

Lab 4  
Sphere

### Test Sample Description

Catalog Number: P563000-030-30K

Description: 3" Wall-Mount Cylinder, White w/ Textured, Opal Glass Lens; Tested as Down-Light

### Photometry

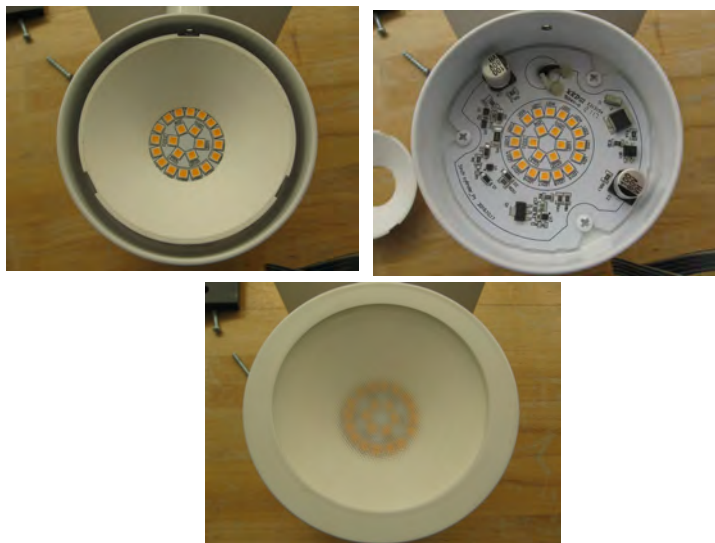
Test Method: IES LM-79-08 § 10  
Preburn Time: 0:55  
Time To Stabilize: 0:30  
Total Operating Time: 1:25

Input Voltage (Volts): 120.0  
Input Current (Amps): 0.102  
Input Wattage (Watts): 12.2  
Ambient Temp (°C): 24.8

### Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1  
Preburn Time: 8:00  
Time To Stabilize: 1:02  
Total Operating Time: 9:02

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



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



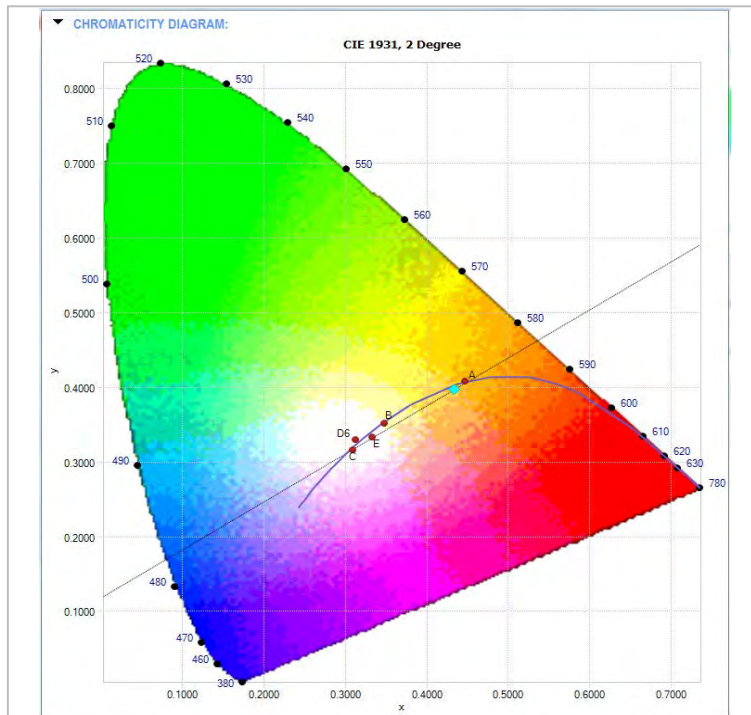


Lamp Cat#: NF2L757GRT-V1  
 Lamp Desc: 22 - Nichia 3000K LEDs  
 Driver Desc: NA

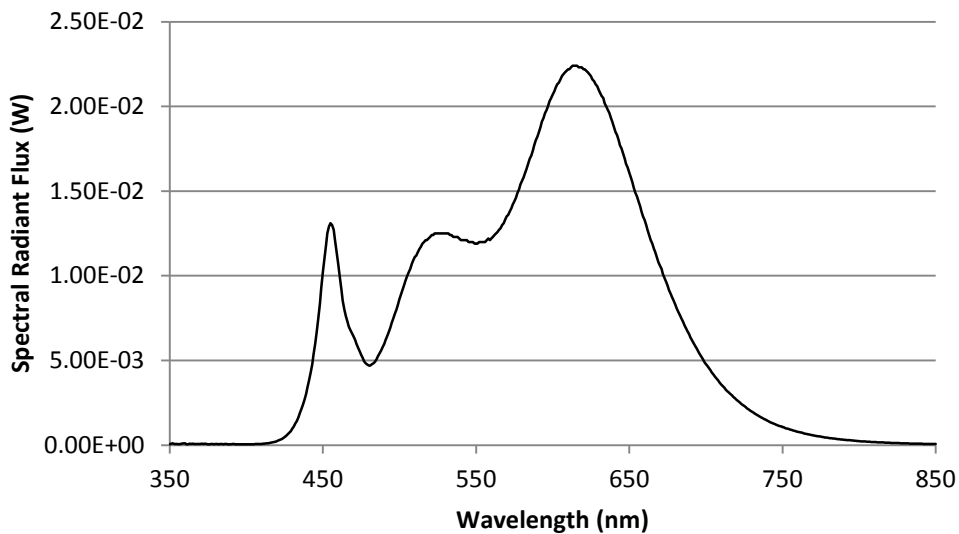
Efficacy: 88.0 LPW      S/P Ratio: 1.5 LM/LM

**Spectral Results**

Name	Value	Unit
Φ	3.49	watts
Φ(v)	1038	lumens
Φ(v')	1556	lm'
Chrom x	0.4335	
Chrom y	0.3976	
Chrom u	0.2512	
Chrom v	0.3455	
Duv	0.0022	
Chrom u'	0.2512	
Chrom v'	0.5183	
CCT	3003	K
Purity	49.5	%
λ (dom)	583.6	nm
FWHM	156.9	nm
λ (peak)	615	nm
λ (center)	589.2	nm
λ (centroid)	587.4	nm
SDCM	Cool White	
RA	94	
Corr. Coef.	0.002132382	
Correlation	0.0054	
R1	98.6	
R2	97.9	
R3	96.3	
R4	98.6	
R5	98.4	
R6	91.8	
R7	90.4	
R8	82.7	
R9	62.9	
R10	95.9	
R11	91.7	
R12	85.3	
R13	98.0	
R14	98.7	



**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: 17.02583  
ISSUE DATE: 09/28/17  
PREPARED FOR: PROGRESS  
CATALOG NUMBER: P563000-030-30K  
LUMINAIRE: 3" Wall-Mount Cylinder, White w/ Textured,  
Opal Glass Lens; Tested as Down-Light  
CAT. NO.: NF2L757GRT-V1  
LAMP: 22- Nichia 3000K LEDs

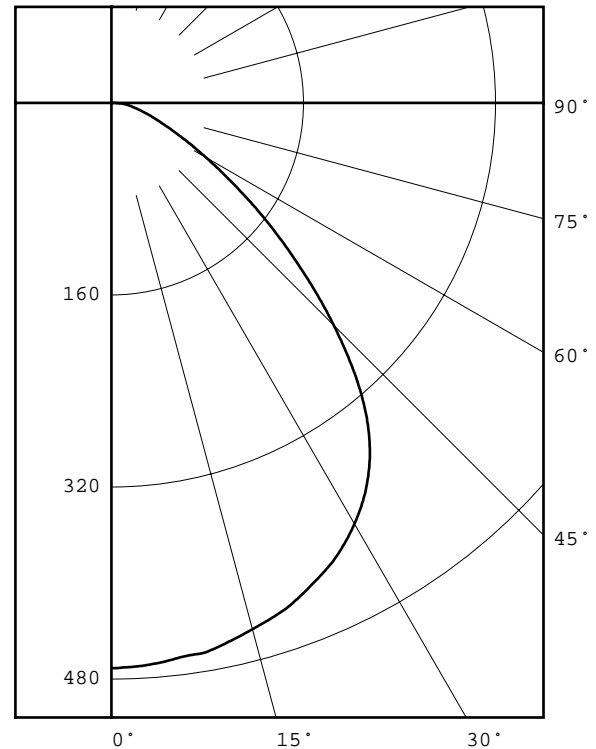
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DEG	CANDELA	LUMENS
0	471	
5	468	45
15	454	128
25	427	197
35	374	232
45	262	201
55	137	124
65	59	61
75	26	28
85	11	11
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	369	36.0
0- 40	602	58.6
0- 60	927	90.3
0- 90	1027	100.0
90-180	0	0.0
0-180	1027	100.0

TOTAL INPUT WATTS = 12.209  
EFFICACY = 84.1 Lm/W  
CIE TYPE - DIRECT  
LUMINAIRE SPACING CRITERION = 1.3  
LUMINOUS DIAMETER: 2.625

LUMINANCE DATA IN CANDELA/SQ METER	
ANGLE	AVERAGE
IN DEG	
45	106082.
55	68384.
65	39970.
75	28761.
85	36135.





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CANDELA DISTRIBUTION

	0.0
0.0	471
2.5	470
5.0	468
7.5	465
10.0	464
12.5	459
15.0	454
17.5	449
20.0	443
22.5	435
25.0	427
27.5	417
30.0	405
32.5	391
35.0	374
37.5	353
40.0	327
42.5	296
45.0	262
47.5	228
50.0	195
52.5	165
55.0	137
57.5	112
60.0	91
62.5	74
65.0	59
67.5	48
70.0	39
72.5	32
75.0	26
77.5	21
80.0	17
82.5	14
85.0	11
87.5	6
90.0	0



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ZONAL LUMEN SUMMARY

0- 5	11.
5- 10	33.
10- 15	54.
15- 20	74.
20- 25	91.
25- 30	105.
30- 35	115.
35- 40	117.
40- 45	109.
45- 50	92.
50- 55	72.
55- 60	52.
60- 65	36.
65- 70	25.
70- 75	17.
75- 80	11.
80- 85	8.
85- 90	3.



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	11
5- 10	33
10- 15	54
15- 20	74
20- 25	91
25- 30	105
30- 35	115
35- 40	117
40- 45	109
45- 50	92
50- 55	72
55- 60	52
60- 65	36
65- 70	25
70- 75	17
75- 80	11
80- 85	8
85- 90	3

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	45
0- 20	173
0- 30	369
0- 40	602
0- 50	803
0- 60	927
0- 70	988
0- 80	1016
0- 90	1027



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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	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88	88
2	102	95	89	85	100	93	88	84	90	86	82	87	83	80	84	81	78	76	76
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	67	67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58	58
5	81	69	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52	52
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46	46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	40	35	34	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31	31

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.

Project Number  
17.02583



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Date  
09/28/2017

### *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

<i>Test Equipment Used</i>			
<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	02/17/2019
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27074V	11/02/2017
<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

<i>Test Equipment Used - Color &amp; SPD; THD &amp; Power Factor</i>			
<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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