

Project Number  
17.02768



Date  
10/20/2017  
Rev 1: 11/15/2017

LAB 5  
Sphere

### Test Sample Description

Catalog Number: P5675-3130K  
Description: 5" 17W LED Direct/Indirect Cylinder

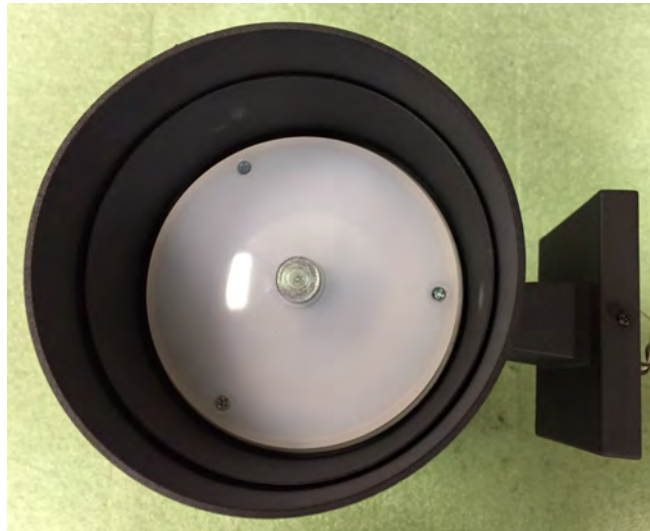
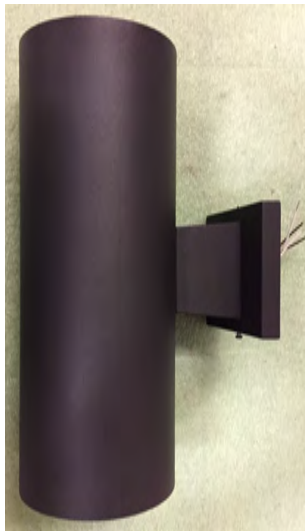
Revision 1: Changed report format from roadway

### Photometry

Test Method: IES LM-79-08 § 10  
Preburn Time: 00:00  
Time To Stabilize: 1:00  
Total Operating Time: 3:00  
  
Input Voltage (Volts): 120.2  
Input Current (Amps): 0.303  
Input Wattage (Watts): 33.9  
Ambient Temp (°C): 26.0

### Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1  
Preburn Time: 1:00  
Time To Stabilize: 1:26  
Total Operating Time: 2:26  
  
Input Voltage (Volts): 120.0  
Input Current (Amps): 0.301  
Input Wattage (Watts): 33.5  
Ambient Temp (°C): 24.0  
PF @ 120V: 0.929  
THD @ 120V (%): 40.7



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Revised By: D. ROBBINS  
Revision Approval: P. McCARTHY



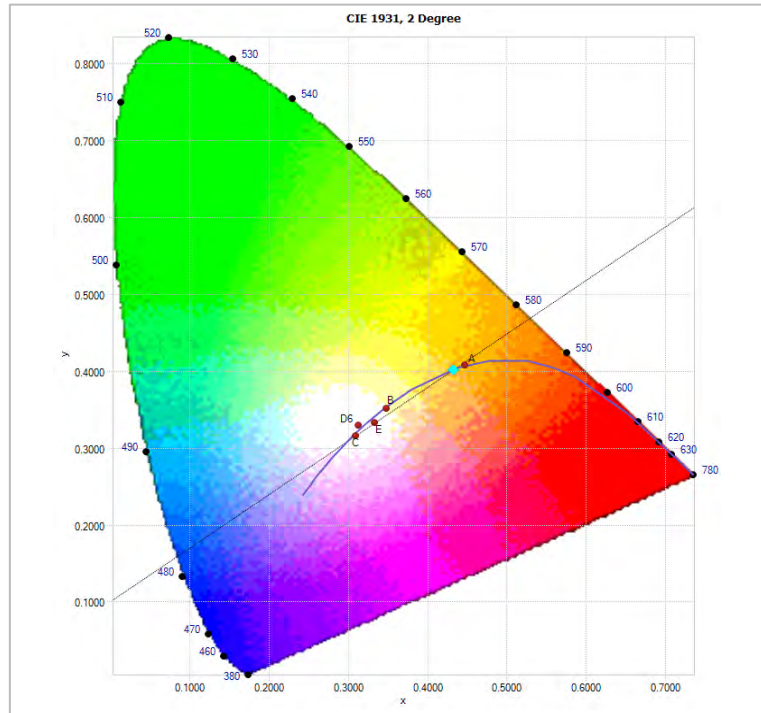
This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



Lamp Cat#: n/a  
 Lamp Desc: 2 - n/a 3000K LEDs  
 Driver Desc: n/a

Efficacy: 29.2 LPW      S/P Ratio: 1.5 LM'/LM

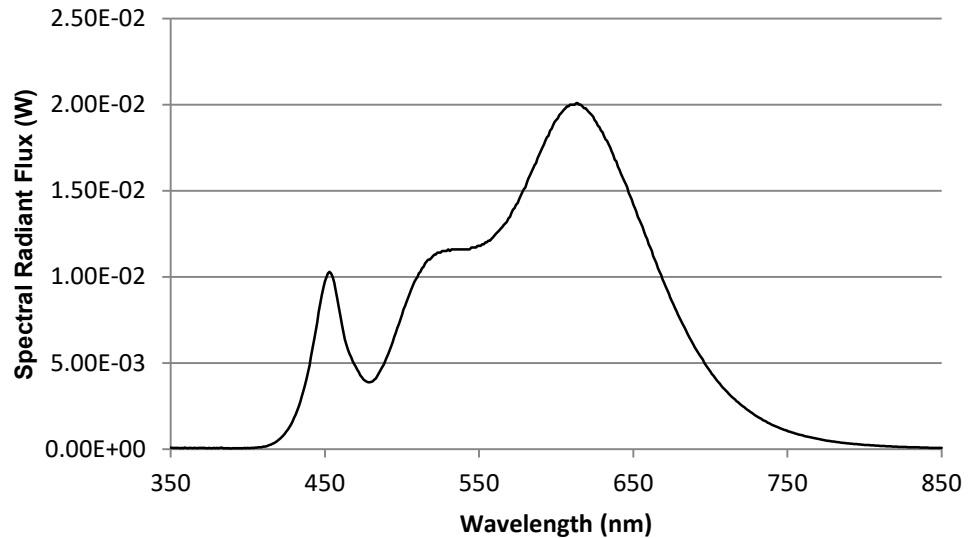
**Chromaticity Diagram**



**Spectral Results**

Name	Value	Unit
$\Phi$	3.22	watts
$\Phi(v)$	977	lumens
$\Phi(v')$	1423	lm'
Chrom x	0.4321	
Chrom y	0.402	
Chrom u	0.2483	
Chrom v	0.3466	
Duv	0.0002	
Chrom u'	0.2483	
Chrom v'	0.5199	
CCT	3064	K
Purity	50.4	%
$\lambda$ (dom)	582.6	nm
FWHM	158	nm
$\lambda$ (peak)	613	nm
$\lambda$ (center)	589.2	nm
$\lambda$ (centroid)	586.9	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000213452	
Correlation	0.0054	
R1	94.2	
R2	97.1	
R3	98.8	
R4	95.6	
R5	94.7	
R6	96.9	
R7	90.3	
R8	77.9	
R9	49.3	
R10	93.4	
R11	96.8	
R12	85.4	
R13	95.5	
R14	99.4	

**Spectral Distribution of Radiant Flux**



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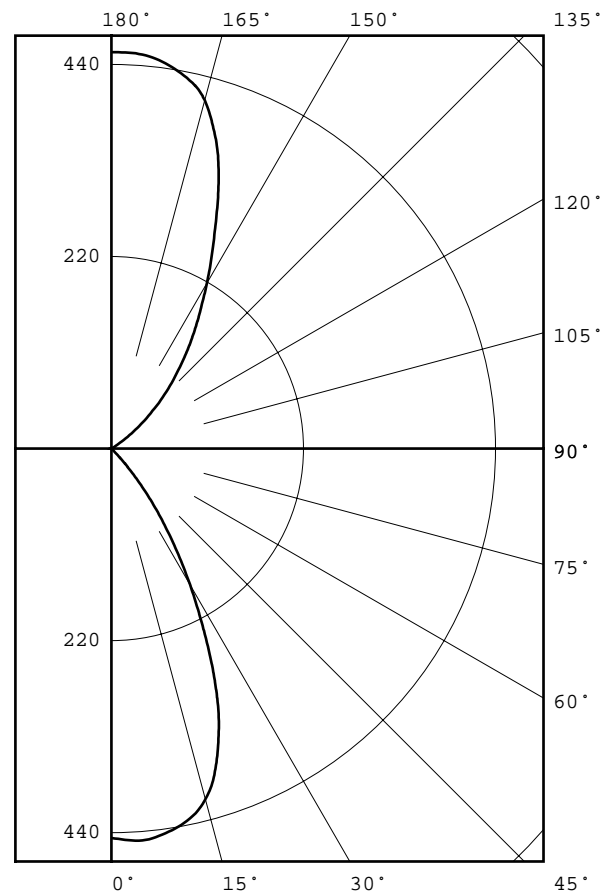
REPORT NUMBER: 17.02768  
ISSUE DATE: 10/20/17  
PREPARED FOR: PROGRESS  
CATALOG NUMBER: P5675-3130K  
LUMINAIRE: 5" 17W LED Direct/Indirect Cylinder  
LAMP: 2- 3000K LED Modules  
MOUNTING: Wall

PAGE: 3 OF 9

DEG	CANDELA	LUMENS
0	446	
5	450	43
15	416	115
25	272	123
35	104	65
45	2	8
55	1	0
65	0	0
75	0	0
85	0	0
90	0	
95	0	0
105	1	0
115	2	2
125	17	18
135	83	64
145	167	104
155	282	130
165	413	114
175	452	43
180	454	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	280	33.8
0- 40	346	41.7
0- 60	354	42.7
0- 90	354	42.7
90-120	3	0.3
90-130	21	2.5
90-150	189	22.8
90-180	476	57.3
0-180	830	100.0

TOTAL INPUT WATTS = 33.9  
EFFICACY = 24.5 Lm/W  
CIE TYPE - DIRECT-INDIRECT  
LUMINAIRE SPACING CRITERION = 0.8





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LUMINOUS DIAMETER: 5.000

LUMINANCE DATA IN CANDELA/SQ METER  
ANGLE AVERAGE

IN DEG

45	223.
55	138.
65	0.
75	0.
85	0.



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CANDELA DISTRIBUTION

	0.0
0.0	446
5.0	450
10.0	440
15.0	416
20.0	358
25.0	272
30.0	180
35.0	104
40.0	43
45.0	2
50.0	1
55.0	1
60.0	0
65.0	0
70.0	0
75.0	0
80.0	0
85.0	0
90.0	0
95.0	0
100.0	0
105.0	1
110.0	1
115.0	2
120.0	4
125.0	17
130.0	47
135.0	83
140.0	122
145.0	167
150.0	219
155.0	282
160.0	357
165.0	413
170.0	439
175.0	452
180.0	454



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ZONAL LUMEN SUMMARY

0- 5	11.
5- 10	32.
10- 15	51.
15- 20	64.
20- 25	66.
25- 30	57.
30- 35	41.
35- 40	24.
40- 45	8.
45- 50	1.
50- 55	0.
55- 60	0.
60- 65	0.
65- 70	0.
70- 75	0.
75- 80	0.
80- 85	0.
85- 90	0.
90- 95	0.
95-100	0.
100-105	0.
105-110	0.
110-115	1.
115-120	1.
120-125	4.
125-130	14.
130-135	26.
135-140	38.
140-145	48.
145-150	56.
150-155	63.
155-160	67.
160-165	63.
165-170	51.
170-175	32.
175-180	11.



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	11
5- 10	32
10- 15	51
15- 20	64
20- 25	66
25- 30	57
30- 35	41
35- 40	24
40- 45	8
45- 50	1
50- 55	0
55- 60	0
60- 65	0
65- 70	0
70- 75	0
75- 80	0
80- 85	0
85- 90	0
90- 95	0
95-100	0
100-105	0
105-110	0
110-115	1
115-120	1
120-125	4
125-130	14
130-135	26
135-140	38
140-145	48
145-150	56
150-155	63
155-160	67
160-165	63
165-170	51
170-175	32
175-180	11

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	43
0- 20	157
0- 30	280
0- 40	346
0- 50	354
0- 60	354
0- 70	354
0- 80	354
0- 90	354
0-100	354
0-110	355
0-120	357
0-130	375
0-140	439
0-150	543
0-160	673
0-170	787
0-180	830



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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	
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	98	95	92	89	90	87	85	82	73	71	69	59	58	57	47	46	46	40
2	92	86	81	77	84	79	75	72	67	64	61	55	53	52	44	43	43	38
3	85	78	72	68	78	72	67	63	61	58	55	51	49	47	42	41	40	35
4	80	71	65	60	73	66	61	57	57	53	50	48	45	43	40	38	37	33
5	75	65	59	54	69	61	55	51	52	48	45	45	42	40	38	36	34	31
6	70	60	53	49	65	56	50	46	49	45	41	42	39	37	36	34	32	29
7	66	55	49	44	61	52	46	42	46	41	38	39	36	34	34	32	30	28
8	62	51	45	41	57	48	43	39	43	38	35	37	34	32	32	30	28	26
9	58	48	42	37	54	45	40	36	40	36	33	35	32	30	30	28	27	25
10	55	45	39	35	51	42	37	33	38	33	31	33	30	28	29	27	25	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: 25889.0 Lumens  
Calibration Date: 09/08/2016

#### *Test Equipment Used*

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 5 - Test Distance: 56.0'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27072V	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	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>Power Supply PF/THD</i>	Voltage-Regulated House Power	N/A	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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