

Project Number  
17.02774



Date  
10/11/2017

LAB 1  
Sphere

**Test Sample Description**

Catalog Number: P5774-3130K  
Description: 5" 17W LED Down-Light Cylinder

**Photometry**

Test Method: IES LM-79-08 § 10  
Preburn Time: 00:05  
Time To Stabilize: 1:30  
Total Operating Time: 7:33  
  
Input Voltage (Volts): 120.2  
Input Current (Amps): 0.152  
Input Wattage (Watts): 17.1  
Ambient Temp (°C): 25.2  
PF @ 120V: 0.931

**Sphere**

Test Method: IES LM-79-08 § 9.1 & 12.1  
Preburn Time: 1:00  
Time To Stabilize: 1:11  
Total Operating Time: 2:11  
  
Input Voltage (Volts): 120.0  
Input Current (Amps): 0.151  
Input Wattage (Watts): 16.8  
Ambient Temp (°C): 24.0



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Checked (sphere): B. LEE  
Checked (photometry): D. ROBBINS  
Approved: P. McCARTHY



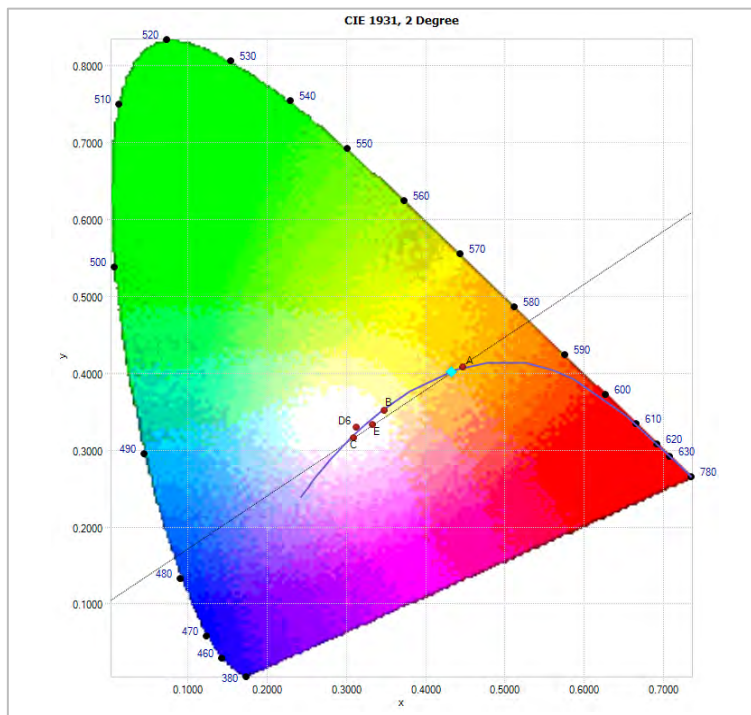
This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



Lamp Cat#: n/a  
 Lamp Desc: 1 - 3000K LED Module  
 Driver Desc: n/a

Efficacy: 29.3 LPW      S/P Ratio: 1.5 LM/LM

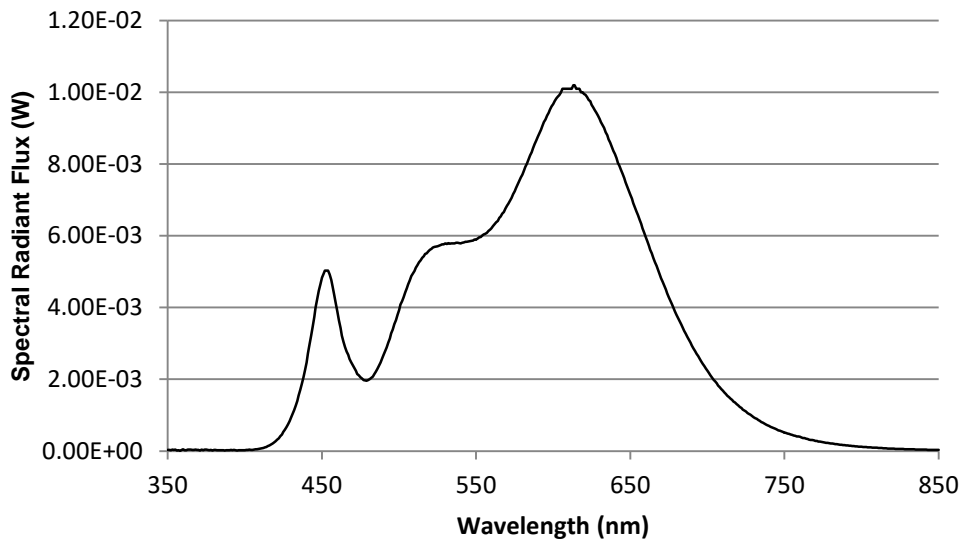
**Chromaticity Diagram**



**Spectral Results**

Name	Value	Unit
$\Phi$	1.62	watts
$\Phi(v)$	492	lumens
$\Phi(v')$	714	lm'
Chrom x	0.4329	
Chrom y	0.4018	
Chrom u	0.2489	
Chrom v	0.3466	
Duv	0.0004	
Chrom u'	0.2489	
Chrom v'	0.5199	
CCT	3049	K
Purity	50.6	%
$\lambda$ (dom)	582.7	nm
FWHM	157	nm
$\lambda$ (peak)	613.2	nm
$\lambda$ (center)	589.2	nm
$\lambda$ (centroid)	586.7	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000364608	
Correlation	0.0054	
R1	94.1	
R2	97.2	
R3	98.5	
R4	95.4	
R5	94.7	
R6	96.9	
R7	89.9	
R8	77.2	
R9	48.0	
R10	93.7	
R11	96.9	
R12	86.0	
R13	95.4	
R14	99.5	

**Spectral Distribution of Radiant Flux**



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ISSUE DATE: 10/11/17  
PREPARED FOR: PROGRESS  
CATALOG NUMBER: P5774-3130K  
LUMINAIRE: 5" 17W LED Down-Light Cylinder  
LAMP: 1- 3000K LED Module  
MOUNTING: Pendant

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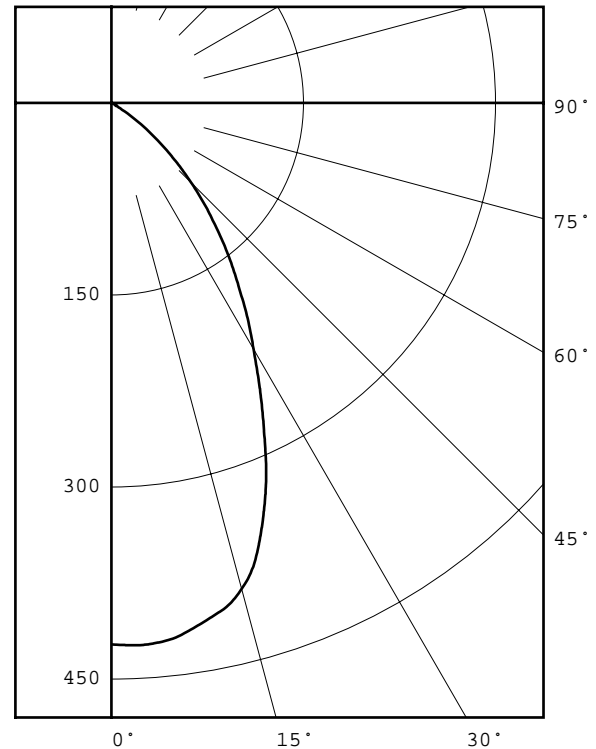
NOTE: NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

DEG	CANDELA	LUMENS
0	423	
5	423	40
15	393	109
25	282	129
35	172	108
45	88	68
55	23	22
65	3	3
75	1	1
85	0	0
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	278	57.9
0- 40	386	80.4
0- 60	476	99.1
0- 90	481	100.0
90-180	0	0.0
0-180	481	100.0

TOTAL INPUT WATTS = 17.1  
EFFICACY = 28.1 Lm/W  
CIE TYPE - DIRECT  
LUMINAIRE SPACING CRITERION = 0.9  
LUMINOUS DIAMETER: 5.000

LUMINANCE DATA IN CANDELA/SQ METER	
ANGLE	AVERAGE
IN DEG	
45	9821.
55	3164.
65	560.
75	305.
85	0.





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CANDELA DISTRIBUTION

	0.0
0.0	423
2.5	424
5.0	423
7.5	419
10.0	412
12.5	405
15.0	393
17.5	374
20.0	346
22.5	316
25.0	282
27.5	251
30.0	222
32.5	197
35.0	172
37.5	150
40.0	128
42.5	108
45.0	88
47.5	70
50.0	53
52.5	37
55.0	23
57.5	10
60.0	5
62.5	4
65.0	3
67.5	2
70.0	1
72.5	2
75.0	1
77.5	1
80.0	1
82.5	0
85.0	0
87.5	0
90.0	0



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ZONAL LUMEN SUMMARY

0- 5	10.
5- 10	30.
10- 15	48.
15- 20	61.
20- 25	66.
25- 30	63.
30- 35	58.
35- 40	50.
40- 45	40.
45- 50	28.
50- 55	16.
55- 60	6.
60- 65	2.
65- 70	1.
70- 75	1.
75- 80	1.
80- 85	0.
85- 90	0.



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	10
5- 10	30
10- 15	48
15- 20	61
20- 25	66
25- 30	63
30- 35	58
35- 40	50
40- 45	40
45- 50	28
50- 55	16
55- 60	6
60- 65	2
65- 70	1
70- 75	1
75- 80	1
80- 85	0
85- 90	0
90- 95	0
95-100	0
100-105	0
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	40
0- 20	149
0- 30	278
0- 40	386
0- 50	454
0- 60	476
0- 70	479
0- 80	481
0- 90	481
0-100	481
0-110	481
0-120	481
0-130	481
0-140	481
0-150	481
0-160	481
0-170	481
0-180	481



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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	
0	119	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92	92	
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84	84	
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77	77	
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70	70	
5	89	80	73	68	87	79	73	68	77	72	67	75	70	67	73	69	66	65	65	
6	84	74	67	63	82	73	67	62	72	66	62	70	65	61	69	64	61	59	59	
7	79	69	62	58	78	68	62	57	67	61	57	66	61	57	64	60	56	55	55	
8	75	64	58	53	73	64	57	53	63	57	53	61	56	53	60	56	52	51	51	
9	71	60	54	49	70	60	54	49	59	53	49	58	53	49	57	52	49	47	47	
10	67	57	50	46	66	56	50	46	55	50	46	54	49	46	54	49	45	44	44	

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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