

Project Number
16.03584



Date
1/5/2017

LAB 6
Sphere

Test Sample Description

Catalog Number: P560052-020-30
Description: 1-Lt. LED Med Wall Lantern

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 21:20
Time To Stabilize: 1:20
Total Operating Time: 23:53

Input Voltage (Volts): 120.2
Input Current (Amps): 0.078
Input Wattage (Watts): 9.3
Ambient Temp (°C): 25.7
PF @ 277V: 0.992
THD @ 277V (%): 12.2

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 1:00
Time To Stabilize: 1:12
Total Operating Time: 2:12

Input Voltage (Volts): 120.0
Input Current (Amps): 0.078
Input Wattage (Watts): 9.3
Ambient Temp (°C): 24.6



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Greenville, SC 29607
www.hubbellighting.com

Checked (sphere): B. LEE
Checked (photometry): M. ELLMANN
Approved: D. BLACK



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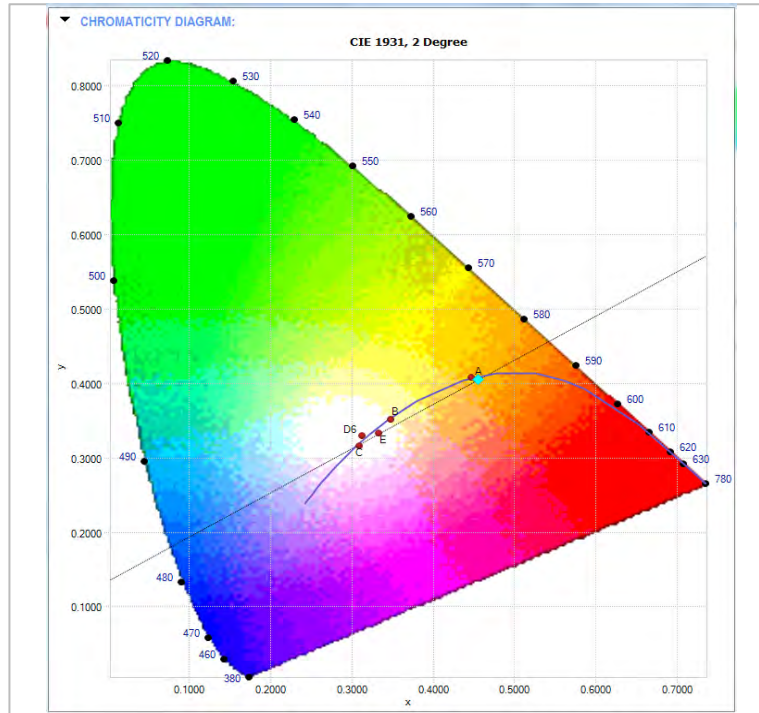


Lamp Cat#: 93070270-3330
 Lamp Desc: 20 - Nichia 3000K LEDs
 Driver Desc: n/a

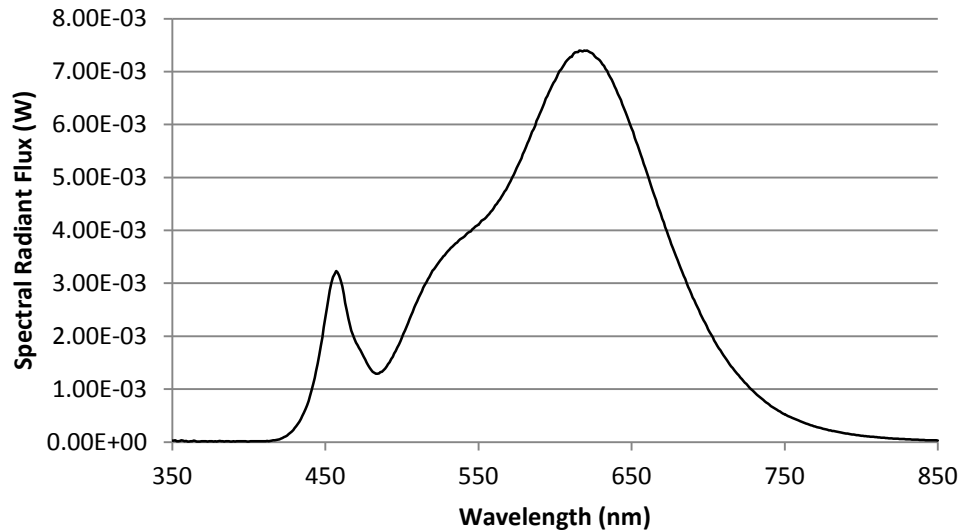
Efficacy: 36.5 LPW S/P Ratio: 1.3 LM/LM

Spectral Results

Name	Value	Unit
Φ	1.17	watts
$\Phi(v)$	339	lumens
$\Phi(v')$	439	lm'
Chrom x	0.4556	
Chrom y	0.406	
Chrom u	0.2618	
Chrom v	0.35	
Duv	0.0016	
Chrom u'	0.2618	
Chrom v'	0.525	
CCT	2723	K
Purity	58.6	%
λ (dom)	584.5	nm
FWHM	143.3	nm
λ (peak)	620.6	nm
λ (center)	604.9	nm
λ (centroid)	598.2	nm
SDCM	Cool White	
RA	92	
Corr. Coef.	0.001345609	
Correlation	0.0054	
R1	92.2	
R2	96.8	
R3	98.2	
R4	91.2	
R5	91.8	
R6	96.1	
R7	89.0	
R8	76.7	
R9	50.2	
R10	91.3	
R11	92.4	
R12	80.7	
R13	93.8	
R14	99.0	



Spectral Distribution of Radiant Flux



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LUMINAIRE: 1-Lt. LED Med Wall Lantern

LAMP CAT. NO.: 93070270-3330

LAMP: 20-NICHIA 3000K LEDs

MOUNTING: Wall

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



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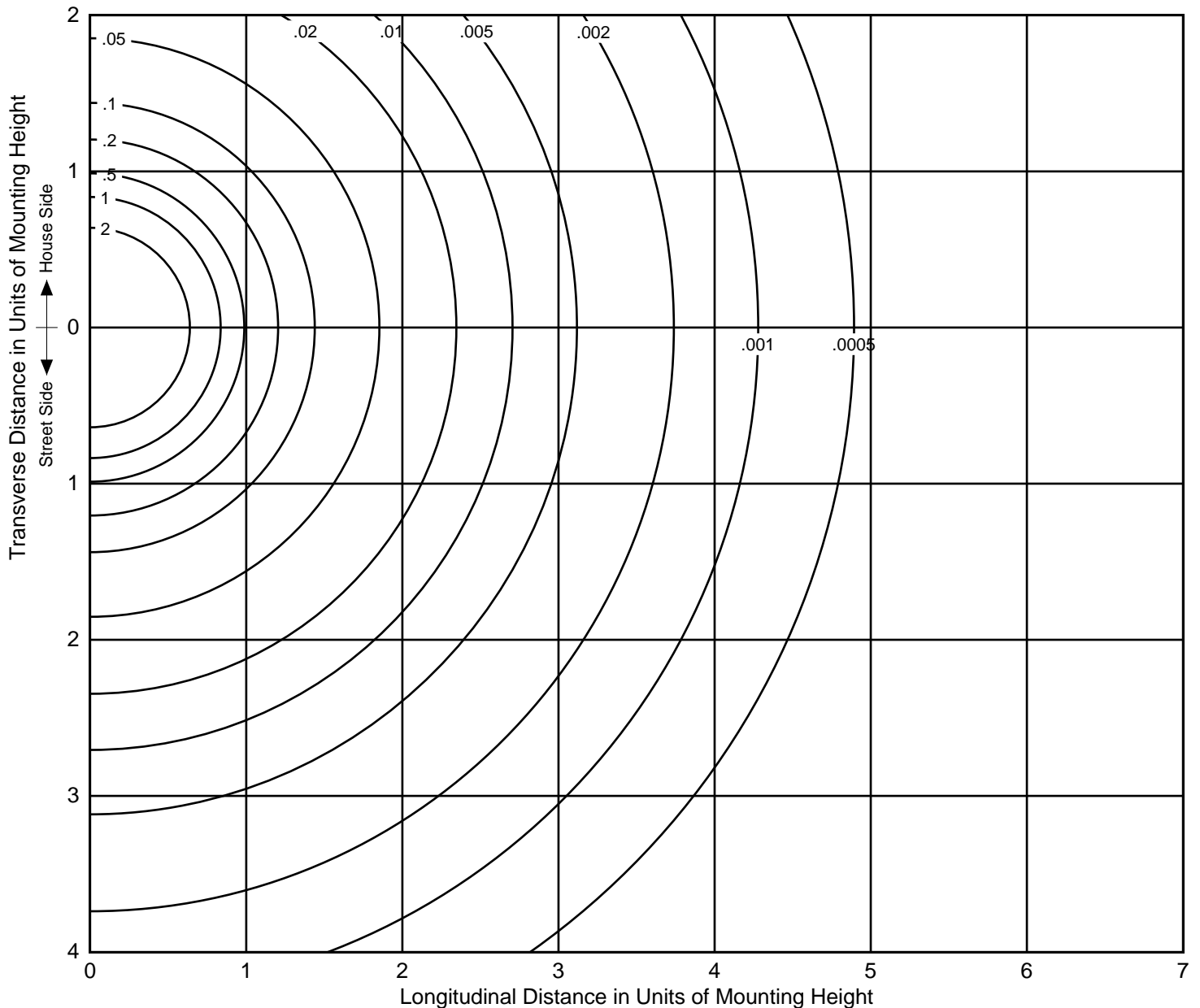
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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION Values based on 6.5-foot mounting height

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





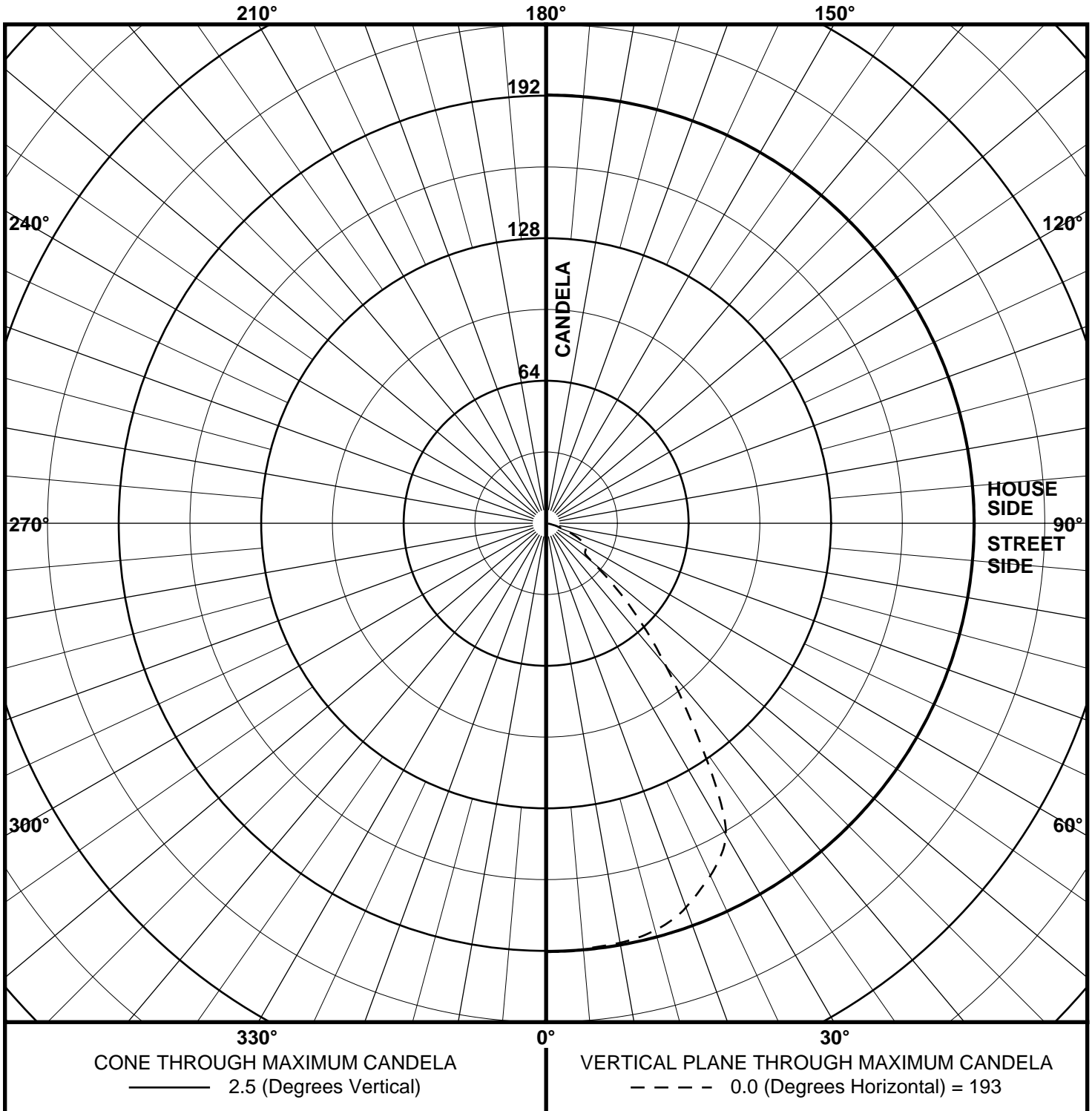
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MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA





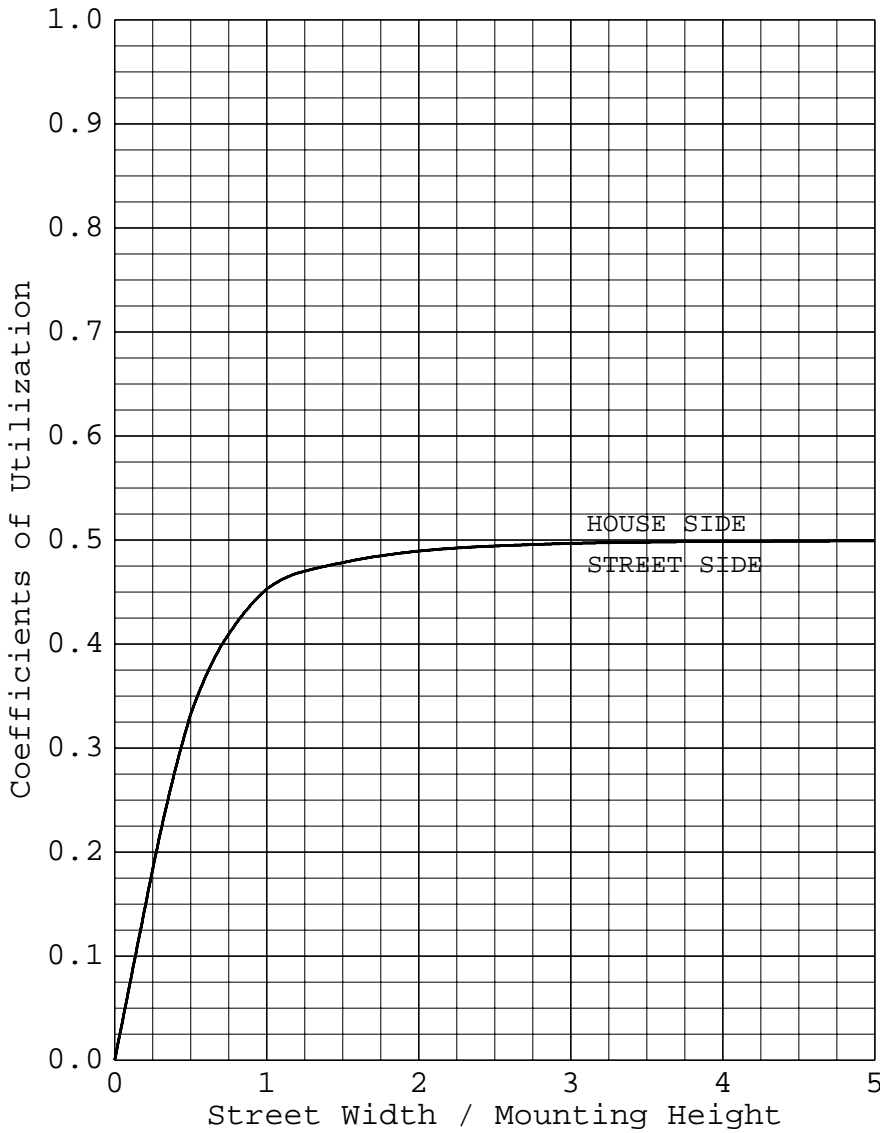
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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	156	50.0
DOWNWARD HOUSE SIDE	156	50.0
DOWNWARD TOTAL	311	100.0
UPWARD STREET SIDE	0	0.0
UPWARD HOUSE SIDE	0	0.0
UPWARD TOTAL	0	0.0
TOTAL FLUX	311	100.0

Total Input Watts 9.3
EFFICACY = 33.4 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 Zonal Summary	Lumens	% of Fixture	Zone Ratings		
			B0	U0	G0
			B	U	G
Forward	156	50.0			
FL (0° – 30°)	75.9	24.4			
FM (30° – 60°)	68.8	22.1			
FH (60° – 80°)	10.5	3.4			G0
FVH (80° – 90°)	0.3	0.1			G0
Backward	156	50.0			
BL (0° – 30°)	75.9	24.4	B0		
BM (30° – 60°)	68.8	22.1	B0		
BH (60° – 80°)	10.5	3.4	B0		G0
BVH (80° – 90°)	0.3	0.1			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	311	100.0			



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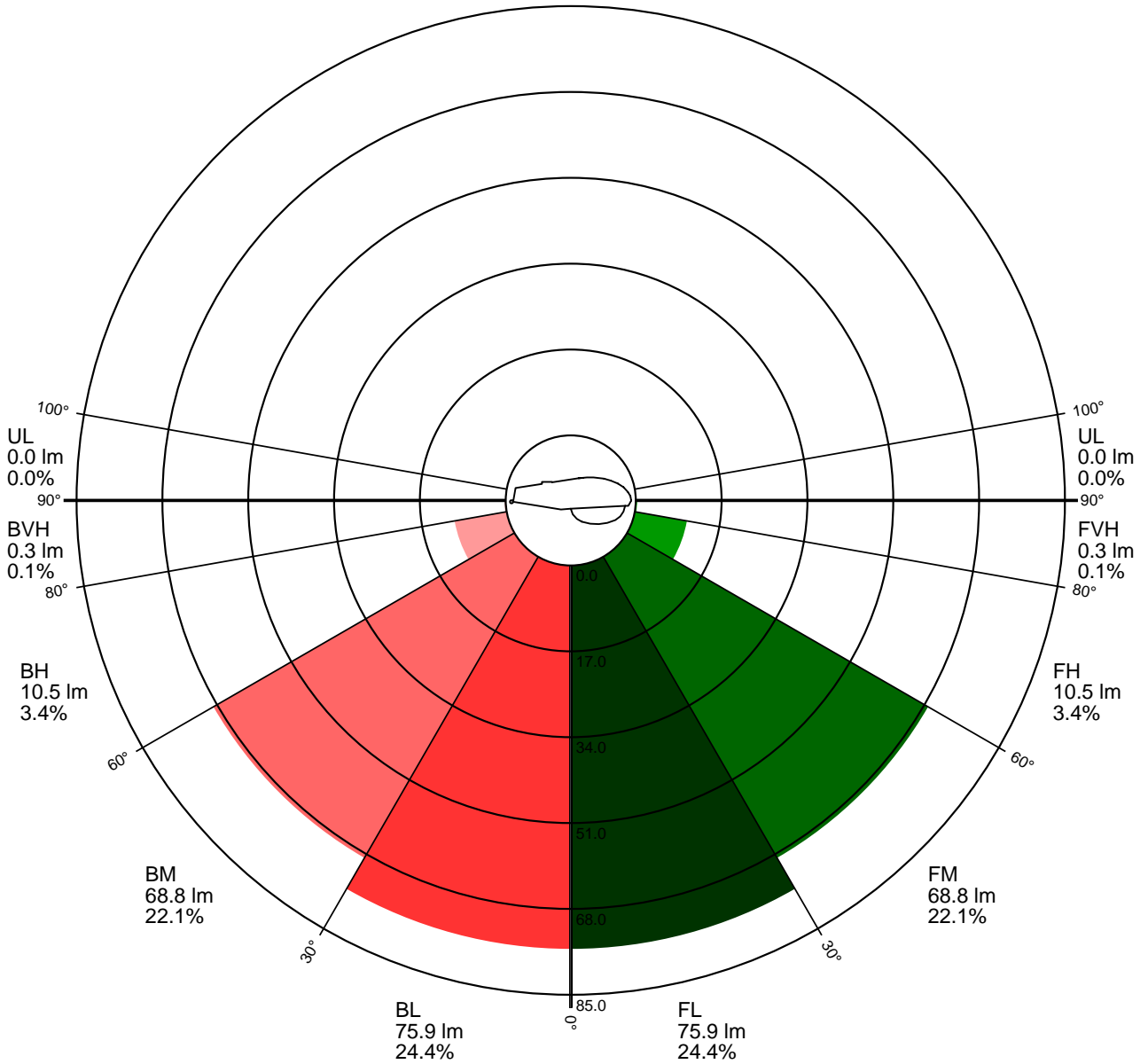
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Zonal Lumen Summary

(Linear scale)

UH
0.0 lm
0.0%





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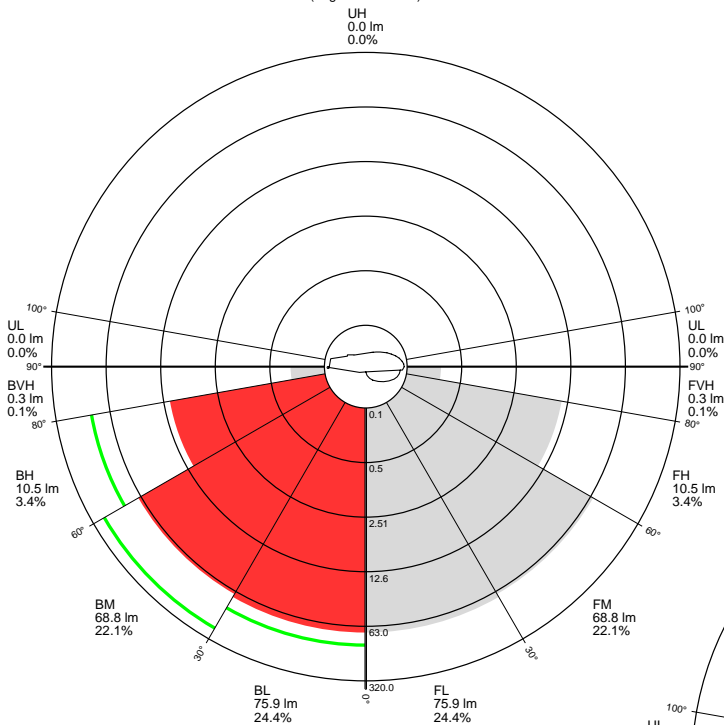
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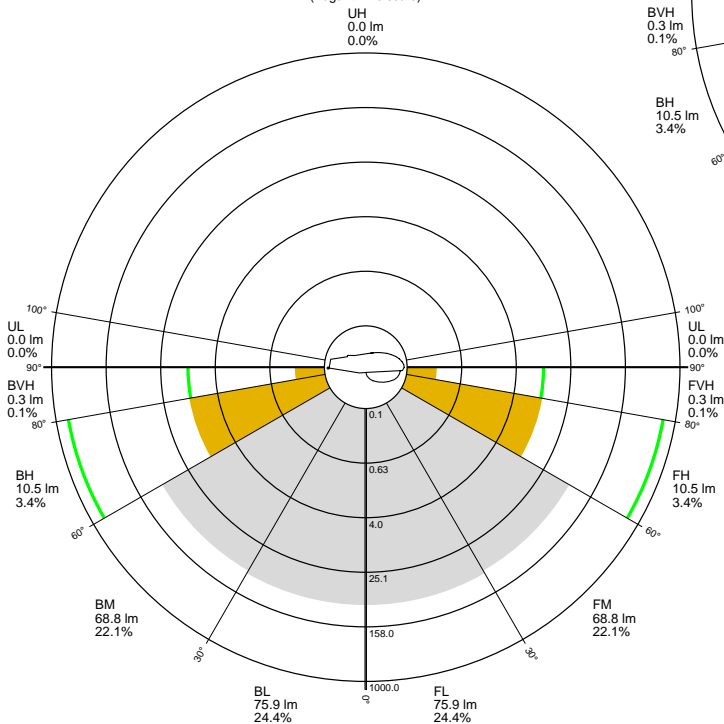
Backlight Rating Details

(Logarithmic scale)



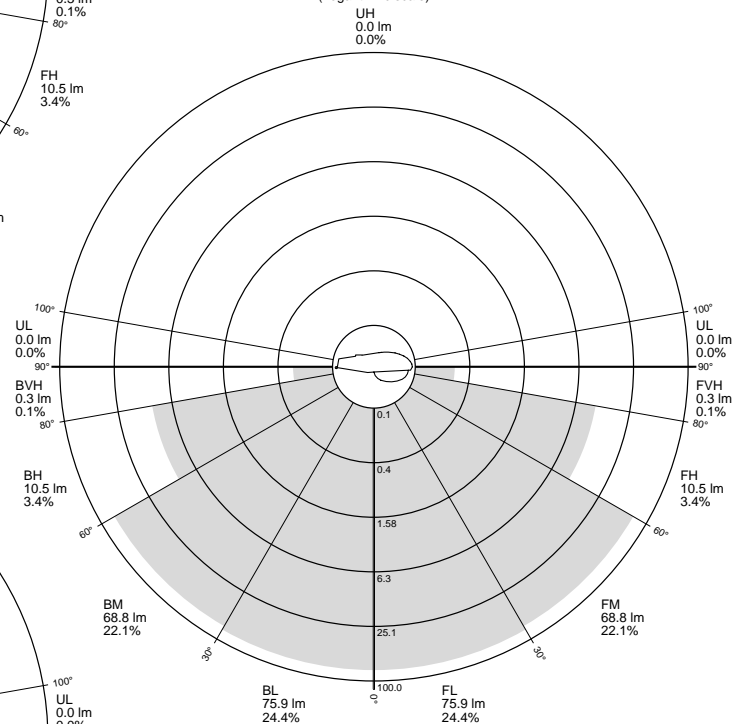
Glare Rating Details

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Uplight Rating Details

(Logarithmic scale)





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CANDELA TABULATION

	TYPE	V
	90.0	0.
	87.5	0.
	85.0	0.
	82.5	1.
	80.0	2.
	77.5	3.
	75.0	5.
	72.5	7.
	70.0	10.
	67.5	13.
	65.0	16.
V	62.5	19.
E	60.0	20.
R	57.5	21.
T	55.0	22.
I	52.5	22.
C	50.0	28.
A	47.5	41.
L	45.0	55.
	42.5	69.
A	40.0	84.
N	37.5	101.
G	35.0	121.
L	32.5	144.
E	30.0	162.
	27.5	169.
	25.0	175.
	22.5	179.
	20.0	184.
	17.5	187.
	15.0	189.
	12.5	191.
	10.0	191.
	7.5	192.
	5.0	192.
	2.5<<	193.
	0.0	192.

CONE OF MAXIMUM CANDELA



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5-DEGREE ZONAL LUMEN SUMMARY		
0- 5		5
5- 10		14
10- 15		23
15- 20		31
20- 25		38
25- 30		43
30- 35		42
35- 40		34
40- 45		26
45- 50		17
50- 55		10
55- 60		10
60- 65		9
65- 70		6
70- 75		4
75- 80		2
80- 85		0
85- 90		0

10-DEGREE ZONAL LUMEN SUMMARY		
0- 10		18
10- 20		53
20- 30		80
30- 40		76
40- 50		42
50- 60		20
60- 70		16
70- 80		5
80- 90		1

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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: 09/02/2016

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	ITL/HLI LAB 6 - Test Distance: 31.3'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27076V	11/2/2017
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	1912745	11/2/2017

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>Power Supply PF/THD</i>	Voltage-Regulated House Power	N/A	N/A
<i>Aux Lamp Supply</i>	Labsphere / LPS-100-0833	031159372	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

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