

Project Number
17.03107



HUBBELL
Lighting

Date
12/11/2017

Lab#6
Sphere

Test Sample Description

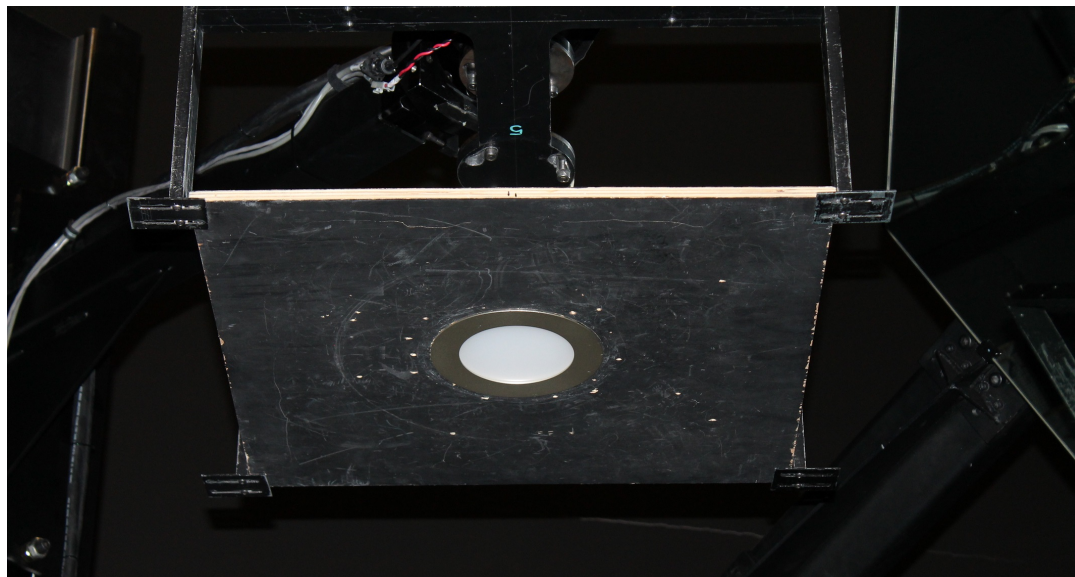
Catalog Number: P800005-009-30
Description: 7" Recessed edgelit. T2 Sample. Brushed Nickel.

Photometry

<i>Test Method:</i>	IES LM-46-04 IES LM-79-08 § 10
<i>Preburn Time:</i>	0:30
<i>Time To Stabilize:</i>	1:00
<i>Total Operating Time:</i>	17:35
<i>Input Voltage (Volts):</i>	120.1
<i>Input Current (Amps):</i>	0.100
<i>Input Wattage (Watts):</i>	11.9
<i>Ambient Temp (°C):</i>	24.0

Sphere

<i>Test Method:</i>	IES LM-16-93 IES LM-79-08 § 9.1 & 12.1
<i>Preburn Time:</i>	1:00
<i>Time To Stabilize:</i>	1:06
<i>Total Operating Time:</i>	2:06
<i>Input Voltage (Volts):</i>	120.0
<i>Input Current (Amps):</i>	0.101
<i>Input Wattage (Watts):</i>	12.0
<i>Ambient Temp (°C):</i>	24.0



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Greenville, SC 29607
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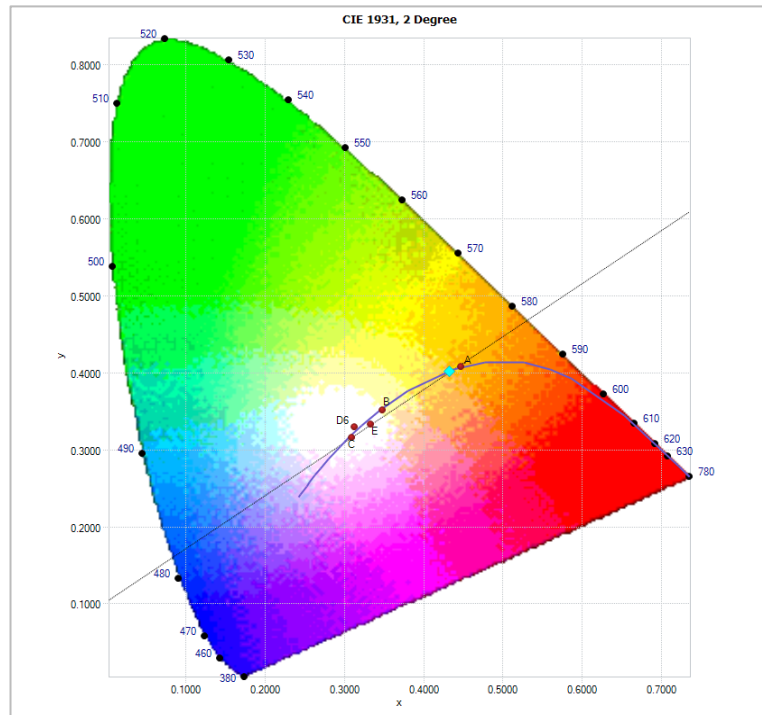
Checked (sphere): B.LEE
Checked (photometry): M.ELLMANN
Approved: _____



Lamp Cat#: 2835
 Lamp Desc: 28 - Seoul 3000K LEDs
 Driver Desc: 1 - Alpha D-PL-A53-01-A V2.0-Y2
 Programmed to 100mA

Efficacy: 76.7 LPW S/P Ratio: 1.4 LM/LM

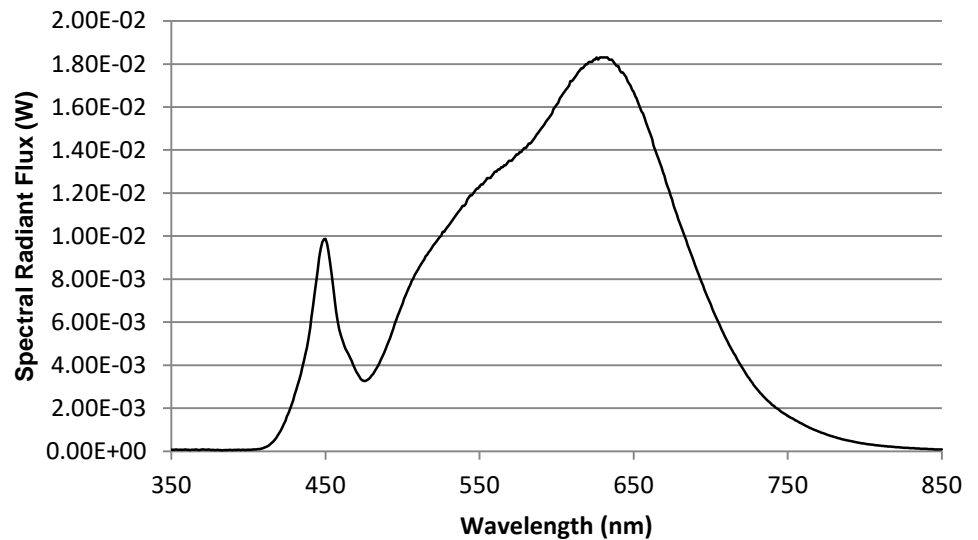
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	3.30	watts
$\Phi(v)$	920	lumens
$\Phi(v')$	1301	lm'
Chrom x	0.4329	
Chrom y	0.4019	
Chrom u	0.2489	
Chrom v	0.3466	
Duv	0.0003	
Chrom u'	0.2489	
Chrom v'	0.5199	
CCT	3050	K
Purity	50.6	%
λ (dom)	582.7	nm
FWHM	171.3	nm
λ (peak)	629.4	nm
λ (center)	601.7	nm
λ (centroid)	595.8	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000322792	
Correlation	0.0054	
R1	94.5	
R2	94.8	
R3	93.4	
R4	94.2	
R5	93.5	
R6	92.9	
R7	94.6	
R8	88.9	
R9	72.7	
R10	86.7	
R11	94.6	
R12	81.7	
R13	94.3	
R14	95.5	

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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LUMINAIRE: 7" Recessed edgelit. T2 Sample. Brushed Nickel.

LAMP CAT. NO.: 2835

LAMP: 28 - Seoul 3000K LEDs

BALLAST CATALOG NUMBER: D-PL-A53-01-A V2.0-Y2

BALLAST: 1-Alpha- set to 100mA

MOUNTING: Recessed

REFLECTOR: PET

REFRACTOR: Polycarbonate

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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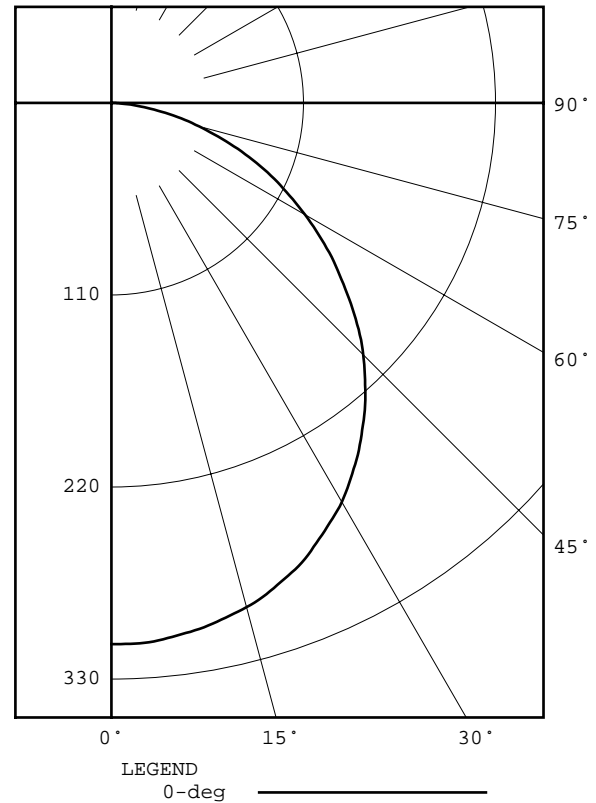
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DEG	CANDELA	LUMENS
0	310	
5	309	29
15	299	84
25	278	128
35	246	154
45	204	157
55	154	137
65	103	102
75	52	55
85	11	13
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	242	28.1
0- 40	396	46.0
0- 60	690	80.2
0- 90	860	100.0
90-180	0	0.0
0-180	860	100.0

EFFICACY = 72.3 lm/W
CIE TYPE - DIRECT
SPACING CRITERION: 1.26
LUMINOUS DIAMETER: 4.625

LUMINANCE DATA IN CANDELA/SQ M	
ANGLE	AVERAGE
IN DEG	
45	26617.
55	24771.
65	22486.
75	18536.
85	11644.





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CANDELA DISTRIBUTION

0.0	310
2.5	310
5.0	309
7.5	307
10.0	305
12.5	302
15.0	299
17.5	295
20.0	290
22.5	285
25.0	278
27.5	271
30.0	264
32.5	255
35.0	246
37.5	236
40.0	226
42.5	215
45.0	204
47.5	192
50.0	179
52.5	166
55.0	154
57.5	141
60.0	128
62.5	115
65.0	103
67.5	90
70.0	77
72.5	64
75.0	52
77.5	41
80.0	29
82.5	19
85.0	11
87.5	4
90.0	0



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		7
5- 10		22
10- 15		36
15- 20		49
20- 25		60
25- 30		69
30- 35		75
35- 40		79
40- 45		80
45- 50		77
50- 55		72
55- 60		65
60- 65		56
65- 70		46
70- 75		34
75- 80		22
80- 85		11
85- 90		3

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		29
0- 20		114
0- 30		242
0- 40		396
0- 50		553
0- 60		690
0- 70		792
0- 80		847
0- 90		860



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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	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	78	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	29	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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: 09/02/16

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	10/25/2018
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	10/26/2018

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	Calibration Checked Daily
<i>Thermometer</i>	National Instruments / USB TC01	1912751	10/26/2018
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	10/25/2018
<i>Power Supply</i>	Chroma / 61602	616020002113	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	0331159372	N/A
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148505	N/A
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

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