

Project Number  
15.00830



**HUBBELL**  
Lighting

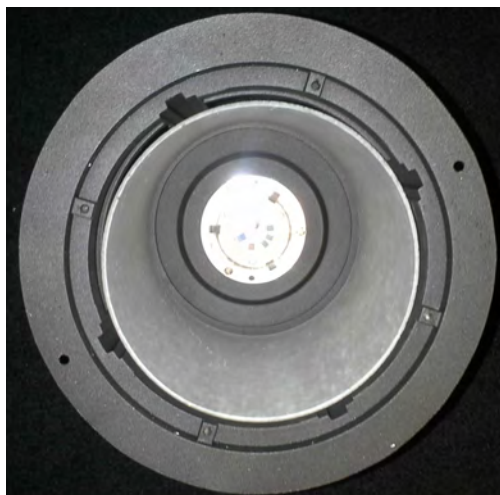
Date  
5/21/2015

LAB 1

### Test Sample Description

Catalog Number: P6424-3130K9  
Description: WISH - 1-Lt. LED Post Lantern w/ HAL 9 W Module

Test Method: IES LM-79-08 § 10  
Preburn Time: 10:15  
Time To Stabilize: 3:37  
Total Operating Time: 14:22  
  
Input Voltage (Volts): 120.0  
Input Current (Amps): 0.069  
Input Wattage (Watts): 7.8  
Ambient Temp (°C): 25.2



### Hubbell Lighting, Inc.

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Checked: D. ROBBINS  
Approved: M. WASHBURN





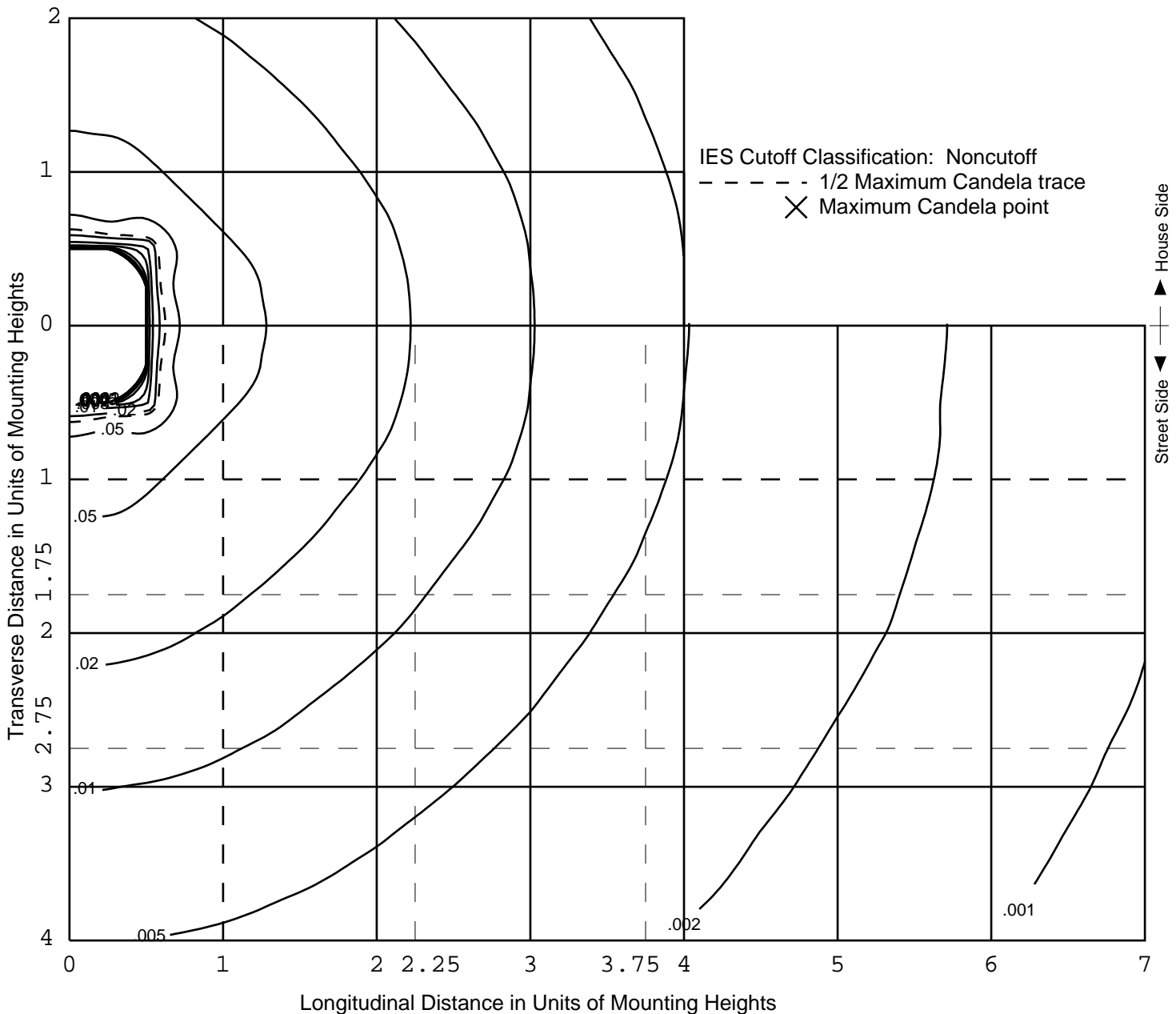
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**ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION**  
Values based on 6.6 foot mounting height.

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CATALOG NUMBER: P6424-3130K9  
LUMINAIRE: WISH - 1-Lt. LED Post  
Lantern w/ HAL 9 W Module  
LAMP CAT. NO.: 93049180-3130  
LAMP: 20 - NICHIA 3000K LEDs  
REFRACTOR: Etched White Linen Glass  
Shade Part# 93061284  
MOUNTING: Post  
NOTE: DATA SHOWN IS ABSOLUTE FOR THE  
SAMPLE PROVIDED.





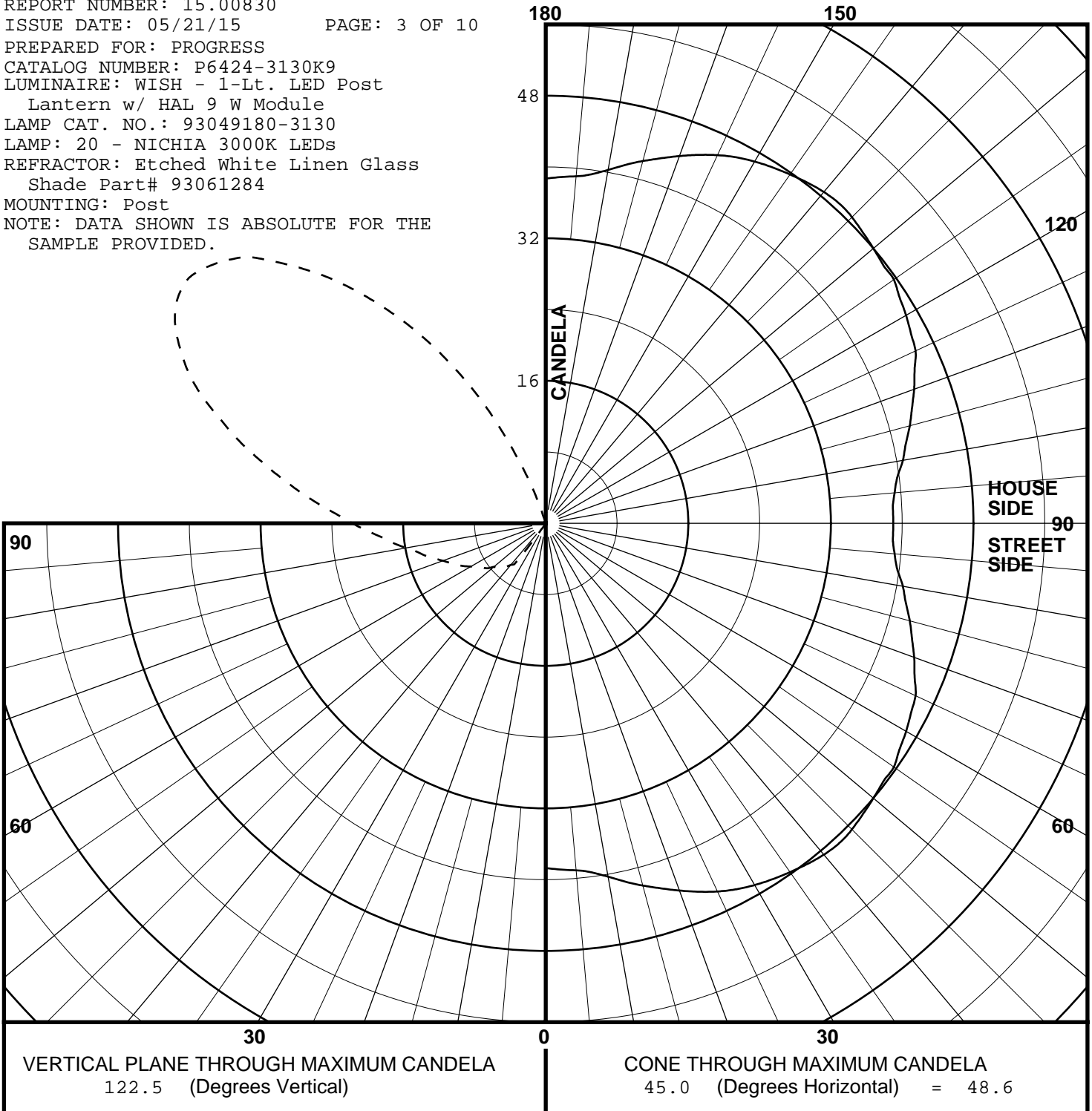
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MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

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 PREPARED FOR: PROGRESS  
 CATALOG NUMBER: P6424-3130K9  
 LUMINAIRE: WISH - 1-Lt. LED Post  
 Lantern w/ HAL 9 W Module  
 LAMP CAT. NO.: 93049180-3130  
 LAMP: 20 - NICHIA 3000K LEDs  
 REFRACTOR: Etched White Linen Glass  
 Shade Part# 93061284  
 MOUNTING: Post  
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE  
 SAMPLE PROVIDED.





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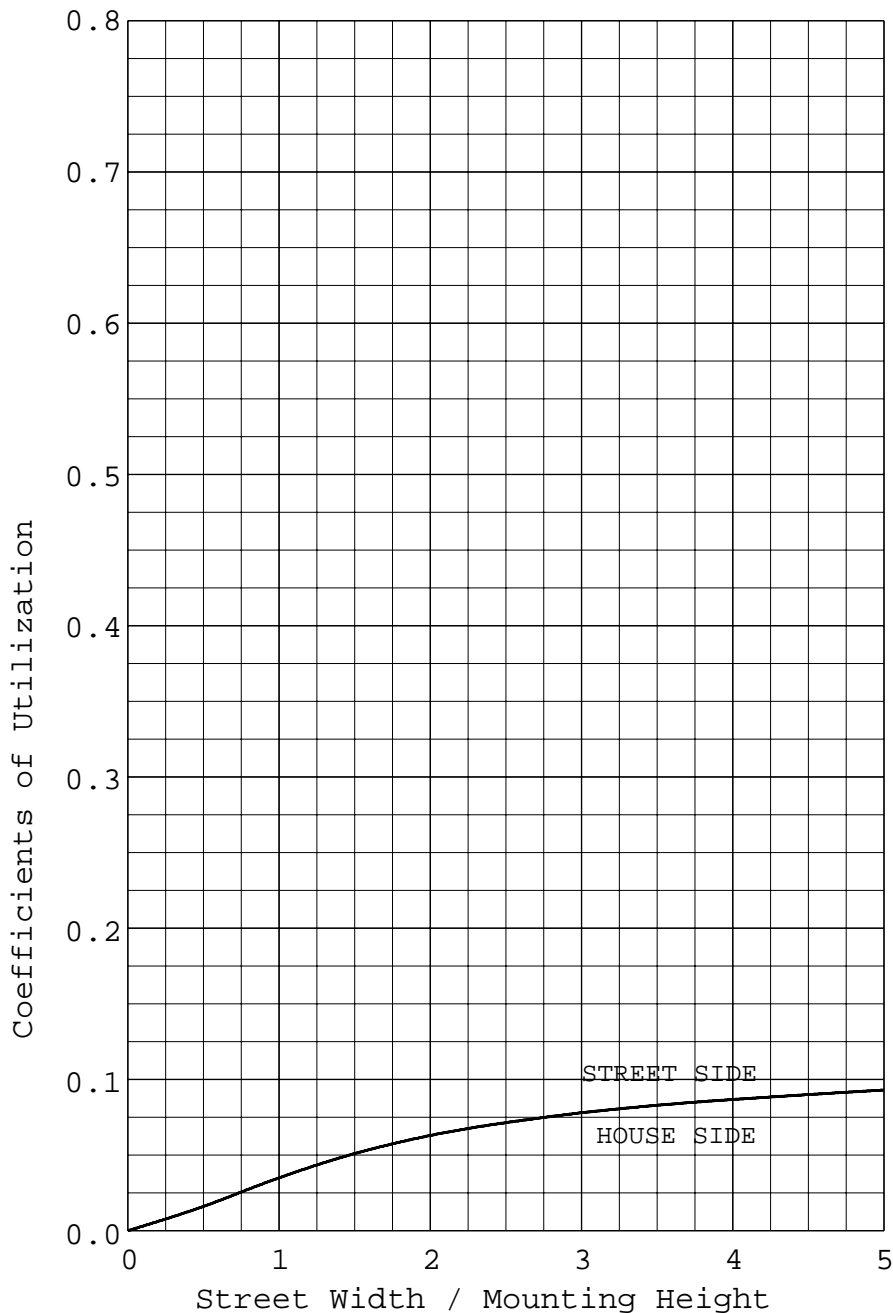
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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	32.	12.4
DOWNWARD HOUSE SIDE	32.	12.4
DOWNWARD TOTAL	63.	24.7
UPWARD STREET SIDE	97.	37.6
UPWARD HOUSE SIDE	97.	37.6
UPWARD TOTAL	193.	75.3
TOTAL FLUX	257.	100.0

TOTAL INPUT WATTS = 7.8  
EFFICACY = 32.9 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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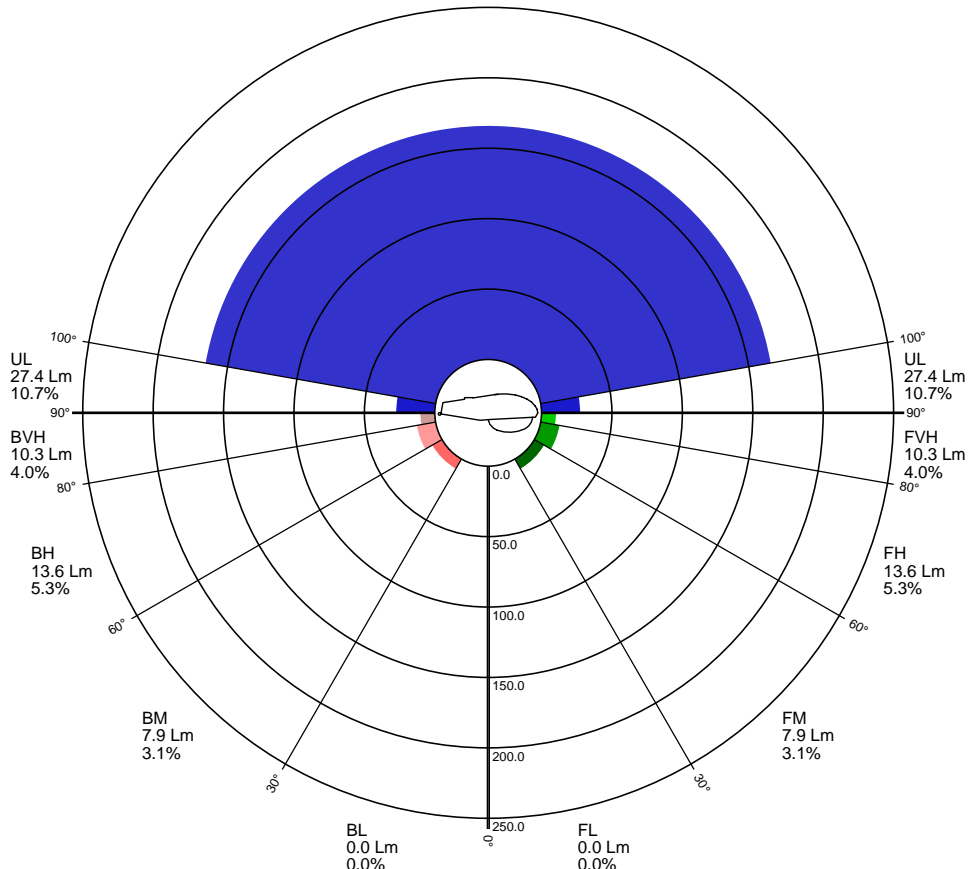
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BUG Rating:			<span style="background-color: red; color: white;">B0</span> <span style="background-color: blue; color: white;">U3</span> <span style="background-color: yellow; color: black;">G1</span>		
Zonal Summary			Lumens	% of Fixture	Zone Ratings
			<span style="background-color: red; color: white;">B</span> <span style="background-color: blue; color: white;">U</span> <span style="background-color: yellow; color: black;">G</span>		
Forward			32	12.4	
FL	(0° - 30°)		0.0	0.0	
FM	(30° - 60°)		7.9	3.1	
FH	(60° - 80°)		13.6	5.3	G0
FVH	(80° - 90°)		10.3	4.0	G1
Backward			32	12.4	
BL	(0° - 30°)		0.0	0.0	B0
BM	(30° - 60°)		7.9	3.1	B0
BH	(60° - 80°)		13.6	5.3	B0
BVH	(80° - 90°)		10.3	4.0	G0
Upward			193	75.3	
UL	(90° - 100°)		27.4	10.7	U2
UH	(100° - 180°)		165.8	64.6	U3
Trapped Light			0	0.0	
Total Flux			257	100.0	

### Zonal Lumen Summary

(Linear scale)

UH  
165.8 Lm  
64.6%





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NVLAP LAB CODE: 201003-0

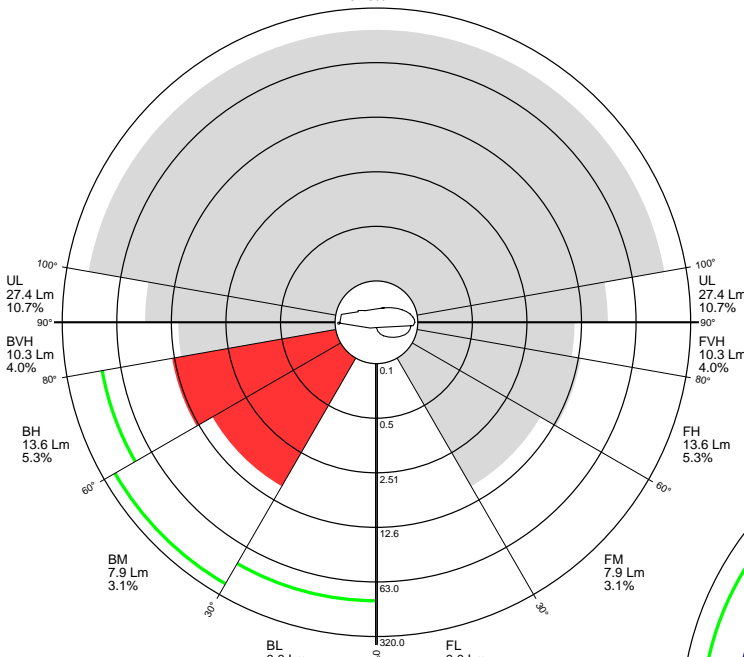
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**Backlight Rating Details**

(Logarithmic scale)

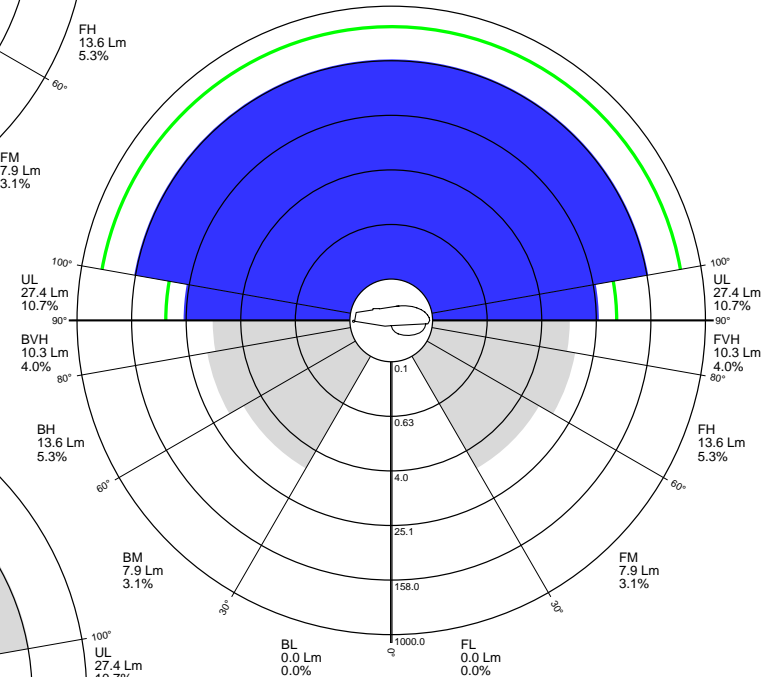
UH  
165.8 Lm  
64.6%



**Uplight Rating Details**

(Logarithmic scale)

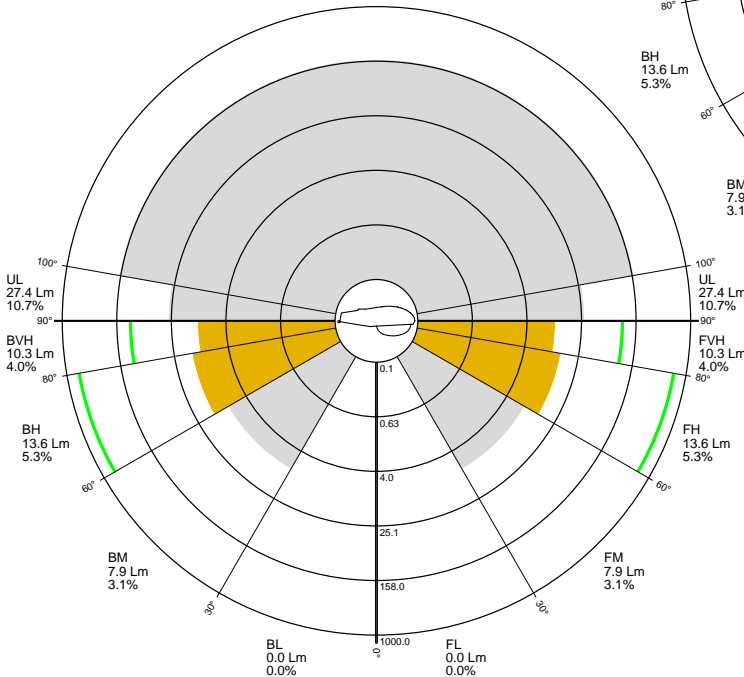
UH  
165.8 Lm  
64.6%



**Glare Rating Details**

(Logarithmic scale)

UH  
165.8 Lm  
64.6%





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CANDELA TABULATION  
STREET SIDE

	LATERAL ANGLE									
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0
	180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	155.0	9.4	9.1	9.7	10.2	10.6	10.7	10.5	10.3	9.7
	145.0	23.9	23.9	24.9	26.1	26.9	27.5	26.9	26.3	25.2
	135.0	33.8	33.9	36.0	38.6	40.4	41.1	40.2	38.8	36.4
	125.0	38.6	39.0	41.9	45.4	47.7	48.5	47.5	45.5	42.1
	122.5<<	38.7	39.1	42.1	45.6	47.8	48.6	47.7	45.8	42.3
	115.0	36.4	36.9	39.8	42.8	44.5	45.1	44.6	42.9	39.8
	105.0	30.3	30.5	32.3	34.2	35.0	35.6	35.2	34.3	32.3
	95.0	24.0	24.0	24.8	25.4	25.5	25.7	25.6	25.4	24.7
	90.0	21.1	21.3	21.6	21.7	21.6	21.7	21.7	21.8	21.6
	87.5	20.0	20.0	20.2	20.2	19.9	20.0	20.0	20.2	20.2
	85.0	18.8	18.8	18.8	18.7	18.4	18.4	18.4	18.7	18.9
V	82.5	17.7	17.8	17.8	17.5	17.1	17.2	17.1	17.5	17.8
E	80.0	16.8	16.8	16.7	16.3	15.9	15.9	15.9	16.3	16.7
R	77.5	16.0	15.9	15.8	15.4	14.8	14.8	14.9	15.3	15.8
T	75.0	15.2	15.2	15.0	14.6	14.1	14.0	14.1	14.5	15.0
I	72.5	14.3	14.3	14.0	13.6	13.1	13.1	13.1	13.7	14.2
C	70.0	13.6	13.6	13.4	12.9	12.3	12.3	12.4	12.8	13.4
A	67.5	12.9	12.9	12.7	12.2	11.7	11.6	11.7	12.2	12.8
L	65.0	12.4	12.4	12.1	11.6	11.1	11.0	11.1	11.6	12.1
	62.5	11.7	11.6	11.4	10.9	10.4	10.4	10.4	10.9	11.4
A	60.0	11.0	11.0	10.7	10.3	9.8	9.7	9.8	10.3	10.7
N	57.5	10.5	10.5	10.3	9.9	9.4	9.3	9.4	9.9	10.4
G	55.0	10.0	9.9	9.7	9.3	8.8	8.7	8.8	9.3	9.7
L	52.5	9.4	9.4	9.3	8.8	8.4	8.3	8.5	8.8	9.3
E	50.0	8.7	8.7	8.5	8.1	7.7	7.6	7.7	8.1	8.6
	47.5	8.5	8.4	8.3	7.9	7.5	7.4	7.5	7.9	8.2
	45.0	7.9	7.9	7.7	7.4	7.1	7.0	7.1	7.4	7.7
	42.5	7.4	7.4	7.3	6.9	6.6	6.6	6.7	6.9	7.3
	40.0	7.0	6.8	6.7	6.4	6.2	6.1	6.2	6.5	6.7
	37.5	6.4	6.4	6.3	6.1	5.8	5.8	5.8	6.1	6.3
	35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

||  
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA



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CANDELA TABULATION  
HOUSE SIDE

LATERAL ANGLE

	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	9.1	9.5	9.7	10.3	10.5	10.7	10.6	10.2	9.7	9.1	9.4
145.0	23.8	24.4	25.2	26.3	26.9	27.5	26.9	26.1	24.9	23.9	23.9
135.0	33.9	34.4	36.4	38.8	40.2	41.1	40.4	38.6	36.0	33.9	33.8
125.0	38.9	39.2	42.1	45.5	47.5	48.5	47.7	45.4	41.9	39.0	38.6
122.5<<	39.0	39.3	42.3	45.8	47.7	48.6	47.8	45.6	42.1	39.1	38.7
115.0	36.8	37.0	39.8	42.9	44.6	45.1	44.5	42.8	39.8	36.9	36.4
105.0	30.6	30.5	32.3	34.3	35.2	35.6	35.0	34.2	32.3	30.5	30.3
95.0	24.0	24.0	24.7	25.4	25.6	25.7	25.5	25.4	24.8	24.0	24.0
90.0	21.4	21.2	21.6	21.8	21.7	21.7	21.6	21.7	21.6	21.3	21.1
87.5	20.1	20.0	20.2	20.2	20.0	20.0	19.9	20.2	20.2	20.0	20.0
85.0	18.8	18.8	18.9	18.7	18.4	18.4	18.4	18.7	18.8	18.8	18.8
V 82.5	17.8	17.7	17.8	17.5	17.1	17.2	17.1	17.5	17.8	17.8	17.7
E 80.0	16.9	16.7	16.7	16.3	15.9	15.9	15.9	16.3	16.7	16.8	16.8
R 77.5	16.0	15.9	15.8	15.3	14.9	14.8	14.8	15.4	15.8	15.9	16.0
T 75.0	15.3	15.2	15.0	14.5	14.1	14.0	14.1	14.6	15.0	15.2	15.2
I 72.5	14.3	14.3	14.2	13.7	13.1	13.1	13.1	13.6	14.0	14.3	14.3
C 70.0	13.6	13.6	13.4	12.8	12.4	12.3	12.3	12.9	13.4	13.6	13.6
A 67.5	12.9	12.9	12.8	12.2	11.7	11.6	11.7	12.2	12.7	12.9	12.9
L 65.0	12.4	12.4	12.1	11.6	11.1	11.0	11.1	11.6	12.1	12.4	12.4
62.5	11.7	11.7	11.4	10.9	10.4	10.4	10.4	10.9	11.4	11.6	11.7
A 60.0	11.0	10.9	10.7	10.3	9.8	9.7	9.8	10.3	10.7	11.0	11.0
N 57.5	10.7	10.6	10.4	9.9	9.4	9.3	9.4	9.9	10.3	10.5	10.5
G 55.0	9.9	9.9	9.7	9.3	8.8	8.7	8.8	9.3	9.7	9.9	10.0
L 52.5	9.6	9.5	9.3	8.8	8.5	8.3	8.4	8.8	9.3	9.4	9.4
E 50.0	8.7	8.7	8.6	8.1	7.7	7.6	7.7	8.1	8.5	8.7	8.7
47.5	8.4	8.4	8.2	7.9	7.5	7.4	7.5	7.9	8.3	8.4	8.5
45.0	8.0	7.9	7.7	7.4	7.1	7.0	7.1	7.4	7.7	7.9	7.9
42.5	7.5	7.4	7.3	6.9	6.7	6.6	6.6	6.9	7.3	7.4	7.4
40.0	6.9	6.9	6.7	6.5	6.2	6.1	6.2	6.4	6.7	6.8	7.0
37.5	6.5	6.4	6.3	6.1	5.8	5.8	5.8	6.1	6.3	6.4	6.4
35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CONE OF MAXIMUM CANDELA





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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	0
5- 10	0
10- 15	0
15- 20	0
20- 25	0
25- 30	0
30- 35	0
35- 40	2
40- 45	3
45- 50	3
50- 55	4
55- 60	5
60- 65	5
65- 70	6
70- 75	7
75- 80	8
80- 85	10
85- 90	11
90- 95	13
95-100	15
100-105	17
105-110	19
110-115	20
115-120	21
120-125	20
125-130	19
130-135	16
135-140	13
140-145	10
145-150	7
150-155	4
155-160	1
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	0
0- 20	0
0- 30	0
0- 40	2
0- 50	7
0- 60	16
0- 70	27
0- 80	43
0- 90	63
0-100	91
0-110	126
0-120	167
0-130	206
0-140	235
0-150	252
0-160	257
0-170	257
0-180	257

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Date  
5/21/2015

### *Goniophotometer Calibration*

*Calibration Lamp:* GE 1000W, 120V, T6, CL (FEL)

*Lamp Number:* ITL78966-1000-38

*Calibration Current:* 8.300 Amps DC

*Total Luminous Flux:* 25753.0 Lumens

*Calibration Date:* 12/02/2014

### *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: 31.75'	N/A	N/A
<i>Power Analyzer</i>	Yokogawa / WT 332	C2QA27071V	11/12/2015
<i>Power Source</i>	Voltage-Regulated House Power	N/A	N/A
<i>Thermometer</i>	National Instruments / USB-TC01	176F4E3	11/11/2015

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