

Project Number
17.02770



Date
10/10/2017

Lab 4
Sphere

Test Sample Description

Catalog Number: P5741-2030K
Description: 6" Diameter Surface-Mount Cylinder w/ Opal Lens

*DUT did not meet photometric stabilization criteria. Data trended strait and steady, but peak to peak values within trend varied about 0.7%. Test started after trending for 10 hours.

Photometry

Test Method: IES LM-79-08 § 10
Preburn Time: 0:30
Time To Stabilize: 10:00*
Total Operating Time: 10:55

Input Voltage (Volts): 119.9
Input Current (Amps): 0.263
Input Wattage (Watts): 29.4
Ambient Temp (°C): 24.9

Sphere

Test Method: IES LM-79-08 § 9.1 & 12.1
Preburn Time: 1:00
Time To Stabilize: 1:11
Total Operating Time: 2:11

Input Voltage (Volts): 120.0
Input Current (Amps): 0.261
Input Wattage (Watts): 29.1
Ambient Temp (°C): 24.0
PF @ 120V: 0.936
THD @ 120V (%): 39.0



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Checked (sphere): B. LEE
Checked (photometry): R. HALL
Approved: P. McCARTHY



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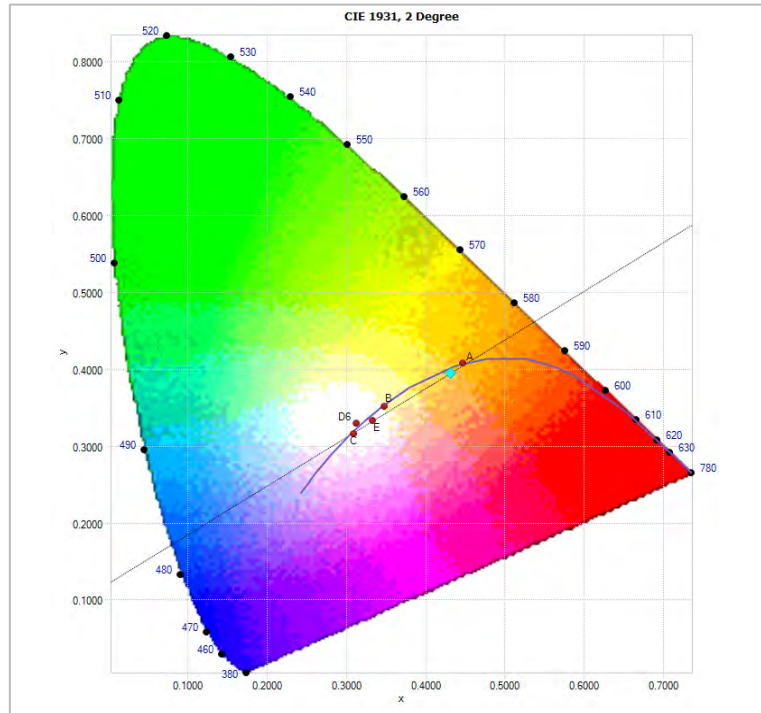


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Lamp Cat#: NA
Lamp Desc: 40 - 3000K LEDs
Driver Desc: NA

Efficacy: 31.5 LPW S/P Ratio: 1.5 LM/LM

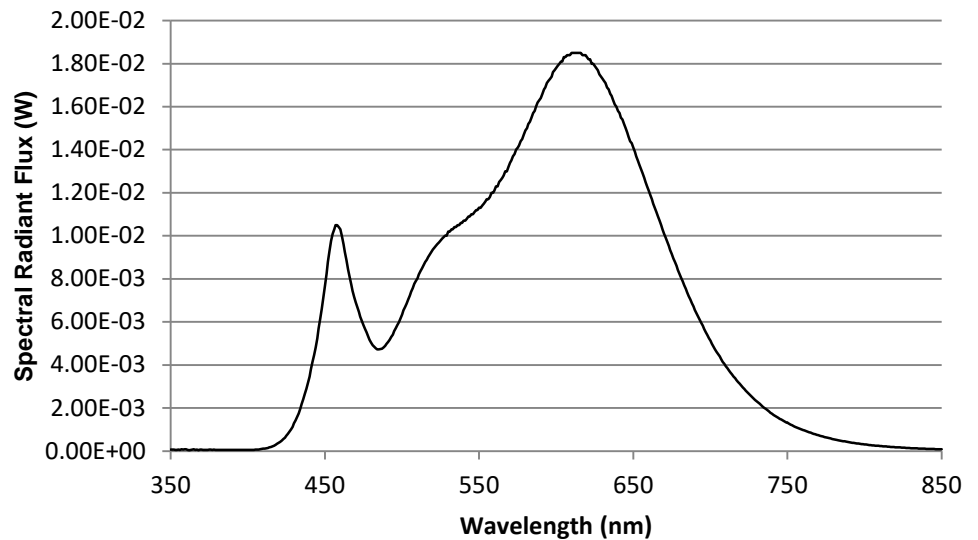
Chromaticity Diagram



Spectral Results

Name	Value	Unit
Φ	3.13	watts
$\Phi(v)$	916	lumens
$\Phi(v')$	1330	lm'
Chrom x	0.4312	
Chrom y	0.3953	
Chrom u	0.2507	
Chrom v	0.3447	
Duv	0.0028	
Chrom u'	0.2507	
Chrom v'	0.517	
CCT	3023	K
Purity	48.1	%
λ (dom)	583.8	nm
FWHM	155.1	nm
λ (peak)	613.4	nm
λ (center)	596.8	nm
λ (centroid)	590.0	nm
SDCM	Cool White	
RA	91	
Corr. Coef.	0.002766568	
Correlation	0.0054	
R1	92.6	
R2	97.9	
R3	96.6	
R4	90.7	
R5	92.5	
R6	95.8	
R7	88.1	
R8	76.4	
R9	49.8	
R10	94.1	
R11	91.9	
R12	81.2	
R13	94.5	
R14	99.3	

Spectral Distribution of Radiant Flux



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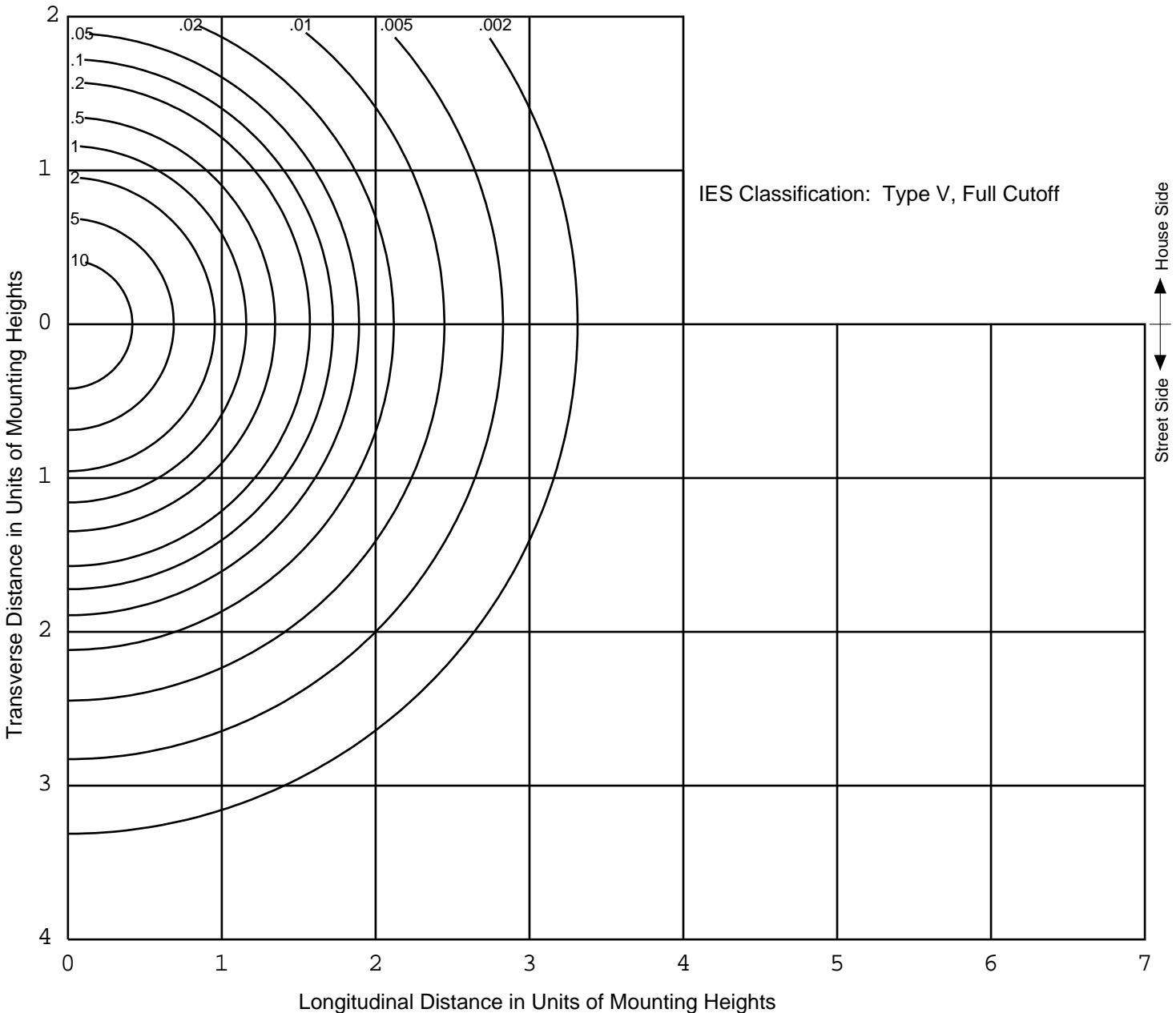


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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION
Values based on 6.5 foot mounting height.

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Cylinder w/ Opal Lens
LAMP: 40- 3000K LEDs



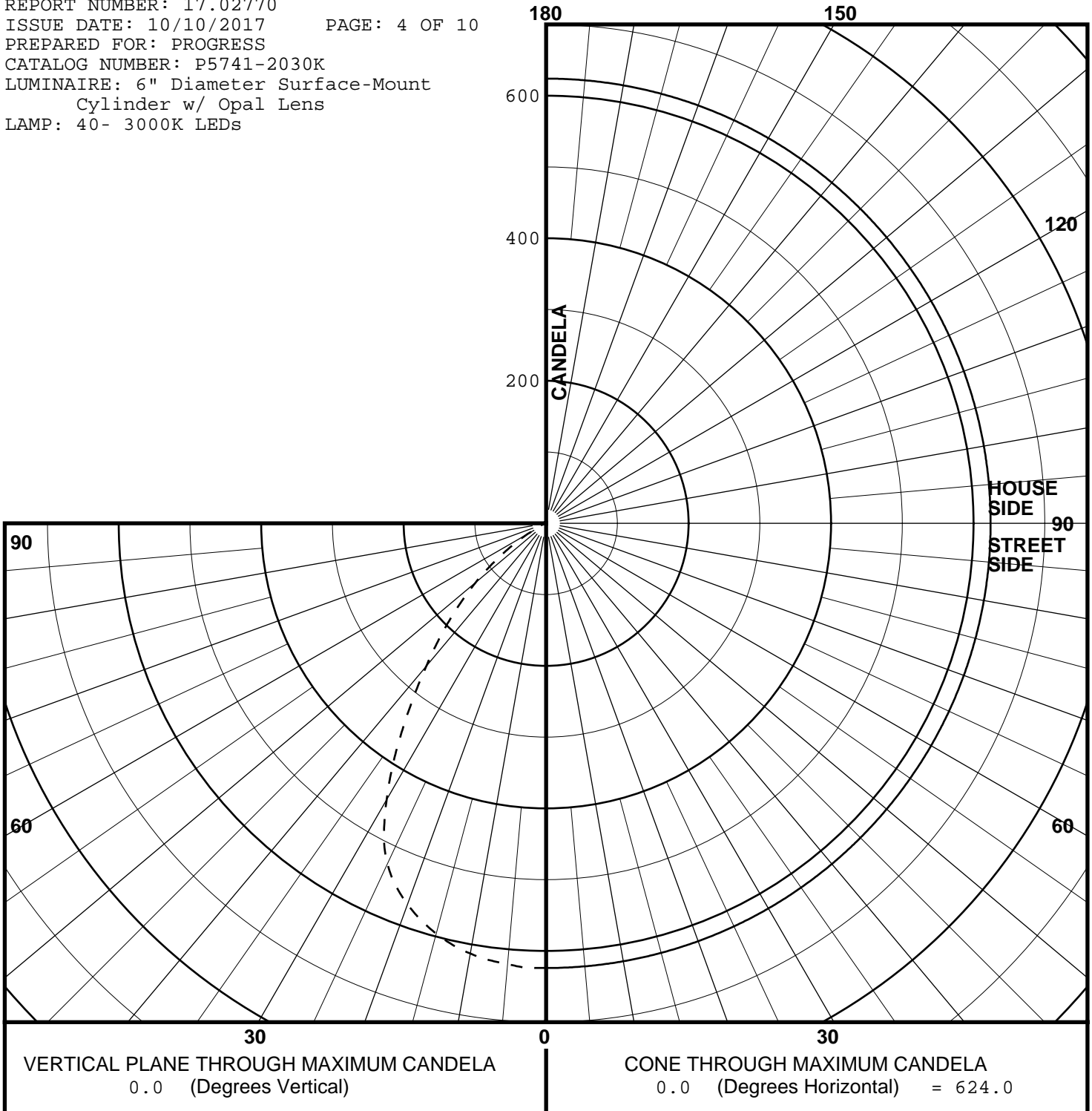


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MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

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LAMP: 40- 3000K LEDs





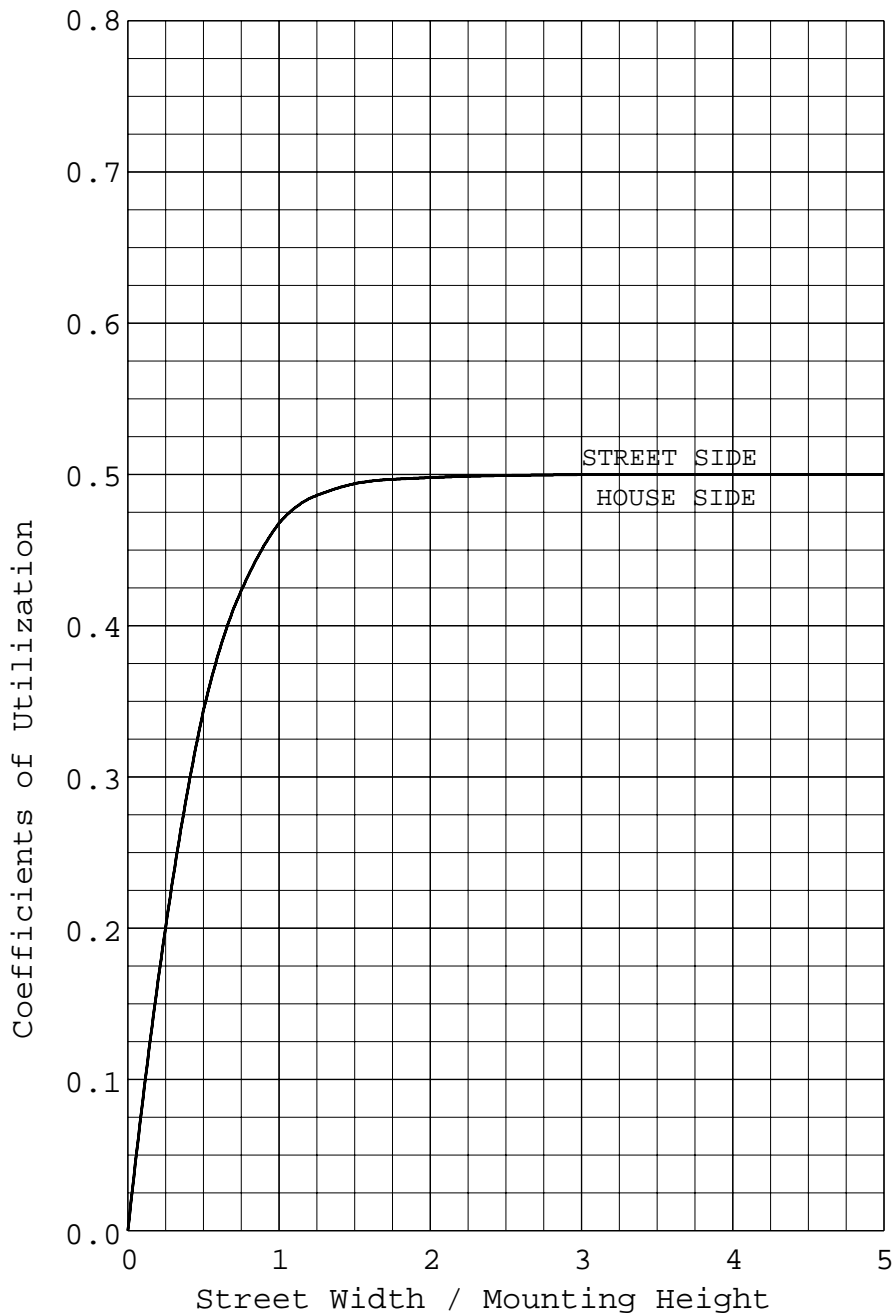
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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	458.	50.0
DOWNWARD HOUSE SIDE	458.	50.0
DOWNWARD TOTAL	915.	100.0
UPWARD STREET SIDE	0.	0.0
UPWARD HOUSE SIDE	0.	0.0
UPWARD TOTAL	0.	0.0
TOTAL FLUX	915.	100.0
TOTAL INPUT WATTS = 29.371		
EFFICACY = 31.2 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.

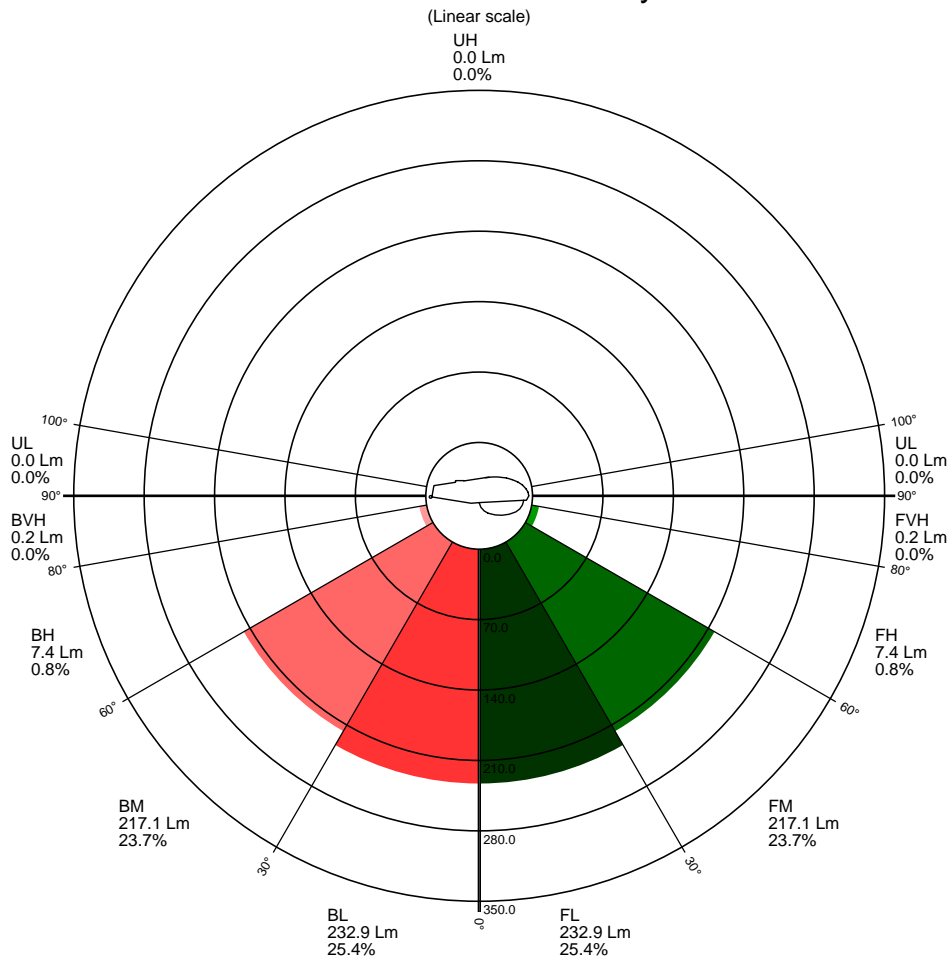


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BUG Rating:			Zone Ratings					
Zonal Summary			Lumens	% of Fixture	B1	U0	G0	
			Zone Ratings			B	U	G
Forward			458	50.0				
FL	(0° - 30°)		232.9	25.4				
FM	(30° - 60°)		217.1	23.7				
FH	(60° - 80°)		7.4	0.8			G0	
FVH	(80° - 90°)		0.2	0.0			G0	
Backward			458	50.0				
BL	(0° - 30°)		232.9	25.4	B1			
BM	(30° - 60°)		217.1	23.7	B0			
BH	(60° - 80°)		7.4	0.8	B0		G0	
BVH	(80° - 90°)		0.2	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			915	100.0				

Zonal Lumen Summary





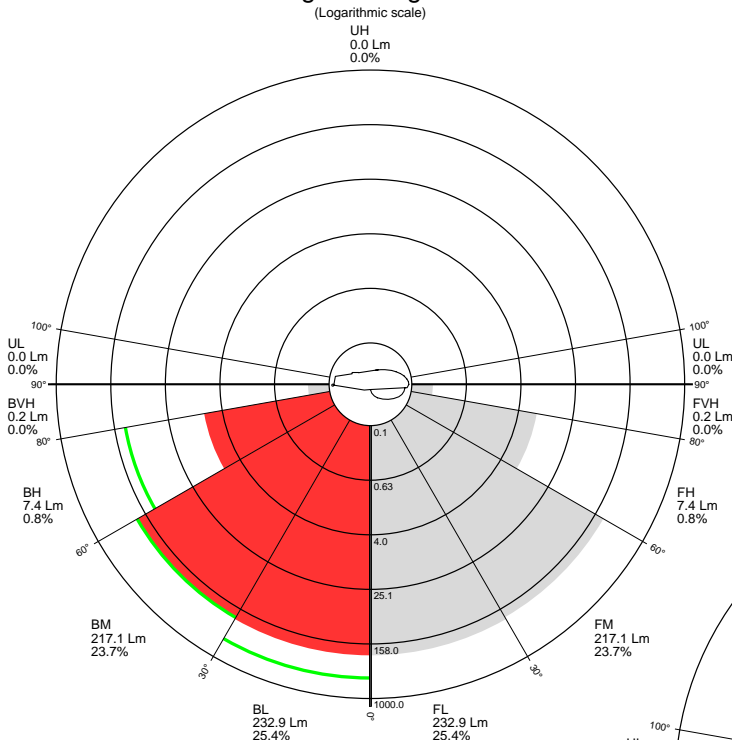
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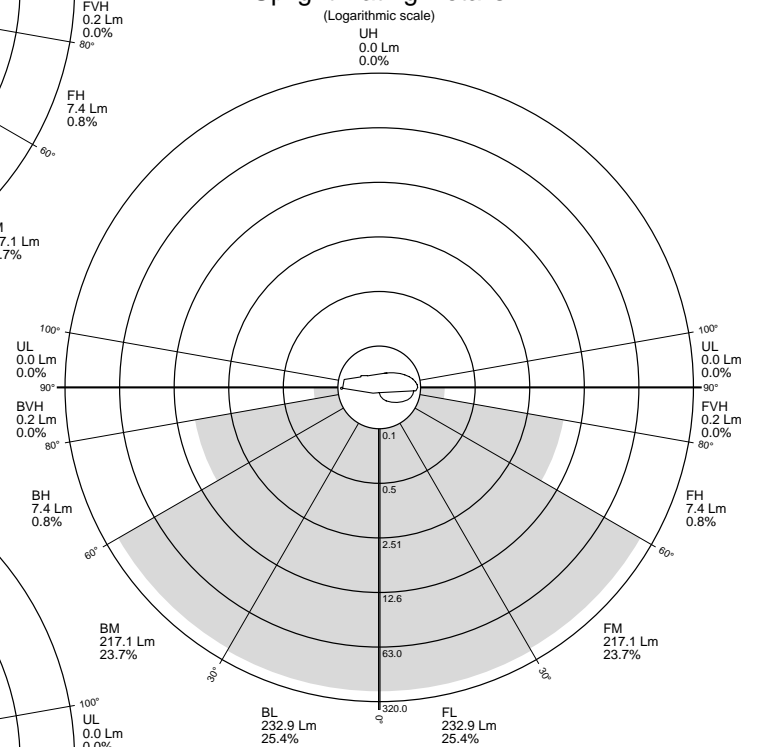
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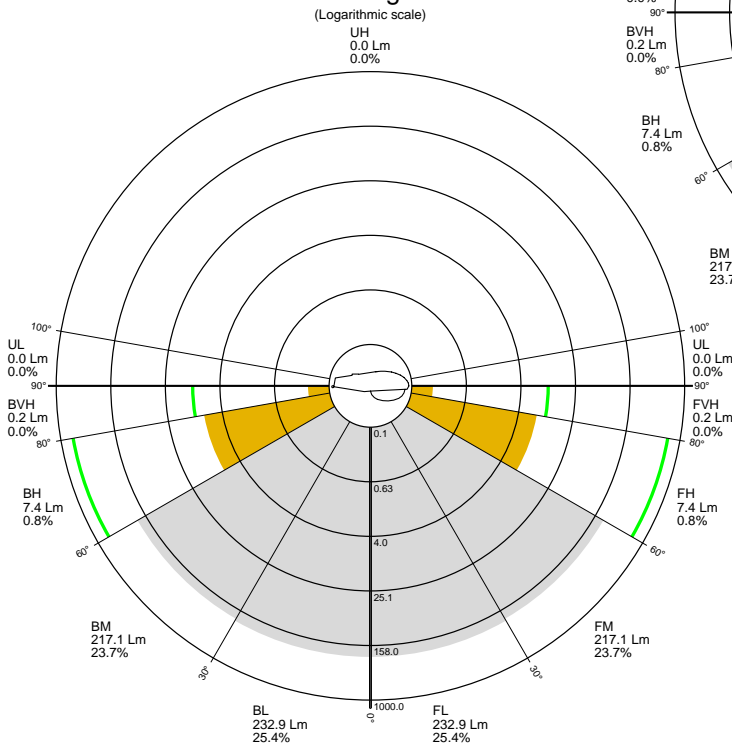
Backlight Rating Details



Uplight Rating Details



Glare Rating Details





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CANDELA TABULATION -- TYPE V

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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	1.
80.0	1.
77.5	1.
75.0	2.
72.5	4.
70.0	6.
67.5	8.
65.0	9.
62.5	14.
60.0	30.
57.5	50.
55.0	74.
52.5	101.
50.0	129.
47.5	159.
45.0	191.
42.5	225.
40.0	262.
37.5	304.
35.0	350.
30.0	448.
25.0	527.
20.0	569.
15.0	596.
10.0	613.
5.0	621.
0.0	624.<<

<< INDICATES MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	15
5- 10	44
10- 15	72
15- 20	96
20- 25	115
25- 30	124
30- 35	117
35- 40	102
40- 45	83
45- 50	64
50- 55	44
55- 60	24
60- 65	8
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	59
0- 20	227
0- 30	466
0- 40	685
0- 50	833
0- 60	900
0- 70	912
0- 80	915
0- 90	915
0-100	915
0-110	915
0-120	915
0-130	915
0-140	915
0-150	915
0-160	915
0-170	915
0-180	915

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Goniophotometer Calibration

Calibration Lamp: Osram ST8-HA4-250-840 22 W/4000 K

Lamp Number: RM B6-28

Ballast: Vossloh Schwabe LN 36.149

Ballast Number: RM B6-28

Calibration Voltage/Frequency: 220Vac / 50hz

Total Luminous Flux: 2463 Lumens

Calibration Date: 01/19/2017

Test Equipment Used

<i>Instrument</i>	<i>Manufacturer / Model</i>	<i>S/N</i>	<i>Calibration Due:</i>
<i>Goniophotometer</i>	LMT/GO-DS 1600 Lab 4- Test Dist.: 31.0'	10B6231	02/17/2019
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27074V	11/02/2017
<i>Power Source</i>	Chroma / 61604	616040003897	N/A
<i>Thermometer</i>	LMT / ATS-4Ch	10B623-3	12/14/2017

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	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

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