

Project Number  
15.00755



**HUBBELL**  
Lighting

Date  
5/11/2015

LAB 6

### Test Sample Description

Catalog Number: P3612-2030K9  
Description: 22" Round Surface-Mount w/ 3 AC HAL 17W LED Modules

Test Method: IES LM-79-08 § 10  
Preburn Time: 0:10  
Time To Stabilize: 1:06  
Total Operating Time: 2:24  
  
Input Voltage (Volts): 120.0  
Input Current (Amps): 0.456  
Input Wattage (Watts): 50.6  
Ambient Temp (°C): 24.2



### Hubbell Lighting, Inc.

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

Checked: B. FLAUM  
Approved: P. McCARTHY



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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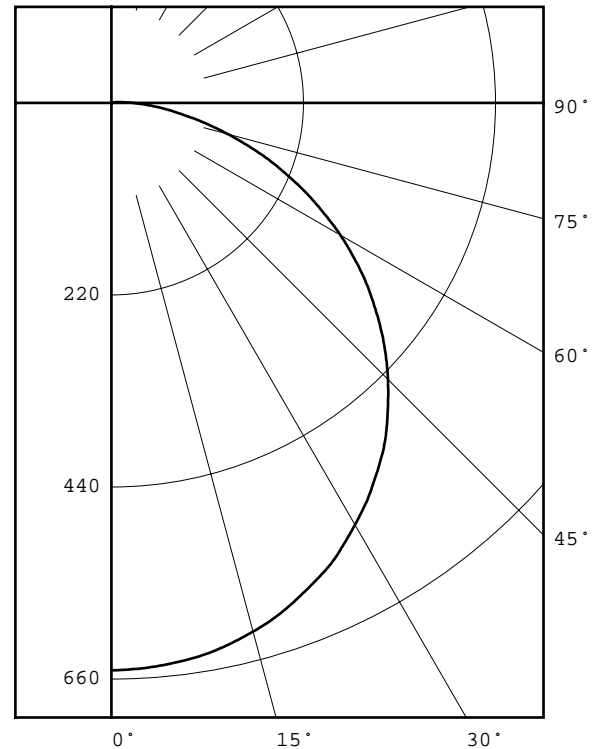


REPORT NUMBER: 15.00755  
ISSUE DATE: 05/11/15  
PREPARED FOR: PROGRESS  
CATALOG NUMBER: P3612-2030K9  
LUMINAIRE: 22" Round Surface-Mount w/ 3 AC HAL 17W LED Modules  
LENS: Opal Glass with Linnen Print - Part #93060640  
LAMP CAT. NO.: 93047261-7130  
LAMP: 120- Nichia 3000K LEDs  
MOUNTING: CEILING  
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

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DEG	CANDELA	LUMENS
0	650	
5	647	62
15	627	177
25	587	270
35	526	329
45	448	346
55	355	317
65	248	245
75	138	147
85	52	59
90	26	
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	509	25.9
0- 40	838	42.6
0- 60	1500	76.4
0- 90	1951	99.3
90-120	14	0.7
90-130	14	0.7
90-150	14	0.7
90-180	14	0.7
0-180	1965	100.0



TOTAL INPUT WATTS = 50.6  
EFFICACY = 38.8 Lm/W  
CIE TYPE - DIRECT  
LUMINAIRE SPACING CRITERION = 1.3



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LUMINOUS DIAMETER: 21.000  
HEIGHT OF SIDE : 3.000

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE AVERAGE

IN DEG

45	2398.
55	2198.
65	1888.
75	1421.
85	867.



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CANDELA DISTRIBUTION

	0.0
0.0	650
5.0	647
10.0	640
15.0	627
20.0	609
25.0	587
30.0	558
35.0	526
40.0	490
45.0	448
50.0	403
55.0	355
60.0	303
65.0	248
70.0	193
75.0	138
80.0	89
85.0	52
90.0	26
95.0	10
100.0	5
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	16.
5- 10	46.
10- 15	75.
15- 20	102.
20- 25	125.
25- 30	145.
30- 35	160.
35- 40	170.
40- 45	174.
45- 50	172.
50- 55	165.
55- 60	152.
60- 65	134.
65- 70	111.
70- 75	86.
75- 80	61.
80- 85	38.
85- 90	21.
90- 95	9.
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	16
5- 10	46
10- 15	75
15- 20	102
20- 25	125
25- 30	145
30- 35	160
35- 40	170
40- 45	174
45- 50	172
50- 55	165
55- 60	152
60- 65	134
65- 70	111
70- 75	86
75- 80	61
80- 85	38
85- 90	21
90- 95	9
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	62
0- 20	239
0- 30	509
0- 40	838
0- 50	1184
0- 60	1500
0- 70	1746
0- 80	1893
0- 90	1951
0-100	1965
0-110	1965
0-120	1965
0-130	1965
0-140	1965
0-150	1965
0-160	1965
0-170	1965
0-180	1965



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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	111	111	111	111	106	106	106	101	101	101	99
1	108	103	98	94	105	101	96	93	96	93	90	92	89	87	88	86	84	82	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	73	70	68	68
3	89	78	70	63	86	77	69	62	73	67	61	71	65	60	68	63	59	57	57
4	81	69	60	53	79	68	59	53	65	58	52	63	56	51	60	55	50	48	48
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48	44	42	42
6	69	55	46	40	67	54	46	40	53	45	39	51	44	39	49	43	38	36	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32	32
8	59	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	30	28	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	27	25	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23	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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5/11/2015

### *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>
<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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