

Project Number
19.00970



HUBBELL
Lighting

Date
6/5/2019

Photometric Test Report

Lab 1
Sphere

Test Sample Description

Catalog Number: P560209-031-30
Description: 23" LED Outdoor Sconce w/ Acrylic Refractor

Photometry

IES LM-31-95
Test Method: IES LM-79-08 § 10

Preburn Time: 1:00
Time To Stabilize: 1:00
Total Operating Time: 3:30

Input Voltage (Volts): 120.1
Input Current (Amps): 0.184
Input Wattage (Watts): 21.9
Ambient Temp (°C): 26.1

Sphere

IES LM-16-93
Test Method: IES LM-79-08 §12.1

Preburn Time: 0:10
Time To Stabilize: 0:56
Total Operating Time: 1:06

Input Voltage (Volts): 120.1
Input Current (Amps): 0.182
Input Wattage (Watts): 21.7
Ambient Temp (°C): out of range
PF @ 120V: 0.993
THD @ 120V (%): 12.3



Hubbell Lighting, Inc.

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

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


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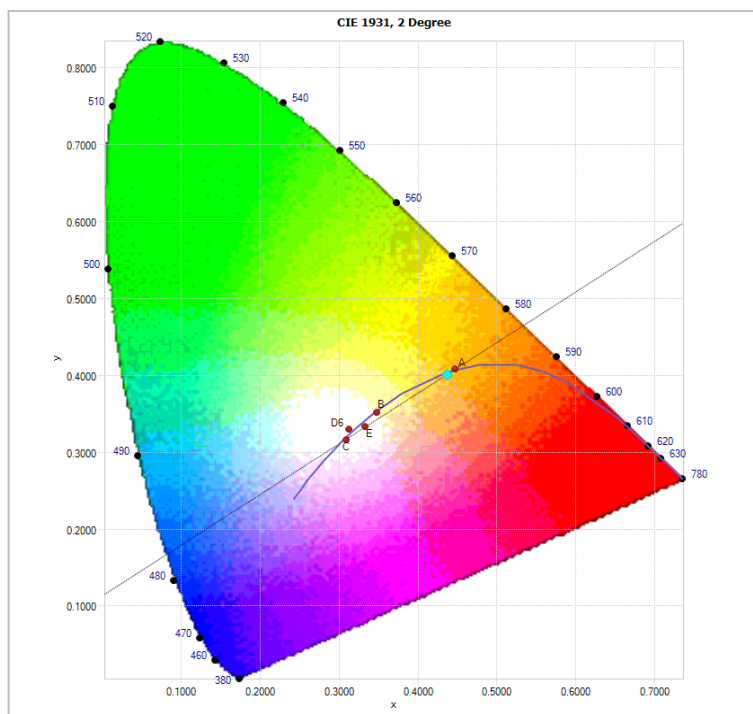
Lamp Cat#: BXEN-30G-11M-3A

Lamp Desc: 84 - Bridgelux 3000K LEDs

Efficacy: 47.0 LPW

S/P Ratio: 1.5 LM/LM

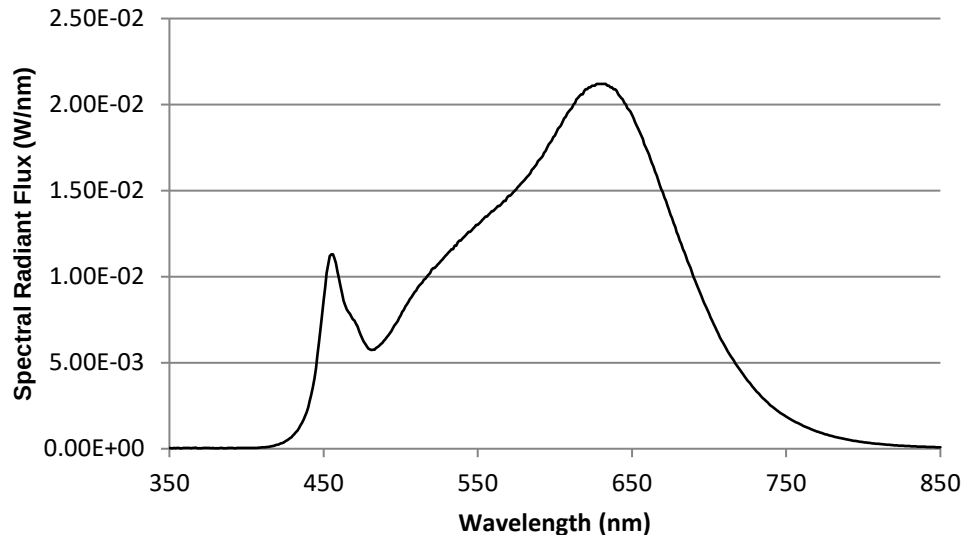
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	3.72	watts
$\Phi(v)$	1019	lumens
$\Phi(v')$	1487	lm'
Chrom x	0.437	
Chrom y	0.4015	
Chrom u	0.2517	
Chrom v	0.3469	
Duv	0.0012	
Chrom u'	0.2517	
Chrom v'	0.5204	
CCT	2977	K
Purity	51.7	%
λ (dom)	583.3	nm
FWHM	164.3	nm
λ (peak)	629.8	nm
λ (center)	605.2	nm
λ (centroid)	597.9	nm
SDCM	Cool White	
RA	97	
Corr. Coef.	0.001037184	
Correlation	0.0054	
R1	98.1	
R2	99.7	
R3	99.2	
R4	96.4	
R5	97.1	
R6	96.8	
R7	94.3	
R8	90.5	
R9	80.7	
R10	98.3	
R11	97.8	
R12	82.1	
R13	99.1	
R14	98.9	

Spectral Distribution of Radiant Flux





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PREPARED FOR: PROGRESS

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LUMINAIRE: 23" LED Outdoor Sconce w/ Acrylic Refractor

LAMP CAT. NO.: BXEN-30G-11M-3A

LAMP: 84- Bridgelux 3000K LEDs

MOUNTING: wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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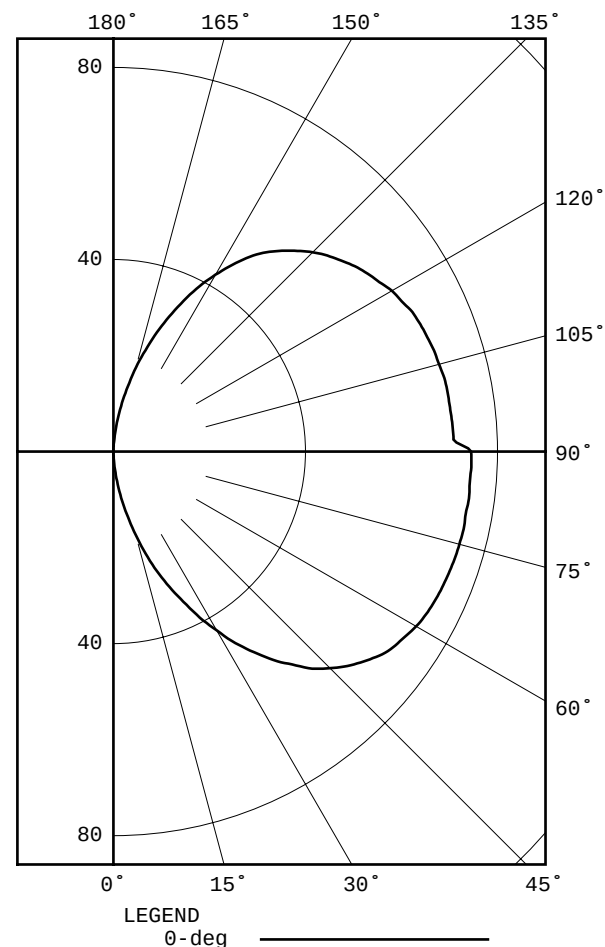
DEG	CANDELA	LUMENS
0	0.1	
5	3.8	1
15	18.0	5
25	34.5	16
35	51.0	32
45	63.8	49
55	71.1	64
65	73.8	73
75	74.6	79
85	74.5	81
90	74.5	
95	70.8	78
105	70.2	74
115	68.7	68
125	64.6	58
135	58.7	45
145	49.5	31
155	34.7	16
165	18.2	5
175	3.4	1
180	0.3	

ZONAL ZONE	LUMEN LUMENS	SUMMARY LUMENS	%FIXT
0- 30		22	2.9
0- 40		54	7.0
0- 60		167	21.5
0- 90		401	51.6
90-120		220	28.3
90-130		278	35.8
90-150		354	45.6
90-180		376	48.4
0-180		777	100.0

EFFICACY = 35.5 lm/W
CIE TYPE - GENERAL DIFFUSE
PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 2.750 4.500
HEIGHT OF SIDE : 22.250 22.250

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	1243.
55	1237.
65	1192.
75	1157.
85	1145.





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CANDELA DISTRIBUTION

0.0	0.1	147.5	46.1
2.5	1.1	150.0	42.5
5.0	3.8	152.5	38.8
7.5	6.9	155.0	34.7
10.0	10.5	157.5	30.4
12.5	14.0	160.0	26.4
15.0	18.0	162.5	22.1
17.5	22.3	165.0	18.2
20.0	26.5	167.5	13.9
22.5	30.5	170.0	10.3
25.0	34.5	172.5	6.8
27.5	39.0	175.0	3.4
30.0	43.0	177.5	1.3
32.5	47.3	180.0	0.3
35.0	51.0		
37.5	54.7		
40.0	57.9		
42.5	61.3		
45.0	63.8		
47.5	66.1		
50.0	68.0		
52.5	69.8		
55.0	71.1		
57.5	71.9		
60.0	72.8		
62.5	73.4		
65.0	73.8		
67.5	74.1		
70.0	74.3		
72.5	74.5		
75.0	74.6		
77.5	74.7		
80.0	74.5		
82.5	74.7		
85.0	74.5		
87.5	74.6		
90.0	74.5		
92.0	70.9		
92.5	70.9		
95.0	70.8		
97.5	70.7		
100.0	70.7		
102.5	70.6		
105.0	70.2		
107.5	70.0		
110.0	69.6		
112.5	69.2		
115.0	68.7		
117.5	67.7		
120.0	67.0		
122.5	65.7		
125.0	64.6		
127.5	63.4		
130.0	61.9		
132.5	60.4		
135.0	58.7		
137.5	56.7		
140.0	54.6		
142.5	52.3		
145.0	49.5		



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5-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 5		0
5- 10		1
10- 15		2
15- 20		4
20- 25		6
25- 30		10
30- 35		14
35- 40		18
40- 45		23
45- 50		27
50- 55		30
55- 60		33
60- 65		36
65- 70		38
70- 75		39
75- 80		40
80- 85		41
85- 90		41
90- 95		39
95-100		38
100-105		38
105-110		37
110-115		35
115-120		33
120-125		30
125-130		28
130-135		24
135-140		21
140-145		17
145-150		14
150-155		10
155-160		6
160-165		4
165-170		2
170-175		1
175-180		0

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 10		1
0- 20		6
0- 30		22
0- 40		54
0- 50		104
0- 60		167
0- 70		240
0- 80		319
0- 90		401
0-100		478
0-110		553
0-120		621
0-130		679
0-140		724
0-150		755
0-160		771
0-170		777
0-180		777



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	93	86	80	75	85	79	74	69	66	62	58	54	50	48	42	40	38	32
2	82	72	64	57	75	66	58	52	54	49	44	44	39	35	34	31	28	23
3	74	61	52	45	67	56	48	41	46	40	34	37	32	27	28	24	21	17
4	66	53	43	36	60	49	40	33	40	33	27	32	26	22	24	20	17	13
5	60	47	37	30	55	43	34	27	35	28	23	28	22	18	21	17	13	10
6	55	41	32	25	50	38	29	23	31	24	19	25	19	15	19	14	11	8
7	51	37	28	21	46	34	25	19	28	21	16	22	17	13	17	13	9	6
8	47	33	24	18	43	30	22	17	25	18	14	20	15	11	15	11	8	5
9	43	30	21	16	39	27	20	14	23	16	12	18	13	9	14	10	7	4
10	40	27	19	14	37	25	18	13	21	15	10	17	12	8	13	9	6	4

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: 07/10/17

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 1 - Test Distance: 31.74'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27071V	10/31/2019
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4E3	10/31/2019

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>Power Analyzer</i>	Yokogawa / WT332	C2QA27075V	10/25/2018
<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>	GWinstek / PSU 150-10	GER 221028	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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