

Project Number
17.02775



Date
10/11/2017

LAB 1
Sphere

Test Sample Description

Catalog Number: P5774-8230K
Description: 5" 17W LED Down-Light Cylinder

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 00:30
Time To Stabilize: 0:20
Total Operating Time: 2:15

Input Voltage (Volts): 120.0
Input Current (Amps): 0.152
Input Wattage (Watts): 17.0
Ambient Temp (°C): 25.2

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 2:00
Time To Stabilize: 1:32
Total Operating Time: 3:32

Input Voltage (Volts): 120.0
Input Current (Amps): 0.150
Input Wattage (Watts): 16.7
Ambient Temp (°C): 24.0
PF @ 120V: 0.934
THD @ 120V (%): 39.6



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



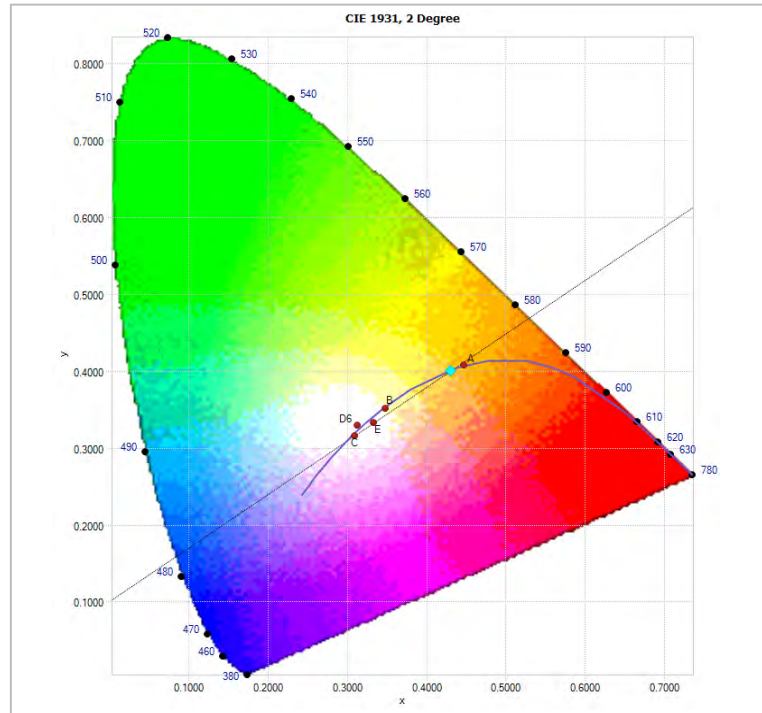
This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



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

Efficacy: 35.3 LPW S/P Ratio: 1.5 LM/LM

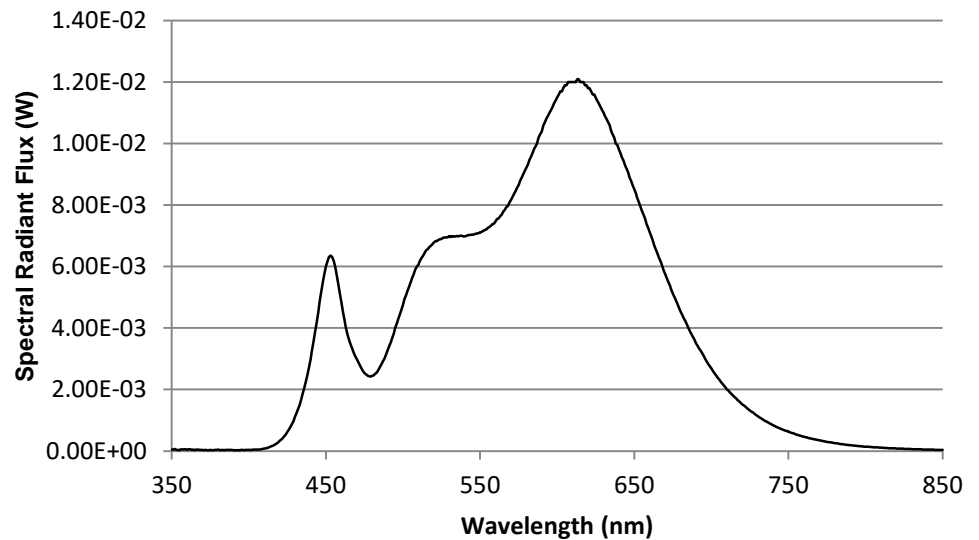
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	1.94	watts
Φ(v)	589	lumens
Φ(v')	867	lm'
Chrom x	0.4301	
Chrom y	0.4006	
Chrom u	0.2477	
Chrom v	0.346	
Duv	0.001	
Chrom u'	0.2477	
Chrom v'	0.519	
CCT	3087	K
Purity	49.3	%
λ (dom)	582.6	nm
FWHM	158.3	nm
λ (peak)	613	nm
λ (center)	588.7	nm
λ (centroid)	586.1	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000455898	
Correlation	0.0054	
R1	94.3	
R2	97.3	
R3	98.5	
R4	95.5	
R5	94.8	
R6	96.8	
R7	90.1	
R8	77.7	
R9	49.0	
R10	93.9	
R11	96.9	
R12	85.6	
R13	95.6	
R14	99.5	

Spectral Distribution of Radiant Flux



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ISSUE DATE: 10/10/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5774-8230K
LUMINAIRE: 5" 17W LED Down-Light Cylinder
LAMP: 1- 3000K LED Module
MOUNTING: Pendant
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

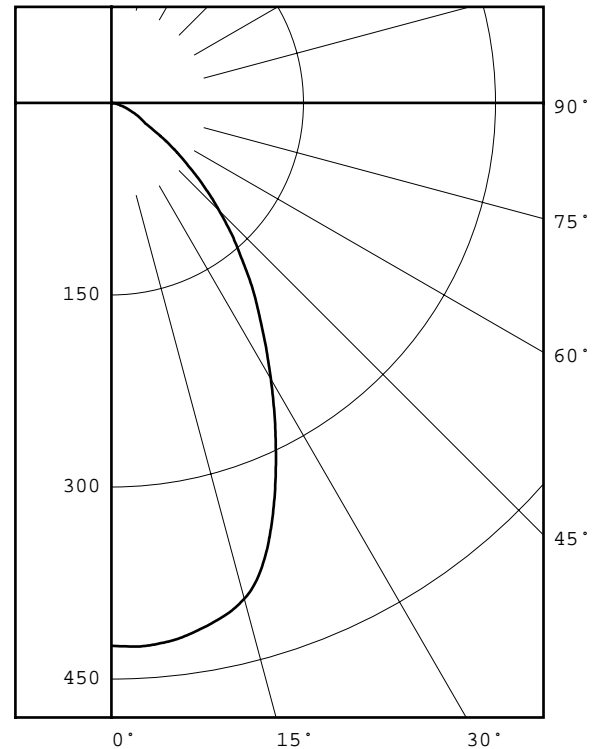
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DEG	CANDELA	LUMENS
0	424	
5	424	40
15	401	112
25	304	139
35	201	126
45	119	92
55	52	47
65	21	20
75	7	8
85	1	2
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	291	49.6
0- 40	417	71.1
0- 60	556	94.8
0- 90	587	100.0
90-180	0	0.0
0-180	587	100.0

TOTAL INPUT WATTS = 16.9
EFFICACY = 34.7 Lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.0
LUMINOUS DIAMETER: 5.000

LUMINANCE DATA IN CANDELA/SQ METER	
ANGLE	AVERAGE
IN DEG	
45	13280.
55	7154.
65	3921.
75	2134.
85	905.





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CANDELA DISTRIBUTION

	0.0
0.0	424
2.5	425
5.0	424
7.5	421
10.0	416
12.5	410
15.0	401
17.5	385
20.0	361
22.5	333
25.0	304
27.5	276
30.0	249
32.5	224
35.0	201
37.5	180
40.0	158
42.5	139
45.0	119
47.5	101
50.0	83
52.5	67
55.0	52
57.5	37
60.0	29
62.5	25
65.0	21
67.5	16
70.0	13
72.5	10
75.0	7
77.5	6
80.0	4
82.5	2
85.0	1
87.5	1
90.0	0



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ZONAL LUMEN SUMMARY

0- 5	10.
5- 10	30.
10- 15	49.
15- 20	63.
20- 25	70.
25- 30	70.
30- 35	66.
35- 40	60.
40- 45	51.
45- 50	41.
50- 55	29.
55- 60	18.
60- 65	12.
65- 70	8.
70- 75	5.
75- 80	3.
80- 85	1.
85- 90	0.



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	10
5- 10	30
10- 15	49
15- 20	63
20- 25	70
25- 30	70
30- 35	66
35- 40	60
40- 45	51
45- 50	41
50- 55	29
55- 60	18
60- 65	12
65- 70	8
70- 75	5
75- 80	3
80- 85	1
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	152
0- 30	291
0- 40	417
0- 50	509
0- 60	556
0- 70	577
0- 80	585
0- 90	587
0-100	587
0-110	587
0-120	587
0-130	587
0-140	587
0-150	587
0-160	587
0-170	587
0-180	587



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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	112	109	105	103	103	109	106	104	101	102	100	98	98	97	95	95	94	92	90	90
2	105	99	94	89	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81	81
3	98	90	84	79	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73	73
4	91	82	75	70	70	89	81	75	70	79	73	69	77	72	68	75	70	67	65	65
5	86	75	68	63	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59	59
6	80	70	62	57	57	79	69	62	57	67	61	56	65	60	56	64	59	56	54	54
7	75	64	57	52	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49	49
8	71	60	53	48	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45	45
9	67	56	49	44	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42	42
10	63	52	45	41	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39	39

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>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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