

Project Number  
17.02589



Date  
10/5/2017

LAB 1  
Sphere

### Test Sample Description

Catalog Number: P563001-147-30K  
Description: 3" Wall-Mount Up/Down Cylinder - Satin Nickel w/ Textured, Opal Glass Refractor

### Photometry

Test Method: IES LM-79-08 § 10  
Preburn Time: 08:30  
Time To Stabilize: 0:60  
Total Operating Time: 9:48  
  
Input Voltage (Volts): 119.9  
Input Current (Amps): 0.201  
Input Wattage (Watts): 23.9  
Ambient Temp (°C): 25.4

### Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1  
Preburn Time: 8:00  
Time To Stabilize: 1:10  
Total Operating Time: 9:10  
  
Input Voltage (Volts): 120.0  
Input Current (Amps): 0.199  
Input Wattage (Watts): 23.8  
Ambient Temp (°C): 24.0



### Hubbell Lighting, Inc.

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

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



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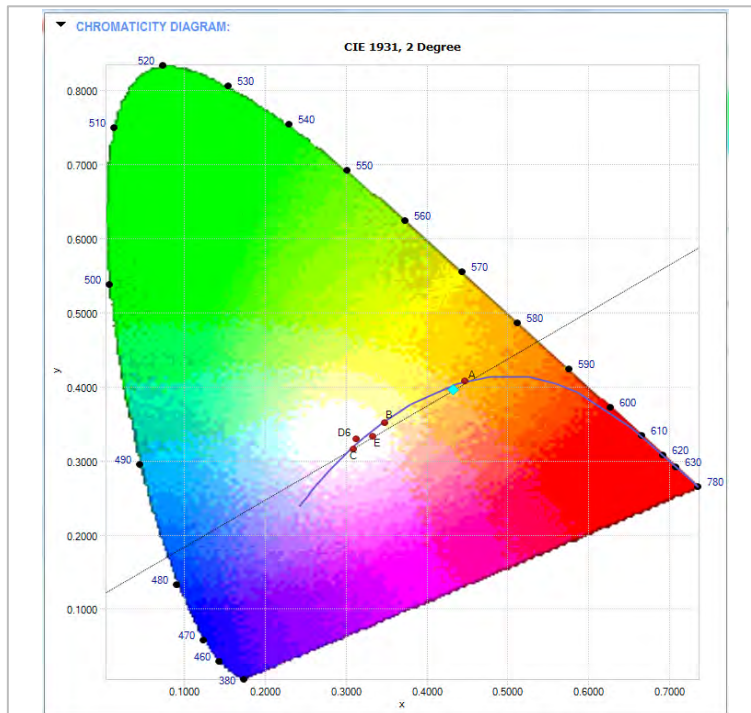


Lamp Cat#: NF2L757GRT-V1  
 Lamp Desc: 44 - Nichia 3000K LEDs  
 Driver Desc: NA

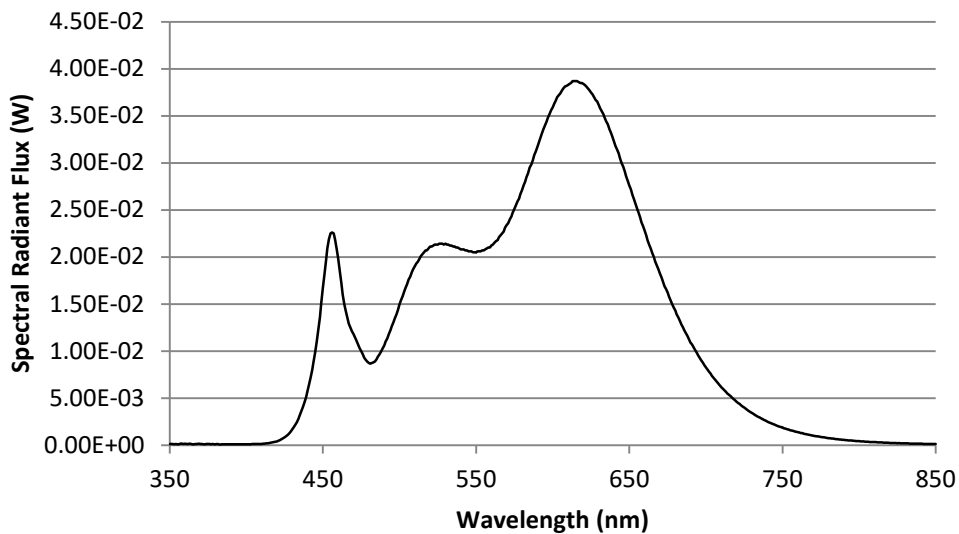
Efficacy: 75.4 LPW      S/P Ratio: 1.5 LM/LM

**Spectral Results**

Name	Value	Unit
Φ	6.04	watts
Φ(v)	1794	lumens
Φ(v')	2703	lm'
Chrom x	0.4329	
Chrom y	0.3965	
Chrom u	0.2513	
Chrom v	0.3452	
Duv	0.0026	
Chrom u'	0.2513	
Chrom v'	0.5177	
CCT	3004	K
Purity	48.9	%
λ (dom)	583.8	nm
FWHM	156.2	nm
λ (peak)	614.5	nm
λ (center)	589.3	nm
λ (centroid)	587.1	nm
SDCM	Cool White	
RA	94	
Corr. Coef.	0.002522064	
Correlation	0.0054	
R1	98.5	
R2	97.5	
R3	95.3	
R4	99.3	
R5	98.2	
R6	91.2	
R7	89.6	
R8	81.8	
R9	61.8	
R10	94.9	
R11	92.6	
R12	84.5	
R13	97.9	
R14	98.2	



**Spectral Distribution of Radiant Flux**



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**PREPARED FOR:** PROGRESS

**CATALOG NUMBER:** P563001-147-30K

**LUMINAIRE:** 3" Wall-Mount Up/Down Cylinder - Satin Nickel w/ Textured, Opal  
Glass Refractor

**LAMP CAT. NO.:** NF2L757GRT-V1

**LAMP:** 44- Nichia 3000K LEDs

**MOUNTING:** Surface

**NOTE:** DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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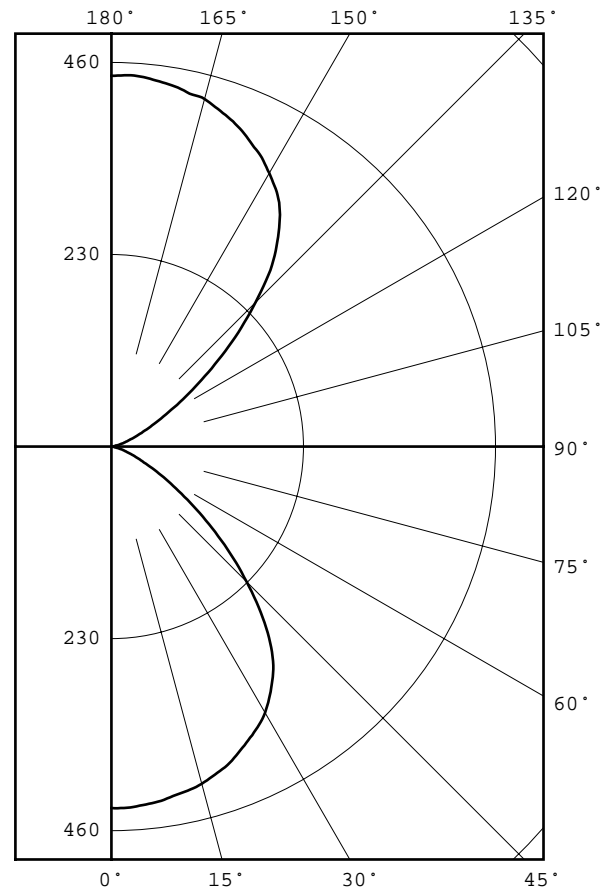
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DEG	CANDELA	LUMENS
0	433	
5	431	41
15	418	118
25	388	179
35	337	209
45	229	176
55	111	101
65	39	41
75	11	12
85	1	2
90	0	
95	2	3
105	12	13
115	42	43
125	118	107
135	244	187
145	351	217
155	399	184
165	431	121
175	444	42
180	444	

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	338	18.8
0- 40	547	30.4
0- 60	824	45.8
0- 90	880	48.9
90-120	59	3.3
90-130	166	9.3
90-150	571	31.8
90-180	919	51.1
0-180	1798	100.0

EFFICACY = 75.2 lm/W  
CIE TYPE - GENERAL DIFFUSE  
LUMINAIRE SPACING CRITERION = 1.25  
PLANE : 0-DEG 90-DEG  
SHIELDING ANGLES : 90 90





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LUMINOUS DIAMETER: 3.000

LUMINANCE DATA IN CANDELA/SQ M  
ANGLE AVERAGE  
IN DEG

45	71015.
55	42436.
65	20236.
75	9320.
85	2516.



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CANDELA DISTRIBUTION

0.0	433
5.0	431
10.0	425
15.0	418
20.0	406
25.0	388
30.0	368
35.0	337
40.0	291
45.0	229
50.0	167
55.0	111
60.0	69
65.0	39
70.0	22
75.0	11
80.0	5
85.0	1
90.0	0
95.0	2
100.0	5
105.0	12
110.0	23
115.0	42
120.0	72
125.0	118
130.0	178
135.0	244
140.0	306
145.0	351
150.0	378
155.0	399
160.0	417
165.0	431
170.0	438
175.0	444
180.0	444



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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	96
30- 35	104
35- 40	105
40- 45	96
45- 50	80
50- 55	60
55- 60	41
60- 65	26
65- 70	15
70- 75	8
75- 80	4
80- 85	2
85- 90	0
90- 95	1
95-100	2
100-105	4
105-110	9
110-115	16
115-120	27
120-125	43
125-130	64
130-135	85
135-140	102
140-145	110
145-150	108
150-155	98
155-160	86
160-165	70
165-170	51
170-175	32
175-180	11

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	41
10- 20	118
20- 30	179
30- 40	209
40- 50	176
50- 60	101
60- 70	41
70- 80	12
80- 90	2
90-100	3
100-110	13
110-120	43
120-130	107
130-140	187
140-150	217
150-160	184
160-170	121
170-180	42



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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	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	99	95	91	88	88	91	88	85	82	74	72	70	62	61	59	51	50	49	44
2	91	84	79	74	74	84	78	73	69	66	63	60	56	53	51	46	44	43	38
3	84	75	68	63	63	77	70	64	59	60	55	52	50	47	45	42	40	38	34
4	77	67	60	54	54	71	62	56	51	54	49	45	45	42	39	38	35	33	30
5	71	60	52	47	47	65	56	49	44	48	43	39	41	37	34	34	32	30	26
6	66	54	47	41	41	60	51	44	39	44	39	35	37	34	31	32	29	26	24
7	61	49	42	36	36	56	46	39	35	40	35	31	34	30	27	29	26	24	21
8	56	45	37	32	32	52	42	35	31	37	31	28	31	27	25	27	24	21	19
9	53	41	34	29	29	49	38	32	28	34	28	25	29	25	22	25	22	20	17
10	49	38	31	26	26	46	35	29	25	31	26	23	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 TEST 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>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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