



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

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100669163

Date: March 27, 2012

REPORT NO. 100669163CRT-001

TEST OF ONE INDUCTION ROADWAY LUMINAIRE

FIXTURE MODEL NO. SP2865C50

RENDERED TO

ESCO LIGHTING, INC.
3254 NORTH KILBOURN AVENUE
CHICAGO, IL 60641-4505

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 500365218.

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:

IES LM-9-09 Approved Method of Electrical and Photometric Measurements of Fluorescent Lamps

IES LM-10-96 Approved Method of Photometric Testing of Outdoor Fluorescent Luminaires

IES LM-54-99 Guide to Lamp Seasoning

DESCRIPTION OF SAMPLE: The client submitted one sample of model number SP2865C50. The sample was received by Intertek on March 2, 2012, in undamaged condition, and one sample was tested as received. The sample designation was E244016-1.

DATES OF TESTS: March 26, 2012.

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SUMMARY

Model No.: SP2865C50
Description: Induction Roadway Luminaire

Criteria	Result
Total Lumen Output	11536 Lumens
Total Power	200.7 W
Luminaire Efficacy	57.48
Power Factor	0.994
Backlight Rating:	B 3
Uplight Rating:	U 1
Glare Rating:	G 1

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Calibration Date	Calibration Due Date
Elgar AC Power Supply	CW1251	--	--	--
Yokogawa Power Meter	WT210	E464	04/19/11	04/19/12
LSI High Speed Mirror Goniometer	6440	--	03/17/12	04/17/12
Cole Parmer Hygro Thermometer	445703	T1359	10/26/11	10/26/12

TEST METHODS

Seasoning in Each Burn Orientation

The photometric tests were performed after the lamps were seasoned. Before the photometric tests, each lamp was operated in its designated orientation on the appropriate driver for a time period greater than 100 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
SP2865C50	103



TEST METHODS (cont'd)

BUG Ratings (Backlight, Uplight, Glare) – for Outdoor Fixtures Only

Zonal Lumens were calculated and grouped using the formula in IESNA TM-15-11 for each zone as defined in the BUG addendum. The maximum lumen rating in each zone was compared against the BUG zonal requirements of Energy Star.

RATING TABLE: BACKLIGHT

NOTE: MAX RATING IN ANY ZONE = RATING FOR LUMINAIRE

	B0	B1	B2	B3	B4	B5
BH	110	500	1000	2500	5000	>5000
BM	220	1000	2500	5000	8500	>8500
BL	110	500	1000	2500	5000	>5000

RATING TABLE: UPLIGHT

NOTE: MAX RATING IN ANY ZONE = RATING FOR LUMINAIRE

	U0	U1	U2	U3	U4	U5
UH	0	10	50	500	1000	>1000
UL	0	10	50	500	1000	>1000

GLARE RATINGS

NOTE: MAX RATING IN ANY ZONE = RATING FOR LUMINAIRE

FOR ASYMMETRICAL LUMINAIRE TYPES (I, II, III, IV)

	G0	G1	G2	G3	G4	G5
FVH	10	100	225	500	750	>750
BVH	10	100	225	500	750	>750
FH	660	1800	5000	7500	12000	>12000
BH	110	500	1000	2500	5000	>5000

FOR QUADRILATERAL SYMMETRICAL LUMINAIRE TYPES (V, VSQUARE)

	G0	G1	G2	G3	G4	G5
FVH	10	100	225	500	750	>750
BVH	10	100	225	500	750	>750
FH	660	1800	5000	7500	12000	>12000
BH	660	1800	5000	7500	12000	>12000

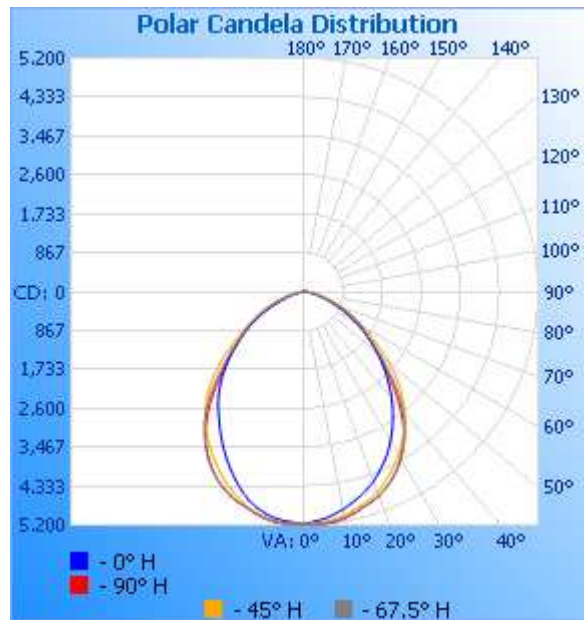
RESULTS OF TESTS

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)
SP2865C50							
E244016-1	UP	277.0	727.6	200.7	0.994	11536	57.48

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
SP2865C50					
0	5171	5171	5171	5171	5171
5	5080	5122	5151	5170	5190
10	4921	5010	5067	5111	5131
15	4727	4842	4914	4979	4979
20	4492	4634	4748	4836	4842
25	4189	4346	4487	4609	4611
30	3831	4007	4185	4303	4283
35	3428	3647	3842	3892	3859
40	2996	3260	3458	3402	3291
45	2554	2846	2996	2788	2650
50	2116	2426	2457	2214	2118
55	1685	1984	1892	1714	1709
60	1248	1551	1428	1377	1356
65	854	1090	1045	1002	982
70	538	690	698	651	632
75	303	418	411	369	354
80	132	183	173	164	161
85	44	53	56	53	53
90	8	12	15	17	17
95	0	0	0	2	2



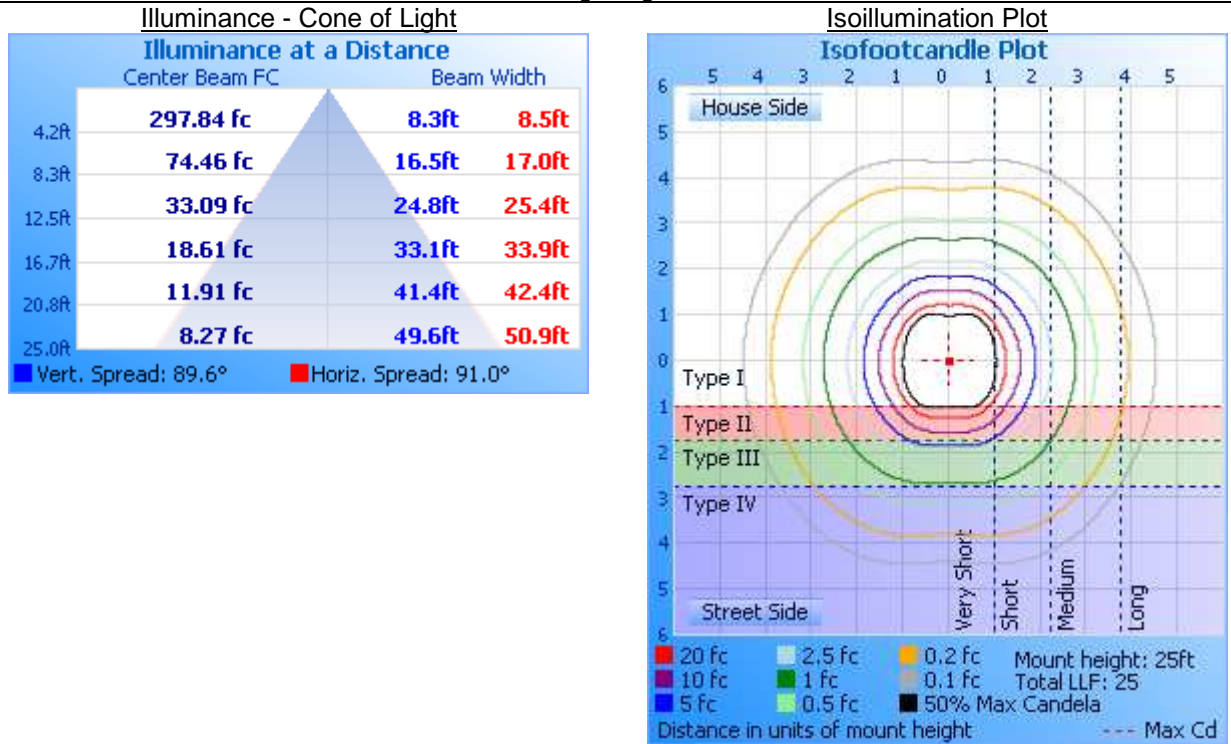
IES Classification
 Longitudinal Classification
 Cutoff Classification

Type VS
 Very Short
 Cutoff

RESULTS OF TESTS (cont'd)

Illumination Plots

Model No.: SP2865C50
Mounting Height: 25 ft.



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
SP2865C50		
0-30	3913	33.9
0-40	6242	54.1
0-60	10045	87.1
60-90	1488	12.9
0-90	11533	100.0
90-180	2.9	0.0
0-180	11536	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
SP2865C50		
0-10	489.5	4.2
10-20	1384	12.0
20-30	2039	17.7
30-40	2330	20.2
40-50	2161	18.7
50-60	1641	14.2
60-70	1007	8.7
70-80	409.0	3.5
80-90	71.6	0.6

RESULTS OF TESTS (cont'd)

BUG Rating (Backlight, Uplight, Glare)

Zone	Total Lumens	Frontlight Category	Frontlight Lumens	Backlight Category	Backlight Lumens	Uplight Category	Uplight Lumens
SP2865C50							
0-30	3913	FL	1961	BL	1952	--	--
30-60	6132	FM	3066	BM	3066	--	--
60-80	1416	FH	707	BH	709	--	--
80-90	72	FVH	37	BVH	35	--	--
90-100	3					UL	3
100-180	0					UH	0

Backlight Rating: B 3
Uplight Rating: U 1
Glare Rating: G 1

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:

Kenda Branch
Engineer
Lighting Division

Report Reviewed By:

Jeffery Davis
Senior Associate Engineer
Lighting Division

Attachment: None