

Project Number  
20.00292



**HUBBELL**  
Lighting

Date  
3/9/2020

### Photometric Test Report

Lab 5  
Sphere

#### Test Sample Description

Catalog Number: P710058-009-30  
Description: Circle Wall Sconce w/ Curved, Summer Linen Shade and Dangling, Brushed Nickel Hoops

**Photometry**

IES LM-46-04  
 Test Method: IES LM-79-08 §10  
 Preburn Time: 0:20  
 Time To Stabilize: 1:26  
 Total Operating Time: 3:30

Input Voltage (Volts): 120.1  
 Input Current (Amps): 0.080  
 Input Wattage (Watts): 9.4  
 Ambient Temp (°C): 26.1  
 PF @ 120V: 0.988  
 THD @ 120V (%): 12.58

**Sphere**

IES LM-16-93  
 Test Method: IES LM-79-08 §12.1  
 Preburn Time: 2:00  
 Time To Stabilize: 0:55  
 Total Operating Time: 2:55

Input Voltage (Volts): 120.0  
 Input Current (Amps): 0.079  
 Input Wattage (Watts): 9.4  
 Ambient Temp (°C): 24



#### Hubbell Lighting, Inc.

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

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



\* This customer-provided information was not verified by the laboratory. Note that LED manufacturer and part # are unverifiable by the lab.  
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This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



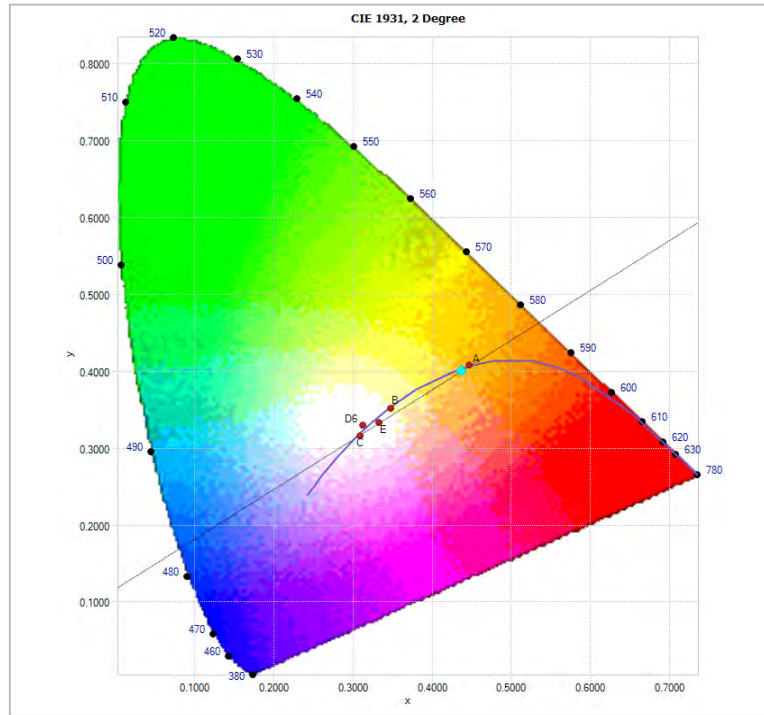
**HUBBELL**  
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Lamp Cat#: 93070270-3330  
Lamp Desc: 20 - Nichia 3000K LEDs

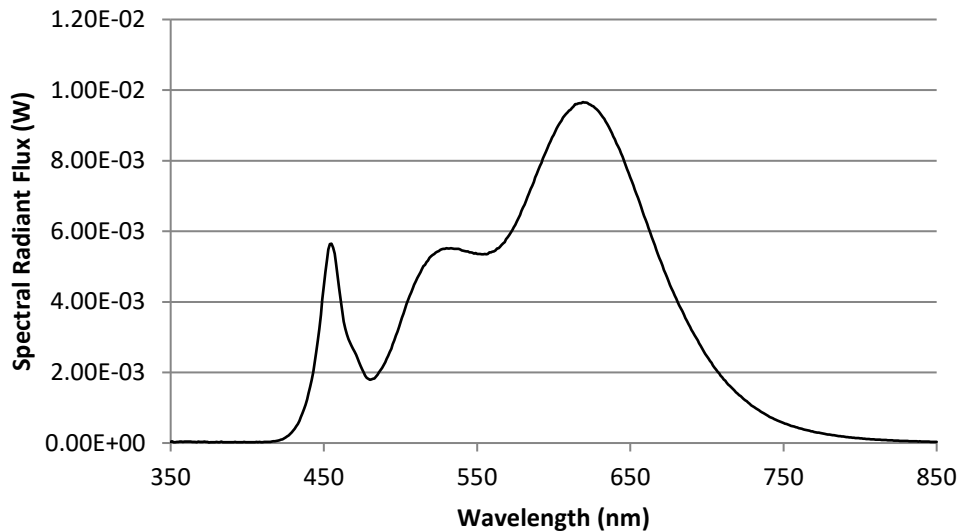
Efficacy: 47.9 LPW      S/P Ratio: 1.5 LM/LM

**Spectral Results**

Name	Value	Unit
$\Phi$	1.55	watts
$\Phi(v)$	450	lumens
$\Phi(v')$	657	lm'
Chrom x	0.437	
Chrom y	0.4005	
Chrom u	0.2521	
Chrom v	0.3467	
Duv	0.0016	
Chrom u'	0.2521	
Chrom v'	0.52	
CCT	2968	K
Purity	51.4	%
$\lambda$ (dom)	583.5	nm
FWHM	159.9	nm
$\lambda$ (peak)	621.3	nm
$\lambda$ (center)	592.8	nm
$\lambda$ (centroid)	591.5	nm
SDCM	Cool White	
RA	96	
Corr. Coef.	0.001427596	
Correlation	0.0054	
R1	98.8	
R2	99.0	
R3	99.0	
R4	97.7	
R5	99.0	
R6	94.2	
R7	93.0	
R8	86.6	
R9	69.9	
R10	99.2	
R11	91.7	
R12	84.6	
R13	98.3	
R14	98.6	



**Spectral Distribution of Radiant Flux**



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**REPORT NUMBER:** 20.00292

**PAGE:** 3 OF 14

**ISSUE DATE:** 03/06/20

**PREPARED FOR:** PROGRESS

**CATALOG NUMBER:** P710058-009-30

**LUMINAIRE:** Circle Wall Sconce w/ Curved, Summer Linen Shade  
and Dangling, Brushed Nickel Hoops

**LAMP CAT. NO.:** 93070270-3330

**LAMP:** 20- Nichia 3000K LEDs

**MOUNTING:** Wall

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



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REPORT NUMBER: 20.00292  
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PREPARED FOR: PROGRESS  
CATALOG NUMBER: P710058-009-30

PAGE: 4 OF 14

CANDELA DISTRIBUTION

	0.0	45.0	90.0	135.0	180.0
0	32	32	32	32	32
5	44	41	33	17	6
15	80	64	34	24	19
25	90	86	37	30	51
35	53	67	38	44	56
45	31	32	36	45	52
55	28	22	24	40	45
65	26	19	9	35	37
75	25	16	5	31	32
85	26	16	3	27	28
90	26	16	2	24	25
95	26	16	3	25	26
105	29	20	5	28	29
115	33	23	14	32	34
125	36	31	28	40	44
135	62	67	38	49	54
145	99	92	39	53	60
155	113	86	39	47	59
165	76	60	37	37	44
175	42	39	35	37	37
180	35	35	35	35	35

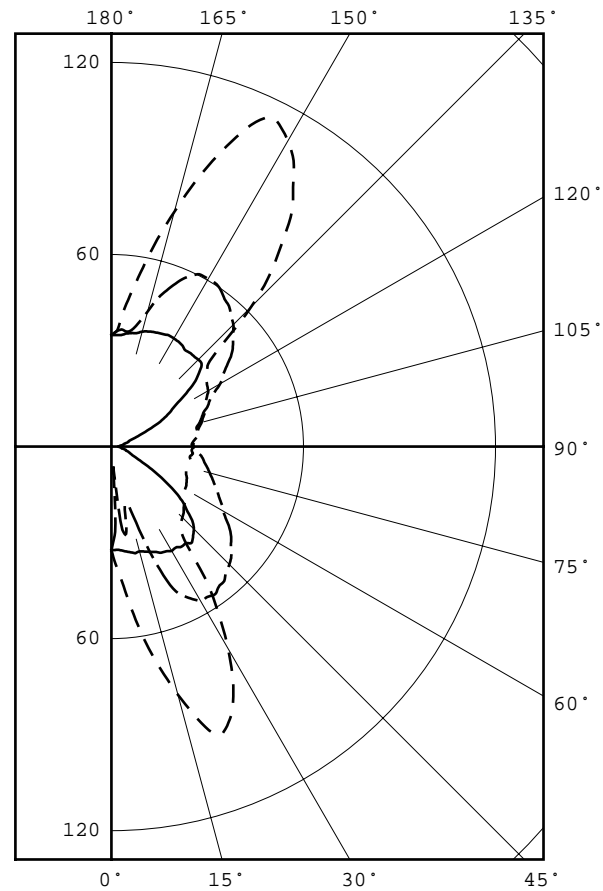
FLUX

3
12
25
31
30
27
23
21
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21
25
32
40
40
29
14
4

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	40	9.7
0- 40	71	17.1
0- 60	128	30.7
0- 90	191	45.8
90-120	66	15.8
90-130	98	23.5
90-150	178	42.9
90-180	226	54.2
0-180	416	100.0

EFFICACY = 44.1 lm/W  
CIE TYPE - GENERAL DIFFUSE  
PLANE : 0-DEG 90-DEG 180-DEG  
SPACING CRITERIA : 1.64 1.76 0.13  
SHIELDING ANGLES : 90 90



LEGEND  
0-deg - - - - -  
90-deg \_\_\_\_\_  
180-deg - . - . -



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**CATALOG NUMBER:** P710058-009-30

**PAGE:** 5 OF 14

PLANE : 0-DEG 90-DEG  
LUMINOUS LENGTH : 2.750 13.250  
HEIGHT OF SIDE : 7.250 7.250

LUMINANCE DATA IN CANDELA/SQ M  
ANGLE AVERAGE AVERAGE AVERAGE  
IN DEG 0-DEG 90-DEG 180-DEG  
45 518. 1415. 862.  
55 437. 991. 703.  
65 392. 417. 561.  
75 375. 259. 482.  
85 400. 202. 436.



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REPORT NUMBER: 20.00292

PAGE: 6 OF 14

ISSUE DATE: 03/06/20

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CATALOG NUMBER: P710058-009-30

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	32	32	32	32	32	32	32	32	32	32	32	32	32	32
2.5	38	38	37	38	37	37	37	37	37	37	36	36	36	36
5.0	44	44	44	44	44	43	43	43	42	42	41	40	39	39
7.5	53	53	53	52	52	51	51	50	48	47	46	45	43	42
10.0	62	62	62	61	60	60	59	57	56	54	52	50	48	45
12.5	71	71	71	71	69	68	68	65	63	61	58	55	52	49
15.0	80	80	80	78	77	76	75	73	70	67	64	61	57	53
17.5	89	89	88	87	85	84	83	81	77	74	70	66	62	57
20.0	96	96	96	94	93	92	90	88	84	81	77	72	67	62
22.5	94	94	94	94	94	94	93	92	90	86	82	77	72	66
25.0	90	90	90	90	90	90	90	90	89	88	86	82	77	71
27.5	82	82	82	83	83	84	84	85	85	85	84	82	79	74
30.0	73	73	73	74	75	76	77	78	79	80	80	80	78	75
32.5	63	63	64	65	66	66	67	69	71	72	74	75	74	72
35.0	53	53	53	55	57	58	59	61	63	65	67	68	70	69
37.5	39	39	40	41	43	44	46	49	53	57	59	61	63	64
40.0	34	34	34	34	35	35	36	39	42	46	51	54	56	58
42.5	32	32	32	32	32	32	31	32	33	36	39	44	48	51
45.0	31	31	31	31	31	30	30	30	30	30	32	35	39	43
47.5	31	30	30	30	29	29	29	28	28	27	27	29	31	35
50.0	30	29	29	29	28	28	28	27	26	26	25	24	25	27
52.5	29	29	29	28	27	27	27	27	26	24	24	23	22	22
55.0	28	28	28	27	27	26	26	25	24	23	22	22	20	20
57.5	27	27	27	26	26	25	25	24	23	22	21	20	19	17
60.0	27	27	26	26	25	25	24	23	22	21	20	19	18	16
62.5	26	26	26	25	25	24	24	23	22	21	20	18	17	15
65.0	26	26	26	25	24	24	24	23	21	20	19	18	16	15
67.5	26	26	25	25	24	24	23	22	21	20	18	17	15	14
70.0	25	25	25	24	23	23	22	21	20	19	17	16	14	13
72.5	25	25	24	23	23	22	22	20	19	18	17	15	13	12
75.0	25	25	24	24	23	22	22	20	19	17	16	14	13	11
77.5	25	25	25	24	23	23	22	20	19	18	16	14	12	11
80.0	25	25	25	24	23	22	22	21	19	17	16	14	12	10
82.5	25	25	25	24	23	23	22	21	19	17	15	14	12	10
85.0	26	25	25	24	23	23	22	21	19	17	16	14	12	10
87.5	25	25	25	24	23	23	22	21	19	17	16	14	12	10
90.0	26	25	25	24	23	23	22	21	19	18	16	14	12	10
92.5	26	26	25	25	24	23	23	21	20	18	16	14	12	10
95.0	26	26	26	25	24	24	23	21	20	18	16	15	13	11
97.5	27	27	26	26	25	24	23	22	21	19	17	15	13	12
100.0	27	27	27	26	25	25	24	23	21	20	18	16	14	12
102.5	28	28	28	27	26	25	25	24	22	20	19	17	15	13
105.0	29	29	29	28	27	27	26	25	23	22	20	18	16	14
107.5	30	30	30	29	28	28	27	26	24	22	21	19	17	15
110.0	31	31	31	30	29	29	28	26	25	23	21	19	18	15
112.5	32	32	32	31	30	29	29	27	26	24	22	20	18	17
115.0	33	33	32	31	30	30	29	28	26	25	23	21	19	17
117.5	34	34	33	32	31	31	30	29	27	26	24	22	21	19
120.0	35	35	34	33	33	32	32	30	29	27	26	24	23	22
122.5	36	35	35	34	33	33	32	31	30	28	27	26	27	28
125.0	36	36	36	35	34	34	33	32	32	31	31	32	35	37
127.5	38	38	37	37	36	36	36	35	36	37	40	43	44	46
130.0	39	39	40	40	40	40	41	43	46	49	51	52	53	52
132.5	46	46	47	49	50	52	53	56	58	59	60	60	60	58
135.0	62	62	63	63	65	65	66	67	68	68	67	67	66	64
137.5	74	74	75	75	75	75	75	75	75	75	75	74	72	70
140.0	83	82	82	83	83	83	83	83	83	83	82	80	78	75
142.5	93	93	93	92	92	91	92	91	90	89	87	85	82	78
145.0	99	99	100	100	99	98	98	98	96	94	92	89	85	80
147.5	106	106	106	105	105	104	104	103	101	98	96	92	86	77



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**REPORT NUMBER:** 20.00292

**PAGE:** 7 OF 14

**ISSUE DATE:** 03/06/20

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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	110	110	110	110	109	109	108	106	104	101	96	89	82	74
152.5	114	114	114	113	112	111	111	108	104	98	92	85	78	70
155.0	113	113	113	111	109	107	106	102	97	92	86	79	72	66
157.5	106	105	105	103	101	100	98	94	90	85	80	74	68	62
160.0	97	96	95	94	91	91	89	86	82	78	73	68	63	58
162.5	87	86	86	84	83	81	81	78	74	70	67	62	58	54
165.0	76	76	75	75	73	72	71	69	66	63	60	57	53	50
167.5	66	66	66	64	63	63	62	60	58	56	54	51	49	46
170.0	57	57	57	56	55	55	54	53	52	50	48	47	45	43
172.5	49	49	49	49	48	48	47	46	46	45	43	42	41	40
175.0	42	42	42	42	41	41	41	40	40	39	39	38	37	37
177.5	36	36	36	36	36	36	36	36	35	35	35	35	35	35
180.0	35	35	35	35	35	35	35	35	35	35	35	35	35	35





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REPORT NUMBER: 20.00292

PAGE: 8 OF 14

ISSUE DATE: 03/06/20

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CATALOG NUMBER: P710058-009-30

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

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**REPORT NUMBER:** 20.00292

**PAGE:** 9 OF 14

**ISSUE DATE:** 03/06/20

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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	66	62	58	51	46	42	39	38	36	33	34	35	36	39
152.5	63	60	56	50	45	41	39	38	36	34	34	35	36	38
155.0	59	56	53	48	44	40	39	38	36	35	34	34	35	37
157.5	57	54	51	47	43	40	38	37	37	35	34	34	35	36
160.0	53	51	49	45	42	39	38	37	37	36	35	35	35	36
162.5	50	48	46	44	41	39	38	37	37	37	36	36	35	35
165.0	47	46	44	42	40	38	37	37	37	37	37	36	36	36
167.5	44	43	42	40	38	37	36	36	36	36	37	37	36	36
170.0	41	40	39	39	37	36	36	36	36	37	37	37	37	37
172.5	39	38	38	37	36	36	36	35	36	36	36	36	37	37
175.0	36	36	36	35	35	35	35	35	35	36	36	36	36	36
177.5	35	35	35	35	35	35	35	35	35	35	35	35	35	36
180.0	35	35	35	35	35	35	35	35	35	35	35	35	35	35



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REPORT NUMBER: 20.00292

PAGE: 10 OF 14

ISSUE DATE: 03/06/20

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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
0.0	32	32	32	32	32	32	32	32	32	32	32	32	32
2.5	30	29	29	29	28	28	28	27	27	27	26	26	27
5.0	24	21	17	13	10	8	7	6	6	6	6	6	6
7.5	10	8	8	10	13	17	20	21	22	24	25	26	26
10.0	11	16	22	26	29	30	30	29	29	29	27	27	27
12.5	22	27	28	27	25	24	22	21	21	20	19	19	19
15.0	26	27	24	23	22	21	20	20	20	20	19	19	19
17.5	26	24	22	22	21	21	21	21	21	21	22	23	23
20.0	25	23	23	23	24	25	27	28	30	32	33	34	35
22.5	25	25	25	27	30	33	37	39	39	42	43	45	45
25.0	26	28	30	33	37	41	45	46	47	49	50	51	51
27.5	28	30	34	38	43	46	49	50	51	52	53	53	54
30.0	30	34	38	43	46	49	52	52	53	54	55	56	56
32.5	32	36	41	45	48	50	52	53	54	54	55	56	56
35.0	35	39	44	47	50	51	53	54	54	55	55	56	56
37.5	36	41	44	47	49	51	52	52	53	54	55	55	55
40.0	38	42	46	48	49	50	51	51	52	53	54	54	55
42.5	39	43	45	47	48	49	49	50	51	52	52	53	53
45.0	40	43	45	46	47	48	48	49	49	51	51	52	52
47.5	40	42	44	45	45	46	47	47	48	49	50	51	51
50.0	39	42	43	43	43	44	45	46	46	47	48	49	49
52.5	39	41	42	42	42	42	43	44	45	46	46	47	47
55.0	38	40	40	40	40	41	42	42	43	44	45	45	45
57.5	36	38	39	39	39	39	39	40	40	41	42	43	43
60.0	35	37	37	37	37	37	38	38	38	39	40	41	40
62.5	34	36	36	36	36	36	37	37	37	38	39	39	39
65.0	33	35	35	35	35	35	35	36	36	37	37	37	37
67.5	31	34	34	34	34	34	34	34	34	35	36	36	36
70.0	30	32	33	32	32	32	33	33	33	34	34	34	34
72.5	29	31	32	31	31	31	31	31	31	32	32	33	33
75.0	28	30	31	30	30	30	30	30	30	31	31	32	32
77.5	27	29	30	29	29	29	29	29	29	30	30	31	31
80.0	26	28	29	28	28	28	28	28	28	29	29	30	30
82.5	25	27	28	28	27	27	27	27	27	28	28	29	29
85.0	25	27	27	26	26	26	26	26	26	27	28	28	28
87.5	24	26	26	26	25	25	25	25	25	26	27	27	27
90.0	23	24	24	24	23	24	23	23	24	24	25	25	25
92.5	24	25	24	24	23	23	23	23	24	24	25	25	25
95.0	24	26	25	25	24	24	24	25	25	25	26	26	26
97.5	24	26	25	25	25	25	25	25	25	26	27	27	27
100.0	25	26	26	25	25	25	25	25	26	26	27	27	27
102.5	26	27	27	26	26	26	26	26	26	26	27	28	27
105.0	27	28	28	27	27	27	27	27	27	27	28	29	29
107.5	28	29	29	28	28	28	28	28	28	29	29	29	30
110.0	29	30	30	29	29	29	29	29	29	30	31	31	31
112.5	31	32	31	31	31	31	31	31	31	32	32	32	33
115.0	32	33	32	32	32	32	32	33	33	33	34	34	34
117.5	34	34	34	34	34	34	35	35	35	36	36	36	36
120.0	36	36	36	36	36	36	37	37	38	38	39	39	39
122.5	37	38	38	38	38	38	39	39	39	40	41	41	41
125.0	39	40	40	39	40	40	41	42	42	43	44	44	44
127.5	42	42	42	42	42	43	44	44	45	46	47	47	47
130.0	43	44	44	44	44	45	46	46	47	48	49	49	50
132.5	45	46	46	46	46	47	48	48	49	50	51	52	52
135.0	46	48	49	48	49	49	50	50	51	52	53	54	54
137.5	47	49	50	51	51	51	52	53	53	54	55	56	55
140.0	48	50	52	53	53	54	54	55	55	56	57	57	57
142.5	47	50	53	54	54	55	56	56	56	57	58	58	58
145.0	47	50	53	55	56	57	58	58	58	59	59	60	60
147.5	46	49	52	55	56	57	58	59	59	60	60	61	61



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**REPORT NUMBER:** 20.00292

**PAGE:** 11 OF 14

**ISSUE DATE:** 03/06/20

**PREPARED FOR:** PROGRESS

**CATALOG NUMBER:** P710058-009-30

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	44	48	51	54	56	57	58	59	59	60	61	61	61
152.5	42	46	49	52	54	56	58	58	59	60	60	60	61
155.0	40	44	47	49	52	54	55	56	57	58	58	59	59
157.5	38	41	44	47	49	51	53	53	54	55	56	56	56
160.0	37	39	41	44	46	48	50	50	50	51	52	52	53
162.5	36	37	39	41	43	44	45	46	47	47	48	49	49
165.0	36	37	37	38	40	40	42	42	42	43	43	44	44
167.5	36	36	36	37	37	38	38	39	39	39	39	40	40
170.0	37	37	37	37	36	36	37	37	37	37	37	37	37
172.5	37	37	37	37	37	37	37	37	36	36	36	36	36
175.0	36	37	37	37	37	37	37	37	37	37	37	37	37
177.5	36	36	36	36	36	36	36	37	36	36	36	36	36
180.0	35	35	35	35	35	35	35	35	35	35	35	35	35



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**REPORT NUMBER:** 20.00292  
**ISSUE DATE:** 03/06/20  
**PREPARED FOR:** PROGRESS  
**CATALOG NUMBER:** P710058-009-30

**PAGE:** 12 OF 14

5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		1
5- 10		2
10- 15		5
15- 20		7
20- 25		11
25- 30		14
30- 35		15
35- 40		16
40- 45		15
45- 50		15
50- 55		14
55- 60		13
60- 65		12
65- 70		11
70- 75		11
75- 80		10
80- 85		10
85- 90		9
90- 95		9
95-100		10
100-105		10
105-110		11
110-115		12
115-120		13
120-125		15
125-130		17
130-135		19
135-140		21
140-145		21
145-150		20
150-155		17
155-160		13
160-165		9
165-170		5
170-175		3
175-180		1

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		3
0- 20		15
0- 30		40
0- 40		71
0- 50		101
0- 60		128
0- 70		151
0- 80		172
0- 90		191
0-100		209
0-110		231
0-120		256
0-130		288
0-140		328
0-150		369
0-160		398
0-170		412
0-180		416



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**PREPARED FOR:** PROGRESS  
**CATALOG NUMBER:** P710058-009-30

**PAGE:** 13 OF 14

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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	95	90	85	81	87	82	78	75	68	65	63	55	53	51	43	42	40	35
2	86	78	71	65	78	71	65	60	59	54	51	48	44	41	37	35	33	28
3	78	68	60	53	71	62	55	49	51	46	42	42	38	34	32	30	27	23
4	71	60	51	45	65	55	47	41	45	40	35	37	32	29	29	26	23	19
5	65	53	44	38	59	48	41	35	40	34	30	33	28	25	26	22	20	16
6	60	47	39	33	54	43	36	30	36	30	26	29	25	22	23	20	17	14
7	55	42	34	28	50	39	32	26	33	27	23	27	22	19	21	18	15	12
8	51	38	30	25	47	35	28	23	30	24	20	24	20	17	19	16	13	11
9	47	35	27	22	43	32	25	20	27	21	18	22	18	15	18	14	12	10
10	44	32	24	19	40	29	23	18	25	19	16	20	16	13	16	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.

Project Number  
20.00292



**HUBBELL**  
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Date  
3/9/2020

### *Goniophotometer Calibration*

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

*Lamp Number:* ITL78966-1000-66

*Calibration Current:* 8.300 Amps DC

*Total Luminous Flux:* 23013.0 Lumens

*Calibration Date:* 08/20/2019

<i>Test Equipment Used</i>			
<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	10/31/2020
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912722	10/31/2020

### *3-Meter-Sphere Calibration*

*Calibration Lamp:* EIKO 28V75W/E10

*Lamp Number:* SCL-1400-K136

*Calibration Current:* 2.679 Amps

*Total Luminous Flux:* 1429 Lumens

<i>Test Equipment Used - Color &amp; SPD; THD &amp; Power Factor</i>			
<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	10/31/2020
<i>Power Analyzer</i>	Yokogawa / WT332	C2QA27075V	10/31/2020
<i>Power Supply</i>	Chroma / 61602	616020002113	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

## **Hubbell Lighting, Inc.**

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