

Project Number
20.00548



HUBBELL
Lighting

Date
05/18/2020

Photometric Test Report

Lab 4
Sphere

Test Sample Description

Catalog Number: P400262-031-30
Description: 2.5' Dual Suspended Arched Bars w/ LED Light-Tube Ends

Photometry

Test Method: IES LM-41-14
IES LM-79-08 §10
Preburn Time: 1:05
Time To Stabilize: 0:30
Total Operating Time: 2:15

Input Voltage (Volts): 120.0
Input Current (Amps): 0.141
Input Wattage (Watts): 16.5
Ambient Temp (°C): 24

Sphere

Test Method: IES LM-16-93
IES LM-79-08 § 12.1
Preburn Time: 0:10
Time To Stabilize: 2:05
Total Operating Time: 2:15

Input Voltage (Volts): 120.0
Input Current (Amps): 0.138
Input Wattage (Watts): 16.1
Ambient Temp (°C): 24
PF @ 120V: 0.977
THD @ 120V (%): 14.9



Hubbell Lighting, Inc.

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

Checked (sphere): B. LEE
Checked (photometry): R. HALL
Approved: L. GENNETTEN



* This customer-provided information was not verified by the laboratory and could affect the validity of the test results.

Note that the LED manufacturer and part number are unverifiable by the lab.

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Lamp Cat#: BXEN-30G-13H-9B

Lamp Desc: 32 - BRIDGELUX 3000K LEDs

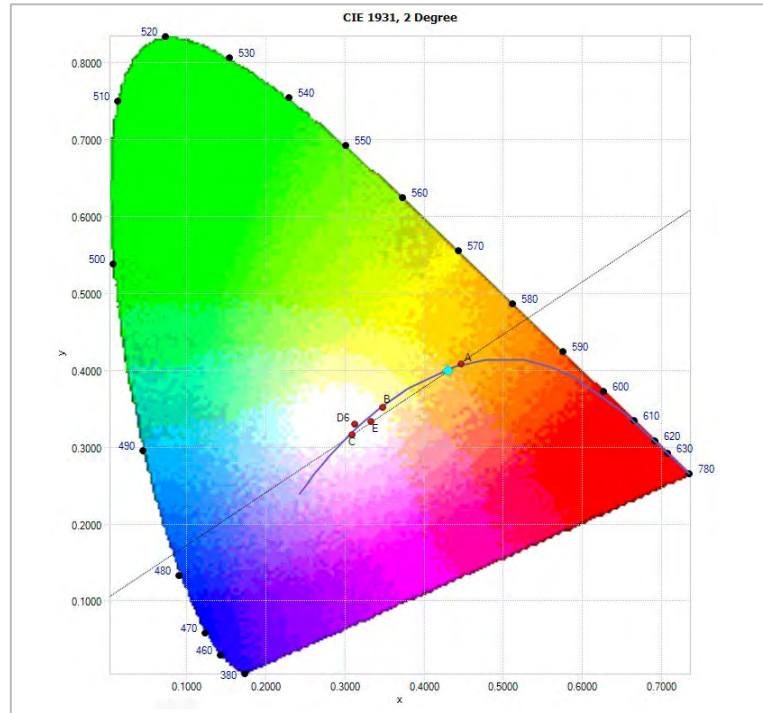
Driver Desc: 1 - JINTOP JT-03-400-16-40

Programmed to 400mA

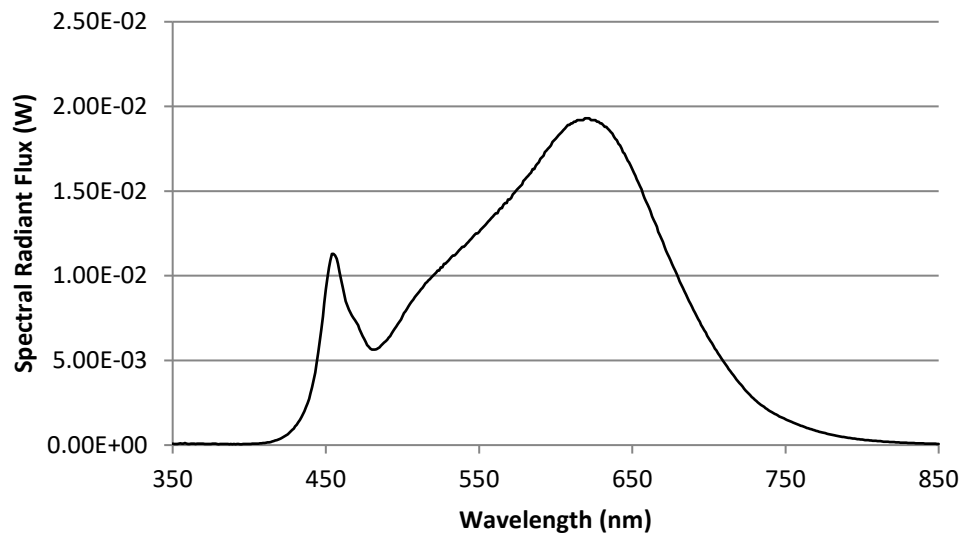
Efficacy: 61.3 LPW S/P Ratio: 1.5 LM'/LM

Spectral Results

Name	Value	Unit
Φ	3.44	watts
$\Phi(v)$	987	lumens
$\Phi(v')$	1461	lm'
Chrom x	0.4298	
Chrom y	0.3994	
Chrom u	0.248	
Chrom v	0.3456	
Duv	0.0014	
Chrom u'	0.248	
Chrom v'	0.5184	
CCT	3084	K
Purity	48.9	%
λ (dom)	582.8	nm
FWHM	164.9	nm
λ (peak)	620.7	nm
λ (center)	598.7	nm
λ (centroid)	592.0	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000875896	
Correlation	0.0054	
R1	93.9	
R2	98.1	
R3	98.3	
R4	92.2	
R5	93.4	
R6	96.4	
R7	91.3	
R8	82.5	
R9	62.3	
R10	94.2	
R11	93.0	
R12	80.3	
R13	95.3	
R14	99.7	



Spectral Distribution of Radiant Flux



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PREPARED FOR: PROGRESS

CATALOG NUMBER: P400262-031-30

LUMINAIRE: 2.5' Dual Suspended Arched Bars w/ LED Light-Tube Ends

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

LAMP: 32- Bridgelux 3000K LEDs

BALLAST: 1- JINTOP Programmed to 400mA

BALLAST CATALOG NUMBER: JT-03-400-16-40

REFRACTOR: Frosted Acrylic



®

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DEG	CANDELA	LUMENS
0	94.0	
5	94.0	9
15	94.0	27
25	94.0	44
35	94.0	59
45	93.0	72
55	93.0	83
65	92.0	91
75	88.0	93
85	83.0	91
90	81.0	
95	78.0	85
105	72.0	77
115	68.0	68
125	65.0	58
135	61.0	47
145	58.0	36
155	53.0	25
165	47.0	14
175	49.0	5
180	49.0	

ZONAL ZONE	LUMEN LUMENS	SUMMARY LUMENS	%FIXT
0- 30		79	8.1
0- 40		138	14.1
0- 60		293	29.9
0- 90		567	57.8
90-120		229	23.4
90-130		287	29.3
90-150		371	37.8
90-180		414	42.2
0-180		981	100.0

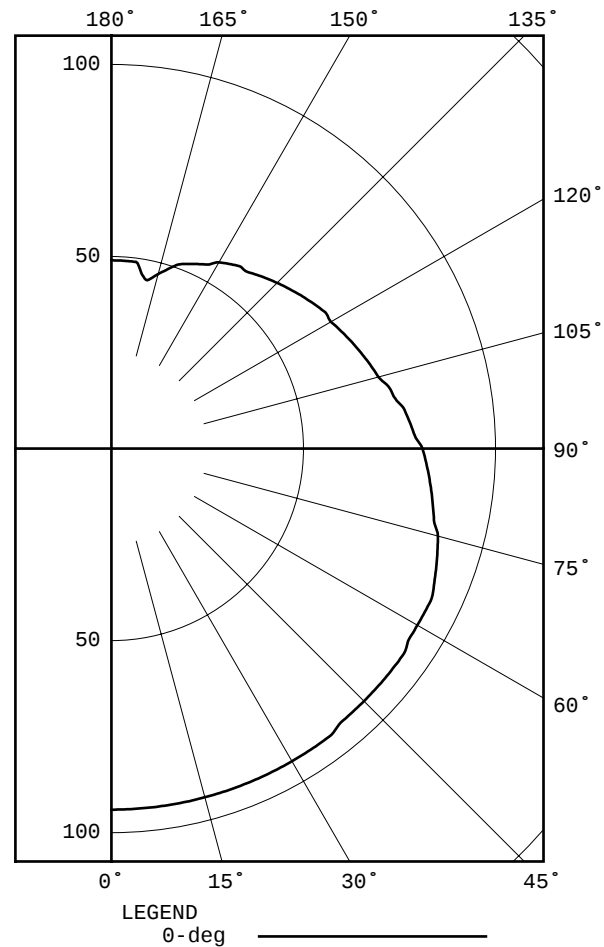
EFFICACY = 59.3 lm/W

CIE TYPE - GENERAL DIFFUSE

SPACING CRITERION: 1.53

PLANE : 0-DEG 90-DEG

SHIELDING ANGLES : 90 90





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LUMINOUS DIAMETER: 30.000
HEIGHT OF SIDE : 3.000

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	256.
55	301.
65	375.
75	505.
85	850.



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CANDELA DISTRIBUTION

0.0	94.0
5.0	94.0
10.0	94.0
15.0	94.0
20.0	94.0
25.0	94.0
30.0	94.0
35.0	94.0
40.0	93.0
45.0	93.0
50.0	93.0
55.0	93.0
60.0	92.0
65.0	92.0
70.0	90.0
75.0	88.0
80.0	85.0
85.0	83.0
90.0	81.0
95.0	78.0
100.0	75.0
105.0	72.0
110.0	70.0
115.0	68.0
120.0	66.0
125.0	65.0
130.0	63.0
135.0	61.0
140.0	59.0
145.0	58.0
150.0	56.0
155.0	53.0
160.0	51.0
165.0	47.0
170.0	46.0
175.0	49.0
180.0	49.0



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5-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 5		2
5- 10		7
10- 15		11
15- 20		15
20- 25		20
25- 30		24
30- 35		28
35- 40		31
40- 45		34
45- 50		38
50- 55		40
55- 60		43
60- 65		45
65- 70		46
70- 75		47
75- 80		46
80- 85		46
85- 90		45
90- 95		43
95-100		42
100-105		39
105-110		37
110-115		35
115-120		33
120-125		30
125-130		28
130-135		25
135-140		22
140-145		19
145-150		17
150-155		14
155-160		11
160-165		8
165-170		5
170-175		3
175-180		1

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 10		9
0- 20		36
0- 30		79
0- 40		138
0- 50		210
0- 60		293
0- 70		384
0- 80		477
0- 90		567
0-100		652
0-110		729
0-120		796
0-130		855
0-140		902
0-150		938
0-160		963
0-170		976
0-180		981



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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	95	89	83	78	88	82	77	73	70	66	63	59	56	53	49	47	44	39
2	85	75	67	60	78	69	62	56	59	53	49	49	45	41	40	37	34	30
3	76	65	55	48	70	60	52	45	51	44	39	42	37	33	35	31	27	23
4	69	56	47	40	64	52	44	37	44	37	32	37	32	27	30	26	22	19
5	63	50	40	33	58	46	37	31	39	32	27	33	27	23	27	22	19	16
6	58	44	35	28	53	41	33	26	35	28	23	29	24	20	24	20	16	13
7	53	40	31	24	49	37	29	23	31	25	20	26	21	17	22	17	14	11
8	50	36	27	21	46	33	25	20	29	22	17	24	19	15	20	16	12	10
9	46	33	24	19	42	30	23	18	26	20	15	22	17	13	18	14	11	9
10	43	30	22	17	40	28	21	16	24	18	14	20	15	12	17	13	10	8

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 : Osram ST8-HA4-250-840 22W / 4000K

Lamp Number: RM B6-28

Ballast: Vossloh Schwabe LN 36.149

Ballast Number: RM B6-28

Calibration Voltage/Frequency: 220Vac / 50hz

Total Luminous Flux: 2463 Lumens

Calibration Date: 06/25/2019

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	LMT/GO-DS 1600 Lab 4 Test Dist.: 31.0'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27074V	10/31/2020
<i>Power Supply</i>	Chroma / 61604	616040003897	N/A
<i>Thermometer</i>	LMT / ATS-4Ch	10B623-3	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

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	10/31/2020
<i>Power Analyzer</i>	Yokogawa / WT332	C2QA27075V	10/31/2020
<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>	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

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