

Project Number
P16.00919



HUBBELL
Lighting

Date
4/14/2016

LAB 5

Test Sample Description

Catalog Number: P2782-0930K9
Description: LED Linear Vanity 24"- Up/Down Light

NOTE: *** THE ORIGINAL DATA CAME FROM TEST 16.00245.IES ***

Test Method: IES LM-79-08 § 10
Preburn Time: 0:00
Time To Stabilize: 6:30
Total Operating Time: 7:30

Input Voltage (Volts): 120.1
Input Current (Amps): 0.352
Input Wattage (Watts): 38.0
Ambient Temp (°C): 24.8



Hubbell Lighting, Inc.

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

Checked: R. WILLIAMS
Approved: P. McCARTHY

NVLAP[®]
NVLAP LAB CODE: 201003-0

This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



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PREPARED FOR: PROGRESS
CATALOG NUMBER: P2782-0930K9
LUMINAIRE: 24" LED Linear Vanity - Up/Down Light
LAMP CAT. NO.: EVAC-5630-L84SE-04
LAMP: 84- 3000K LEDs
REFRACTOR: Etched Opal - Part #93068579
MOUNTING: WALL
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

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*** THE ORIGINAL DATA CAME FROM TEST 16.00245.IES ***

CANDELA DISTRIBUTION

	0.0	45.0	90.0	135.0	180.0
0	138	138	138	138	138
5	146	144	141	131	126
15	166	156	136	111	101
25	186	165	126	89	76
35	210	173	113	66	57
45	235	182	96	49	56
55	252	189	76	45	51
65	262	193	56	37	35
75	271	191	35	24	31
85	276	191	14	18	29
90	279	192	2	17	28
95	280	193	12	18	29
105	280	198	34	24	32
115	278	205	57	34	38
125	273	210	80	53	50
135	264	206	102	58	68
145	241	197	121	67	68
155	213	187	136	92	76
165	186	175	147	117	104
175	163	160	153	140	135
180	151	151	151	151	151

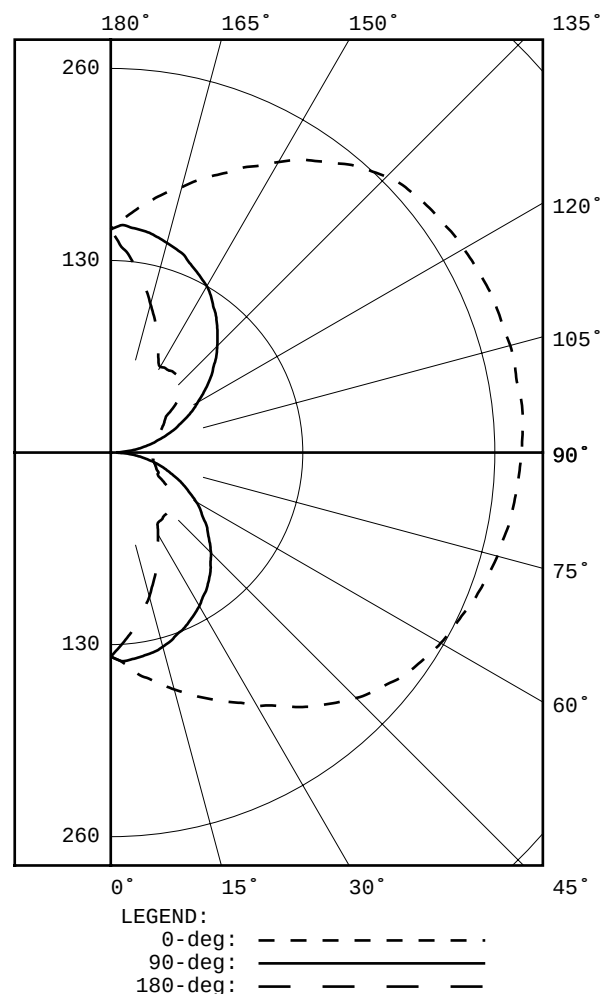
FLUX

13
38
59
76
92
103
107
107
105
106
111
113
112
103
85
65
41
14

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	110	7.6
0- 40	186	12.8
0- 60	380	26.2
0- 90	699	48.3
90-120	330	22.8
90-130	442	30.5
90-150	629	43.4
90-180	750	51.7
0-180	1448	100.0

TOTAL INPUT WATTS = 38.0
EFFICACY = 38.1 Lm/W
CIE TYPE - DIRECT-INDIRECT
PLANE: 0-DEG 90-DEG 180-DEG
SPACING CRITERIA : 2.3 1.3 0.8





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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 2.500 22.000
HEIGHT OF SIDE : 2.250 2.250

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	4928.	3470.	1174.
55	5416.	3257.	1096.
65	5961.	3061.	796.
75	6767.	2757.	774.
85	7904.	2086.	830.



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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	138	138	138	138	138	138	138	138	138
5.0	146	146	144	142	141	135	131	128	126
10.0	156	155	151	144	139	129	121	116	114
15.0	166	164	156	145	136	121	111	104	101
20.0	176	172	161	146	131	113	100	91	88
25.0	186	181	165	145	126	105	89	80	76
30.0	198	190	169	143	120	95	78	67	64
35.0	210	200	173	141	113	86	66	58	57
40.0	223	211	177	138	105	75	55	56	56
45.0	235	221	182	134	96	65	49	55	56
50.0	244	229	186	128	86	54	47	53	54
55.0	252	235	189	123	76	43	45	51	51
60.0	258	240	191	120	67	35	42	44	43
65.0	262	243	193	118	56	31	37	36	35
70.0	267	246	192	113	45	27	28	32	33
75.0	271	249	191	109	35	23	24	30	31
80.0	274	251	190	104	24	16	21	28	29
85.0	276	253	191	103	14	13	18	27	29
90.0	279	255	192	98	2	11	17	27	28
95.0	280	256	193	102	12	12	18	27	29
100.0	279	257	195	106	23	15	21	28	30
105.0	280	258	198	115	34	22	24	31	32
110.0	279	258	201	123	46	31	28	33	34
115.0	278	259	205	128	57	35	34	37	38
120.0	276	258	208	134	68	39	46	42	42
125.0	273	257	210	139	80	43	53	53	50
130.0	270	255	209	143	91	54	57	63	62
135.0	264	249	206	149	102	66	58	67	68
140.0	254	241	202	153	112	78	59	67	69
145.0	241	230	197	157	121	89	67	67	68
150.0	227	218	192	160	130	100	79	69	67
155.0	213	206	187	162	136	111	92	81	76
160.0	199	195	181	162	143	121	104	94	90
165.0	186	184	175	161	147	131	117	108	104
170.0	175	174	168	160	151	139	129	122	119
175.0	163	163	160	157	153	146	140	136	135
180.0	151	151	151	151	151	151	151	151	151



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ZONAL LUMEN SUMMARY

0- 5	3.
5- 10	10.
10- 15	16.
15- 20	22.
20- 25	27.
25- 30	32.
30- 35	36.
35- 40	40.
40- 45	44.
45- 50	47.
50- 55	50.
55- 60	52.
60- 65	53.
65- 70	54.
70- 75	54.
75- 80	53.
80- 85	53.
85- 90	52.
90- 95	52.
95-100	53.
100-105	55.
105-110	56.
110-115	57.
115-120	57.
120-125	56.
125-130	55.
130-135	53.
135-140	49.
140-145	45.
145-150	40.
150-155	35.
155-160	30.
160-165	24.
165-170	17.
170-175	11.
175-180	4.



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	94	88	83	78	86	81	76	72	67	64	60	54	52	49	43	41	39	34
2	84	75	68	61	77	69	62	57	57	52	47	46	42	39	36	33	30	26
3	76	65	56	50	69	59	52	46	49	43	39	40	35	31	31	27	25	20
4	69	57	48	41	63	52	44	38	43	37	32	35	30	26	27	23	20	16
5	63	50	41	35	57	46	38	32	38	32	27	31	26	22	24	20	17	14
6	58	45	36	30	53	41	33	27	34	28	23	28	23	19	21	18	15	12
7	53	40	32	26	49	37	29	24	31	25	20	25	20	16	19	16	13	10
8	50	36	28	22	45	33	26	21	28	22	18	23	18	14	18	14	11	9
9	46	33	25	20	42	30	23	18	25	20	16	21	16	13	16	13	10	8
10	43	30	23	17	39	28	21	16	23	18	14	19	15	12	15	12	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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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: 08/04/2015

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL / HLI LAB 5 - Test Distance: 56.0'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27072V	11/10/2016
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	11/10/2016

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