

Project Number
P16.00916



HUBBELL
Lighting

Date
4/14/2016

LAB 6

Test Sample Description

Catalog Number: P2834-0930K9

Description: LED Linear Vanity 13" w/ Etched Opal Refractor Part # 93068584

NOTE: *** THE ORIGINAL DATA CAME FROM TEST 16.00246.IES ***

Test Method: IES LM-79-08 § 10

Preburn Time: 0:00

Time To Stabilize: 6:46

Total Operating Time: 7:03

Input Voltage (Volts): 120.1

Input Current (Amps): 0.204

Input Wattage (Watts): 22.0

Ambient Temp (°C): 25.0



Hubbell Lighting, Inc.

701 Millennium Boulevard
Greenville, SC 29607
www.hubbellighting.com

Checked: D. ROBBINS/B. FLAUM
Approved: M. WASHBURN



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NVLAP
NVLAP LAB CODE: 201003-0

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PREPARED FOR: PROGRESS

CATALOG NUMBER: P2834-0930K9

LUMINAIRE: LED Linear Vanity 13" w/ Etched Opal Refractor Part # 93068584

LAMP CAT. NO.: EVAC-5630-L48SE-07

LAMP: 48 - EVAC 3000K LEDs

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED.

*** THE ORIGINAL DATA CAME FROM TEST 16.00246.IES ***

CANDELA DISTRIBUTION

FLUX

	0.0	45.0	90.0	135.0	180.0	
0	21	21	21	21	21	
5	57	22	24	22	44	3
15	53	65	42	41	38	13
25	93	78	53	43	43	28
35	111	93	63	44	40	43
45	118	92	53	35	28	48
55	123	90	42	23	16	50
65	126	87	30	12	11	49
75	128	85	19	9	9	48
85	130	85	8	7	8	47
90	130	84	3	6	8	
95	130	84	8	7	8	46
105	129	85	18	9	9	48
115	126	87	30	12	11	49
125	123	90	41	22	15	50
135	118	92	53	34	27	48
145	111	93	62	43	40	43
155	103	92	53	48	52	31
165	93	71	42	46	62	17
175	28	37	32	33	22	4
180	19	19	19	19	19	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	44	6.7
0- 40	87	13.1
0- 60	185	27.9
0- 90	330	49.6
90-120	144	21.6
90-130	193	29.1
90-150	284	42.7
90-180	335	50.4
0-180	665	100.0

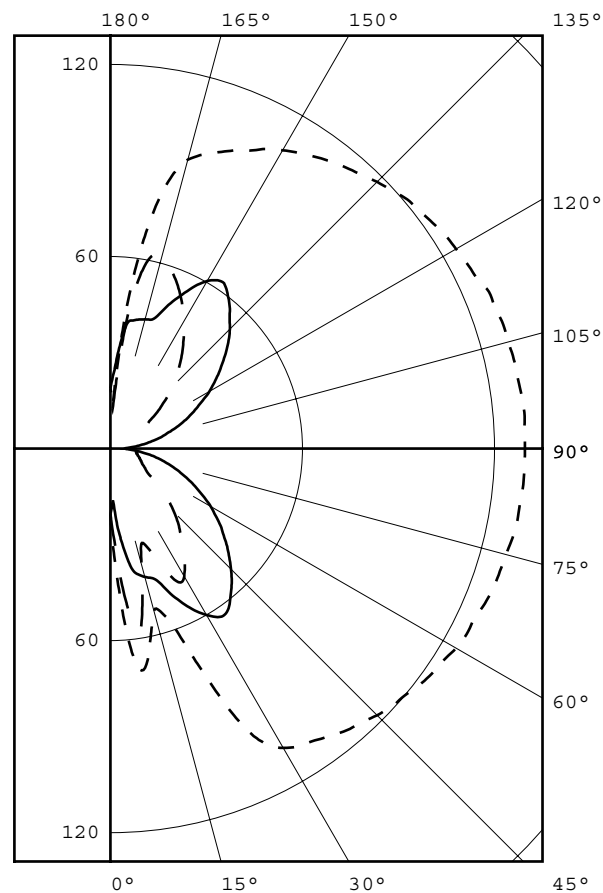
TOTAL INPUT WATTS = 22.0

EFFICACY = 30.2 Lm/W

CIE TYPE - DIRECT-INDIRECT

PLANE : 0-DEG 90-DEG 180-DEG

SPACING CRITERIA : 4.2 2.6 2.0



LEGEND:
0-deg: - - - - -
90-deg: _____
180-deg: — — — — —



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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 2.000 13.000
HEIGHT OF SIDE : 2.000 2.000

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	4964.	3893.	1188.
55	5246.	3578.	680.
65	5628.	3191.	489.
75	6228.	2750.	438.
85	7124.	2008.	440.



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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	21	21	21	21	21	21	21	21	21
5.0	57	44	22	18	24	17	22	35	44
10.0	67	56	31	35	38	29	22	45	56
15.0	53	57	65	45	42	38	41	39	38
20.0	61	70	73	55	44	42	47	35	32
25.0	93	87	78	66	53	49	43	41	43
30.0	108	101	88	75	60	55	45	41	46
35.0	111	106	93	77	63	53	44	37	40
40.0	115	109	93	74	59	48	41	30	34
45.0	118	111	92	71	53	42	35	23	28
50.0	120	112	91	67	48	36	29	19	22
55.0	123	114	90	63	42	31	23	16	16
60.0	125	114	89	59	36	25	17	12	13
65.0	126	115	87	54	30	19	12	11	11
70.0	127	116	86	50	24	15	10	10	10
75.0	128	116	85	46	19	10	9	9	9
80.0	129	117	85	44	14	9	8	8	8
85.0	130	117	85	42	8	8	7	8	8
90.0	130	116	84	40	3	7	6	7	8
95.0	130	117	84	41	8	8	7	7	8
100.0	129	116	84	44	13	9	8	8	8
105.0	129	117	85	46	18	10	9	9	9
110.0	128	116	86	50	24	14	10	10	10
115.0	126	116	87	54	30	19	12	11	11
120.0	125	115	89	58	36	24	17	12	12
125.0	123	114	90	62	41	30	22	16	15
130.0	121	113	91	67	47	36	28	19	21
135.0	118	111	92	70	53	42	34	23	27
140.0	115	109	93	73	58	47	39	29	33
145.0	111	106	93	76	62	53	43	36	40
150.0	108	103	92	78	60	56	47	43	46
155.0	103	100	92	72	53	52	48	49	52
160.0	99	97	88	59	45	44	51	54	58
165.0	93	88	71	45	42	39	46	57	62
170.0	73	67	46	42	41	38	37	50	56
175.0	28	33	37	33	32	32	33	28	22
180.0	19	19	19	19	19	19	19	19	19



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ZONAL LUMEN SUMMARY

0- 5	1.
5- 10	3.
10- 15	5.
15- 20	8.
20- 25	12.
25- 30	16.
30- 35	20.
35- 40	22.
40- 45	24.
45- 50	25.
50- 55	25.
55- 60	25.
60- 65	25.
65- 70	25.
70- 75	24.
75- 80	24.
80- 85	24.
85- 90	23.
90- 95	23.
95-100	23.
100-105	24.
105-110	24.
110-115	25.
115-120	25.
120-125	25.
125-130	25.
130-135	24.
135-140	24.
140-145	22.
145-150	20.
150-155	17.
155-160	14.
160-165	10.
165-170	6.
170-175	3.
175-180	1.



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	1
5- 10	3
10- 15	5
15- 20	8
20- 25	12
25- 30	16
30- 35	20
35- 40	22
40- 45	24
45- 50	25
50- 55	25
55- 60	25
60- 65	25
65- 70	25
70- 75	24
75- 80	24
80- 85	24
85- 90	23
90- 95	23
95-100	23
100-105	24
105-110	24
110-115	25
115-120	25
120-125	25
125-130	25
130-135	24
135-140	24
140-145	22
145-150	20
150-155	17
155-160	14
160-165	10
165-170	6
170-175	3
175-180	1

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	3
0- 20	16
0- 30	44
0- 40	87
0- 50	135
0- 60	185
0- 70	235
0- 80	283
0- 90	330
0-100	376
0-110	424
0-120	473
0-130	523
0-140	571
0-150	614
0-160	645
0-170	661
0-180	665



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	94	89	83	79	86	81	77	73	68	64	61	55	53	50	44	42	40	35
2	85	75	68	62	77	69	63	57	58	52	48	47	43	40	37	34	31	27
3	76	65	57	50	69	60	52	46	50	44	39	40	36	32	31	28	25	21
4	69	57	48	41	63	52	44	38	43	37	32	35	30	26	27	24	21	17
5	63	50	41	34	57	46	38	32	38	32	27	31	26	22	24	21	18	14
6	58	45	36	29	53	41	33	27	34	28	23	28	23	19	22	18	15	12
7	53	40	31	25	49	37	29	23	31	24	20	25	20	16	20	16	13	10
8	49	36	28	22	45	33	26	20	28	22	17	23	18	14	18	14	11	9
9	46	33	25	19	42	30	23	18	25	19	15	21	16	13	16	13	10	8
10	43	30	22	17	39	27	20	16	23	17	13	19	14	11	15	11	9	7

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE
BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES
ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.

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Date
4/14/2016

Goniophotometer Calibration

Calibration Lamp: GE 1000W, 120V, T6, CL (FEL)

Lamp Number: ITL78966-1000-14

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 23413.0 Lumens

Calibration Date: 07/18/2015

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL / HLI LAB 6 - Test Distance: 31.3'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27076V	11/10/2016
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	11/10/2016

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