



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-002

TEST OF ONE INDUCTION ROADWAY LUMINAIRE

FIXTURE MODEL NO. SP2865E50

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 SP2865E50. The sample was received by Intertek on March 2, 2012, in undamaged condition, and one sample was tested as received. The sample designation was E244017-1.

DATES OF TESTS: March 26, 2012.

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SUMMARY

Model No.: SP2865E50
Description: Induction Roadway Luminaire

Criteria	Result
Total Lumen Output	16966 Lumens
Total Power	286.4 W
Luminaire Efficacy	59.24
Power Factor	0.989
Backlight Rating:	B 4
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
SP2865E50	102



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

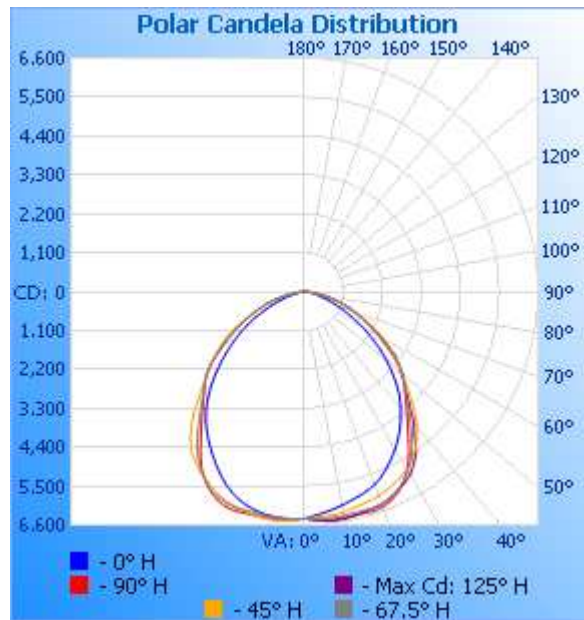
RESULTS OF TESTS

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)
SP2865E50							
E244017-1	UP	277.0	1046	286.4	0.989	16966	59.24

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
SP2865E50					
0	6416	6416	6416	6416	6416
5	6272	6326	6378	6437	6484
10	6134	6232	6325	6431	6488
15	5974	6115	6229	6405	6483
20	5799	5940	6134	6386	6478
25	5495	5711	5991	6212	6258
30	5124	5449	5788	5844	5813
35	4703	5118	5454	5304	5122
40	4223	4705	4945	4612	4503
45	3666	4195	4243	4057	4016
50	3029	3589	3565	3621	3606
55	2370	2880	3034	3046	2978
60	1727	2217	2513	2378	2363
65	1178	1637	1850	1823	1811
70	730	1181	1294	1312	1316
75	426	742	834	858	870
80	212	382	440	451	458
85	62	120	164	184	187
90	2	8	30	45	47
95	0	0	1	8	8



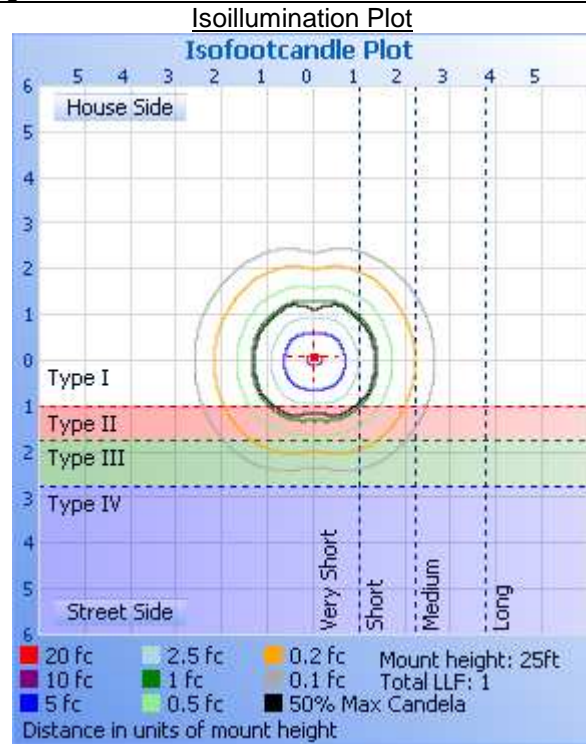
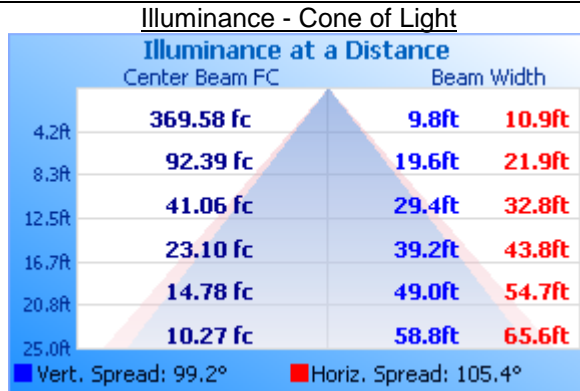
IES Classification
 Longitudinal Classification
 Cutoff Classification

Type VS
 Very Short
 Cutoff

RESULTS OF TESTS (cont'd)

Illumination Plots

Model No.: SP2865E50
Mounting Height: 25 ft.



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
SP2865E50		
0-30	5165	30.4
0-40	8423	49.6
0-60	14206	83.7
60-90	2753	16.2
0-90	16959	100.0
90-180	7.5	0.0
0-180	16966	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
SP2865E50		
0-10	612.9	3.6
10-20	1790	10.5
20-30	2763	16.3
30-40	3258	19.2
40-50	3164	18.7
50-60	2619	15.4
60-70	1730	10.2
70-80	832.1	4.9
80-90	190.9	1.1

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
SP2865E50							
0-30	5165	FL	2552	BL	2613	--	--
30-60	9040	FM	4473	BM	4567	--	--
60-80	2561	FH	1253	BH	1308	--	--
80-90	191	FVH	93	BVH	98	--	--
90-100	7					UL	7
100-180	0					UH	0

Backlight Rating: B 4
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