

Project Number
16.00015



HUBBELL
Lighting

Date
1/8/2016

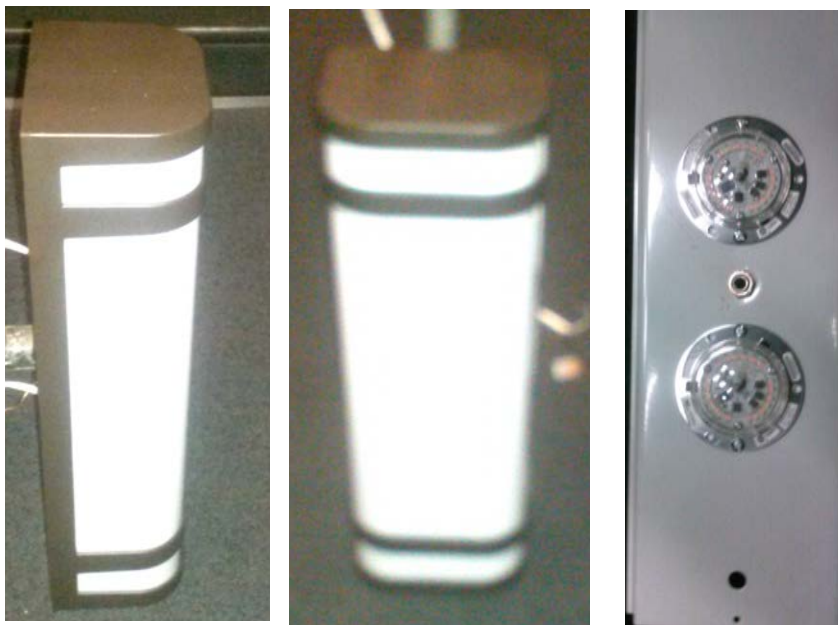
LAB 5

Test Sample Description

Catalog Number: 5806-12930K9
Description: 2-Lt. LED Wall Lantern

Test Method: IES LM-79-08 § 10
Preburn Time: 0:00
Time To Stabilize: 2:30
Total Operating Time: 4:38

Input Voltage (Volts): 119.9
Input Current (Amps): 0.139
Input Wattage (Watts): 15.6
Ambient Temp (°C): 25.0



Hubbell Lighting, Inc.

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

Checked: D. BLACK
Approved: M. WASHBURN





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REPORT NUMBER: 16.00015
ISSUE DATE: 01/08/16
PREPARED FOR: PROGRESS
CATALOG NUMBER: 5806-12930K9
LUMINAIRE: 2-Lt. LED Wall Lantern
LAMP CAT. NO.: 93049180-3130
LAMP: 40- Nichia 3000K LEDs
MOUNTING: Wall

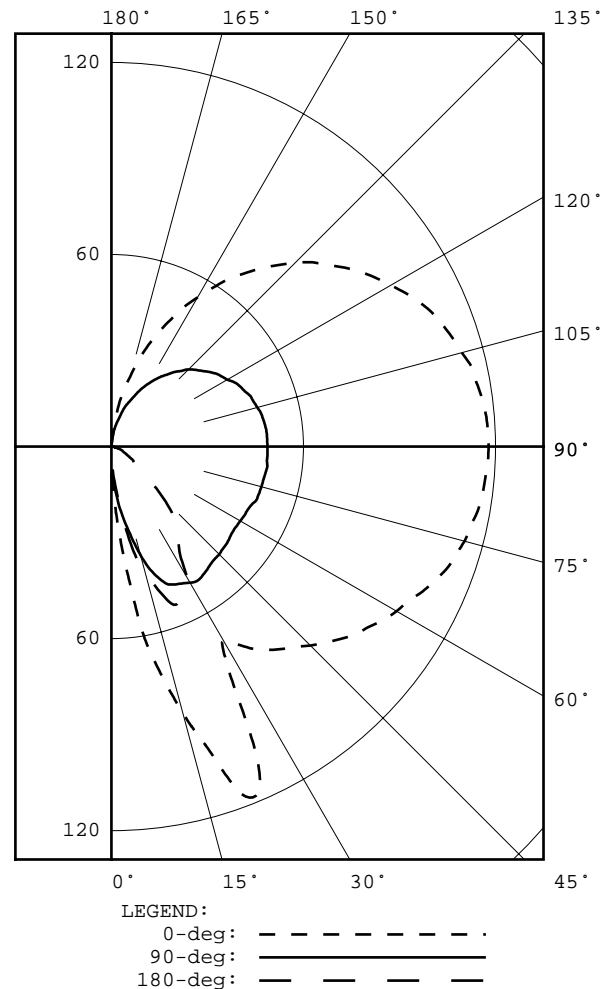
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NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	9	9	9	9	9	
5	26	21	14	11	11	2
15	86	69	35	36	41	14
25	108	82	48	45	51	29
35	77	69	49	39	36	34
45	88	79	48	31	23	42
55	98	88	46	25	9	49
65	107	96	47	23	4	56
75	114	102	49	23	2	62
85	117	105	49	22	1	65
90	117	105	49	21	0	
95	117	105	49	21	0	65
105	113	102	47	21	0	61
115	106	95	44	20	0	53
125	95	85	40	17	0	43
135	81	72	34	15	0	32
145	64	56	27	11	0	20
155	44	38	18	7	0	10
165	23	20	9	4	0	3
175	0	1	1	0	0	0
180	0	0	0	0	0	

ZONAL ZONE	LUMEN LUMENS	SUMMARY LUMENS	%FIXT
0- 30		46	7.1
0- 40		80	12.5
0- 60		170	26.6
0- 90		353	55.2
90-120		179	27.9
90-130		222	34.6
90-150		273	42.7
90-180		287	44.8
0-180		640	100.0

EFFICACY = 41.0 Lm/W
CIE TYPE - DIRECT-INDIRECT





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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 5.000 5.000
HEIGHT OF SIDE :14.500 14.500

LUMINANCE DATA IN CANDELA/SQ M
ANGLE AVERAGE AVERAGE AVERAGE
IN DEG 0-DEG 90-DEG 180-DEG
45 1975. 1070. 521.
55 2064. 973. 179.
65 2178. 953. 89.
75 2313. 982. 43.
85 2441. 1016. 10.



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NVLAP LAB CODE: 201003-0

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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	9	9	9	9	9	9	9	9	9	9	9	9	9	9
2.5	15	15	15	15	15	15	15	14	14	13	13	13	12	12
5.0	26	26	26	25	24	25	24	24	23	22	21	21	19	18
7.5	42	42	42	40	40	38	38	37	36	34	33	32	29	28
10.0	62	61	60	58	57	57	57	54	52	48	46	43	40	38
12.5	74	74	73	73	72	72	71	71	67	63	59	54	48	45
15.0	86	86	87	86	85	84	83	79	74	70	69	64	59	55
17.5	98	96	93	89	85	84	84	82	82	77	73	70	67	61
20.0	114	113	110	107	104	104	100	93	87	82	74	69	65	61
22.5	118	120	121	119	115	116	119	109	101	91	81	73	66	62
25.0	108	110	110	113	112	110	109	109	101	91	82	75	68	64
27.5	80	81	86	92	97	98	100	101	97	93	84	76	70	65
30.0	70	70	70	70	70	70	74	85	89	89	83	80	73	68
32.5	73	73	74	73	73	72	72	71	71	77	79	78	70	62
35.0	77	77	77	77	76	76	75	73	72	70	69	68	67	63
37.5	80	80	80	80	79	79	78	77	75	73	71	69	68	65
40.0	83	83	83	82	82	81	81	80	78	76	74	71	69	67
42.5	85	85	85	85	85	84	84	83	81	79	76	73	70	68
45.0	88	88	88	88	88	87	87	86	84	82	79	76	72	69
47.5	91	91	91	91	91	90	90	88	87	84	81	78	74	70
50.0	94	94	94	94	94	93	93	91	89	87	84	80	76	72
52.5	96	96	97	97	96	96	95	94	92	89	86	82	78	73
55.0	98	99	99	99	99	98	98	96	94	91	88	84	80	75
57.5	101	101	102	102	101	101	100	98	96	93	90	86	82	77
60.0	103	103	104	104	104	103	102	101	99	96	92	88	83	78
62.5	105	105	106	106	106	105	105	103	101	98	94	90	85	80
65.0	107	108	108	108	108	107	107	105	103	100	96	91	86	81
67.5	109	110	111	111	110	109	109	107	105	102	98	93	88	83
70.0	112	112	113	113	112	112	111	109	107	104	100	95	90	85
72.5	113	114	114	114	114	113	113	111	108	105	101	96	91	85
75.0	114	114	115	115	115	115	114	112	109	106	102	97	92	86
77.5	115	116	116	117	116	116	115	113	110	107	103	98	93	87
80.0	116	117	117	118	117	117	116	114	111	108	104	99	94	88
82.5	117	117	118	119	118	117	117	115	112	109	104	100	94	88
85.0	117	118	119	119	118	118	117	115	113	109	105	100	94	88
87.5	118	118	119	119	119	118	117	116	113	109	105	100	95	88
90.0	117	118	119	119	119	118	117	116	113	109	105	100	94	88
92.5	118	118	119	119	119	118	118	116	113	109	105	100	95	89
95.0	117	118	119	119	118	118	117	115	112	109	105	100	95	88
97.5	117	117	118	118	118	117	117	115	112	108	104	99	94	88
100.0	116	116	117	117	117	116	116	114	111	108	104	99	93	87
102.5	115	115	116	117	116	115	115	113	110	107	103	98	92	86
105.0	113	114	115	115	115	114	114	112	109	106	102	97	91	86
107.5	112	112	113	113	113	112	112	110	107	104	100	95	90	84
110.0	110	111	112	112	112	111	110	109	106	103	99	94	89	83
112.5	109	109	110	110	110	109	108	107	104	101	97	92	87	82
115.0	106	107	108	108	107	107	106	104	102	99	95	91	86	80
117.5	104	104	105	105	105	104	104	102	99	96	93	88	84	78
120.0	101	101	102	102	102	101	100	99	97	93	90	86	81	75
122.5	98	99	99	99	99	98	98	96	94	91	88	83	79	73
125.0	95	95	96	96	96	95	95	93	91	88	85	80	76	71
127.5	92	92	93	93	92	92	92	90	88	85	82	78	73	69
130.0	88	89	89	89	89	88	88	86	84	82	79	75	70	66
132.5	85	85	86	86	85	85	84	83	81	78	75	72	68	63
135.0	81	81	82	82	82	81	81	79	77	75	72	69	65	60
137.5	77	77	77	78	77	77	76	75	73	71	68	65	61	57
140.0	73	73	73	73	73	72	72	71	69	67	64	61	58	54
142.5	68	68	69	69	68	68	67	66	65	63	60	57	54	50
145.0	64	64	64	64	64	63	63	62	61	58	56	53	50	47
147.5	59	59	59	59	59	58	58	57	56	54	52	49	46	43
150.0	54	54	54	54	54	54	53	52	51	49	47	45	42	39
152.5	49	49	49	49	49	48	48	47	46	44	43	41	38	36
155.0	44	44	44	44	44	43	43	42	41	40	38	36	34	31
157.5	39	39	39	39	38	38	38	37	36	35	33	32	30	28
160.0	34	34	34	34	33	33	33	32	31	30	29	27	26	24

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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
162.5	28	28	28	28	28	28	28	27	26	26	24	23	22	20
165.0	23	23	23	23	23	23	22	22	21	20	20	19	17	16
167.5	18	18	18	18	18	17	17	17	17	16	15	14	13	13
170.0	13	13	13	13	13	13	12	12	11	11	10	10	10	9
172.5	5	5	6	6	6	6	6	6	5	5	5	5	5	5
175.0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
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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CANDELA DISTRIBUTION
LATERAL ANGLE

	65.0	67.5	70.0	75.0	80.0	85.0	90.0	112.5	135.0	157.5	180.0
0.0	9	9	9	9	9	9	9	9	9	9	9
2.5	11	12	11	11	11	10	10	9	8	8	8
5.0	17	17	16	16	15	14	14	12	11	11	11
7.5	27	25	24	22	21	20	19	16	16	16	17
10.0	34	33	32	29	27	25	24	22	22	25	26
12.5	41	40	38	36	33	31	29	27	29	34	35
15.0	50	47	45	42	39	36	35	33	36	40	41
17.5	56	53	51	47	44	41	40	38	41	43	46
20.0	57	56	54	50	47	45	44	43	44	47	51
22.5	60	58	56	53	50	48	47	46	46	48	53
25.0	60	57	56	54	51	49	48	48	45	47	51
27.5	62	59	58	54	52	49	48	48	44	45	51
30.0	63	60	57	54	52	50	49	48	43	43	47
32.5	60	59	57	55	52	51	50	48	41	38	40
35.0	62	60	58	55	52	50	49	48	39	34	36
37.5	63	61	59	56	53	50	49	46	36	32	33
40.0	64	62	60	56	53	50	48	44	34	29	30
42.5	65	63	61	57	53	50	48	43	32	27	28
45.0	66	64	62	57	54	50	48	42	31	25	23
47.5	67	65	63	58	54	50	47	41	30	22	18
50.0	68	66	63	58	54	50	47	40	28	19	13
52.5	68	66	64	59	54	50	47	39	27	15	10
55.0	70	67	65	59	54	50	46	38	25	14	9
57.5	71	69	66	60	55	50	46	37	25	13	8
60.0	73	70	67	61	55	50	47	37	24	12	6
62.5	74	71	68	62	56	51	47	36	24	12	5
65.0	75	72	69	63	57	51	47	36	23	11	4
67.5	77	74	70	64	58	52	47	36	23	10	4
70.0	78	75	72	65	59	53	48	36	23	10	4
72.5	79	76	73	66	59	53	48	37	23	10	3
75.0	80	77	73	66	59	53	49	36	23	9	2
77.5	80	77	74	67	60	54	49	36	22	9	2
80.0	81	78	74	67	60	54	49	36	22	9	1
82.5	82	78	75	68	61	54	49	36	22	8	1
85.0	82	78	75	68	61	54	49	36	22	8	1
87.5	82	79	75	68	61	54	49	36	22	8	0
90.0	82	78	75	68	60	54	49	36	21	7	0
92.5	82	79	75	68	61	54	49	36	21	8	0
95.0	82	78	75	68	61	54	49	36	21	8	0
97.5	81	78	74	67	60	54	49	36	21	8	0
100.0	81	77	74	67	60	53	48	35	21	8	0
102.5	80	77	73	66	59	53	48	35	21	8	0
105.0	79	76	72	65	59	52	47	35	21	7	0
107.5	78	75	71	65	58	51	47	34	20	7	0
110.0	77	74	70	64	57	51	46	34	20	7	0
112.5	75	73	69	62	56	50	45	33	20	7	0
115.0	74	71	68	61	55	49	44	33	20	7	0
117.5	72	69	66	60	53	48	43	32	19	7	0
120.0	70	67	64	58	52	46	42	31	18	6	0
122.5	68	65	62	56	51	45	41	30	18	6	0
125.0	66	63	60	54	49	44	40	29	17	6	0
127.5	63	61	58	52	47	42	38	28	17	6	0
130.0	61	59	56	51	45	40	37	27	16	5	0
132.5	59	56	54	48	43	39	36	26	15	5	0
135.0	56	53	51	46	41	37	34	25	15	5	0
137.5	53	50	48	44	39	35	32	23	14	5	0
140.0	50	48	45	41	37	33	30	22	13	4	0
142.5	46	45	43	38	35	31	28	21	12	4	0
145.0	43	42	40	36	32	29	27	19	11	4	0
147.5	40	38	37	33	30	27	25	18	10	3	0
150.0	36	35	33	30	27	24	22	16	9	3	0
152.5	33	31	30	27	24	22	20	15	8	2	0
155.0	29	28	27	24	22	19	18	13	7	2	0
157.5	26	25	24	21	19	17	16	12	6	2	0
160.0	22	21	20	19	16	15	14	10	6	2	0

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CANDELA DISTRIBUTION
LATERAL ANGLE

	65.0	67.5	70.0	75.0	80.0	85.0	90.0	112.5	135.0	157.5	180.0
162.5	19	18	17	16	14	13	12	9	5	1	0
165.0	15	14	13	12	11	10	9	7	4	1	0
167.5	12	11	11	9	9	8	7	5	3	1	0
170.0	8	8	8	7	7	6	6	4	2	1	0
172.5	5	5	5	4	4	4	4	3	1	0	0
175.0	2	2	2	2	2	2	1	1	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0	0
180.0	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	2
10- 15	5
15- 20	9
20- 25	14
25- 30	16
30- 35	16
35- 40	18
40- 45	20
45- 50	22
50- 55	23
55- 60	25
60- 65	27
65- 70	29
70- 75	31
75- 80	32
80- 85	32
85- 90	33
90- 95	33
95-100	32
100-105	31
105-110	30
110-115	28
115-120	25
120-125	23
125-130	20
130-135	17
135-140	14
140-145	11
145-150	9
150-155	6
155-160	4
160-165	2
165-170	1
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	2
0- 20	16
0- 30	46
0- 40	80
0- 50	122
0- 60	170
0- 70	226
0- 80	288
0- 90	353
0-100	418
0-110	478
0-120	532
0-130	575
0-140	606
0-150	626
0-160	636
0-170	639
0-180	640



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	94	88	82	76	86	81	76	71	68	64	61	57	54	51	46	44	42	36
2	84	74	66	59	77	68	61	55	57	51	47	47	43	39	38	35	32	27
3	75	63	54	47	69	58	50	44	49	43	37	40	35	31	32	28	25	21
4	68	55	46	39	62	51	42	36	43	36	31	35	30	25	28	24	20	17
5	62	49	39	32	57	45	36	30	38	31	26	31	26	21	25	20	17	14
6	57	43	34	27	52	40	32	25	34	27	22	28	22	18	22	18	15	11
7	53	39	30	24	48	36	28	22	30	24	19	25	20	16	20	16	13	10
8	49	35	26	21	45	32	25	19	27	21	16	23	17	14	18	14	11	8
9	45	32	24	18	42	29	22	17	25	19	14	21	16	12	17	13	10	7
10	42	29	21	16	39	27	20	15	23	17	13	19	14	11	16	12	9	7

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.

Project Number
16.00015



HUBBELL
Lighting

Date
1/8/2016

Goniophotometer Calibration

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

Lamp Number: ITL78966-1000-14

Calibration Current: 8.300 Amps DC

Total Luminous Flux: 23413.0 Lumens

Calibration Date: 08/04/2015

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL / HLI LAB 5 - Test Distance: 56.0'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27072V	11/10/2016
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	11/10/2016

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