

Project Number
17.02761



HUBBELL
Lighting

Date
10/16/2017

LAB 1
Sphere

Test Sample Description

Catalog Number: P5642-2030K
Description: 6" 29W LED Direct / Indirect Wall-Mount Cylinder

Photometry

Test Method:	IES LM-79-08 § 10
Preburn Time:	00:20
Time To Stabilize:	3:40
Total Operating Time:	4:40
Input Voltage (Volts):	119.9
Input Current (Amps):	0.525
Input Wattage (Watts):	58.9
Ambient Temp (°C):	25.3
PF @ 120V:	0.935

Sphere

Test Method:	IES LM-79-08 § 9.1 & 12.1
Preburn Time:	0:30
Time To Stabilize:	1:21
Total Operating Time:	1:51
Input Voltage (Volts):	120.0
Input Current (Amps):	0.520
Input Wattage (Watts):	57.9
Ambient Temp (°C):	24.0



Hubbell Lighting, Inc.

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

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



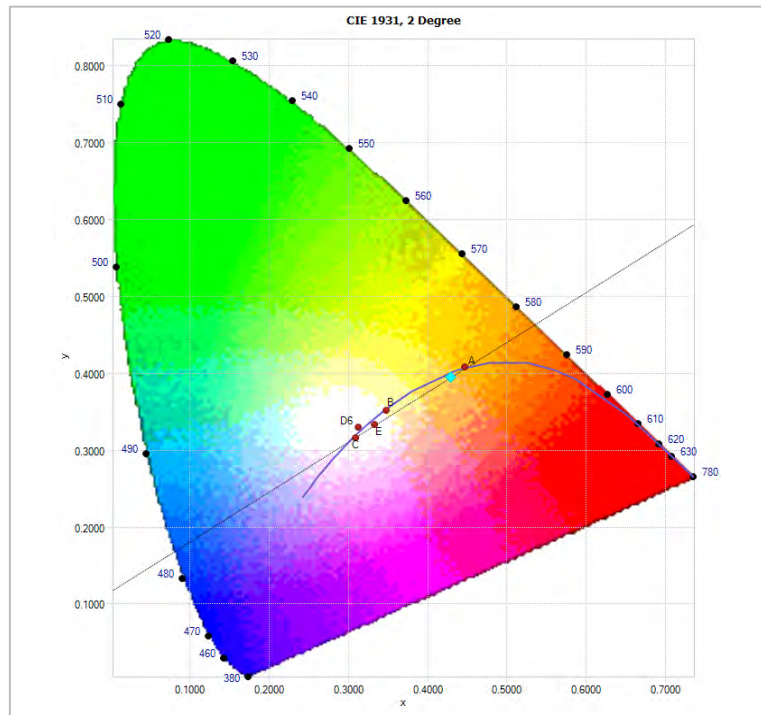
This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



Lamp Cat#: NA
Lamp Desc: 2 - 3000K LEDs
Driver Desc: NA

Efficacy: 31.5 LPW S/P Ratio: 1.4 LM/LM

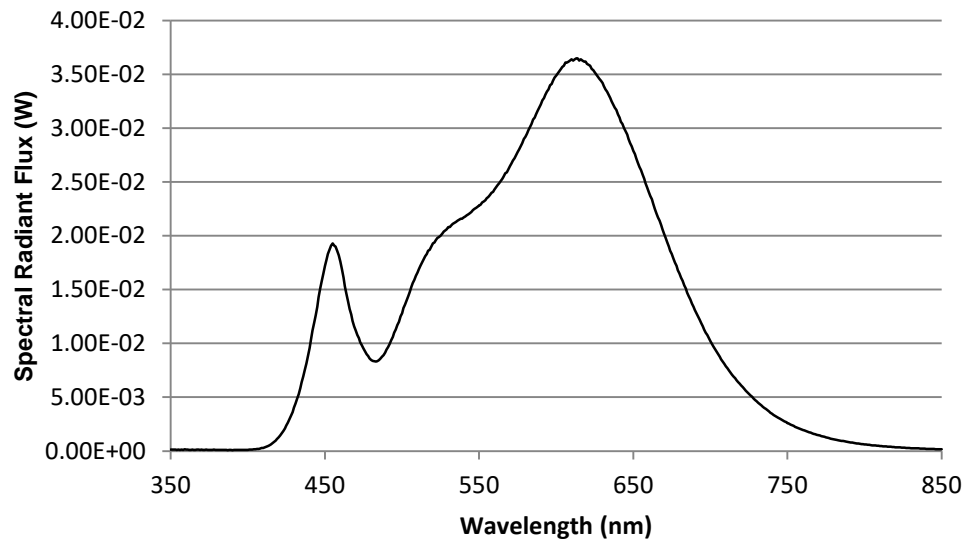
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	6.23	watts
$\Phi(v)$	1823	lumens
$\Phi(v')$	2635	lm'
Chrom x	0.4292	
Chrom y	0.3955	
Chrom u	0.2492	
Chrom v	0.3445	
Duv	0.0024	
Chrom u'	0.2492	
Chrom v'	0.5168	
CCT	3062	K
Purity	47.5	%
λ (dom)	583.5	nm
FWHM	159.4	nm
λ (peak)	613.3	nm
λ (center)	595.4	nm
λ (centroid)	589.5	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.002365278	
Correlation	0.0054	
R1	92.5	
R2	96.4	
R3	97.9	
R4	92.0	
R5	92.4	
R6	95.3	
R7	89.8	
R8	78.0	
R9	51.0	
R10	90.8	
R11	93.2	
R12	82.4	
R13	93.9	
R14	98.8	

Spectral Distribution of Radiant Flux



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



®

HUBBELL
Lighting

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

REPORT NUMBER: 17.02761

PAGE: 3 OF 12

ISSUE DATE: 10/12/17

PREPARED FOR: PROGRESS

CATALOG NUMBER: P5642-2030K

LUMINAIRE: 6" 29W LED Direct / Indirect Wall-Mount Cylinder

LAMP: 2- 3000K LEDs

MOUNTING: Wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



HUBBELL
Lighting

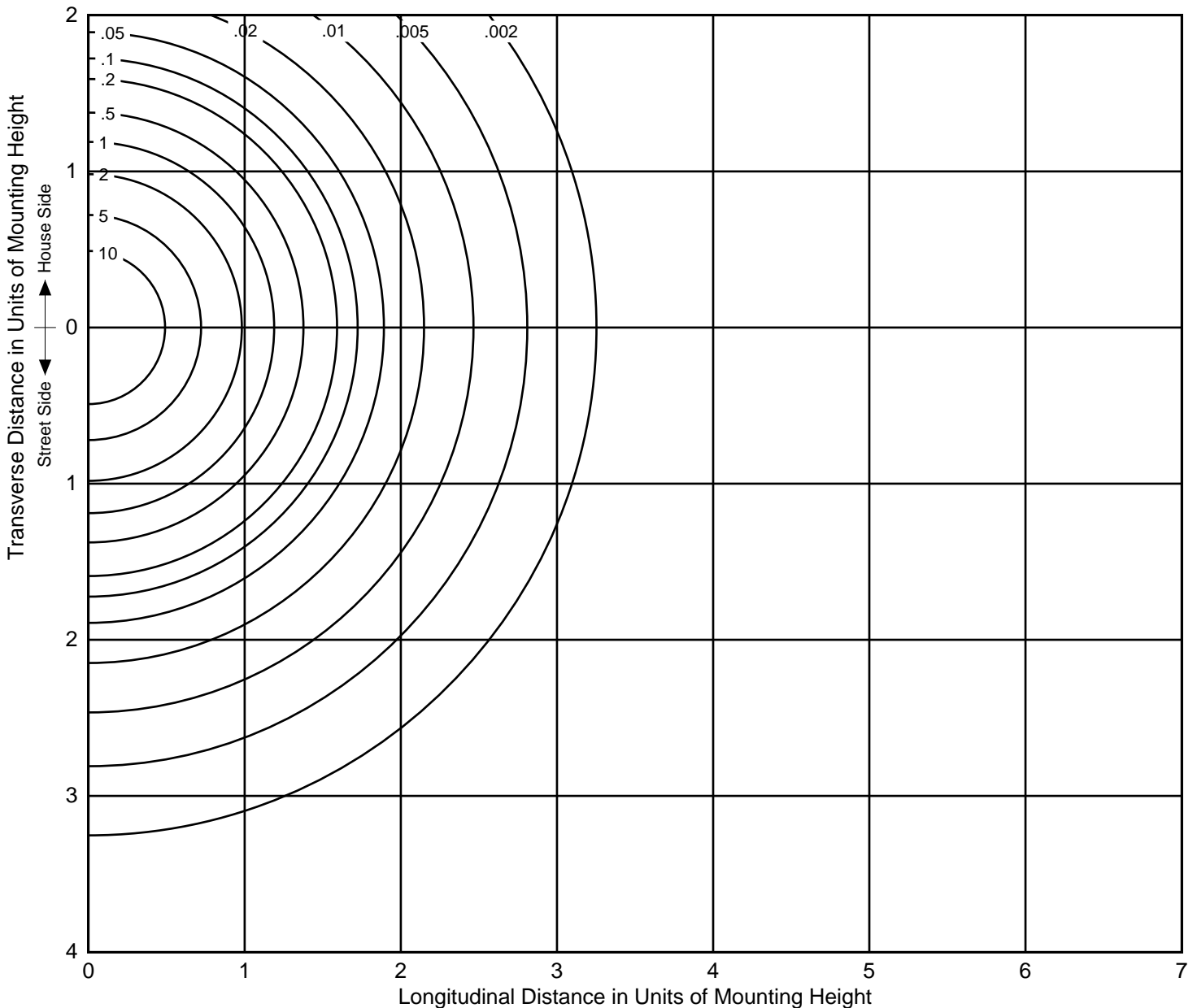
701 Millennium Blvd
Greenville, SC 29607
www.hubbellighting.com

REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 4 OF 12

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION
Values based on 6-foot mounting height

IES Classification: Type V
Cutoff Classification (deprecated): Noncutoff

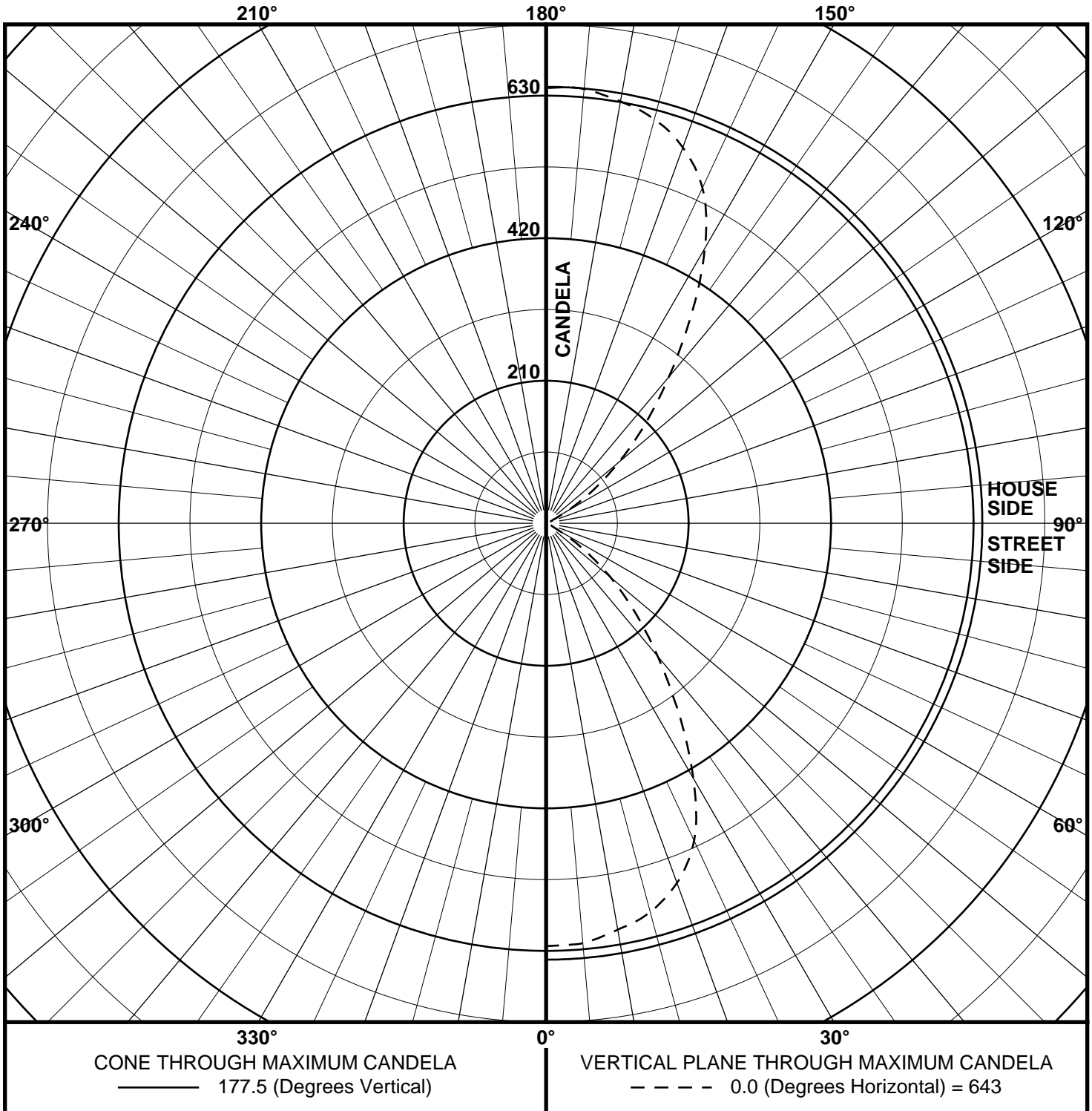




REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 5 OF 12

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

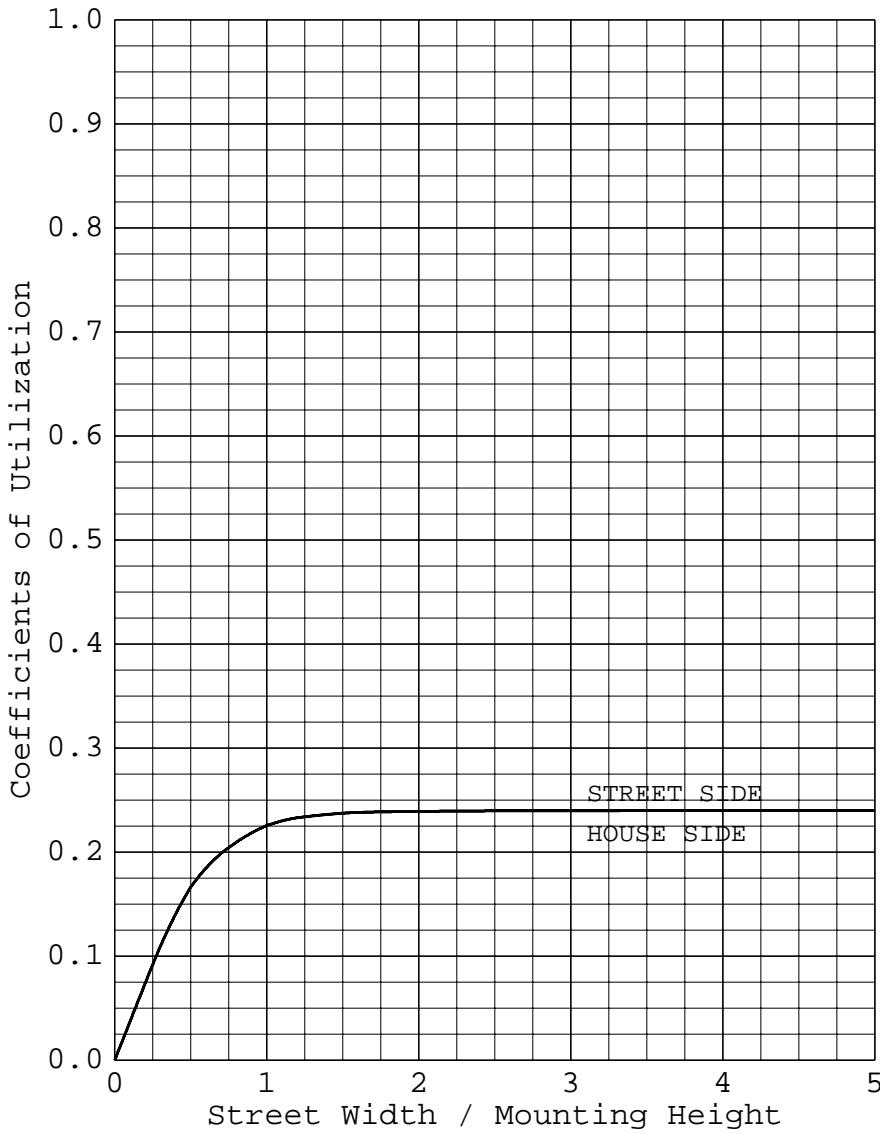




REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 6 OF 12

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	446	24.0
DOWNWARD HOUSE SIDE	446	24.0
DOWNWARD TOTAL	891	48.0
UPWARD STREET SIDE	482	26.0
UPWARD HOUSE SIDE	482	26.0
UPWARD TOTAL	965	52.0
TOTAL FLUX	1856	100.0
EFFICACY = 31.5 lm/W		

ALL CANDELA AND LUMENS 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.



REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 7 OF 12

BUG Rating Zonal Summary	Lumens	% of Fixture	Zone Ratings		
			B	U	G
Forward	446	24.0	B1	U4	G0
FL (0° – 30°)	229.7	12.4			
FM (30° – 60°)	209.4	11.3			
FH (60° – 80°)	6.5	0.3			G0
FVH (80° – 90°)	0.1	0.0			G0
Backward	446	24.0	B1		
BL (0° – 30°)	229.7	12.4			
BM (30° – 60°)	209.4	11.3	B0		
BH (60° – 80°)	6.5	0.3	B0		G0
BVH (80° – 90°)	0.1	0.0			G0
Upward	965	52.0		U1	
UL (90° – 100°)	0.1	0.0			
UH (100° – 180°)	964.5	52.0		U4	
Trapped Light	0	0.0			
Total Flux	1856	100.0			



HUBBELL
Lighting

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

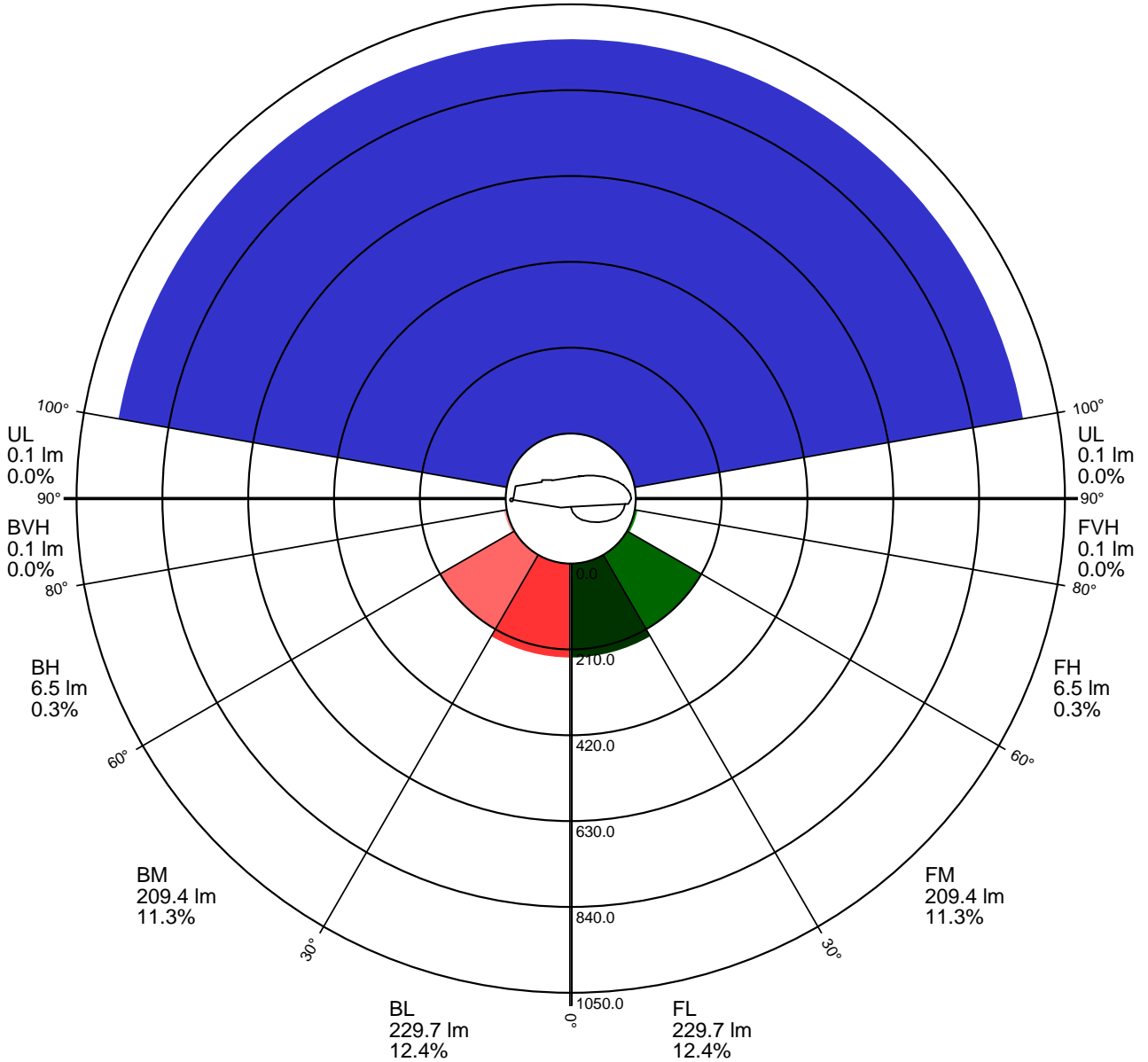
REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 8 OF 12

Zonal Lumen Summary

(Linear scale)

UH
964.5 lm
52.0%





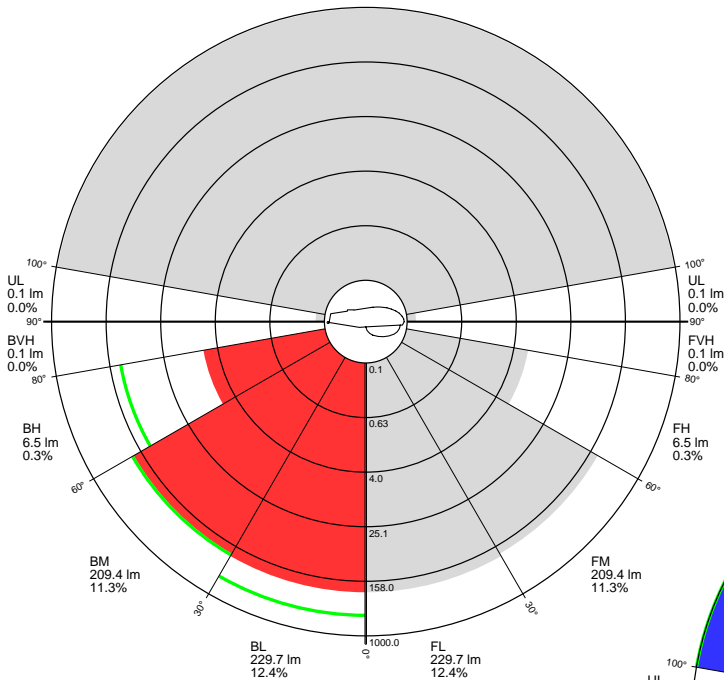
REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 9 OF 12

Backlight Rating Details

(Logarithmic scale)

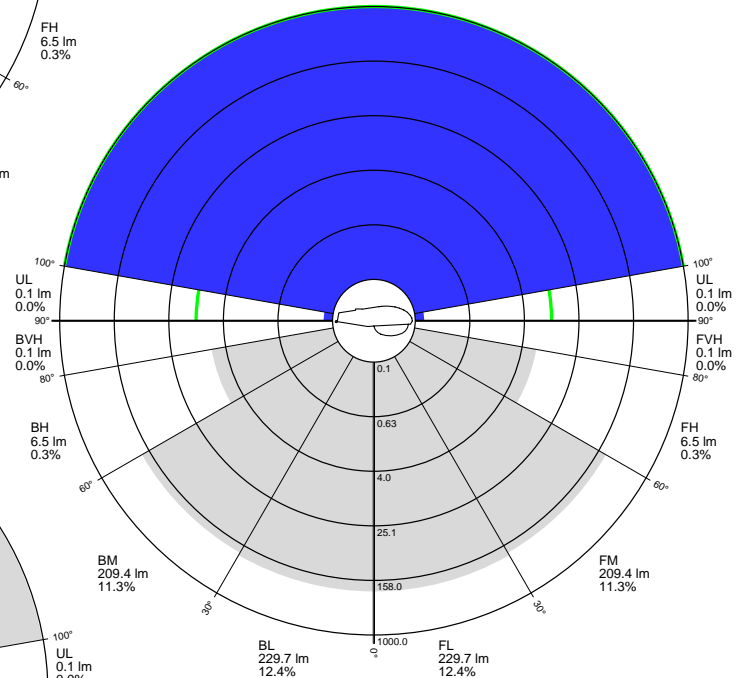
UH
964.5 lm
52.0%



Uplight Rating Details

(Logarithmic scale)

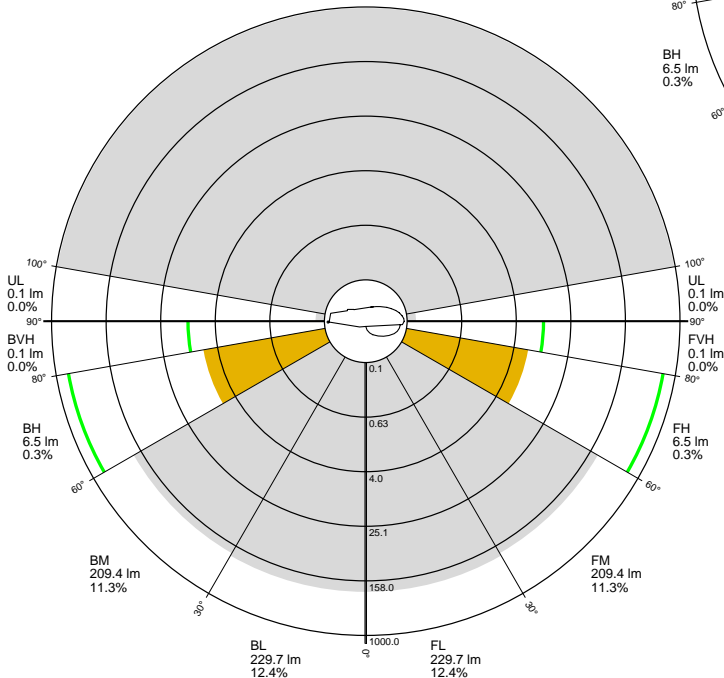
UH
964.5 lm
52.0%



Glare Rating Details

(Logarithmic scale)

UH
964.5 lm
52.0%





HUBBELL
Lighting

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

REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 10 OF 12

CANDELA TABULATION

TYPE V

	180.0	641.
	177.5<<	643.
	175.0	642.
	165.0	616.
	155.0	545.
	145.0	372.
	135.0	206.
	125.0	83.
	115.0	10.
	105.0	2.
	95.0	0.
	92.5	0.
	90.0	0.
	87.5	0.
V	85.0	0.
E	82.5	0.
R	80.0	1.
T	77.5	1.
I	75.0	2.
C	72.5	3.
A	70.0	5.
L	67.5	7.
	65.0	9.
A	62.5	12.
N	60.0	25.
G	57.5	46.
L	55.0	69.
E	52.5	95.
	50.0	124.
	47.5	153.
	45.0	185.
	42.5	219.
	40.0	256.
	37.5	296.
	35.0	340.
	30.0	434.
	25.0	516.
	20.0	564.
	15.0	593.
	10.0	608.
	5.0	621.
	0.0	623.

CONE OF MAXIMUM CANDELA



HUBBELL
Lighting

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

REPORT NUMBER: 17.02761
ISSUE DATE: 10/12/17
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5642-2030K

PAGE: 11 OF 12

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	15
5- 10	44
10- 15	71
15- 20	95
20- 25	113
25- 30	121
30- 35	114
35- 40	99
40- 45	81
45- 50	62
50- 55	42
55- 60	21
60- 65	7
65- 70	4
70- 75	2
75- 80	1
80- 85	0
85- 90	0
90- 95	0
95-100	0
100-105	1
105-110	2
110-115	4
115-120	9
120-125	27
125-130	48
130-135	70
135-140	90
140-145	109
145-150	124
150-155	129
155-160	119
160-165	99
165-170	74
170-175	46
175-180	15

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	59
10- 20	167
20- 30	234
30- 40	213
40- 50	143
50- 60	63
60- 70	11
70- 80	2
80- 90	0
90-100	0
100-110	3
110-120	13
120-130	75
130-140	159
140-150	232
150-160	248
160-170	173
170-180	61

Project Number
17.02761



HUBBELL
Lighting

Date
10/16/2017

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

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	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4E3	11/7/2017

Sphere Calibration

Calibration Lamp: EIKO 28V75W/E10

Lamp Number: SCL-1400-J136

Calibration Current: 2.679 Amps

Total Luminous Flux: 1427 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	Calibrated Weekly
<i>Thermometer</i>	National Instruments / USB TC01	1912751	11/2/2017
<i>LAMP Power Meter</i>	Yokogawa / WT332	C2QA27075V	11/1/2017
<i>Power Supply</i>	Chroma / 61602	616020002113	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.

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