

Project Number  
16.03282



Date  
11/29/2016

Lab 6  
Sphere

### Test Sample Description

Catalog Number: P350025-00930

Description: 1-Lt. Small LED Flush Mount Sconce. Test using 17W LED SAMPLE "A" - Diffused Lens.

### Photometry

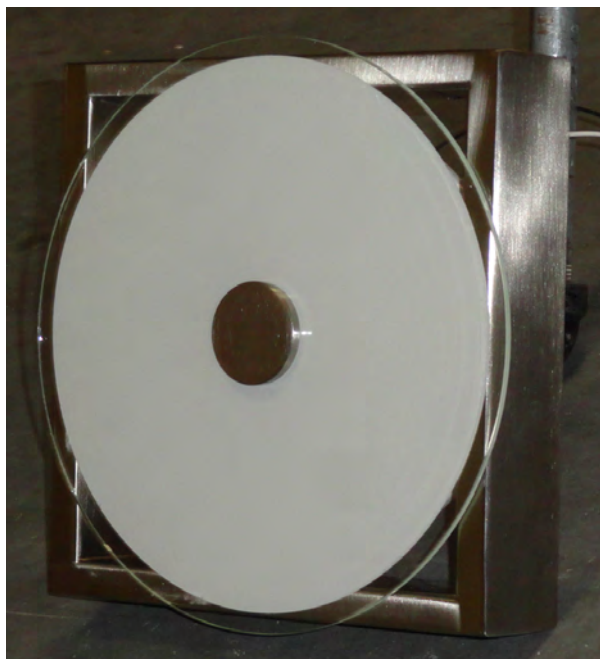
Test Method: IES LM-79-08 § 10  
Preburn Time: 01:30  
Time To Stabilize: 0:50  
Total Operating Time: 3:16

Input Voltage (Volts): 120.2  
Input Current (Amps): 0.147  
Input Wattage (Watts): 17.4  
Ambient Temp (°C): 24.5

### Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1  
Preburn Time: 0:10  
Time To Stabilize: 1:08  
Total Operating Time: 1:18

Input Voltage (Volts): 120.0  
Input Current (Amps): 0.146  
Input Wattage (Watts): 17.2  
Ambient Temp (°C): 24.0  
PF @ 120V: 0.985  
THD @ 120V (%): 18.1



### Hubbell Lighting, Inc.

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

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



This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

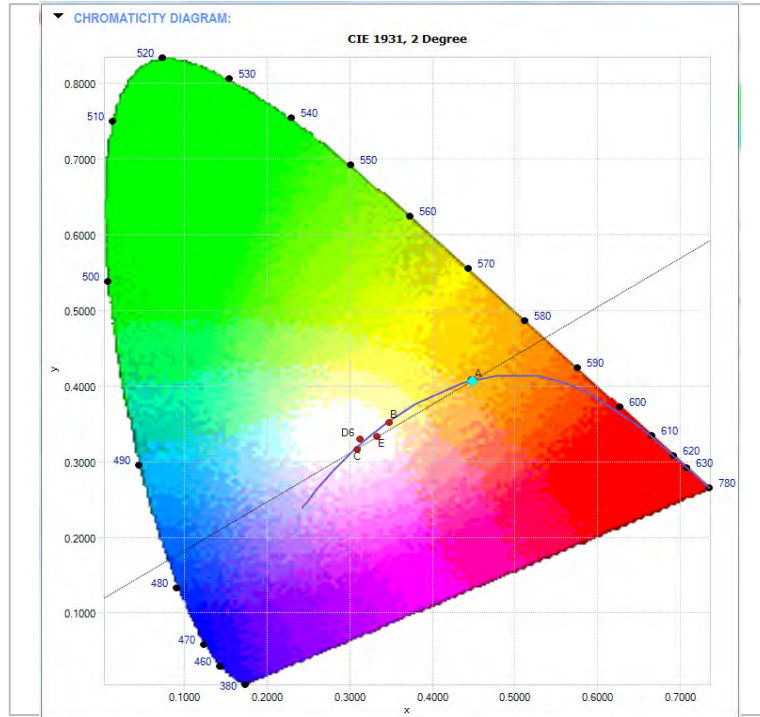


Lamp Cat#: 93047261-5xxx  
 Lamp Desc: 40 - Nichia 3000K LEDs

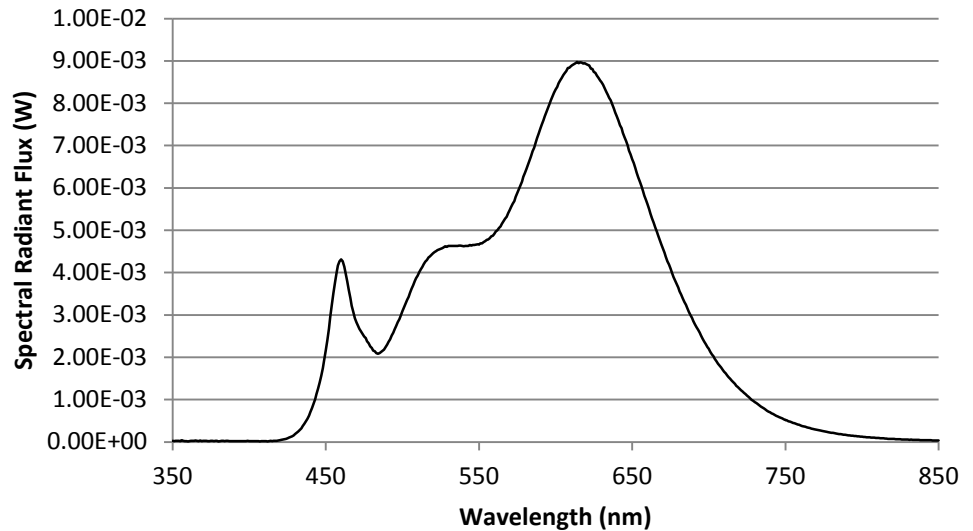
Efficacy: 23.8 LPW      S/P Ratio: 1.4 LM/LM

**Spectral Results**

Name	Value	Unit
$\Phi$	1.39	watts
$\Phi(v)$	409	lumens
$\Phi(v')$	579	lm'
Chrom x	0.4483	
Chrom y	0.4073	
Chrom u	0.2565	
Chrom v	0.3496	
Duv	0.0001	
Chrom u'	0.2565	
Chrom v'	0.5243	
CCT	2842	K
Purity	56.8	%
$\lambda$ (dom)	583.6	nm
FWHM	150	nm
$\lambda$ (peak)	614.9	nm
$\lambda$ (center)	595.9	nm
$\lambda$ (centroid)	593.4	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000209217	
Correlation	0.0054	
R1	97.4	
R2	98.5	
R3	94.6	
R4	96.1	
R5	97.2	
R6	92.6	
R7	88.3	
R8	79.1	
R9	56.8	
R10	97.0	
R11	97.6	
R12	83.2	
R13	99.4	
R14	97.9	



**Spectral Distribution of Radiant Flux**



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CATALOG NUMBER: P350025-00930

LUMINAIRE: 1-Lt. Small LED Flush Mount Sconce.17W LED SAMPLE "A"

LAMP CAT. NO.: 93047261-5xxx

LAMP: 40-NICHIA 3000K LED's

Lens : Diffused

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

CANDELA DISTRIBUTION

	0.0	45.0	90.0	135.0	180.0
0	0.5	0.5	0.5	0.5	0.5
5	3.2	2.1	0.7	0.6	0.8
15	14.6	9.1	0.5	3.3	3.4
25	30.3	23.2	0.7	9.0	15.2
35	46.5	38.1	0.6	20.2	25.4
45	60.5	45.4	0.5	29.2	28.8
55	73.0	51.9	0.3	33.5	27.7
65	83.3	57.1	0.7	33.1	26.7
75	90.8	59.8	0.5	29.9	26.1
85	94.9	60.6	0.5	28.7	26.0
90	95.4	60.7	0.5	28.7	26.0
95	94.8	60.5	0.4	28.4	26.0
105	90.8	59.2	0.3	29.9	25.8
115	83.5	56.6	0.3	32.8	26.7
125	72.6	51.6	0.4	33.6	27.4
135	60.0	44.0	0.6	29.4	28.4
145	45.9	35.7	0.6	20.3	26.0
155	29.0	21.8	0.7	8.8	15.0
165	13.7	8.7	0.6	3.1	3.6
175	1.0	0.3	0.2	0.1	0.3
180	0.1	0.1	0.1	0.1	0.1

FLUX

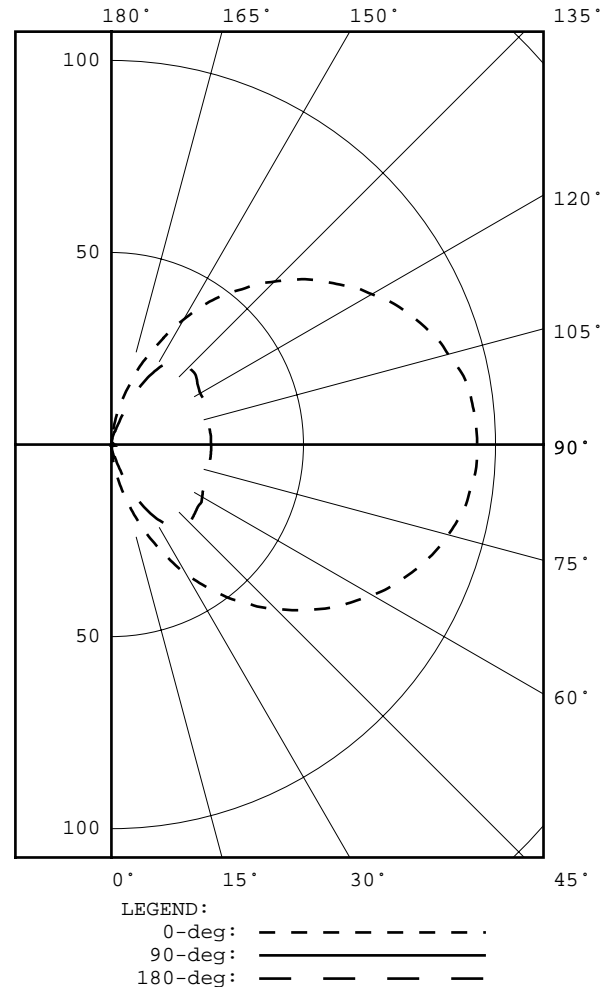
0.2
1.7
6.5
14.7
23.5
31.2
36.6
39.5
40.8
40.7
39.2
36.1
30.6
22.9
14.1
6.2
1.6
0.1

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	8.5	2.2
0- 40	23.1	6.0
0- 60	77.8	20.1
0- 90	194.8	50.4
90-120	116.0	30.0
90-130	146.7	38.0
90-150	183.7	47.5
90-180	191.6	49.6
0-180	386.4	100.0

EFFICACY = 22.2 Lm/W

CIE TYPE - DIRECT-INDIRECT





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PLANE : 0-DEG 90-DEG  
LUMINOUS LENGTH : 0.125 7.250  
HEIGHT OF SIDE : 7.250 7.250

LUMINANCE DATA IN CANDELA/SQ M  
ANGLE AVERAGE AVERAGE AVERAGE  
IN DEG 0-DEG 90-DEG 180-DEG  
45 2479. 604. 1180.  
55 2596. 368. 985.  
65 2688. 901. 862.  
75 2758. 698. 793.  
85 2804. 789. 768.



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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
0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
2.5	1.5	1.4	1.4	1.3	1.2	1.1	1.0	0.9	0.8	0.8	0.5	0.6	0.5	0.4
5.0	3.2	3.2	3.2	2.8	2.5	2.1	1.8	1.3	1.1	0.8	0.7	0.6	0.6	0.5
7.5	5.7	5.7	5.5	5.0	4.6	3.8	2.9	2.1	1.4	0.9	0.8	0.6	0.6	0.8
10.0	8.2	8.4	8.0	7.4	6.5	5.7	4.2	2.7	1.6	0.8	0.6	0.6	0.4	0.8
12.5	11.4	11.4	10.8	10.0	9.0	7.5	6.4	4.0	2.0	0.9	0.7	0.6	0.6	1.1
15.0	14.6	14.4	13.8	12.8	11.1	9.1	7.3	5.1	2.3	0.9	0.5	0.3	0.5	1.1
17.5	18.4	18.5	17.7	16.5	14.4	11.4	8.8	7.0	2.9	1.1	0.6	0.4	0.6	1.8
20.0	22.3	22.5	21.9	20.7	18.4	14.7	10.3	7.5	3.6	1.0	0.6	0.5	0.8	2.5
22.5	26.4	26.3	25.9	24.9	22.5	18.9	12.9	8.3	4.2	1.2	0.6	0.4	1.0	3.4
25.0	30.3	30.2	29.5	28.6	26.6	23.2	17.2	9.3	5.3	1.4	0.7	0.6	1.3	4.3
27.5	34.7	34.6	33.8	32.0	30.3	27.5	21.4	11.3	5.6	1.4	0.6	0.6	1.4	5.3
30.0	38.9	38.8	38.0	35.7	33.9	31.5	25.7	14.3	5.8	1.5	0.7	0.5	1.8	6.1
32.5	42.7	43.0	41.5	39.4	37.3	35.2	30.1	17.4	6.1	1.5	0.6	0.5	2.1	7.0
35.0	46.5	46.7	45.3	42.9	40.0	38.1	34.2	19.8	6.6	1.6	0.6	0.5	2.7	8.0
37.5	50.4	50.3	49.2	46.4	42.9	41.1	37.9	21.9	7.4	1.7	0.6	0.5	3.1	9.4
40.0	53.5	53.6	52.5	49.6	45.5	42.7	41.5	23.8	8.3	1.7	0.5	0.4	3.6	10.7
42.5	57.4	57.1	56.2	52.6	48.3	44.0	44.0	25.9	9.4	1.8	0.5	0.3	4.0	12.1
45.0	60.5	60.4	59.0	56.0	50.9	45.4	45.7	28.7	10.4	2.0	0.5	0.4	4.3	13.4
47.5	63.8	63.7	62.0	58.9	53.3	47.0	46.3	31.8	11.3	1.9	0.4	0.3	4.5	14.2
50.0	66.9	66.7	65.1	61.4	55.9	48.9	46.1	35.0	12.3	2.2	0.5	0.3	5.0	15.1
52.5	70.1	69.7	67.7	63.6	58.0	50.3	45.5	37.6	13.2	2.2	0.4	0.4	5.3	15.8
55.0	73.0	72.6	70.6	66.1	60.1	51.9	45.0	39.5	14.4	2.1	0.3	0.2	5.8	16.6
57.5	75.6	75.6	73.3	68.7	62.2	53.6	45.0	40.3	15.8	2.4	0.5	0.5	6.4	17.5
60.0	78.4	78.0	75.7	70.9	63.6	54.8	45.0	39.2	16.7	2.4	0.5	0.4	6.6	17.8
62.5	81.1	80.4	77.9	72.7	65.0	55.9	45.6	37.8	17.5	2.5	0.3	0.5	6.8	18.3
65.0	83.3	83.2	80.2	75.1	66.7	57.1	46.0	36.7	17.8	2.9	0.7	0.7	6.8	18.7
67.5	85.5	85.1	81.9	76.4	68.1	57.8	45.8	35.2	17.3	2.6	0.5	0.5	6.4	18.4
70.0	87.5	87.2	83.8	77.8	69.2	58.8	45.9	33.9	16.8	2.9	0.4	0.6	6.3	18.3
72.5	89.3	88.9	85.2	78.9	70.2	59.3	45.9	32.9	16.0	2.9	0.3	0.6	5.8	17.7
75.0	90.8	90.5	87.0	80.1	71.2	59.8	46.3	32.1	15.5	3.0	0.5	0.6	5.6	17.2
77.5	92.2	91.8	88.2	81.1	71.8	60.2	46.5	31.5	15.0	3.2	0.5	0.8	5.3	16.7
80.0	93.5	92.9	89.3	82.0	72.4	60.4	46.6	30.9	14.8	3.1	0.6	0.6	4.9	16.1
82.5	94.1	93.8	90.2	82.7	72.6	60.4	46.4	30.5	14.4	2.9	0.4	0.7	4.3	15.4
85.0	94.9	94.4	90.7	83.3	72.9	60.6	46.5	30.3	14.4	2.9	0.5	0.7	4.1	15.2
87.5	95.2	94.8	90.9	83.5	72.9	60.6	46.4	29.9	14.3	2.9	0.5	0.7	3.7	14.8
90.0	95.4	94.8	91.2	83.6	73.0	60.7	46.3	29.8	14.3	2.9	0.5	0.8	3.8	14.7
92.5	95.1	94.7	91.0	83.6	72.9	60.5	46.2	29.8	14.2	2.9	0.5	0.8	3.8	14.7
95.0	94.8	94.4	90.8	83.4	72.8	60.5	46.3	30.0	14.3	2.9	0.4	0.8	4.0	14.9
97.5	94.4	94.0	90.2	82.8	72.5	60.3	46.4	30.2	14.3	3.0	0.4	0.7	4.4	15.2
100.0	93.8	93.1	89.5	82.3	72.2	60.2	46.3	30.4	14.5	3.1	0.5	0.8	5.0	15.8
102.5	92.5	91.9	88.3	81.2	71.7	59.8	46.1	30.6	14.6	3.0	0.4	0.7	5.3	16.3
105.0	90.8	90.5	87.0	80.0	70.9	59.2	45.7	30.9	14.7	2.8	0.3	0.6	5.6	16.6
107.5	89.5	89.0	85.6	79.0	70.1	58.9	45.6	31.7	15.3	2.8	0.4	0.6	6.0	17.3
110.0	87.6	87.4	84.0	77.8	69.1	58.4	45.5	32.3	15.9	2.8	0.5	0.5	6.4	17.9
112.5	85.6	85.3	82.1	76.3	67.9	57.5	45.1	33.4	16.4	2.7	0.4	0.4	6.6	18.1
115.0	83.5	82.9	79.9	74.6	66.4	56.6	44.9	34.2	16.5	2.4	0.3	0.2	6.7	18.2
117.5	81.2	80.9	78.1	72.9	64.8	55.7	44.2	35.6	16.5	2.4	0.5	0.6	6.9	18.3
120.0	78.3	78.3	75.5	70.8	63.1	54.4	43.6	36.7	15.8	2.4	0.5	0.5	7.2	18.0
122.5	75.8	75.5	73.3	68.6	61.4	53.1	43.2	37.1	15.0	2.3	0.5	0.5	6.7	17.6
125.0	72.6	72.4	70.5	66.1	59.7	51.6	42.9	36.3	13.9	2.1	0.4	0.4	6.1	16.9
127.5	69.7	69.5	67.9	63.6	57.8	49.9	43.0	34.7	13.1	2.2	0.6	0.5	5.9	16.5
130.0	66.9	66.4	64.8	60.7	55.5	48.0	43.0	32.1	12.1	2.2	0.6	0.4	5.5	15.7
132.5	63.5	63.2	61.8	58.2	53.1	46.0	42.9	29.4	11.1	2.1	0.6	0.4	5.1	14.9
135.0	60.0	60.0	58.5	55.4	50.5	44.0	42.1	26.6	10.2	2.0	0.6	0.5	4.7	13.9
137.5	56.8	56.7	55.3	52.4	47.8	42.0	40.6	24.4	9.2	1.8	0.7	0.5	4.2	12.6
140.0	52.8	53.0	51.8	49.0	44.8	40.4	38.4	22.1	8.3	1.7	0.6	0.4	3.6	11.2
142.5	49.5	49.4	48.6	45.5	41.8	38.3	35.3	20.4	7.6	1.7	0.7	0.5	3.1	9.7
145.0	45.9	45.7	44.7	42.1	38.4	35.7	31.9	18.7	6.7	1.5	0.6	0.5	2.5	8.4
147.5	41.9	41.9	40.7	38.2	35.4	32.7	28.1	16.5	6.1	1.5	0.7	0.4	2.1	7.3
150.0	37.6	37.7	36.6	34.5	31.8	29.3	24.2	14.1	5.7	1.4	0.8	0.5	1.8	6.3
152.5	33.7	33.4	32.6	30.6	28.4	25.5	20.3	11.3	5.4	1.4	0.8	0.5	1.5	5.4
155.0	29.0	29.1	28.2	26.9	24.7	21.8	16.4	9.0	5.1	1.4	0.7	0.6	1.3	4.4
157.5	25.2	25.3	24.5	23.2	20.9	17.7	12.4	7.9	4.2	1.3	0.7	0.4	1.1	3.4
160.0	21.7	21.3	20.5	19.2	17.1	13.8	9.9	6.9	3.3	1.1	0.7	0.5	0.9	2.3



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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
162.5	17.3	17.5	16.7	15.3	13.5	10.9	8.4	6.1	2.8	1.1	0.6	0.5	0.7	1.5
165.0	13.7	13.8	13.2	12.0	10.6	8.7	6.9	4.6	2.2	1.1	0.6	0.5	0.6	1.1
167.5	10.4	10.4	10.0	9.2	8.1	6.7	5.2	3.2	1.6	0.8	0.6	0.4	0.4	0.6
170.0	7.6	7.6	7.1	6.8	5.9	4.8	3.3	2.0	1.2	0.7	0.7	0.5	0.4	0.6
172.5	3.9	3.9	3.7	3.1	2.6	1.8	1.3	0.9	0.6	0.3	0.3	0.2	0.2	0.2
175.0	1.0	1.0	0.8	0.5	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.1
177.5	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.1
180.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1



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CANDELA DISTRIBUTION  
LATERAL ANGLE

	125.0	135.0	145.0	155.0	165.0	175.0	180.0
0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
2.5	0.3	0.4	0.3	0.3	0.3	0.4	0.3
5.0	0.5	0.6	0.7	0.8	0.8	0.8	0.8
7.5	0.9	1.1	1.3	1.4	1.7	1.7	1.7
10.0	1.0	1.5	1.8	2.2	2.4	2.6	2.4
12.5	1.7	2.5	3.1	3.3	3.3	3.4	3.2
15.0	2.4	3.3	3.6	3.7	3.6	3.5	3.4
17.5	3.4	4.5	4.6	4.9	5.2	5.4	5.4
20.0	4.4	5.3	6.1	7.1	7.7	8.2	8.4
22.5	5.3	6.9	8.5	10.1	11.1	11.4	11.7
25.0	6.5	9.0	11.9	13.7	14.6	15.0	15.2
27.5	7.9	12.0	15.0	16.8	17.8	18.4	18.3
30.0	9.6	14.9	18.0	19.7	20.4	21.1	21.1
32.5	12.0	17.7	20.8	22.3	23.0	23.4	23.5
35.0	14.5	20.2	23.5	24.5	24.9	25.3	25.4
37.5	16.5	22.5	25.8	26.6	26.6	26.9	27.0
40.0	18.4	25.0	27.9	28.4	27.9	27.8	27.9
42.5	20.3	27.2	29.8	29.7	28.5	28.4	28.4
45.0	21.9	29.2	31.4	30.4	29.0	28.6	28.8
47.5	23.5	30.8	32.3	30.8	29.0	28.6	28.5
50.0	25.0	32.2	32.9	31.0	29.1	28.4	28.2
52.5	26.6	33.0	33.0	30.9	28.8	28.0	27.9
55.0	27.7	33.5	32.9	30.6	28.5	27.8	27.7
57.5	28.7	33.8	33.0	30.6	28.4	27.7	27.8
60.0	29.0	33.6	32.5	30.2	27.9	27.3	27.3
62.5	29.0	33.3	32.0	29.9	27.3	26.9	26.8
65.0	29.2	33.1	31.6	29.7	27.2	26.8	26.7
67.5	28.6	32.1	30.8	29.0	26.6	26.3	26.5
70.0	28.0	31.5	29.9	28.5	26.6	26.3	26.5
72.5	27.5	30.5	29.2	27.9	26.1	25.9	26.3
75.0	26.7	29.9	28.7	27.5	26.0	26.0	26.1
77.5	26.3	29.4	28.3	27.1	25.8	26.0	26.2
80.0	25.7	28.9	27.8	26.5	25.7	25.8	26.0
82.5	25.2	28.6	27.5	26.3	25.7	25.7	26.0
85.0	25.2	28.7	27.7	26.3	25.6	25.8	26.0
87.5	25.1	28.6	27.5	26.1	25.5	25.6	26.0
90.0	25.1	28.7	27.5	26.0	25.4	25.7	26.0
92.5	25.0	28.4	27.5	25.9	25.4	25.6	25.9
95.0	25.1	28.4	27.6	25.8	25.1	25.6	26.0
97.5	25.2	28.6	27.6	25.6	25.2	25.6	25.9
100.0	25.6	29.1	27.8	25.5	25.1	25.7	25.9
102.5	25.9	29.4	28.2	25.4	24.9	25.4	25.9
105.0	26.4	29.9	28.6	25.4	24.8	25.4	25.8
107.5	27.1	30.6	29.6	25.9	25.2	25.6	26.1
110.0	27.7	31.5	30.2	26.4	25.5	25.8	26.3
112.5	28.2	32.1	31.0	26.7	25.8	25.9	26.4
115.0	28.6	32.8	31.5	26.9	25.8	26.0	26.7
117.5	29.0	33.4	32.2	27.3	26.0	26.0	26.7
120.0	29.0	33.8	32.7	27.5	26.1	26.2	26.7
122.5	28.6	33.8	33.1	27.9	26.3	26.6	27.0
125.0	27.5	33.6	33.4	27.9	26.6	26.7	27.4
127.5	26.6	33.1	33.6	28.2	26.9	27.3	28.0
130.0	25.0	32.0	33.2	28.2	27.0	27.7	28.5
132.5	23.6	30.6	32.4	27.8	26.7	27.9	28.5
135.0	21.8	29.4	31.5	27.2	26.6	27.6	28.4
137.5	20.3	27.5	30.0	26.6	26.1	26.4	27.2
140.0	18.6	25.0	28.3	25.1	25.0	26.5	27.5
142.5	16.9	22.9	26.0	23.5	23.7	26.2	27.2
145.0	14.6	20.3	23.4	21.6	22.5	25.1	26.0
147.5	12.1	17.6	20.6	19.4	20.7	23.3	24.2
150.0	9.7	14.8	17.6	17.2	18.6	21.0	21.6
152.5	8.1	11.6	13.8	14.7	16.7	18.1	18.5
155.0	6.6	8.8	10.7	11.9	13.5	14.9	15.0
157.5	5.4	6.5	7.5	8.8	10.1	10.8	11.3
160.0	4.1	4.7	5.4	6.4	6.8	7.7	7.6



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CANDELA DISTRIBUTION  
LATERAL ANGLE

	125.0	135.0	145.0	155.0	165.0	175.0	180.0
162.5	2.9	3.9	4.3	4.5	4.6	4.8	5.0
165.0	2.1	3.1	3.7	3.8	3.7	3.6	3.6
167.5	1.3	1.8	2.5	3.0	3.0	3.1	3.1
170.0	0.8	1.1	1.5	1.9	2.0	2.2	2.1
172.5	0.2	0.4	0.6	0.8	0.9	0.9	0.9
175.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3
177.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0
180.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1





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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	0
5- 10	0
10- 15	1
15- 20	1
20- 25	2
25- 30	4
30- 35	6
35- 40	8
40- 45	11
45- 50	13
50- 55	15
55- 60	16
60- 65	18
65- 70	19
70- 75	20
75- 80	20
80- 85	20
85- 90	21
90- 95	20
95-100	20
100-105	20
105-110	19
110-115	19
115-120	18
120-125	16
125-130	14
130-135	12
135-140	10
140-145	8
145-150	6
150-155	4
155-160	2
160-165	1
165-170	0
170-175	0
175-180	0

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	0
0- 20	2
0- 30	8
0- 40	23
0- 50	47
0- 60	78
0- 70	114
0- 80	154
0- 90	195
0-100	236
0-110	275
0-120	311
0-130	341
0-140	364
0-150	378
0-160	385
0-170	386
0-180	386



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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	84	84	84	69	69	69	57	57	57	50
1	92	86	80	74	74	84	78	73	68	65	61	57	53	49	47	41	39	37	31
2	82	72	63	56	56	74	65	58	52	54	48	43	43	38	35	33	30	27	22
3	73	61	52	44	44	66	56	47	40	45	39	33	36	31	27	27	23	20	16
4	66	53	43	36	36	60	48	39	33	39	32	27	31	26	21	23	19	16	12
5	60	46	36	29	29	54	42	33	27	34	27	22	27	22	17	20	16	13	9
6	55	41	31	24	24	50	37	29	22	30	23	18	24	18	14	18	14	10	7
7	50	36	27	21	21	46	33	25	19	27	20	15	21	16	12	16	12	9	6
8	47	33	24	18	18	42	30	22	16	24	18	13	19	14	10	14	10	7	5
9	43	29	21	15	15	39	27	19	14	22	16	11	18	12	9	13	9	6	4
10	40	27	19	13	13	36	24	17	12	20	14	10	16	11	8	12	8	5	3

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.

Project Number  
16.03282



**HUBBELL**  
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Date  
11/29/2016

### *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: 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	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	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>Power Supply PF/THD</i>	Voltage-Regulated House Power	N/A	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	031159372	10/31/2017
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148605	10/4/2017
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

## **Hubbell Lighting, Inc.**

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*This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.*