

Project Number
16.00022



Date
1/11/2016

LAB 6
Sphere

Test Sample Description

Catalog Number: P5741-3030K9
Description: REFRACTOR: Sabic polycarbonate LUX7430C-NAT Lens #93047259-3

Photometry

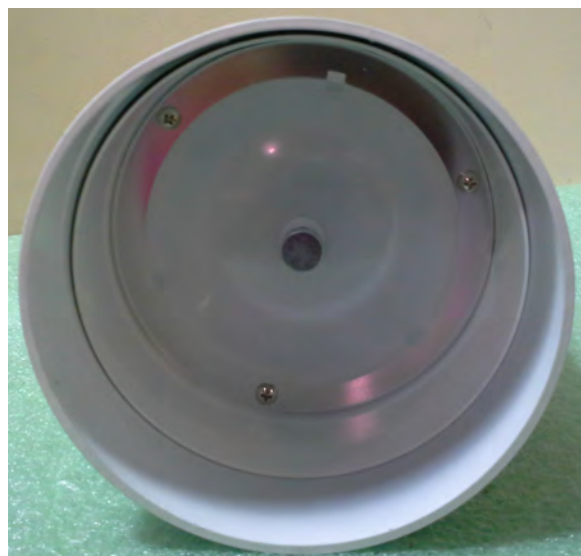
Test Method: IES LM-79-08 § 10
Preburn Time: 0:05
Time To Stabilize: 5:09
Total Operating Time: 6:10

Input Voltage (Volts): 119.9
Input Current (Amps): 0.262
Input Wattage (Watts): 29.3
Ambient Temp (°C): 24.3

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 10:00
Time To Stabilize: 1:05
Total Operating Time: 11:05

Input Voltage (Volts): 120.0
Input Current (Amps): 0.261
Input Wattage (Watts): 29.1
Ambient Temp (°C): 24.4



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Greenville, SC 29607
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Checked (sphere): B. LEE
Checked (photometry): D. ROBBINS
Approved: D. BLACK



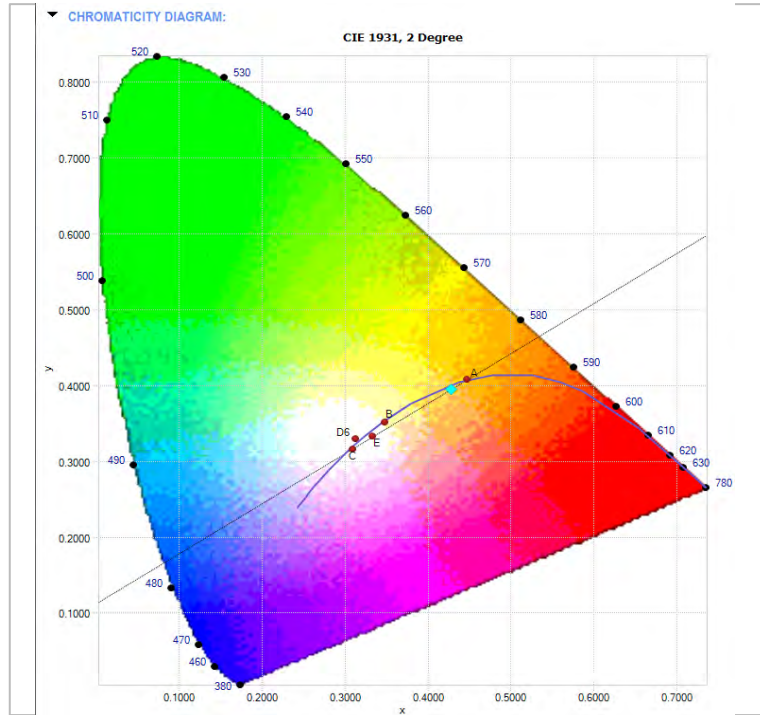


Lamp Cat#: 93058664-3130
 Lamp Desc: 40 - Nichia 3000K LEDs
 Driver Desc: N/A

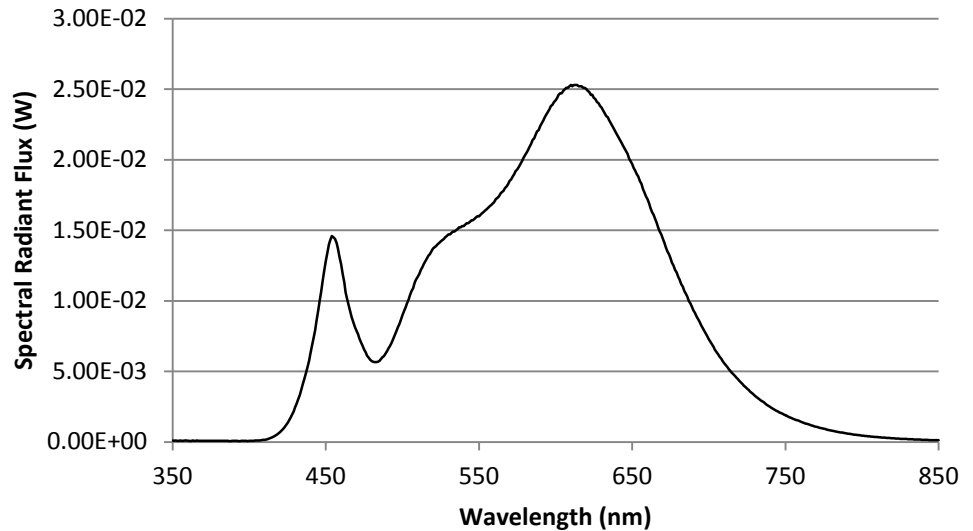
Efficacy: 43.8 LPW S/P Ratio: 1.5 LM/LM

Spectral Results

Name	Value	Unit
Φ	4.36	watts
Φ(v)	1274	lumens
Φ(v')	1852	lm'
Chrom x	0.4281	
Chrom y	0.3958	
Chrom u	0.2484	
Chrom v	0.3445	
Duv	0.0026	
Chrom u'	0.2484	
Chrom v'	0.5168	
CCT	3084	K
Purity	47.3	%
λ (dom)	583.3	nm
FWHM	162.1	nm
λ (peak)	613.6	nm
λ (center)	595.3	nm
λ (centroid)	590.0	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.002081967	
Correlation	0.0054	
R1	92.7	
R2	96.3	
R3	97.8	
R4	92.3	
R5	92.5	
R6	95.1	
R7	90.3	
R8	78.8	
R9	52.4	
R10	90.5	
R11	93.4	
R12	80.6	
R13	94.0	
R14	98.6	



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: 16.00022
ISSUE DATE: 01/08/16
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5741-3030K9
LUMINAIRE: 6" Downlight pendant/ceiling Cylinder with LEDs moved closer to opening.
LAMP CAT. NO.: 93058664-3130
LAMP: 40- Nichia 3000K LEDs
REFRACTOR: Sabic polycarbonate LUX7430C-NAT Lens #93047259-3
MOUNTING: Ceiling
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

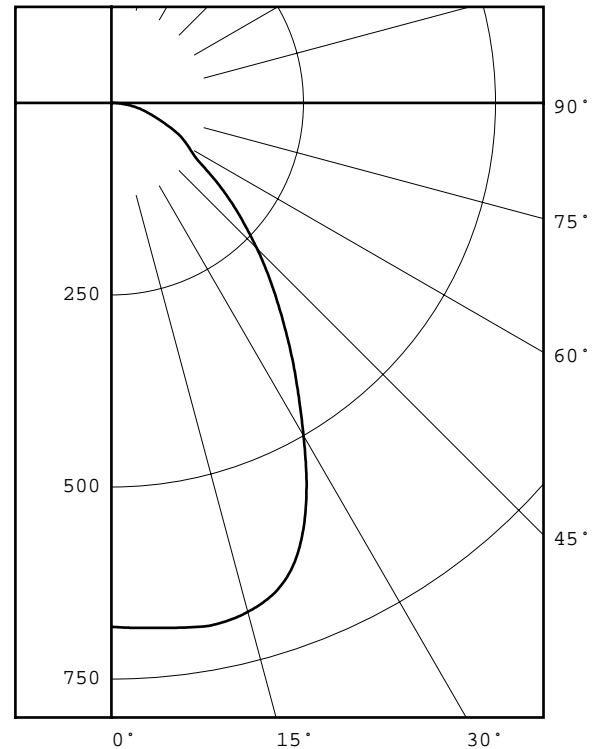
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DEG	CANDELA	LUMENS
0	682	
5	686	66
15	686	193
25	596	271
35	412	258
45	268	207
55	149	138
65	96	93
75	49	52
85	15	17
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	530	40.9
0- 40	788	60.8
0- 60	1132	87.4
0- 90	1295	100.0
90-180	0	0.0
0-180	1295	100.0

TOTAL INPUT WATTS = 29.3
EFFICACY = 44.2 Lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.1
LUMINOUS DIAMETER: 6.000

LUMINANCE DATA IN CANDELA/SQ METER	
ANGLE AVERAGE	IN DEG
45	20770.
55	14236.
65	12448.
75	10375.
85	9431.





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CANDELA DISTRIBUTION

	0.0
0.0	682
2.5	684
5.0	686
7.5	689
10.0	692
12.5	691
15.0	686
17.5	677
20.0	661
22.5	634
25.0	596
27.5	550
30.0	500
32.5	454
35.0	412
37.5	372
40.0	335
42.5	301
45.0	268
47.5	236
50.0	207
52.5	178
55.0	149
57.5	128
60.0	117
62.5	107
65.0	96
67.5	82
70.0	69
72.5	58
75.0	49
77.5	41
80.0	32
82.5	24
85.0	15
87.5	8
90.0	0



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ZONAL LUMEN SUMMARY

0- 5	16.
5- 10	49.
10- 15	82.
15- 20	111.
20- 25	132.
25- 30	139.
30- 35	134.
35- 40	124.
40- 45	111.
45- 50	96.
50- 55	77.
55- 60	60.
60- 65	52.
65- 70	42.
70- 75	31.
75- 80	22.
80- 85	13.
85- 90	4.



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	16
5- 10	49
10- 15	82
15- 20	111
20- 25	132
25- 30	139
30- 35	134
35- 40	124
40- 45	111
45- 50	96
50- 55	77
55- 60	60
60- 65	52
65- 70	42
70- 75	31
75- 80	22
80- 85	13
85- 90	4

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	66
0- 20	259
0- 30	530
0- 40	788
0- 50	995
0- 60	1132
0- 70	1226
0- 80	1278
0- 90	1295



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
	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	106	106	106	102	102	102	100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	66
4	88	77	69	64	85	76	69	63	73	67	62	71	66	61	69	65	61	59
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39
9	63	50	43	38	61	50	43	38	49	42	37	48	42	37	47	41	37	35
10	59	47	40	35	58	46	39	35	45	39	35	44	39	34	44	38	34	33

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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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: 07/18/2015

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL / HLI LAB 6 - Test Distance: 31.3'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27076V	11/10/2016
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	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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