

Project Number  
18.00104



**HUBBELL**  
Lighting

Date  
2/6/2018

LAB #1  
Sphere

**Test Sample Description**

Catalog Number: P710051-009-30  
Description: 1-Lt. LED Wall Sconce w/ Glass and Polycarbonate Lens

**Photometry**

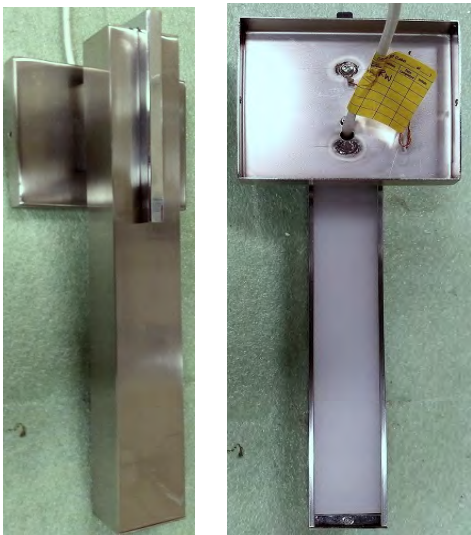
Test Method: IES LM-41-14  
IES LM-79-08 §10  
Preburn Time: 0:10  
Time To Stabilize: 1:15  
Total Operating Time: 2:15

Input Voltage (Volts): 119.9  
Input Current (Amps): 0.138  
Input Wattage (Watts): 16.4  
Ambient Temp (°C): 26

**Sphere**

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

Input Voltage (Volts): 120.0  
Input Current (Amps): 0.138  
Input Wattage (Watts): 16.4  
Ambient Temp (°C): 24  
PF @ 120V: 0.983  
THD @ 120V (%): 15.0



**Hubbell Lighting, Inc.**

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

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



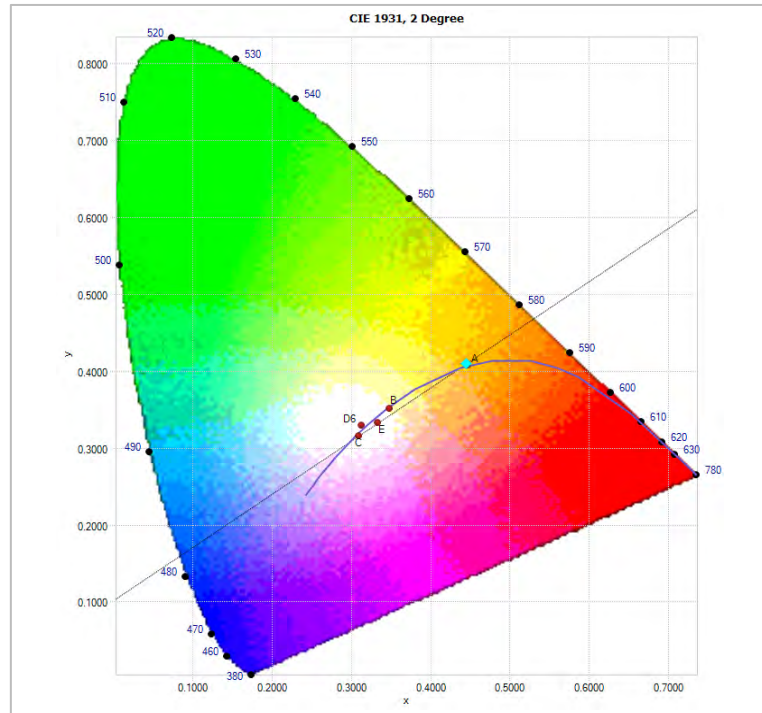
This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



Lamp Cat#: EVAC120C-3528SE-L42-14S3P-145  
 Lamp Desc: 42 - Seoul 3000K LEDs

Efficacy: 37.9 LPW      S/P Ratio: 1.4 LM/LM

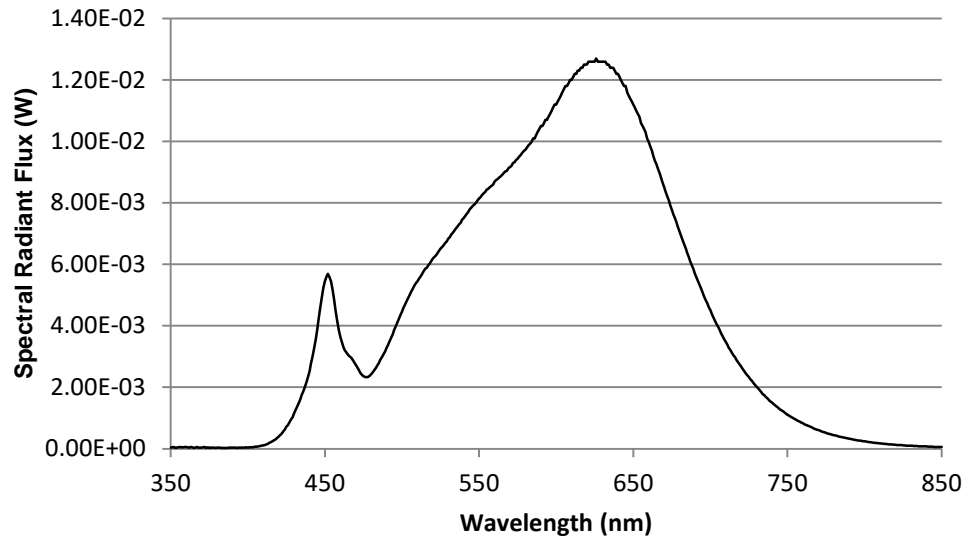
**Chromaticity Diagram**



**Spectral Results**

Name	Value	Unit
$\Phi$	2.20	watts
$\Phi(v)$	621	lumens
$\Phi(v')$	845	lm'
Chrom x	0.4445	
Chrom y	0.41	
Chrom u	0.2529	
Chrom v	0.3499	
Duv	0.001	
Chrom u'	0.2529	
Chrom v'	0.5248	
CCT	2923	K
Purity	56.5	%
$\lambda$ (dom)	582.7	nm
FWHM	162.9	nm
$\lambda$ (peak)	625.3	nm
$\lambda$ (center)	603.9	nm
$\lambda$ (centroid)	598.3	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.001365112	
Correlation	0.0054	
R1	93.1	
R2	95.1	
R3	95.6	
R4	93.8	
R5	92.3	
R6	93.7	
R7	94.4	
R8	85.4	
R9	65.3	
R10	87.4	
R11	94.1	
R12	80.7	
R13	93.4	
R14	96.7	

**Spectral Distribution of Radiant Flux**





®

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**PREPARED FOR:** PROGRESS

**CATALOG NUMBER:** P710051-009-30

**LUMINAIRE:** 1-Lt. LED Wall Sconce w/ Glass and Polycarbonate Lens

**LAMP CAT. NO.:** EVAC120C-3528SE-L42-14S3P-145

**LAMP:** 42- Seoul 3000K LEDs

**MOUNTING:** Wall

**NOTE:** DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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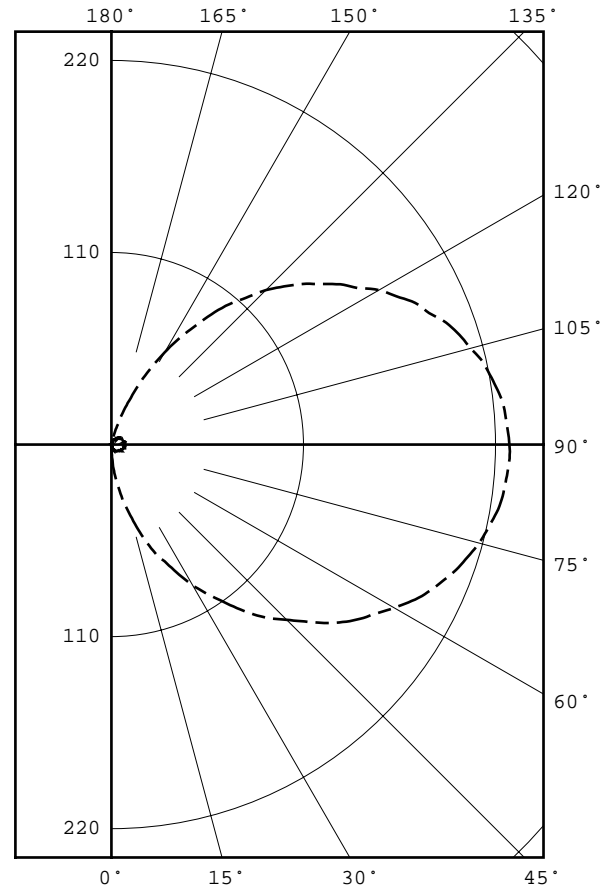
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CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	1	1	1	1	1	
5	1	1	2	9	14	1
15	0	0	1	28	42	4
25	0	0	3	48	75	11
35	0	0	4	69	109	20
45	0	0	5	89	142	32
55	0	0	6	106	174	45
65	0	0	7	118	200	56
75	1	0	8	128	218	65
85	0	0	7	131	227	69
90	0	0	8	132	228	
95	0	1	8	132	226	69
105	0	0	7	124	213	63
115	0	0	7	111	192	53
125	0	0	6	93	160	40
135	0	1	6	73	125	27
145	0	0	4	49	82	15
155	0	0	3	26	40	6
165	1	0	2	5	7	1
175	0	0	0	0	0	0
180	0	0	0	0	0	0

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	15	2.6
0- 40	35	6.1
0- 60	112	19.5
0- 90	302	52.4
90-120	185	32.1
90-130	225	39.1
90-150	268	46.5
90-180	275	47.6
0-180	576	100.0

EFFICACY = 35.1 lm/W  
CIE TYPE - GENERAL DIFFUSE  
PLANE : 0-DEG 90-DEG  
LUMINOUS LENGTH : 1.500 1.500  
HEIGHT OF SIDE : 11.000 11.000

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	0.	585.	16601.
55	0.	628.	18215.
65	0.	682.	19491.
75	94.	751.	20454.



LEGEND  
0-deg - - - - -  
90-deg - - - - -  
180-deg - - - - -



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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	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2.5	1	0	0	1	0	1	1	1	1	1	1	1	1	1
5.0	1	1	1	1	1	1	1	1	1	1	1	2	2	1
7.5	0	0	0	0	1	0	0	0	1	0	1	1	1	1
10.0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
12.5	0	0	0	0	0	0	0	0	1	0	1	1	1	1
15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17.5	0	0	0	0	0	0	0	0	1	0	0	0	1	1
20.0	0	0	0	1	0	1	1	1	1	1	1	1	1	1
22.5	1	0	1	0	1	1	1	0	1	1	1	1	1	1
25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.0	0	0	0	1	0	0	0	0	1	0	0	0	1	0
42.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52.5	0	0	0	0	0	0	0	0	1	0	0	0	1	0
55.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75.0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
77.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
97.5	0	0	0	0	0	0	0	0	0	0	1	0	0	1
100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102.5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117.5	0	0	0	0	0	0	0	0	0	1	0	1	0	0
120.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130.0	1	0	1	0	0	1	0	0	1	1	1	0	1	1
132.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135.0	0	0	1	0	1	1	1	1	1	1	1	1	1	1
137.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140.0	1	1	0	0	1	0	1	1	1	0	1	1	1	1
142.5	1	1	0	0	1	0	1	1	1	1	1	1	1	1
145.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0	0	1	0	0	1	1	1



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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	0	0	0	0	0	0	0	0	0	0	0	0	1	1
152.5	1	0	1	0	1	1	1	1	1	1	1	1	2	2
155.0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
157.5	0	0	0	0	0	0	0	0	1	0	1	1	1	1
160.0	0	1	1	1	1	1	1	1	1	1	1	2	2	2
162.5	0	0	0	0	0	1	1	0	0	1	1	1	1	1
165.0	1	0	0	0	0	0	1	1	0	0	0	0	1	1
167.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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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	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2.5	1	1	1	1	1	1	1	1	1	1	1	2	2	2
5.0	2	2	2	2	2	2	2	2	3	3	4	5	5	6
7.5	1	1	1	1	1	1	2	2	3	4	6	6	7	9
10.0	1	1	1	1	1	1	1	2	4	5	7	8	10	12
12.5	1	1	1	1	1	1	2	3	5	7	10	11	13	15
15.0	0	0	0	0	1	1	1	3	5	8	11	13	14	18
17.5	1	1	1	0	1	1	2	4	7	10	13	15	18	22
20.0	1	1	1	1	1	2	3	6	8	12	16	18	21	25
22.5	1	1	1	1	2	2	4	6	9	13	18	21	23	29
25.0	0	0	0	0	0	1	3	6	9	13	19	22	25	31
27.5	0	0	0	0	0	1	3	7	10	15	21	24	28	35
30.0	0	0	0	0	0	0	4	7	11	16	23	27	30	37
32.5	0	0	0	0	0	1	4	8	12	17	25	28	33	40
35.0	0	0	0	0	0	1	4	8	12	18	26	30	35	43
37.5	0	0	0	0	0	1	5	9	13	20	29	33	38	47
40.0	1	1	0	1	1	1	5	10	15	22	31	36	41	50
42.5	0	0	0	0	0	1	5	10	15	22	32	37	42	53
45.0	0	0	0	0	0	1	5	10	16	24	34	39	45	55
47.5	0	0	0	0	0	1	5	11	16	25	35	41	46	58
50.0	0	0	0	0	0	1	6	11	17	26	37	43	49	61
52.5	0	0	0	1	0	1	6	12	18	27	39	45	51	64
55.0	0	0	0	0	0	1	6	12	18	28	40	46	53	66
57.5	0	0	0	0	0	1	7	13	19	29	41	48	55	68
60.0	0	0	0	0	0	1	6	12	19	29	42	48	55	69
62.5	0	0	0	0	0	1	6	13	19	29	43	49	57	71
65.0	0	0	0	0	0	1	7	13	20	30	44	51	58	73
67.5	0	0	0	0	0	1	7	13	20	31	45	52	60	75
70.0	0	0	0	0	0	1	7	14	21	32	46	53	61	77
72.5	0	0	0	0	0	1	7	14	21	33	47	54	62	78
75.0	0	0	0	0	0	2	8	15	22	34	48	56	64	80
77.5	0	0	0	0	0	2	8	14	22	34	49	56	64	80
80.0	0	0	0	0	0	1	8	14	22	34	49	56	65	81
82.5	0	0	0	0	0	1	7	14	22	34	49	56	65	81
85.0	0	0	0	0	0	1	7	14	22	33	49	56	65	81
87.5	0	0	0	0	0	1	8	15	22	34	49	57	65	82
90.0	0	0	0	0	0	1	8	15	22	34	49	57	65	82
92.5	0	0	0	0	0	2	8	15	22	34	49	57	65	82
95.0	0	0	0	0	0	2	8	15	23	34	49	57	65	81
97.5	1	1	0	0	0	2	8	15	22	34	49	57	65	81
100.0	0	0	0	0	0	1	7	14	21	33	47	55	63	79
102.5	0	0	0	0	0	2	8	14	22	33	48	55	63	79
105.0	0	0	0	0	0	1	7	14	21	32	46	54	61	77
107.5	0	0	0	0	0	1	7	13	20	31	45	52	60	75
110.0	0	0	0	0	0	1	7	13	20	31	44	51	58	73
112.5	0	0	0	0	0	1	7	13	19	30	43	50	56	71
115.0	0	0	0	0	0	1	7	12	18	28	41	47	54	68
117.5	0	0	0	0	0	1	7	12	18	28	40	46	53	66
120.0	0	0	0	0	0	1	7	12	17	26	38	44	50	63
122.5	0	0	0	0	0	1	6	11	16	24	36	42	47	60
125.0	0	0	0	0	0	1	6	11	15	23	34	40	45	57
127.5	0	0	0	0	0	1	6	10	14	22	33	37	43	54
130.0	1	1	1	0	1	2	6	10	14	21	31	36	40	51
132.5	0	0	0	0	0	1	5	9	12	19	28	32	37	47
135.0	1	1	1	0	1	2	6	9	12	18	27	31	35	44
137.5	0	0	0	0	0	1	5	7	10	16	24	27	31	40
140.0	1	1	1	1	1	2	5	7	10	15	23	26	29	37
142.5	1	1	1	1	1	2	5	7	9	13	20	23	26	33
145.0	0	0	0	0	0	1	4	5	7	11	17	19	22	28
147.5	1	1	0	0	1	1	4	5	6	10	15	17	19	25



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CANDELA DISTRIBUTION  
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	0	0	0	0	0	1	3	4	5	8	12	14	16	21
152.5	1	1	1	1	1	2	3	4	4	7	11	12	14	18
155.0	1	1	1	0	0	0	3	3	3	5	8	9	10	13
157.5	1	1	0	1	0	1	2	2	2	3	6	7	7	10
160.0	2	2	1	1	2	1	3	2	2	3	5	5	5	7
162.5	1	1	1	1	1	1	2	2	1	2	3	3	3	4
165.0	1	1	0	1	1	1	2	1	1	1	2	2	1	2
167.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





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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	1	1	1	1	1	1	1	1	1	1	1	1	1
2.5	3	3	4	4	5	5	5	6	5	6	6	6	6
5.0	7	9	9	10	11	12	13	13	13	13	14	14	14
7.5	11	12	14	15	16	18	18	19	19	20	20	21	20
10.0	14	16	19	20	21	23	24	25	25	27	27	27	27
12.5	18	21	23	26	28	30	31	32	32	34	34	35	35
15.0	22	24	28	30	33	35	37	38	39	41	41	43	42
17.5	26	30	34	37	40	43	45	46	47	49	50	51	51
20.0	30	35	39	43	47	50	53	54	55	58	59	60	60
22.5	34	39	44	49	53	57	60	62	63	65	67	68	69
25.0	37	43	48	54	58	63	66	68	69	72	74	75	75
27.5	41	47	54	60	65	70	74	76	77	81	82	84	84
30.0	45	52	59	65	71	77	81	83	85	89	91	92	93
32.5	49	56	64	71	78	83	89	91	93	97	99	101	101
35.0	52	60	69	76	83	90	96	98	100	104	107	109	109
37.5	56	65	74	82	90	97	103	106	108	112	116	118	118
40.0	60	70	80	89	97	104	111	114	116	121	124	127	127
42.5	63	74	84	93	102	110	117	120	123	128	131	134	135
45.0	67	78	89	99	108	116	124	127	130	136	139	142	142
47.5	70	82	93	104	113	122	130	134	137	143	147	150	150
50.0	74	86	98	109	119	129	138	141	144	151	155	158	159
52.5	77	89	102	114	125	135	144	148	151	158	163	166	167
55.0	79	92	106	118	129	140	149	154	158	165	169	173	174
57.5	82	96	109	122	134	145	155	159	164	171	176	180	180
60.0	84	98	112	125	138	150	160	165	169	176	182	186	187
62.5	86	101	115	129	142	154	165	170	174	182	188	193	194
65.0	88	103	118	132	147	159	170	175	180	189	194	198	200
67.5	90	106	121	136	150	163	174	180	185	194	200	204	205
70.0	92	108	124	139	153	167	179	184	189	198	204	209	210
72.5	94	110	126	141	156	170	182	189	193	203	209	213	214
75.0	96	112	128	144	159	173	186	192	197	206	213	217	218
77.5	97	113	130	146	161	175	188	195	199	209	216	220	221
80.0	97	114	131	147	162	177	190	196	201	212	218	223	224
82.5	98	114	131	148	164	178	191	198	204	213	220	225	226
85.0	98	114	131	148	164	179	192	199	205	214	221	226	227
87.5	99	115	133	149	165	179	193	200	205	215	222	226	228
90.0	99	116	132	149	165	179	194	200	205	215	222	226	228
92.5	98	115	132	149	164	179	193	199	205	214	221	226	227
95.0	98	115	132	148	164	178	192	198	204	213	220	225	226
97.5	97	114	130	147	162	176	190	196	202	211	218	222	224
100.0	95	112	128	145	160	174	188	194	199	209	216	220	221
102.5	95	111	127	143	158	172	185	191	196	205	212	216	218
105.0	92	108	124	140	155	169	181	187	193	202	208	212	213
107.5	90	106	121	137	152	165	177	183	189	198	204	208	209
110.0	88	103	119	134	148	161	173	179	184	192	199	203	204
112.5	85	100	115	130	144	157	169	174	179	187	193	197	197
115.0	82	97	111	125	139	152	163	168	173	181	187	190	192
117.5	80	94	108	122	134	146	157	162	166	174	180	183	184
120.0	76	89	103	116	128	140	151	156	160	167	173	176	177
122.5	72	85	98	111	123	134	143	148	153	160	164	167	167
125.0	69	81	93	106	117	127	137	141	145	151	156	159	160
127.5	65	77	88	100	111	121	130	134	137	144	148	150	151
130.0	62	73	84	95	105	115	123	127	130	136	140	143	143
132.5	57	67	78	88	98	107	115	118	121	127	131	133	134
135.0	53	63	73	83	92	100	108	111	114	119	123	125	125
137.5	48	57	66	76	84	92	99	102	104	109	112	114	114
140.0	44	53	62	70	78	86	92	94	96	100	103	104	105
142.5	40	48	56	64	71	78	83	85	87	90	92	94	94
145.0	34	42	49	56	63	69	73	75	77	79	81	82	82
147.5	30	37	43	50	56	62	65	66	68	69	71	71	72



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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	26	31	37	43	49	53	56	58	58	59	59	60	61	
152.5	22	27	32	38	42	46	48	49	50	50	50	50	50	
155.0	17	21	26	31	35	38	39	39	40	39	39	39	40	
157.5	13	16	20	24	27	29	30	31	30	30	29	29	29	
160.0	10	12	15	19	21	22	22	22	22	21	20	20	21	
162.5	6	7	10	12	14	15	14	14	14	12	12	11	12	
165.0	2	4	5	6	7	8	8	8	8	7	7	7	7	
167.5	0	0	1	1	1	1	2	2	2	2	2	2	2	
170.0	0	0	0	0	0	0	0	0	0	0	0	0	0	
172.5	0	0	0	0	0	0	0	0	0	0	0	0	0	
175.0	0	0	0	0	0	0	0	0	0	0	0	0	0	
177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	
180.0	0	0	0	0	0	0	0	0	0	0	0	0	0	



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		0
5- 10		0
10- 15		1
15- 20		3
20- 25		4
25- 30		6
30- 35		9
35- 40		12
40- 45		15
45- 50		18
50- 55		21
55- 60		24
60- 65		27
65- 70		29
70- 75		31
75- 80		33
80- 85		34
85- 90		35
90- 95		35
95-100		34
100-105		33
105-110		31
110-115		28
115-120		25
120-125		22
125-130		19
130-135		15
135-140		12
140-145		9
145-150		6
150-155		4
155-160		2
160-165		1
165-170		0
170-175		0
175-180		0

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		1
0- 20		4
0- 30		15
0- 40		35
0- 50		67
0- 60		112
0- 70		168
0- 80		233
0- 90		302
0-100		371
0-110		434
0-120		487
0-130		527
0-140		554
0-150		569
0-160		575
0-170		576
0-180		576



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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	108	108	108	108	100	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	92	85	79	73	84	78	73	68	65	61	57	53	50	46	42	39	37	31	31
2	81	71	62	55	74	65	57	51	53	47	42	43	38	34	33	30	27	22	22
3	73	60	51	43	66	55	46	40	45	38	33	36	31	26	28	23	20	16	16
4	66	52	42	35	60	48	39	32	39	32	26	31	25	21	24	19	16	12	12
5	60	46	36	29	54	42	33	26	34	27	22	27	21	17	21	16	13	9	9
6	55	40	31	24	50	37	28	22	30	23	18	24	18	14	18	14	10	7	7
7	50	36	27	20	46	33	25	19	27	20	15	22	16	12	16	12	9	6	6
8	46	32	24	17	42	30	22	16	24	18	13	19	14	10	15	11	7	5	5
9	43	29	21	15	39	27	19	14	22	16	11	18	13	9	14	9	6	4	4
10	40	27	19	13	37	24	17	12	20	14	10	16	11	8	12	8	6	3	3

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

<b>Test Equipment Used</b>			
<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

<b>Test Equipment Used - Color &amp; SPD; THD &amp; Power Factor</b>			
<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

**Hubbell Lighting, Inc.**

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