

Project Number
15.00373



Date
3/4/2015

LAB 6

Test Sample Description

Catalog Number: P2303-xx30K9
Description: CTC Downlight Fixture with Frosted Globe- module assembly by HAL-25514

Test Method: IES LM-79-08 § 10
Preburn Time: 00:00
Time To Stabilize: 1:29
Total Operating Time: 8:17

Input Voltage (Volts): 120.0
Input Current (Amps): 0.149
Input Wattage (Watts): 16.6
Ambient Temp (°C): 24.6



Hubbell Lighting, Inc.

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

Checked: R. WILLIAMS
Approved: M. WASHBURN





HUBBELL
Lighting

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

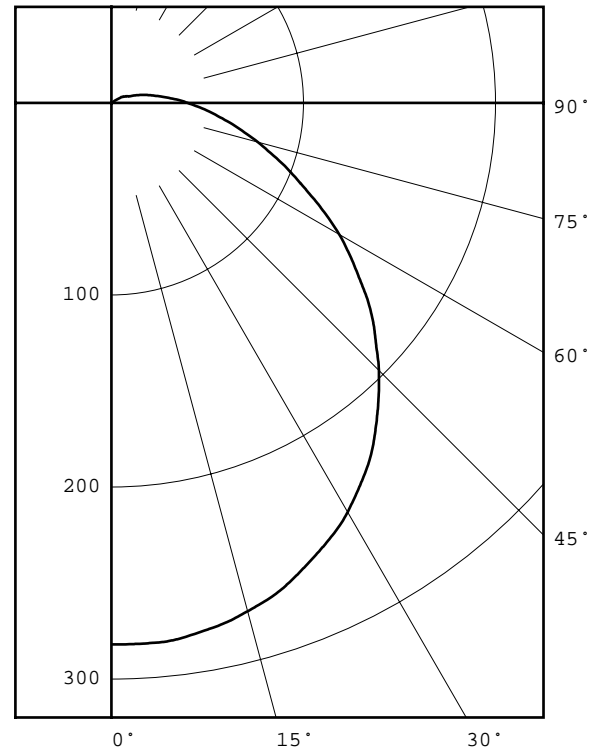


REPORT NUMBER: 15.00373
ISSUE DATE: 03/04/15
PREPARED FOR: PROGRESS
CATALOG NUMBER: P2303-xx30K9
LUMINAIRE: CTC Downlight Fixture with Frosted Globe- module assembly by HAL-25514
LAMP CAT. NO.: 93047261-4130 Module
LAMP: 40- NICHIA 3000K LEDs
MOUNTING: CEILING
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

PAGE: 2 OF 8

DEG	CANDELA	LUMENS
0	282	
5	282	27
15	274	77
25	257	119
35	232	145
45	197	152
55	157	141
65	115	115
75	79	84
85	51	56
90	40	
95	30	33
105	16	17
115	8	8
125	0	1
135	0	0
145	0	0
155	0	0
165	0	0
175	0	0
180	0	0

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	223	22.9
0- 40	368	37.8
0- 60	661	67.8
0- 90	915	93.9
90-120	58	6.0
90-130	59	6.1
90-150	59	6.1
90-180	59	6.1
0-180	974	100.0



TOTAL INPUT WATTS = 16.6
EFFICACY = 58.7 Lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.3



®

HUBBELL
Lighting

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



REPORT NUMBER: 15.00373
ISSUE DATE: 03/04/15
PREPARED FOR: PROGRESS

PAGE: 3 OF 8

LUMINOUS DIAMETER: 10.500
HEIGHT OF SIDE : 3.000

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	3655.
55	3223.
65	2735.
75	2317.
85	2030.



®

HUBBELL
Lighting

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



REPORT NUMBER: 15.00373
ISSUE DATE: 03/04/15
PREPARED FOR: PROGRESS

PAGE: 4 OF 8

CANDELA DISTRIBUTION

	0.0
0.0	282
5.0	282
10.0	279
15.0	274
20.0	267
25.0	257
30.0	246
35.0	232
40.0	215
45.0	197
50.0	178
55.0	157
60.0	137
65.0	115
70.0	96
75.0	79
80.0	64
85.0	51
90.0	40
95.0	30
100.0	22
105.0	16
110.0	10
115.0	8
120.0	6
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



HUBBELL
Lighting

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



REPORT NUMBER: 15.00373
ISSUE DATE: 03/04/15
PREPARED FOR: PROGRESS

PAGE: 5 OF 8

ZONAL LUMEN SUMMARY

0- 5	7.
5- 10	20.
10- 15	33.
15- 20	45.
20- 25	55.
25- 30	64.
30- 35	70.
35- 40	75.
40- 45	76.
45- 50	76.
50- 55	73.
55- 60	68.
60- 65	61.
65- 70	53.
70- 75	46.
75- 80	38.
80- 85	31.
85- 90	25.
90- 95	19.
95-100	14.
100-105	10.
105-110	7.
110-115	5.
115-120	3.
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.



HUBBELL
Lighting

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



REPORT NUMBER: 15.00373
ISSUE DATE: 03/04/15
PREPARED FOR: PROGRESS

PAGE: 6 OF 8

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	7
5- 10	20
10- 15	33
15- 20	45
20- 25	55
25- 30	64
30- 35	70
35- 40	75
40- 45	76
45- 50	76
50- 55	73
55- 60	68
60- 65	61
65- 70	53
70- 75	46
75- 80	38
80- 85	31
85- 90	25
90- 95	19
95-100	14
100-105	10
105-110	7
110-115	5
115-120	3
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	27
0- 20	104
0- 30	223
0- 40	368
0- 50	520
0- 60	661
0- 70	775
0- 80	859
0- 90	915
0-100	948
0-110	965
0-120	973
0-130	974
0-140	974
0-150	974
0-160	974
0-170	974
0-180	974



HUBBELL
Lighting

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



REPORT NUMBER: 15.00373
ISSUE DATE: 03/04/15

PAGE: 7 OF 8

PREPARED FOR: PROGRESS

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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	105	100	95	90	102	97	92	88	92	88	84	87	83	81	82	79	77	75
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	64	61
3	87	75	66	59	83	73	65	59	69	62	57	66	60	55	62	57	53	51
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	50	44	39	37
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	23
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

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.

Project Number
15.00373



HUBBELL
Lighting

Date
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

Hubbell Lighting, Inc.

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

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