

Project Number
17.00402



Date
2/13/2017

LAB 6
Sphere

Test Sample Description

Catalog Number: P7252-17430K9
Description: 32" LED Flush Mount

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 16:30
Time To Stabilize: 0:55
Total Operating Time: 18:20

Input Voltage (Volts): 119.9
Input Current (Amps): 0.437
Input Wattage (Watts): 51.7
Ambient Temp (°C): 24.6
PF @ 277V: 0.938

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 10:00
Time To Stabilize: 0:57
Total Operating Time: 10:57

Input Voltage (Volts): 120.0
Input Current (Amps): 0.435
Input Wattage (Watts): 51.6
Ambient Temp (°C): 24.2



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

Checked (sphere): B. LEE
Checked (photometry): M. ELLMANN
Approved: D. BLACK



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Lamp Cat#: STW9C2SA

Lamp Desc: 54 - Seoul 3000K LEDs

Driver Desc: 1 - ERP ESP050MVW-1200-42

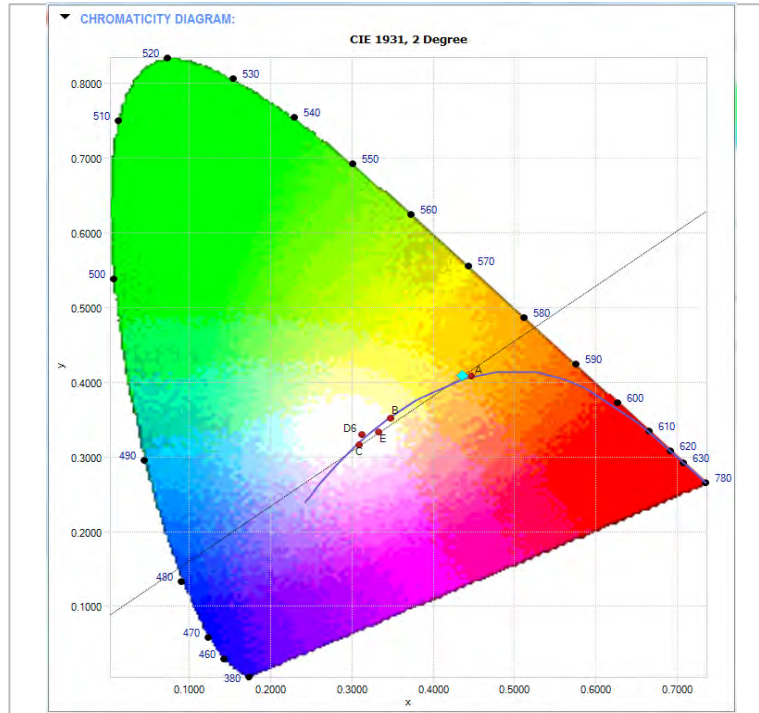
Efficacy: 67.1 LPW

S/P Ratio:

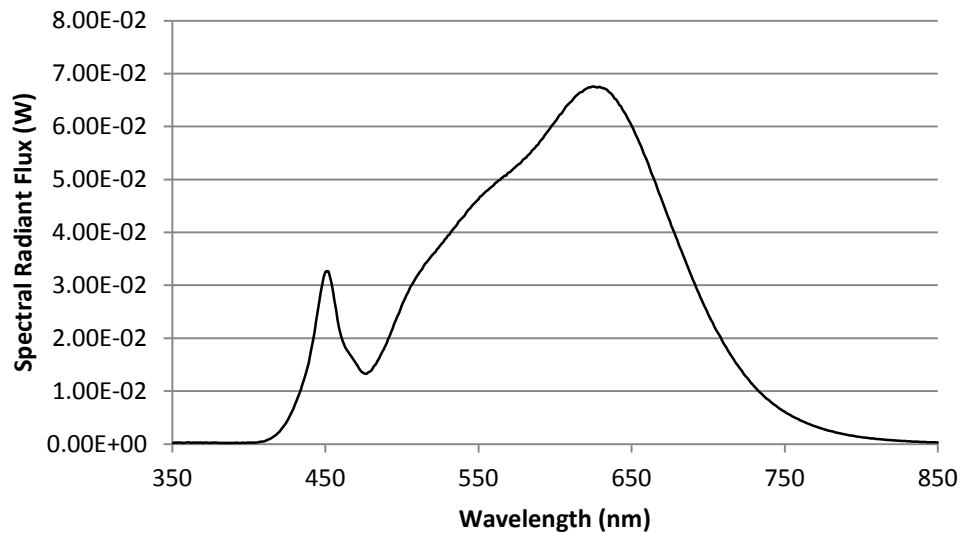
1.4 LM/LM

Spectral Results

Name	Value	Unit
Φ	12.17	watts
$\Phi(v)$	3461	lumens
$\Phi(v')$	4865	lm'
Chrom x	0.4363	
Chrom y	0.4092	
Chrom u	0.2479	
Chrom v	0.3489	
Duv	0.0021	
Chrom u'	0.2479	
Chrom v'	0.5233	
CCT	3051	K
Purity	53.8	%
λ (dom)	581.9	nm
FWHM	171.7	nm
λ (peak)	625.1	nm
λ (center)	600.4	nm
λ (centroid)	596.1	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.002154435	
Correlation	0.0054	
R1	92.6	
R2	94.3	
R3	94.7	
R4	93.7	
R5	91.7	
R6	92.4	
R7	95.0	
R8	86.0	
R9	65.6	
R10	85.7	
R11	93.8	
R12	78.8	
R13	92.7	
R14	96.3	



Spectral Distribution of Radiant Flux



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PREPARED FOR: PROGRESS

CATALOG NUMBER: P7252-17430K9

LUMINAIRE: 32" LED Flush Mount

LAMP CAT. NO.: STW9C2SA

LAMP: 54 - 3000K Seoul LEDs

BALLAST CATALOG NUMBER: ESP050MVW-1200-42

BALLAST: 1 - ERP

REFRACTOR: Acrylic

MOUNTING: Ceiling

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



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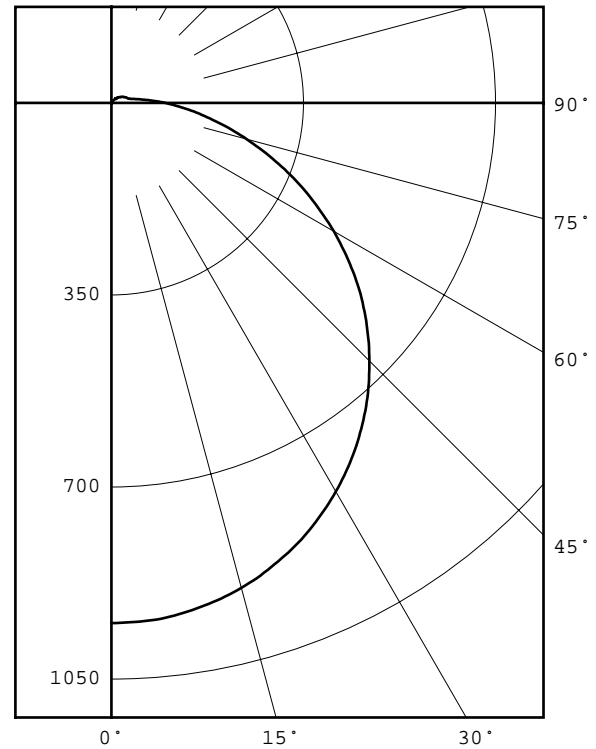
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DEG	CANDELA	LUMENS
0	948	
5	945	90
15	915	258
25	857	395
35	773	484
45	665	513
55	538	481
65	396	392
75	255	271
85	141	155
90	98	
95	63	72
105	31	35
115	25	25
125	18	17
135	11	9
145	5	3
155	3	1
165	2	1
175	1	0
180	1	

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	743	23.2
0- 40	1227	38.3
0- 60	2221	69.4
0- 90	3039	94.9
90-120	132	4.1
90-130	148	4.6
90-150	160	5.0
90-180	162	5.1
0-180	3201	100.0

EFFICACY = 61.9 lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.28





®

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LUMINOUS DIAMETER: 30.000
HEIGHT OF SIDE : 4.250

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	1747.
55	1635.
65	1482.
75	1291.
85	1159.



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CANDELA DISTRIBUTION

0.0	948
5.0	945
10.0	933
15.0	915
20.0	889
25.0	857
30.0	818
35.0	773
40.0	722
45.0	665
50.0	604
55.0	538
60.0	468
65.0	396
70.0	324
75.0	255
80.0	193
85.0	141
90.0	98
95.0	63
100.0	41
105.0	31
110.0	29
115.0	25
120.0	22
125.0	18
130.0	15
135.0	11
140.0	8
145.0	5
150.0	4
155.0	3
160.0	2
165.0	2
170.0	2
175.0	1
180.0	1



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		23
5- 10		67
10- 15		110
15- 20		149
20- 25		183
25- 30		212
30- 35		234
35- 40		249
40- 45		257
45- 50		256
50- 55		248
55- 60		232
60- 65		210
65- 70		182
70- 75		151
75- 80		120
80- 85		90
85- 90		65
90- 95		44
95-100		28
100-105		19
105-110		16
110-115		14
115-120		12
120-125		9
125-130		7
130-135		5
135-140		3
140-145		2
145-150		1
150-155		1
155-160		1
160-165		0
165-170		0
170-175		0
175-180		0

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		90
10- 20		258
20- 30		395
30- 40		484
40- 50		513
50- 60		481
60- 70		392
70- 80		271
80- 90		155
90-100		72
100-110		35
110-120		25
120-130		17
130-140		9
140-150		3
150-160		1
160-170		1
170-180		0



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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	118	118	118	118	118	115	115	115	115	108	108	108	103	103	103	97	97	97	95
1	106	101	96	91	103	98	93	89	92	89	86	88	85	82	83	81	79	76	76
2	96	87	79	73	93	84	78	72	80	74	69	76	71	67	72	68	65	62	62
3	87	76	67	60	84	74	66	59	70	63	58	66	61	56	63	58	54	52	52
4	79	67	58	51	77	65	57	50	62	55	49	59	53	47	56	51	46	44	44
5	73	59	50	43	70	58	49	43	55	48	42	53	46	41	50	45	40	38	38
6	67	53	44	38	65	52	43	37	50	42	36	48	41	36	46	40	35	33	33
7	62	48	39	33	60	47	39	33	45	38	32	43	37	32	42	36	31	29	29
8	58	44	35	29	56	43	35	29	41	34	29	40	33	28	38	32	28	26	26
9	54	40	32	26	52	40	32	26	38	31	26	37	30	25	35	29	25	23	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	33	27	23	21	21

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: 09/02/2016

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 6 - Test Distance: 31.3'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27076V	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	11/30/7136	11/2/2017

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	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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