

Project Number
20.00679



HUBBELL
Lighting

Date
6/8/2020

Photometric Test Report

Lab 5
Sphere

Test Sample Description

Catalog Number: P55104-031-30

Description: 6" Cylinder - Up and Down Light w/ Glass Cover at Up Light

Photometry

Test Method: IES LM-31-95
IES LM-79-08 §10

Preburn Time: 0:20

Time To Stabilize: 1:35

Total Operating Time: 4:44

Input Voltage (Volts): 120.2

Input Current (Amps): 0.593

Input Wattage (Watts): 65.2

Ambient Temp (°C): 25.4



Sphere

Test Method: IES LM-16-93
IES LM-79-08 §12.1

Preburn Time: 5:20

Time To Stabilize: 1:07

Total Operating Time: 7:04

Input Voltage (Volts): 120.0

Input Current (Amps): 0.582

Input Wattage (Watts): 63.3

Ambient Temp (°C): 24

PF @ 120V: 0.913

THD @ 120V (%): 45.2



Hubbell Lighting, Inc.

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

Checked (sphere): M. ELLMANN
Checked (photometry): M. OLALDE
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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Lamp Cat#: 2835

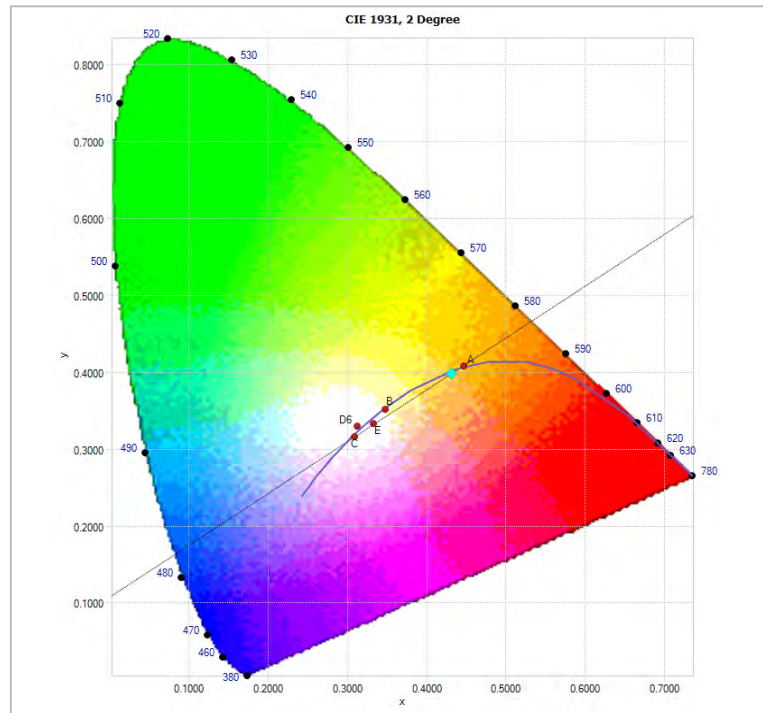
Lamp Desc: 2- AC LED Modules, Each w
42- Bridgelux 3000K LEDs

Efficacy: 24.9 LPW

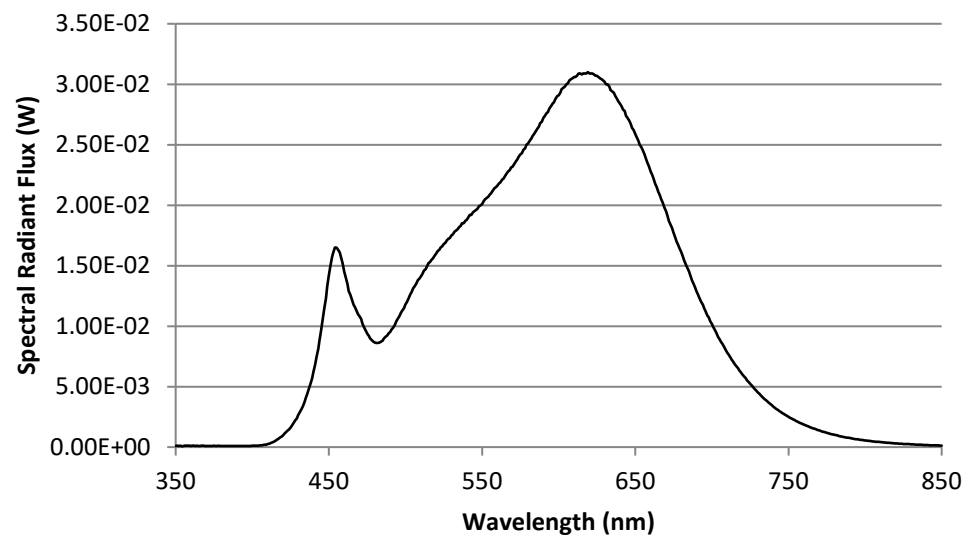
S/P Ratio: 1.5 LM'/LM

Spectral Results

Name	Value	Unit
Φ	5.52	watts
$\Phi(v)$	1577	lumens
$\Phi(v')$	2305	lm'
Chrom x	0.4307	
Chrom y	0.399	
Chrom u	0.2487	
Chrom v	0.3456	
Duv	0.0012	
Chrom u'	0.2487	
Chrom v'	0.5184	
CCT	3063	K
Purity	49.1	%
λ (dom)	583.0	nm
FWHM	165	nm
λ (peak)	618.9	nm
λ (center)	599.3	nm
λ (centroid)	592.4	nm
SDCM	Cool White	
RA	93	
Corr. Coef.	0.001172832	
Correlation	0.0054	
R1	93.4	
R2	97.4	
R3	98.4	
R4	92.2	
R5	93.0	
R6	96.1	
R7	91.3	
R8	81.7	
R9	59.9	
R10	92.7	
R11	92.9	
R12	82.0	
R13	94.7	
R14	99.3	



Spectral Distribution of Radiant Flux



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LUMINAIRE: 6" Cylinder - Up and Down Light w/ Uplight Glass Lens

LAMP CAT. NO.: 2835

LAMP: 84- Bridgelux 3000K LEDs; 2- AC LED Modules

MOUNTING: wall

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.



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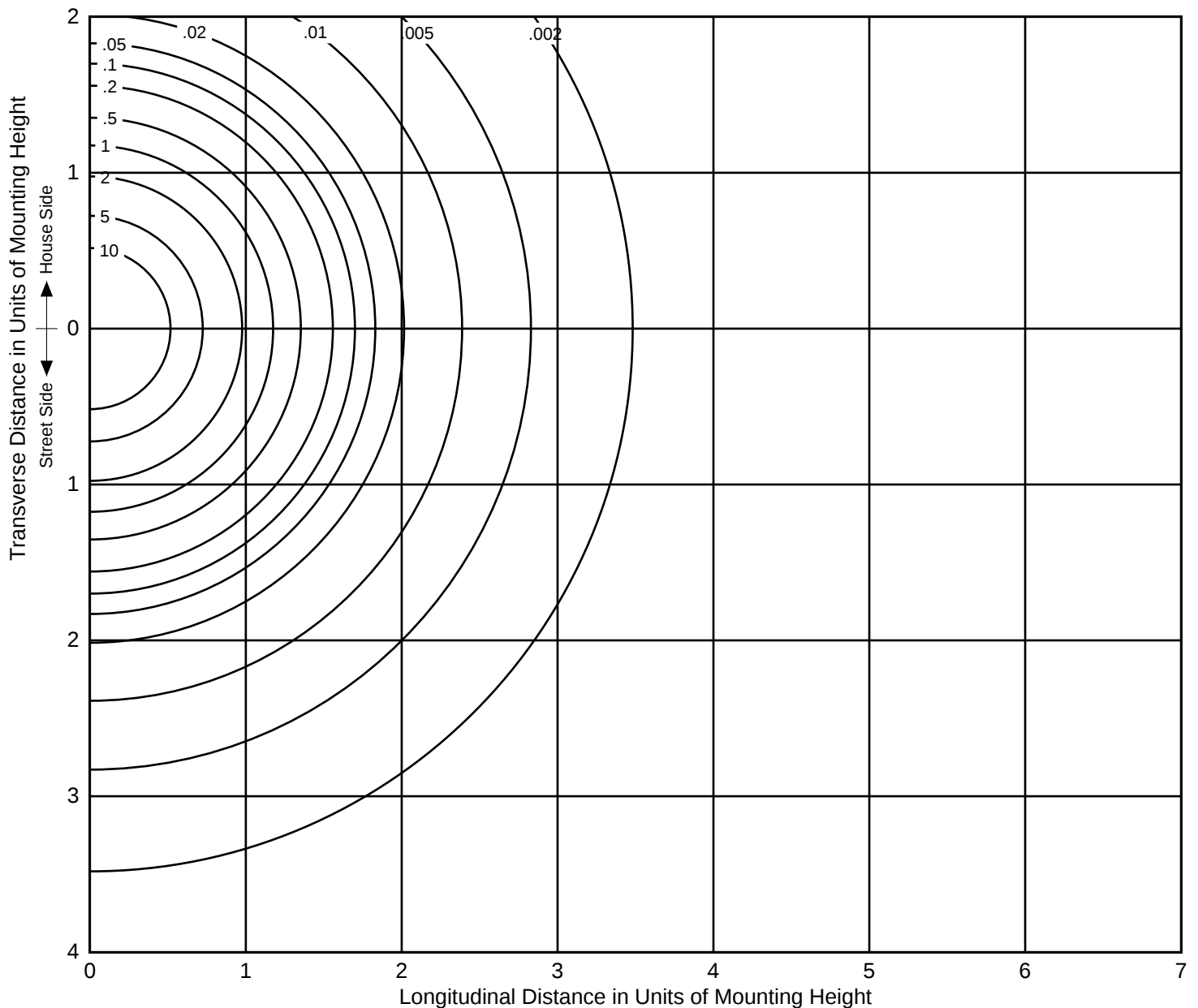
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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION Values based on 6-foot mounting height

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





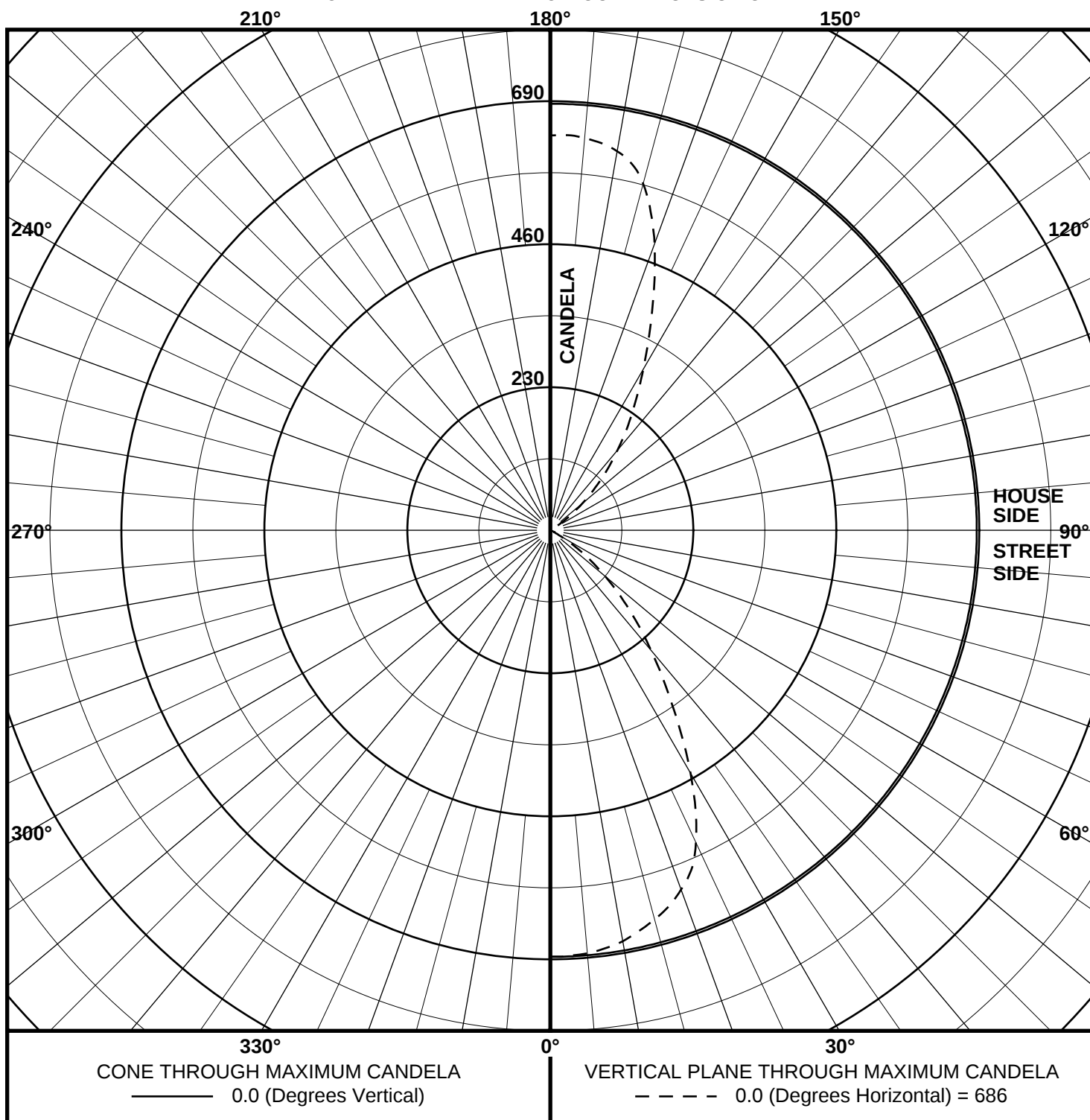
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MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

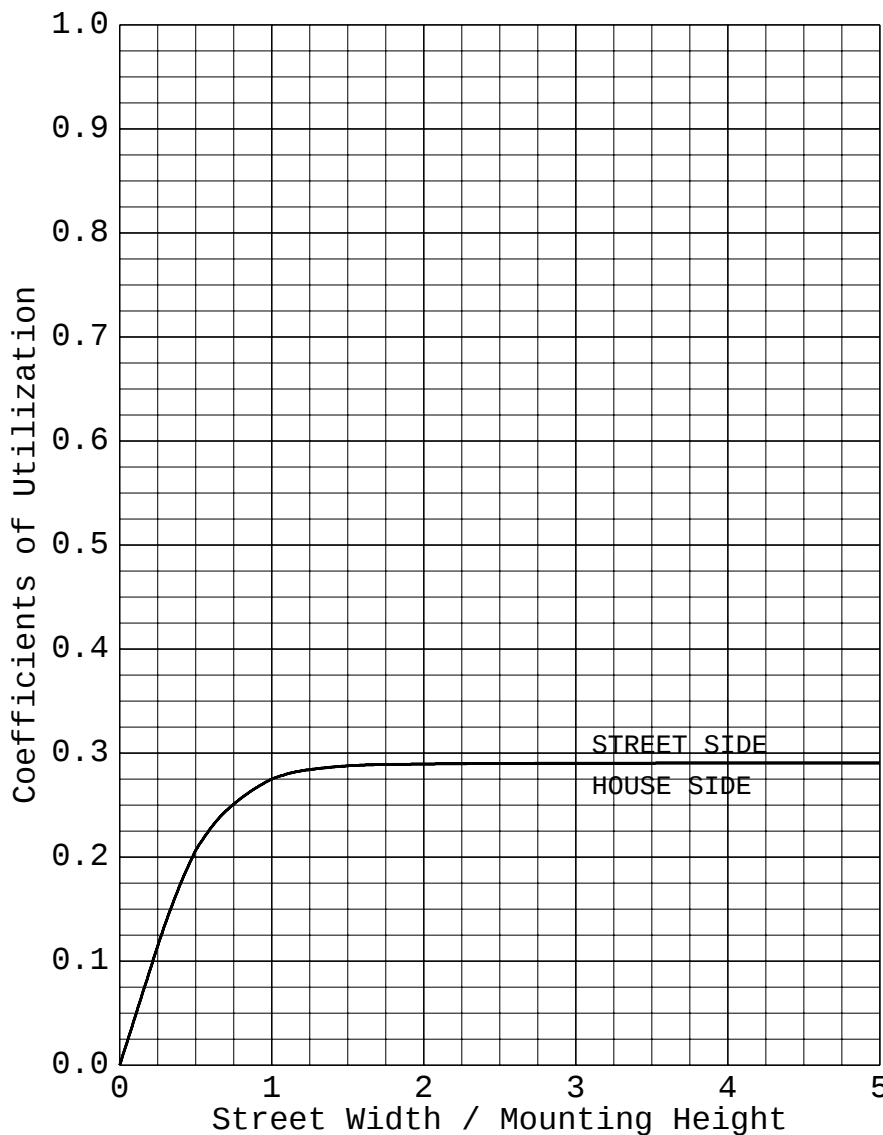




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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	460	29.1
DOWNWARD HOUSE SIDE	460	29.1
DOWNWARD TOTAL	920	58.2
UPWARD STREET SIDE	331	20.9
UPWARD HOUSE SIDE	331	20.9
UPWARD TOTAL	662	41.8
TOTAL FLUX	1582	100.0

EFFICACY = 24.3 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.



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BUG Rating				B1	U4	G0		
Zonal Summary				Lumens	% of Fixture	Zone Ratings		
						B	U	G
Forward				460	29.1			
FL	(0° – 30°)		248.9	15.7				
FM	(30° – 60°)		205.0	13.0				
FH	(60° – 80°)		5.8	0.4				G0
FVH	(80° – 90°)		0.2	0.0				G0
Backward				460	29.1			
BL	(0° – 30°)		248.9	15.7	B1			
BM	(30° – 60°)		205.0	13.0	B0			
BH	(60° – 80°)		5.8	0.4	B0			G0
BVH	(80° – 90°)		0.2	0.0				G0
Upward				662	41.8			
UL	(90° – 100°)		0.0	0.0			U0	
UH	(100° – 180°)		661.7	41.8			U4	
Trapped Light				0	0.0			
Total Flux				1582	100.0			



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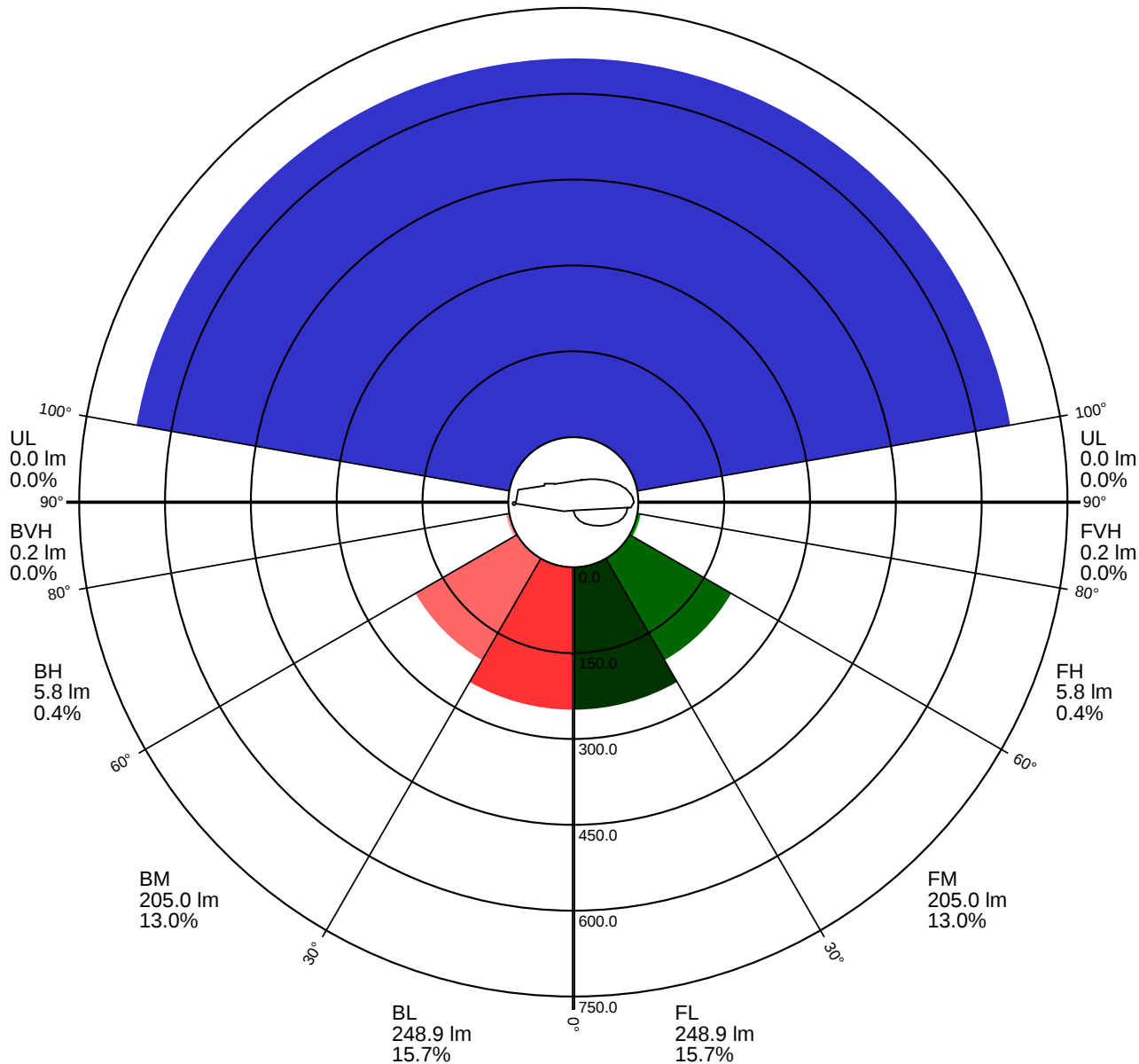
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Zonal Lumen Summary

(Linear scale)

UH
661.7 lm
41.8%





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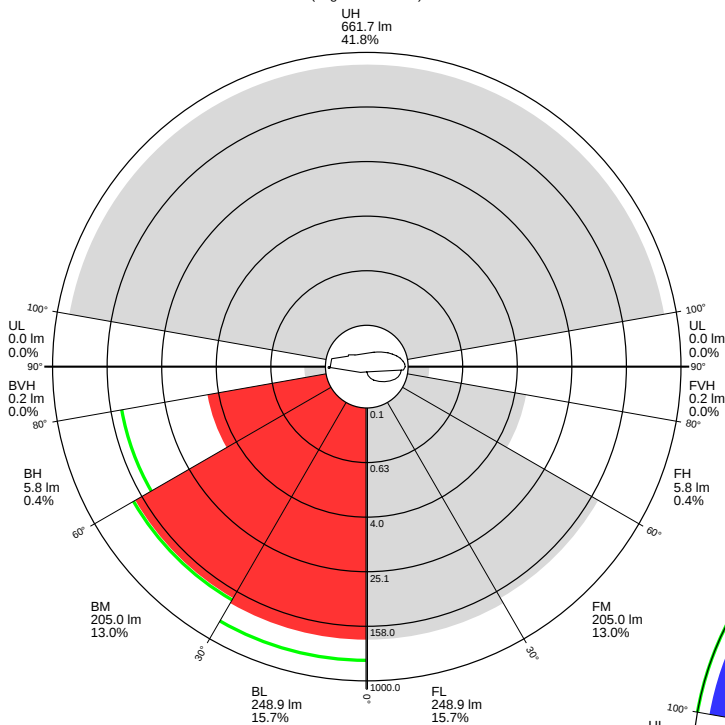
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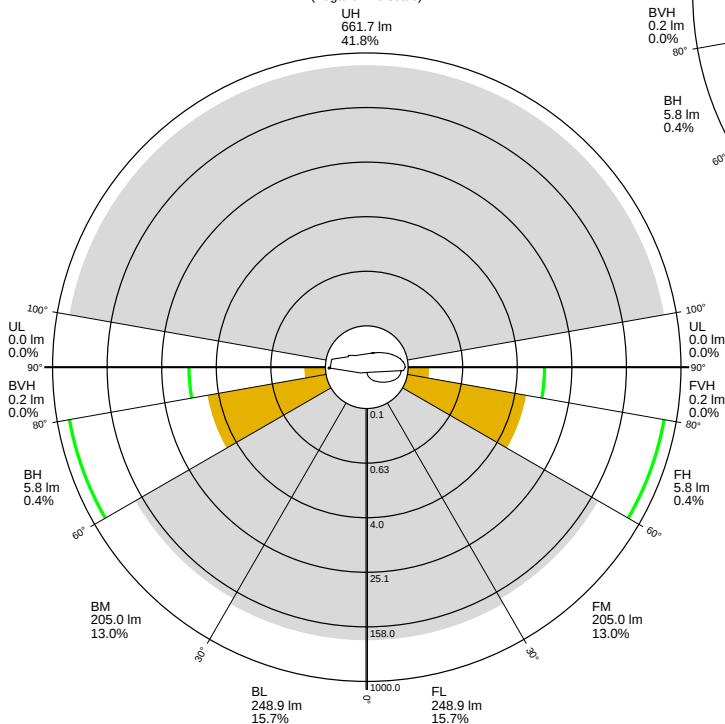
Backlight Rating Details

(Logarithmic scale)



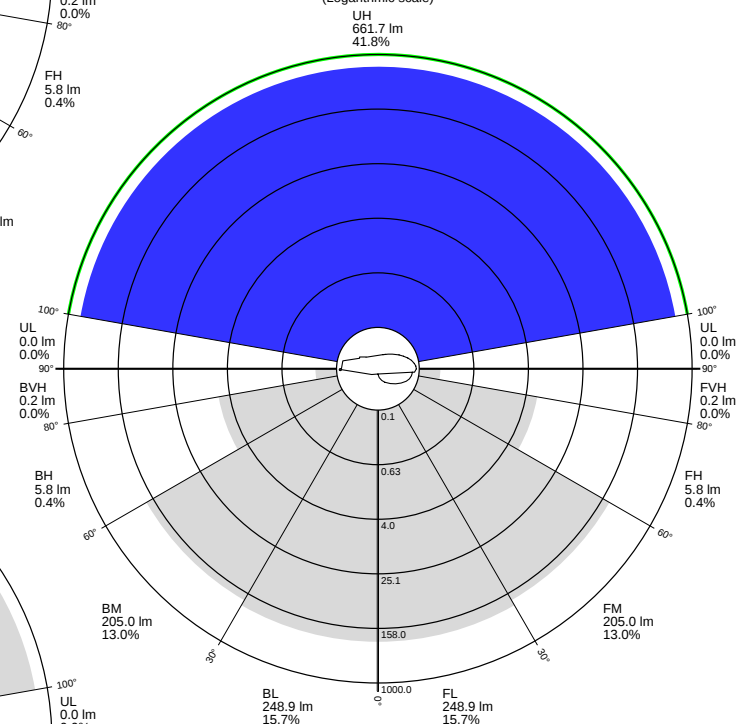
Glare Rating Details

(Logarithmic scale)



Uplight Rating Details

(Logarithmic scale)





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CANDELA TABULATION

TYPE V

	180.0	635.
	175.0	633.
	165.0	577.
	155.0	387.
	145.0	229.
	135.0	115.
	125.0	28.
	115.0	4.
	105.0	1.
	95.0	0.
	92.5	0.
	90.0	0.
	87.5	0.
	85.0	0.
V	82.5	1.
E	80.0	1.
R	77.5	2.
T	75.0	3.
I	72.5	4.
C	70.0	5.
A	67.5	6.
L	65.0	7.
	62.5	9.
A	60.0	20.
N	57.5	40.
G	55.0	63.
L	52.5	88.
E	50.0	115.
	47.5	146.
	45.0	178.
	42.5	214.
	40.0	252.
	37.5	295.
	35.0	341.
	32.5	395.
	30.0	451.
	25.0	554.
	20.0	615.
	15.0	648.
	10.0	671.
	5.0	683.
	0.0<<	686.

CONE OF MAXIMUM CANDELA



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5-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 5		16
5- 10		48
10- 15		78
15- 20		104
20- 25		123
25- 30		127
30- 35		116
35- 40		98
40- 45		79
45- 50		59
50- 55		38
55- 60		19
60- 65		5
65- 70		3
70- 75		2
75- 80		1
80- 85		0
85- 90		0
90- 95		0
95-100		0
100-105		0
105-110		1
110-115		2
115-120		2
120-125		7
125-130		21
130-135		37
135-140		52
140-145		66
145-150		77
150-155		86
155-160		92
160-165		88
165-170		71
170-175		45
175-180		15

10-DEGREE		
ZONAL	LUMEN	SUMMARY
0- 10		65
0- 20		247
0- 30		498
0- 40		712
0- 50		851
0- 60		908
0- 70		916
0- 80		920
0- 90		920
0-100		920
0-110		921
0-120		925
0-130		952
0-140		1041
0-150		1184
0-160		1362
0-170		1522
0-180		1582

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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

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
Goniophotometer	ITL/HLI LAB 5 - Test Distance: 56.0'	N/A	N/A
Power Analyzer	Yokogawa / WT 332	C2QA27072V	10/31/2020
Power Source	Voltage-Regulated House Power	N/A	N/A
Thermometer	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

Test Equipment Used - Color & SPD; THD & Power Factor

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
3-Meter Sphere	Labsphere / LMS-3M	N/A	Calibration Checked Daily
Thermometer	National Instruments / USB TC01	1912751	10/31/2020
Power Analyzer	Yokogawa / WT332	C2QA27075V	10/31/2020
Power Supply	Chroma / 61602	616020002113	N/A
Power Supply PF/THD	Voltage-Regulated House Power	N/A	N/A
Aux Lamp Supply	GW Instek / PSU 150-10	GER221028	N/A
Cal Lamp Supply	Labsphere / LPS-150-0268	1218148505	N/A
Spectrometer	Labsphere / CDS 1100	0624117792	N/A

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