

Project Number
15.00371



HUBBELL
Lighting

Date
3/4/2015

LAB 6

Test Sample Description

Catalog Number: P2301-xx30K9
Description: CTC Downlight Fixture with Frosted Globe- 93047261-4130 Module

Test Method: IES LM-79-08 § 10
Preburn Time: 00:00
Time To Stabilize: 1:21
Total Operating Time: 1:50

Input Voltage (Volts): 120.2
Input Current (Amps): 0.147
Input Wattage (Watts): 16.4
Ambient Temp (°C): 24.5



Hubbell Lighting, Inc.

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Greenville, SC 29607
www.hubbellighting.com

Checked: R. WILLIAMS
Approved: M. WASHBURN





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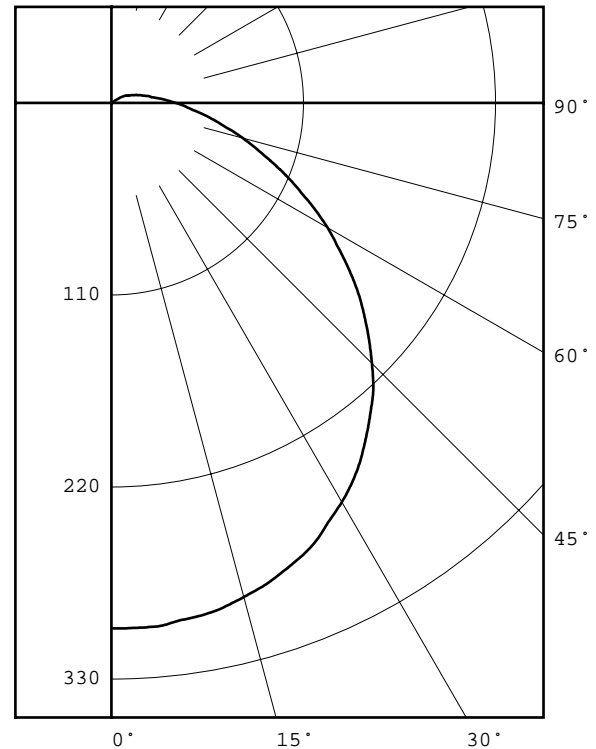
REPORT NUMBER: 15.00371
ISSUE DATE: 03/04/15
PREPARED FOR: PROGRESS
CATALOG NUMBER: P2301-xx30K9
LUMINAIRE: CTC Downlight Fixture with Frosted Globe- 93047261-4130
Module
LAMP CAT. NO.: 93047261-4130 Module
LAMP: 40- NICHIA 3000K LEDs
MOUNTING: CEILING
NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED.

PAGE: 2 OF 8

DEG	CANDELA	LUMENS
0	301	
5	301	29
15	293	83
25	277	127
35	249	156
45	211	163
55	166	149
65	119	118
75	78	83
85	47	52
90	36	
95	28	31
105	17	18
115	10	10
125	0	1
135	0	0
145	0	0
155	0	0
165	0	0
175	0	0
180	0	0

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	239	23.4
0- 40	394	38.7
0- 60	706	69.3
0- 90	959	94.1
90-120	59	5.8
90-130	60	5.9
90-150	60	5.9
90-180	60	5.9
0-180	1019	100.0

TOTAL INPUT WATTS = 16.4
EFFICACY = 62.1 Lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.3





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PAGE: 3 OF 8

LUMINOUS DIAMETER: 10.500
HEIGHT OF SIDE : 3.000

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	3915.
55	3408.
65	2830.
75	2287.
85	1871.



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PAGE: 4 OF 8

CANDELA DISTRIBUTION

	0.0
0.0	301
5.0	301
10.0	298
15.0	293
20.0	286
25.0	277
30.0	264
35.0	249
40.0	231
45.0	211
50.0	189
55.0	166
60.0	143
65.0	119
70.0	97
75.0	78
80.0	61
85.0	47
90.0	36
95.0	28
100.0	22
105.0	17
110.0	13
115.0	10
120.0	7
125.0	0
130.0	0
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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ISSUE DATE: 03/04/15
PREPARED FOR: PROGRESS

PAGE: 5 OF 8

ZONAL LUMEN SUMMARY

0- 5	7.
5- 10	21.
10- 15	35.
15- 20	48.
20- 25	59.
25- 30	68.
30- 35	76.
35- 40	80.
40- 45	82.
45- 50	81.
50- 55	77.
55- 60	71.
60- 65	64.
65- 70	55.
70- 75	46.
75- 80	37.
80- 85	29.
85- 90	23.
90- 95	18.
95-100	13.
100-105	10.
105-110	8.
110-115	6.
115-120	4.
120-125	1.
125-130	0.
130-135	0.
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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PAGE: 6 OF 8

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	7
5- 10	21
10- 15	35
15- 20	48
20- 25	59
25- 30	68
30- 35	76
35- 40	80
40- 45	82
45- 50	81
50- 55	77
55- 60	71
60- 65	64
65- 70	55
70- 75	46
75- 80	37
80- 85	29
85- 90	23
90- 95	18
95-100	13
100-105	10
105-110	8
110-115	6
115-120	4
120-125	1
125-130	0
130-135	0
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	239
0- 40	394
0- 50	557
0- 60	706
0- 70	824
0- 80	907
0- 90	959
0-100	990
0-110	1008
0-120	1018
0-130	1019
0-140	1019
0-150	1019
0-160	1019
0-170	1019
0-180	1019



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ISSUE DATE: 03/04/15

PAGE: 7 OF 8

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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	106	100	96	91	102	98	93	89	92	89	85	87	84	82	83	80	78	75
2	96	87	79	73	92	84	78	72	80	74	69	76	71	67	72	68	64	62
3	87	76	67	60	84	74	66	59	70	63	58	66	61	56	63	58	54	52
4	80	67	58	51	77	65	57	50	62	55	49	59	53	48	56	51	46	44
5	73	60	50	44	70	58	50	43	55	48	42	53	46	41	50	45	40	38
6	67	54	44	38	65	52	44	37	50	42	37	48	41	36	46	40	35	33
7	62	49	40	33	60	47	39	33	45	38	32	43	37	32	42	36	31	29
8	58	44	36	30	56	43	35	29	41	34	29	40	33	28	38	32	28	26
9	54	41	32	27	52	40	32	26	38	31	26	37	30	25	35	29	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	28	23	33	27	23	21

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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3/4/2015

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: 11/24/2014

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
Goniophotometer	ITL / HLI LAB 6 - Test Distance: 31.3'	N/A	N/A
Power Analyzer	Yokogawa / WT 332	C2QA27076V	11/12/2015
Power Source	Voltage-Regulated House Power	N/A	N/A
Thermometer	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.