



FOR THE SCOPE OF  
ACCREDITATION UNDER NVLAP LAB  
CODE 100402-0.

# REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100641836

Date: March 9, 2012

REPORT NO. 100641836CRT-006

TEST OF ONE CEILING MOUNT FIXTURE

FIXTURE MODEL NO. RRRC14-ABR

RENDERED TO

MILLENNIUM LIGHTING  
922 DAILEY MILL ROAD  
MCDONOUGH, GA 30253

TEST: Electrical and Photometric tests as required to the IESNA test standard.

LABORATORY NOTE: The laboratory that conducted the testing detailed in this report has been Qualified, Verified, and Recognized for LM-79 Testing for ENERGY STAR for SSL by US DOE's CALiPER program.

STATEMENT OF LIMITATION: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number 500357309.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

IESNA LM-54: 1999 Guide to Lamp Seasoning

IESNA LM-46-04: 1998 Approved Method for Photometric Testing of Indoor Luminaires Using High Intensity Discharge or Incandescent Filament Lamps

DESCRIPTION OF SAMPLE: The client submitted one sample of model number RRRC14-ABR. The sample was received by Intertek on February 14, 2012, in undamaged condition, and one sample was tested as received. The sample designation was M242867-2.

DATES OF TESTS: March 7, 2012.

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SUMMARY

Model No.: RRRC14-ABR
Description: Ceiling Mount Fixture with a 100 W Incandescent Bulb

Criteria	Result
Total Lumen Output	476.8 Lumens
Total Power	88.18 W
Luminaire Efficacy	5.407
Power Factor	1.000

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Calibration Date	Calibration Due Date
Elgar AC Power Supply	CW1251	--	--	--
Xitron Power Analyzer	2503H	E235	04/20/11	04/20/12
Cole Parmer Hygro Thermometer	445703	T1359	10/26/11	10/26/12
Kikusui DC Power Supply	35-10L	E160	---	---
Sorenson DC Power Supply	DLM150-20E	--	---	---
LSI High Speed Mirror Goniometer	6440	--	02/17/12	03/17/12

TEST METHODS

Seasoning in Each Burn Orientation

The photometric tests were performed after the lamps were seasoned. Before the photometric tests, each bulb was operated in its designated orientation in the appropriate fixture for a time period of 1.5% of its rated hours in accordance with IESNA LM-54 Guide to Lamp Seasoning.

Photometric and Electrical measurements – Distribution Method

A LSI Type C High Speed Model 6440 Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the Xitron or Yokogawa Power Analyzer.

Some graphics were created with Photometrics Plus software.

Estimated Total Operating Time

Model No.	Total Hours
RRRC14-ABR	1

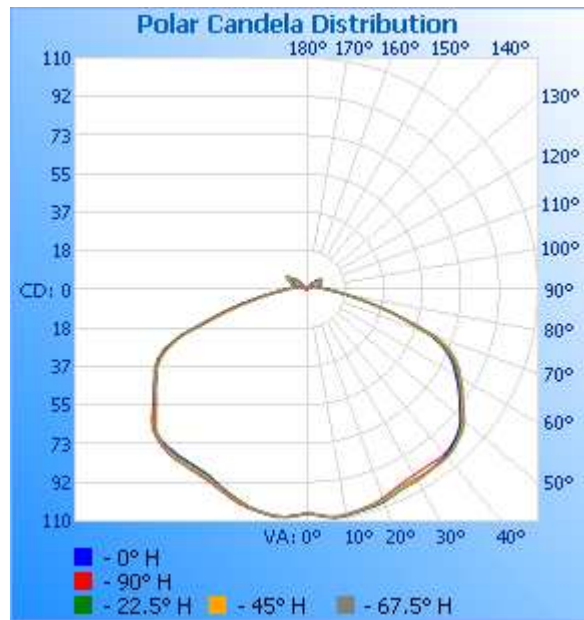
## RESULTS OF TESTS

### Photometric and Electrical Measurements – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
RRRC14-ABR							
M242867-2	UP	120.0	734.8	88.18	1.000	476.8	5.407

### Intensity (Candlepower) Summary at 25°C - Candelas

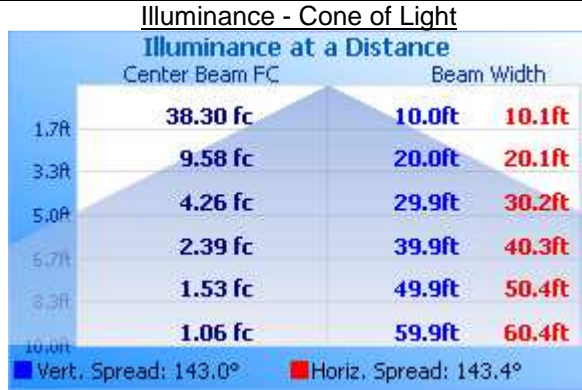
Angle	0	22.5	45	67.5	90
RRRC14-ABR					
0	106	106	106	106	106
5	108	108	108	108	108
10	109	109	109	109	108
15	108	108	108	107	107
20	107	107	107	106	106
25	105	105	105	104	103
30	105	105	105	104	102
35	104	104	104	104	102
40	103	104	104	104	102
45	100	101	101	102	100
50	96	96	97	98	96
55	89	90	90	91	89
60	82	82	84	85	83
65	75	76	77	78	77
70	62	62	64	66	64
75	41	42	41	43	41
80	25	25	24	25	25
85	16	16	15	16	16
90	10	10	9	10	10
95	8	8	7	7	8
100	6	6	5	6	6
105	5	5	5	5	6
110	6	6	6	6	6
115	7	7	7	7	0
120	8	8	8	8	2
125	8	8	7	8	0
130	7	7	4	5	0
135	5	5	0	5	0
140	3	0	2	4	1
145	0	0	0	2	0
150	0	1	0	1	0
155	1	1	0	0	0



## RESULTS OF TESTS (cont'd)

### Illumination Plots

Model No.: RRRC14-ABR  
Mounting Height: 10 ft.



### Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
RRRC14-ABR		
0-30	88.6	18.6
0-40	152.8	32.1
0-60	310.0	65.0
60-90	135.9	28.5
0-90	445.9	93.5
90-180	30.9	6.5
0-180	476.8	100.0

Picture (not to scale)



CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:

A handwritten signature in black ink, appearing to read 'Kenda Branch'.

Kenda Branch  
Engineer  
Lighting Division

Attachment: None

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'David Ellis'.

David Ellis  
Senior Project Engineer  
Lighting Division