

Project Number
17.02224



Date
8/16/2017

LAB 1
Sphere

Test Sample Description

Catalog Number: P350100-020-30
Description: 1-Lt. LED Flush Mount w/ Etched Glass Refractor

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 00:05
Time To Stabilize: 1:20
Total Operating Time: 2:31

Input Voltage (Volts): 120.1
Input Current (Amps): 0.153
Input Wattage (Watts): 18.2
Ambient Temp (°C): 25.4
PF @ 120V: 0.985
THD @ 120V (%): 18.59

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 8:00
Time To Stabilize: 0:57
Total Operating Time: 8:57

Input Voltage (Volts): 120.0
Input Current (Amps): 0.150
Input Wattage (Watts): 17.7
Ambient Temp (°C): 24.0



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



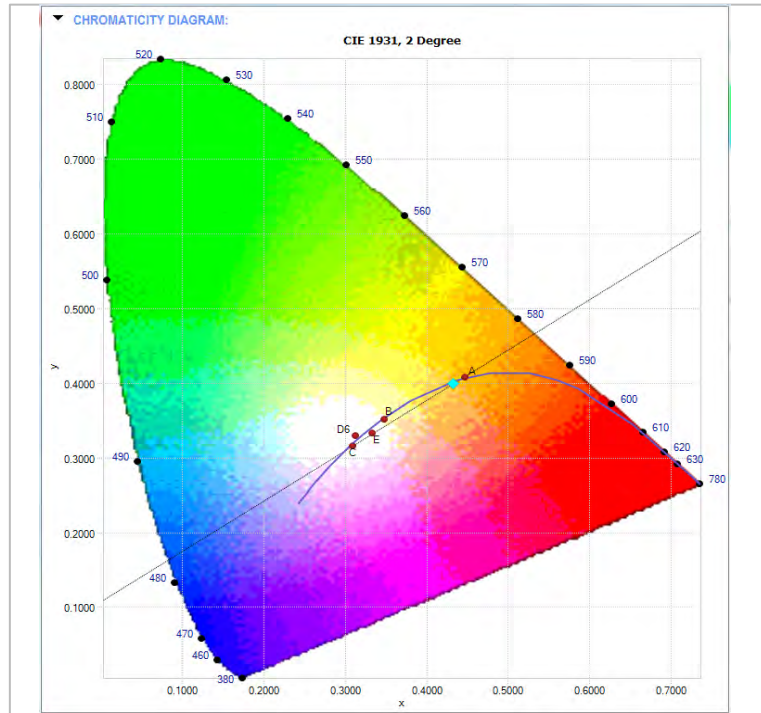


Lamp Cat#: 93047261-5230
 Lamp Desc: 40 - n/a 3000K LEDs
 Driver Desc: n/a

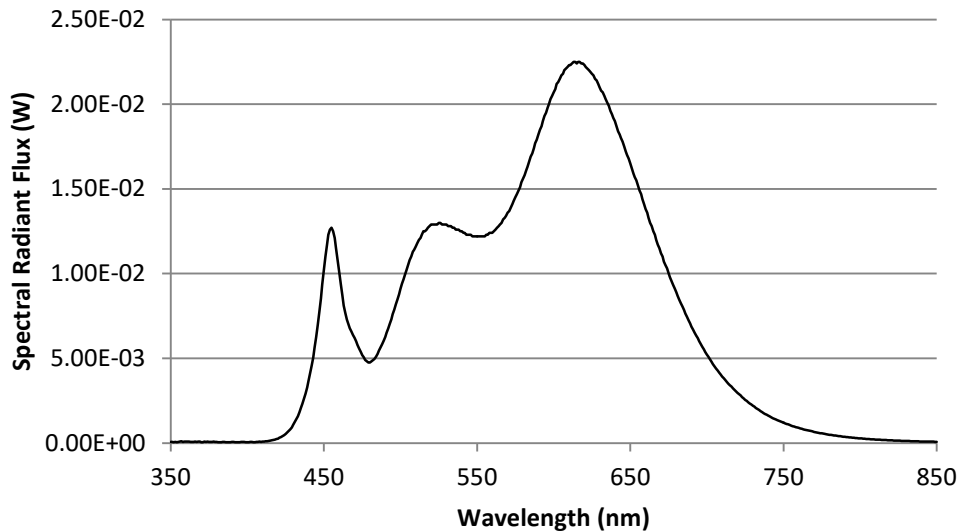
Efficacy: 59.5 LPW S/P Ratio: 1.5 LM/LM

Spectral Results

Name	Value	Unit
Φ	3.57	watts
$\Phi(v)$	1053	lumens
$\Phi(v')$	1594	lm'
Chrom x	0.4324	
Chrom y	0.4001	
Chrom u	0.2494	
Chrom v	0.3461	
Duv	0.001	
Chrom u'	0.2494	
Chrom v'	0.5191	
CCT	3042	K
Purity	49.9	%
λ (dom)	583.0	nm
FWHM	162.1	nm
λ (peak)	614.7	nm
λ (center)	588.9	nm
λ (centroid)	588.4	nm
SDCM	Cool White	
RA	95	
Corr. Coef.	0.000973289	
Correlation	0.0054	
R1	98.5	
R2	98.2	
R3	97.1	
R4	97.6	
R5	98.1	
R6	92.4	
R7	91.7	
R8	84.5	
R9	66.0	
R10	96.1	
R11	90.4	
R12	86.4	
R13	97.7	
R14	98.8	



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.



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REPORT NUMBER: 17.02224

PAGE: 3 OF 9

ISSUE DATE: 08/15/17

PREPARED FOR: PROGRESS

CATALOG NUMBER: P350100-020-30

LUMINAIRE: 1-Lt. LED Flush Mount w/ Etched Glass Refractor

LAMP CAT. NO.: 93047261-5230

LAMP: 40 - 3000K LEDs

MOUNTING: Ceiling

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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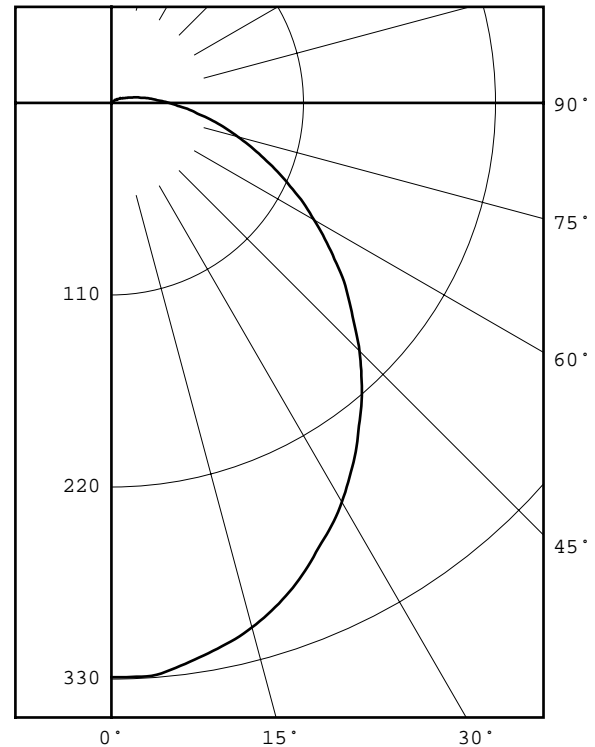
REPORT NUMBER: 17.02224
ISSUE DATE: 08/15/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P350100-020-30

PAGE: 4 OF 9

DEG	CANDELA	LUMENS
0	329	
5	328	31
15	311	88
25	281	130
35	244	153
45	201	155
55	156	140
65	113	112
75	75	80
85	45	49
90	33	
95	24	27
105	12	13
115	6	6
125	3	3
135	0	0
145	0	0
155	0	0
165	0	0
175	0	0
180	0	

ZONAL ZONE	LUMEN LUMENS	SUMMARY LUMENS	%FIXT
0- 30		248	25.2
0- 40		401	40.7
0- 60		696	70.5
0- 90		937	95.0
90-120		46	4.7
90-130		49	5.0
90-150		49	5.0
90-180		49	5.0
0-180		986	100.0

EFFICACY = 54.2 lm/W
CIE TYPE - DIRECT
LUMINAIRE SPACING CRITERION = 1.20
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90





®

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CATALOG NUMBER: P350100-020-30

PAGE: 5 OF 9

LUMINOUS DIAMETER: 10.000
HEIGHT OF SIDE : 3.000

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	4059.
55	3473.
65	2901.
75	2358.
85	1899.



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REPORT NUMBER: 17.02224
ISSUE DATE: 08/15/17
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CATALOG NUMBER: P350100-020-30

PAGE: 6 OF 9

CANDELA DISTRIBUTION

0.0	329
5.0	328
10.0	320
15.0	311
20.0	298
25.0	281
30.0	264
35.0	244
40.0	223
45.0	201
50.0	178
55.0	156
60.0	134
65.0	113
70.0	93
75.0	75
80.0	59
85.0	45
90.0	33
95.0	24
100.0	17
105.0	12
110.0	8
115.0	6
120.0	4
125.0	3
130.0	3
135.0	0
140.0	0
145.0	0
150.0	0
155.0	0
160.0	0
165.0	0
170.0	0
175.0	0
180.0	0



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REPORT NUMBER: 17.02224
ISSUE DATE: 08/15/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P350100-020-30

PAGE: 7 OF 9

5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		8
5- 10		23
10- 15		37
15- 20		50
20- 25		61
25- 30		69
30- 35		75
35- 40		78
40- 45		78
45- 50		76
50- 55		73
55- 60		67
60- 65		60
65- 70		52
70- 75		44
75- 80		36
80- 85		28
85- 90		21
90- 95		15
95-100		11
100-105		8
105-110		5
110-115		4
115-120		3
120-125		2
125-130		1
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		31
10- 20		88
20- 30		130
30- 40		153
40- 50		155
50- 60		140
60- 70		112
70- 80		80
80- 90		49
90-100		27
100-110		13
110-120		6
120-130		3
130-140		0
140-150		0
150-160		0
160-170		0
170-180		0



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CATALOG NUMBER: P350100-020-30

PAGE: 8 OF 9

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	118	118	118	118	118	115	115	115	115	108	108	108	103	103	103	97	97	97	95
1	106	101	96	92	92	103	98	94	90	93	89	86	88	85	82	84	81	79	77
2	96	87	80	74	74	93	85	78	73	81	75	70	77	72	68	73	69	66	63
3	88	77	68	61	61	85	75	67	60	71	64	59	67	62	57	64	59	55	53
4	80	68	59	52	52	77	66	58	51	63	56	50	60	54	49	57	52	47	45
5	74	61	51	45	45	71	59	50	44	56	49	43	54	47	42	52	46	41	39
6	68	55	45	39	39	66	53	45	39	51	43	38	49	42	37	47	41	36	34
7	63	49	41	34	34	61	48	40	34	46	39	33	44	38	33	43	37	32	30
8	59	45	37	31	31	57	44	36	30	42	35	30	41	34	29	39	33	29	27
9	55	41	33	28	28	53	41	33	27	39	32	27	38	31	27	36	30	26	24
10	52	38	30	25	25	50	38	30	25	36	29	24	35	29	24	34	28	24	22

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: ITL78966-1000-38

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 25889.0 Lumens

Calibration Date: 07/10/2017

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 1 - Test Distance: 31.74'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27071V	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4EB	11/7/2017

Sphere Calibration

Calibration Lamp: EIKO 28V75W/E10

Lamp Number: SCL-1400-J136

Calibration Current: 2.679 Amps

Total Luminous Flux: 1427 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	Calibrated Weekly
<i>Thermometer</i>	National Instruments / USB TC01	1912751	11/2/2017
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	11/1/2017
<i>Power Supply</i>	Chroma / 61602	616020002113	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	031159372	10/31/2017
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148505	12/1/2017
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

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