

Project Number
20.00819



HUBBELL
Lighting

Date
7/7/2020
Rev 1: 12/7/2020

Photometric Test Report

Lab 5
Sphere

Test Sample Description

Catalog Number: P810033-028-30
Description: 1x4 Flat Panel Sample

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

Revision 1: Updated the Product Catalog Number from P350206-027-30 per Brand management.

Photometry

Test Method: IES LM-41-14
IES LM-79-08 §10

Preburn Time: 0:10

Time To Stabilize: 6:00

Total Operating Time: 7:20

Input Voltage (Volts): 119.9

Input Current (Amps): 0.363

Input Wattage (Watts): 43.0

Ambient Temp (°C): 25.8

Sphere

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

Preburn Time: 1:50

Time To Stabilize: 1:09

Total Operating Time: 3:28

Input Voltage (Volts): 120.0

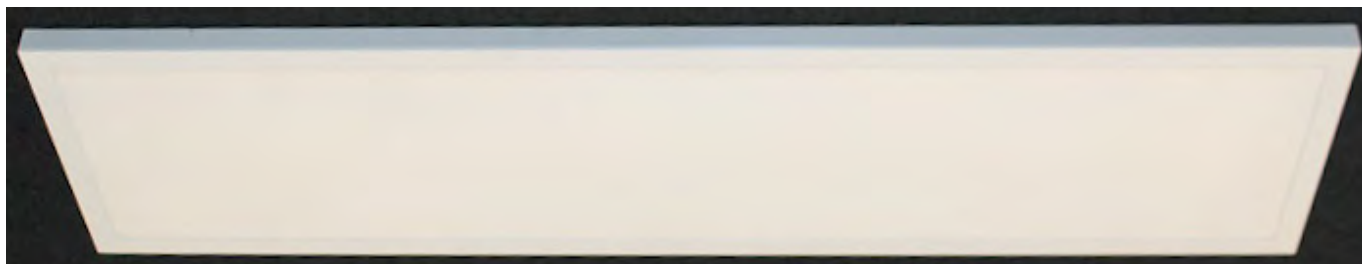
Input Current (Amps): 0.362

Input Wattage (Watts): 43.0

Ambient Temp (°C): 24

PF @ 120V: 0.991

THD @ 120V (%): 12.5



Hubbell Lighting, Inc.

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

Revised By: D. ROBBINS
Revision Approval: P. McCARTHY



* 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#: BXEW-30G-11L-3B-00

Lamp Desc: 240 - Bridgelux 3000K LEDs

Driver Desc: 1 - Becky BQE48-1100-42-TD

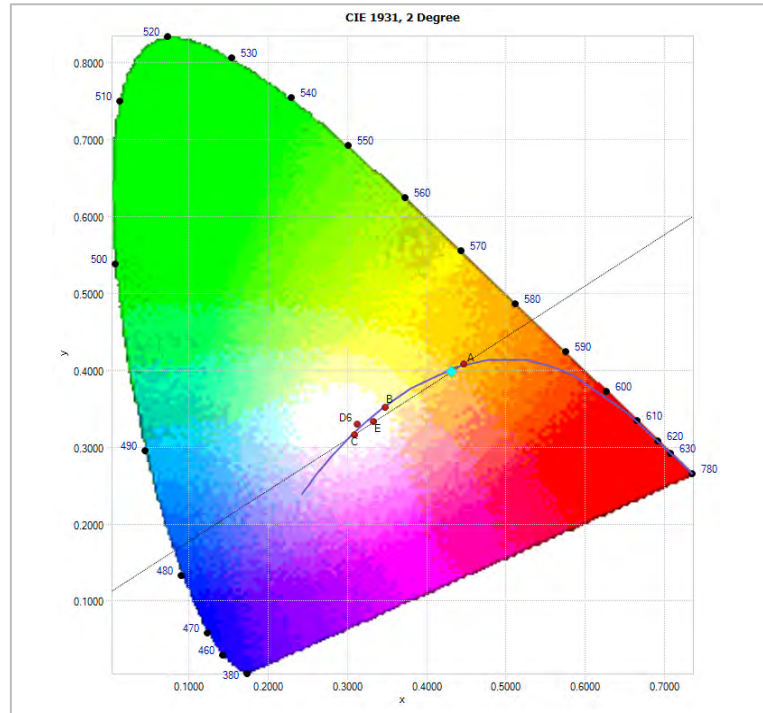
Programmed to 1100mA

Efficacy: 82.5 LPW

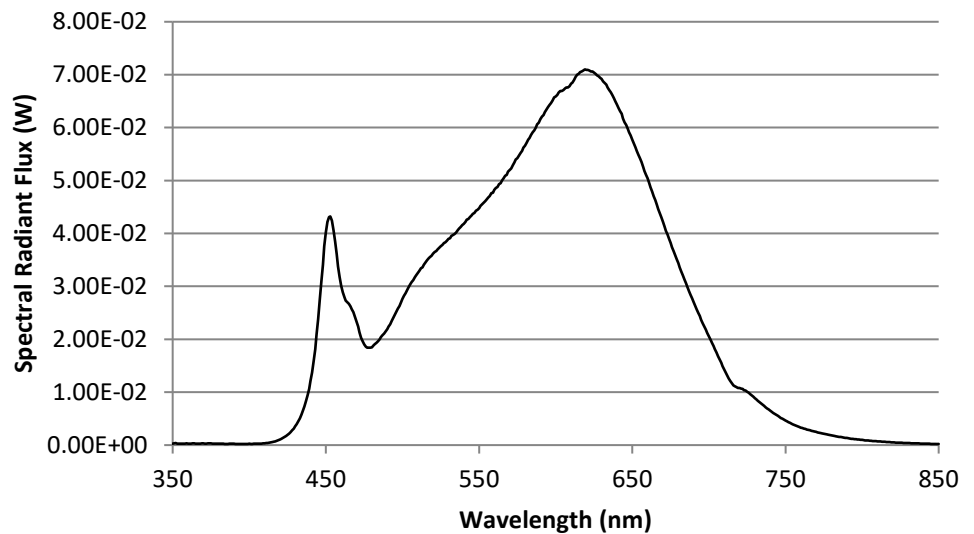
S/P Ratio: 1.5 LM'/LM

Spectral Results

Name	Value	Unit
Φ	12.21	watts
$\Phi(v)$	3547	lumens
$\Phi(v')$	5199	lm'
Chrom x	0.431	
Chrom y	0.3982	
Chrom u	0.2493	
Chrom v	0.3454	
Duv	0.0016	
Chrom u'	0.2493	
Chrom v'	0.5182	
CCT	3051	K
Purity	48.9	%
λ (dom)	583.2	nm
FWHM	160.5	nm
λ (peak)	619.8	nm
λ (center)	598.3	nm
λ (centroid)	590.4	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.001535656	
Correlation	0.0054	
R1	93.8	
R2	97.9	
R3	98.1	
R4	92.7	
R5	93.7	
R6	96.2	
R7	90.9	
R8	81.6	
R9	60.2	
R10	94.2	
R11	93.9	
R12	81.4	
R13	95.2	
R14	99.6	



Spectral Distribution of Radiant Flux



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ISSUE DATE: 07/07/20

REV 1 DATE: 12/07/20

PREPARED FOR: PROGRESS

CATALOG NUMBER: P810033-028-30

LUMINAIRE: 1x4 Flat Panel Sample

LAMP CAT. NO.: BXEW-30G-11L-3B-00

LAMP: 240- Bridgelux 3000K LEDs

BALLAST CATALOG NUMBER: BQE48-1100-42-TD

BALLAST: 1- BECKY - Programmed to 1100mA

MOUNTING: Ceiling

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

REVISION 1: Updated the Product Catalog Number from
P350207-027-30 per Brand management.



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CATALOG NUMBER: P810033-028-30

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	
0	1080	1080	1080	1080	1080	
5	1078	1075	1077	1074	1073	102
15	1047	1044	1042	1041	1040	294
25	977	976	972	967	972	448
35	877	874	870	864	865	544
45	752	744	738	735	736	570
55	590	584	579	578	578	520
65	413	408	405	402	399	401
75	227	223	221	218	217	234
85	62	62	61	59	58	69
90	4	4	3	4	4	
95	0	0	0	0	0	1
105	0	0	0	0	0	0
115	0	0	0	0	0	0
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	

FLUX

102
294
448
544
570
520
401
234
69

1
0
0
0
0
0
0
0

ZONAL ZONE	LUMEN	SUMMARY LUMENS
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ZONE	LOHRS	% EXPT
0- 30	844	26.5
0- 40	1389	43.6
0- 60	2479	77.9
0- 90	3183	100.0
90-120	1	0.0
90-130	1	0.0
90-150	1	0.0
90-180	1	0.0
0-180	3184	100.0

EFFICACY = 74.0 lm/W

CIE TYPE - DIRECT

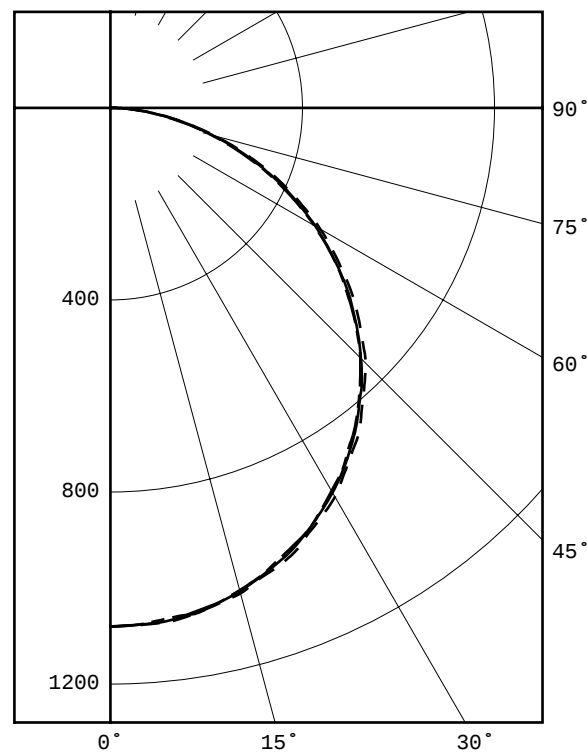
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SIE FILE      DIRECT
PLANE          : 0-DEG  90-DEG

```

SPACING CRITERIA :	1.28	1.27
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SHIELDING ANGLES : 90 90



LEGEND

LEGEND

0-deg	— — — — —
45-deg	—————
90-deg	— — — — —



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CATALOG NUMBER: P810033-028-30

PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 46.000 10.000

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	3584.	3517.	3507.
55	3466.	3401.	3396.
65	3293.	3229.	3181.
75	2955.	2877.	2825.
85	2397.	2358.	2242.



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**CANDELA DISTRIBUTION
LATERAL ANGLE**

	0.0	22.5	45.0	67.5	90.0
0.0	1080	1080	1080	1080	1080
5.0	1078	1075	1077	1074	1073
10.0	1066	1061	1062	1059	1067
15.0	1047	1044	1042	1041	1040
20.0	1017	1010	1011	1006	1007
25.0	977	976	972	967	972
30.0	935	925	925	919	921
35.0	877	874	870	864	865
40.0	815	811	806	804	804
45.0	752	744	738	735	736
50.0	673	667	661	663	658
55.0	590	584	579	578	578
60.0	505	496	493	492	490
65.0	413	408	405	402	399
70.0	319	315	312	309	307
75.0	227	223	221	218	217
80.0	138	137	136	132	131
85.0	62	62	61	59	58
90.0	4	4	3	4	4
95.0	0	0	0	0	0
100.0	0	0	0	0	0
105.0	0	0	0	0	0
110.0	0	0	0	0	0
115.0	0	0	0	0	0
120.0	0	0	0	0	0
125.0	0	0	0	0	0
130.0	0	0	0	0	0
135.0	0	0	0	0	0
140.0	0	0	0	0	0
145.0	0	0	0	0	0
150.0	0	0	0	0	0
155.0	0	0	0	0	0
160.0	0	0	0	0	0
165.0	0	0	0	0	0
170.0	0	0	0	0	0
175.0	0	0	0	0	0
180.0	0	0	0	0	0



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5-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 5		26
5- 10		77
10- 15		125
15- 20		169
20- 25		208
25- 30		240
30- 35		264
35- 40		280
40- 45		287
45- 50		284
50- 55		271
55- 60		249
60- 65		219
65- 70		182
70- 75		139
75- 80		95
80- 85		53
85- 90		17
90- 95		1
95-100		0
100-105		0
105-110		0
110-115		0
115-120		0
120-125		0
125-130		0
130-135		0
135-140		0
140-145		0
145-150		0
150-155		0
155-160		0
160-165		0
165-170		0
170-175		0
175-180		0

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 10		102
0- 20		396
0- 30		844
0- 40		1389
0- 50		1959
0- 60		2479
0- 70		2879
0- 80		3114
0- 90		3183
0-100		3184
0-110		3184
0-120		3184
0-130		3184
0-140		3184
0-150		3184
0-160		3184
0-170		3184
0-180		3184



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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	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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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Date
7/7/2020
Rev 1: 12/7/2020

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>
Goniophotometer	ITL/HLI LAB 5 - Test Distance: 56.0'	N/A	N/A
Power Analyzer	Yokogawa / WT 332	C2QA27072V	10/31/2020
Power Source	Voltage-Regulated House Power	N/A	N/A
Thermometer	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>
3-Meter Sphere	Labsphere / LMS-3M	N/A	Calibration Checked Daily
Thermometer	National Instruments / USB TC01	1912751	10/31/2020
Power Analyzer	Yokogawa / WT332	C2QA27075V	10/31/2020
Power Supply	Chroma / 61602	616020002113	N/A
Power Supply PF/THD	Voltage-Regulated House Power	N/A	N/A
Aux Lamp Supply	GW Instek / PSU 150-10	GER221028	N/A
Cal Lamp Supply	Labsphere / LPS-150-0268	1218148505	N/A
Spectrometer	Labsphere / CDS 1100	0624117792	N/A

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