

Project Number
17.01615



Date
6/7/2017

Lab 1
Sphere

Test Sample Description

Catalog Number: P560072-031-30
Description: 1-Lt. Led Small Wall Lantern w/ Etched Opal Refractor

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 10:00
Time To Stabilize: 0:45
Total Operating Time: 13:04

Input Voltage (Volts): 120.0
Input Current (Amps): 0.078
Input Wattage (Watts): 9.2
Ambient Temp (°C): 24.2

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 2:00
Time To Stabilize: 1:23
Total Operating Time: 3:23

Input Voltage (Volts): 120.0
Input Current (Amps): 0.077
Input Wattage (Watts): 9.2
Ambient Temp (°C): 24.3
PF @ 120V: 0.99
THD @ 120V (%): 12.7



Hubbell Lighting, Inc.

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

Checked (sphere): B. LEE
Checked (photometry): M. HALL
Approved: 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.

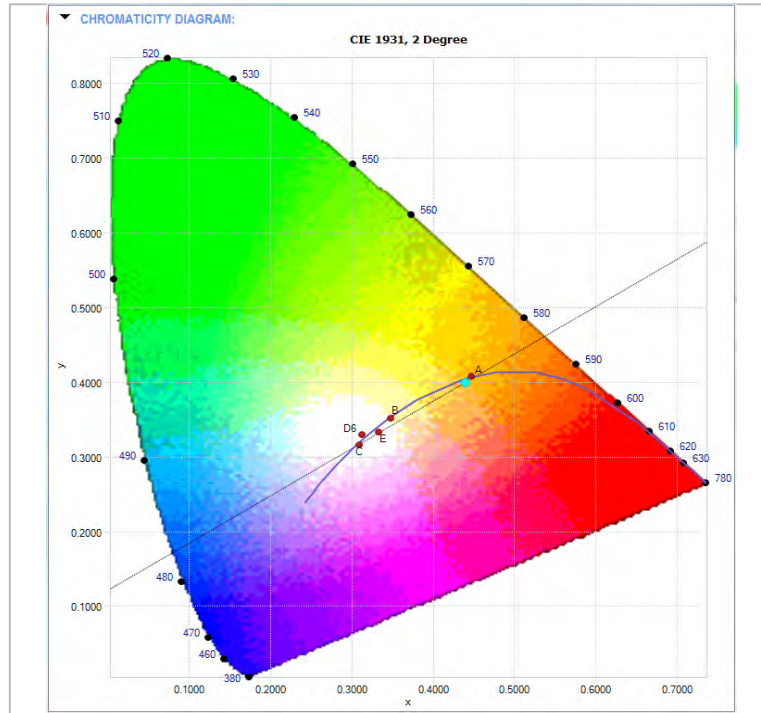


Lamp Cat#: 93070270-3130
 Lamp Desc: 20 - Nichia 4000K LEDs
 Driver Desc: NA

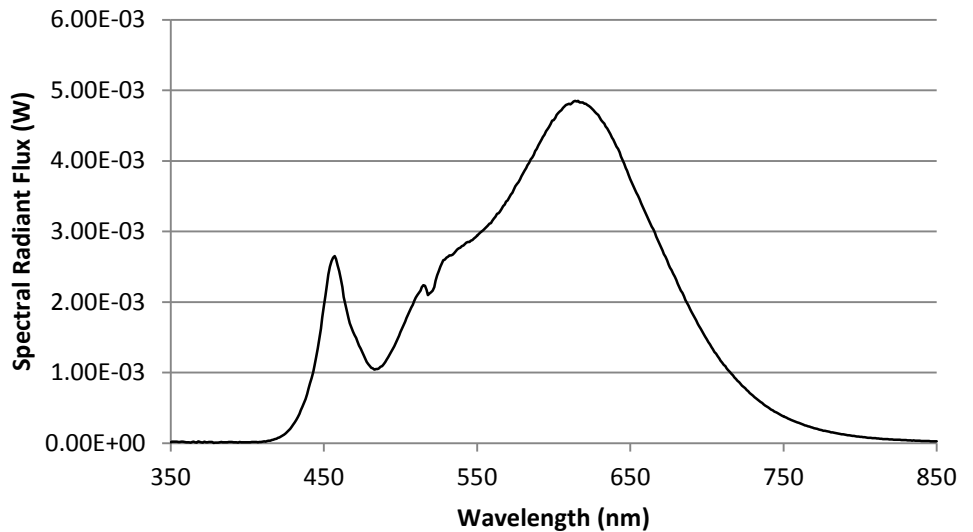
Efficacy: 25.7 LPW S/P Ratio: 1.4 LM/LM

Spectral Results

Name	Value	Unit
Φ	0.81	watts
Φ(v)	236	lumens
Φ(v')	328	lm'
Chrom x	0.4393	
Chrom y	0.4004	
Chrom u	0.2537	
Chrom v	0.3469	
Duv	0.0021	
Chrom u'	0.2537	
Chrom v'	0.5203	
CCT	2928	K
Purity	52	%
λ (dom)	583.8	nm
FWHM	152.8	nm
λ (peak)	614.8	nm
λ (center)	601.1	nm
λ (centroid)	594.1	nm
SDCM	Cool White	
RA	91	
Corr. Coef.	0.001784527	
Correlation	0.0054	
R1	91.9	
R2	96.9	
R3	97.9	
R4	90.5	
R5	91.5	
R6	95.5	
R7	89.1	
R8	77.0	
R9	50.2	
R10	91.3	
R11	91.2	
R12	79.4	
R13	93.6	
R14	99.2	



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.



®

HUBBELL
Lighting

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

REPORT NUMBER: 17.01615

PAGE: 3 OF 9

ISSUE DATE: 06/07/17

PREPARED FOR: PROGRESS

CATALOG NUMBER: P560072-031-30

LUMINAIRE: 1-Lt. Led Small Wall Lantern

LAMP CAT. NO.: 93070270-3130

LAMP: 20- NICHIA 3000K LEDs

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



HUBBELL
Lighting

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

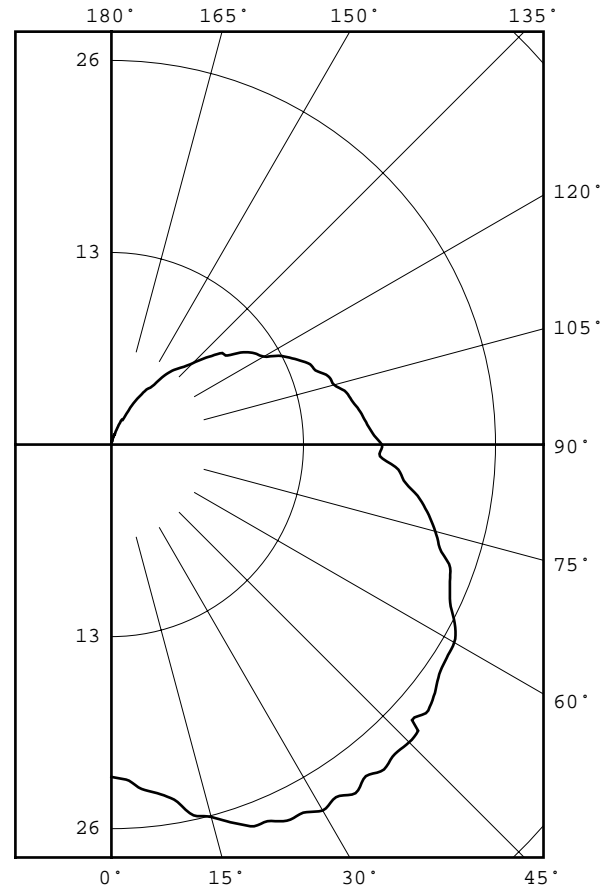
REPORT NUMBER: 17.01615
ISSUE DATE: 06/07/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P560072-031-30

PAGE: 4 OF 9

DEG	CANDELA	LUMENS
0	22.5	
5	23.4	2
15	26.1	7
25	28.1	13
35	28.8	18
45	28.5	22
55	27.1	24
65	25.3	25
75	22.7	24
85	19.5	21
90	18.3	
95	17.3	19
105	15.6	17
115	13.7	14
125	10.9	10
135	7.8	6
145	4.8	3
155	1.9	1
165	0.7	0
175	0.1	0
180	0.1	

ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	23	10.0
0- 40	41	17.9
0- 60	87	38.3
0- 90	157	69.4
90-120	49	21.7
90-130	59	25.9
90-150	68	30.1
90-180	69	30.6
0-180	227	100.0

EFFICACY = 24.6 lm/W
CIE TYPE - SEMI-DIRECT
LUMINAIRE SPACING CRITERION = 1.85
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90





®

HUBBELL
Lighting

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

REPORT NUMBER: 17.01615
ISSUE DATE: 06/07/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P560072-031-30

PAGE: 5 OF 9

LUMINOUS DIAMETER: 3.000
HEIGHT OF SIDE : 2.750

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	4078.
55	3885.
65	3747.
75	3591.
85	3421.



HUBBELL
Lighting

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

REPORT NUMBER: 17.01615
ISSUE DATE: 06/07/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P560072-031-30

PAGE: 6 OF 9

CANDELA DISTRIBUTION

0.0	22.5	147.5	4.4
2.5	22.7	150.0	3.7
5.0	23.4	152.5	3.0
7.5	23.8	155.0	1.9
10.0	24.4	157.5	1.8
12.5	25.7	160.0	1.3
15.0	26.1	162.5	0.7
17.5	26.8	165.0	0.7
20.0	27.5	167.5	0.3
22.5	27.6	170.0	0.2
25.0	28.1	172.5	0.0
27.5	28.1	175.0	0.1
30.0	28.6	177.5	0.3
32.5	28.3	180.0	0.1
35.0	28.8		
37.5	28.3		
40.0	28.7		
42.5	28.4		
45.0	28.5		
47.0	28.4		
47.5	27.6		
50.0	28.0		
52.5	27.6		
55.0	27.1		
57.5	26.9		
60.0	26.8		
62.5	26.2		
65.0	25.3		
67.5	24.8		
70.0	24.4		
72.5	23.3		
75.0	22.7		
77.5	22.0		
80.0	21.2		
82.5	20.1		
85.0	19.5		
87.5	18.2		
90.0	18.3		
92.5	17.7		
95.0	17.3		
97.5	17.0		
100.0	16.6		
102.5	16.3		
105.0	15.6		
107.5	15.4		
110.0	14.7		
112.5	14.4		
115.0	13.7		
117.5	13.0		
120.0	11.9		
122.5	11.5		
125.0	10.9		
127.5	9.9		
130.0	9.6		
132.5	8.7		
135.0	7.8		
137.5	7.1		
140.0	6.6		
142.5	5.9		
145.0	4.8		



HUBBELL
Lighting

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

REPORT NUMBER: 17.01615
ISSUE DATE: 06/07/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P560072-031-30

PAGE: 7 OF 9

5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		1
5- 10		2
10- 15		3
15- 20		4
20- 25		6
25- 30		7
30- 35		8
35- 40		10
40- 45		11
45- 50		11
50- 55		12
55- 60		12
60- 65		13
65- 70		13
70- 75		12
75- 80		12
80- 85		11
85- 90		10
90- 95		10
95-100		9
100-105		9
105-110		8
110-115		7
115-120		6
120-125		5
125-130		4
130-135		4
135-140		3
140-145		2
145-150		1
150-155		1
155-160		0
160-165		0
165-170		0
170-175		0
175-180		0

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		2
10- 20		7
20- 30		13
30- 40		18
40- 50		22
50- 60		24
60- 70		25
70- 80		24
80- 90		21
90-100		19
100-110		17
110-120		14
120-130		10
130-140		6
140-150		3
150-160		1
160-170		0
170-180		0



HUBBELL
Lighting

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

REPORT NUMBER: 17.01615
ISSUE DATE: 06/07/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P560072-031-30

PAGE: 8 OF 9

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	112	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69
1	97	91	85	80	80	91	86	80	76	76	72	68	66	63	60	58	56	53	49
2	87	77	69	62	62	81	72	65	58	64	58	52	56	51	47	48	45	41	37
3	78	66	57	49	49	73	62	53	47	55	48	42	48	42	37	41	37	33	29
4	71	57	48	40	40	66	54	45	38	48	40	34	42	36	31	36	31	27	24
5	65	51	41	34	34	60	48	39	32	42	35	29	37	31	26	32	27	23	20
6	59	45	35	29	29	55	42	34	27	37	30	25	33	27	22	28	23	19	17
7	55	40	31	25	25	51	38	30	24	34	26	21	30	24	19	26	21	17	14
8	51	36	28	21	21	47	34	26	21	31	24	19	27	21	17	24	19	15	12
9	47	33	25	19	19	44	31	23	18	28	21	16	25	19	15	22	17	13	11
10	44	30	22	17	17	41	29	21	16	26	19	15	23	17	13	20	15	12	10

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.

Project Number
17.01615



HUBBELL
Lighting

Date
6/7/2017

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: 12/05/2016

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 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	176F4EB	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>Power Supply PF/THD</i>	Voltage-Regulated House Power	N/A	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

Hubbell Lighting, Inc.

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

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