

Project Number  
17.02762



Date  
10/16/2017  
Rev 1: 11/13/2017

LAB 1  
Sphere

### Test Sample Description

Catalog Number: P5642-3130K  
Description: 6" 29w LED Direct/Indirect Cylinder

Revision 1: Changed report format from roadway

### Photometry

Test Method: IES LM-79-08 § 10  
Preburn Time: 03:00  
Time To Stabilize: 1:15  
Total Operating Time: 4:31  
  
Input Voltage (Volts): 120.3  
Input Current (Amps): 0.530  
Input Wattage (Watts): 59.4  
Ambient Temp (°C): 25.2  
PF @ 120V: 0.932

### Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1  
Preburn Time: 0:30  
Time To Stabilize: 1:26  
Total Operating Time: 1:56  
  
Input Voltage (Volts): 120.0  
Input Current (Amps): 0.518  
Input Wattage (Watts): 57.7  
Ambient Temp (°C): 24.0



### Hubbell Lighting, Inc.

701 Millennium Boulevard  
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www.hubbellighting.com

Revised By: D. ROBBINS  
Revision Approval: 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.



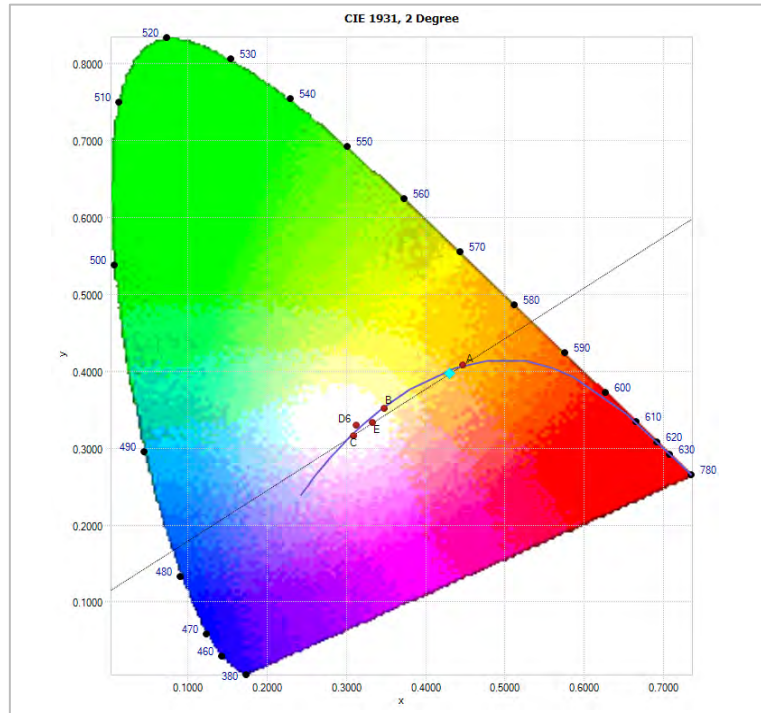
Lamp Cat#: NA  
 Lamp Desc: 2 - NA 3000K LEDs  
 Driver Desc: NA

Efficacy: 30.7 LPW      S/P Ratio: 1.4 LM/LM

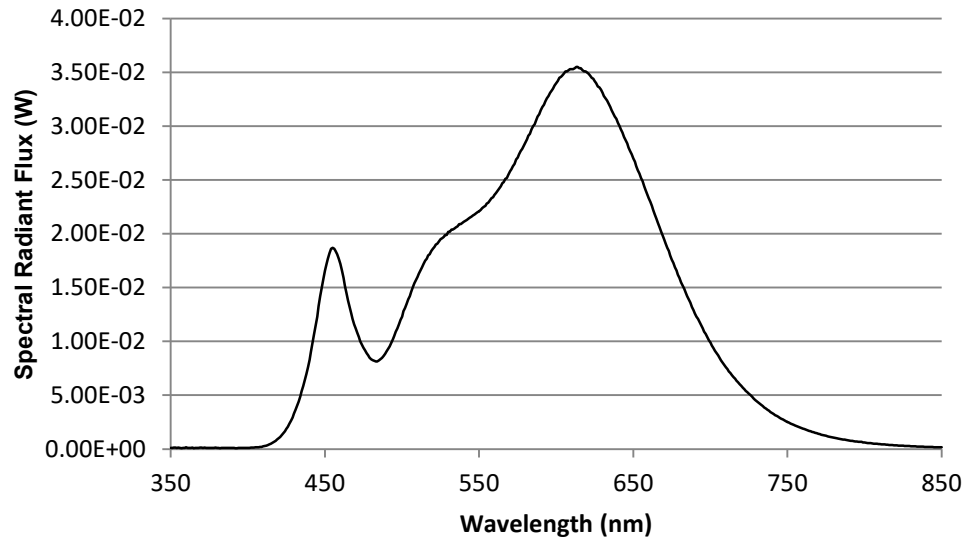
**Spectral Results**

Name	Value	Unit
Φ	6.02	watts
Φ(v)	1771	lumens
Φ(v')	2550	lm'
Chrom x	0.4306	
Chrom y	0.3973	
Chrom u	0.2494	
Chrom v	0.3452	
Duv	0.0019	
Chrom u'	0.2494	
Chrom v'	0.5177	
CCT	3051	K
Purity	48.5	%
λ (dom)	583.3	nm
FWHM	158.6	nm
λ (peak)	613.3	nm
λ (center)	595.4	nm
λ (centroid)	589.9	nm
SDCM	Cool White	
RA	91	
Corr. Coef.	0.001850256	
Correlation	0.0054	
R1	92.1	
R2	96.4	
R3	97.9	
R4	91.5	
R5	91.9	
R6	95.3	
R7	89.6	
R8	77.3	
R9	49.4	
R10	90.6	
R11	92.7	
R12	81.0	
R13	93.5	
R14	99.0	

**Chromaticity Diagram**



**Spectral Distribution of Radiant Flux**



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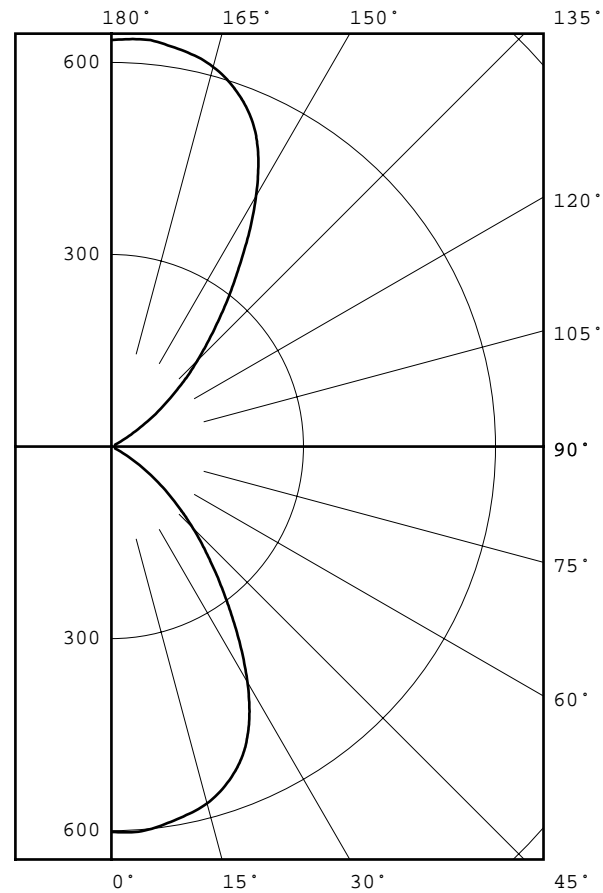
REPORT NUMBER: 17.02762  
ISSUE DATE: 10/16/17  
PREPARED FOR: PROGRESS  
CATALOG NUMBER: P5642-3130K  
LUMINAIRE: 6" 29w LED Direct/Indirect Cylinder  
LAMP: 2- 3000K LED Modules  
MOUNTING: Wall

PAGE: 1 OF 5

DEG	CANDELA	LUMENS
	0.0	
0	602	
5	602	57
15	577	162
25	502	228
35	332	208
45	180	139
55	66	61
65	6	8
75	2	2
85	0	0
90	0	
95	0	0
105	2	2
115	6	8
125	69	63
135	190	147
145	352	221
155	535	243
165	614	173
175	638	61
180	635	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	447	25.1
0- 40	655	36.7
0- 60	855	47.9
0- 90	865	48.5
90-120	11	0.6
90-130	74	4.2
90-150	442	24.8
90-180	918	51.5
0-180	1783	100.0

EFFICACY = 30.0 Lm/W  
CIE TYPE - DIRECT-INDIRECT





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LUMINOUS DIAMETER: 6.000

LUMINANCE DATA IN CANDELA/SQ M

ANGLE AVERAGE

IN DEG

45	13950.
55	6306.
65	778.
75	423.
85	0.



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CANDELA DISTRIBUTION

0.0	602	160.0	584
2.5	603	162.5	601
4.0	603	165.0	614
5.0	602	167.5	623
7.5	597	170.0	629
10.0	591	172.5	634
12.5	585	174.0	637
15.0	577	175.0	638
17.5	565	177.5	637
20.0	549	180.0	635
22.5	529		
25.0	502		
27.5	467		
30.0	425		
32.5	379		
35.0	332		
37.5	289		
40.0	249		
42.5	213		
45.0	180		
47.5	148		
50.0	119		
52.5	92		
55.0	66		
57.5	44		
60.0	24		
62.5	9		
65.0	6		
67.5	5		
70.0	4		
72.5	3		
75.0	2		
77.5	1		
80.0	1		
82.5	0		
85.0	0		
87.5	0		
90.0	0		
92.5	0		
95.0	0		
97.5	1		
100.0	1		
102.5	1		
105.0	2		
107.5	3		
110.0	4		
112.5	5		
115.0	6		
117.5	9		
120.0	24		
122.5	45		
125.0	69		
127.5	97		
130.0	125		
132.5	158		
135.0	190		
137.5	225		
140.0	264		
142.5	307		
145.0	352		
147.5	403		
150.0	452		
152.5	497		
155.0	535		
157.5	563		



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	14
5- 10	43
10- 15	69
15- 20	93
20- 25	110
25- 30	118
30- 35	111
35- 40	96
40- 45	79
45- 50	60
50- 55	40
55- 60	21
60- 65	6
65- 70	3
70- 75	2
75- 80	1
80- 85	0
85- 90	0
90- 95	0
95-100	0
100-105	1
105-110	2
110-115	3
115-120	6
120-125	21
125-130	42
130-135	64
135-140	84
140-145	102
145-150	118
150-155	125
155-160	118
160-165	99
165-170	74
170-175	45
175-180	15

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	57
0- 20	219
0- 30	447
0- 40	655
0- 50	794
0- 60	855
0- 70	863
0- 80	865
0- 90	865
0-100	866
0-110	868
0-120	876
0-130	939
0-140	1087
0-150	1307
0-160	1550
0-170	1723
0-180	1783



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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	107	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	99	96	92	89	89	91	88	86	83	75	73	71	63	61	60	51	50	50	44
2	92	86	80	76	76	85	79	75	71	68	65	62	57	55	53	47	46	45	40
3	85	77	71	66	66	78	72	66	62	62	58	54	52	50	47	44	42	40	36
4	79	69	63	57	57	73	65	59	54	56	52	48	48	45	42	40	38	36	33
5	73	63	56	50	50	68	59	53	48	51	46	43	44	40	38	37	35	33	30
6	68	57	50	45	45	63	54	47	43	47	42	38	40	37	34	34	32	30	27
7	63	52	45	40	40	59	49	43	38	43	38	35	37	34	31	32	29	27	25
8	59	48	41	36	36	55	45	39	34	40	35	31	35	31	28	30	27	25	23
9	55	44	37	33	33	51	42	35	31	37	32	29	32	28	26	28	25	23	21
10	52	41	34	30	30	48	38	33	28	34	29	26	30	26	24	26	23	21	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.

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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: 25889.0 Lumens  
Calibration Date: 07/10/2017

#### *Test Equipment Used*

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 1 - Test Distance: 31.74'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27071V	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4E3	11/7/2017

### *Sphere Calibration*

Calibration Lamp: EIKO 28V75W/E10  
Lamp Number: SCL-1400-J136  
Calibration Current: 2.679 Amps  
Total Luminous Flux: 1427 Lumens

#### *Test Equipment Used - Color & SPD; THD & Power Factor*

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>3-Meter Sphere</i>	Labsphere / LMS-3M	N/A	Calibrated Weekly
<i>Thermometer</i>	National Instruments / USB TC01	1912751	11/2/2017
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	11/1/2017
<i>Power Supply</i>	Chroma / 61602	616020002113	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	0331159372	10/31/2017
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148505	12/1/2017
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

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