

Project Number
20.00547



HUBBELL
Lighting

Date
05/19/2020

Photometric Test Report

Lab 4
Sphere

Test Sample Description

Catalog Number: P400263-031-30
Description: 40" Triple Suspended Arched Bars w/ LED Light-Tube Ends

Photometry

Test Method: IES LM-41-14
IES LM-79-08 §10

Preburn Time: 14:25
Time To Stabilize: 0:30
Total Operating Time: 15:35

Input Voltage (Volts): 120.0
Input Current (Amps): 0.201
Input Wattage (Watts): 23.3
Ambient Temp (°C): 24.6

Sphere

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

Preburn Time: 0:30
Time To Stabilize: 1:37
Total Operating Time: 2:07

Input Voltage (Volts): 120.0
Input Current (Amps): 0.197
Input Wattage (Watts): 22.8
Ambient Temp (°C): 24
PF @ 120V: 0.965
THD @ 120V (%): 17.2



Hubbell Lighting, Inc.

701 Millennium Boulevard
Greenville, SC 29607
www.hubbellighting.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: 48 - BRIDGELUX 3000K LEDs

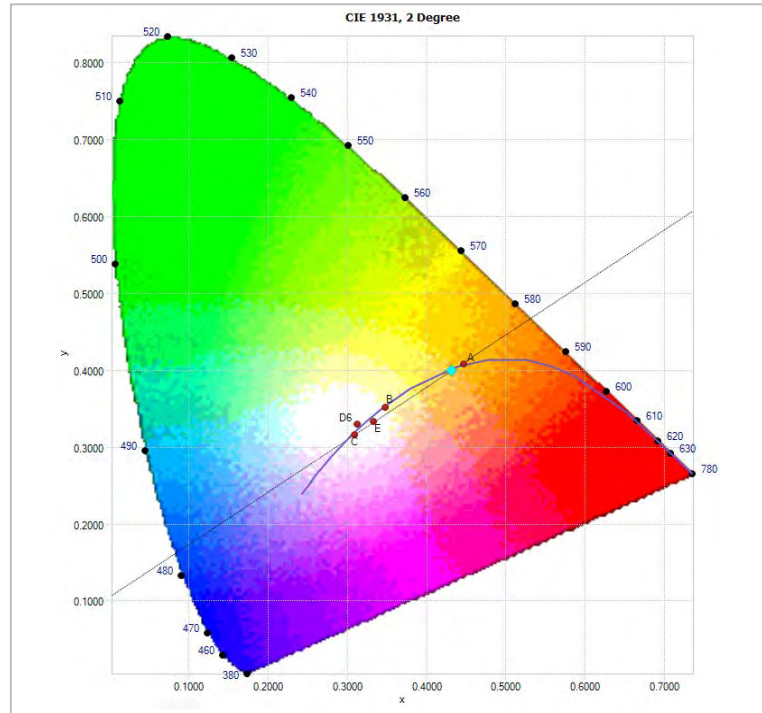
Driver Desc: 1 - JINTOP JT-03-600-24-40

Programmed to 600mA

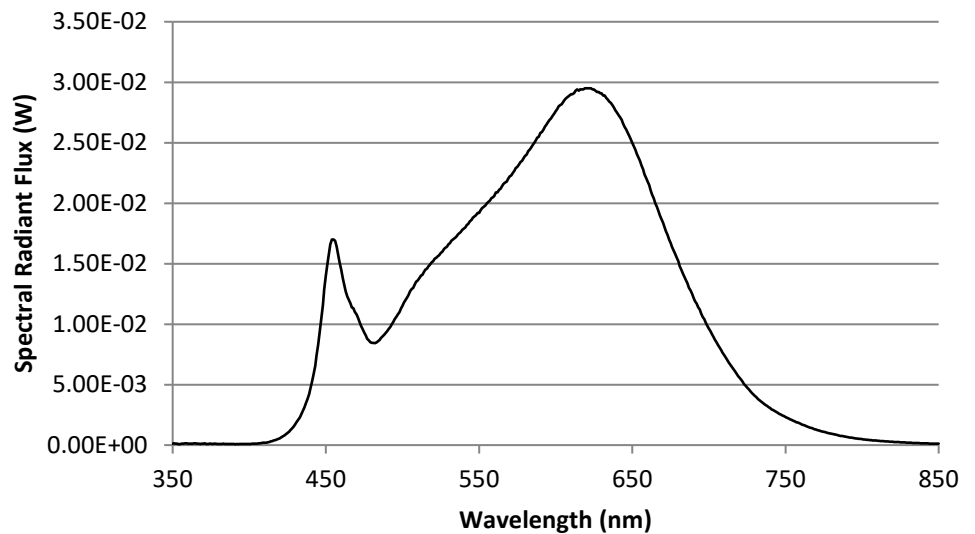
Efficacy: 66.0 LPW S/P Ratio: 1.5 LM/LM

Spectral Results

Name	Value	Unit
Φ	5.25	watts
$\Phi(v)$	1505	lumens
$\Phi(v')$	2215	lm'
Chrom x	0.4308	
Chrom y	0.3998	
Chrom u	0.2484	
Chrom v	0.3458	
Duv	0.0009	
Chrom u'	0.2484	
Chrom v'	0.5188	
CCT	3069	K
Purity	49.3	%
λ (dom)	582.8	nm
FWHM	164.7	nm
λ (peak)	620.4	nm
λ (center)	599.0	nm
λ (centroid)	592.3	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.000860017	
Correlation	0.0054	
R1	93.9	
R2	98.0	
R3	98.4	
R4	92.3	
R5	93.4	
R6	96.4	
R7	91.4	
R8	82.6	
R9	62.3	
R10	94.0	
R11	93.1	
R12	80.5	
R13	95.3	
R14	99.6	



Spectral Distribution of Radiant Flux



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CATALOG NUMBER: P400263-031-30

LUMINAIRE: 40" Triple Suspended Arched Bars w/ LED Light-Tube Ends

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

LAMP: 48- Bridgelux 3000K LEDs

BALLAST: 1- JINTOP Programmed to 600mA

BALLAST CATALOG NUMBER: JT-03-600-24-40

REFRACTOR: Frosted Acrylic Tubes



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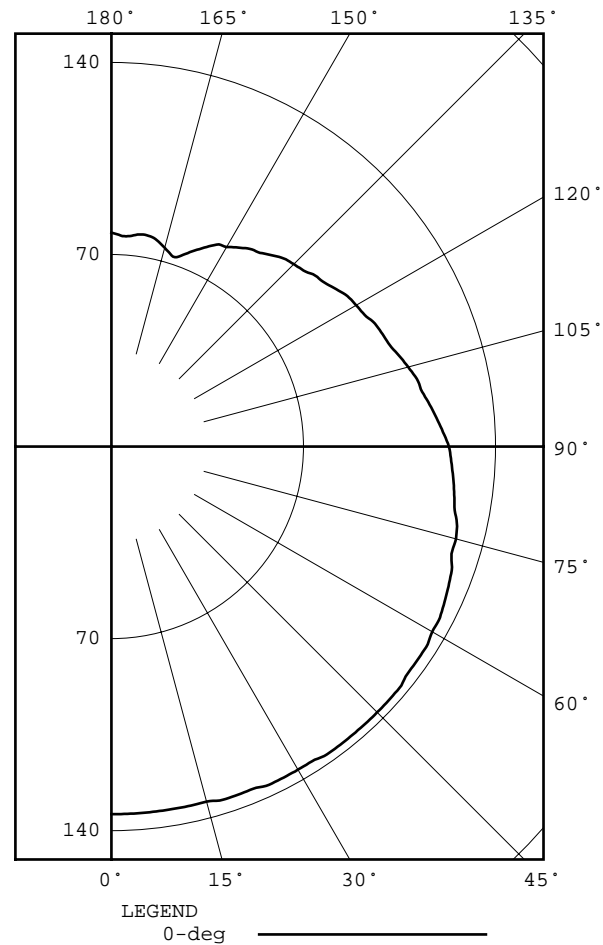
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DEG	CANDELA	LUMENS
0	134	
5	134	13
15	134	38
25	136	63
35	137	86
45	137	106
55	136	122
65	134	133
75	130	137
85	125	136
90	123	
95	119	130
105	112	118
115	106	105
125	100	90
135	94	73
145	88	55
155	80	37
165	75	21
175	77	7
180	78	

ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	114	7.7
0- 40	200	13.6
0- 60	428	29.1
0- 90	834	56.7
90-120	353	24.0
90-130	443	30.1
90-150	571	38.8
90-180	637	43.3
0-180	1471	100.0

EFFICACY = 63.2 lm/W
CIE TYPE - GENERAL DIFFUSE
SPACING CRITERION: 1.56
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90





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LUMINOUS DIAMETER: 40.000
HEIGHT OF SIDE : 6.000

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	201.
55	230.
65	277.
75	362.
85	556.



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CANDELA DISTRIBUTION

0.0	134
5.0	134
10.0	134
15.0	134
20.0	135
25.0	136
30.0	136
35.0	137
40.0	137
45.0	137
50.0	137
55.0	136
60.0	135
65.0	134
70.0	132
75.0	130
80.0	127
85.0	125
90.0	123
95.0	119
100.0	115
105.0	112
110.0	108
115.0	106
120.0	103
125.0	100
130.0	97
135.0	94
140.0	91
145.0	88
150.0	84
155.0	80
160.0	74
165.0	75
170.0	78
175.0	77
180.0	78



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		3
5- 10		10
10- 15		16
15- 20		22
20- 25		28
25- 30		34
30- 35		40
35- 40		46
40- 45		51
45- 50		55
50- 55		59
55- 60		63
60- 65		66
65- 70		67
70- 75		68
75- 80		69
80- 85		68
85- 90		68
90- 95		66
95-100		64
100-105		61
105-110		58
110-115		54
115-120		51
120-125		47
125-130		43
130-135		38
135-140		34
140-145		30
145-150		25
150-155		21
155-160		16
160-165		12
165-170		9
170-175		6
175-180		2

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		13
0- 20		51
0- 30		114
0- 40		200
0- 50		306
0- 60		428
0- 70		561
0- 80		698
0- 90		834
0-100		964
0-110		1082
0-120		1187
0-130		1277
0-140		1350
0-150		1405
0-160		1442
0-170		1463
0-180		1471



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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	109	109	109	109	101	110	110	110	101	87	87	87	74	74	74	62	62	62	57
1	95	88	83	78	87	82	77	72	70	66	62	58	55	53	48	46	44	38	38
2	85	75	67	60	78	69	62	56	59	53	48	49	44	41	40	36	33	29	29
3	76	64	55	48	70	59	51	45	50	44	39	42	37	32	34	30	27	22	22
4	69	56	47	39	63	52	43	37	44	37	32	36	31	27	29	25	22	18	18
5	63	50	40	33	58	46	37	31	39	32	27	32	27	22	26	22	18	15	15
6	58	44	35	28	53	41	32	26	35	28	23	29	23	19	23	19	16	13	13
7	53	40	31	24	49	37	29	23	31	25	20	26	21	17	21	17	14	11	11
8	49	36	27	21	45	33	25	20	28	22	17	24	18	15	19	15	12	10	10
9	46	32	24	19	42	30	23	17	26	20	15	22	17	13	18	14	11	8	8
10	43	30	22	17	39	28	20	16	24	18	14	20	15	12	16	12	10	7	7

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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