

Project Number
16.00020



Date
1/8/2016

LAB #5
Sphere

Test Sample Description

Catalog Number: P5642-3030K9

Description: P5642-3030K9 6" diameter up/down wall mount LED cylinder with LEDs moved closer to opening.

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 2:00
Time To Stabilize: 1:44
Total Operating Time: 6:03

Input Voltage (Volts): 120.0
Input Current (Amps): 0.522
Input Wattage (Watts): 58.0
Ambient Temp (°C): 25.0

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 1:30
Time To Stabilize: 1:57
Total Operating Time: 3:27

Input Voltage (Volts): 120.0
Input Current (Amps): 0.522
Input Wattage (Watts): 58.2
Ambient Temp (°C): 24.6



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Checked (sphere): B. LEE
Checked (photometry): B. FLAUM/ R. WILLIAMS
Approved: M. WASHBURN

NVLAP[®]
NVLAP LAB CODE: 201003-0

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

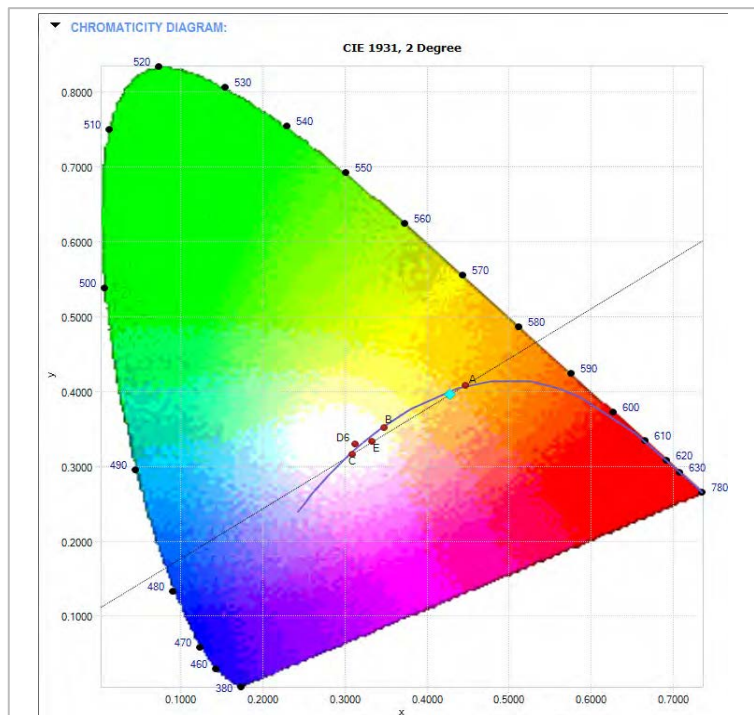


Lamp Cat#: 93058664-3130K9
 Lamp Desc: 40 - Nichia 3000K LEDs
 Driver Desc: N/A

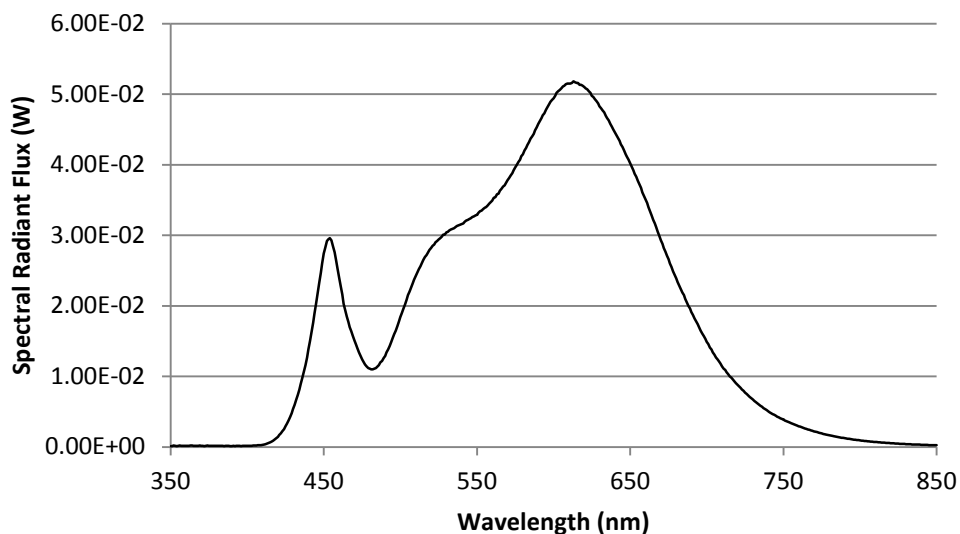
Efficacy: 44.9 LPW S/P Ratio: 1.4 LM'/LM

Spectral Results

Name	Value	Unit
Φ	8.93	watts
$\Phi(v)$	2613	lumens
$\Phi(v')$	3785	lm'
Chrom x	0.4279	
Chrom y	0.3965	
Chrom u	0.248	
Chrom v	0.3447	
Duv	0.0023	
Chrom u'	0.248	
Chrom v'	0.517	
CCT	3093	K
Purity	47.4	%
λ (dom)	583.1	nm
FWHM	162.7	nm
λ (peak)	613.3	nm
λ (center)	594.9	nm
λ (centroid)	589.9	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.001778266	
Correlation	0.0054	
R1	92.5	
R2	95.8	
R3	97.4	
R4	92.4	
R5	92.2	
R6	94.7	
R7	90.6	
R8	79.0	
R9	52.2	
R10	89.3	
R11	93.5	
R12	80.3	
R13	93.6	
R14	98.2	



Spectral Distribution of Radiant Flux



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PREPARED FOR: PROGRESS

CATALOG NUMBER: P5642-3030K9

LUMINAIRE: P5642-3030K9 6" diameter up/down wall mount LED cylinder with
LEDs moved closer to opening.

LAMP CAT. NO.: 93058664-3130

LAMP: 40-Nichia LEDs 3000K

REFRACTOR: #lens 93047259-3 Sabic polycarbonate LUX7430C-NAT

MOUNTING: wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED.

DEG	CANDELA	LUMENS
0	652	
5	652	62
15	646	182
25	564	257
35	396	249
45	263	203
55	149	138
65	100	98
75	52	55
85	16	18
90	1	
95	14	16
105	52	54
115	99	97
125	147	138
135	267	206
145	410	257
155	598	272
165	700	197
175	697	67
180	692	

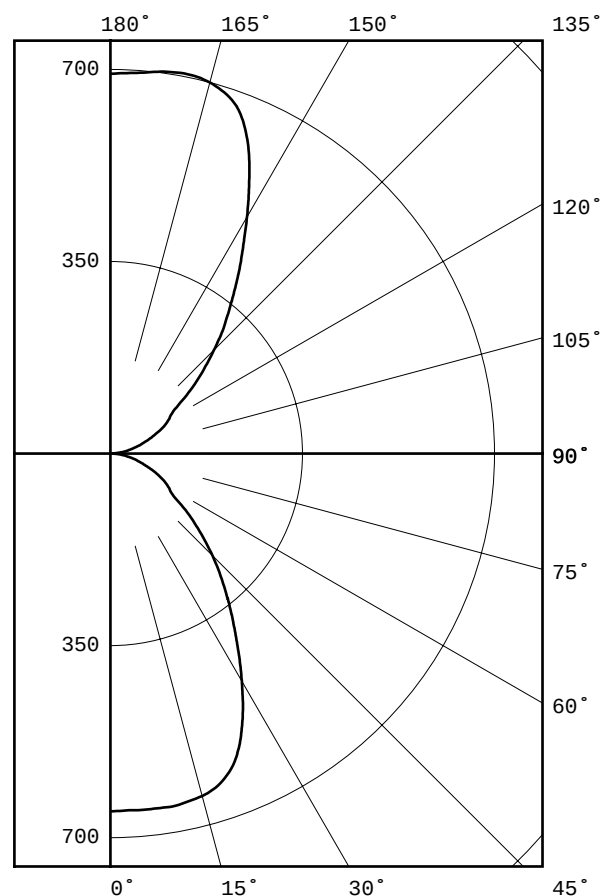
ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	501	19.5
0- 40	750	29.2
0- 60	1091	42.5
0- 90	1262	49.2
90-120	168	6.5
90-130	306	11.9
90-150	769	30.0
90-180	1304	50.8
0-180	2566	100.0

TOTAL INPUT WATTS = 58.0

EFFICACY = 44.2 Lm/W

CIE TYPE - DIRECT-INDIRECT

LUMINAIRE SPACING CRITERION = 1.1





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LUMINOUS DIAMETER: 6.000

LUMINANCE DATA IN CANDELA/SQ METER
ANGLE AVERAGE
IN DEG

45	20382.
55	14236.
65	12967.
75	11010.
85	10060.



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CANDELA DISTRIBUTION

	0.0
0.0	652
5.0	652
10.0	653
15.0	646
20.0	623
25.0	564
30.0	479
35.0	396
40.0	326
45.0	263
50.0	204
55.0	149
60.0	122
65.0	100
70.0	73
75.0	52
80.0	33
85.0	16
90.0	1
95.0	14
100.0	32
105.0	52
110.0	73
115.0	99
120.0	122
125.0	147
130.0	205
135.0	267
140.0	334
145.0	410
150.0	498
155.0	598
160.0	673
165.0	700
170.0	705
175.0	697
180.0	692



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ZONAL LUMEN SUMMARY

0- 5	16.
5- 10	47.
10- 15	77.
15- 20	105.
20- 25	125.
25- 30	132.
30- 35	128.
35- 40	120.
40- 45	109.
45- 50	94.
50- 55	77.
55- 60	62.
60- 65	54.
65- 70	44.
70- 75	33.
75- 80	23.
80- 85	13.
85- 90	5.
90- 95	4.
95-100	12.
100-105	22.
105-110	32.
110-115	43.
115-120	54.
120-125	61.
125-130	76.
130-135	95.
135-140	111.
140-145	124.
145-150	133.
150-155	138.
155-160	134.
160-165	113.
165-170	83.
170-175	50.
175-180	17.



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**5-DEGREE
ZONAL LUMEN SUMMARY**

0- 5	16
5- 10	47
10- 15	77
15- 20	105
20- 25	125
25- 30	132
30- 35	128
35- 40	120
40- 45	109
45- 50	94
50- 55	77
55- 60	62
60- 65	54
65- 70	44
70- 75	33
75- 80	23
80- 85	13
85- 90	5
90- 95	4
95-100	12
100-105	22
105-110	32
110-115	43
115-120	54
120-125	61
125-130	76
130-135	95
135-140	111
140-145	124
145-150	133
150-155	138
155-160	134
160-165	113
165-170	83
170-175	50
175-180	17

**10-DEGREE
ZONAL LUMEN SUMMARY**

0- 10	62
0- 20	244
0- 30	501
0- 40	750
0- 50	953
0- 60	1091
0- 70	1189
0- 80	1244
0- 90	1262
0-100	1278
0-110	1333
0-120	1430
0-130	1567
0-140	1774
0-150	2031
0-160	2303
0-170	2499
0-180	2566



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	94	91	87	90	87	84	81	74	71	69	61	60	58	50	49	48	43
2	90	83	77	72	83	77	72	68	65	62	59	55	52	50	45	43	42	37
3	83	74	67	61	76	68	62	58	58	54	50	49	46	43	40	38	36	32
4	76	66	58	53	70	61	55	50	52	47	44	44	41	38	37	34	32	28
5	70	59	51	46	65	55	48	43	47	42	38	40	36	33	34	31	29	25
6	65	53	46	40	60	50	43	38	43	38	34	37	33	30	31	28	26	23
7	60	49	41	36	56	45	39	34	39	34	30	34	30	27	28	25	23	21
8	56	44	37	32	52	41	35	30	36	31	27	31	27	24	26	23	21	19
9	52	41	33	29	48	38	32	27	33	28	24	29	25	22	24	21	19	17
10	49	37	30	26	45	35	29	25	31	26	22	27	23	20	23	20	18	16

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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1/8/2016

Goniophotometer Calibration

Calibration Lamp: GE 1000W, 120V, T6, CL (FEL)

Lamp Number: ITL78966-1000-14

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 23413.0 Lumens

Calibration Date: 08/04/2015

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	11/10/2016
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	11/10/2016

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	11/10/2016
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	11/10/2016
<i>Power Supply</i>	Chroma / 61602	616020002113	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	031159372	11/10/2016
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148605	11/10/2016
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

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