

Project Number  
17.02421



Date  
9/5/2017  
Rev 1: 11/9/2017

LAB 6  
Sphere

### Test Sample Description

Catalog Number: P700000-020-30  
Description: 9" Linear Under-Cabinet - Bronze

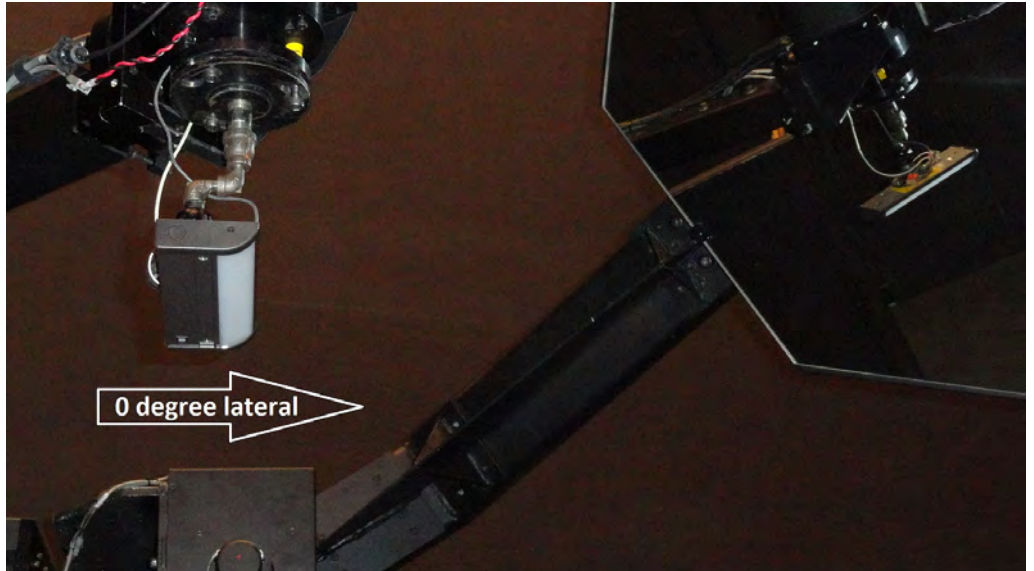
Revision 1: Corrected Catalog Number on Front page; was ...-028-30

### Photometry

Test Method: IES LM-79-08 § 10  
Preburn Time: 17:00  
Time To Stabilize: 1:00  
Total Operating Time: 18:50  
  
Input Voltage (Volts): 119.9  
Input Current (Amps): 0.039  
Input Wattage (Watts): 4.7  
Ambient Temp (°C): 24.1  
PF @120V: 0.99  
THD @120V (%): 13.75

### Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1  
Preburn Time: 0:30  
Time To Stabilize: 1:04  
Total Operating Time: 1:34  
  
Input Voltage (Volts): 120.0  
Input Current (Amps): 0.039  
Input Wattage (Watts): 4.6  
Ambient Temp (°C): 24.0



### Hubbell Lighting, Inc.

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

Revised By: P. McCARTHY  
Revision Approval: 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.

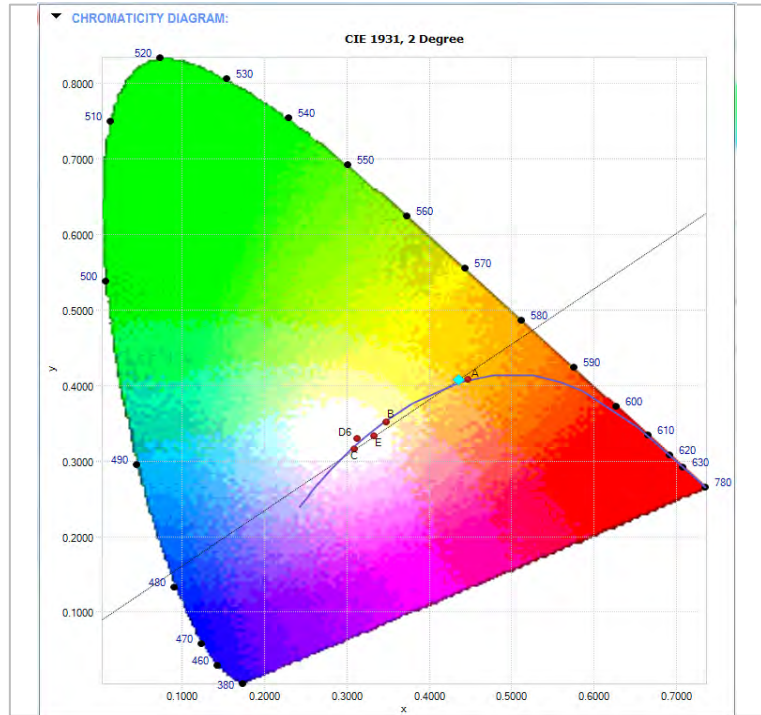


Lamp Cat#: SAW9A32E-E1  
 Lamp Desc: 16 - Seoul Semiconductor 3000K LEDs  
 Driver Desc: NA

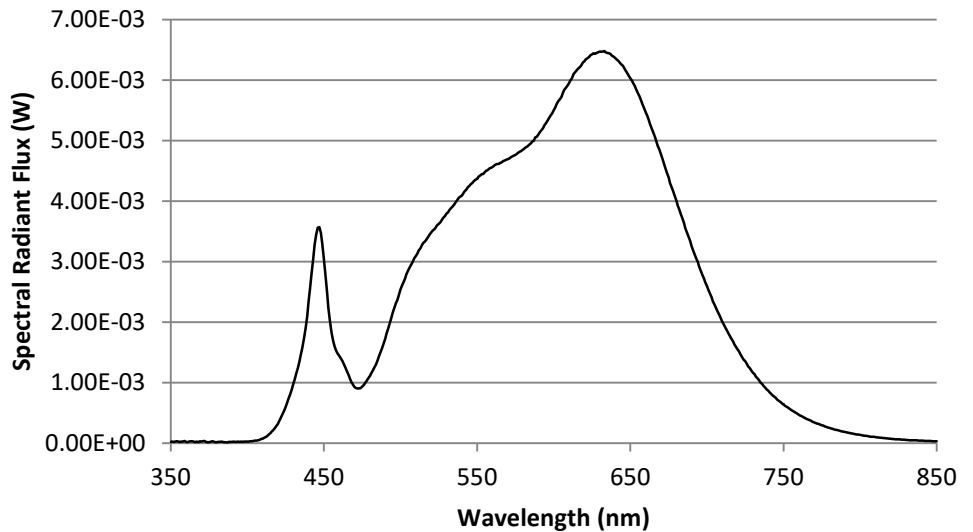
Efficacy: 70.2 LPW      S/P Ratio: 1.4 LM/LM

**Spectral Results**

Name	Value	Unit
Φ	1.17	watts
Φ(v)	323	lumens
Φ(v')	454	lm'
Chrom x	0.4353	
Chrom y	0.408	
Chrom u	0.2479	
Chrom v	0.3484	
Duv	0.0017	
Chrom u'	0.2479	
Chrom v'	0.5227	
CCT	3057	K
Purity	53.1	%
λ (dom)	582.0	nm
FWHM	177	nm
λ (peak)	631.9	nm
λ (center)	601.9	nm
λ (centroid)	598.3	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.001787652	
Correlation	0.0054	
R1	95.2	
R2	94.0	
R3	91.4	
R4	94.5	
R5	93.9	
R6	92.0	
R7	94.8	
R8	91.8	
R9	78.4	
R10	85.2	
R11	95.2	
R12	81.4	
R13	94.5	
R14	94.4	



**Spectral Distribution of Radiant Flux**



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**REPORT NUMBER:** 17.02421

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**ISSUE DATE:** 08/31/17

**PREPARED FOR:** PROGRESS

**CATALOG NUMBER:** P700000-020-30

**LUMINAIRE:** 9" Linear Under-Cabinet - Bronze

**LAMP CAT. NO.:** SAW9A32E-E1

**LAMP:** 16- Seoul Semi 3000K LEDs

**MOUNTING:** Surface

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



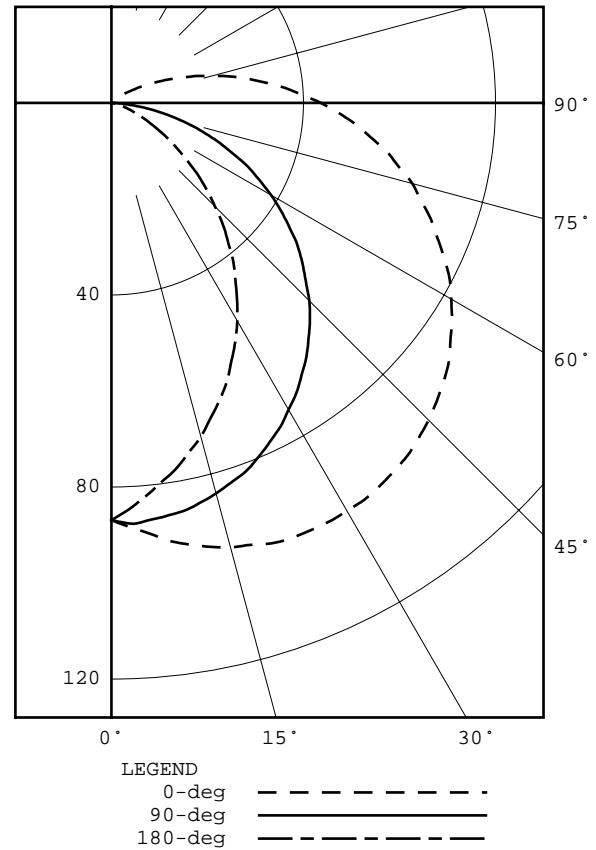
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CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	86.9	86.9	86.9	86.9	86.9	8
5	90.0	89.1	87.3	83.2	82.2	24
15	95.8	92.0	84.2	74.8	72.0	36
25	98.2	91.7	78.0	64.0	59.2	44
35	97.4	88.0	69.1	51.3	45.0	46
45	93.4	81.7	58.3	37.3	30.5	43
55	86.2	72.8	45.3	22.8	17.0	36
65	76.5	61.7	31.3	10.1	7.0	27
75	64.9	49.2	16.3	2.6	2.0	18
85	51.1	35.0	2.9	0.3	0.3	11
90	43.6	27.8	0.0	0.0	0.2	5
95	36.2	20.5	0.0	0.0	0.0	2
105	21.7	9.0	0.0	0.0	0.0	1
115	10.1	2.5	0.0	0.0	0.0	0
125	3.3	0.6	0.0	0.0	0.0	0
135	0.6	0.2	0.0	0.0	0.0	0
145	0.3	0.1	0.0	0.0	0.0	0
155	0.0	0.0	0.0	0.0	0.0	0
165	0.0	0.0	0.0	0.0	0.0	0
175	0.0	0.0	0.0	0.0	0.0	0
180	0.0	0.0	0.0	0.0	0.0	0

ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	68	22.6
0- 40	112	37.2
0- 60	201	67.0
0- 90	281	93.8
90-120	18	5.9
90-130	18	6.1
90-150	18	6.2
90-180	18	6.2
0-180	300	100.0

EFFICACY = 64.5 lm/W  
CIE TYPE - DIRECT  
PLANE : 0-DEG 90-DEG 180-DEG  
SPACING CRITERIA : 1.67 1.26 0.95





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CANDELA DISTRIBUTION  
LATERAL ANGLE

0.0	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0	95.0	105.0	115.0
0.0	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9
2.5	88.4	88.5	88.8	88.4	88.3	88.2	87.8	87.8	87.7	87.7	87.7	87.9	86.5	85.9
5.0	90.0	90.2	90.4	89.9	89.6	89.1	88.5	88.2	87.6	87.5	87.3	87.1	85.5	84.6
7.5	92.0	91.9	91.9	91.3	90.7	90.2	89.3	88.6	87.7	87.1	86.8	86.6	84.6	83.3
10.0	93.4	93.5	93.4	92.6	91.9	91.1	89.9	88.8	87.7	86.7	86.3	85.8	83.5	81.9
12.5	94.7	94.7	94.4	93.7	92.8	91.6	90.1	88.7	87.3	85.9	85.3	84.6	82.0	80.2
15.0	95.8	95.8	95.6	94.5	93.4	92.0	90.3	88.5	86.6	85.1	84.2	83.4	80.5	78.3
17.5	96.5	96.7	96.3	95.2	93.9	92.1	90.2	87.9	85.9	84.0	82.9	81.9	78.6	76.3
20.0	97.6	97.5	97.1	95.8	94.3	92.3	90.0	87.6	85.1	82.8	81.7	80.4	76.9	74.2
22.5	98.1	98.1	97.5	96.0	94.2	92.1	89.4	86.7	84.0	81.3	79.9	78.4	74.9	71.9
25.0	98.2	98.2	97.7	96.1	94.0	91.7	88.7	85.7	82.5	79.6	78.0	76.5	72.5	69.3
27.5	98.3	98.4	97.6	95.9	93.7	91.0	88.0	84.5	81.0	77.7	76.1	74.2	70.1	66.8
30.0	98.1	98.3	97.4	95.5	93.2	90.3	86.8	83.0	79.3	75.7	73.8	71.9	67.5	63.9
32.5	98.0	98.0	97.1	94.9	92.4	89.4	85.6	81.6	77.6	73.6	71.7	69.5	64.9	60.9
35.0	97.4	97.4	96.4	94.3	91.5	88.0	84.0	79.9	75.5	71.2	69.1	67.0	62.1	58.0
37.5	96.7	96.7	95.7	93.4	90.6	86.8	82.5	78.0	73.5	69.0	66.7	64.4	59.4	54.9
40.0	95.9	95.7	94.8	92.2	89.2	85.3	80.8	76.1	71.2	66.3	63.9	61.5	56.2	51.7
42.5	94.7	94.7	93.7	91.1	87.7	83.7	79.0	73.9	68.9	63.8	61.2	58.6	53.3	48.7
45.0	93.4	93.3	92.1	89.5	86.0	81.7	76.8	71.6	66.2	60.8	58.3	55.5	49.9	45.0
47.5	91.9	91.9	90.6	87.7	84.3	79.6	74.5	69.1	63.5	58.0	54.9	52.4	46.6	41.6
50.0	90.3	90.1	88.8	86.1	82.1	77.5	72.2	66.5	60.8	54.9	51.9	49.1	43.1	37.9
52.5	88.6	88.5	87.0	84.0	80.1	75.2	69.9	64.0	58.0	51.9	48.9	45.9	39.7	34.4
55.0	86.2	86.1	84.9	81.8	77.7	72.8	67.3	61.0	54.8	48.4	45.3	42.5	36.0	30.7
57.5	84.1	84.1	82.7	79.4	75.3	70.1	64.2	58.1	51.7	45.3	41.9	38.6	32.5	26.8
60.0	81.7	81.6	80.3	77.0	72.6	67.5	61.5	55.1	48.6	41.7	38.4	35.1	28.7	23.3
62.5	79.4	79.0	77.6	74.5	70.1	64.7	58.7	52.1	45.2	38.3	34.7	31.4	25.0	19.6
65.0	76.5	76.4	74.9	71.6	67.3	61.7	55.5	48.6	41.8	34.7	31.3	27.8	21.3	16.0
67.5	73.5	73.4	72.0	68.7	64.2	58.7	52.4	45.4	38.0	31.0	27.2	24.0	17.5	12.6
70.0	70.8	70.6	69.0	65.8	61.2	55.3	49.0	41.9	34.7	27.2	23.6	20.2	13.9	9.5
72.5	67.6	67.6	66.1	62.8	58.1	52.6	46.1	38.7	31.2	23.5	19.9	16.6	10.5	6.8
75.0	64.9	64.7	63.0	59.7	55.0	49.2	42.5	35.2	27.5	19.9	16.3	12.9	7.7	4.5
77.5	61.3	61.1	59.7	56.4	51.6	45.6	38.9	31.6	23.7	16.0	12.6	9.3	4.7	2.7
80.0	58.2	57.8	56.1	52.9	48.1	42.1	35.3	27.9	20.1	12.4	9.1	6.1	2.5	1.3
82.5	54.4	54.4	52.5	49.4	44.6	38.4	31.5	24.1	16.5	9.0	5.9	3.4	1.1	0.6
85.0	51.1	50.5	49.0	45.8	41.0	35.0	28.1	20.6	12.8	5.7	2.9	1.2	0.3	0.2
87.5	47.3	47.2	45.3	42.0	37.4	31.2	24.4	16.9	9.6	3.1	1.0	0.1	0.1	0.1
90.0	43.6	43.2	41.7	38.4	33.6	27.8	21.1	13.5	6.5	1.0	0.0	0.0	0.0	0.0
92.5	39.6	39.4	37.8	34.5	29.8	24.2	17.5	10.3	3.9	0.0	0.0	0.0	0.0	0.0
95.0	36.2	36.1	34.3	30.9	26.6	20.5	14.1	7.5	2.0	0.0	0.0	0.0	0.0	0.0
97.5	32.4	32.3	30.6	27.4	23.0	17.1	11.1	5.2	1.0	0.0	0.0	0.0	0.0	0.0
100.0	28.8	28.7	27.2	24.1	19.6	14.5	8.7	3.5	0.5	0.0	0.0	0.0	0.0	0.0
102.5	25.4	25.1	23.5	20.6	16.5	11.3	6.3	2.1	0.2	0.0	0.0	0.0	0.0	0.0
105.0	21.7	21.5	20.3	17.4	13.4	9.0	4.5	1.3	0.1	0.0	0.0	0.0	0.0	0.0
107.5	18.6	18.4	17.0	14.5	10.9	6.7	3.1	0.7	0.1	0.0	0.0	0.0	0.0	0.0
110.0	15.2	15.2	13.9	11.5	8.3	4.9	2.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
112.5	12.7	12.6	11.4	9.1	6.4	3.5	1.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
115.0	10.1	9.9	9.0	7.1	4.9	2.5	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
117.5	8.1	7.9	7.0	5.4	3.5	1.8	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
120.0	6.1	6.0	5.4	4.0	2.5	1.2	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
122.5	4.6	4.5	3.9	2.9	1.8	0.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
125.0	3.3	3.1	2.8	2.1	1.1	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
127.5	2.4	2.5	2.1	1.5	0.9	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
130.0	1.6	1.6	1.3	0.9	0.6	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
132.5	1.1	1.0	1.0	0.7	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
135.0	0.6	0.7	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5	0.4	0.5	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0	0.4	0.4	0.4	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5	0.3	0.2	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0	95.0	105.0	115.0
150.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION  
LATERAL ANGLE

	125.0	135.0	145.0	155.0	165.0	175.0	180.0
0.0	86.9	86.9	86.9	86.9	86.9	86.9	86.9
2.5	85.6	85.1	84.8	84.7	84.7	84.6	84.7
5.0	84.0	83.2	82.7	82.5	82.4	82.2	82.2
7.5	82.3	81.3	80.7	80.2	79.9	79.9	79.7
10.0	80.5	79.4	78.6	78.0	77.7	77.5	77.4
12.5	78.7	77.2	76.2	75.3	74.8	74.7	74.5
15.0	76.5	74.8	73.6	72.6	72.2	71.9	72.0
17.5	74.0	72.3	70.9	69.8	69.1	68.8	68.8
20.0	71.8	69.8	68.2	67.1	66.2	66.0	65.9
22.5	69.3	66.8	65.2	63.9	63.1	62.8	62.8
25.0	66.6	64.0	62.1	60.8	59.6	59.2	59.2
27.5	63.6	60.9	58.9	57.4	56.3	56.0	55.9
30.0	60.6	57.8	55.6	53.9	52.9	52.4	52.4
32.5	57.6	54.7	52.3	50.6	49.3	49.0	48.7
35.0	54.3	51.3	48.8	47.0	45.7	45.3	45.0
37.5	51.2	47.9	45.4	43.6	42.4	41.8	41.7
40.0	47.7	44.5	41.8	39.9	38.4	37.9	37.8
42.5	44.4	40.8	38.3	36.3	35.1	34.5	34.4
45.0	40.8	37.3	34.4	32.5	31.2	30.7	30.5
47.5	37.1	33.5	30.8	28.8	27.8	27.3	27.1
50.0	33.6	29.8	27.3	25.4	24.2	23.7	23.7
52.5	29.9	26.5	23.9	22.2	20.8	20.5	20.2
55.0	26.0	22.8	20.4	18.6	17.6	17.1	17.0
57.5	22.4	19.3	17.0	15.5	14.8	14.3	14.2
60.0	19.1	15.9	13.9	12.7	11.9	11.5	11.4
62.5	15.5	13.0	11.2	10.1	9.3	9.0	9.1
65.0	12.5	10.1	8.4	7.8	7.4	7.1	7.0
67.5	9.4	7.6	6.5	5.8	5.4	5.3	5.2
70.0	6.9	5.3	4.5	4.1	4.0	3.9	3.9
72.5	4.9	3.9	3.4	3.1	3.0	2.9	2.8
75.0	3.2	2.6	2.4	2.2	2.1	2.1	2.0
77.5	1.9	1.6	1.5	1.4	1.4	1.4	1.3
80.0	1.0	0.9	0.9	0.9	0.8	0.9	0.9
82.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6
85.0	0.2	0.3	0.3	0.4	0.4	0.4	0.3
87.5	0.1	0.1	0.1	0.2	0.2	0.3	0.3
90.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
92.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0



**HUBBELL**  
Lighting

701 Millennium Blvd  
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CANDELA DISTRIBUTION  
LATERAL ANGLE

	125.0	135.0	145.0	155.0	165.0	175.0	180.0
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	2
5- 10	6
10- 15	10
15- 20	14
20- 25	17
25- 30	19
30- 35	21
35- 40	23
40- 45	23
45- 50	23
50- 55	22
55- 60	21
60- 65	19
65- 70	17
70- 75	15
75- 80	12
80- 85	10
85- 90	8
90- 95	6
95-100	4
100-105	3
105-110	2
110-115	1
115-120	1
120-125	0
125-130	0
130-135	0
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	8
10- 20	24
20- 30	36
30- 40	44
40- 50	46
50- 60	43
60- 70	36
70- 80	27
80- 90	18
90-100	11
100-110	5
110-120	2
120-130	1
130-140	0
140-150	0
150-160	0
160-170	0
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	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	82	79	77	74
2	95	86	78	72	92	83	76	71	79	73	68	74	70	65	71	67	63	60
3	86	75	66	59	83	73	65	58	69	62	56	65	59	54	62	57	53	50
4	79	66	57	50	76	64	56	49	61	53	48	58	51	46	55	49	45	42
5	72	59	49	42	70	57	48	42	54	47	41	52	45	40	49	43	39	36
6	67	53	44	37	64	52	43	36	49	41	36	47	40	35	45	39	34	32
7	62	48	39	32	60	47	38	32	45	37	31	43	36	31	41	35	30	28
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	25
9	54	40	31	26	52	39	31	26	37	30	25	36	29	25	34	29	24	22
10	50	37	29	23	49	36	28	23	35	28	23	33	27	22	32	26	22	20

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  
17.02421



**HUBBELL**  
Lighting

Date  
9/5/2017  
Rev 1: 11/9/2017

### *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: 09/2/2016

### *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	1912745	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>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	0331159372	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.**

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