

Project Number
18.00176



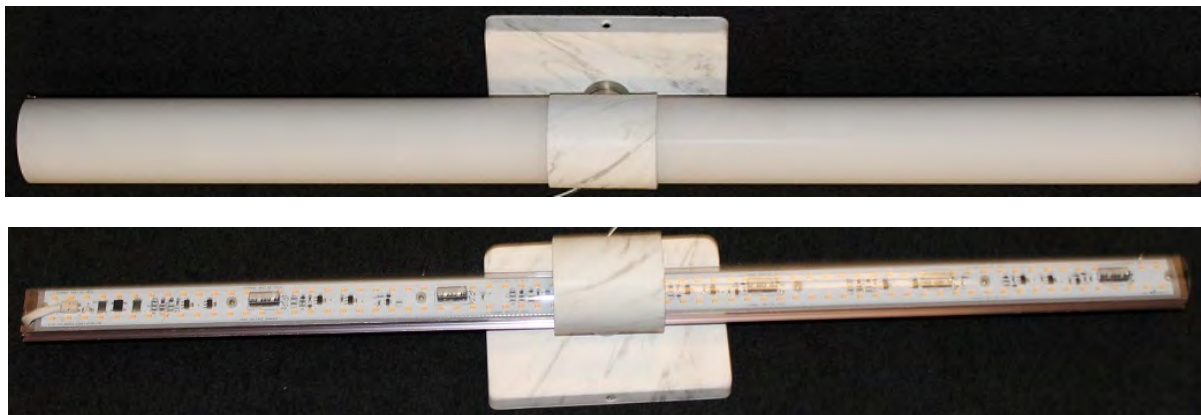
Date
2/20/2018

Lab 1

Test Sample Description

Catalog Number: P300151-150
Description: 1-Light LED Bath with 31" EVO LED Board w/ Etched White Glass Refractor

Test Methods: IES LM-41-14
IES LM-79-08 §10
Preburn Time: 0:15
Time To Stabilize: 1:48
Total Operating Time: 3:19
Input Voltage (Volts): 120.1
Input Current (Amps): 0.430
Input Wattage (Watts): 50.9
Ambient Temp (°C): 26
PF @ 120V: 0.986
THD @ 120V (%): 12.8



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Checked: 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.



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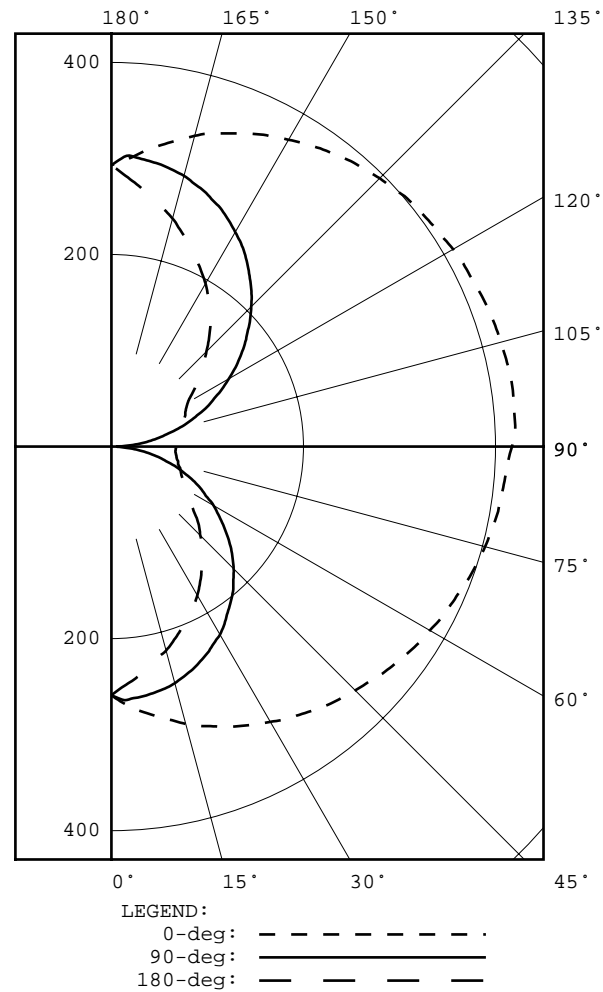
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 CATALOG NUMBER: P300151-150
 LUMINAIRE: 1-Light LED Bath with 31" EVO LED Board w/ Etched White Glass Refractor
 LAMP CAT. NO.: 3528
 LAMP: 1- AC LED Module with 140- Seoul 3000K LEDs
 MOUNTING: Wall
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	259	259	259	259	259	
5	274	268	263	247	245	25
15	299	282	255	226	220	72
25	321	290	237	200	193	113
35	341	293	211	172	163	145
45	359	292	180	139	131	166
55	376	288	142	104	101	174
65	390	285	102	71	82	174
75	403	285	59	53	72	169
85	411	285	18	42	67	164
90	420	290	5	43	69	
95	421	295	25	44	69	170
105	420	299	72	56	75	179
115	414	311	118	77	85	188
125	406	319	164	113	106	191
135	395	327	206	152	140	184
145	379	330	243	190	177	163
155	359	326	272	224	212	128
165	335	317	292	255	246	81
175	305	300	302	281	276	28
180	293	293	293	293	293	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	210	8.4
0- 40	356	14.1
0- 60	695	27.6
0- 90	1202	47.8
90-120	538	21.4
90-130	729	29.0
90-150	1076	42.8
90-180	1313	52.2
0-180	2515	100.0

TOTAL INPUT WATTS = 50.9
 EFFICACY = 49.4 Lm/W
 CIE TYPE - DIRECT-INDIRECT
 PLANE : 0-DEG 90-DEG 180-DEG
 SPACING CRITERIA : 2.0 1.3 1.0





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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 2.500 32.000
HEIGHT OF SIDE : 2.500 2.500

LUMINANCE DATA IN CANDELA/SQ METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	4917.	4573.	1794.
55	5229.	4314.	1405.
65	5684.	4004.	1195.
75	6373.	3418.	1139.
85	7348.	2113.	1198.



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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	259	259	259	259	259	259	259	259	259
5.0	274	272	268	262	263	251	247	247	245
10.0	286	283	276	265	260	244	237	234	232
15.0	299	294	282	266	255	235	226	222	220
20.0	310	304	287	264	247	224	214	209	206
25.0	321	313	290	261	237	212	200	195	193
30.0	331	322	292	255	226	199	187	182	179
35.0	341	329	293	248	211	184	172	166	163
40.0	351	336	293	241	197	168	156	150	147
45.0	359	342	292	231	180	151	139	134	131
50.0	368	347	291	221	162	134	121	117	116
55.0	376	352	288	209	142	116	104	102	101
60.0	383	358	291	197	123	97	88	88	89
65.0	390	363	285	184	102	77	71	78	82
70.0	397	367	285	173	81	59	60	72	77
75.0	403	371	285	163	59	41	53	67	72
80.0	408	376	285	155	39	29	48	64	69
85.0	411	378	285	151	18	22	42	61	67
90.0	420	386	290	154	5	21	43	63	69
95.0	421	388	295	159	25	24	44	64	69
100.0	422	389	298	166	48	32	50	66	71
105.0	420	388	299	177	72	45	56	70	75
110.0	418	388	305	192	95	65	65	75	80
115.0	414	386	311	206	118	86	77	82	85
120.0	411	385	317	221	141	107	93	91	92
125.0	406	384	319	236	164	128	113	107	106
130.0	402	381	324	251	185	149	133	125	122
135.0	395	377	327	262	206	169	152	143	140
140.0	388	373	329	274	225	189	172	162	160
145.0	379	366	330	283	243	207	190	181	177
150.0	369	360	329	290	258	225	207	199	196
155.0	359	351	326	296	272	241	224	215	212
160.0	347	342	323	300	283	255	240	231	229
165.0	335	331	317	301	292	268	255	248	246
170.0	320	318	310	301	298	279	269	263	260
175.0	305	305	300	297	302	287	281	277	276
180.0	293	293	293	293	293	293	293	293	293



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ZONAL LUMEN SUMMARY

0- 5	6.
5- 10	18.
10- 15	30.
15- 20	42.
20- 25	52.
25- 30	61.
30- 35	69.
35- 40	76.
40- 45	81.
45- 50	84.
50- 55	87.
55- 60	87.
60- 65	87.
65- 70	86.
70- 75	85.
75- 80	84.
80- 85	82.
85- 90	82.
90- 95	84.
95-100	86.
100-105	88.
105-110	91.
110-115	93.
115-120	95.
120-125	96.
125-130	96.
130-135	94.
135-140	90.
140-145	85.
145-150	78.
150-155	69.
155-160	59.
160-165	47.
165-170	34.
170-175	21.
175-180	7.



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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	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	94	89	84	79	79	86	81	77	73	67	64	61	55	52	50	43	41	40	34
2	85	76	69	62	62	77	69	63	58	58	53	48	46	43	40	36	34	31	26
3	77	66	57	51	51	70	60	53	47	50	44	40	40	36	32	31	28	26	21
4	70	58	49	42	42	63	53	45	39	44	38	33	35	31	27	28	24	21	17
5	64	51	42	36	36	58	47	39	33	39	33	28	31	27	23	25	21	18	15
6	59	46	37	31	31	53	42	34	28	35	29	24	28	23	20	22	19	16	13
7	54	41	32	26	26	49	38	30	25	31	25	21	26	21	17	20	16	14	11
8	50	37	29	23	23	46	34	27	22	29	23	18	23	19	15	18	15	12	10
9	47	34	26	20	20	42	31	24	19	26	20	16	21	17	14	17	13	11	9
10	43	31	23	18	18	40	28	22	17	24	18	15	20	15	12	16	12	10	8

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 LUMINAIRE SAMPLE.

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2/20/2018

Goniophotometer Calibration

Calibration Lamp: GE 1000W, 120V, T6, CL (FEL)

Lamp Number: ITL78966-1000-36

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: 31.75'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27071V	10/25/2018
<i>Power Source</i>	Voltage-Regulated House Power	616020002113	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4E3	10/26/2018

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