

Project Number
20.00157



HUBBELL
Lighting

Date
1/31/2020

Photometric Test Report

Lab 5
Sphere

Test Sample Description

Catalog Number: P300306-009-40
Description: 32" LED Edge-Lit Vanity

Photometry

Test Method: IES LM-41-14
IES LM-79-08 §10
Preburn Time: 1:30
Time To Stabilize: 1:45
Total Operating Time: 3:05

Input Voltage (Volts): 120.2
Input Current (Amps): 0.264
Input Wattage (Watts): 31.6
Ambient Temp (°C): 25.3

Sphere

Test Method: IES LM-16-93
IES LM-79-08 §12.1
Preburn Time: 0:00
Time To Stabilize: 1:11
Total Operating Time: 1:22

Input Voltage (Volts): 120.0
Input Current (Amps): 0.264
Input Wattage (Watts): 31.5
Ambient Temp (°C): 24



Hubbell Lighting, Inc.

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

Checked (sphere): M. ELLMAN
Checked (photometry): D. ROBBINS / M. OLALDE
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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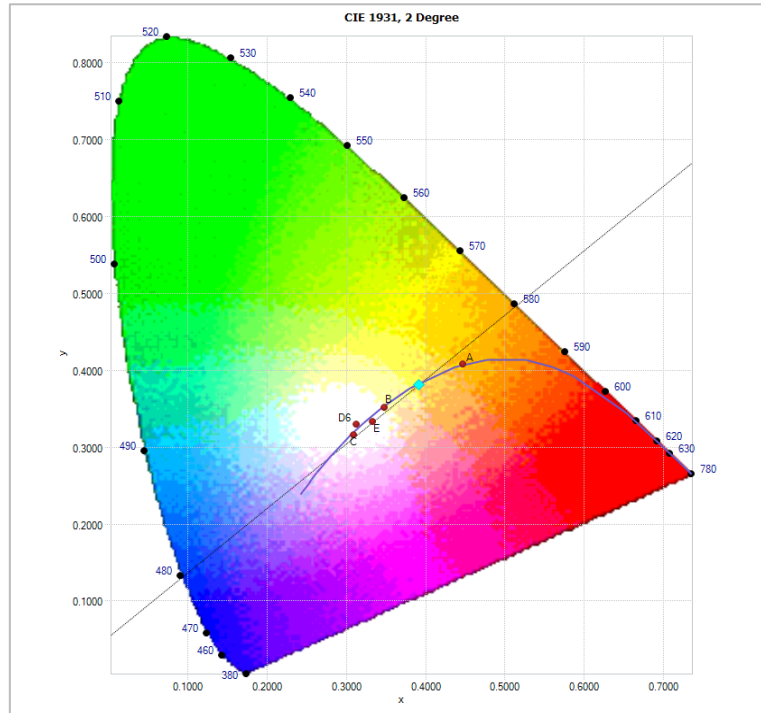


Lamp Cat#: 2835
Lamp Desc: 84 - Bridgelux 4000K LEDs

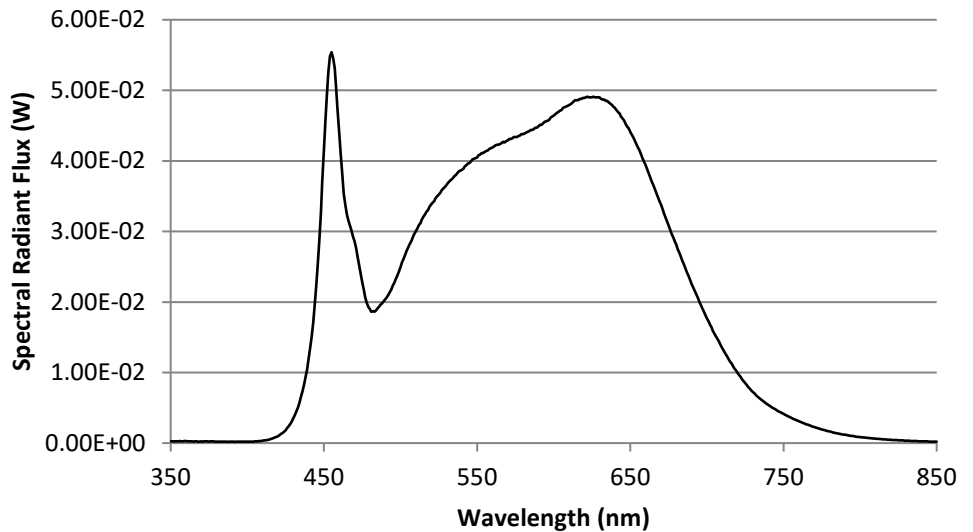
Efficacy: 92.6 LPW S/P Ratio: 1.7 LM/LM

Spectral Results

Name	Value	Unit
Φ	10.27	watts
Φ(v)	2917	lumens
Φ(v')	5030	lm'
Chrom x	0.3913	
Chrom y	0.3819	
Chrom u	0.2302	
Chrom v	0.337	
Duv	0.001	
Chrom u'	0.2302	
Chrom v'	0.5054	
CCT	3753	K
Purity	32.1	%
λ (dom)	580.3	nm
FWHM	24.2	nm
λ (peak)	455.1	nm
λ (center)	458.8	nm
λ (centroid)	582.4	nm
SDCM	Cool White	
RA	94	
Corr. Coef.	0.000640194	
Correlation	0.0054	
R1	95.2	
R2	97.4	
R3	96.7	
R4	93.0	
R5	93.3	
R6	93.9	
R7	95.1	
R8	90.1	
R9	77.4	
R10	91.6	
R11	92.7	
R12	70.2	
R13	96.2	
R14	97.7	



Spectral Distribution of Radiant Flux



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PREPARED FOR: PROGRESS

CATALOG NUMBER: P300306-009-40

LUMINAIRE: 32" LED Edge-Lit Vanity

LAMP CAT. NO.: 2835

LAMP: 84- Bridgelux 4000K LEDs

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

SEARCH_CRI: X

SEARCH_COLORTEMP: Y

SEARCH_LPW: Z

SEARCH_DISTRIBUTION: W



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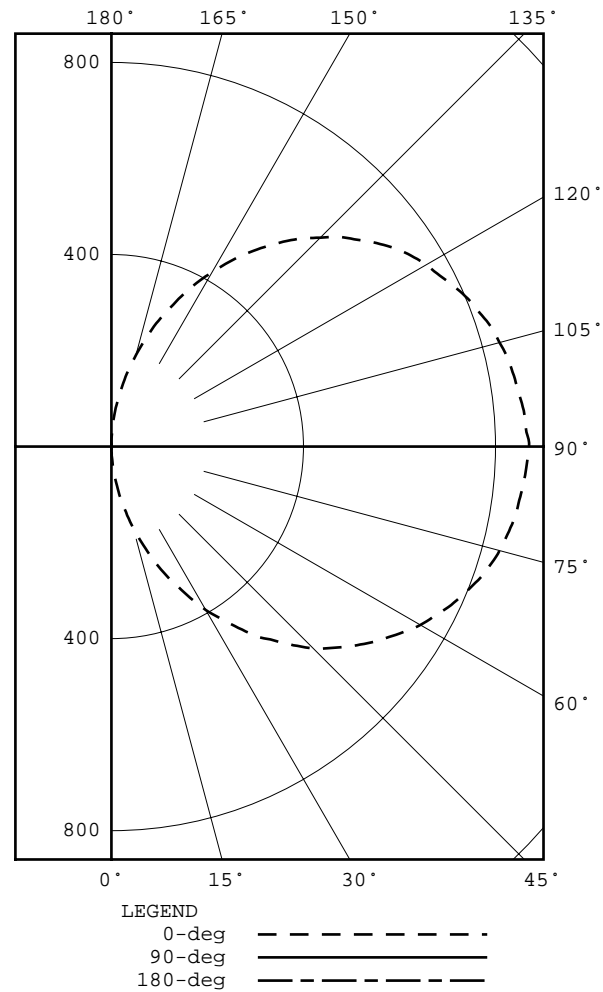
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CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	4	4	4	4	4	
5	45	32	4	2	0	2
15	176	117	0	0	0	16
25	317	209	0	0	0	44
35	461	296	0	0	0	85
45	594	380	0	0	0	134
55	696	447	0	0	0	182
65	781	502	0	0	0	226
75	837	539	0	0	0	258
85	862	556	0	0	0	274
90	870	559	0	0	0	
95	862	554	0	0	0	274
105	837	537	0	0	0	258
115	788	506	0	0	0	228
125	720	464	0	0	0	188
135	615	396	0	0	0	140
145	491	317	0	0	0	91
155	346	227	0	0	0	48
165	197	133	1	0	0	18
175	63	43	5	2	0	3
180	5	5	5	5	5	

ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	62	2.5
0- 40	147	6.0
0- 60	463	18.8
0- 90	1221	49.5
90-120	759	30.8
90-130	947	38.4
90-150	1178	47.8
90-180	1247	50.5
0-180	2467	100.0

EFFICACY = 78.1 lm/W
CIE TYPE - GENERAL DIFFUSE
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90





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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 4.000 31.000

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	10501.	0.	0.
55	15168.	0.	0.
65	23100.	0.	0.
75	40424.	0.	0.
85	123630.	0.	0.



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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	4	4	4	4	4	4	4	4	4
5.0	45	43	32	18	4	3	2	0	0
10.0	109	100	74	36	2	1	0	0	0
15.0	176	160	117	55	0	0	0	0	0
20.0	246	225	160	75	0	0	0	0	0
25.0	317	291	209	94	0	0	0	0	0
30.0	393	356	253	114	0	0	0	0	0
35.0	461	420	296	132	0	0	0	0	0
40.0	527	481	340	151	0	0	0	0	0
45.0	594	536	380	167	0	0	0	0	0
50.0	647	587	415	183	0	0	0	0	0
55.0	696	633	447	196	0	0	0	0	0
60.0	743	671	476	210	0	0	0	0	0
65.0	781	708	502	221	0	0	0	0	0
70.0	813	739	523	230	0	0	0	0	0
75.0	837	758	539	237	0	0	0	0	0
80.0	853	774	548	241	0	0	0	0	0
85.0	862	782	556	244	0	0	0	0	0
90.0	870	789	559	245	0	0	0	0	0
95.0	862	781	554	242	0	0	0	0	0
100.0	851	773	547	239	0	0	0	0	0
105.0	837	761	537	234	0	0	0	0	0
110.0	816	741	524	228	0	0	0	0	0
115.0	788	716	506	221	0	0	0	0	0
120.0	757	687	486	215	0	0	0	0	0
125.0	720	652	464	207	0	0	0	0	0
130.0	670	609	432	194	0	0	0	0	0
135.0	615	561	396	179	0	0	0	0	0
140.0	557	506	360	163	0	0	0	0	0
145.0	491	444	317	146	0	0	0	0	0
150.0	419	383	274	127	0	0	0	0	0
155.0	346	316	227	107	0	0	0	0	0
160.0	273	248	179	86	0	0	0	0	0
165.0	197	182	133	66	1	0	0	0	0
170.0	127	117	86	44	3	1	1	0	0
175.0	63	57	43	25	5	3	2	0	0
180.0	5	5	5	5	5	5	5	5	5



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	0
5- 10	2
10- 15	5
15- 20	10
20- 25	18
25- 30	27
30- 35	37
35- 40	48
40- 45	61
45- 50	73
50- 55	85
55- 60	97
60- 65	108
65- 70	118
70- 75	126
75- 80	132
80- 85	136
85- 90	138
90- 95	138
95-100	136
100-105	132
105-110	126
110-115	118
115-120	109
120-125	100
125-130	88
130-135	76
135-140	64
140-145	51
145-150	40
150-155	29
155-160	19
160-165	12
165-170	6
170-175	2
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	2
0- 20	18
0- 30	62
0- 40	147
0- 50	281
0- 60	463
0- 70	688
0- 80	946
0- 90	1221
0-100	1494
0-110	1752
0-120	1980
0-130	2168
0-140	2308
0-150	2399
0-160	2447
0-170	2465
0-180	2467



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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	107	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	92	85	79	74	74	84	78	72	68	64	60	56	52	49	46	40	38	36	30
2	81	71	63	56	56	74	65	57	51	53	47	42	42	38	34	32	29	26	21
3	73	61	51	44	44	66	55	47	40	45	38	33	35	30	26	27	23	19	15
4	66	53	43	35	35	60	48	39	32	39	32	26	30	25	21	23	19	15	11
5	60	46	36	29	29	54	42	33	27	34	27	22	27	21	17	20	16	12	9
6	55	41	31	24	24	49	37	29	22	30	23	18	24	18	14	18	13	10	7
7	50	36	27	21	21	46	33	25	19	27	20	15	21	16	12	16	12	8	6
8	46	33	24	18	18	42	30	22	16	24	18	13	19	14	10	14	10	7	5
9	43	29	21	16	16	39	27	19	14	22	16	11	17	12	9	13	9	6	4
10	40	27	19	14	14	36	25	17	12	20	14	10	16	11	8	12	8	5	3

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: 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>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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