

Project Number
20.00303



HUBBELL
Lighting

Date
3/9/2020

Photometric Test Report

Lab 5
Sphere

Test Sample Description

Catalog Number: P500147-031-30

Description: Globe Pendant w/ Black Metal Hemispherical Housing and Opal Glass Hemispherical Shade;
One AC LED Module

Photometry

Test Method: IES LM-46-04
IES LM-79-08 §10

Preburn Time: 2:00

Time To Stabilize: 3:00

Total Operating Time: 5:10

Input Voltage (Volts): 120.1

Input Current (Amps): 0.079

Input Wattage (Watts): 9.4

Ambient Temp (°C): 25.6

Sphere

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

Preburn Time: 3:00

Time To Stabilize: 1:14

Total Operating Time: 4:14

Input Voltage (Volts): 120.0

Input Current (Amps): 0.079

Input Wattage (Watts): 9.4

Ambient Temp (°C): 24

PF @ 120V: 0.992

THD @ 120V (%): 12.8



Hubbell Lighting, Inc.

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

Checked (sphere): B. LEE
Checked (photometry): D. ROBBINS
Approved: P. McCARTHY



* This customer-provided information was not verified by the laboratory. Note that LED manufacturer and part # are unverifiable by the lab.

This report shall not be reproduced, except in full, without the written approval of HLI's NVLAP-accredited laboratory

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



HUBBELL Lighting

Lamp Cat#: 93070270-3330

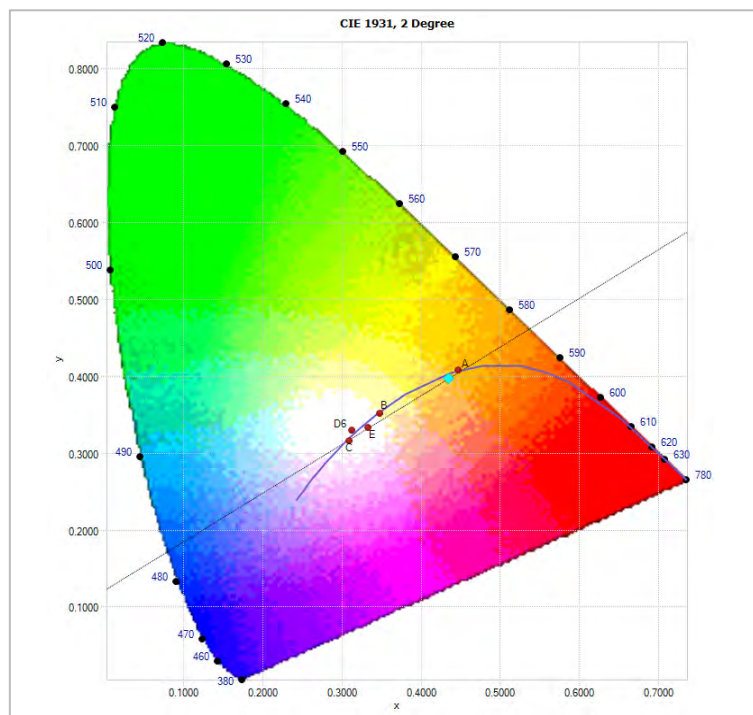
Lamp Desc: 20 - HAL 3000K LEDs

Efficacy: 59.6 LPW

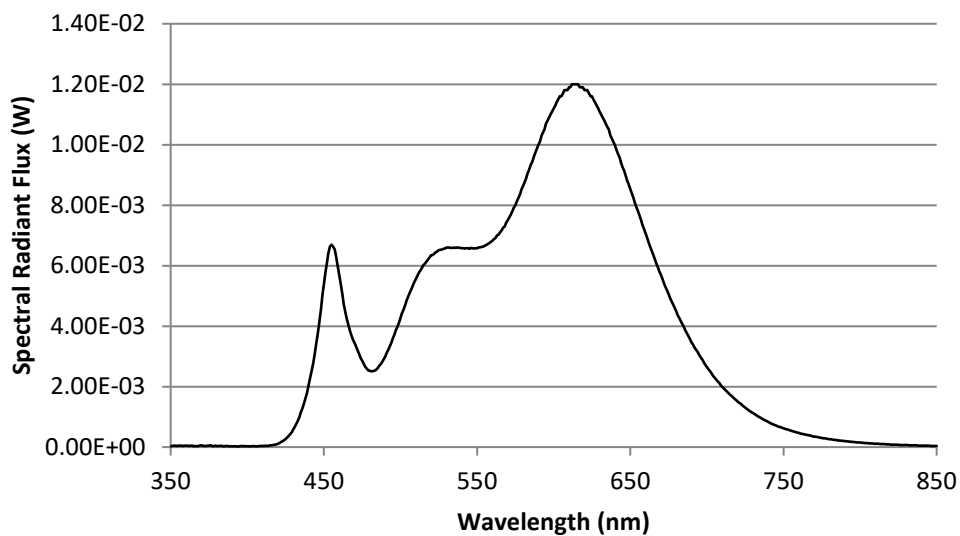
S/P Ratio: 1.5 LM'/LM

Spectral Results

Name	Value	Unit
Φ	1.88	watts
$\Phi(v)$	560	lumens
$\Phi(v')$	819	lm'
Chrom x	0.4348	
Chrom y	0.3976	
Chrom u	0.252	
Chrom v	0.3457	
Duv	0.0025	
Chrom u'	0.252	
Chrom v'	0.5185	
CCT	2980	K
Purity	49.9	%
λ (dom)	583.8	nm
FWHM	152.9	nm
λ (peak)	614.1	nm
λ (center)	591.2	nm
λ (centroid)	588.2	nm
SDCM	Cool White	
RA	94	
Corr. Coef.	0.002321762	
Correlation	0.0054	
R1	97.1	
R2	99.1	
R3	97.0	
R4	97.3	
R5	97.7	
R6	94.2	
R7	89.4	
R8	79.5	
R9	55.7	
R10	99.0	
R11	96.0	
R12	84.7	
R13	98.7	
R14	99.3	



Spectral Distribution of Radiant Flux



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



HUBBELL
Lighting

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

REPORT NUMBER: 20.00303

PAGE: 3 OF 9

ISSUE DATE: 03/10/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P500147-031-30

LUMINAIRE: Globe Pendant w/ Black Metal Hemispherical
Housing and Opal Glass Hemispherical Shade;
One AC LED Module

LAMP CAT. NO.: 93070270-3330

LAMP: 20- HAL 3000K LEDs

MOUNTING: Ceiling

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



HUBBELL
Lighting

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

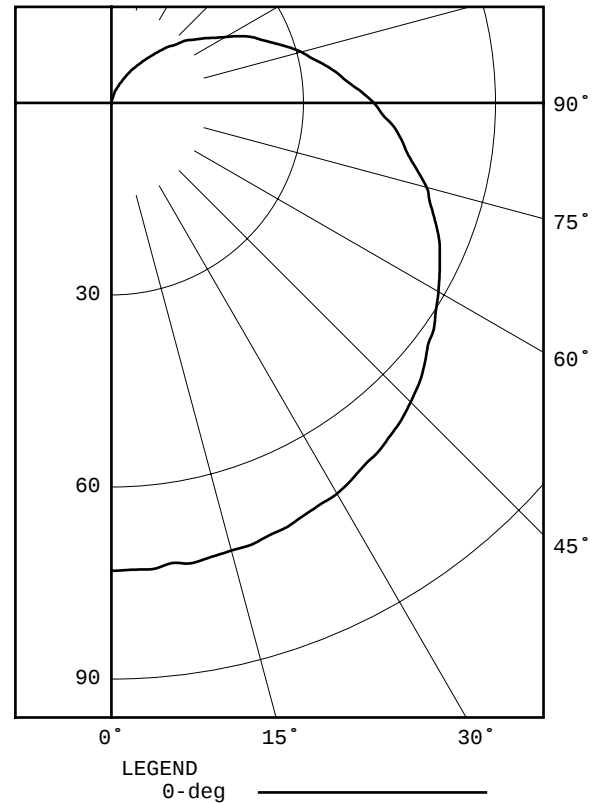
REPORT NUMBER: 20.00303
ISSUE DATE: 03/10/20
PREPARED FOR: PROGRESS
CATALOG NUMBER: P500147-031-30

PAGE: 8 OF 9

DEG	CANDELA	LUMENS
0	73.1	
5	73.1	7
15	72.4	21
25	71.1	33
35	69.0	43
45	66.1	51
55	61.5	55
65	56.6	56
75	51.0	54
85	44.4	48
90	41.0	
95	37.1	41
105	30.7	32
115	24.3	24
125	17.6	16
135	12.3	10
145	7.2	5
155	3.6	2
165	1.0	0
175	0.2	0
180	0.0	

ZONAL ZONE	LUMEN	SUMMARY LUMENS	%FIXT
0- 30		60	12.2
0- 40		104	20.9
0- 60		210	42.2
0- 90		368	74.0
90-120		97	19.5
90-130		113	22.7
90-150		127	25.6
90-180		129	26.0
0-180		497	100.0

EFFICACY = 53.0 lm/W
CIE TYPE - SEMI-DIRECT
SPACING CRITERION: 1.45
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90





®

HUBBELL
Lighting

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

REPORT NUMBER: 20.00303
ISSUE DATE: 03/10/20
PREPARED FOR: PROGRESS
CATALOG NUMBER: P500147-031-30

PAGE: 5 OF 9

LUMINOUS DIAMETER: 8.000
HEIGHT OF SIDE : 4.500

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	1680.
55	1635.
65	1629.
75	1654.
85	1710.



HUBBELL
Lighting

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

REPORT NUMBER: 20.00303

ISSUE DATE: 03/10/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P500147-031-30

PAGE: 6 OF 9

CANDELA DISTRIBUTION

0.0	73.1
5.0	73.1
10.0	73.0
15.0	72.4
20.0	71.9
25.0	71.1
30.0	70.5
35.0	69.0
40.0	67.8
45.0	66.1
50.0	63.8
55.0	61.5
60.0	59.0
65.0	56.6
70.0	53.8
75.0	51.0
80.0	47.1
85.0	44.4
90.0	41.0
95.0	37.1
100.0	33.9
105.0	30.7
110.0	27.2
115.0	24.3
120.0	20.6
125.0	17.6
130.0	15.2
135.0	12.3
140.0	9.5
145.0	7.2
150.0	5.4
155.0	3.6
160.0	2.3
165.0	1.0
170.0	0.6
175.0	0.2
180.0	0.0



HUBBELL
Lighting

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

REPORT NUMBER: 20.00303

ISSUE DATE: 03/10/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P500147-031-30

PAGE: 7 OF 9

5-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 5		2
5- 10		5
10- 15		9
15- 20		12
20- 25		15
25- 30		18
30- 35		21
35- 40		23
40- 45		25
45- 50		26
50- 55		27
55- 60		28
60- 65		28
65- 70		28
70- 75		27
75- 80		26
80- 85		25
85- 90		23
90- 95		21
95-100		19
100-105		17
105-110		15
110-115		13
115-120		11
120-125		9
125-130		7
130-135		5
135-140		4
140-145		3
145-150		2
150-155		1
155-160		1
160-165		0
165-170		0
170-175		0
175-180		0

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 10		7
0- 20		27
0- 30		60
0- 40		104
0- 50		155
0- 60		210
0- 70		266
0- 80		320
0- 90		368
0-100		408
0-110		441
0-120		465
0-130		481
0-140		490
0-150		495
0-160		497
0-170		497
0-180		497



HUBBELL
Lighting

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

REPORT NUMBER: 20.00303

PAGE: 8 OF 9

ISSUE DATE: 03/10/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P500147-031-30

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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74
1	98	92	86	81	93	87	82	77	78	74	70	69	66	63	62	59	57	53
2	88	78	69	62	83	74	66	60	66	60	54	58	54	49	52	48	44	41
3	79	67	58	50	74	63	55	48	57	50	44	50	45	40	44	40	36	32
4	72	58	49	41	67	55	46	39	49	42	36	44	38	33	39	34	30	26
5	66	52	42	35	62	49	40	33	44	36	30	39	33	28	35	29	25	22
6	60	46	36	30	57	44	35	28	39	32	26	35	29	24	31	26	22	19
7	56	41	32	26	52	39	31	25	35	28	23	32	25	21	28	23	19	16
8	52	37	29	23	48	36	27	22	32	25	20	29	23	18	26	21	17	14
9	48	34	26	20	45	33	25	19	29	23	18	27	21	16	24	19	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.

Project Number
20.00303



HUBBELL
Lighting

Date
3/9/2020

Goniophotometer Calibration

Calibration Lamp: GE 1000W, 120V, T6, CL (FEL)

Lamp Number: ITL78966-1000-66

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 23013.0 Lumens

Calibration Date: 08/20/2019

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 5 - Test Distance: 56.0'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27072V	10/31/2020
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	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

Hubbell Lighting, Inc.

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

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