

Project Number
20.00809



HUBBELL
Lighting

Date
7/1/2020

Photometric Test Report

LAB #5
Sphere

Test Sample Description

Catalog Number: P550101-031-30
Description: 5" BLACK CYLINDER DOWN LIGHT NO PHOTOCELL TEST WILL APPLY FOR P5674-31/30K

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

Photometry

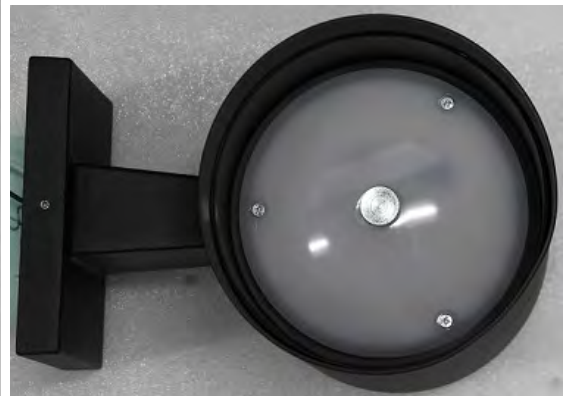
Test Method: IES LM-46-04
IES LM-79-08 §10
Preburn Time: 0:10
Time To Stabilize: 3:02
Total Operating Time: 3:25

Input Voltage (Volts): 120.2
Input Current (Amps): 0.170
Input Wattage (Watts): 18.6
Ambient Temp (°C): 25.9
PF @ 120V: 0.9
THD @ 120V (%): 44.5

Sphere

Test Method: IES LM-16-93
IES LM-79-08 §12.1
Preburn Time: 2:00
Time To Stabilize: 1:26
Total Operating Time: 4:13

Input Voltage (Volts): 120.0
Input Current (Amps): 0.167
Input Wattage (Watts): 18.3
Ambient Temp (°C): 24
PF @ 120V: 0.918
THD @ 120V (%): 44.1



Hubbell Lighting, Inc.

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

Checked (sphere): M. ELLMANN
Checked (photometry): D. ROBBINS
Approved: L. GENNETTEN

* This customer-provided information was not verified by the laboratory. Note that LED manufacturer and part # are unverifiable by the lab.
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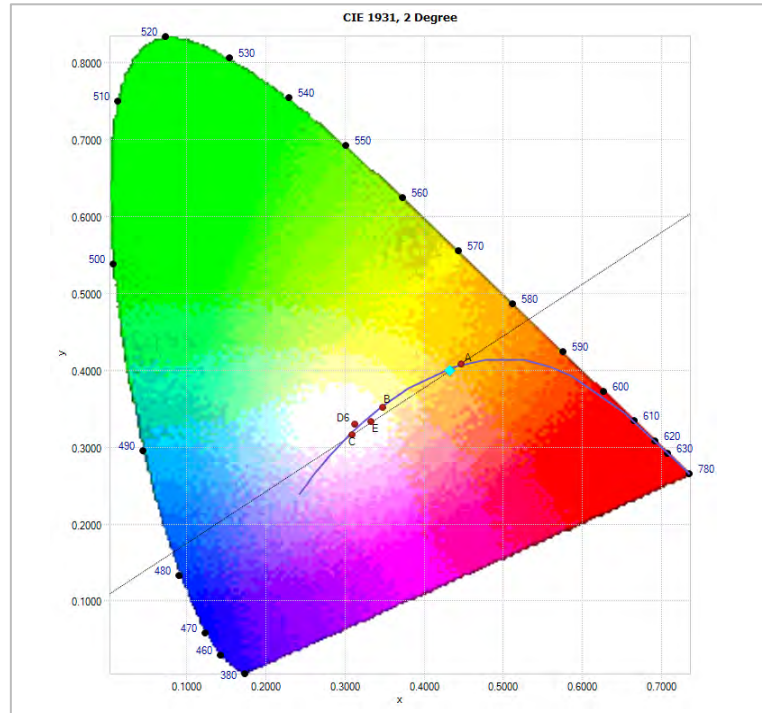
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Lamp Cat#: 2835
Lamp Desc: 42 - Bridgelux 3000K LEDs

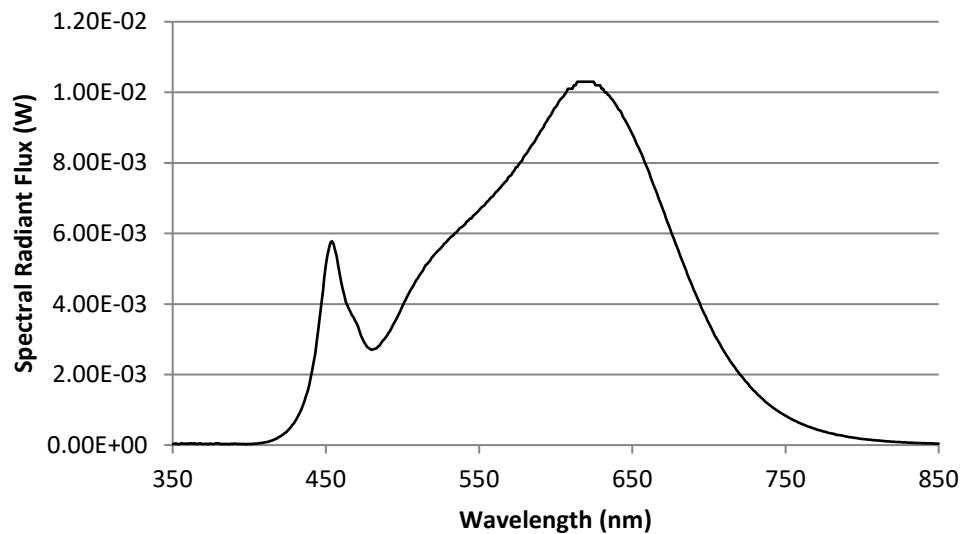
Efficacy: 28.5 LPW S/P Ratio: 1.5 LM/LM

Spectral Results

Name	Value	Unit
Φ	1.83	watts
Φ(v)	521	lumens
Φ(v')	760	lm'
Chrom x	0.4321	
Chrom y	0.3999	
Chrom u	0.2493	
Chrom v	0.346	
Duv	0.001	
Chrom u'	0.2493	
Chrom v'	0.519	
CCT	3046	K
Purity	49.7	%
λ (dom)	583.0	nm
FWHM	166.7	nm
λ (peak)	619.5	nm
λ (center)	599.8	nm
λ (centroid)	593.4	nm
SDCM	Cool White	
RA	94	
Corr. Coef.	0.001012055	
Correlation	0.0054	
R1	94.4	
R2	97.7	
R3	98.6	
R4	93.5	
R5	94.0	
R6	96.3	
R7	92.2	
R8	83.6	
R9	64.1	
R10	93.4	
R11	94.4	
R12	81.6	
R13	95.5	
R14	99.0	



Spectral Distribution of Radiant Flux



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REPORT NUMBER: 20.00809

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ISSUE DATE: 06/30/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P550101-031-30

LUMINAIRE: Black 5" CYLINDER DOWN LIGHT NO PHOTOCCELL TEST WILL APPLY FOR
P5674-31/30K

LAMP CAT. NO.: 2835

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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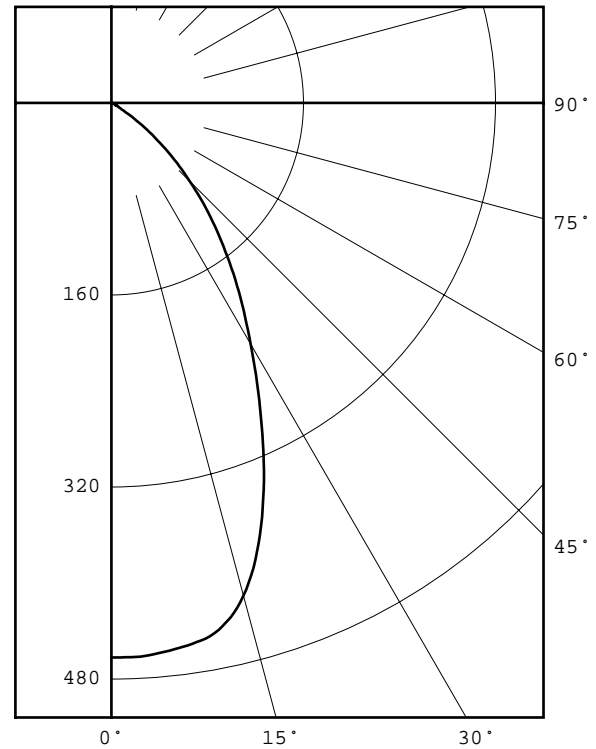
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DEG	CANDELA	LUMENS
0	462	
5	460	44
15	425	118
25	296	136
35	180	113
45	92	72
55	25	24
65	4	4
75	1	1
85	0	0
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	297	58.2
0- 40	410	80.2
0- 60	505	98.9
0- 90	511	100.0
90-180	0	0.0
0-180	511	100.0

EFFICACY = 27.5 lm/W
CIE TYPE - DIRECT
SPACING CRITERION: 0.91
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90
LUMINOUS DIAMETER: 4.750

LUMINANCE DATA IN CANDELA/SQ M	
ANGLE	AVERAGE
IN DEG	
45	11380.
55	3812.
65	828.
75	338.
85	0.



LEGEND
0-deg



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CANDELA DISTRIBUTION

0.0	462
2.5	462
5.0	460
7.5	457
10.0	453
12.5	443
15.0	425
17.5	399
20.0	367
22.5	332
25.0	296
27.5	263
30.0	232
32.5	205
35.0	180
37.5	156
40.0	134
42.5	113
45.0	92
47.5	74
50.0	56
52.5	40
55.0	25
57.5	12
60.0	7
62.5	5
65.0	4
67.5	3
70.0	2
72.5	2
75.0	1
77.5	1
80.0	1
82.5	0
85.0	0
87.5	0
90.0	0



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5-DEGREE		
ZONAL	LUMEN	SUMMARY
0-	5	11
5-	10	33
10-	15	52
15-	20	65
20-	25	69
25-	30	67
30-	35	60
35-	40	52
40-	45	42
45-	50	30
50-	55	17
55-	60	6
60-	65	3
65-	70	2
70-	75	1
75-	80	1
80-	85	0
85-	90	0

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0-	10	44
0-	20	161
0-	30	297
0-	40	410
0-	50	481
0-	60	505
0-	70	509
0-	80	511
0-	90	511



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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	119	119	119	119	119	116	116	116	116	111	111	111	111	111	106	106	106	102	102	102	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	100	98	97	96	95	94	92
2	106	101	97	93	104	99	95	92	96	93	90	93	90	88	93	90	88	90	88	86	84
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	87	83	80	84	81	79	77
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	81	76	73	79	75	72	70
5	89	80	73	68	87	79	73	68	77	72	67	75	71	67	75	71	67	74	70	66	65
6	84	74	67	63	82	73	67	62	72	66	62	70	65	62	70	65	62	69	64	61	60
7	79	69	62	58	78	68	62	58	67	61	57	66	61	57	66	61	57	64	60	57	55
8	75	64	58	53	74	64	58	53	63	57	53	62	56	53	62	56	53	61	56	52	51
9	71	60	54	50	70	60	54	49	59	53	49	58	53	49	58	53	49	57	52	49	47
10	67	57	50	46	66	56	50	46	55	50	46	55	49	46	55	49	46	54	49	46	44

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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7/1/2020

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

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