

Project Number
17.02758



Date
10/12/2017

LAB 1
Sphere

Test Sample Description

Catalog Number: P5641-2030K
Description: 6" Diameter LED Wall-Mount, Down-Light Cylinder

Photometry

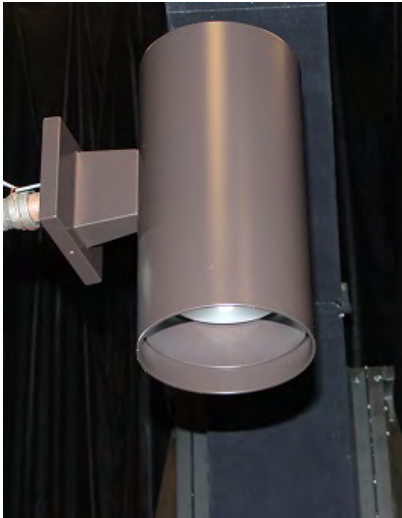
Test Method: IES LM-79-08 § 10
Preburn Time: 00:10
Time To Stabilize: 0:85
Total Operating Time: 2:18

Input Voltage (Volts): 120.0
Input Current (Amps): 0.267
Input Wattage (Watts): 30.0
Ambient Temp (°C): 25.8
PF @ 120V: 0.935

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 2:00
Time To Stabilize: 1:13
Total Operating Time: 3:13

Input Voltage (Volts): 120.0
Input Current (Amps): 0.265
Input Wattage (Watts): 29.5
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

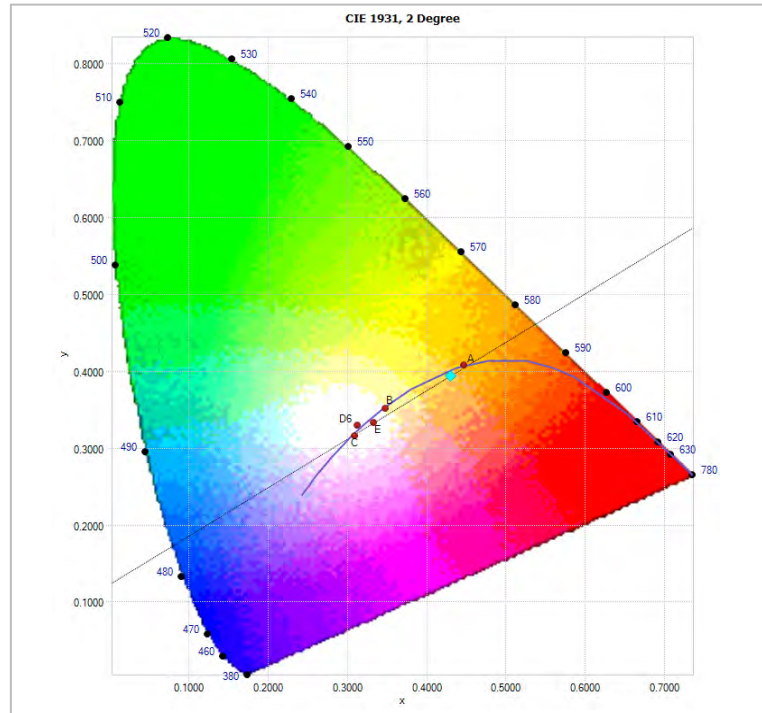




Lamp Cat#: n/a
 Lamp Desc: 1 - 3000K LEDs
 Driver Desc: n/a

Efficacy: 31.6 LPW S/P Ratio: 1.5 LM/LM

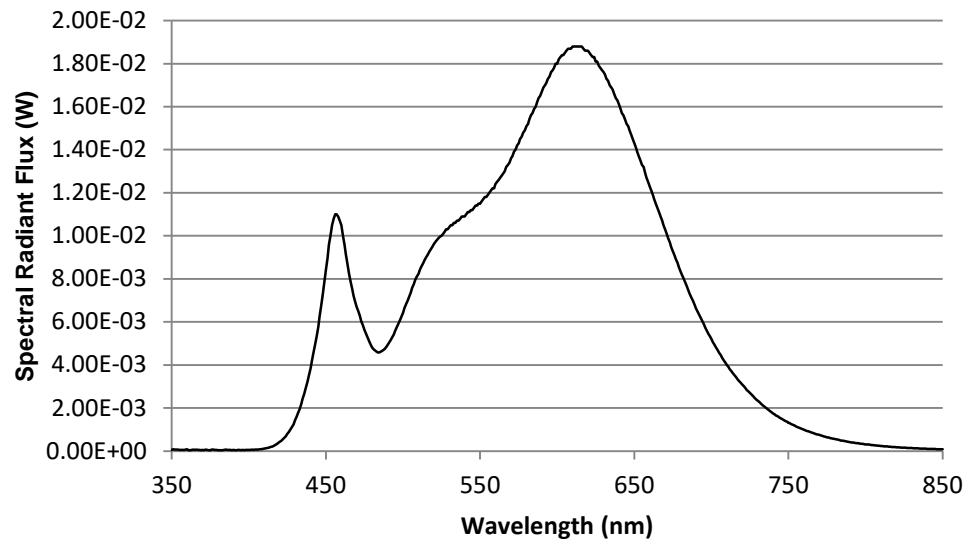
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	3.19	watts
$\Phi(v)$	933	lumens
$\Phi(v')$	1355	lm'
Chrom x	0.4299	
Chrom y	0.3941	
Chrom u	0.2503	
Chrom v	0.3442	
Duv	0.0031	
Chrom u'	0.2503	
Chrom v'	0.5163	
CCT	3038	K
Purity	47.3	%
λ (dom)	583.8	nm
FWHM	155.9	nm
λ (peak)	613.2	nm
λ (center)	596.4	nm
λ (centroid)	589.7	nm
SDCM	Cool White	
RA	91	
Corr. Coef.	0.003034241	
Correlation	0.0054	
R1	92.6	
R2	97.5	
R3	97.1	
R4	91.1	
R5	92.5	
R6	95.6	
R7	88.5	
R8	76.9	
R9	50.3	
R10	93.3	
R11	92.3	
R12	81.1	
R13	94.4	
R14	99.5	

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.

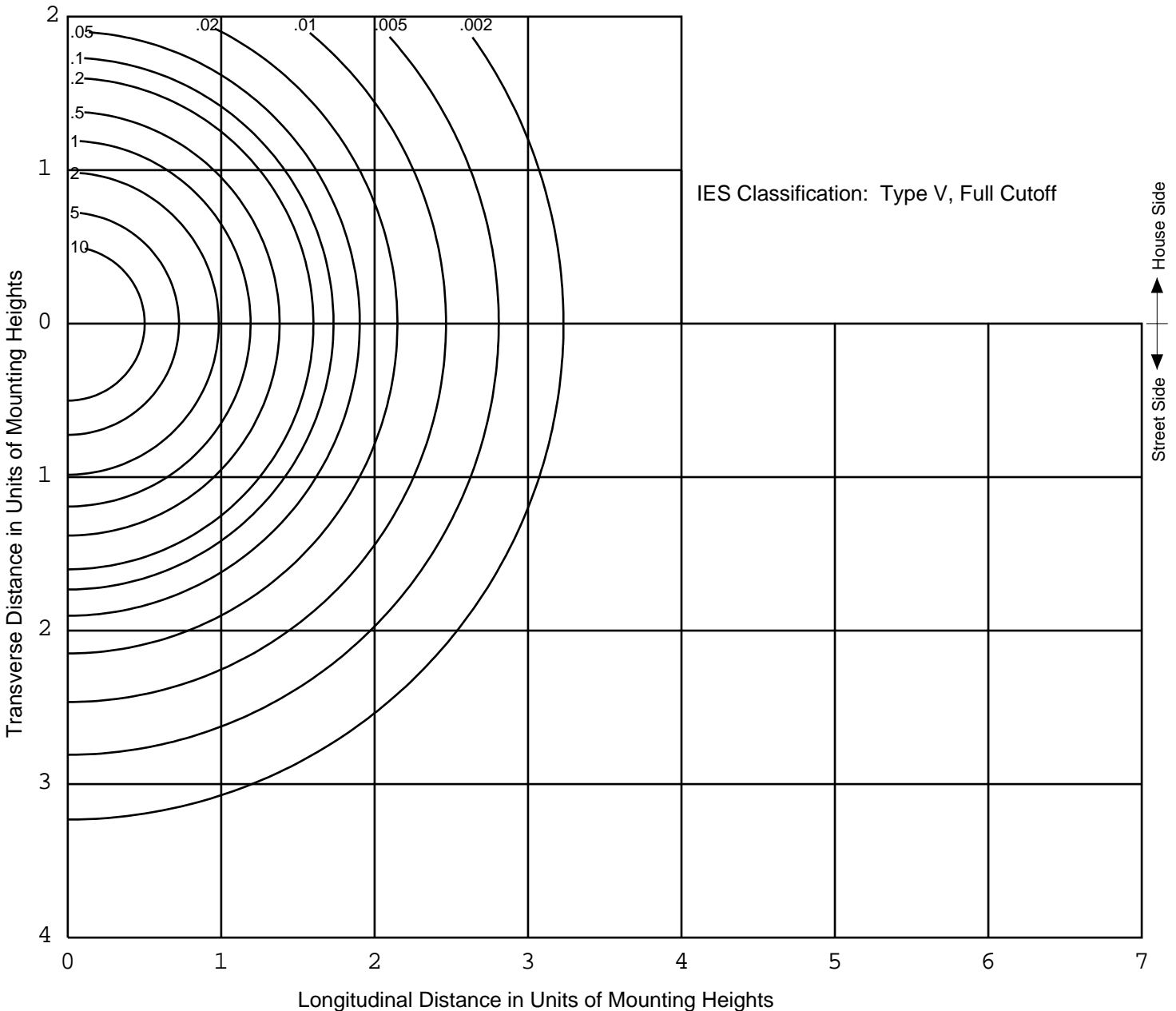


HUBBELL
Lighting

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

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

REPORT NUMBER: 17.02758
ISSUE DATE: 10/11/17 PAGE: 3 OF 10
PREPARED FOR: PROGRESS
CATALOG NUMBER: P5641-2030K
LUMINAIRE: 6" Diameter LED Wall-Mount, Down-Light Cylinder
LAMP: 1- 3000 K LEDs
MOUNTING: Wall
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



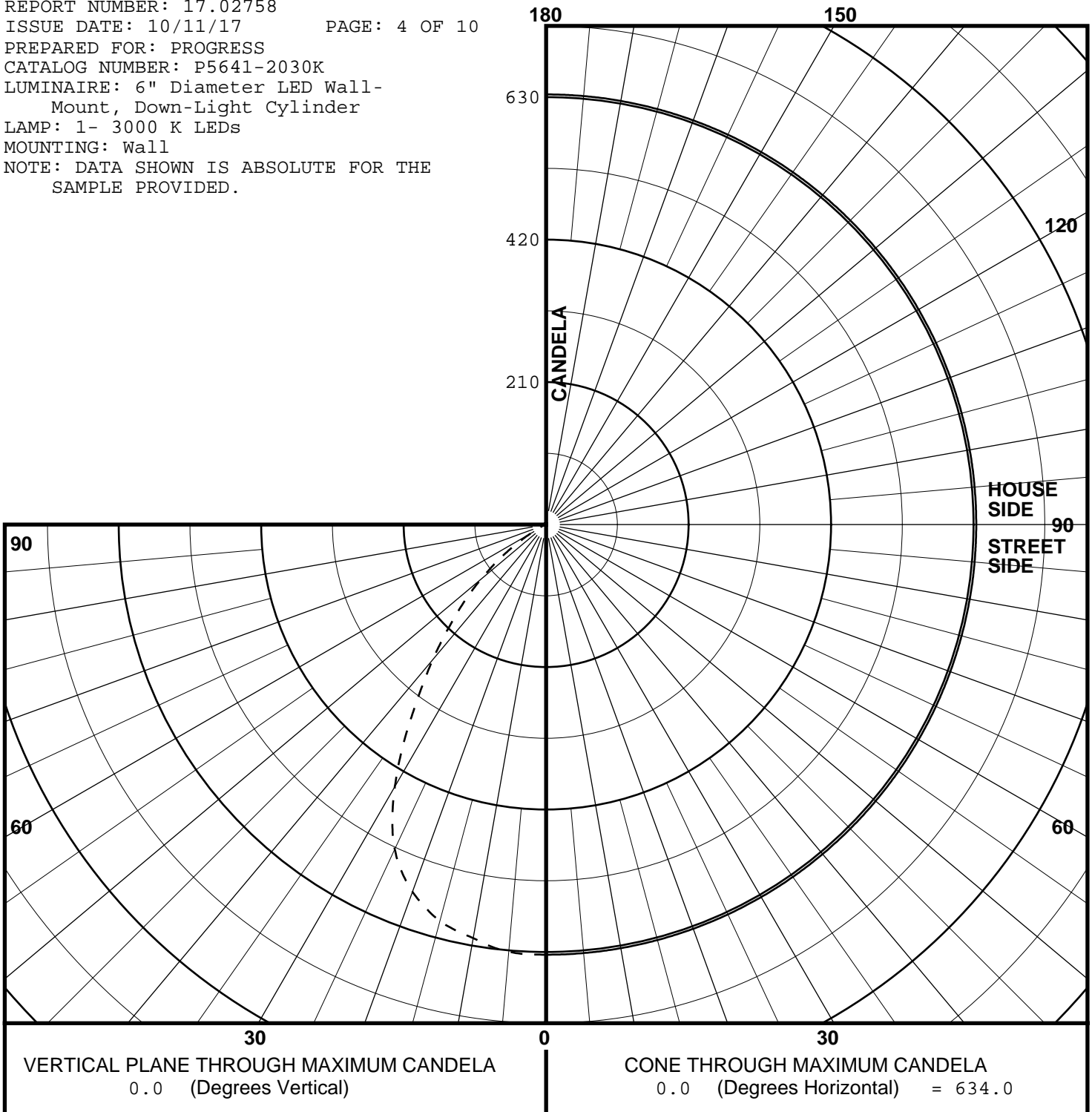


HUBBELL
Lighting

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

MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

REPORT NUMBER: 17.02758
 ISSUE DATE: 10/11/17 PAGE: 4 OF 10
 PREPARED FOR: PROGRESS
 CATALOG NUMBER: P5641-2030K
 LUMINAIRE: 6" Diameter LED Wall-Mount, Down-Light Cylinder
 LAMP: 1- 3000 K LEDs
 MOUNTING: Wall
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.





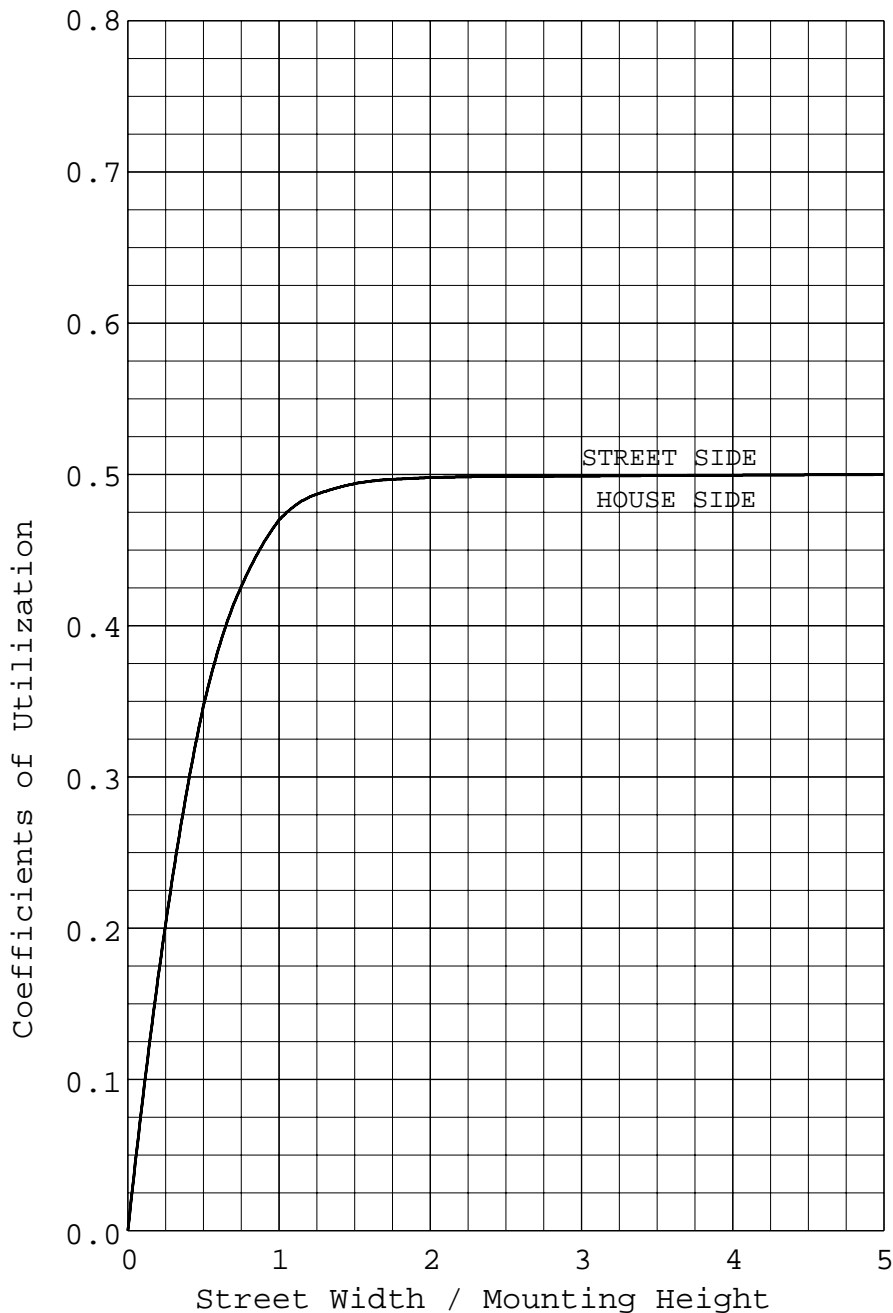
HUBBELL
Lighting

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

REPORT NUMBER: 17.02758
ISSUE DATE: 10/11/17
PREPARED FOR: PROGRESS

PAGE: 5 OF 10

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	455.	50.0
DOWNWARD HOUSE SIDE	455.	50.0
DOWNWARD TOTAL	909.	100.0
UPWARD STREET SIDE	0.	0.0
UPWARD HOUSE SIDE	0.	0.0
UPWARD TOTAL	0.	0.0
TOTAL FLUX	909.	100.0
TOTAL INPUT WATTS = 30.0		
EFFICACY = 30.3 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.

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



HUBBELL
Lighting

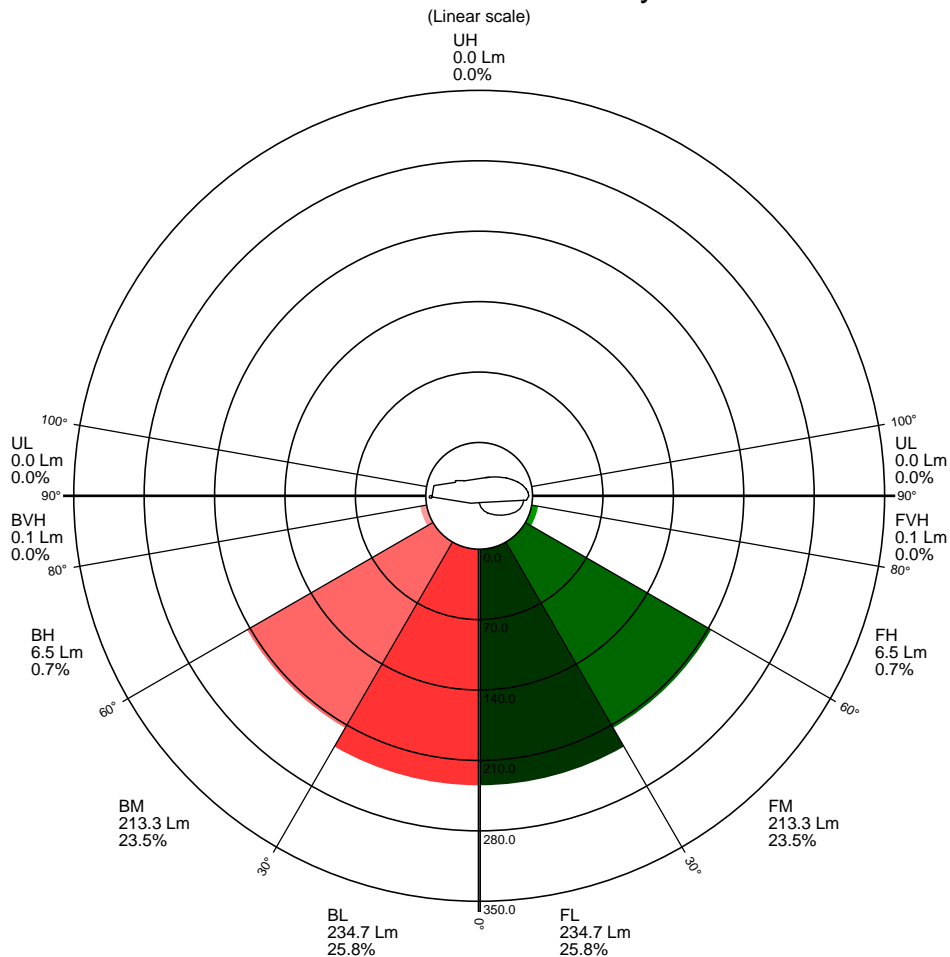
701 Millenium Blvd
Greenville, SC 29607
www.hubbellighting.com

REPORT NUMBER: 17.02758
ISSUE DATE: 10/11/17
PREPARED FOR: PROGRESS

PAGE: 6 OF 10

BUG Rating: Zonal Summary	Lumens	% of Fixture	Zone Ratings		
			B	U	G
Forward	455	50.0			
FL (0° - 30°)	234.7	25.8			
FM (30° - 60°)	213.3	23.5			
FH (60° - 80°)	6.5	0.7			G0
FVH (80° - 90°)	0.1	0.0			G0
Backward	455	50.0			
BL (0° - 30°)	234.7	25.8	B1		
BM (30° - 60°)	213.3	23.5	B0		
BH (60° - 80°)	6.5	0.7	B0		G0
BVH (80° - 90°)	0.1	0.0			G0
Upward	0	0.0			
UL (90° - 100°)	0.0	0.0		U0	
UH (100° - 180°)	0.0	0.0		U0	
Trapped Light	0	0.0			
Total Flux	909	100.0			

Zonal Lumen Summary





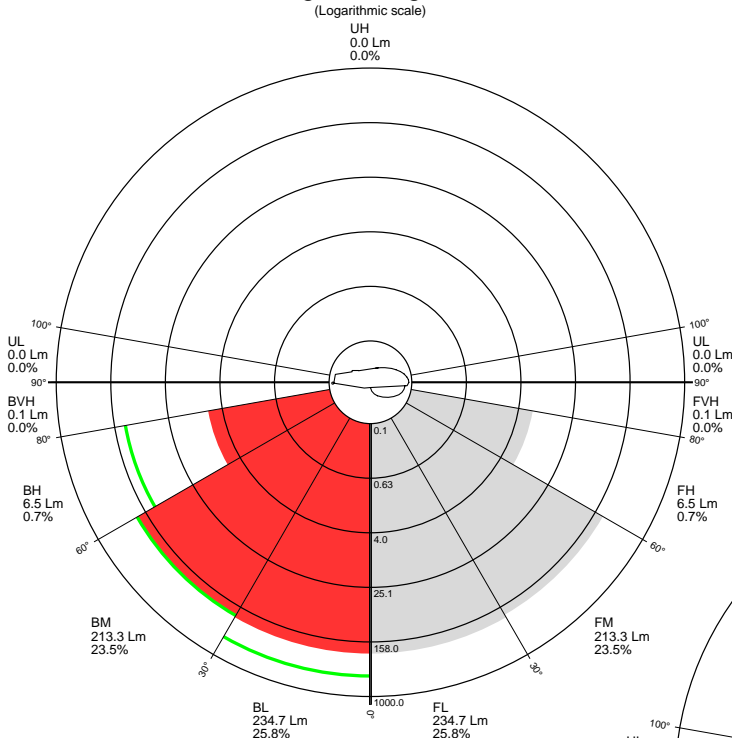
HUBBELL
Lighting

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

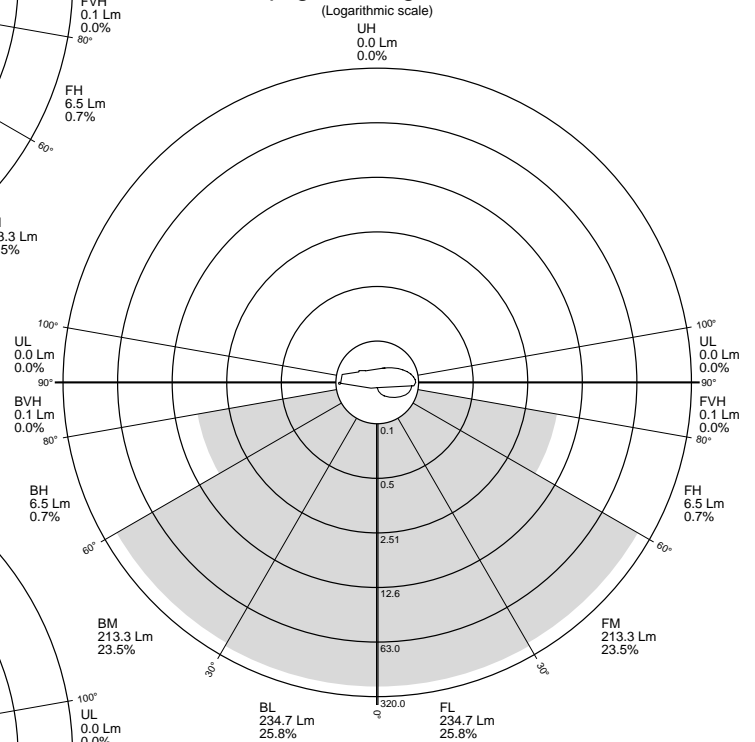
REPORT NUMBER: 17.02758
ISSUE DATE: 10/11/17
PREPARED FOR: PROGRESS

PAGE: 7 OF 10

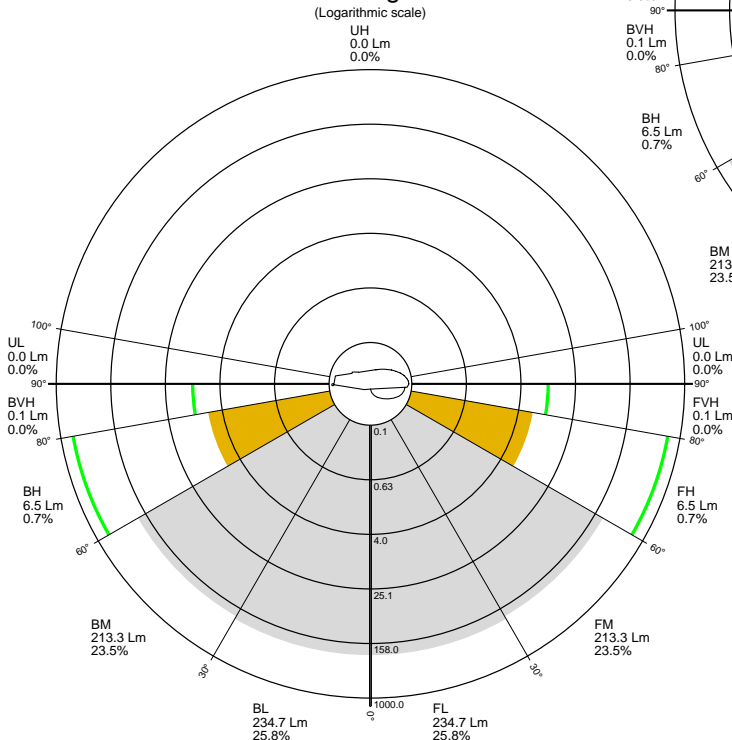
Backlight Rating Details



Uplight Rating Details



Glare Rating Details





HUBBELL
Lighting

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

REPORT NUMBER: 17.02758
ISSUE DATE: 10/11/17
PREPARED FOR: PROGRESS
CANDELA TABULATION -- TYPE V

PAGE: 8 OF 10

180.0	0.
175.0	0.
165.0	0.
155.0	0.
145.0	0.
135.0	0.
125.0	0.
115.0	0.
105.0	0.
95.0	0.
90.0	0.
87.5	0.
85.0	0.
82.5	0.
80.0	1.
77.5	1.
75.0	1.
72.5	3.
70.0	5.
67.5	7.
65.0	9.
62.5	12.
60.0	27.
57.5	47.
55.0	71.
52.5	97.
50.0	125.
47.5	156.
45.0	187.
42.5	222.
40.0	260.
37.5	300.
35.0	346.
30.0	446.
25.0	528.
20.0	576.
15.0	605.
10.0	619.
5.0	632.
0.0	634.<<

<< INDICATES MAXIMUM CANDELA



HUBBELL
Lighting

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

REPORT NUMBER: 17.02758
ISSUE DATE: 10/11/17
PREPARED FOR: PROGRESS

PAGE: 9 OF 10

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	15
5- 10	45
10- 15	73
15- 20	97
20- 25	116
25- 30	124
30- 35	117
35- 40	100
40- 45	82
45- 50	63
50- 55	42
55- 60	22
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	0
105-110	0
110-115	0
115-120	0
120-125	0
125-130	0
130-135	0
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	60
0- 20	230
0- 30	469
0- 40	686
0- 50	832
0- 60	896
0- 70	907
0- 80	909
0- 90	909
0-100	909
0-110	909
0-120	909
0-130	909
0-140	909
0-150	909
0-160	909
0-170	909
0-180	909

Project Number
17.02758



HUBBELL
Lighting

Date
10/12/2017

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	10/31/2017
<i>Cal Lamp Supply</i>	Labsphere / LPS-150-0268	1218148505	12/1/2017
<i>Spectrometer</i>	Labsphere / CDS 1100	0624117792	N/A

Hubbell Lighting, Inc.

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