

Project Number
17.02771



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

Lab 4
Sphere

Test Sample Description

Catalog Number: P5741-3130K

Description: 6" Diameter Surface-Mount Cylinder w/ Opal Lens

*DUT did not meet photometric stabilization criteria. Data trended straight and steady, but peak to peak values within trend varied about 0.7%. Test started after trending for 30 minutes.

Revision 1: Changed report format from roadway

Photometry

Test Method: IES LM-79-08 § 10

Preburn Time: 0:50

Time To Stabilize: 0:30*

Total Operating Time: 2:25

Input Voltage (Volts): 119.9

Input Current (Amps): 0.259

Input Wattage (Watts): 28.9

Ambient Temp (°C): 24.9

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1

Preburn Time: 1:00

Time To Stabilize: 1:13

Total Operating Time: 2:13

Input Voltage (Volts): 120.0

Input Current (Amps): 0.256

Input Wattage (Watts): 28.6

Ambient Temp (°C): 24.0

PF @ 120V: 0.935

THD @ 120V (%): 39.0



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

NVLAP[®]
TESTING
NVLAP LAB CODE: 201003-0


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Lamp Cat#: NA

Lamp Desc: 40 - NA 3000K LEDs

Driver Desc: NA

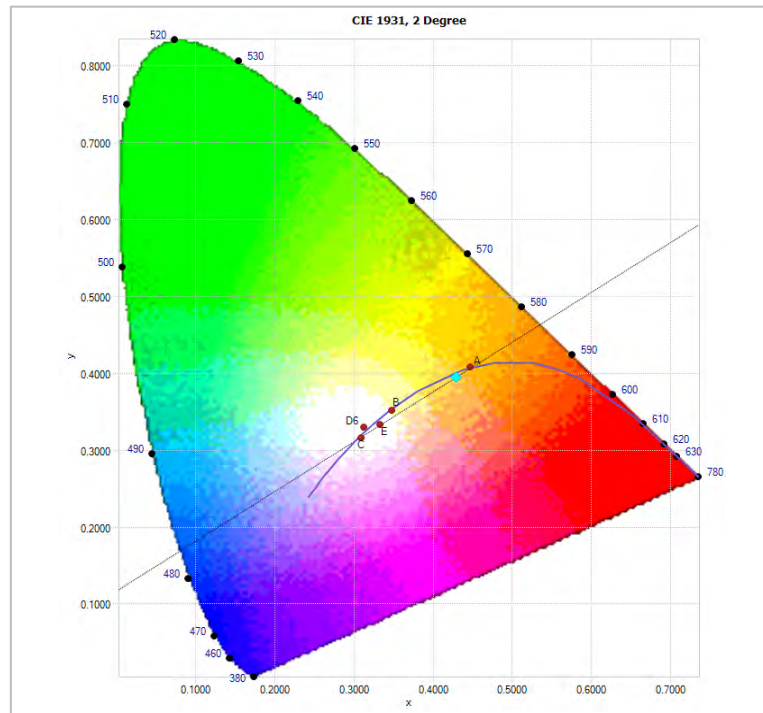
Efficacy: 30.1 LPW

S/P Ratio: 1.5 LM'/LM

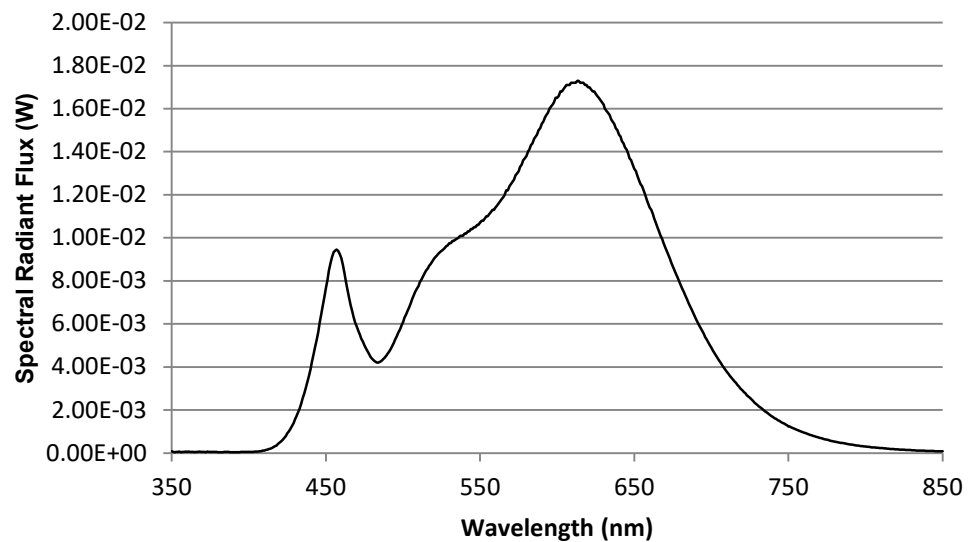
Spectral Results

Name	Value	Unit
Φ	2.95	watts
$\Phi(v)$	861	lumens
$\Phi(v')$	1253	lm'
Chrom x	0.4295	
Chrom y	0.3956	
Chrom u	0.2494	
Chrom v	0.3446	
Duv	0.0024	
Chrom u'	0.2494	
Chrom v'	0.5169	
CCT	3056	K
Purity	47.7	%
λ (dom)	583.5	nm
FWHM	158.7	nm
λ (peak)	613.3	nm
λ (center)	595.9	nm
λ (centroid)	589.9	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.002384958	
Correlation	0.0054	
R1	92.8	
R2	97.2	
R3	97.7	
R4	91.8	
R5	92.7	
R6	95.8	
R7	89.3	
R8	77.8	
R9	51.4	
R10	92.6	
R11	93.1	
R12	82.0	
R13	94.4	
R14	99.4	

Chromaticity Diagram



Spectral Distribution of Radiant Flux



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



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REPORT NUMBER: 17.02771
ISSUE DATE: 10/10/2017 11:45:27
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5741-3130K
LUMINAIRE: 6" Diameter Surface-Mount Cylinder w/ Opal Lens
LAMP: 40- 3000K LEDs

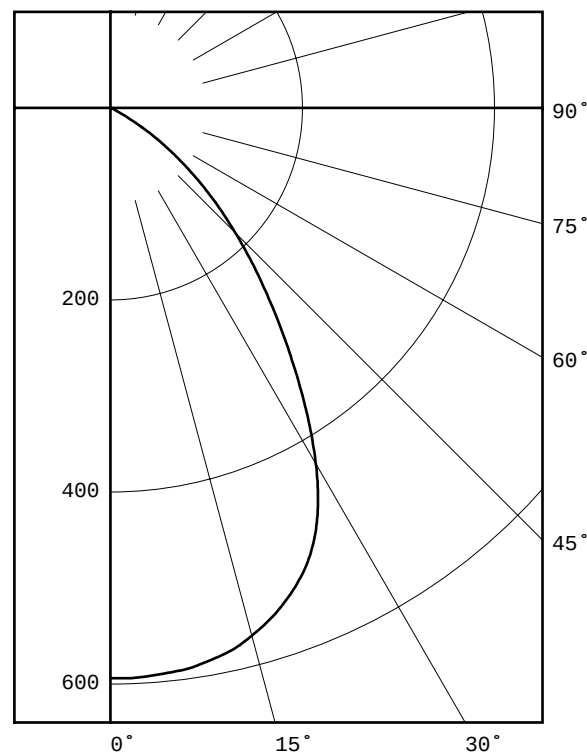
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DEG	CANDELA	LUMENS
0	594	
5	592	56
15	569	160
25	500	227
35	337	211
45	184	143
55	71	64
65	6	9
75	3	3
85	1	1
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	444	50.8
0- 40	654	74.9
0- 60	861	98.5
0- 90	874	100.0
90-180	0	0.0
0-180	874	100.0

TOTAL INPUT WATTS = 28.887
EFFICACY = 30.3 Lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.1
LUMINOUS DIAMETER: 6.000

LUMINANCE DATA IN CANDELA/SQ METER	
ANGLE	AVERAGE
IN DEG	
45	14260.
55	6783.
65	778.
75	635.
85	629.





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CANDELA DISTRIBUTION

	0.0
0.0	594
2.5	594
5.0	592
7.5	590
10.0	585
12.5	579
15.0	569
17.5	557
20.0	542
22.5	524
25.0	500
27.5	468
30.0	428
32.5	383
35.0	337
37.5	294
40.0	254
42.5	218
45.0	184
47.5	153
50.0	124
52.5	96
55.0	71
57.5	47
60.0	27
62.5	12
65.0	6
67.5	5
70.0	4
72.5	3
75.0	3
77.5	2
80.0	1
82.5	1
85.0	1
87.5	0
90.0	0



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ZONAL LUMEN SUMMARY

0- 5	14.
5- 10	42.
10- 15	69.
15- 20	92.
20- 25	109.
25- 30	118.
30- 35	112.
35- 40	98.
40- 45	81.
45- 50	62.
50- 55	42.
55- 60	22.
60- 65	7.
65- 70	3.
70- 75	2.
75- 80	1.
80- 85	1.
85- 90	0.



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**5-DEGREE
ZONAL LUMEN SUMMARY**

0- 5	14
5- 10	42
10- 15	69
15- 20	92
20- 25	109
25- 30	118
30- 35	112
35- 40	98
40- 45	81
45- 50	62
50- 55	42
55- 60	22
60- 65	7
65- 70	3
70- 75	2
75- 80	1
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	56
0- 20	216
0- 30	444
0- 40	654
0- 50	797
0- 60	861
0- 70	871
0- 80	873
0- 90	874
0-100	874
0-110	874
0-120	874
0-130	874
0-140	874
0-150	874
0-160	874
0-170	874
0-180	874



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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	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	104	110	107	104	102	103	101	99	99	98	96	96	94	93	91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	83
3	99	91	85	81	97	90	84	80	87	83	79	85	81	77	82	79	76	74
4	93	84	77	72	91	82	76	72	80	75	71	78	74	70	76	72	69	67
5	87	77	70	65	85	76	69	65	74	68	64	72	67	63	71	66	63	61
6	81	71	64	59	80	70	63	59	68	62	58	67	62	58	65	61	57	56
7	76	66	58	54	75	65	58	53	63	57	53	62	57	53	61	56	52	51
8	72	61	54	49	71	60	53	49	59	53	49	58	52	48	57	52	48	47
9	68	57	50	45	67	56	49	45	55	49	45	54	49	45	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

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 : Osram ST8-HA4-250-840 22 W/4000 K
Lamp Number: RM B6-28
Ballast: Vossloh Schwabe LN 36.149
Ballast Number: RM B6-28
Calibration Voltage/Frequency: 220Vac / 50hz
Total Luminous Flux: 2463 Lumens
Calibration Date: 01/19/2017

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	LMT/GO-DS 1600 Lab 4- Test Dist.: 31.0'	10B6231	2/17/2019
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27074V	11/2/2017
<i>Power Source</i>	Chroma / 61604	616040003897	10/27/2017
<i>Thermometer</i>	LMT / ATS-4Ch	10B623-3	12/14/2017

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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