

Project Number  
15.00754



**HUBBELL**  
Lighting

Date  
5/11/2015

LAB 6

### Test Sample Description

Catalog Number: P3611-2030K9  
Description: 16" Round Surface-Mount w/ 2 AC HAL 17W LED Modules

Test Method: IES LM-79-08 § 10  
Preburn Time: 0:00  
Time To Stabilize: 1:21  
Total Operating Time: 2:07  
  
Input Voltage (Volts): 119.8  
Input Current (Amps): 0.295  
Input Wattage (Watts): 32.7  
Ambient Temp (°C): 24.3



### Hubbell Lighting, Inc.

701 Millennium Boulevard  
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www.hubbellighting.com

Checked: R. WILLIAMS  
Approved: P. McCARTHY





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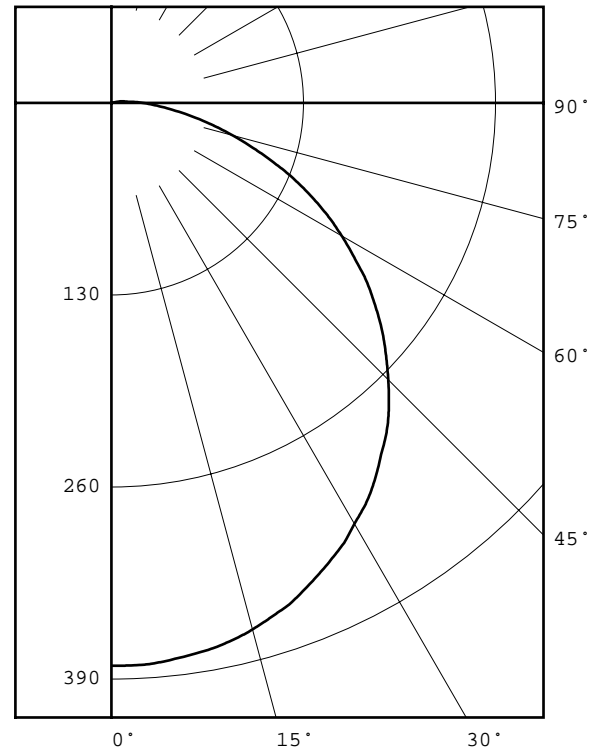
REPORT NUMBER: 15.00754  
ISSUE DATE: 05/11/15  
PREPARED FOR: PROGRESS  
CATALOG NUMBER: P3611-2030K9  
LUMINAIRE: 16" Round Surface-Mount w/ 2 AC HAL 17W LED Modules  
LENS: Opal Glass with Linnen Print - Part #93060639  
LAMP CAT. NO.: 93047261-7130  
LAMP: 80- Nichia 3000K LEDs  
MOUNTING: CEILING  
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

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DEG	CANDELA	LUMENS
0	381	
5	380	36
15	369	104
25	345	159
35	311	194
45	265	205
55	211	188
65	149	147
75	85	90
85	36	41
90	20	
95	10	13
105	0	1
115	0	0
125	0	0
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	299	25.4
0- 40	494	41.9
0- 60	887	75.2
0- 90	1165	98.9
90-120	13	1.1
90-130	13	1.1
90-150	13	1.1
90-180	13	1.1
0-180	1178	100.0

TOTAL INPUT WATTS = 32.7  
EFFICACY = 36.0 Lm/W  
CIE TYPE - DIRECT  
LUMINAIRE SPACING CRITERION = 1.3





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LUMINOUS DIAMETER: 16.000  
HEIGHT OF SIDE : 2.000

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	2492.
55	2310.
65	2026.
75	1588.
85	1129.



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CANDELA DISTRIBUTION

	0.0
0.0	381
5.0	380
10.0	376
15.0	369
20.0	359
25.0	345
30.0	329
35.0	311
40.0	290
45.0	265
50.0	239
55.0	211
60.0	180
65.0	149
70.0	116
75.0	85
80.0	58
85.0	36
90.0	20
95.0	10
100.0	6
105.0	0
110.0	0
115.0	0
120.0	0
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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ZONAL LUMEN SUMMARY

0- 5	9.
5- 10	27.
10- 15	44.
15- 20	60.
20- 25	74.
25- 30	85.
30- 35	94.
35- 40	100.
40- 45	103.
45- 50	102.
50- 55	98.
55- 60	90.
60- 65	80.
65- 70	67.
70- 75	52.
75- 80	38.
80- 85	25.
85- 90	15.
90- 95	8.
95-100	4.
100-105	1.
105-110	0.
110-115	0.
115-120	0.
120-125	0.
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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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	9
5- 10	27
10- 15	44
15- 20	60
20- 25	74
25- 30	85
30- 35	94
35- 40	100
40- 45	103
45- 50	102
50- 55	98
55- 60	90
60- 65	80
65- 70	67
70- 75	52
75- 80	38
80- 85	25
85- 90	15
90- 95	8
95-100	4
100-105	1
105-110	0
110-115	0
115-120	0
120-125	0
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	36
0- 20	140
0- 30	299
0- 40	494
0- 50	699
0- 60	887
0- 70	1034
0- 80	1124
0- 90	1165
0-100	1177
0-110	1178
0-120	1178
0-130	1178
0-140	1178
0-150	1178
0-160	1178
0-170	1178
0-180	1178



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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	119	119	119	119	116	116	116	116	110	110	110	106	106	106	101	101	101	99
1	108	103	98	94	105	100	96	92	96	92	89	91	89	86	88	85	83	81
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	76	73	69	67
3	89	78	69	63	86	76	68	62	73	66	61	70	64	59	67	62	58	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	54	50	47
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	42	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	34	30	28
9	55	42	33	28	54	41	33	28	40	32	27	39	32	27	37	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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:* ITL78966-1000-38

*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>
<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.*