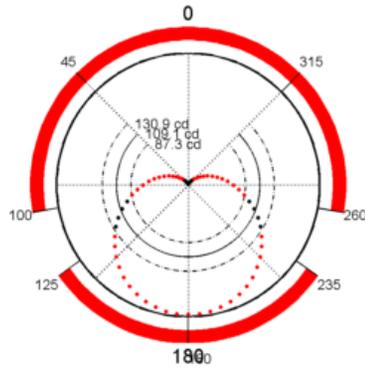
Horizontal Plane: 90
Intensity Test: Fail
Luminous Flux Test: Pass



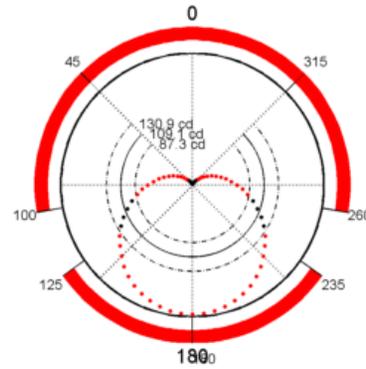
The data in this presentation is considered confidential and is not intended for publication or distribution beyond the company or institution to which it has been provided by the CLTC. It is for development and verification only and not intended as a substitute for data generated by an Independent Testing Lab. Distribution or publication of this data is forbidden without the express written consent of the CLTC. CLTC makes no claim as to the accuracy of this data beyond the specific test conditions and parameters under which the data was obtained.

OMNI-17-01

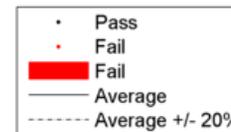
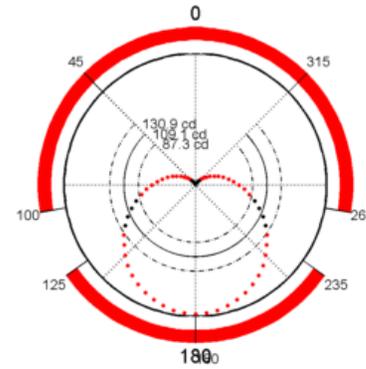
Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 0



Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 45

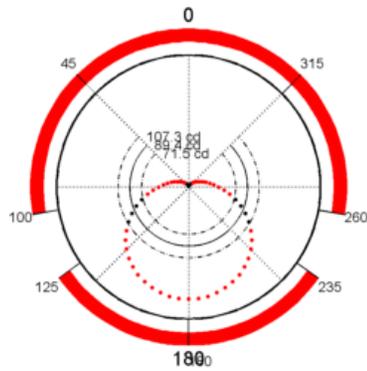


Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 90

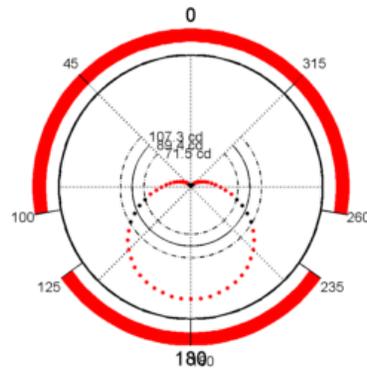


OMNI-18-01

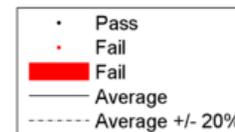
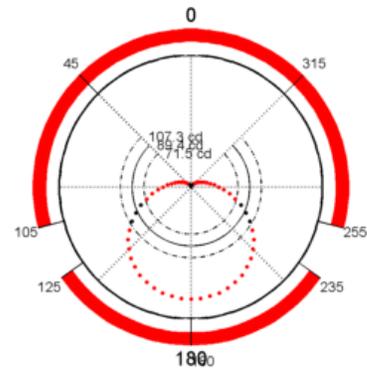
Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 0



Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 45

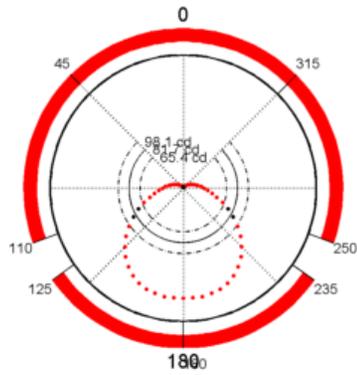


Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 90

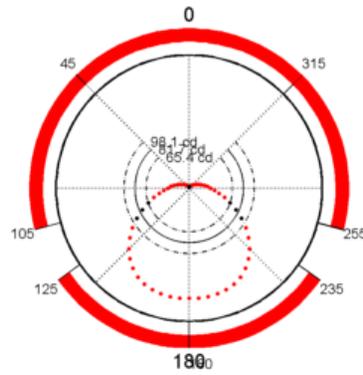


OMNI-19-01

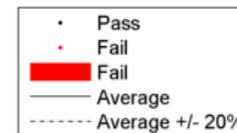
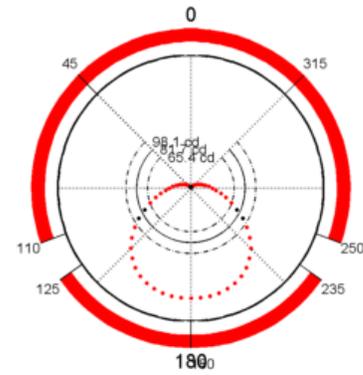
Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 0



Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 45

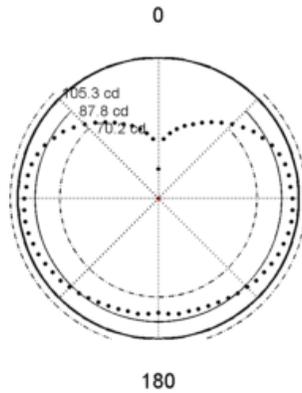


Intensity Test: Fail
Luminous Flux Test: Fail
Horizontal Plane: 90

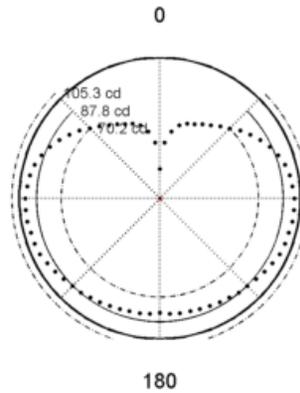


OMNI-20-01

Horizontal Plane: 0
 Intensity Test: Pass
 Luminous Flux Test: Pass



Horizontal Plane: 45
 Intensity Test: Pass
 Luminous Flux Test: Pass



Horizontal Plane: 90
 Intensity Test: Pass
 Luminous Flux Test: Pass

