

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: ITL86249 Page 1 of 5
DATE: 01/25/16
PREPARED FOR: B-K Lighting, Inc.
LUMINAIRE CAT NO: MN-LED-e67-SP-12-C, SN-MN-LED-e67-SP-12, ST-MN-LED-e67-SP-12, SF-MN-LED-e67-SP-12, TF-MN-LED-e67-SP-12, RM-MN-LED-e67-SP-12, PM-MN-LED-e67-SP-12, WM-MN-LED-e67-SP-12, SM-MN-LED-e67-SP-12, CH-LED-e67-SP-12

ADDRESS: 40429 Brickyard Drive
Madera, CA 93636-9515

LUMINAIRE: Machined cylindrical metal housing, 1 black circuit board with 3 LEDs, one clear plastic lens with one conical optic per LED with semi-hemispherical recessed center toward LED, clear micro-prismatic flat glass lens in machined cylindrical black painted metal lens frame. Lens prisms out. Luminaire aimed at the horizon for this test.

LAMPS: Three white light emitting diodes (LEDs), aimed at the horizon.

LED DRIVER: B-K Lighting 524438/400188-L

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

INSTRUMENTATION:

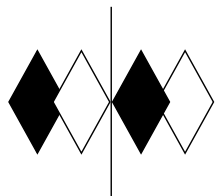
	<u>Calibration Due</u>
APT 6040 AC Power Source	NA
Acme Electric T-1-81052 Transformer	NA
Yokogawa WT210 Power Analyzer	11/30/16
Omega HH66R Digital Thermometer	09/02/16

PROCEDURE: In Situ Temperature Measurement Test on surface mounted luminaire. The luminaire was mounted horizontally to an in-situ wall apparatus 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 12VAC 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

Checked: N. White

Approved: C. Stout



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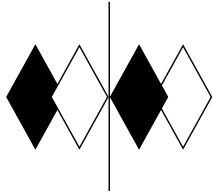
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RESULTS: Performance Data

Thermocouple Location		Temperature in Degrees C	Temperatures Corrected to Reflect a 25°C Ambient
T _A	(ambient)	25.9	25.0
T _{LD}	(LED)	71.3	70.4
T _{DR}	(driver)	52.5	51.6

Luminaire Input Electrical

Input Voltage (Volts AC): 12.0
Input Current (Amps AC): 0.606
Input Power (Watts AC): 6.58



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NVLAP
NVLAP LAB CODE: 200925-0

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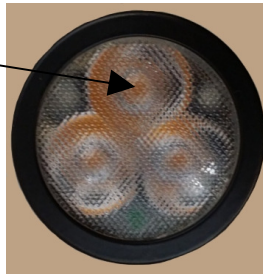
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RESULTS: Photographs

LED

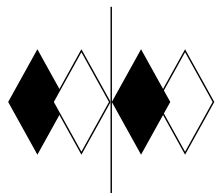


LUMINAIRE WITH LENS



LUMINAIRE WITHOUT LENS





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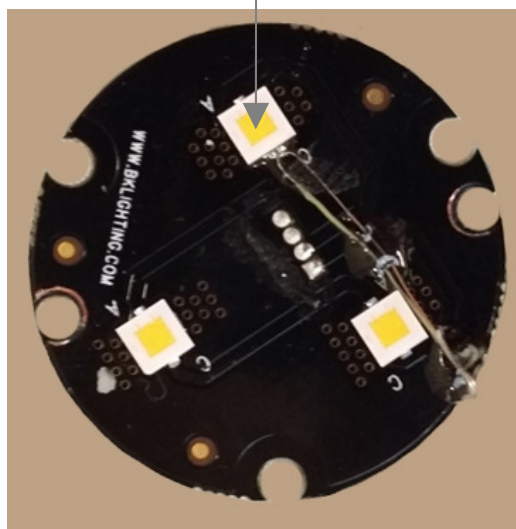
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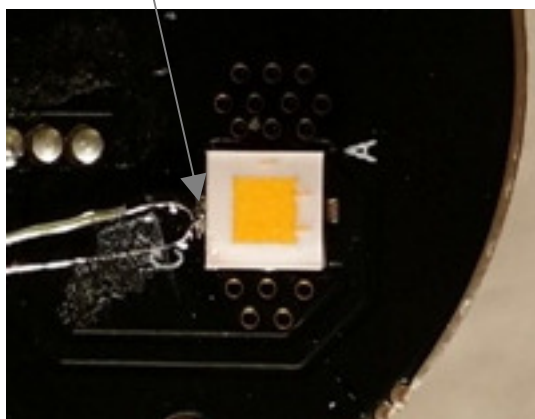
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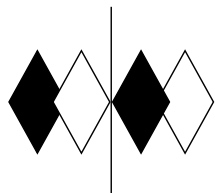
RESULTS: Photographs (continued)

LED



LED





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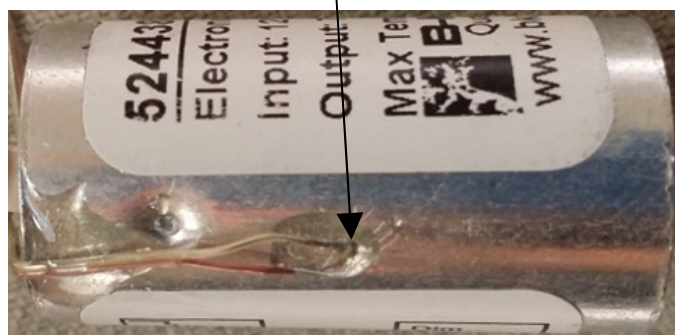
RESULTS:

Photographs (continued)

DRIVER LOCATION



DRIVER



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