

Project Number
17.02585



Date
9/21/2017

LAB 5
Sphere

Test Sample Description

Catalog Number: P563000-147-30K
Description: 3" Wall-Mount Cylinder, Satin Nickel w/ Textured, Opal Glass Lens; Tested as Down-Light

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 0:00
Time To Stabilize: 0:45
Total Operating Time: 1:30

Input Voltage (Volts): 120.3
Input Current (Amps): 0.099
Input Wattage (Watts): 11.8
Ambient Temp (°C): 25.3

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 1:00
Time To Stabilize: 0:58
Total Operating Time: 1:58

Input Voltage (Volts): 120.0
Input Current (Amps): 0.099
Input Wattage (Watts): 11.8
Ambient Temp (°C): 24.0



Hubbell Lighting, Inc.

701 Millennium Boulevard
Greenville, SC 29607
www.hubbellighting.com

Checked (sphere): B. LEE
Checked (photometry): R. WILLIAMS
Approved: P. McCARTHY



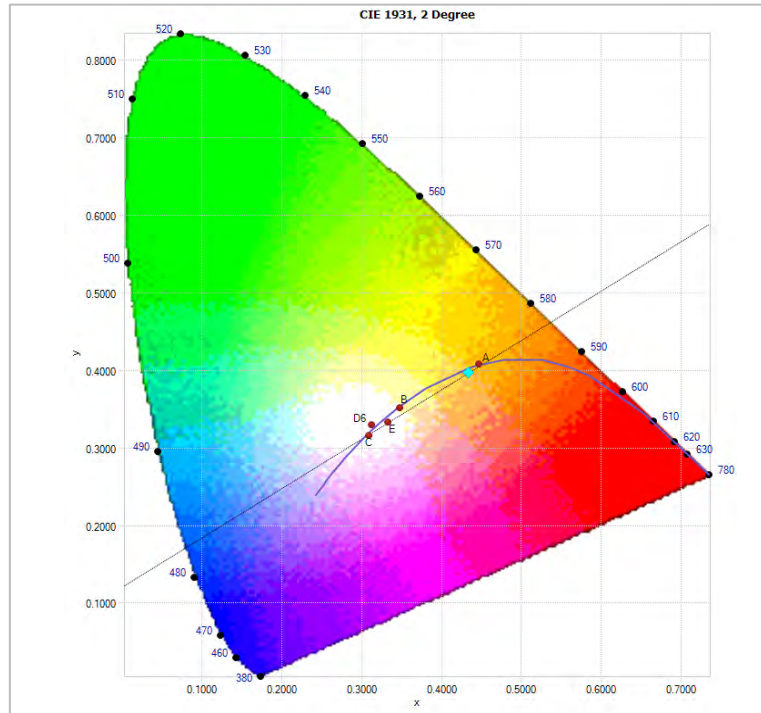


Lamp Cat#: NF2L757GRT-V1
 Lamp Desc: 22 - Nichia 3000K LEDs
 Driver Desc: NA

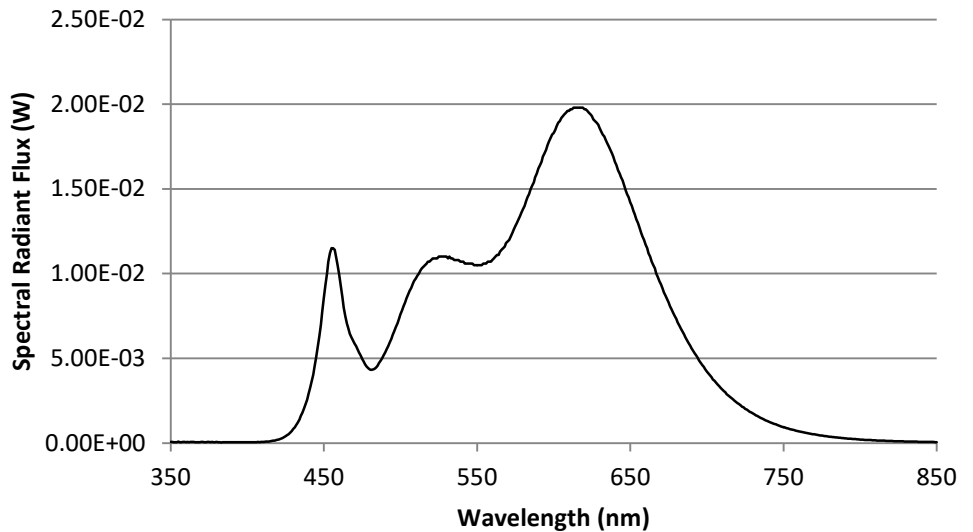
Efficacy: 77.7 LPW S/P Ratio: 1.5 LM/LM

Spectral Results

Name	Value	Unit
Φ	3.09	watts
$\Phi(v)$	917	lumens
$\Phi(v')$	1377	lm'
Chrom x	0.4337	
Chrom y	0.3973	
Chrom u	0.2514	
Chrom v	0.3455	
Duv	0.0024	
Chrom u'	0.2514	
Chrom v'	0.5182	
CCT	2997	K
Purity	49.4	%
λ (dom)	583.7	nm
FWHM	156.2	nm
λ (peak)	615.2	nm
λ (center)	589.4	nm
λ (centroid)	587.4	nm
SDCM	Cool White	
RA	94	
Corr. Coef.	0.0023053	
Correlation	0.0054	
R1	98.6	
R2	97.6	
R3	95.7	
R4	99.0	
R5	98.2	
R6	91.4	
R7	90.0	
R8	82.3	
R9	62.6	
R10	95.2	
R11	92.2	
R12	84.7	
R13	97.9	
R14	98.5	



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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PREPARED FOR: PROGRESS

CATALOG NUMBER: P563000-147-30K

LUMINAIRE: 3" Wall-Mount Cylinder, Satting Nickel w/
Textured, Opal Glass Lens; Tested as Down-Light

LAMP CAT. NO.: NF2L757GRT-V1

LAMP: 22- Nichia 3000K

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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DEG	CANDELA	LUMENS
0	433	
5	433	41
15	418	118
25	391	180
35	341	211
45	236	181
55	118	108
65	45	46
75	14	15
85	2	3
90	0	

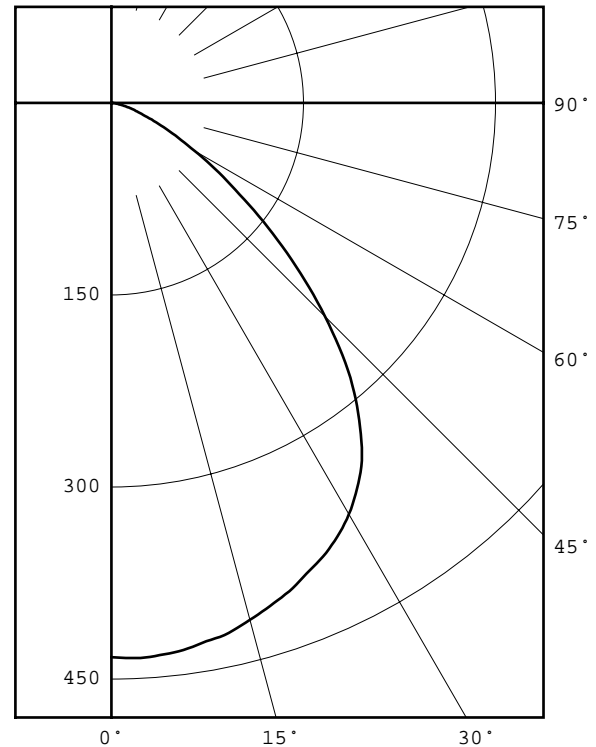
ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	339	37.6
0- 40	550	60.9
0- 60	839	92.9
0- 90	903	100.0
90-180	0	0.0
0-180	903	100.0

EFFICACY = 76.5 lm/W
 CIE TYPE - DIRECT
 LUMINAIRE SPACING CRITERION = 1.26
 PLANE : 0-DEG 90-DEG
 SHIELDING ANGLES : 90 90
 LUMINOUS DIAMETER: 3.000

LUMINANCE DATA IN CANDELA/SQ M

ANGLE	AVERAGE
IN DEG	
45	73186.
55	45112.
65	23349.
75	11861.
85	5032.





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CANDELA DISTRIBUTION

0.0	433
2.5	434
5.0	433
7.5	431
10.0	427
12.5	424
15.0	418
17.5	412
20.0	406
22.5	398
25.0	391
27.5	382
30.0	371
32.5	357
35.0	341
37.5	319
40.0	295
42.5	267
45.0	236
47.5	205
50.0	174
52.5	145
55.0	118
57.5	96
60.0	75
62.5	59
65.0	45
67.5	34
70.0	25
72.5	19
75.0	14
77.5	9
80.0	6
82.5	4
85.0	2
87.5	1
90.0	0



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		10
5- 10		31
10- 15		50
15- 20		68
20- 25		83
25- 30		97
30- 35	105	
35- 40	106	
40- 45	98	
45- 50	83	
50- 55	63	
55- 60	44	
60- 65	29	
65- 70	17	
70- 75	10	
75- 80	5	
80- 85	2	
85- 90	1	

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		41
10- 20		118
20- 30		180
30- 40		211
40- 50		181
50- 60		108
60- 70		46
70- 80		15
80- 90		3



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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	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89	89
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	78	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68	68
4	88	78	71	65	86	77	70	65	75	68	64	72	67	63	70	66	62	60	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53	53
6	76	64	57	51	74	64	56	51	62	55	50	60	54	50	59	54	49	48	48
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	43	43
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39	39
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32

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 TEST SAMPLE.

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9/21/2017

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: 09/08/2016

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	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	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	031159372	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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