

Project Number
17.02759



Date
10/12/2017
Rev 1: 11/14/2017

LAB 1
Sphere

Test Sample Description

Catalog Number: P5641-3130K
Description: 6" 29W LED Down-Light Cylinder

Revision 1: Changed report format from roadway

Photometry

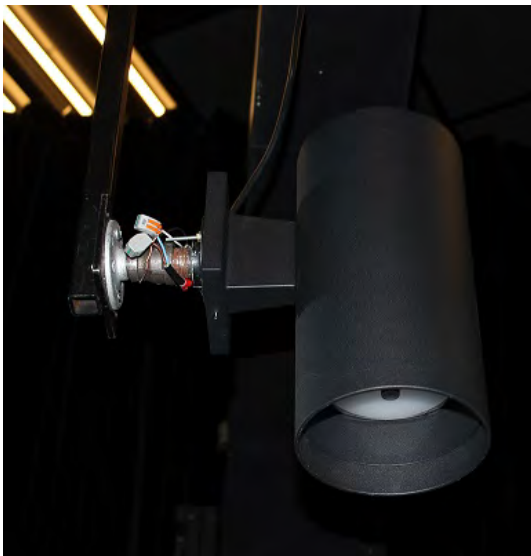
Test Method: IES LM-79-08 § 10
Preburn Time: 00:05
Time To Stabilize: 1:15
Total Operating Time: 3:20

Input Voltage (Volts): 120.0
Input Current (Amps): 0.264
Input Wattage (Watts): 29.6
Ambient Temp (°C): 25.2
PF @ 120V: 0.934

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 2:00
Time To Stabilize: 1:28
Total Operating Time: 3:28

Input Voltage (Volts): 120.0
Input Current (Amps): 0.257
Input Wattage (Watts): 28.6
Ambient Temp (°C): 24.0



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



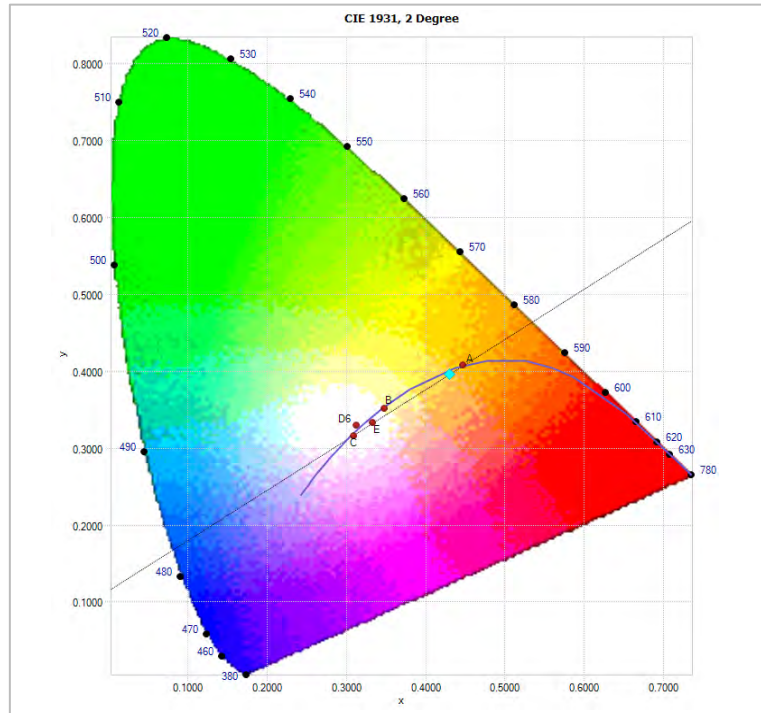
This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



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

Efficacy: 30.8 LPW S/P Ratio: 1.4 LM/LM

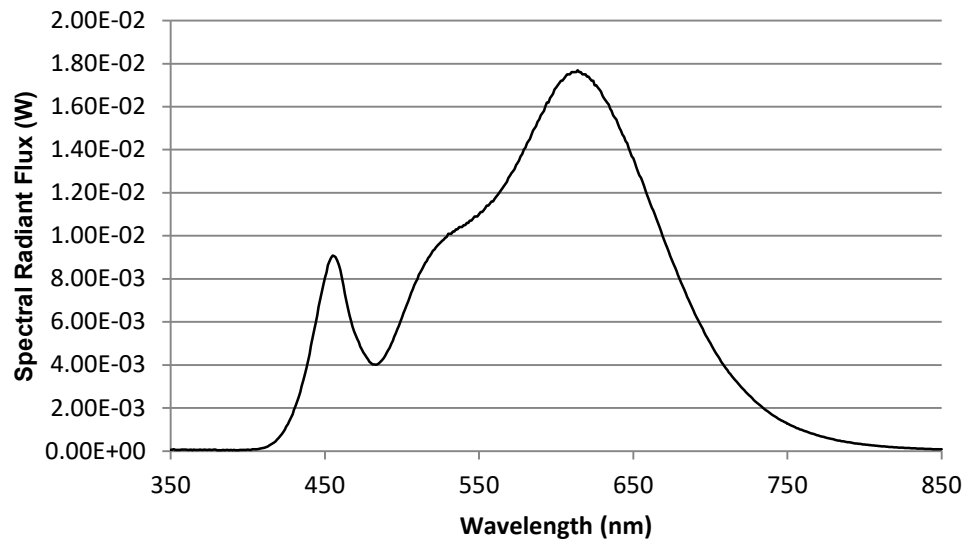
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	3.01	watts
$\Phi(v)$	881	lumens
$\Phi(v')$	1268	lm'
Chrom x	0.4304	
Chrom y	0.3968	
Chrom u	0.2495	
Chrom v	0.345	
Duv	0.0021	
Chrom u'	0.2495	
Chrom v'	0.5175	
CCT	3050	K
Purity	48.3	%
λ (dom)	583.4	nm
FWHM	159.5	nm
λ (peak)	613.8	nm
λ (center)	595.6	nm
λ (centroid)	590.0	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.002036582	
Correlation	0.0054	
R1	92.5	
R2	96.4	
R3	98.0	
R4	92.1	
R5	92.4	
R6	95.4	
R7	89.9	
R8	78.1	
R9	51.1	
R10	90.8	
R11	93.4	
R12	82.5	
R13	93.9	
R14	98.8	

Spectral Distribution of Radiant Flux



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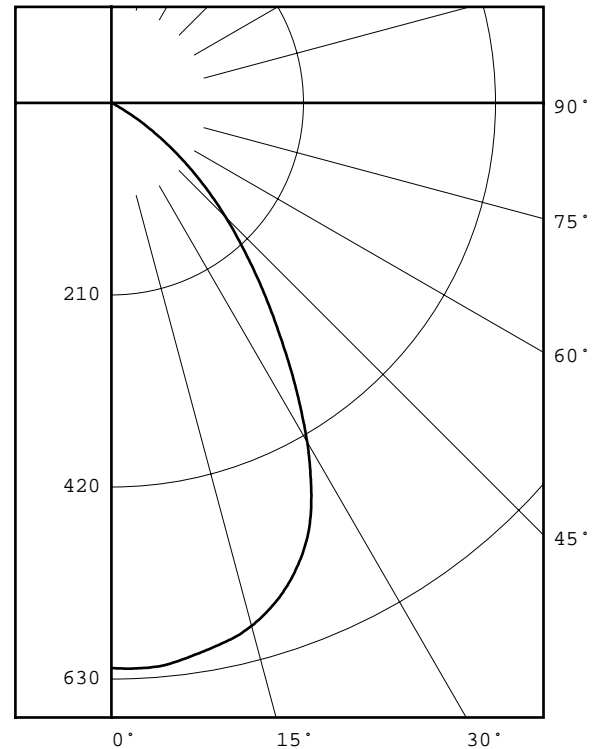
REPORT NUMBER: 17.02759
ISSUE DATE: 10/11/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5641-3130K
LUMINAIRE: 6" 29W LED Down-Light Cylinder
LAMP: 1- 3000K LED Module
MOUNTING: Wall
DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

PAGE: 3 OF 8

DEG	CANDELA	LUMENS
	0.0	
0	618	
5	618	59
15	592	166
25	512	232
35	331	207
45	177	137
55	61	56
65	5	7
75	2	2
85	0	0
90	0	
95	0	0
105	0	0
115	0	0
125	0	0
135	0	0
145	0	0
155	0	0
165	0	0
175	0	0
180	0	

ZONAL ZONE	LUMEN LUMENS	SUMMARY	%FIXT
0- 30	457		52.8
0- 40	664		76.7
0- 60	857		99.0
0- 90	866		100.0
90-120	0		0.0
90-130	0		0.0
90-150	0		0.0
90-180	0		0.0
0-180	866		100.0

EFFICACY = 29.3 Lm/W
CIE TYPE - DIRECT





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LUMINAIRE SPACING CRITERION = 1.1

LUMINOUS DIAMETER: 6.000

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE

IN DEG	
45	13717.
55	5828.
65	648.
75	423.
85	0.



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CANDELA DISTRIBUTION

0.0	618	160.0	0
2.0	619	162.5	0
2.5	619	165.0	0
5.0	618	167.5	0
7.5	613	170.0	0
10.0	607	172.5	0
12.5	601	175.0	0
15.0	592	177.5	0
17.5	579	180.0	0
20.0	562		
22.5	540		
25.0	512		
27.5	473		
30.0	428		
32.5	379		
35.0	331		
37.5	287		
40.0	247		
42.5	210		
45.0	177		
47.5	145		
50.0	115		
52.5	87		
55.0	61		
57.5	38		
60.0	18		
62.5	6		
65.0	5		
67.5	5		
70.0	3		
72.5	3		
75.0	2		
77.5	2		
80.0	1		
82.5	0		
85.0	0		
87.5	0		
90.0	0		
92.5	0		
95.0	0		
97.5	0		
100.0	0		
102.5	0		
105.0	0		
107.5	0		
110.0	0		
112.5	0		
115.0	0		
117.5	0		
120.0	0		
122.5	0		
125.0	0		
127.5	0		
130.0	0		
132.5	0		
135.0	0		
137.5	0		
140.0	0		
142.5	0		
145.0	0		
147.5	0		
150.0	0		
152.5	0		
155.0	0		
157.5	0		



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	15
5- 10	44
10- 15	71
15- 20	95
20- 25	113
25- 30	119
30- 35	111
35- 40	96
40- 45	78
45- 50	59
50- 55	38
55- 60	18
60- 65	4
65- 70	2
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	59
0- 20	225
0- 30	457
0- 40	664
0- 50	801
0- 60	857
0- 70	863
0- 80	866
0- 90	866
0-100	866
0-110	866
0-120	866
0-130	866
0-140	866
0-150	866
0-160	866
0-170	866
0-180	866



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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	116	111	111	111	111	111	106	106	106	106	102	102	102	102	100
1	113	109	107	104	104	110	107	105	102	102	103	101	99	99	98	96	99	98	96	96	96	95	94	92
2	106	100	96	92	92	104	98	94	91	91	95	92	89	92	89	87	92	89	87	89	87	85	83	83
3	99	92	86	81	81	97	90	85	81	81	88	83	79	85	81	78	85	81	78	83	80	77	75	75
4	93	84	78	73	73	91	83	77	73	73	81	76	72	79	74	71	79	74	71	77	73	70	68	68
5	87	78	71	66	66	86	77	70	66	66	75	69	65	73	68	64	73	68	64	71	67	64	62	62
6	82	72	65	60	60	80	71	64	60	60	69	63	59	68	63	59	68	63	59	66	62	58	57	57
7	77	66	60	55	55	76	66	59	54	54	64	58	54	63	58	54	63	58	54	62	57	54	52	52
8	73	62	55	50	50	71	61	55	50	50	60	54	50	59	53	50	59	53	50	58	53	49	48	48
9	69	58	51	46	46	67	57	51	46	46	56	50	46	55	50	46	55	50	46	54	49	46	44	44
10	65	54	47	43	43	64	53	47	43	43	52	47	43	52	46	42	52	46	42	51	46	42	41	41

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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Date
10/12/2017

Rev 1: 11/15/2017

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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