

Project Number
17.02756



Date
10/9/2017

Lab 1
Sphere

Test Sample Description

Catalog Number: P300094-009
Description: 34" LED Linear Vanity - CONCOURSE w/ Glass Refractor

Photometry

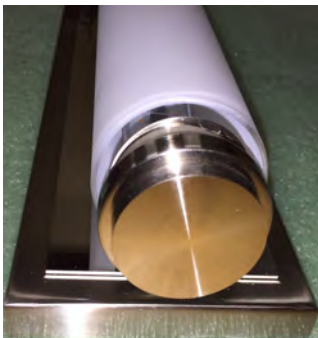
Test Method: IES LM-79-08 § 10
Preburn Time: 00:10
Time To Stabilize: 1:55
Total Operating Time: 3:30

Input Voltage (Volts): 120.2
Input Current (Amps): 0.452
Input Wattage (Watts): 53.9
Ambient Temp (°C): 25.4

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 1:00
Time To Stabilize: 1:05
Total Operating Time: 2:05

Input Voltage (Volts): 120.0
Input Current (Amps): 0.449
Input Wattage (Watts): 53.4
Ambient Temp (°C): 24.0



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



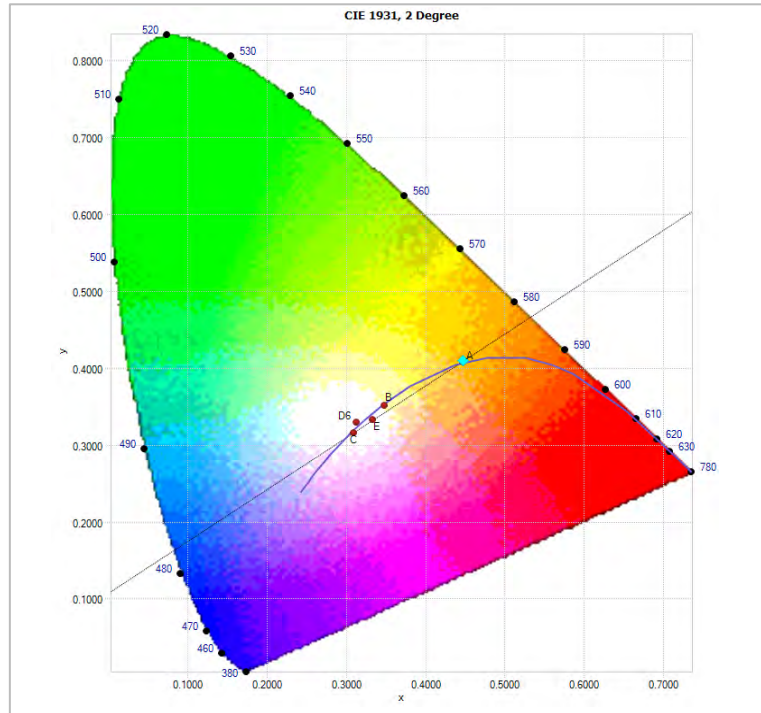
This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



Lamp Cat#: 3528
 Lamp Desc: 140 - Seoul 3000K LEDs
 Driver Desc: NA

Efficacy: 55.6 LPW S/P Ratio: 1.3 LM/LM

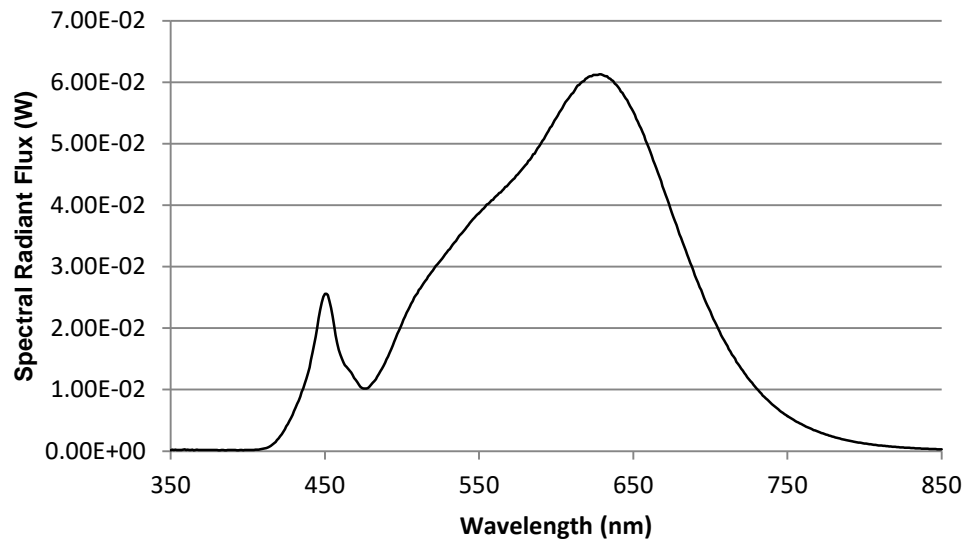
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	10.63	watts
$\Phi(v)$	2969	lumens
$\Phi(v')$	3968	lm'
Chrom x	0.4473	
Chrom y	0.4101	
Chrom u	0.2546	
Chrom v	0.3502	
Duv	0.0006	
Chrom u'	0.2546	
Chrom v'	0.5253	
CCT	2879	K
Purity	57.4	%
λ (dom)	583.0	nm
FWHM	162.9	nm
λ (peak)	628.3	nm
λ (center)	605.5	nm
λ (centroid)	600.0	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.001056908	
Correlation	0.0054	
R1	93.3	
R2	94.8	
R3	94.8	
R4	94.1	
R5	92.5	
R6	93.4	
R7	94.5	
R8	85.9	
R9	66.4	
R10	86.9	
R11	94.6	
R12	81.7	
R13	93.5	
R14	96.3	

Spectral Distribution of Radiant Flux



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PREPARED FOR: PROGRESS

CATALOG NUMBER: P300094-009

LUMINAIRE: 34" LED Linear Vanity - CONCOURSE w/ Glass Refractor

LAMP CAT. NO.: 3528

LAMP: 140- Seoul 3000K LEDs

MOUNTING: Wall



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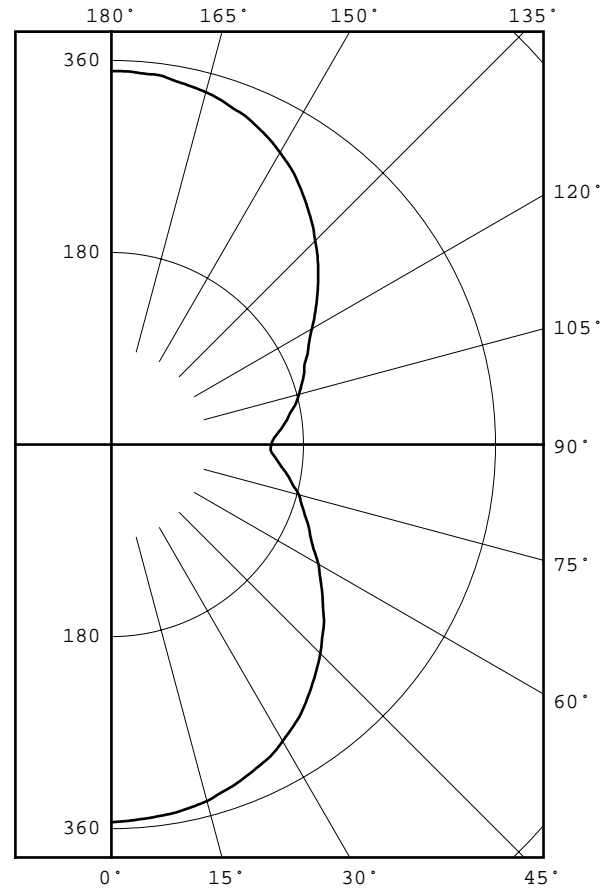
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DEG	CANDELA	LUMENS
0	354	
5	352	34
15	346	98
25	331	153
35	309	193
45	277	214
55	241	216
65	206	205
75	182	191
85	155	170
90	150	
95	159	174
105	182	192
115	203	201
125	235	211
135	270	209
145	303	190
155	327	151
165	342	97
175	349	33
180	350	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	284	9.7
0- 40	477	16.3
0- 60	907	30.9
0- 90	1474	50.3
90-120	567	19.4
90-130	778	26.5
90-150	1176	40.1
90-180	1457	49.7
0-180	2932	100.0

EFFICACY = 54.3 lm/W
CIE TYPE - GENERAL DIFFUSE
LUMINAIRE SPACING CRITERION = 1.35
PLANE : 0-DEG 90-DEG
SHIELDING ANGLES : 90 90





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PLANE	:	0-DEG	90-DEG
LUMINOUS LENGTH	:	36.000	3.000
HEIGHT OF SIDE	:	3.000	3.000

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE
IN DEG

45	5190.
55	5389.
65	5935.
75	7698.
85	13072.



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CANDELA DISTRIBUTION

0.0	354
5.0	352
10.0	350
15.0	346
20.0	339
25.0	331
30.0	321
35.0	309
40.0	293
45.0	277
50.0	260
55.0	241
60.0	224
65.0	206
70.0	193
75.0	182
80.0	168
85.0	155
90.0	150
95.0	159
100.0	170
105.0	182
110.0	192
115.0	203
120.0	217
125.0	235
130.0	253
135.0	270
140.0	287
145.0	303
150.0	316
155.0	327
160.0	335
165.0	342
170.0	346
175.0	349
180.0	350



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		8
5- 10		25
10- 15		41
15- 20		56
20- 25		70
25- 30		83
30- 35		93
35- 40		100
40- 45		106
45- 50		108
50- 55		109
55- 60		107
60- 65		104
65- 70		101
70- 75		98
75- 80		93
80- 85		88
85- 90		83
90- 95		84
95-100		90
100-105		94
105-110		98
110-115		100
115-120		102
120-125		104
125-130		106
130-135		106
135-140		103
140-145		98
145-150		91
150-155		81
155-160		70
160-165		56
165-170		41
170-175		25
175-180		8

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		34
10- 20		98
20- 30		153
30- 40		193
40- 50		214
50- 60		216
60- 70		205
70- 80		191
80- 90		170
90-100		174
100-110		192
110-120		201
120-130		211
130-140		209
140-150		190
150-160		151
160-170		97
170-180		33



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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	50
1	95	90	85	80	80	87	83	78	74	69	66	63	57	55	52	46	44	42	37
2	86	77	70	64	64	78	71	65	59	59	54	50	49	45	42	39	36	34	29
3	78	67	59	52	52	71	62	54	48	52	46	41	42	38	34	34	30	28	23
4	71	59	50	43	43	65	54	46	40	45	39	35	37	33	29	30	26	23	20
5	65	52	43	37	37	59	48	40	34	40	34	29	33	28	25	26	23	20	17
6	59	46	38	31	31	54	43	35	29	36	30	25	30	25	21	24	20	17	14
7	55	42	33	27	27	50	39	31	26	33	27	22	27	22	19	22	18	15	12
8	51	38	30	24	24	46	35	28	22	30	24	19	25	20	16	20	16	13	11
9	47	34	27	21	21	43	32	25	20	27	21	17	23	18	15	18	15	12	10
10	44	31	24	19	19	40	29	22	18	25	19	15	21	16	13	17	13	11	9

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	176F4E3	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	0331159372	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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