

Project Number
15.01597



HUBBELL
Lighting

Date
8/27/2015

LAB 6

Test Sample Description

Catalog Number: 6536-13630K9
Description: 1-Lt. Hanging/CTC Conv Lantern w/ HAL 9W AC LED Module

Test Method: IES LM-79-08 § 10
Preburn Time: 0:20
Time To Stabilize: 2:22
Total Operating Time: 3:27

Input Voltage (Volts): 120.2
Input Current (Amps): 0.072
Input Wattage (Watts): 8.1
Ambient Temp (°C): 24.3



Hubbell Lighting, Inc.

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

Checked: B. FLAUM
Approved: P. McCARTHY





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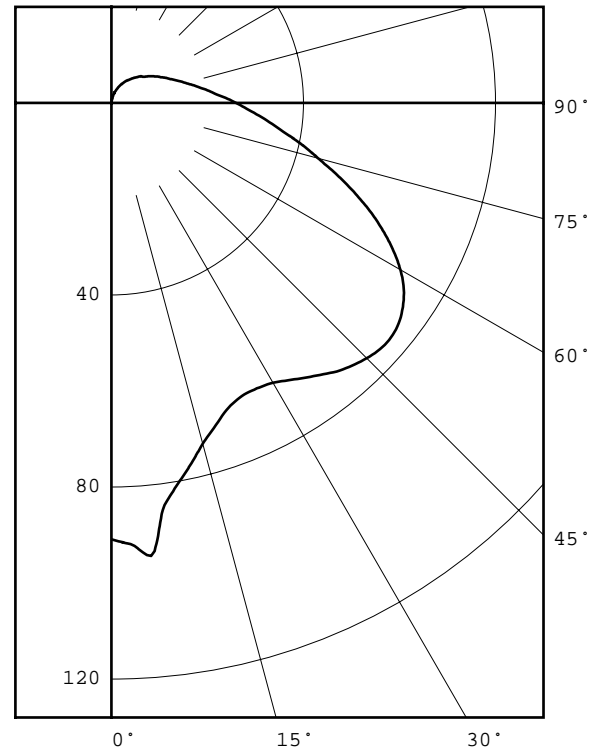
REPORT NUMBER: 15.01597
ISSUE DATE: 08/27/15
PREPARED FOR: PROGRESS
CATALOG NUMBER: 6536-13630K9
LUMINAIRE: 1-Lt. Hanging/CTC Conv Lantern w/ HAL 9W AC LED Module
REFRACTOR: Etched Glass - Part #93063749
LAMP CAT. NO.: 93049180-3130
LAMP: 20- Nichia 3000K LEDs
MOUNTING: Ceiling
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

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DEG	CANDELA	LUMENS
0	90.9	
5	94.7	8.3
15	73.5	20.8
25	66.7	31.1
35	69.9	44.0
45	75.2	58.1
55	74.1	66.0
65	62.2	61.4
75	44.6	47.4
85	30.9	33.9
90	25.9	
95	21.7	24.0
105	16.0	17.1
115	12.4	12.3
125	9.7	8.7
135	7.6	5.9
145	5.7	3.6
155	3.8	1.8
165	2.0	0.6
175	0.2	0.1
180	0.0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	60.2	13.5
0- 40	104.3	23.4
0- 60	228.3	51.3
0- 90	371.1	83.4
90-120	53.4	12.0
90-130	62.1	14.0
90-150	71.7	16.1
90-180	74.1	16.6
0-180	445.1	100.0

TOTAL INPUT WATTS = 8.1
EFFICACY = 55.0 Lm/W
CIE TYPE - SEMI-DIRECT
LUMINAIRE SPACING CRITERION = 1.1





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LUMINOUS DIAMETER: 4.250
HEIGHT OF SIDE : 7.500

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	3577.
55	3352.
65	2763.
75	2005.
85	1451.



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CANDELA DISTRIBUTION

	0.0
0.0	90.9
5.0	94.7
10.0	80.4
15.0	73.5
20.0	68.7
25.0	66.7
30.0	67.3
35.0	69.9
40.0	73.0
45.0	75.2
50.0	76.0
55.0	74.1
60.0	69.5
65.0	62.2
70.0	53.5
75.0	44.6
80.0	37.0
85.0	30.9
90.0	25.9
95.0	21.7
100.0	18.6
105.0	16.0
110.0	14.0
115.0	12.4
120.0	11.0
125.0	9.7
130.0	8.5
135.0	7.6
140.0	6.6
145.0	5.7
150.0	4.7
155.0	3.8
160.0	2.9
165.0	2.0
170.0	1.0
175.0	0.2
180.0	0.0



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ZONAL LUMEN SUMMARY

0- 5	2.2
5- 10	6.1
10- 15	9.1
15- 20	11.7
20- 25	14.2
25- 30	16.9
30- 35	20.2
35- 40	23.8
40- 45	27.5
45- 50	30.6
50- 55	32.7
55- 60	33.3
60- 65	32.1
65- 70	29.3
70- 75	25.6
75- 80	21.8
80- 85	18.4
85- 90	15.5
90- 95	13.0
95-100	11.0
100-105	9.3
105-110	7.8
110-115	6.7
115-120	5.7
120-125	4.8
125-130	3.9
130-135	3.3
135-140	2.6
140-145	2.0
145-150	1.5
150-155	1.1
155-160	0.7
160-165	0.4
165-170	0.2
170-175	0.0
175-180	0.0



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	2
5- 10	6
10- 15	9
15- 20	12
20- 25	14
25- 30	17
30- 35	20
35- 40	24
40- 45	27
45- 50	31
50- 55	33
55- 60	33
60- 65	32
65- 70	29
70- 75	26
75- 80	22
80- 85	18
85- 90	15
90- 95	13
95-100	11
100-105	9
105-110	8
110-115	7
115-120	6
120-125	5
125-130	4
130-135	3
135-140	3
140-145	2
145-150	2
150-155	1
155-160	1
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	8
0- 20	29
0- 30	60
0- 40	104
0- 50	162
0- 60	228
0- 70	290
0- 80	337
0- 90	371
0-100	395
0-110	412
0-120	424
0-130	433
0-140	439
0-150	443
0-160	445
0-170	445
0-180	445



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	
0	115	115	115	115	110	110	110	110	102	102	102	94	94	94	87	87	87	83
1	101	95	89	84	97	91	86	81	84	80	76	77	74	70	71	68	65	62
2	90	80	72	65	86	77	70	63	71	64	59	65	60	55	59	55	52	48
3	81	69	60	52	77	66	57	51	61	53	47	56	50	45	51	46	42	39
4	74	60	50	43	70	58	48	41	53	45	39	48	42	37	44	39	34	31
5	67	53	43	36	64	51	42	35	47	39	33	43	36	31	39	34	29	26
6	62	47	37	30	58	45	36	30	42	34	28	38	32	26	35	29	25	22
7	57	42	33	26	54	41	32	26	38	30	24	35	28	23	32	26	22	19
8	53	38	29	23	50	37	28	22	34	27	21	31	25	20	29	23	19	17
9	49	35	26	20	47	34	25	20	31	24	19	29	22	18	27	21	17	15
10	46	32	24	18	44	31	23	18	29	22	17	27	20	16	25	19	15	13

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: 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	11/12/2015
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	11/11/2015

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