

Project Number
20.00109



HUBBELL
Lighting

Date
01/30/2020

Photometric Test Report

Lab 4
Sphere

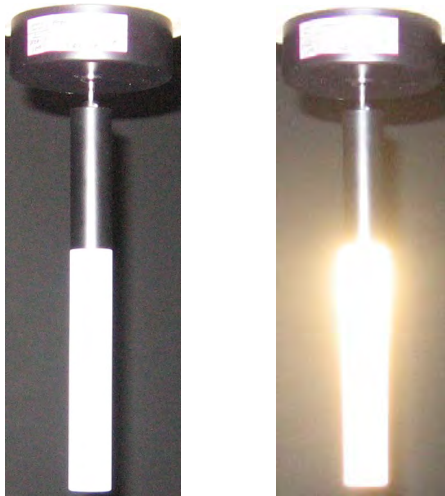
Test Sample Description

Catalog Number: P500321-031-30
Description: Ceiling Mount w/ 1- Hanging LED Light-Tube

Photometry

Test Method: IES LM-41-14
IES LM-79-08 §10
Preburn Time: 0:30
Time To Stabilize: 0:35
Total Operating Time: 1:45

Input Voltage (Volts): 120.0
Input Current (Amps): 0.058
Input Wattage (Watts): 6.8
Ambient Temp (°C): 24.9



Sphere

Test Method: IES LM-16-93
IES LM-79-08 § 12.1
Preburn Time: 1:00
Time To Stabilize: 1:14
Total Operating Time: 2:58

Input Voltage (Volts): 120.0
Input Current (Amps): 0.056
Input Wattage (Watts): 6.6
Ambient Temp (°C): 24
PF @ 120V: 0.975
THD @ 120V (%): 16.2



Hubbell Lighting, Inc.

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

Checked (sphere): M.ELLMANN
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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This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Efficacy: 63.6 LPW S/P Ratio: 1.5 LM'/LM



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LUMINAIRE: Ceiling Mount w/ 1- Hanging LED Light-Tube

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

LAMP: 8- Bridgelux 3000K LEDs

BALLAST: 1- JINTOP Programmed to 150mA

BALLAST CATALOG NUMBER: JT-01-150-6-40

REFRACTOR: Frosted Acrylic Tube



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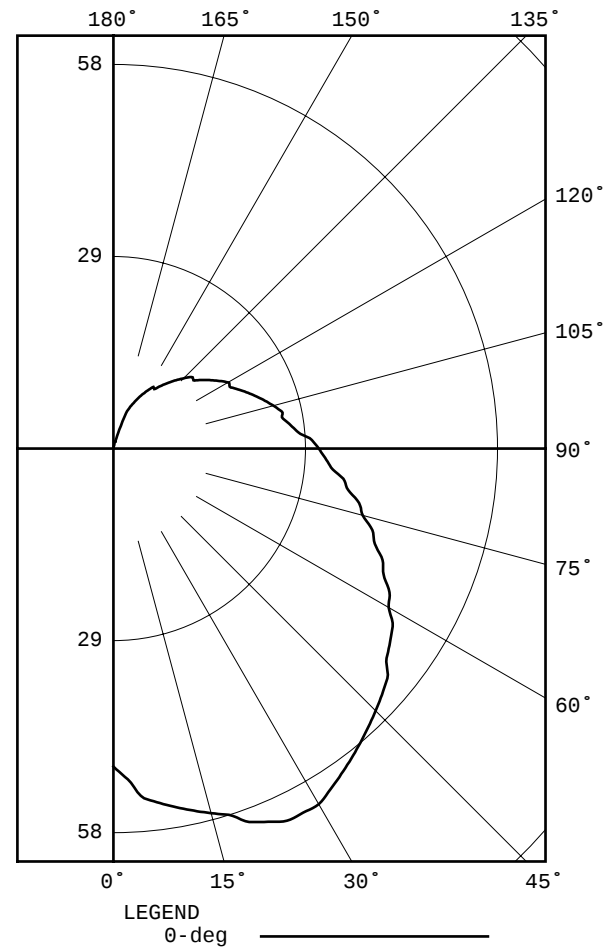
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DEG	CANDELA	LUMENS
0	48.0	
5	53.0	5
15	57.0	16
25	62.0	28
35	60.0	38
45	56.0	43
55	51.0	46
65	45.0	45
75	39.0	41
85	33.0	36
90	31.0	
95	28.0	31
105	25.0	26
115	21.0	21
125	18.0	16
135	15.0	12
145	11.0	7
155	8.0	4
165	1.0	1
175	0.0	0
180	0.0	

ZONAL ZONE	LUMEN	SUMMARY LUMENS	%FIXT
0- 30		50	12.0
0- 40		87	21.0
0- 60		177	42.3
0- 90		299	71.8
90-120		78	18.8
90-130		94	22.7
90-150		113	27.2
90-180		118	28.2
0-180		417	100.0

EFFICACY = 61.6 lm/W
CIE TYPE - SEMI-DIRECT
SPACING CRITERION: 1.78
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90





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LUMINOUS DIAMETER: 1.188
HEIGHT OF SIDE : 6.750

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	13449.
55	10972.
65	9016.
75	7526.
85	6326.



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CANDELA DISTRIBUTION

0.0	48.0
5.0	53.0
10.0	55.0
15.0	57.0
20.0	60.0
25.0	62.0
30.0	62.0
35.0	60.0
40.0	58.0
45.0	56.0
50.0	54.0
55.0	51.0
60.0	48.0
65.0	45.0
70.0	42.0
75.0	39.0
80.0	36.0
85.0	33.0
90.0	31.0
95.0	28.0
100.0	26.0
105.0	25.0
110.0	23.0
115.0	21.0
120.0	20.0
125.0	18.0
130.0	16.0
135.0	15.0
140.0	13.0
145.0	11.0
150.0	10.0
155.0	8.0
160.0	6.0
165.0	1.0
170.0	0.0
175.0	0.0
180.0	0.0



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5-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 5		1
5- 10		4
10- 15		7
15- 20		10
20- 25		13
25- 30		16
30- 35		18
35- 40		20
40- 45		21
45- 50		22
50- 55		23
55- 60		23
60- 65		23
65- 70		22
70- 75		21
75- 80		20
80- 85		19
85- 90		18
90- 95		16
95-100		15
100-105		14
105-110		13
110-115		11
115-120		10
120-125		9
125-130		7
130-135		6
135-140		5
140-145		4
145-150		3
150-155		2
155-160		1
160-165		1
165-170		0
170-175		0
175-180		0

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 10		5
0- 20		21
0- 30		50
0- 40		87
0- 50		131
0- 60		177
0- 70		221
0- 80		263
0- 90		299
0-100		330
0-110		357
0-120		378
0-130		394
0-140		405
0-150		413
0-160		416
0-170		417
0-180		417



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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
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	72
1	98	92	87	81	93	87	82	77	78	74	70	69	66	63	61	58	56	52
2	88	78	70	63	83	74	67	60	66	60	55	58	53	49	51	47	44	40
3	79	67	58	51	74	64	55	49	57	50	44	50	44	40	44	39	36	32
4	72	59	49	42	67	56	47	40	49	42	36	44	38	33	38	34	30	26
5	66	52	42	35	62	49	40	34	44	36	31	39	33	28	34	29	25	22
6	60	46	37	30	57	44	35	29	39	32	26	35	29	24	31	26	22	19
7	56	42	32	26	52	39	31	25	35	28	23	31	25	21	28	23	19	16
8	52	38	29	23	48	36	28	22	32	25	20	29	23	18	25	20	17	14
9	48	34	26	20	45	33	25	19	29	23	18	26	20	16	23	18	15	13
10	45	31	23	18	42	30	22	17	27	20	16	24	19	15	22	17	13	11

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	13117591	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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