

Project Number
15.00656



Date
2/20/2014

LAB 1

Test Sample Description

Catalog Number: P2300-0930K9
Description: C-T-C 11' LED Flush Mount w/ HAL 17W LED Module

Test Method: IES LM-79-08 § 10
Preburn Time: 00:10
Time To Stabilize: 1:16
Total Operating Time: 1:33

Input Voltage (Volts): 120.1
Input Current (Amps): 0.150
Input Wattage (Watts): 16.7
Ambient Temp (°C): 25.3



Hubbell Lighting, Inc.

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Checked: D. ROBBINS
Approved: M. WASHBURN



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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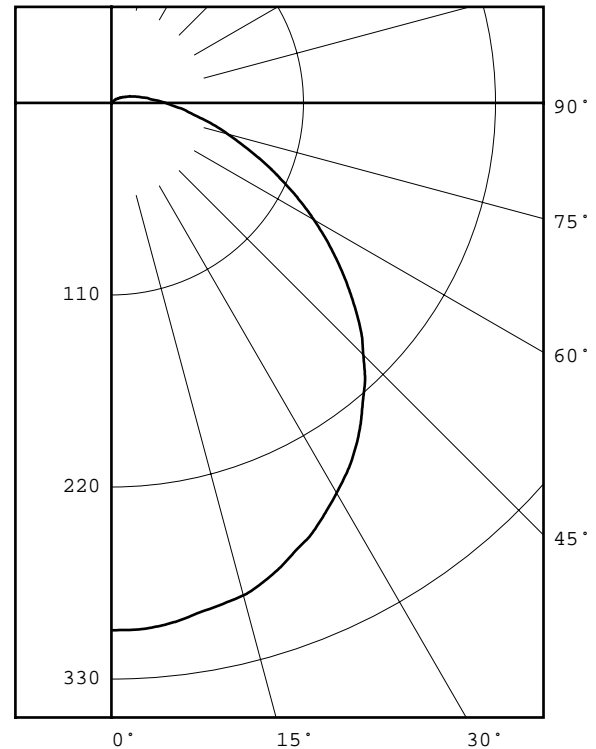
REPORT NUMBER: 15.00656
ISSUE DATE: 04/23/15
PREPARED FOR: PROGRESS
CATALOG NUMBER: P2300-0930K9
LUMINAIRE: C-T-C 11' LED Flush Mount w/ HAL 17W LED Module
REFRACTOR: Etched Glass Part #93048528
LAMP CAT. NO.: 93047261-4130
LAMP: 40 - Nichia 3000K LEDs
MOUNTING: Ceiling
NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED.

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DEG	CANDELA	LUMENS
0	302	
5	301	29
15	292	82
25	272	125
35	243	152
45	204	158
55	158	141
65	110	109
75	69	74
85	41	45
90	30	
95	23	26
105	14	15
115	8	8
125	4	4
135	0	1
145	0	0
155	0	0
165	0	0
175	0	0
180	0	0

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	236	24.4
0- 40	388	40.1
0- 60	687	71.0
0- 90	914	94.5
90-120	49	5.1
90-130	53	5.5
90-150	54	5.5
90-180	54	5.5
0-180	968	100.0

TOTAL INPUT WATTS = 16.7
EFFICACY = 58.0 Lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.3





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LUMINOUS DIAMETER: 9.500
HEIGHT OF SIDE : 3.000

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	4498.
55	3825.
65	3055.
75	2331.
85	1838.



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CANDELA DISTRIBUTION

	0.0
0.0	302
5.0	301
10.0	296
15.0	292
20.0	283
25.0	272
30.0	258
35.0	243
40.0	224
45.0	204
50.0	182
55.0	158
60.0	134
65.0	110
70.0	88
75.0	69
80.0	53
85.0	41
90.0	30
95.0	23
100.0	18
105.0	14
110.0	11
115.0	8
120.0	6
125.0	4
130.0	3
135.0	0
140.0	0
145.0	0
150.0	0
155.0	0
160.0	0
165.0	0
170.0	0
175.0	0
180.0	0



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ZONAL LUMEN SUMMARY

0- 5	7.
5- 10	21.
10- 15	35.
15- 20	47.
20- 25	58.
25- 30	67.
30- 35	74.
35- 40	78.
40- 45	79.
45- 50	78.
50- 55	74.
55- 60	67.
60- 65	59.
65- 70	50.
70- 75	41.
75- 80	33.
80- 85	25.
85- 90	19.
90- 95	15.
95-100	11.
100-105	9.
105-110	6.
110-115	5.
115-120	3.
120-125	2.
125-130	2.
130-135	1.
135-140	0.
140-145	0.
145-150	0.
150-155	0.
155-160	0.
160-165	0.
165-170	0.
170-175	0.
175-180	0.



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	7
5- 10	21
10- 15	35
15- 20	47
20- 25	58
25- 30	67
30- 35	74
35- 40	78
40- 45	79
45- 50	78
50- 55	74
55- 60	67
60- 65	59
65- 70	50
70- 75	41
75- 80	33
80- 85	25
85- 90	19
90- 95	15
95-100	11
100-105	9
105-110	6
110-115	5
115-120	3
120-125	2
125-130	2
130-135	1
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	29
0- 20	111
0- 30	236
0- 40	388
0- 50	545
0- 60	687
0- 70	796
0- 80	870
0- 90	914
0-100	940
0-110	955
0-120	963
0-130	967
0-140	968
0-150	968
0-160	968
0-170	968
0-180	968



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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	118	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76	76
2	96	88	80	74	93	85	79	73	81	75	70	77	72	68	73	69	66	63	63
3	88	77	68	61	85	75	67	60	71	64	59	67	62	57	64	59	55	53	53
4	80	68	59	52	77	66	58	51	63	56	50	60	54	49	57	52	47	45	45
5	74	60	51	45	71	59	50	44	56	49	43	54	47	42	51	46	41	39	39
6	68	54	45	39	66	53	45	38	51	43	38	49	42	37	46	41	36	34	34
7	63	49	40	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27	27
9	55	41	33	27	53	40	32	27	39	32	27	37	31	26	36	30	26	24	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22	22

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
2/20/2014

Goniophotometer Calibration

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

Lamp Number: ITL78966-1000-38

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 25753.0 Lumens

Calibration Date: 12/02/2014

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
Goniophotometer	ITL / HLI LAB 1- Test Distance: 31.75'	N/A	N/A
Power Analyzer	Yokogawa / WT 332	C2QA27071V	11/12/2015
Power Source	Voltage-Regulated House Power	N/A	N/A
Thermometer	National Instruments / USB-TC01	176F4E3	11/11/2015

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