



LAB 1
Sphere

Test Sample Description

Catalog Number: P500148-009-30

Description: 12" LED Pendant w/ AC LED Module with Diffuse Cover and Opal Glass Refractor

Photometry

IES LM-46-04
Test Method: IES LM-79-08 §10

Preburn Time: 0:20

Time To Stabilize: 0:25

Total Operating Time: 2:05

Input Voltage (Volts): 120.2

Input Current (Amps): 0.078

Input Wattage (Watts): 9.3

Ambient Temp (°C): 26.1

Sphere

IES LM-16-93
Test Method: 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

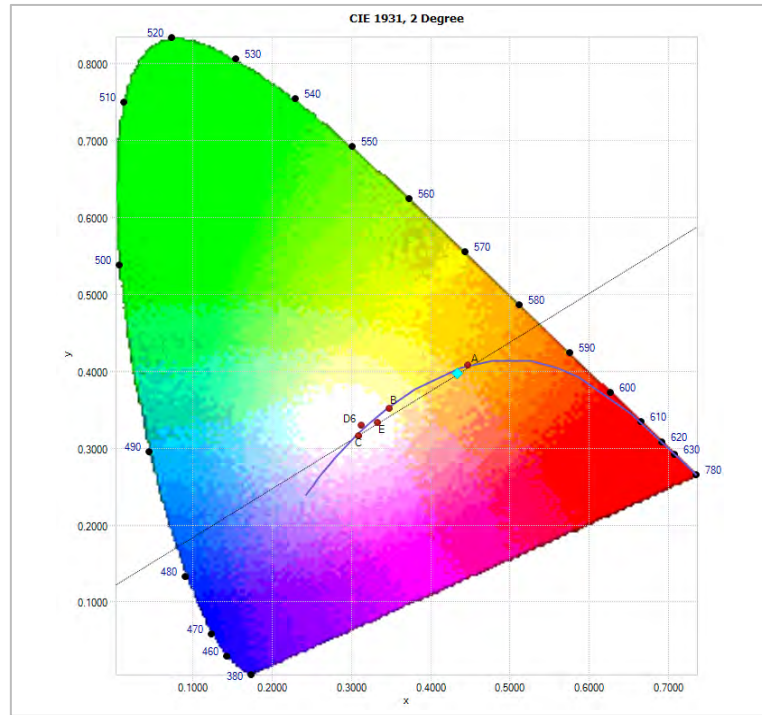




Lamp Cat#: 93070270-3330
 Lamp Desc: 20 - 3000K LEDs
 Driver Desc: NA

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

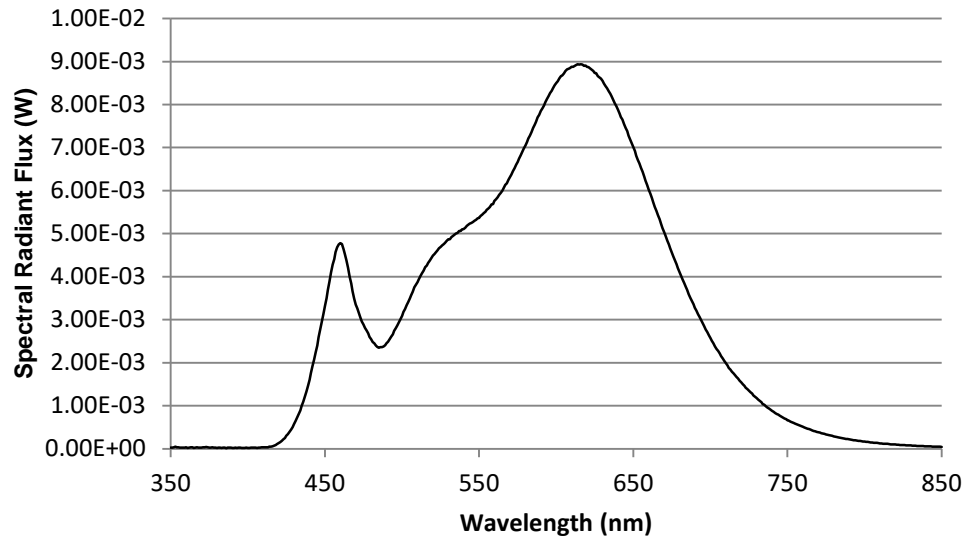
Chromaticity Diagram



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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PREPARED FOR: PROGRESS

CATALOG NUMBER: P500148--009-30

LUMINAIRE: 12" LED Pendant w/ AC LED Module
with Diffuse Cover and Opal Glass Refractor

LAMP: 20- 3000K LEDs

MOUNTING: Pendant

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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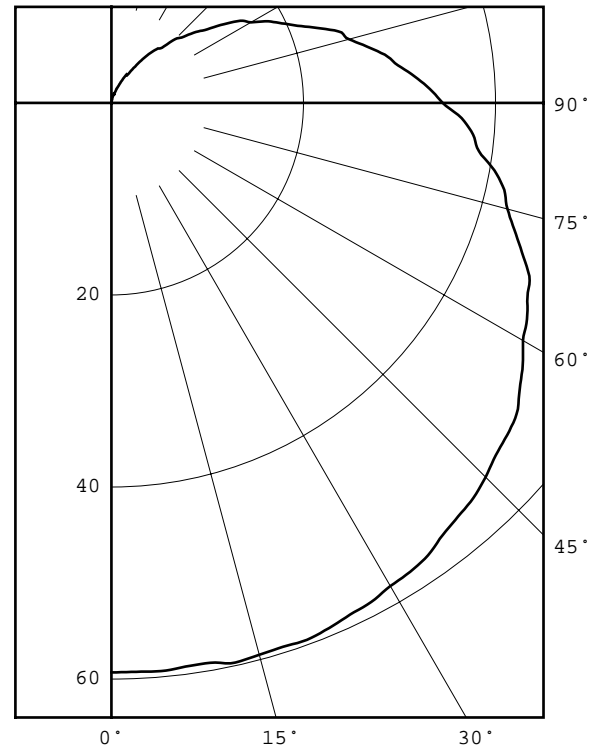
DEG	CANDELA	LUMENS
0	59.3	
5	59.4	6
15	59.5	17
25	58.8	27
35	57.5	36
45	55.1	43
55	51.9	47
65	47.8	47
75	42.7	45
85	37.8	41
90	34.5	
95	31.7	35
105	25.6	27
115	19.6	20
125	14.3	13
135	9.4	7
145	5.4	3
155	2.5	1
165	0.9	0
175	0.0	0
180	0.0	

ZONAL LUMEN SUMMARY			
ZONE	LUMEN	LUMENS	%FIXT
0- 30		50	12.0
0- 40		86	20.7
0- 60		175	42.1
0- 90		309	74.4
90-120		82	19.6
90-130		94	22.7
90-150		105	25.3
90-180		106	25.6
0-180		415	100.0

EFFICACY = 44.6 lm/W
CIE TYPE - SEMI-DIRECT
PLANE : 0-DEG 90-DEG
LUMINOUS DIAMETER : 12.000 12.000
HEIGHT OF SIDE : 6.000 6.000

LUMINANCE DATA IN CANDELA/SQ M

ANGLE	AVERAGE
IN DEG	
45	559.
55	568.
65	587.
75	620.
85	695.



LEGEND
0-deg



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CANDELA DISTRIBUTION

0.0	59.3
5.0	59.4
10.0	59.2
15.0	59.5
20.0	59.5
25.0	58.8
30.0	58.1
35.0	57.5
40.0	56.2
45.0	55.1
50.0	53.8
55.0	51.9
60.0	49.5
65.0	47.8
70.0	45.5
75.0	42.7
80.0	40.5
85.0	37.8
90.0	34.5
95.0	31.7
100.0	28.9
105.0	25.6
110.0	22.8
115.0	19.6
120.0	16.8
125.0	14.3
130.0	11.5
135.0	9.4
140.0	7.3
145.0	5.4
150.0	3.4
155.0	2.5
160.0	1.5
165.0	0.9
170.0	0.4
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		7
15- 20		10
20- 25		12
25- 30		15
30- 35		17
35- 40		19
40- 45		21
45- 50		22
50- 55		23
55- 60		23
60- 65		24
65- 70		24
70- 75		23
75- 80		22
80- 85		21
85- 90		20
90- 95		18
95-100		16
100-105		15
105-110		13
110-115		11
115-120		9
120-125		7
125-130		6
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		6
0- 20		23
0- 30		50
0- 40		86
0- 50		128
0- 60		175
0- 70		222
0- 80		268
0- 90		309
0-100		343
0-110		371
0-120		390
0-130		403
0-140		410
0-150		414
0-160		415
0-170		415
0-180		415



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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	74	70	70	66	63	62	59	57	53
2	88	78	69	62		83	73	66	59	66	59	54	58	53	49	52	48	44	41
3	79	67	57	50		74	63	55	48	56	49	44	50	44	40	44	40	36	32
4	72	58	48	41		67	55	46	39	49	42	36	44	38	33	39	34	30	26
5	65	51	42	34		61	49	40	33	44	36	30	39	33	28	35	29	25	22
6	60	46	36	29		56	44	35	28	39	32	26	35	29	24	31	26	22	19
7	55	41	32	25		52	39	31	24	35	28	23	32	25	21	28	23	19	16
8	51	37	28	22		48	35	27	21	32	25	20	29	23	18	26	20	17	14
9	48	34	25	20		45	32	24	19	29	22	18	26	20	16	24	19	15	13
10	45	31	23	18		42	30	22	17	27	20	16	24	19	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>
<i>Goniophotometer</i>	ITL/HLI LAB 1 - Test Distance: 31.74'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27071V	10/25/2018
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	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>
<i>3-Meter Sphere</i>	Labsphere / LMS-3M	N/A	Checked Daily
<i>Thermometer</i>	National Instruments / USB TC01	1912751	10/26/2018
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	10/25/2018
<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>	Labsphere / LPS-100-0833	0331159372	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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