

Project Number
19.01183



HUBBELL
Lighting

Date
6/26/2019

Photometric Test Report

Lab 1
Sphere

Test Sample Description

Catalog Number: P300292-009-30
Description: 4-LT LED Vanity w/ 4-Etched - White Inside Refractors

Photometry

Test Method: IES LM-46-04
IES LM-79-08 §10
Preburn Time: 0:45
Time To Stabilize: 0:15
Total Operating Time: 2:20
Input Voltage (Volts): 120.2
Input Current (Amps): 0.339
Input Wattage (Watts): 40.4
Ambient Temp (°C): 25.8

Sphere

Test Method: IES LM-16-93
IES LM-79-08 §12.1
Preburn Time: 0:10
Time To Stabilize: 3:12
Total Operating Time: 3:22
Input Voltage (Volts): 120.0
Input Current (Amps): 0.333
Input Wattage (Watts): 39.6
Ambient Temp (°C): 24
PF @ 120V: 0.995
THD @ 120V (%): 13.1



Hubbell Lighting, Inc.

701 Millennium Boulevard
Greenville, SC 29607
www.hubbellighting.com

Checked (sphere): M. ELLMANN / 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.

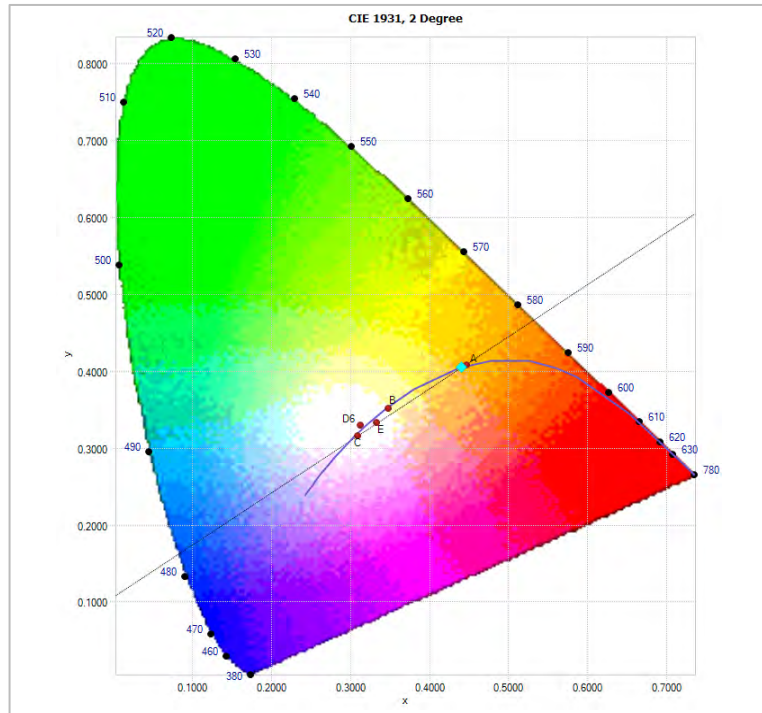


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Lamp Cat#: 2835
Lamp Desc: 60 - Bridgelux 3000K LEDs

Efficacy: 50.2 LPW S/P Ratio: 1.4 LM/LM

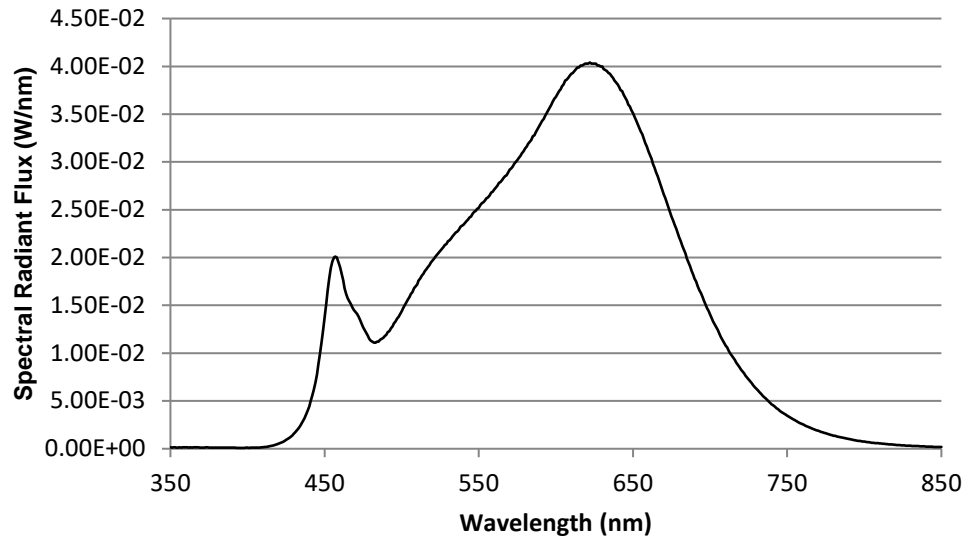
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	7.05	watts
Φ(v)	1988	lumens
Φ(v')	2830	lm'
Chrom x	0.4407	
Chrom y	0.4059	
Chrom u	0.2522	
Chrom v	0.3484	
Duv	0	
Chrom u'	0.2522	
Chrom v'	0.5227	
CCT	2951	K
Purity	54.1	%
λ (dom)	582.9	nm
FWHM	162	nm
λ (peak)	621.2	nm
λ (center)	603.4	nm
λ (centroid)	596.9	nm
SDCM	Cool White	
RA	94	
Corr. Coef.	0.000278965	
Correlation	0.0054	
R1	94.6	
R2	98.4	
R3	98.8	
R4	92.6	
R5	93.8	
R6	97.1	
R7	91.8	
R8	83.7	
R9	65.4	
R10	94.8	
R11	93.6	
R12	80.5	
R13	95.9	
R14	99.5	

Spectral Distribution of Radiant Flux





®

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LUMINAIRE: 4-LT LED Vanity w/ 4-Etched - White Inside Refractors

LAMP CAT. NO.: 2835

LAMP: 60- Bridgelux 3000K LEDs

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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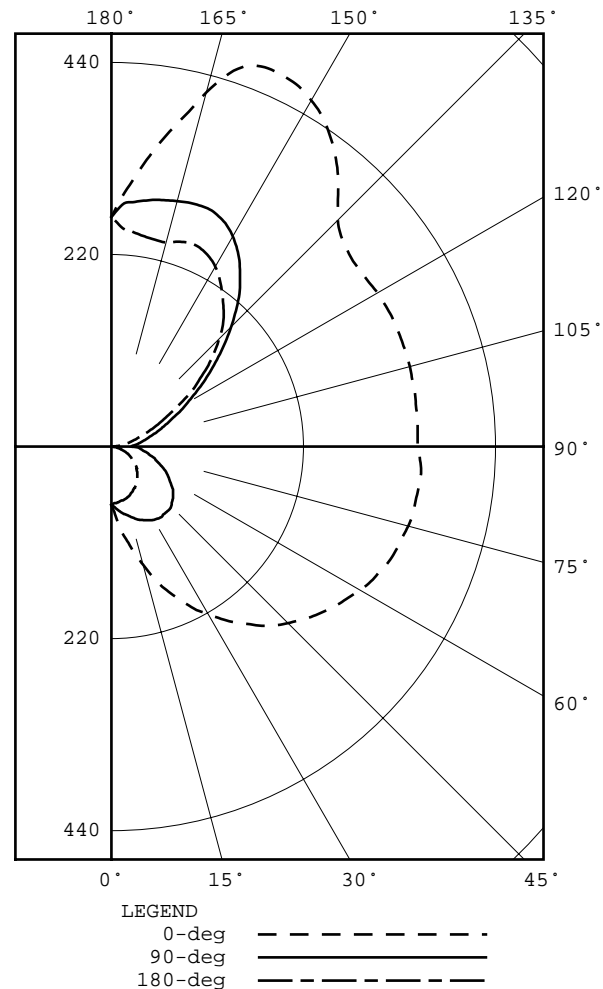
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CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	67	67	67	67	67	
5	88	81	72	65	65	7
15	140	118	83	64	62	26
25	197	156	93	61	57	51
35	246	191	99	54	50	77
45	286	218	97	45	42	102
55	316	238	86	36	32	121
65	339	253	69	25	22	133
75	352	260	51	14	11	138
85	356	259	34	5	2	135
90	351	254	23	2	0	
95	352	255	29	9	7	136
105	354	256	47	29	25	144
115	354	259	78	60	57	154
125	349	265	129	108	114	167
135	367	299	194	161	175	180
145	436	361	256	208	220	180
155	468	396	291	233	248	146
165	420	365	291	240	242	87
175	310	297	281	251	248	27
180	263	263	263	263	263	

ZONAL ZONE	LUMEN LUMENS	SUMMARY LUMENS	%FIXT
0- 30		84	4.2
0- 40		161	8.0
0- 60		384	19.1
0- 90		791	39.3
90-120		434	21.6
90-130		600	29.9
90-150		960	47.7
90-180		1220	60.7
0-180		2011	100.0

EFFICACY = 49.8 lm/W
CIE TYPE - SEMI-INDIRECT
PLANE : 0-DEG 90-DEG 180-DEG
SPACING CRITERIA : 3.82 2.03 1.20
SHIELDING ANGLES : 90 90





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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 2.250 28.000
HEIGHT OF SIDE : 5.000 5.000

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE AVERAGE AVERAGE
IN DEG 0-DEG 90-DEG 180-DEG
45 3088. 2864. 454.
55 3248. 2939. 329.
65 3423. 2905. 222.
75 3600. 2909. 113.
85 3807. 3156. 21.



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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	5.0	10.0	15.0	20.0	22.5	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0
0.0	67	67	67	67	67	67	67	67	67	67	67	67	67	67
2.5	75	75	75	75	74	74	73	74	73	73	72	72	71	71
5.0	88	88	88	87	86	86	85	84	84	83	81	80	79	77
7.5	101	101	100	99	98	98	97	95	93	92	90	89	86	85
10.0	112	113	112	111	110	109	108	106	104	102	99	97	94	92
12.5	127	126	126	124	122	121	120	118	115	112	109	106	102	99
15.0	140	139	138	137	134	134	131	129	125	122	118	114	110	106
17.5	156	155	154	152	149	148	145	142	137	133	127	123	118	113
20.0	171	171	169	166	163	161	159	154	149	144	138	132	126	120
22.5	184	185	182	180	175	174	171	166	160	154	147	141	134	127
25.0	197	197	195	192	188	186	183	178	171	164	156	149	142	134
27.5	211	210	207	204	200	197	195	188	182	174	166	158	150	141
30.0	221	221	218	216	211	208	205	198	190	183	174	166	157	148
32.5	234	233	231	227	222	219	216	209	200	192	183	174	164	154
35.0	246	245	242	238	233	230	226	218	209	201	191	181	171	160
37.5	256	256	253	250	243	240	236	227	218	209	198	188	176	165
40.0	268	266	264	259	253	250	246	237	227	217	206	195	183	171
42.5	278	276	273	269	263	259	254	245	234	224	212	200	188	176
45.0	286	286	282	278	271	268	262	253	242	231	218	206	193	180
47.5	294	293	290	285	279	274	270	260	249	237	224	211	198	184
50.0	302	301	298	293	285	281	276	266	255	242	229	216	202	188
52.5	309	308	305	300	293	289	283	273	260	248	234	221	206	191
55.0	316	315	312	306	298	294	289	278	266	252	238	224	209	194
57.5	322	322	318	312	305	300	294	283	271	257	243	227	213	197
60.0	329	328	325	318	310	306	300	289	275	261	246	231	215	199
62.5	335	334	329	324	315	310	305	293	280	265	250	234	218	201
65.0	339	339	334	328	319	315	309	297	283	269	253	236	220	203
67.5	344	343	339	332	324	319	313	300	286	271	255	238	222	204
70.0	347	346	342	335	326	322	316	302	289	273	257	240	223	205
72.5	349	349	345	338	329	324	318	305	290	275	258	240	223	205
75.0	352	352	347	340	331	326	320	307	292	277	260	242	225	206
77.5	354	352	348	341	333	327	321	308	293	277	260	242	224	205
80.0	354	354	349	343	333	327	321	308	293	277	260	242	224	204
82.5	355	354	349	343	333	328	322	308	293	277	259	241	223	204
85.0	356	354	350	343	333	328	322	308	293	276	259	241	222	203
87.5	354	354	349	342	333	327	321	307	292	276	258	240	221	202
90.0	351	350	346	339	329	323	317	303	288	272	254	236	218	199
92.5	351	350	345	338	329	323	317	303	288	272	254	237	218	199
95.0	352	350	346	339	329	324	317	303	289	272	255	237	219	200
97.5	352	351	346	339	330	324	318	304	289	273	255	238	219	201
100.0	353	351	347	340	330	324	318	304	289	273	255	238	220	201
102.5	353	352	347	340	330	324	318	304	289	273	256	239	221	202
105.0	354	352	348	340	331	325	318	305	290	273	256	239	221	203
107.5	354	353	348	341	331	325	319	305	290	274	257	239	222	203
110.0	354	353	348	342	331	325	319	305	290	274	257	239	222	205
112.5	354	353	349	342	332	326	320	306	291	274	258	241	224	206
115.0	354	353	349	341	332	326	319	306	291	275	259	242	225	208
117.5	353	352	348	341	331	325	319	306	291	276	259	243	227	210
120.0	352	350	346	339	330	324	318	306	292	276	260	245	229	214
122.5	350	349	345	338	329	324	318	305	291	277	262	247	232	217
125.0	349	348	344	338	329	324	318	306	293	279	265	251	237	223
127.5	349	348	344	338	331	325	320	308	297	283	270	256	244	231
130.0	352	351	347	341	334	329	324	313	302	289	277	265	251	239
132.5	357	357	353	347	340	336	331	321	310	298	286	274	263	250
135.0	367	367	364	359	351	347	343	333	323	311	299	287	275	263
137.5	384	383	379	374	368	364	360	348	338	326	315	303	290	277
140.0	404	403	399	394	387	382	378	368	357	344	332	318	306	293
142.5	421	421	418	413	405	401	396	385	373	361	347	334	321	308
145.0	436	436	432	426	420	415	411	400	387	374	361	348	334	321
147.5	449	449	445	439	431	427	422	411	399	386	372	360	347	333

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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	5.0	10.0	15.0	20.0	22.5	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0
150.0	458	458	455	449	442	438	432	421	409	396	383	371	358	344
152.5	465	465	461	455	449	444	439	428	416	403	391	380	366	352
155.0	468	468	464	459	452	447	442	431	420	408	396	384	371	358
157.5	469	468	464	459	452	447	442	432	421	410	398	387	373	360
160.0	464	463	460	454	447	443	437	428	418	406	394	383	370	357
162.5	448	449	445	440	434	429	425	416	405	394	383	373	361	348
165.0	420	419	416	411	406	403	399	391	384	374	365	357	347	336
167.5	388	387	386	383	379	376	372	366	362	354	347	341	334	325
170.0	362	362	360	357	355	351	350	346	340	335	330	326	320	313
172.5	336	336	334	333	330	328	327	324	320	316	312	310	306	301
175.0	310	311	310	309	307	306	305	302	301	298	297	294	292	288
177.5	287	285	285	285	285	283	283	282	280	279	279	279	277	275
180.0	263	263	263	263	263	263	263	263	263	263	263	263	263	263



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LATERAL ANGLE

	65.0	67.5	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	112.5	115.0	120.0
0.0	67	67	67	67	67	67	67	67	67	67	67	67	67	67
2.5	70	70	70	69	69	69	69	69	68	67	67	66	66	66
5.0	76	76	75	74	73	72	72	71	70	68	67	67	67	66
7.5	83	82	80	78	77	76	75	74	71	69	68	68	67	67
10.0	89	87	86	83	81	79	78	75	73	70	68	68	67	66
12.5	95	93	91	88	85	83	80	78	74	72	70	69	68	67
15.0	102	99	97	92	90	86	83	80	76	73	70	69	69	67
17.5	108	105	103	98	94	90	86	82	78	74	71	70	69	67
20.0	114	111	108	102	98	93	89	84	79	75	72	71	69	67
22.5	120	117	113	107	101	96	91	86	81	76	72	71	69	67
25.0	126	122	119	111	105	99	93	87	81	77	72	71	69	66
27.5	132	128	124	116	109	102	95	89	82	77	72	71	69	66
30.0	138	134	129	120	112	104	97	90	83	77	72	70	68	65
32.5	144	139	134	124	115	106	98	90	83	76	71	69	67	64
35.0	149	144	138	127	117	108	99	90	82	75	70	67	65	62
37.5	153	148	142	130	119	108	98	89	81	74	68	66	64	60
40.0	159	152	146	133	121	110	98	89	80	73	67	64	62	59
42.5	163	156	149	135	122	109	98	87	78	71	65	62	60	57
45.0	166	160	152	137	123	109	97	86	76	69	62	60	58	55
47.5	170	163	154	138	122	108	94	83	73	66	60	57	55	52
50.0	173	166	157	140	123	107	92	80	71	63	57	55	53	50
52.5	176	168	159	141	123	105	89	77	67	60	54	52	50	47
55.0	178	170	160	141	122	102	86	73	64	57	51	49	47	44
57.5	180	171	161	141	120	100	81	69	60	53	47	46	43	41
60.0	182	173	163	141	119	97	77	65	56	49	44	42	41	39
62.5	184	174	163	141	118	94	73	61	52	46	41	39	38	36
65.0	185	175	163	140	116	90	69	56	48	42	38	36	34	33
67.5	186	176	163	140	114	87	64	52	44	39	35	33	32	30
70.0	186	176	163	138	112	84	59	47	40	35	31	29	28	27
72.5	186	175	163	137	109	80	54	43	36	31	27	26	25	24
75.0	186	175	162	136	107	77	51	39	33	28	24	23	22	22
77.5	185	174	161	134	104	73	45	34	28	24	21	19	19	18
80.0	184	173	160	132	102	70	42	31	25	21	18	17	16	15
82.5	183	171	158	130	99	66	37	26	21	18	15	14	13	12
85.0	182	170	157	128	97	64	34	23	19	15	12	11	11	10
87.5	181	169	155	126	95	61	31	20	16	13	10	9	9	8
90.0	179	166	152	123	92	58	23	18	15	12	9	8	8	7
92.5	179	167	153	124	94	60	25	20	17	14	11	11	10	10
95.0	180	168	154	126	96	63	29	24	20	18	15	15	14	14
97.5	181	169	155	128	98	66	33	28	24	22	19	19	19	18
100.0	182	170	156	129	100	68	37	32	28	26	23	23	23	23
102.5	183	171	158	131	103	72	42	37	34	31	29	29	28	28
105.0	184	172	159	134	106	76	47	42	39	37	35	34	34	34
107.5	185	174	161	136	110	81	54	49	45	44	42	41	41	41
110.0	186	176	163	139	113	86	61	56	53	51	49	49	49	48
112.5	188	178	167	143	118	92	69	64	60	59	58	57	57	57
115.0	191	181	170	147	124	99	78	73	70	68	66	67	66	66
117.5	194	185	174	153	131	109	90	84	81	80	78	77	77	77
120.0	198	189	179	159	138	118	101	95	92	90	90	90	88	88
122.5	202	194	185	166	148	129	114	108	104	104	102	103	101	100
125.0	209	202	192	176	158	142	129	123	119	118	117	117	116	113
127.5	217	209	202	186	170	156	144	137	133	132	131	131	130	127
130.0	227	220	212	197	184	171	160	153	148	146	145	146	144	142
132.5	238	231	224	211	197	187	177	170	163	162	159	159	158	155
135.0	251	244	238	225	213	204	194	186	180	176	175	175	173	169
137.5	266	259	252	240	230	219	211	202	195	191	188	187	186	183
140.0	280	274	268	256	245	236	228	218	209	205	201	200	199	195
142.5	295	289	283	271	260	252	242	231	223	217	213	211	210	205
145.0	309	302	296	284	274	265	256	244	234	228	222	220	218	214
147.5	320	314	308	297	286	277	268	255	245	237	230	228	226	222

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LATERAL ANGLE

	65.0	67.5	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	112.5	115.0	120.0
150.0	332	324	319	307	296	288	278	264	253	245	238	236	233	229
152.5	339	332	326	315	304	296	286	271	259	250	243	241	238	234
155.0	344	337	330	319	309	301	291	276	263	255	247	244	242	237
157.5	346	339	333	321	311	304	294	279	266	257	251	248	246	241
160.0	343	336	330	319	309	304	294	279	267	259	253	250	248	244
162.5	336	329	324	314	306	302	293	280	268	261	254	252	250	246
165.0	326	321	315	308	301	298	291	279	269	261	255	253	251	247
167.5	315	311	308	302	296	295	289	279	269	263	258	256	254	250
170.0	306	302	300	295	292	292	287	278	269	263	259	257	256	252
172.5	295	293	290	287	286	288	284	276	268	263	260	258	257	254
175.0	284	282	281	280	279	283	281	274	267	264	260	259	258	256
177.5	273	272	272	272	273	278	277	272	266	264	262	261	260	258
180.0	263	263	263	263	263	263	263	263	263	263	263	263	263	263



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	125.0	130.0	135.0	140.0	145.0	150.0	155.0	157.5	160.0	165.0	170.0	175.0	180.0
0.0	67	67	67	67	67	67	67	67	67	67	67	67	67
2.5	66	66	65	65	65	65	65	65	65	65	65	65	65
5.0	66	65	65	65	65	65	65	65	65	65	65	65	65
7.5	66	65	65	65	65	64	65	65	65	65	64	64	64
10.0	65	65	64	64	64	64	64	64	64	64	63	63	63
12.5	66	65	64	64	63	63	64	63	64	63	63	63	63
15.0	66	64	64	63	63	63	63	63	63	62	62	62	62
17.5	66	65	64	63	63	63	63	62	62	62	62	61	61
20.0	65	64	63	62	61	62	61	61	61	60	60	60	60
22.5	65	63	62	61	60	60	60	60	60	59	59	58	58
25.0	64	62	61	60	59	59	59	58	58	58	57	57	57
27.5	63	61	60	58	58	57	57	57	57	56	55	55	55
30.0	62	60	58	57	57	56	56	56	55	54	54	54	54
32.5	61	58	56	55	54	54	53	53	53	52	52	52	52
35.0	59	56	54	53	52	51	51	51	51	50	50	50	50
37.5	57	54	52	50	49	48	48	48	48	48	48	48	48
40.0	56	52	50	48	47	47	47	47	47	46	46	46	46
42.5	53	50	47	46	44	44	44	44	44	44	44	44	44
45.0	51	48	45	43	42	42	42	42	42	42	42	42	42
47.5	49	45	42	41	40	39	40	40	40	40	40	39	39
50.0	47	43	41	39	38	37	38	38	38	38	38	37	38
52.5	44	41	38	36	35	35	36	35	36	35	35	35	35
55.0	42	38	36	34	33	33	33	33	33	33	32	32	32
57.5	39	36	33	31	30	30	30	30	30	30	30	29	29
60.0	37	33	31	29	28	28	27	27	27	27	27	27	27
62.5	34	31	28	26	25	25	25	24	25	24	24	24	24
65.0	31	28	25	24	22	22	22	22	22	21	21	21	22
67.5	29	26	23	21	20	19	19	19	19	19	19	19	19
70.0	25	22	20	18	17	16	16	16	16	16	16	16	16
72.5	23	19	17	15	14	13	13	13	13	13	13	13	13
75.0	20	17	14	13	11	11	11	11	11	11	11	11	11
77.5	17	14	11	9	8	8	8	8	8	8	8	8	8
80.0	15	12	9	7	6	6	6	6	6	5	6	5	6
82.5	11	8	6	5	3	3	3	3	3	3	3	3	3
85.0	9	7	5	3	2	2	1	1	2	1	1	1	2
87.5	8	5	3	2	1	1	0	0	0	0	0	0	0
90.0	7	4	2	1	0	0	0	0	0	0	0	0	0
92.5	10	7	5	4	3	2	3	3	3	3	3	3	3
95.0	14	11	9	8	7	6	7	7	7	7	6	6	7
97.5	18	15	13	12	11	11	11	11	11	11	11	11	11
100.0	22	20	18	16	15	14	15	15	15	15	15	15	15
102.5	28	25	23	21	20	20	20	20	20	20	20	20	20
105.0	34	31	29	27	26	26	25	25	25	25	25	25	25
107.5	41	38	35	33	32	31	31	31	31	31	31	31	31
110.0	48	45	43	40	39	38	38	38	38	38	38	38	38
112.5	57	53	51	49	47	47	46	47	46	46	47	47	47
115.0	66	62	60	58	57	56	55	55	56	56	56	56	57
117.5	77	74	71	68	67	67	67	68	68	68	68	68	68
120.0	87	84	81	80	79	79	79	80	80	81	81	81	81
122.5	99	97	94	93	93	93	94	95	95	95	97	97	97
125.0	112	110	108	107	107	108	109	109	110	111	112	112	114
127.5	125	121	121	121	121	122	123	125	125	127	128	128	128
130.0	138	135	134	135	136	137	139	140	141	142	144	144	145
132.5	151	149	148	149	149	151	153	154	155	157	158	158	160
135.0	165	162	161	162	164	166	168	169	170	172	173	175	175
137.5	178	176	175	176	177	179	182	183	183	185	187	188	189
140.0	190	188	188	189	190	192	194	195	196	197	198	199	200
142.5	201	198	199	200	203	205	206	207	207	208	209	209	210
145.0	210	207	208	210	213	215	217	218	218	218	219	219	220
147.5	218	215	216	218	221	223	226	226	227	228	229	229	230

THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.



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CANDELA DISTRIBUTION
LATERAL ANGLE

	125.0	130.0	135.0	140.0	145.0	150.0	155.0	157.5	160.0	165.0	170.0	175.0	180.0
150.0	225	222	223	225	228	231	233	235	235	237	237	238	238
152.5	230	228	229	230	233	236	239	241	241	243	244	244	244
155.0	235	233	233	234	236	239	242	244	245	246	247	247	248
157.5	238	236	237	237	238	241	244	245	246	248	249	250	250
160.0	241	239	239	239	240	242	244	245	246	247	248	249	249
162.5	243	241	239	240	240	241	243	244	244	245	246	246	246
165.0	244	242	240	240	239	240	240	241	241	242	242	242	242
167.5	247	245	243	242	242	241	242	242	242	242	242	243	242
170.0	249	248	246	245	244	243	244	244	244	244	244	243	244
172.5	251	250	248	247	246	246	246	246	246	246	246	246	245
175.0	254	252	251	250	249	249	249	249	249	249	249	248	248
177.5	257	256	254	254	253	253	253	253	253	253	253	252	253
180.0	263	263	263	263	263	263	263	263	263	263	263	263	263



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		2
5- 10		6
10- 15		10
15- 20		16
20- 25		22
25- 30		29
30- 35		35
35- 40		42
40- 45		48
45- 50		54
50- 55		59
55- 60		62
60- 65		66
65- 70		68
70- 75		69
75- 80		69
80- 85		68
85- 90		67
90- 95		67
95-100		69
100-105		71
105-110		73
110-115		75
115-120		78
120-125		82
125-130		85
130-135		88
135-140		91
140-145		92
145-150		88
150-155		79
155-160		67
160-165		52
165-170		35
170-175		20
175-180		6

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		7
0- 20		33
0- 30		84
0- 40		161
0- 50		263
0- 60		384
0- 70		518
0- 80		655
0- 90		791
0-100		927
0-110		1071
0-120		1225
0-130		1391
0-140		1571
0-150		1751
0-160		1897
0-170		1984
0-180		2011



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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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	92	86	81	77	83	78	74	70	63	59	56	49	46	44	36	34	32	26
2	82	73	66	60	74	66	60	54	53	48	44	41	37	34	29	27	25	19
3	74	63	55	48	67	57	50	44	46	40	35	35	31	27	25	22	19	15
4	67	55	46	40	60	50	42	36	40	34	29	30	26	22	22	18	16	12
5	61	49	40	33	55	44	36	30	35	29	24	27	22	19	19	16	13	9
6	56	43	34	28	50	39	31	26	31	25	21	24	19	16	17	14	11	8
7	52	39	30	24	46	35	27	22	28	22	18	21	17	14	15	12	10	7
8	48	35	27	21	43	32	24	19	25	20	15	19	15	12	14	11	8	6
9	44	32	24	18	40	29	22	17	23	17	14	18	13	10	13	10	7	5
10	41	29	21	16	37	26	19	15	21	16	12	16	12	9	12	9	6	4

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.

Project Number
19.01183



HUBBELL
Lighting

Date
6/26/2019

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: 07/10/17

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	10/31/2019
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4E3	10/31/2019

Sphere Calibration

Calibration Lamp: EIKO 28V75W/E10

Lamp Number: SCL-1400-K136

Calibration Current: 2.679 Amps

Total Luminous Flux: 1429 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	Calibration Checked Daily
<i>Thermometer</i>	National Instruments / USB TC01	1912751	10/31/2019
<i>Power Analyzer</i>	Yokogawa / WT332	C2QA27075V	10/31/2019
<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>	GW Instek / PSU 150-10	GER221028	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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