



LAB 1
Sphere

Test Sample Description

Catalog Number: P500147--009-30
Description: 8" LED Pendant w/ AC LED Module and Opal Glass Enclosure

Photometry

Test Method: IES LM-46-04
IES LM-79-08 §10
Preburn Time: 0:15
Time To Stabilize: 0:50
Total Operating Time: 2:40

Input Voltage (Volts): 120.1
Input Current (Amps): 0.078
Input Wattage (Watts): 9.3
Ambient Temp (°C): 26.1

Sphere

Test Method: IES LM-16-93
IES LM-79-08 §12.1
Preburn Time: 2:00
Time To Stabilize: 1:14
Total Operating Time: 3:14

Input Voltage (Volts): 120.0
Input Current (Amps): 0.078
Input Wattage (Watts): 9.3
Ambient Temp (°C): 24
PF @ 120V: 0.991
THD @ 120V (%): 12.4



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



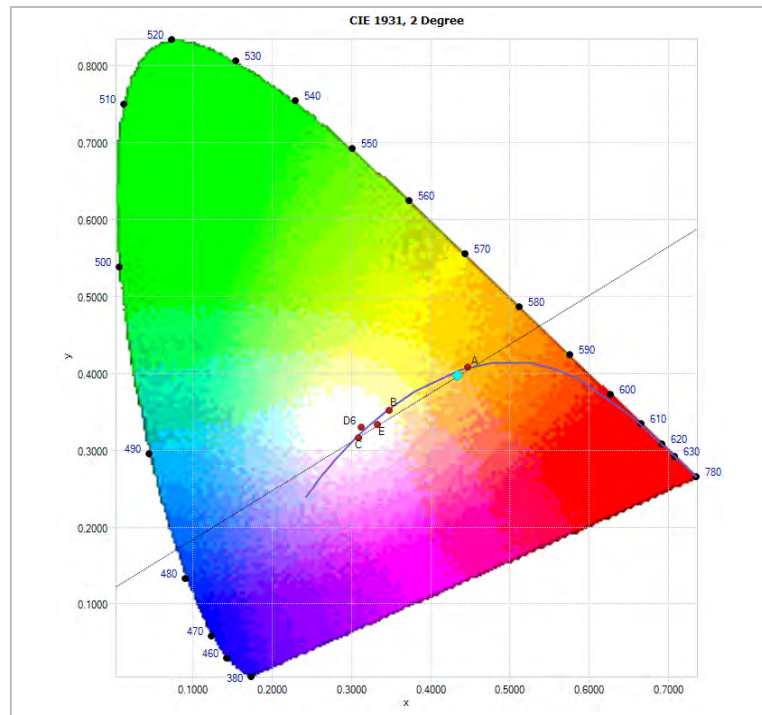


Lamp Cat#: 93070270-3330
 Lamp Desc: 20 - 3000K LEDs
 Driver Desc: NA

Programmed to xxmA

Efficacy: 47.2 LPW S/P Ratio: 1.4 LM/LM

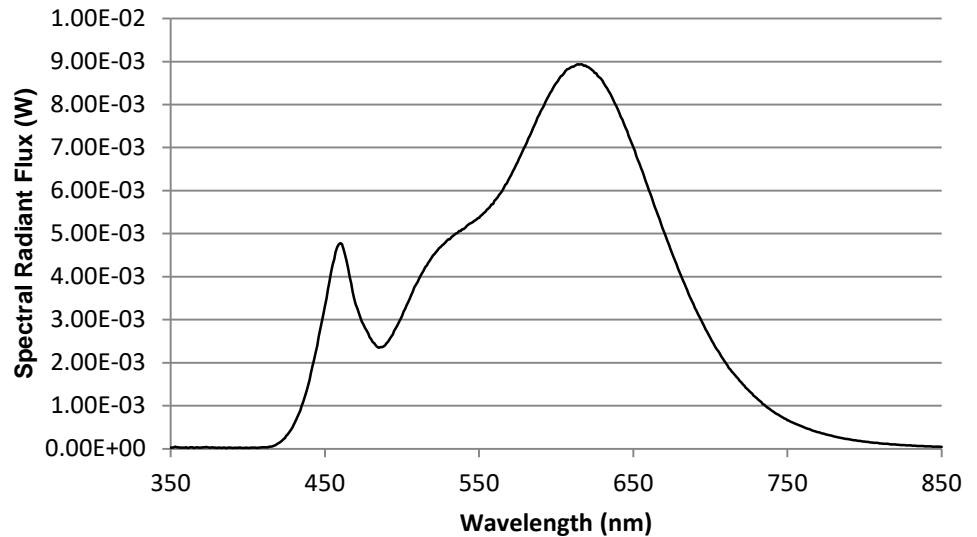
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	1.52	watts
Φ(v)	439	lumens
Φ(v')	636	lm'
Chrom x	0.434	
Chrom y	0.3972	
Chrom u	0.2517	
Chrom v	0.3455	
Duv	0.0025	
Chrom u'	0.2517	
Chrom v'	0.5182	
CCT	2990	K
Purity	49.5	%
λ (dom)	583.8	nm
FWHM	156.3	nm
λ (peak)	614.9	nm
λ (center)	597.9	nm
λ (centroid)	591.8	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.00239603	
Correlation	0.0054	
R1	93.9	
R2	98.7	
R3	96.6	
R4	92.0	
R5	93.8	
R6	96.0	
R7	88.8	
R8	78.5	
R9	54.8	
R10	96.0	
R11	93.7	
R12	82.6	
R13	95.8	
R14	99.3	

Spectral Distribution of Radiant Flux





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ISSUE DATE: 02/15/18

PREPARED FOR: PROGRESS

CATALOG NUMBER: P500147--009-30

LUMINAIRE: 8" LED Pendant w/ AC LED Module
with Diffuse Cover and Opal Glass Enclosure

LAMP: 20- 3000K LEDs

MOUNTING: Pendant

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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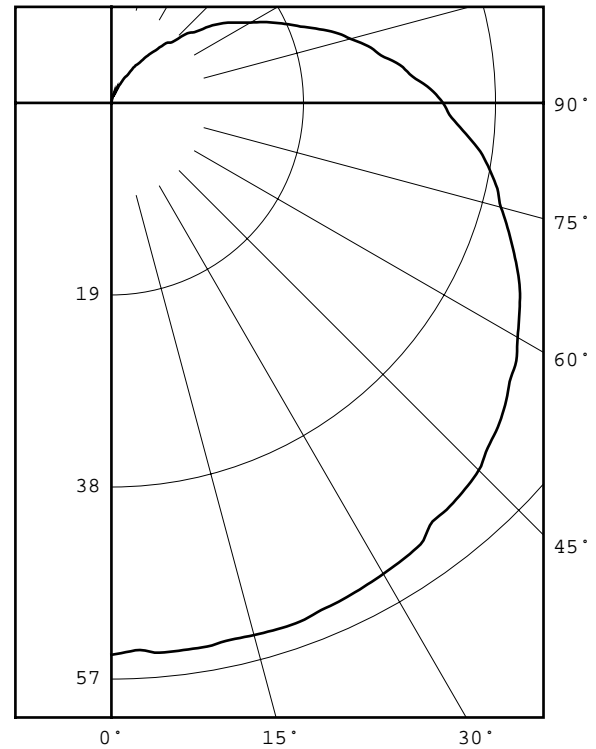
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DEG	CANDELA	LUMENS
0	54.6	
5	54.6	5
15	54.5	15
25	54.2	25
35	53.3	33
45	51.4	40
55	48.1	43
65	44.6	44
75	39.9	42
85	35.2	38
90	32.8	
95	29.9	33
105	24.5	26
115	18.6	19
125	13.8	12
135	8.5	7
145	4.9	3
155	2.1	1
165	1.0	0
175	0.0	0
180	0.0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	46	11.8
0- 40	79	20.4
0- 60	162	41.7
0- 90	287	74.0
90-120	77	19.9
90-130	90	23.1
90-150	100	25.7
90-180	101	26.0
0-180	388	100.0

EFFICACY = 41.7 lm/W
CIE TYPE - SEMI-DIRECT
PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 8.000 8.000
HEIGHT OF SIDE : 4.000 4.000

LUMINANCE DATA IN CANDELA/SQ M	
ANGLE	AVERAGE
IN DEG	
45	1174.
55	1185.
65	1233.
75	1303.
85	1457.



LEGEND
0-deg



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CANDELA DISTRIBUTION

0.0	54.6
5.0	54.6
10.0	54.6
15.0	54.5
20.0	54.6
25.0	54.2
30.0	53.8
35.0	53.3
40.0	52.1
45.0	51.4
50.0	49.9
55.0	48.1
60.0	46.4
65.0	44.6
70.0	42.3
75.0	39.9
80.0	38.0
85.0	35.2
90.0	32.8
95.0	29.9
100.0	27.1
105.0	24.5
110.0	21.5
115.0	18.6
120.0	15.9
125.0	13.8
130.0	11.0
135.0	8.5
140.0	6.8
145.0	4.9
150.0	3.2
155.0	2.1
160.0	1.6
165.0	1.0
170.0	0.0
175.0	0.0
180.0	0.0



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		1
5- 10		4
10- 15		6
15- 20		9
20- 25		11
25- 30		14
30- 35		16
35- 40		17
40- 45		19
45- 50		20
50- 55		21
55- 60		22
60- 65		22
65- 70		22
70- 75		21
75- 80		21
80- 85		20
85- 90		19
90- 95		17
95-100		16
100-105		14
105-110		12
110-115		10
115-120		8
120-125		7
125-130		5
130-135		4
135-140		3
140-145		2
145-150		1
150-155		1
155-160		0
160-165		0
165-170		0
170-175		0
175-180		0

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		5
0- 20		21
0- 30		46
0- 40		79
0- 50		119
0- 60		162
0- 70		206
0- 80		248
0- 90		287
0-100		320
0-110		346
0-120		364
0-130		376
0-140		383
0-150		387
0-160		388
0-170		388
0-180		388



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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	113	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74
1	98	92	86	81		93	87	82	77	78	73	70	69	66	63	62	59	56	52
2	88	78	69	62		82	73	66	59	65	59	54	58	53	49	51	47	44	40
3	79	67	57	50		74	63	54	48	56	49	43	50	44	39	44	39	35	32
4	72	58	48	41		67	55	46	39	49	42	36	44	37	33	39	34	29	26
5	65	51	42	34		61	49	40	33	43	36	30	39	32	27	34	29	25	22
6	60	46	36	29		56	43	35	28	39	31	26	35	28	24	31	25	21	19
7	55	41	32	25		52	39	30	24	35	28	22	31	25	20	28	23	19	16
8	51	37	28	22		48	35	27	21	32	25	20	29	22	18	26	20	16	14
9	48	34	25	20		45	32	24	19	29	22	17	26	20	16	23	18	15	12
10	45	31	23	18		42	30	22	17	27	20	16	24	18	14	22	17	13	11

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.



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>
Goniophotometer	ITL/HLI LAB 1 - Test Distance: 31.74'	N/A	N/A
Power Analyzer	Yokogawa / WT 332	C2QA27071V	10/25/2018
Power Source	Voltage-Regulated House Power	N/A	N/A
Thermometer	National Instruments / USB-TC01	176F4E3	10/26/2018

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>
3-Meter Sphere	Labsphere / LMS-3M	N/A	Checked Daily
Thermometer	National Instruments / USB TC01	1912751	10/26/2018
LAMP Power Meter	Yokogawa / WT332	C2QA27075V	10/25/2018
Power Supply	Chroma / 61602	616020002113	N/A
Power Supply PF/THD	Voltage-Regulated House Power	N/A	N/A
Aux Lamp Supply	Labsphere / LPS-100-0833	0331159372	N/A
Cal Lamp Supply	Labsphere / LPS-150-0268	1218148505	N/A
Spectrometer	Labsphere / CDS 1100	0624117792	N/A

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