

Project Number  
20.00777



**HUBBELL**  
Lighting

Date  
6/25/2020

### Photometric Test Report

LAB #5  
Sphere

#### Test Sample Description

Catalog Number: P710103-031-30  
Description: Acrylic Cylinder Wall Sconce

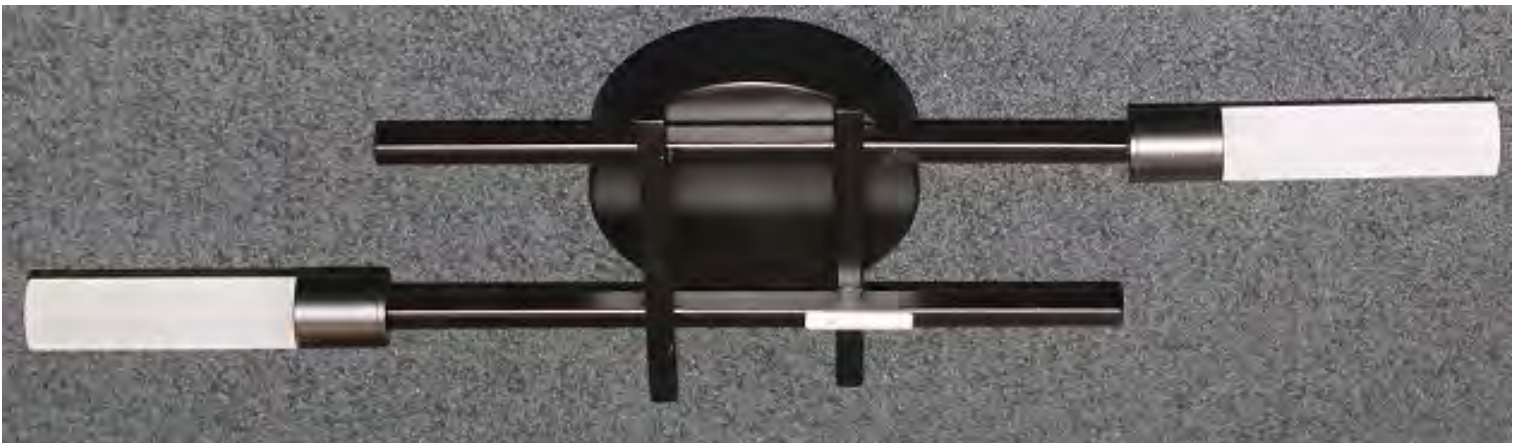
Sample did not reach stabilization criterion

**Photometry**  
Test Method: IES LM-46-04  
Preburn Time: 0:30  
Time To Stabilize: 3:00  
Total Operating Time: 5:50

Input Voltage (Volts): 120.2  
Input Current (Amps): 0.112  
Input Wattage (Watts): 13.0  
Ambient Temp (°C): 26.2  
PF @ 120V: 0.972  
THD @ 120V (%): 14.76

**Sphere**  
Test Method: IES LM-16-93  
IES LM-79-08 §12.1  
Preburn Time: 20:20  
Time To Stabilize: 1:25  
Total Operating Time: 22:20

Input Voltage (Volts): 120.0  
Input Current (Amps): 0.111  
Input Wattage (Watts): 13.1  
Ambient Temp (°C): 24



#### Hubbell Lighting, Inc.

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

Checked (sphere): M. ELLMANN  
Checked (photometry): M. OLALDE  
Approved: L. GENNETTEN

\* This customer-provided information was not verified by the laboratory. Note that LED manufacturer and part # are unverifiable by the lab.  
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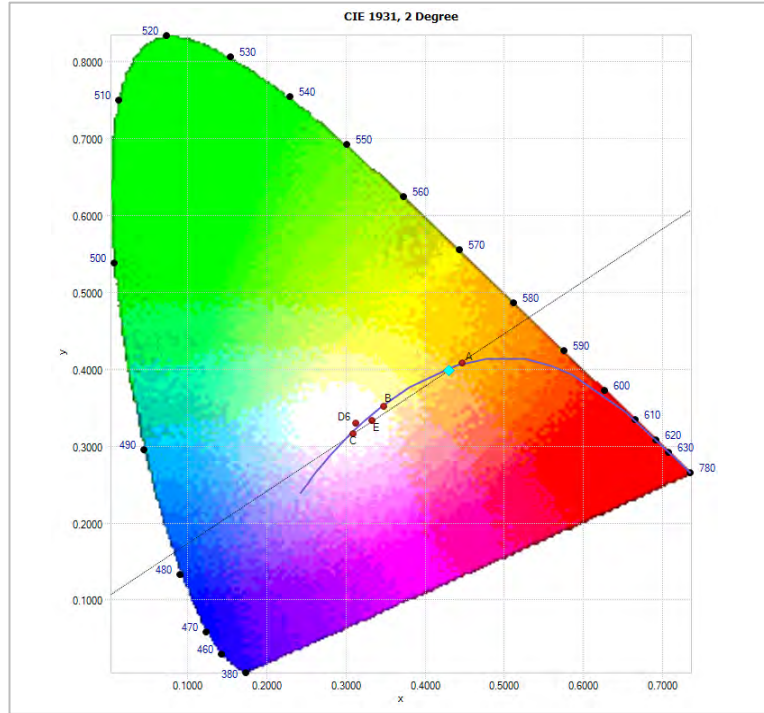


Lamp Cat#: BXEN-30G-13H-9B  
 Lamp Desc: 16 - Bridgelux 3000K LEDs  
 Driver Desc: 1 - Jintop JT-01-300-12-40  
 Programmed to 300mA

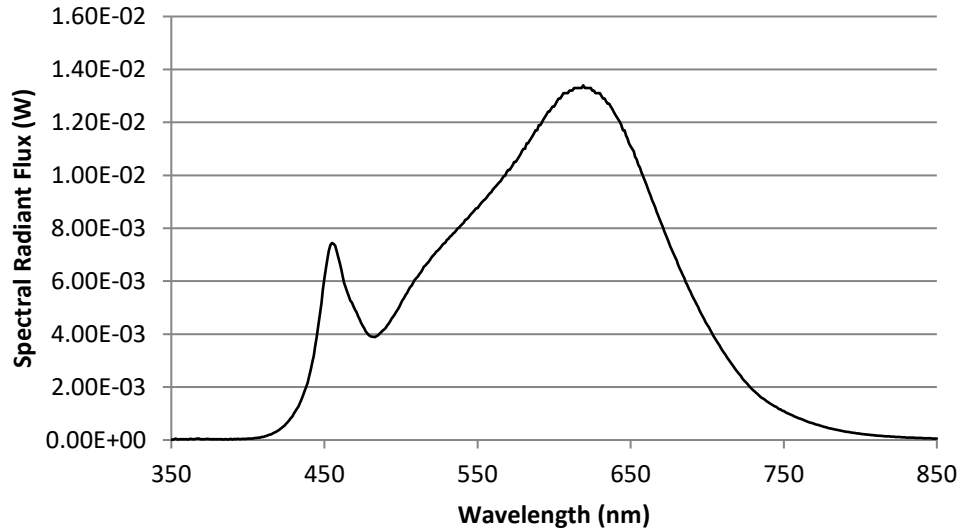
Efficacy: 52.4 LPW      S/P Ratio: 1.5 LM/LM

**Spectral Results**

Name	Value	Unit
$\Phi$	2.39	watts
$\Phi(v)$	686	lumens
$\Phi(v')$	1007	lm'
Chrom x	0.43	
Chrom y	0.3992	
Chrom u	0.2482	
Chrom v	0.3456	
Duv	0.0016	
Chrom u'	0.2482	
Chrom v'	0.5184	
CCT	3078	K
Purity	48.9	%
$\lambda$ (dom)	582.9	nm
FWHM	163.9	nm
$\lambda$ (peak)	619	nm
$\lambda$ (center)	598.9	nm
$\lambda$ (centroid)	591.9	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000990405	
Correlation	0.0054	
R1	92.9	
R2	97.5	
R3	98.2	
R4	91.3	
R5	92.5	
R6	96.0	
R7	90.8	
R8	80.9	
R9	58.6	
R10	92.9	
R11	91.8	
R12	80.8	
R13	94.4	
R14	99.6	



**Spectral Distribution of Radiant Flux**



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**REPORT NUMBER:** 20.00777

**PAGE:** 3 OF 14

**ISSUE DATE:** 06/24/20

**PREPARED FOR:** PROGRESS

**CATALOG NUMBER:** P710103-031-30

**LUMINAIRE:** Acrylic Cylinder Wall Sconce

**LAMP CAT. NO.:** BXEN-30G-13H-9B

**LAMP:** 16- Bridgelux 3000K LEDs

**BALLAST CATALOG NUMBER:** JT-01-300-12-40

**BALLAST:** 1- Jintop - Programmed to 300mA

**MOUNTING:** Wall

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



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CANDELA DISTRIBUTION

	0.0	45.0	90.0	135.0	180.0
0	41.5	41.5	41.5	41.5	41.5
5	42.2	40.9	41.4	42.1	44.4
15	43.1	41.5	41.3	44.9	49.1
25	44.8	42.4	41.3	47.7	53.8
35	47.2	43.6	40.8	50.1	56.9
45	49.5	45.7	41.2	52.6	57.9
55	50.6	47.3	40.9	53.8	57.0
65	52.0	49.5	41.1	55.3	59.2
75	52.0	51.0	40.9	53.8	64.5
85	52.8	51.8	41.1	53.6	62.5
90	49.5	49.9	41.2	54.0	61.2
95	52.7	50.1	40.6	55.1	65.1
105	48.6	48.6	40.4	55.7	67.5
115	48.4	49.3	40.2	54.8	66.1
125	50.4	47.4	39.7	53.1	62.5
135	49.8	46.0	40.1	51.0	59.5
145	48.6	44.3	40.0	48.5	56.1
155	46.5	42.6	40.0	45.5	51.8
165	44.3	41.5	40.2	42.9	47.2
175	42.1	40.4	40.5	40.8	43.2
180	40.2	40.2	40.2	40.2	40.2

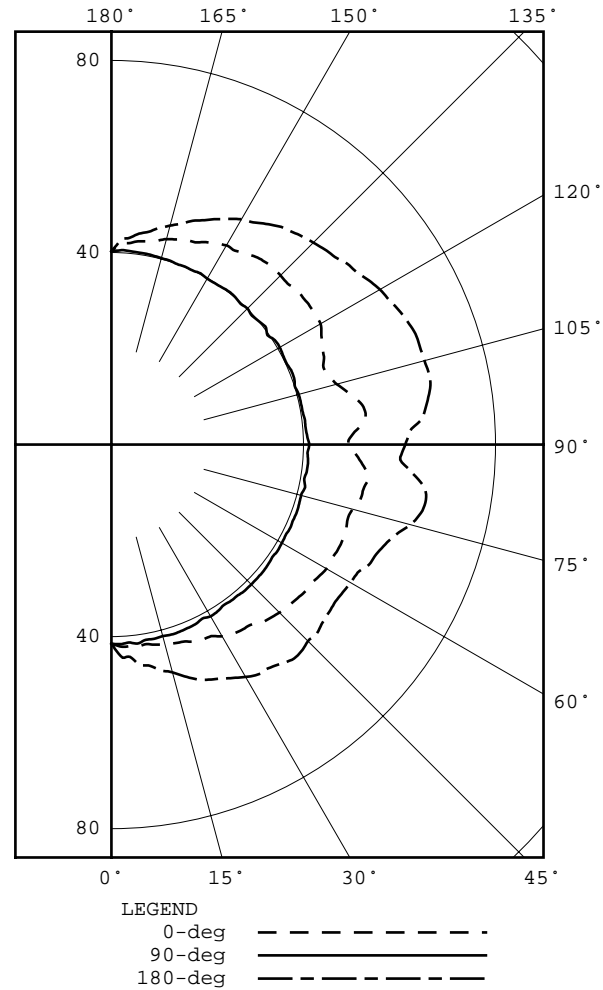
FLUX

4
12
21
29
37
44
50
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57
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37
29
21
12
4

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	37	6.0
0- 40	67	10.8
0- 60	149	24.0
0- 90	311	50.2
90-120	161	26.1
90-130	206	33.2
90-150	272	43.9
90-180	308	49.8
0-180	619	100.0

EFFICACY = 47.6 lm/W  
CIE TYPE - GENERAL DIFFUSE  
PLANE : 0-DEG 90-DEG 180-DEG  
SPACING CRITERIA : 1.75 1.52 1.98  
SHIELDING ANGLES : 90 90





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LUMINOUS DIAMETER: 8.500  
HEIGHT OF SIDE : 2.300

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	1422.	1184.	1664.
55	1615.	1305.	1819.
65	1933.	1528.	2200.
75	2401.	1888.	2978.
85	3351.	2609.	3967.



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CANDELA DISTRIBUTION  
LATERAL ANGLE

0.0	0.0	5.0	10.0	15.0	20.0	22.5	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0
0.0	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
2.5	42.1	42.2	42.1	41.4	40.9	40.8	40.8	40.9	40.8	40.9	41.1	41.3	41.5	41.5
5.0	42.2	42.2	41.9	41.3	40.5	40.8	40.7	40.6	40.9	41.0	40.9	40.9	41.2	41.1
7.5	42.4	42.5	42.4	41.7	41.1	41.2	41.1	41.1	41.3	41.3	41.5	41.3	41.5	41.6
10.0	42.2	42.4	42.3	41.5	41.1	41.0	41.0	40.9	41.0	41.0	41.0	41.2	41.2	41.4
12.5	42.7	42.8	42.6	41.7	41.5	41.3	41.3	41.3	41.4	41.2	41.2	41.3	41.4	41.3
15.0	43.1	43.2	43.1	42.2	41.9	41.6	41.8	41.5	41.6	41.6	41.5	41.2	41.7	41.4
17.5	43.4	43.8	43.4	42.4	42.2	42.0	41.9	42.1	41.7	41.8	41.6	41.5	41.6	41.5
20.0	43.7	44.1	43.8	43.1	42.8	42.6	42.3	42.3	42.0	42.0	41.9	41.8	41.9	41.8
22.5	44.4	44.4	44.4	43.4	43.1	42.7	42.8	42.5	42.5	42.2	42.0	42.2	41.9	41.8
25.0	44.8	45.1	44.7	43.9	43.4	43.2	43.2	43.0	42.6	42.7	42.4	42.2	42.1	41.8
27.5	45.0	45.6	45.3	44.4	43.7	43.7	43.6	43.4	43.0	42.8	42.7	42.4	42.1	41.9
30.0	46.1	46.3	46.2	45.1	44.7	44.6	44.3	44.1	43.8	43.5	43.2	42.7	42.7	42.3
32.5	46.8	47.1	46.8	46.0	45.2	45.2	44.9	44.7	44.3	44.1	43.7	43.3	43.1	42.6
35.0	47.2	47.1	47.1	46.0	45.5	45.3	45.1	44.7	44.3	44.0	43.6	43.2	42.9	42.5
37.5	47.4	47.9	47.7	46.8	46.2	46.1	45.8	45.3	45.1	44.6	44.2	43.8	43.3	42.8
40.0	48.5	48.6	48.5	47.4	46.8	46.3	46.2	46.1	45.8	45.2	44.8	44.3	43.9	43.2
42.5	49.0	49.3	49.2	48.2	47.5	47.4	47.1	46.8	46.4	46.0	45.4	44.9	44.3	43.9
45.0	49.5	49.5	49.5	48.5	47.6	47.6	47.5	46.9	46.6	46.2	45.7	45.3	44.7	43.9
47.5	49.8	50.0	49.8	49.1	48.2	48.1	47.9	47.5	47.1	46.6	46.0	45.5	44.6	44.0
50.0	50.2	50.4	50.4	49.5	49.0	48.6	48.6	48.2	47.5	47.2	46.4	46.1	45.1	44.4
52.5	50.6	51.1	51.0	50.1	49.3	49.1	48.9	48.6	48.2	47.8	47.2	46.4	45.5	44.9
55.0	50.6	51.0	51.0	50.3	49.7	49.4	49.3	48.9	48.6	47.9	47.3	46.6	45.8	44.7
57.5	51.2	51.4	51.3	50.8	50.4	50.2	50.0	49.6	49.3	48.7	47.9	47.1	46.2	45.2
60.0	51.7	51.6	51.8	51.5	51.1	50.9	50.7	50.1	49.7	49.1	48.6	47.6	46.6	45.7
62.5	51.6	51.8	51.8	51.8	51.6	51.3	51.2	50.7	50.2	49.6	48.7	47.9	46.8	45.8
65.0	52.0	52.3	52.5	52.5	52.6	52.3	52.0	51.7	50.8	50.4	49.5	48.5	47.2	46.2
67.5	52.1	52.1	52.3	53.2	53.3	53.0	52.6	52.1	51.4	50.7	49.8	48.8	47.7	46.4
70.0	52.0	52.2	52.5	53.6	53.6	53.6	53.4	52.6	52.1	51.2	50.2	49.4	48.0	47.0
72.5	51.6	51.5	52.5	54.1	54.5	54.2	54.0	53.3	52.3	51.5	50.8	49.4	48.4	47.1
75.0	52.0	51.6	53.1	54.8	55.2	55.1	54.5	53.7	52.6	51.7	51.0	49.7	48.7	47.1
77.5	53.1	52.6	54.0	56.1	56.3	56.2	55.7	54.8	53.6	52.5	51.5	50.3	49.0	47.8
80.0	53.3	52.5	54.6	56.6	56.8	56.5	55.9	54.9	53.5	52.5	51.3	50.1	48.7	47.4
82.5	53.9	53.6	56.2	57.7	58.0	57.4	57.1	55.7	54.1	53.1	51.8	50.5	49.1	47.6
85.0	52.8	53.7	57.0	58.7	58.3	57.8	57.2	55.7	54.4	52.9	51.8	50.2	48.8	47.6
87.5	51.1	53.3	56.8	59.1	58.8	58.2	57.6	55.7	53.7	51.7	50.7	50.0	49.1	47.5
90.0	49.5	53.6	57.6	59.6	58.8	58.2	57.3	54.9	51.6	50.6	49.9	50.2	49.3	47.8
92.5	50.3	53.6	57.6	58.6	57.5	57.1	56.6	53.8	50.8	49.5	50.2	50.2	48.7	47.2
95.0	52.7	54.3	57.2	57.3	56.1	55.7	55.2	52.5	49.6	49.5	50.1	50.0	49.0	47.3
97.5	53.3	53.7	55.8	55.8	54.2	53.7	53.3	51.4	48.9	49.0	49.5	49.7	48.8	47.0
100.0	52.3	52.3	54.1	54.4	53.1	52.3	51.6	50.1	48.7	48.5	49.2	49.8	48.3	46.8
102.5	50.4	50.7	52.5	52.9	52.0	51.7	51.1	49.0	48.0	48.4	48.7	49.2	47.9	46.6
105.0	48.6	48.9	50.5	52.0	52.1	51.8	51.3	49.3	47.8	47.9	48.6	49.3	47.9	46.4
107.5	47.6	47.6	49.2	51.9	52.0	52.0	51.8	51.0	48.8	47.7	48.4	48.9	47.7	46.3
110.0	47.0	47.1	48.8	51.8	52.5	52.7	52.5	52.3	50.2	48.9	48.7	48.8	47.6	46.2
112.5	47.9	47.5	48.8	51.5	52.7	52.6	52.4	51.9	51.3	50.3	49.2	48.9	47.7	46.1
115.0	48.4	47.3	48.3	50.9	52.2	52.0	51.7	51.5	50.5	50.0	49.3	48.4	47.3	45.9
117.5	49.3	47.9	48.3	49.7	51.0	51.5	50.9	50.8	50.2	49.4	48.7	47.9	46.9	45.5
120.0	50.3	49.3	48.8	49.6	50.4	50.8	50.9	51.0	50.0	49.5	48.7	47.7	46.9	45.7
122.5	50.3	49.5	48.6	49.5	49.4	49.7	50.0	50.2	49.6	48.9	48.1	47.4	46.3	45.2
125.0	50.4	49.3	48.3	48.4	48.5	48.5	48.9	49.4	48.8	48.2	47.4	46.8	45.7	44.6
127.5	50.3	49.6	48.8	48.6	48.5	48.5	48.5	49.0	48.6	48.1	47.3	46.7	45.5	44.6
130.0	50.4	49.8	49.1	48.3	48.2	48.0	47.9	48.2	48.2	47.7	47.2	46.3	45.5	44.4
132.5	49.7	49.9	48.9	47.8	47.7	47.6	47.1	47.4	47.5	47.1	46.4	45.7	44.8	44.1
135.0	49.8	49.7	49.1	47.8	47.4	47.5	47.2	46.9	46.9	46.8	46.0	45.8	44.6	44.0
137.5	49.9	49.6	48.6	47.8	47.3	47.2	46.7	46.4	46.4	46.2	45.7	45.0	44.2	43.4
140.0	49.7	49.4	48.3	47.7	47.0	47.0	46.7	46.3	46.0	45.6	45.4	44.5	44.2	43.3
142.5	49.3	48.7	48.3	47.4	46.7	46.6	46.4	46.2	45.6	45.5	45.1	44.4	43.8	43.2
145.0	48.6	48.3	47.6	46.8	46.1	45.9	46.0	45.5	45.5	44.8	44.3	43.9	43.3	42.6
147.5	47.9	47.8	47.0	46.3	46.0	45.5	45.6	45.1	44.8	44.3	43.9	43.4	42.8	42.3

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CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	5.0	10.0	15.0	20.0	22.5	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0
150.0	47.9	47.6	47.0	46.1	45.6	45.5	45.3	45.1	44.6	44.1	43.6	43.1	42.8	42.3
152.5	47.2	47.0	46.2	45.8	45.4	45.1	44.9	44.7	44.1	43.8	43.2	43.0	42.5	42.1
155.0	46.5	46.1	45.3	45.0	44.5	44.4	44.2	44.0	43.4	43.0	42.6	42.1	41.8	41.5
157.5	45.6	45.5	44.7	44.4	44.0	44.0	43.7	43.5	43.0	42.7	42.6	42.1	41.6	41.4
160.0	45.4	45.1	44.2	43.7	43.6	43.3	43.1	42.9	42.7	42.3	42.1	41.8	41.4	41.2
162.5	44.8	44.5	43.6	43.2	42.9	42.9	42.9	42.6	42.3	42.0	41.9	41.6	41.3	41.1
165.0	44.3	43.8	43.1	42.7	42.6	42.3	42.3	41.9	42.0	41.6	41.5	41.3	41.2	41.2
167.5	43.5	43.3	42.6	42.2	41.9	41.8	41.9	41.7	41.5	41.5	41.2	41.1	40.9	40.8
170.0	43.0	42.7	41.9	41.7	41.5	41.4	41.4	41.3	41.2	41.0	40.9	40.8	40.9	40.8
172.5	42.7	42.3	41.5	41.3	41.1	41.2	41.1	40.8	40.9	40.8	40.6	40.8	40.6	40.8
175.0	42.1	42.0	41.1	40.9	40.7	40.6	40.7	40.5	40.4	40.4	40.4	40.6	40.4	40.5
177.5	41.9	41.4	40.7	40.5	40.3	40.1	40.1	40.0	40.2	40.1	40.4	40.4	40.2	40.2
180.0	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2





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LATERAL ANGLE

	65.0	67.5	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	112.5	115.0	120.0
0.0	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
2.5	41.6	41.7	41.7	41.7	41.9	41.6	41.5	41.6	41.9	41.5	41.7	41.9	41.9	42.0
5.0	41.3	41.7	41.3	41.5	41.4	41.4	41.4	41.7	41.6	41.7	42.0	42.1	42.2	42.2
7.5	41.5	41.5	41.5	41.9	41.7	41.7	41.8	42.1	42.1	42.4	42.8	42.8	42.8	42.7
10.0	41.3	41.3	41.4	41.5	41.4	41.3	41.3	41.6	42.0	42.2	42.5	42.7	42.8	43.0
12.5	41.4	41.5	41.3	41.4	41.4	41.2	41.4	41.7	42.0	42.2	42.9	43.0	43.2	43.5
15.0	41.4	41.5	41.5	41.4	41.3	41.2	41.3	41.7	42.1	42.6	43.2	43.6	43.7	43.9
17.5	41.5	41.5	41.5	41.3	41.3	41.0	41.5	41.5	42.2	42.7	43.2	43.8	44.0	44.4
20.0	41.6	41.5	41.7	41.5	41.4	41.2	41.5	41.7	42.4	43.0	43.7	44.1	44.5	44.9
22.5	41.4	41.5	41.5	41.5	41.2	41.0	41.4	41.5	42.3	43.1	43.6	44.2	44.6	45.1
25.0	41.6	41.4	41.5	41.4	41.4	41.1	41.3	41.6	42.5	43.2	43.8	44.5	44.9	45.6
27.5	41.7	41.6	41.4	41.4	41.0	40.8	40.9	41.6	42.4	43.2	44.1	44.6	45.0	46.0
30.0	42.1	41.9	41.9	41.8	41.3	41.2	41.3	41.8	42.7	43.5	44.6	45.0	45.5	46.7
32.5	42.3	42.1	42.0	41.6	41.6	41.3	41.2	42.0	43.0	44.0	44.9	45.6	46.3	47.3
35.0	42.0	41.8	41.7	41.6	41.1	40.7	40.8	41.7	42.6	43.6	44.7	45.2	45.8	47.4
37.5	42.3	42.3	41.9	41.8	41.3	40.8	41.0	42.0	42.6	43.9	45.2	45.8	46.5	47.6
40.0	42.7	42.6	42.2	42.2	41.5	41.0	41.0	42.0	42.9	44.1	45.4	46.1	46.6	48.1
42.5	43.2	43.1	42.8	42.4	41.7	41.4	41.2	42.3	43.4	44.5	45.9	46.7	47.5	48.8
45.0	43.4	42.9	42.6	42.3	41.6	41.2	41.2	42.1	43.3	44.5	46.1	46.6	47.2	48.9
47.5	43.6	43.0	42.9	42.3	41.7	41.0	41.2	42.0	43.1	44.5	46.0	46.8	47.4	49.1
50.0	43.8	43.1	43.0	42.2	41.9	41.2	41.2	42.2	43.3	44.6	46.2	47.2	47.7	49.2
52.5	43.9	43.5	43.2	42.6	41.8	41.3	41.1	42.2	43.4	44.8	46.3	47.2	48.2	49.8
55.0	44.0	43.5	43.3	42.5	41.4	41.1	40.9	41.9	43.1	44.7	46.3	47.1	48.1	49.8
57.5	44.4	43.8	43.6	42.7	41.9	41.5	41.1	42.1	43.5	45.0	46.5	47.6	48.2	50.0
60.0	44.8	44.2	43.7	42.9	42.0	41.4	41.0	41.9	43.5	45.1	46.8	47.7	48.5	50.4
62.5	44.6	44.3	43.7	42.6	41.8	41.1	40.9	41.8	43.3	44.9	46.8	47.6	48.6	50.2
65.0	45.4	44.7	43.9	43.1	42.3	41.3	41.1	41.9	43.6	45.2	47.0	47.9	49.0	50.7
67.5	45.3	44.8	44.2	43.0	42.1	41.5	41.0	42.0	43.6	45.2	47.1	47.9	49.0	50.9
70.0	45.7	45.1	44.1	43.2	42.1	41.3	41.1	42.1	43.5	45.1	47.1	48.1	49.0	51.0
72.5	45.8	45.4	44.6	43.1	42.3	41.4	41.0	42.0	43.4	45.2	47.2	48.1	49.2	51.1
75.0	45.8	45.1	44.4	43.1	42.2	41.2	40.9	41.8	43.2	45.2	47.0	48.0	49.0	50.9
77.5	46.4	45.6	44.7	43.6	42.4	41.5	41.3	42.0	43.6	45.3	47.6	48.6	49.6	51.7
80.0	45.8	45.1	44.3	43.0	41.9	41.3	40.8	41.6	43.3	45.0	46.9	48.1	49.0	50.9
82.5	46.3	45.5	44.7	43.5	42.1	41.5	41.1	41.9	43.6	45.3	47.3	48.2	49.2	51.3
85.0	46.0	45.3	44.4	43.4	42.1	40.9	41.1	41.6	43.3	45.2	47.1	48.1	49.3	51.0
87.5	46.0	45.3	44.9	43.3	42.1	41.2	40.9	41.8	43.1	45.4	47.4	48.2	49.5	51.3
90.0	46.2	45.6	44.7	43.3	42.2	41.3	41.2	41.9	43.3	45.2	47.4	48.5	49.7	51.5
92.5	45.6	44.8	44.5	43.1	41.9	40.9	40.8	41.5	43.2	45.3	47.1	48.2	49.2	51.0
95.0	45.9	45.1	44.4	42.9	41.8	41.1	40.6	41.7	43.3	45.3	47.3	48.4	49.4	51.1
97.5	45.7	44.9	44.4	42.9	41.9	41.1	40.6	41.7	43.2	45.2	47.2	48.2	49.3	51.1
100.0	45.7	44.9	44.2	42.9	41.8	40.9	40.4	41.6	43.2	44.9	46.9	48.1	49.2	51.2
102.5	45.2	44.3	43.6	42.5	41.5	40.5	40.4	41.2	42.9	44.6	46.8	47.9	48.9	50.9
105.0	45.0	44.3	43.8	42.3	41.4	40.8	40.4	41.3	42.8	44.7	46.9	47.8	48.9	50.8
107.5	44.9	44.4	43.7	42.4	41.3	40.7	40.1	41.2	42.6	44.7	46.7	47.4	48.5	50.5
110.0	45.0	44.3	43.7	42.2	41.2	40.6	40.5	41.3	42.8	44.7	46.7	47.7	48.5	50.4
112.5	45.1	44.3	43.6	42.6	41.5	40.7	40.5	41.5	42.9	44.8	46.8	47.6	48.7	50.4
115.0	44.6	43.9	43.5	42.3	41.2	40.5	40.2	41.1	42.7	44.4	46.2	47.2	48.2	50.3
117.5	44.3	43.8	43.3	42.0	41.2	40.4	40.3	40.9	42.5	44.2	46.0	47.0	47.8	49.9
120.0	44.4	43.6	43.3	42.2	41.3	40.5	40.5	41.2	42.8	44.3	45.8	46.8	48.0	49.7
122.5	44.0	43.5	42.9	42.0	41.0	40.6	40.4	41.2	42.4	44.0	45.6	46.5	47.5	49.1
125.0	43.7	43.1	42.5	41.4	40.7	40.0	39.7	40.7	42.1	43.4	45.2	45.9	46.7	48.7
127.5	43.6	43.1	42.7	41.7	40.9	40.2	40.4	40.8	42.4	43.6	45.2	45.9	46.8	48.5
130.0	43.3	43.0	42.5	41.5	40.7	40.0	40.0	40.9	42.1	43.5	45.2	45.5	46.5	48.1
132.5	42.9	42.5	42.0	41.1	40.9	39.9	39.7	40.4	41.9	42.8	44.3	45.0	46.0	47.5
135.0	42.9	42.7	42.2	41.3	40.6	40.1	40.1	40.5	41.8	43.0	44.2	45.1	45.9	47.2
137.5	42.8	42.3	41.9	41.1	40.5	40.0	39.8	40.7	41.5	42.8	44.2	44.8	45.4	46.6
140.0	42.6	42.1	41.9	41.4	40.7	40.3	40.1	40.7	41.6	42.9	44.0	44.5	45.2	46.4
142.5	42.4	42.0	41.9	41.2	40.7	40.3	40.2	40.5	41.6	42.4	43.7	44.3	44.8	45.8
145.0	42.2	41.7	41.5	41.1	40.4	40.0	40.0	40.3	41.1	42.1	43.2	43.7	44.3	45.3
147.5	41.7	41.4	41.4	41.0	40.5	40.1	39.9	40.4	40.9	42.0	42.7	43.4	43.9	44.7

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**HUBBELL**  
**Lighting**

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

**REPORT NUMBER:** 20.00777

**PAGE:** 9 OF 14

**ISSUE DATE:** 06/24/20

**PREPARED FOR:** PROGRESS

**CATALOG NUMBER:** P710103-031-30

CANDELA DISTRIBUTION  
LATERAL ANGLE

150.0	65.0	67.5	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	112.5	115.0	120.0
152.5	41.8	41.6	41.4	40.9	40.6	40.3	39.9	40.4	41.3	42.0	42.8	43.2	43.8	44.5
155.0	41.6	41.4	41.4	41.0	40.6	40.2	40.2	40.5	41.1	41.9	42.4	43.0	43.5	44.2
157.5	41.2	41.0	40.8	40.5	40.4	40.1	40.0	40.3	40.9	41.4	42.1	42.3	42.6	43.5
160.0	41.2	41.0	40.7	40.7	40.4	40.2	40.1	40.2	41.0	41.4	41.9	42.2	42.4	43.1
162.5	41.2	40.8	40.9	40.6	40.3	40.2	40.0	40.2	40.8	41.2	41.7	42.1	42.1	42.8
165.0	41.0	40.9	40.9	40.8	40.3	40.2	40.2	40.4	40.8	41.1	41.6	41.8	42.0	42.4
167.5	40.8	40.7	40.6	40.7	40.5	40.0	40.2	40.2	40.7	40.9	41.3	41.5	41.7	42.0
170.0	40.8	40.7	40.8	40.9	40.6	40.6	40.3	40.3	40.8	40.9	41.0	41.1	41.3	41.7
172.5	40.8	40.7	40.7	40.5	40.5	40.4	40.4	40.3	40.8	40.8	41.0	41.0	41.3	41.4
175.0	40.8	40.7	41.1	40.5	40.7	40.7	40.4	40.6	40.8	40.8	41.0	40.9	41.1	41.0
177.5	40.6	40.4	40.6	40.6	40.6	40.6	40.5	40.5	40.6	40.9	40.7	40.6	40.7	40.7
180.0	40.4	40.2	40.7	40.4	40.7	40.6	40.5	40.4	40.4	40.5	40.5	40.7	40.7	40.4
	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2



**HUBBELL**  
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PREPARED FOR: PROGRESS

CATALOG NUMBER: P710103-031-30

CANDELA DISTRIBUTION  
LATERAL ANGLE

	125.0	130.0	135.0	140.0	145.0	150.0	155.0	157.5	160.0	165.0	170.0	175.0	180.0
0.0	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
2.5	41.7	41.6	41.4	41.4	41.5	41.5	41.4	41.1	41.4	42.0	42.3	43.3	44.1
5.0	41.9	42.1	42.1	42.2	42.0	42.1	42.2	41.9	42.2	42.5	43.3	43.9	44.4
7.5	43.0	43.1	43.0	43.0	43.0	43.3	43.4	43.4	43.4	44.0	44.6	45.3	46.3
10.0	43.0	43.1	43.0	43.4	43.5	43.8	44.0	43.8	43.9	44.6	45.0	46.2	46.8
12.5	43.8	43.9	44.1	44.2	44.4	44.8	45.0	44.9	45.2	45.8	46.2	47.3	48.2
15.0	44.4	44.7	44.9	45.0	45.4	45.8	46.2	46.1	46.4	46.8	47.4	48.5	49.1
17.5	44.7	45.2	45.5	45.9	46.4	46.7	46.9	47.1	47.3	48.0	48.6	49.9	50.6
20.0	45.5	45.9	46.4	46.8	47.2	47.7	47.9	48.0	48.4	49.3	50.0	51.1	52.0
22.5	45.7	46.1	46.8	47.3	48.0	48.4	48.7	49.1	49.4	50.0	50.9	52.1	53.0
25.0	46.4	46.8	47.7	48.2	48.9	49.5	50.0	50.0	50.4	51.3	52.0	53.2	53.8
27.5	46.8	47.5	48.0	48.9	49.5	50.0	50.6	50.9	51.2	52.0	52.9	53.8	54.8
30.0	47.4	48.3	49.3	50.0	50.5	51.2	51.7	52.2	52.3	53.2	54.1	55.1	55.9
32.5	48.1	49.0	50.1	50.8	51.5	52.1	52.6	53.1	53.2	54.1	54.9	56.1	56.8
35.0	48.2	49.3	50.1	50.8	51.8	52.3	52.9	53.1	53.6	54.3	55.2	56.5	56.9
37.5	48.8	49.8	51.0	51.7	52.4	53.0	53.7	54.1	54.2	54.9	56.1	57.1	57.6
40.0	49.4	50.6	51.6	52.4	53.2	53.6	54.3	54.6	54.9	55.7	56.5	57.6	58.5
42.5	50.0	51.3	52.5	53.1	53.8	54.5	55.1	55.5	55.8	56.3	57.3	58.0	58.5
45.0	50.1	51.5	52.6	53.4	54.4	54.8	55.3	55.7	56.0	56.7	57.5	57.9	57.9
47.5	50.3	51.8	53.0	54.0	55.0	55.4	55.9	56.1	56.3	56.9	57.6	58.0	58.1
50.0	50.7	52.1	53.7	54.4	55.6	56.3	56.6	56.7	57.0	57.6	58.1	58.4	57.5
52.5	51.1	52.4	54.1	54.8	56.0	56.9	57.4	57.6	57.5	58.2	58.3	58.1	57.2
55.0	51.2	52.8	53.8	55.1	56.3	57.2	57.9	57.9	58.0	58.5	58.7	58.0	57.0
57.5	51.8	52.9	54.5	55.6	56.8	58.1	58.7	58.9	58.9	59.0	59.5	58.3	57.2
60.0	52.0	53.3	54.8	56.1	57.2	58.2	59.1	59.7	60.1	59.9	60.0	58.5	57.5
62.5	52.0	53.4	54.9	56.3	57.5	58.6	59.5	60.0	60.5	60.4	60.3	58.9	57.8
65.0	52.1	53.7	55.3	56.7	57.9	59.2	60.1	60.8	60.9	61.0	61.1	60.0	59.2
67.5	52.4	54.0	55.5	56.8	58.2	59.3	60.5	60.8	61.0	61.3	61.7	60.7	59.7
70.0	52.8	53.7	55.5	57.0	58.5	59.5	60.8	61.1	61.2	61.5	62.0	61.5	60.7
72.5	52.7	53.7	54.8	56.5	58.6	59.5	60.6	61.5	61.3	61.7	62.4	62.9	62.2
75.0	52.5	53.4	53.8	55.3	57.3	59.0	60.3	60.8	61.2	61.6	62.9	64.2	64.5
77.5	53.0	53.7	53.7	54.1	55.9	58.1	60.0	60.5	61.3	62.1	63.7	65.0	66.0
80.0	52.5	53.2	53.3	53.7	54.7	56.9	58.7	59.4	60.2	61.7	63.6	65.1	66.5
82.5	52.7	53.5	53.7	54.0	54.9	56.9	58.7	59.4	60.5	62.0	64.0	65.0	65.5
85.0	52.9	53.1	53.6	54.2	55.2	56.9	58.5	59.4	60.2	62.1	63.8	63.8	62.5
87.5	53.0	53.6	53.6	54.4	55.8	58.1	59.8	60.5	61.0	62.2	64.1	63.3	60.2
90.0	53.2	54.0	54.0	55.2	56.9	59.4	61.0	61.9	61.9	63.0	64.4	63.6	61.2
92.5	52.7	52.8	53.9	54.9	57.5	59.9	61.4	61.6	62.1	63.0	64.0	63.7	62.2
95.0	52.9	53.7	55.1	56.6	58.9	60.6	62.3	62.8	63.1	63.7	64.3	65.1	65.1
97.5	52.8	54.3	56.0	57.8	59.1	60.5	62.5	63.0	63.9	64.5	65.2	65.8	66.3
100.0	53.0	54.5	56.0	57.7	59.1	60.6	62.4	63.3	63.9	65.0	65.7	66.5	67.4
102.5	52.6	54.1	55.7	57.3	59.0	60.3	62.4	63.0	63.7	65.0	65.9	66.7	67.8
105.0	52.3	54.0	55.7	57.2	58.9	60.2	62.2	63.1	63.8	65.0	65.7	66.9	67.5
107.5	52.2	53.9	55.5	57.2	58.5	60.4	61.8	62.5	63.3	64.7	65.5	66.6	67.4
110.0	52.2	53.8	55.5	57.1	58.6	59.9	61.8	62.4	63.3	64.5	65.5	66.5	67.4
112.5	52.1	53.9	55.5	57.1	58.4	60.1	61.4	62.0	63.1	64.1	65.5	66.6	66.8
115.0	51.6	53.4	54.8	56.4	57.8	59.4	60.9	61.4	62.1	63.5	64.3	65.4	66.1
117.5	51.3	52.9	54.4	55.9	57.4	58.6	60.2	60.4	61.4	62.6	63.6	64.9	65.2
120.0	51.3	52.7	54.4	55.8	56.9	58.5	59.7	60.2	61.2	62.2	63.2	64.2	64.6
122.5	50.8	52.4	53.6	55.1	56.4	57.6	58.9	59.7	60.4	61.5	62.3	63.4	63.6
125.0	50.2	51.6	53.1	54.3	55.3	56.8	58.2	58.7	59.4	60.4	61.2	62.1	62.5
127.5	50.1	51.3	52.5	53.9	55.3	56.3	57.7	58.2	59.0	59.7	60.8	61.7	61.9
130.0	49.4	50.8	52.1	53.5	54.8	55.7	56.9	57.6	58.1	59.0	60.1	60.8	60.8
132.5	48.9	50.1	51.6	52.7	53.9	54.9	56.0	56.7	57.2	58.0	59.1	59.9	60.2
135.0	48.6	49.6	51.0	52.4	53.5	54.3	55.7	56.4	56.8	57.6	58.4	59.2	59.5
137.5	48.0	49.1	50.2	51.6	52.8	53.7	54.7	55.3	55.9	56.6	57.6	58.4	58.8
140.0	47.6	48.7	49.7	51.1	52.2	53.1	54.2	54.7	55.2	56.0	56.8	58.0	58.0
142.5	47.0	48.1	49.1	50.6	51.5	52.2	53.4	53.6	54.2	55.3	56.0	56.8	57.3
145.0	46.3	47.4	48.5	49.6	50.4	51.5	52.5	53.0	53.1	54.1	54.8	55.7	56.1
147.5	45.8	46.5	47.6	48.8	49.6	50.5	51.5	51.9	52.2	52.9	53.8	54.6	54.9



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**PREPARED FOR:** PROGRESS

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CANDELA DISTRIBUTION  
LATERAL ANGLE

	125.0	130.0	135.0	140.0	145.0	150.0	155.0	157.5	160.0	165.0	170.0	175.0	180.0
150.0	45.5	46.2	47.4	48.4	49.0	49.9	50.5	51.0	51.7	52.0	52.8	53.8	54.2
152.5	45.0	45.6	46.6	47.4	48.1	48.8	49.9	50.1	50.4	51.1	51.9	52.3	53.0
155.0	44.1	44.8	45.5	46.5	47.1	47.9	48.4	48.8	49.2	49.8	50.7	51.3	51.8
157.5	43.7	44.1	44.9	45.6	46.5	46.9	47.8	47.9	48.3	48.7	49.6	50.2	50.6
160.0	43.2	43.6	44.2	45.1	45.6	45.9	46.7	47.0	47.1	47.6	48.5	49.1	49.6
162.5	42.6	42.9	43.5	44.3	44.9	45.1	45.8	46.1	46.4	46.8	47.3	48.0	48.2
165.0	42.2	42.7	42.9	43.3	43.8	44.2	45.0	44.9	45.3	45.6	46.3	46.7	47.2
167.5	42.0	42.2	42.4	42.8	43.2	43.5	44.1	44.2	44.4	44.7	45.1	45.8	46.2
170.0	41.3	41.3	42.0	42.1	42.5	42.6	43.1	43.2	43.5	43.7	44.3	44.5	45.0
172.5	41.1	41.2	41.1	41.7	41.8	41.9	42.4	42.3	42.4	43.0	43.3	43.9	44.3
175.0	40.8	40.7	40.8	41.0	41.0	41.3	41.6	41.6	41.6	41.9	42.5	42.9	43.2
177.5	40.3	40.2	40.1	40.6	40.5	40.6	40.8	40.9	41.0	41.2	41.7	42.4	42.5
180.0	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2



**HUBBELL**  
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701 Millennium Blvd  
Greenville, SC 29607  
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**PREPARED FOR:** PROGRESS  
**CATALOG NUMBER:** P710103-031-30

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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		1
5- 10		3
10- 15		5
15- 20		7
20- 25		9
25- 30		11
30- 35		14
35- 40		16
40- 45		18
45- 50		20
50- 55		21
55- 60		23
60- 65		25
65- 70		26
70- 75		27
75- 80		28
80- 85		28
85- 90		29
90- 95		29
95-100		28
100-105		28
105-110		27
110-115		26
115-120		25
120-125		23
125-130		21
130-135		19
135-140		18
140-145		16
145-150		13
150-155		11
155-160		9
160-165		7
165-170		5
170-175		3
175-180		1

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		4
0- 20		16
0- 30		37
0- 40		67
0- 50		104
0- 60		149
0- 70		199
0- 80		254
0- 90		311
0-100		367
0-110		422
0-120		472
0-130		516
0-140		553
0-150		582
0-160		603
0-170		615
0-180		619



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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	107	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	93	87	81	76	76	85	80	75	70	66	63	59	54	51	49	43	41	39	33
2	83	74	66	59	59	76	67	60	54	56	50	46	45	41	37	35	32	29	24
3	75	63	54	47	47	68	58	50	44	48	42	37	38	34	30	30	26	23	19
4	68	55	46	39	39	62	51	42	36	42	35	30	34	28	24	26	22	19	15
5	62	49	39	32	32	56	45	36	30	37	30	25	30	24	20	23	19	16	12
6	57	43	34	28	28	52	40	31	25	33	26	21	26	21	17	21	17	13	10
7	52	39	30	24	24	48	36	28	22	30	23	18	24	19	15	19	15	12	9
8	48	35	26	21	21	44	32	24	19	27	21	16	22	17	13	17	13	10	8
9	45	32	24	18	18	41	29	22	17	24	18	14	20	15	12	16	12	9	7
10	42	29	21	16	16	38	27	20	15	22	17	13	18	14	10	14	11	8	6

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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**HUBBELL**  
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Date  
6/25/2020

### *Goniophotometer Calibration*

*Calibration Lamp:* GE 1000W, 120V, T6, CL (FEL)

*Lamp Number:* ITL78966-1000-66

*Calibration Current:* 8.300 Amps DC

*Total Luminous Flux:* 23013.0 Lumens

*Calibration Date:* 08/20/2019

<i>Test Equipment Used</i>			
<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 5 - Test Distance: 56.0'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27072V	10/31/2020
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	10/31/2020

### *3-Meter-Sphere Calibration*

*Calibration Lamp:* EIKO 28V75W/E10

*Lamp Number:* SCL-1400-K136

*Calibration Current:* 2.679 Amps

*Total Luminous Flux:* 1429 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	Calibration Checked Daily
<i>Thermometer</i>	National Instruments / USB TC01	1912751	10/31/2020
<i>Power Analyzer</i>	Yokogawa / WT332	C2QA27075V	10/31/2020
<i>Power Supply</i>	Chroma / 61602	616020002113	N/A
<i>Aux Lamp Supply</i>	GW Instek / PSU 150-10	GER221028	N/A
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148505	N/A
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

## **Hubbell Lighting, Inc.**

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