

Project Number
20.00810



HUBBELL
Lighting

Date
6/30/2020

Photometric Test Report

LAB #5
Sphere

Test Sample Description

Catalog Number: P550103-031-30

Description: Black 6" Cylinder Downlight; Test will Apply for P5641-31/30K

After operating for 3 hours, the sample did not meet stabilization requirements per LM-79-08

Photometry

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

Preburn Time: 0:10

Time To Stabilize: 3:00

Total Operating Time: 11:37

Input Voltage (Volts): 120.1

Input Current (Amps): 0.296

Input Wattage (Watts): 32.5

Ambient Temp (°C): 26

PF @ 120V: 0.912

THD @ 120V (%): 45.46

Sphere

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

Preburn Time: 2:00

Time To Stabilize: 1:00

Total Operating Time: 3:00

Input Voltage (Volts): 120.0

Input Current (Amps): 0.291

Input Wattage (Watts): 31.6

Ambient Temp (°C): 24

PF @ 120V: 0.91

THD @ 120V (%): 46.1



Hubbell Lighting, Inc.

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

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

NVLAP
TESTING
NVLAP LAB CODE: 201003-0

* 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#: 2835

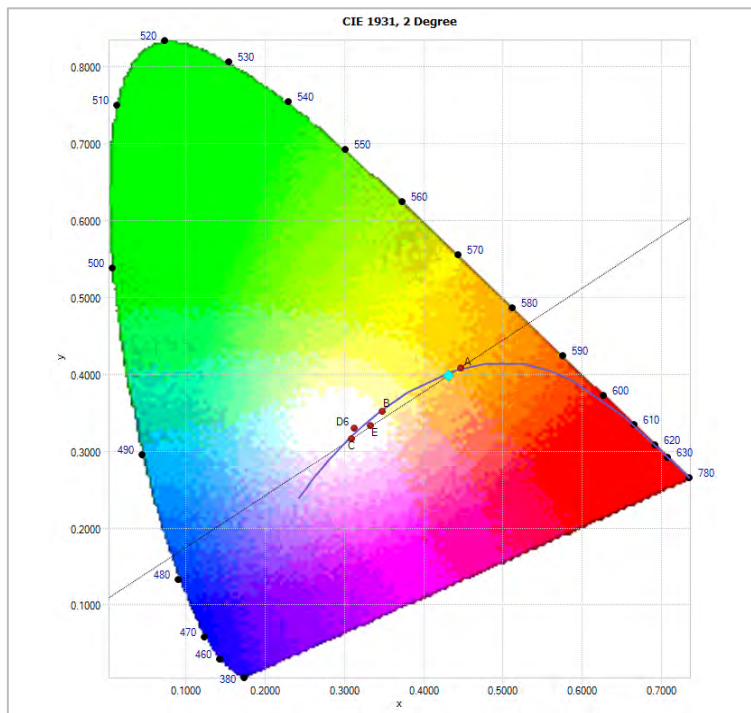
Lamp Desc: 1- AC LED Module w/ 42 - BRIDGELUX
3000K LEDs

Efficacy: 30.8 LPW

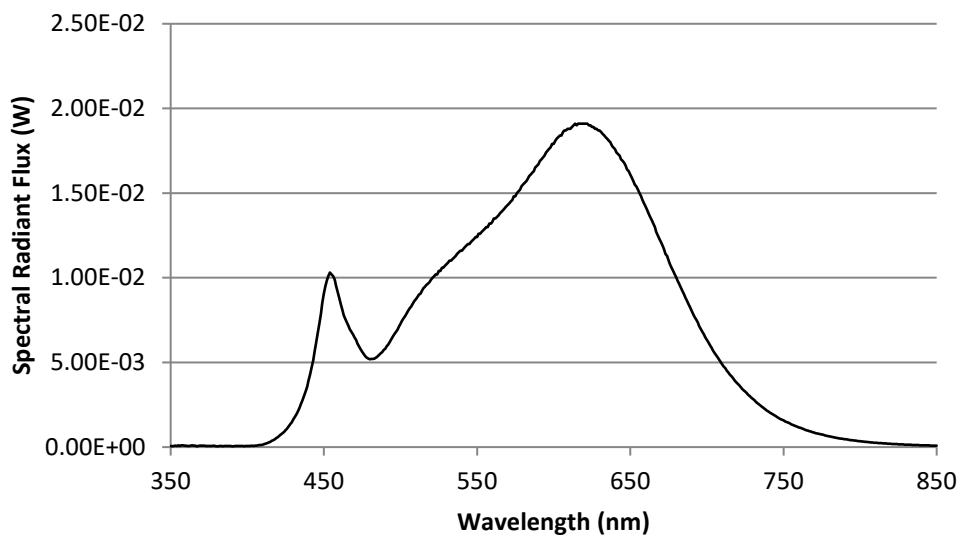
S/P Ratio: 1.5 LM'/LM

Spectral Results

Name	Value	Unit
Φ	3.41	watts
$\Phi(v)$	973	lumens
$\Phi(v')$	1418	lm'
Chrom x	0.431	
Chrom y	0.399	
Chrom u	0.2489	
Chrom v	0.3456	
Duv	0.0012	
Chrom u'	0.2489	
Chrom v'	0.5185	
CCT	3059	K
Purity	49.1	%
λ (dom)	583.0	nm
FWHM	165.8	nm
λ (peak)	619.1	nm
λ (center)	599.5	nm
λ (centroid)	592.7	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.00121549	
Correlation	0.0054	
R1	93.5	
R2	97.3	
R3	98.4	
R4	92.5	
R5	93.2	
R6	96.0	
R7	91.6	
R8	82.2	
R9	60.8	
R10	92.5	
R11	93.2	
R12	82.0	
R13	94.7	
R14	99.1	



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: 20.00810

PAGE: 3 OF 8

ISSUE DATE: 06/30/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P550103-031-30

LUMINAIRE: Black 6" Cylinder Downlight; Test will
Apply for P5641-31/30K

LAMP CAT. NO.: 2835

LAMP: 1- AC LED Module w/ 42- Bridgelux 3000K LEDs

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



HUBBELL
Lighting

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

REPORT NUMBER: 20.00810
ISSUE DATE: 06/30/20
PREPARED FOR: PROGRESS
CATALOG NUMBER: P550103-031-30

PAGE: 4 OF 8

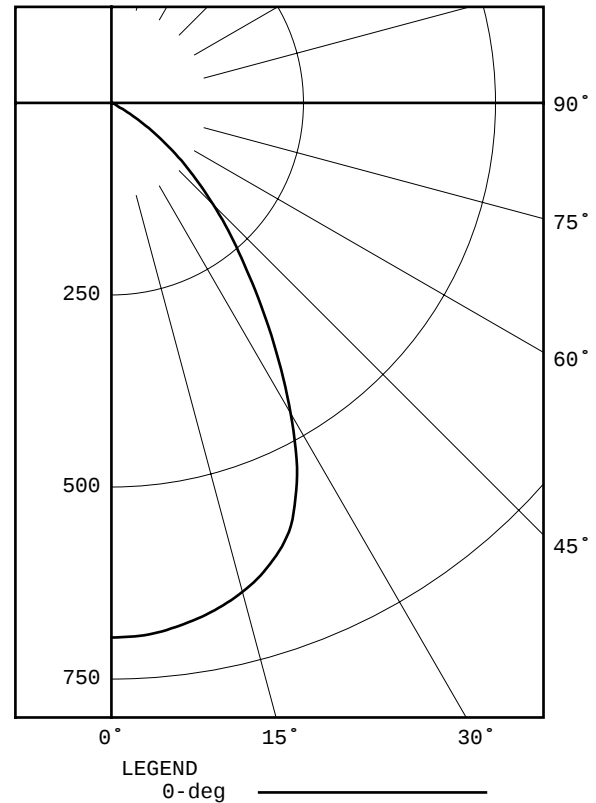
DEG	CANDELA	LUMENS
0	696	
5	692	66
15	659	185
25	567	257
35	357	224
45	188	146
55	68	62
65	8	9
75	2	3
85	0	0
90	0	

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	508	53.3
0- 40	732	76.8
0- 60	940	98.7
0- 90	953	100.0
90-180	0	0.0
0-180	953	100.0

EFFICACY = 29.3 lm/W
CIE TYPE - DIRECT
SPACING CRITERION: 1.04
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90
LUMINOUS DIAMETER: 5.750

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	15870.
55	7077.
65	1130.
75	461.
85	0.





HUBBELL
Lighting

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

REPORT NUMBER: 20.00810

ISSUE DATE: 06/30/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P550103-031-30

PAGE: 5 OF 8

CANDELA DISTRIBUTION

0.0	696
2.5	695
5.0	692
7.5	686
10.0	679
12.5	670
15.0	659
17.5	645
20.0	627
22.5	604
25.0	567
27.5	522
30.0	467
32.5	411
35.0	357
37.5	308
40.0	263
42.5	225
45.0	188
47.5	154
50.0	124
52.5	95
55.0	68
57.5	45
60.0	24
62.5	9
65.0	8
67.5	6
70.0	5
72.5	4
75.0	2
77.5	2
80.0	1
82.5	1
85.0	0
87.5	0
90.0	0



HUBBELL
Lighting

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

REPORT NUMBER: 20.00810
ISSUE DATE: 06/30/20
PREPARED FOR: PROGRESS
CATALOG NUMBER: P550103-031-30

PAGE: 6 OF 8

5-DEGREE		
ZONAL	LUMEN	SUMMARY
0-	5	17
5-	10	49
10-	15	79
15-	20	106
20-	25	126
25-	30	131
30-	35	121
35-	40	103
40-	45	83
45-	50	63
50-	55	41
55-	60	21
60-	65	6
65-	70	3
70-	75	2
75-	80	1
80-	85	0
85-	90	0

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0-	10	66
0-	20	251
0-	30	508
0-	40	732
0-	50	878
0-	60	940
0-	70	949
0-	80	952
0-	90	953



HUBBELL
Lighting

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

REPORT NUMBER: 20.00810
ISSUE DATE: 06/30/20
PREPARED FOR: PROGRESS
CATALOG NUMBER: P550103-031-30

PAGE: 7 OF 7

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	93	92
2	106	100	96	92	104	98	94	91	95	92	89	92	89	87	89	87	85	83
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75
4	93	84	78	73	91	83	77	73	81	76	72	79	74	71	77	73	70	68
5	87	78	71	66	86	77	70	66	75	69	65	73	68	64	71	67	64	62
6	82	72	65	60	81	71	64	60	69	64	59	68	63	59	66	62	58	57
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52
8	73	62	55	50	71	61	55	50	60	54	50	59	54	50	58	53	49	48
9	69	58	51	46	67	57	51	46	56	50	46	55	50	46	54	49	46	44
10	65	54	47	43	64	53	47	43	53	47	43	52	46	43	51	46	42	41

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
20.00810



HUBBELL
Lighting

Date
6/30/2020

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.