

itl boulder
 THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



INDEPENDENT TESTING LABORATORIES, INC.
 4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL99999
 DATE: 99/99/9999
 PREPARED FOR: ABCXYZ Lighting, Inc.
 LUMINAIRE CAT NO: 9999-xxxx

ADDRESS: 9999 XYZ Avenue
 East West Park, CA 99999

Luminaire: Fabricated metal housing with white painted general interior finish, white painted flat metal end and side caps, 2 formed white painted metal outboard reflectors/driver covers, 3 white circuit boards each with 80 LEDs, translucent white holographic bottom lens. Open top.

LAMPS: Two hundred forty white light emitting diodes (LEDs), 160 tilted 37-degrees above the horizon, 80 vertical base-up position.

LED DRIVER: Osram OT30W/PRG1050C/UNV/DIM/L, driver has multiple leads, only line input and LED output leads connected for this test, client states driver programmed for 700ma output.

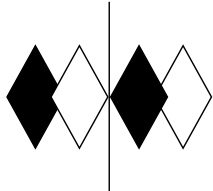
OBJECT OF TEST: Measure temperature of hottest single LED in the luminaire for correlation to the LED manufacturer's lumen depreciation curves. Also measure two additional LED temperatures and the hot spot on the LED driver. ABCXYZ Lighting, Inc. provided direction as to which LEDs to measure and where to place the thermocouple on each LED. ABCXYZ Lighting, Inc. also provided direction for thermocouple placement on the LED driver. Type K thermocouples were utilized for all thermal measurements.

INSTRUMENTATION:		<u>Calibration Due</u>
	Elgar CW1251 AC Power Source	NA
	Yokogawa WT210 Power Analyzer	05/31/15
	Omega HH802U Digital Thermometer	08/31/15

PROCEDURE: In Situ Temperature Measurement Test on suspended luminaire. The luminaire was suspended horizontally in free air per UL 1598 specifications and the Energy Star Manufacturer's Guide for Qualifying Solid State Lighting Luminaires. After mounting, the luminaire was energized at 120VAC 60Hz input to the LED driver and allowed to stabilize in a 25 +/-1 degree Celsius free air ambient. Once stabilization was verified the LED, driver, and ambient temperatures were recorded.

RESULTS: Refer to following pages

<p>Checked: <u> X. Abcdef </u> Approved: <u> Y. Ghijk </u></p>



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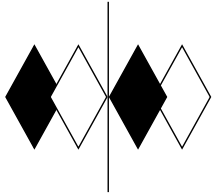
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RESULTS: Performance Data

Thermocouple Location	Temperature in Degrees C	Temperatures Corrected to Reflect a 25°C Ambient
T _A (ambient)	24.5	25.0
T _{LD1} (LED1)	43.3	43.8
T _{LD2} (LED2)	44.5	45.0
T _{LD3} (LED3)	40.7	41.2
T _{DR1} (driver1)	46.8	47.3

Luminaire Input Electrical

Input Voltage (Volts AC): 120.0
 Input Current (Amps AC): 0.462
 Input Power (Watts AC): 55.3
 Input Power Factor (%): 99.4



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NVLAP LAB CODE: 200925-0

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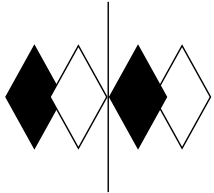
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RESULTS: Photographs

PICTURE OF FULLY
ASSEMBLED LUMINAIRE

PICTURE OF LUMINAIRE
WITH THERMOCOUPLED
LEDS INDICATED



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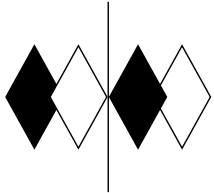
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RESULTS: Photographs (continued)

PICTURE OF TYPICAL LED
THERMOCOUPLE
PLACEMENT

PICTURE OF TYPICAL
DRIVER THERMOCOUPLE
PLACEMENT



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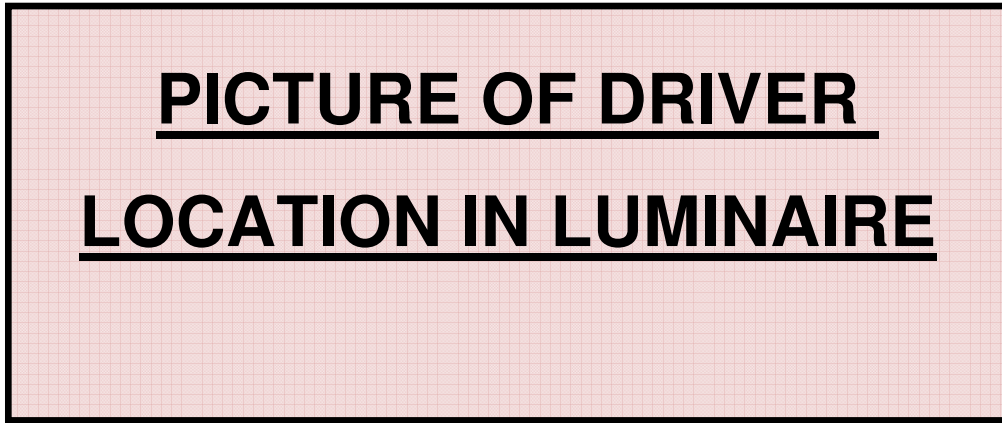
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RESULTS: Photographs (continued)



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