



GONIOPHOTOMETER TEST REPORT

IES LM79-08 Section 9.3

TÜV SÜD America

Photometric Testing and Evaluation in Accordance with LM79-2008

Report Prepared for:

Michael Prainito
Marketing Manager

Global Tech LED LLC
8901 Quality Road
Bonita Springs, FL 34135
United States

Telephone: (877) 748-5533

Sample Tested: GTSOL5498-HO-GR-T2
Sample Description: LED Luminaire
Manufacturer: Global Tech LED LLC

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Report Prepared by:

Laymond Drummond
TÜV SÜD Project Handler

Report Reviewed by:

Bryan Cubitt
TÜV SÜD Program Manager



GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

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June 23, 2015

Summary of Key Test Results

Model# **GTSOL5498-HO-GR-T2**

Manufacturer Global Tech LED LLC

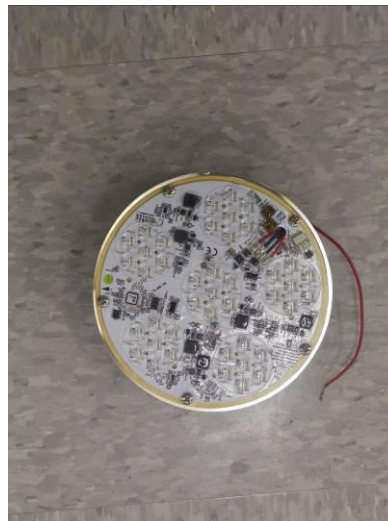
TÜV Sample# 1923-8

Date of Test June 11, 2015

Notes: Tested in intended orientation

(Horizontal, FBU – Fixture Base Up)

TYPE 2 OPTICS



Parameter	Measured Result
Luminous Flux	12,444 Lumens
Input Power	133.08 Watts
Efficacy	93.51 Lumens/Watt
Beam Angle	67.9° (V) / 25.8° (H)
Stabilization Time	34 minutes

The above results are recorded / derived from measurements in accordance with LM79-08.



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Report# 72106215-09-GONI

June 23, 2015

TABLE OF CONTENTS

Test Results4

Zonal Lumen Summary4

Illuminance Plots.....5

Candela Plots5

Photometric Testing Information6

Equipment List:6





GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-09-GONI

June 23, 2015

Test Results –

The following results were obtained after stabilization of the sample in accordance with the requirements set forth in section 5.0 of IES LM79-2008. Stability is achieved when the variation of 3 readings of light output and electrical power over a period of 30 minutes, taken 15 minutes apart, is less than 0.5%.

Photometric Results	Global Tech LED LLC: GTSOL5498-HO-GR-T2	
	Goniophotometer (120V)	
Total Luminous Flux (Lumens)	12,444	
Luminous Efficacy (Lumens/Watt)	93.51	

Electrical Results	Global Tech LED LLC: GTSOL5498-HO-GR-T2	
	Goniophotometer (120V)	
Input Power (Watts)	133.08	
Input Voltage (Volts AC)	120.02	
Input Current (Amps)	1.11	
Power Factor	.996	
Input Frequency (Hertz)	60	
A-THD (Current %)	4.49	

Additional Parameters	Global Tech LED LLC: GTSOL5498-HO-GR-T2	
	Goniophotometer (120V)	
Stabilization Time (Light and Power)	34 minutes	
Test Geometry Configuration	Type C	
Ambient Temperature	24.7°C	

Zonal Lumen Summary

Zone	Lumens	% Lamp / Luminaire
0-30	2,135.30	17.20%
0-40	3,862.60	31%
0-60	8,322.30	66.90%
60-90	4,027.30	32.40%
70-100	1,848.40	14.90%
90-120	91.2	0.70%
0-90	12,349.50	99.20%
90-180	94.9	0.80%
0-180	12,444.40	100%

TÜV SÜD America, Inc.
5945 Cabot Parkway, Suite 100,
Alpharetta GA 30005

Telephone: 678-341-5900 www.tuvamerica.com

Page 4

NRG_F_10.04

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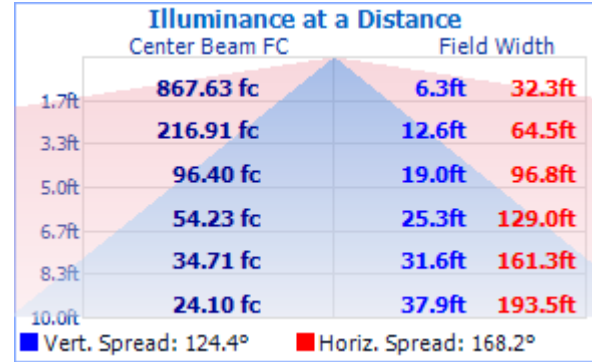
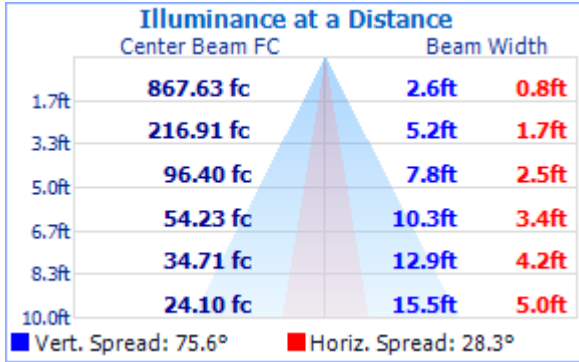
GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-09-GONI

June 23, 2015

Test Results – Illuminance Plots

The following images depict the illuminance characteristics of the luminaire.

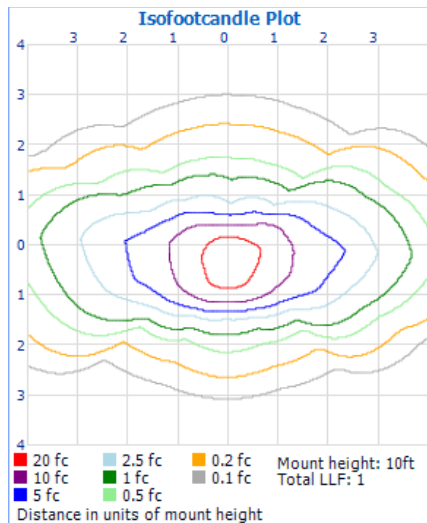


Beam Angle = 75.6° (V) / 28.3° (H)

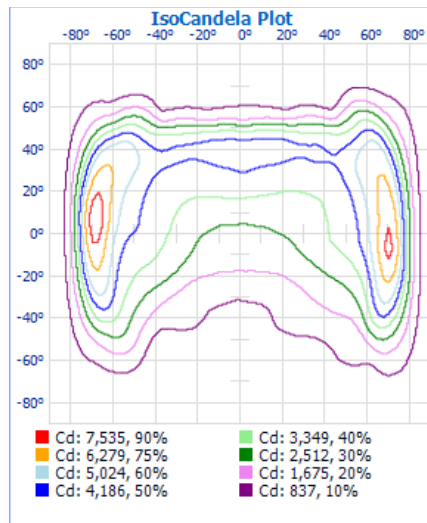
Field Angle = 124.4° (V) / 168.2° (H)

Test Results – Candela Plots

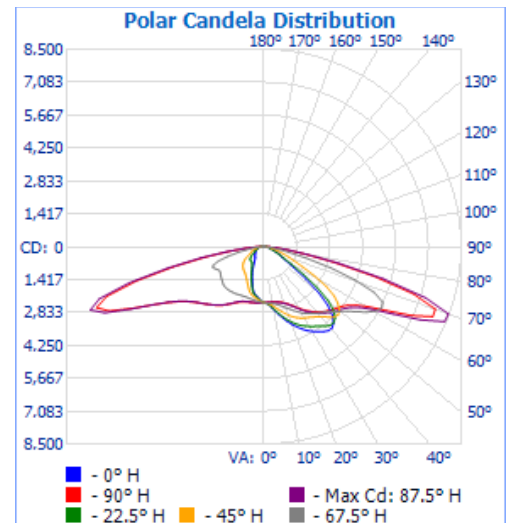
The following images depict the luminous intensity distribution characteristics of the luminaire:



Isofootcandle Plot



Isocandela Plot



Polar Candela

Maximum Candela = 8,458.3 at Horizontal: 87.5°, Vertical: 70.0°

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5945 Cabot Parkway, Suite 100,
Alpharetta GA 30005

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Page 5

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GONIOPHOTOMETRIC TEST REPORT IES LM79-2008

Report# 72106215-09-GONI

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TÜV SÜD Photometric Testing Information

Testing is performed in accordance with the procedures outlined in IESNA LM79-2008. The sample is evaluated for photometric and electrical characteristics using a goniophotometer, located in an accredited, temperature and humidity-controlled, draft free photometric laboratory.

Sample Stabilization

The sample (UUT) is placed on a goniophotometer and powered by a regulated and conditioned alternating or direct current supply. The stabilization times shown on the results pages of this report denote the time of the 3rd measurement (of the 3 consecutive readings) since this is the minimum time that the sample is assumed to have taken to reach stabilization in accordance with section 5.0 of LM79-2008.

Goniophotometer

The Goniophotometer is a Mirror based Type C optical measurement system in accordance with section 9.3.1 of IESNA LM79-2008.

Goniophotometer Calibration

The Goniophotometer is calibrated using a frosted tungsten filament FDS/DZE lamp with the following specifications:

- Manufacturer: General Electric
- Part Number: CSB-110
- Lamp Number: 112-A
- Voltage: 16.52 Volts DC
- Wattage: 150.0 Watts
- Calibration Current: 4.816 Amperes
- Luminous Intensity: 151.5 Candelas
- Calibration Date: 02-13-2011 (NIST traceable)

TÜV SÜD Test Equipment List:

TÜV SÜD Mirror Goniophotometer System – contains the following:			
Goniophotometer	M.E. GONC02	GON002	Weekly
Spectroradiometer	Gigahertz Optik P9801	GIG002	Weekly
Power Analyzer	Yokogawa WT210	ATLE0031	11/21/2015
Power Source	Chroma 61603	AC007	N/A

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TÜV SÜD America, Inc.
 5945 Cabot Parkway, Suite 100,
 Alpharetta GA 30005
 Telephone: 678-341-5900 www.tuvamerica.com

Page 6

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