

Project Number
15.00749



HUBBELL
Lighting

Date
5/8/2015

LAB 1

Test Sample Description

Catalog Number: P6430-3130K9
Description: LED Post Lantern w/ AC HAL 9W LED Module

Test Method: IES LM-79-08 § 10
Preburn Time: 00:15
Time To Stabilize: 2:10
Total Operating Time: 4:04

Input Voltage (Volts): 120.1
Input Current (Amps): 0.062
Input Wattage (Watts): 7.0
Ambient Temp (°C): 25.0



Hubbell Lighting, Inc.

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

Checked: D. ROBBINS
Approved: P. McCARTHY



This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



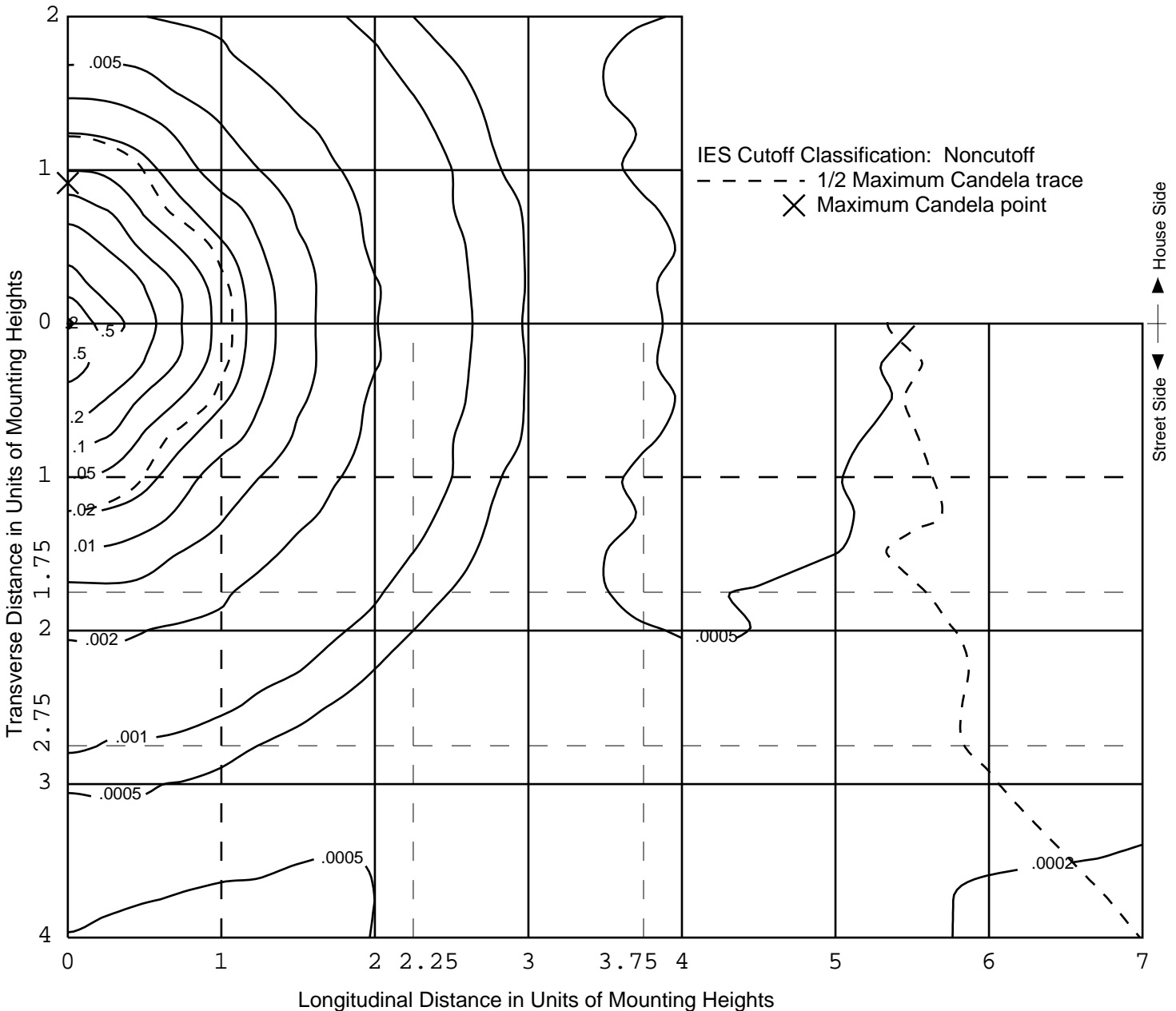
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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION
Values based on 6 foot mounting height.

REPORT NUMBER: 15.00749
ISSUE DATE: 05/08/15 PAGE: 2 OF 10
PREPARED FOR: COLUMBIA LIGHTING
CATALOG NUMBER: P6430-3130K9
LUMINAIRE: LED Post Lantern w/ AC HAL
9W LED Module
REFRACTOR: Clear Seeded Glass - Part
#93060447
LAMP CAT. NO.: 93049180-3130
LAMP: 20- Nichia 3000K LEDs
MOUNTING: Post
NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED.





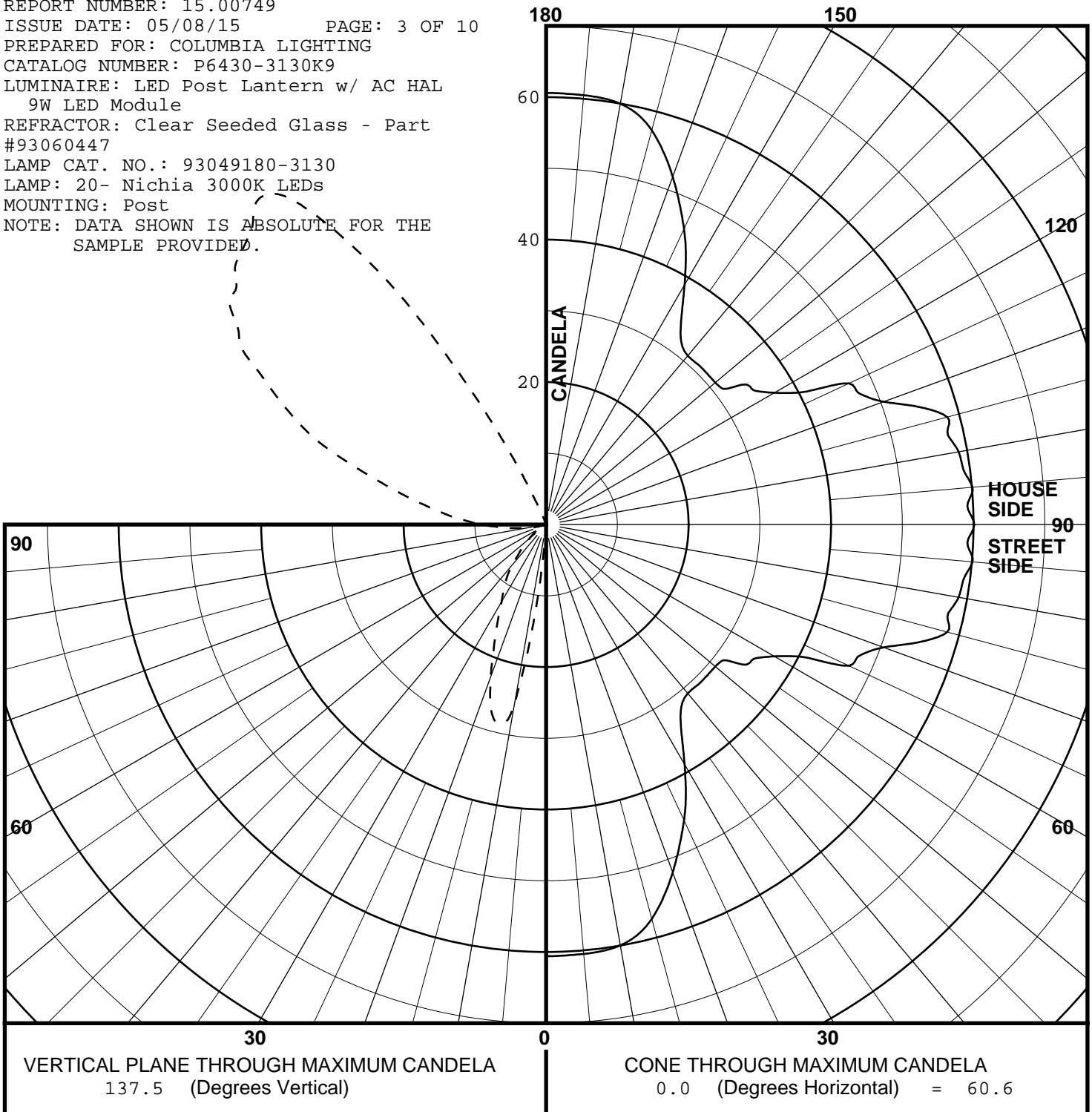
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MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

REPORT NUMBER: 15.00749
 ISSUE DATE: 05/08/15 PAGE: 3 OF 10
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 REFRACTOR: Clear Seeded Glass - Part
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 LAMP CAT. NO.: 93049180-3130
 LAMP: 20- Nichia 3000K LEDs
 MOUNTING: Post
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE
 SAMPLE PROVIDED.





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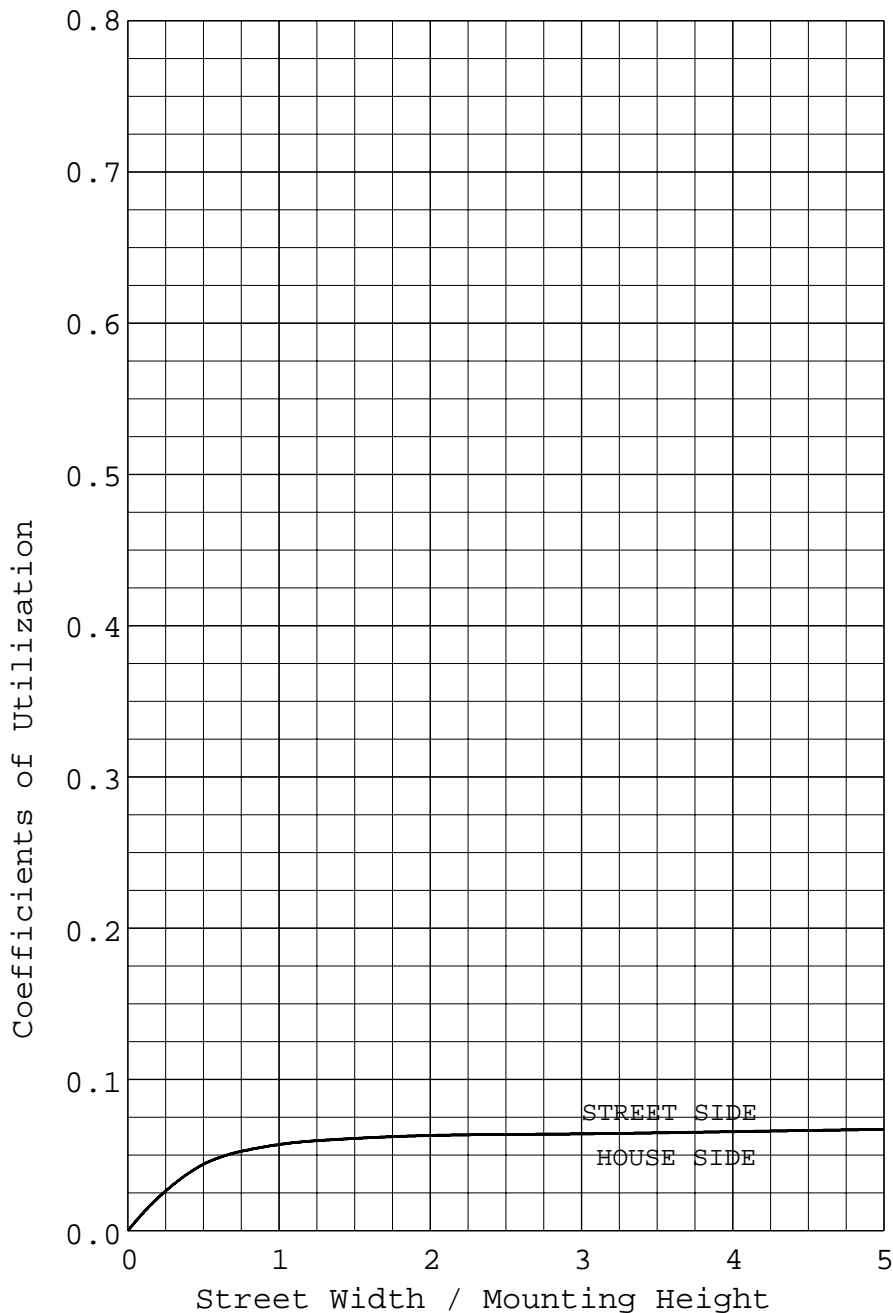
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REPORT NUMBER: 15.00749
ISSUE DATE: 05/08/15
PREPARED FOR: COLUMBIA LIGHTING

PAGE: 4 OF 10

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	15.	7.7
DOWNWARD HOUSE SIDE	15.	7.7
DOWNWARD TOTAL	30.	15.5
UPWARD STREET SIDE	83.	42.3
UPWARD HOUSE SIDE	83.	42.3
UPWARD TOTAL	165.	84.5
TOTAL FLUX	196.	100.0
TOTAL INPUT WATTS = 7.0		
EFFICACY = 28.0 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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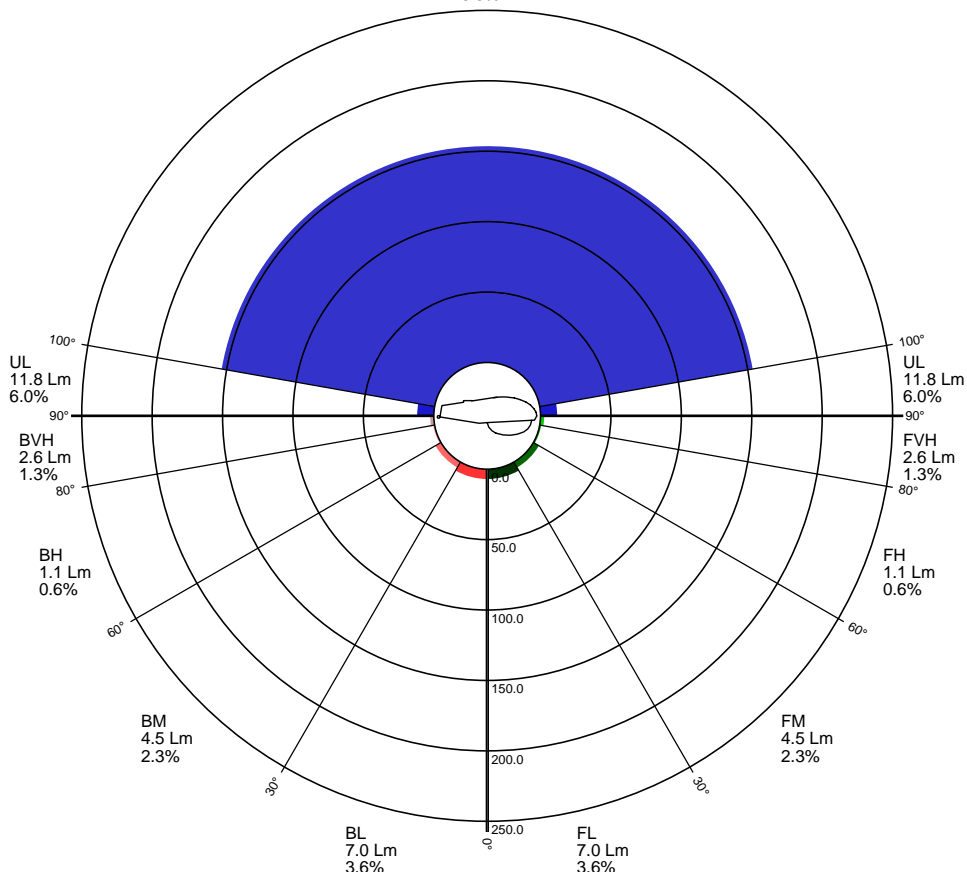
PAGE: 5 OF 10

BUG Rating:			Zone Ratings		
Zonal Summary			B0	U3	G0
		Lumens	% of Fixture		
			B	U	G
Forward		15			
FL	(0° - 30°)	7.0			
FM	(30° - 60°)	4.5			
FH	(60° - 80°)	1.1			G0
FVH	(80° - 90°)	2.6			G0
Backward		15			
BL	(0° - 30°)	7.0	B0		
BM	(30° - 60°)	4.5	B0		
BH	(60° - 80°)	1.1	B0		G0
BVH	(80° - 90°)	2.6			G0
Upward		165			
UL	(90° - 100°)	11.8		U2	
UH	(100° - 180°)	153.6		U3	
Trapped Light		0			
Total Flux		196			

Zonal Lumen Summary

(Linear scale)

UH
153.6 Lm
78.5%





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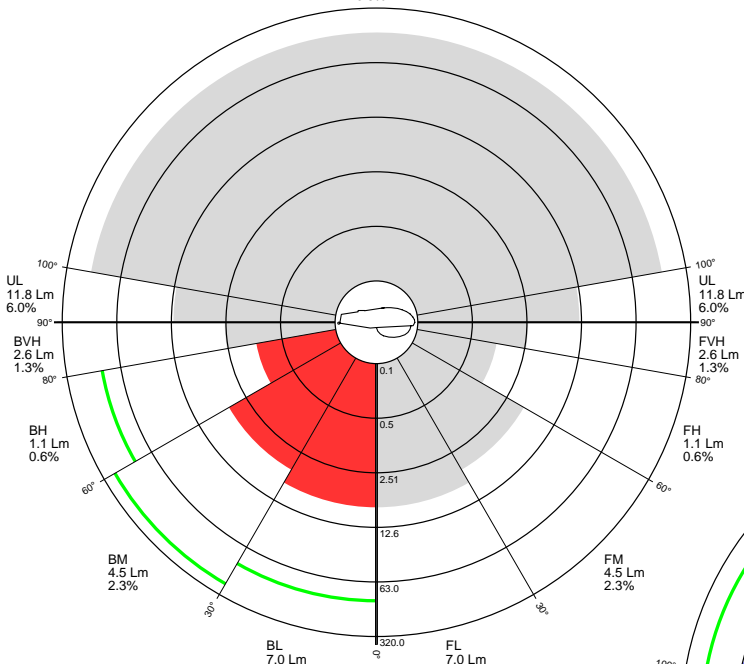
REPORT NUMBER: 15.00749
ISSUE DATE: 05/08/15
PREPARED FOR: COLUMBIA LIGHTING

PAGE: 6 OF 10

Backlight Rating Details

(Logarithmic scale)

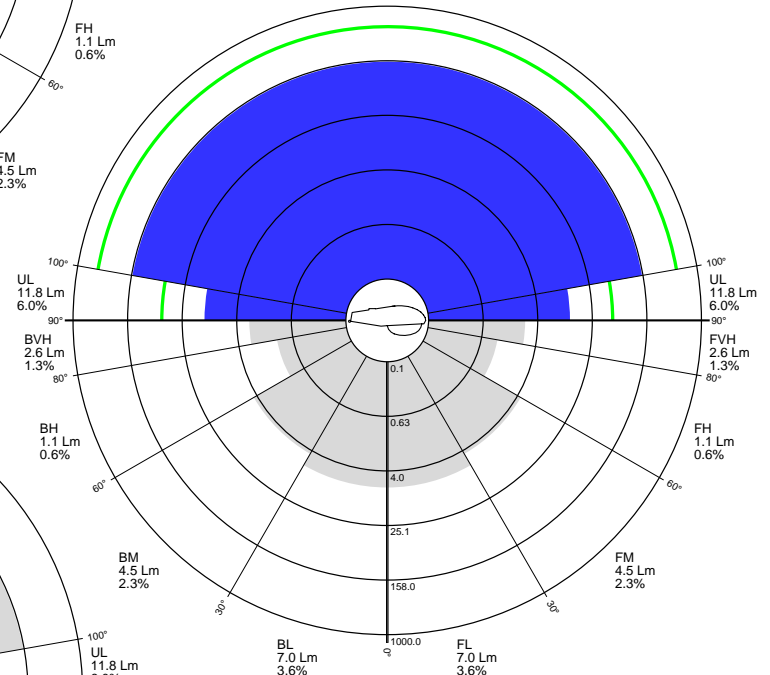
UH
153.6 Lm
78.5%



Uplight Rating Details

(Logarithmic scale)

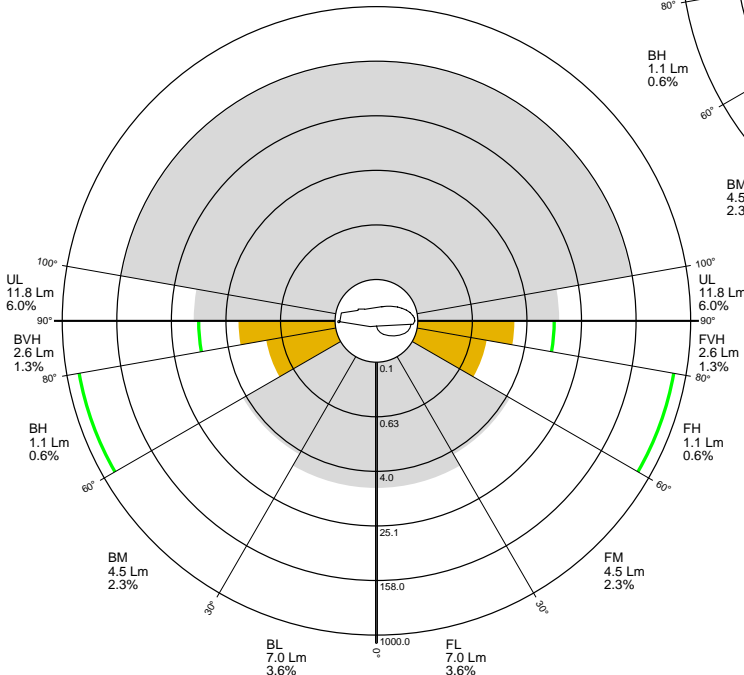
UH
153.6 Lm
78.5%



Glare Rating Details

(Logarithmic scale)

UH
153.6 Lm
78.5%





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REPORT NUMBER: 15.00749
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PAGE: 7 OF 10

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
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6.1	6.6	5.4	4.6	3.3	2.2	2.9	3.7	3.4	4.6
	48.3	48.0	46.5	35.3	26.1	26.0	27.5	36.5	43.9	47.5
	60.6	60.5	57.3	45.8	32.9	31.0	34.3	46.9	58.3	60.1
	58.5	59.1	56.3	44.8	33.4	32.2	34.3	46.0	56.9	58.4
	54.3	54.7	51.6	40.9	31.9	31.1	32.6	41.7	51.9	54.1
	41.3	41.1	39.4	30.9	24.4	24.2	25.0	31.9	39.3	40.8
	25.0	24.6	23.0	18.6	15.4	14.7	15.6	19.0	23.1	24.2
	13.4	13.3	12.7	10.4	8.8	8.1	8.8	10.6	12.7	13.1
	9.3	9.4	9.1	7.4	6.2	5.8	6.3	7.7	9.3	9.4
	7.0	7.2	7.1	5.9	4.8	4.2	4.8	5.9	7.1	7.1
	5.6	5.7	5.6	4.6	3.9	3.4	3.9	4.8	5.7	5.7
V	3.8	4.1	3.8	3.2	2.6	2.3	2.7	3.5	4.2	4.2
E	3.0	2.9	2.9	2.6	2.2	1.8	2.2	2.7	3.2	3.2
R	1.9	1.9	1.9	1.8	1.5	1.3	1.7	2.0	2.2	2.1
T	0.9	1.0	1.0	1.0	1.0	0.8	0.9	1.0	1.0	1.0
I	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.4
C	1.0	0.9	1.0	0.9	0.9	0.9	0.8	0.9	0.8	0.8
A	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.7	0.8	0.8
L	0.7	0.7	0.7	0.8	0.6	0.6	0.7	0.6	0.6	0.6
	1.0	1.2	1.2	1.2	1.1	1.0	1.0	1.0	1.0	1.0
A	1.1	1.2	1.2	1.1	1.1	0.9	1.0	1.0	1.0	1.0
N	1.7	1.7	1.7	1.6	1.4	1.3	1.3	1.4	1.4	1.3
G	2.0	2.1	2.1	2.0	1.7	1.4	1.6	1.7	1.6	1.6
L	2.5	2.4	2.3	2.1	1.6	1.4	1.7	1.7	1.7	1.7
E	3.1	3.0	2.8	2.5	2.0	1.8	2.0	2.1	2.1	2.1
	3.9	4.0	3.7	3.3	2.6	2.4	2.5	2.8	2.8	2.8
	4.9	4.8	4.5	3.9	2.9	2.7	2.9	3.3	3.5	3.5
	5.9	5.9	5.5	4.6	3.4	3.1	3.6	4.0	4.3	4.4
	7.4	7.3	6.8	5.8	4.3	4.0	4.4	5.0	5.4	5.4
	8.8	8.8	8.1	6.9	5.3	4.8	5.5	6.1	6.4	6.5
	10.0	10.0	9.1	8.0	6.1	5.3	6.2	6.9	7.0	7.2
	12.5	12.6	11.6	10.4	8.0	6.5	8.5	9.8	9.3	9.3
	16.7	16.8	15.9	14.2	10.8	8.7	11.8	14.3	14.1	13.9
	22.7	22.7	21.7	19.4	15.1	13.2	16.4	20.2	21.4	21.7
	28.3	28.2	26.1	23.4	20.8	20.1	21.2	24.5	27.6	28.8
	25.4	25.2	24.1	22.6	22.1	21.9	22.3	23.3	24.6	25.9
	3.4	3.1	2.8	2.2	1.8	1.7	1.9	1.8	1.8	1.9
	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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PAGE: 8 OF 10

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	3.7	4.6	3.4	3.7	2.9	2.2	3.3	4.6	5.4	6.6	6.1
145.0	46.7	47.5	43.9	36.5	27.5	26.0	26.1	35.3	46.5	48.0	48.3
137.5<<	60.1	60.1	58.3	46.9	34.3	31.0	32.9	45.8	57.3	60.5	60.6
135.0	58.7	58.4	56.9	46.0	34.3	32.2	33.4	44.8	56.3	59.1	58.5
125.0	54.7	54.1	51.9	41.7	32.6	31.1	31.9	40.9	51.6	54.7	54.3
115.0	40.9	40.8	39.3	31.9	25.0	24.2	24.4	30.9	39.4	41.1	41.3
105.0	24.5	24.2	23.1	19.0	15.6	14.7	15.4	18.6	23.0	24.6	25.0
95.0	13.5	13.1	12.7	10.6	8.8	8.1	8.8	10.4	12.7	13.3	13.4
90.0	9.2	9.4	9.3	7.7	6.3	5.8	6.2	7.4	9.1	9.4	9.3
87.5	7.2	7.1	7.1	5.9	4.8	4.2	4.8	5.9	7.1	7.2	7.0
85.0	5.8	5.7	5.7	4.8	3.9	3.4	3.9	4.6	5.6	5.7	5.6
V 82.5	4.1	4.2	4.2	3.5	2.7	2.3	2.6	3.2	3.8	4.1	3.8
E 80.0	3.3	3.2	3.2	2.7	2.2	1.8	2.2	2.6	2.9	2.9	3.0
R 77.5	2.2	2.1	2.2	2.0	1.7	1.3	1.5	1.8	1.9	1.9	1.9
T 75.0	0.9	1.0	1.0	1.0	0.9	0.8	1.0	1.0	1.0	1.0	0.9
I 72.5	0.3	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.4
C 70.0	0.8	0.8	0.8	0.9	0.8	0.9	0.9	0.9	1.0	0.9	1.0
A 67.5	0.8	0.8	0.8	0.7	0.9	0.8	0.8	0.9	0.9	0.8	0.8
L 65.0	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.8	0.7	0.7	0.7
62.5	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.0
A 60.0	0.9	1.0	1.0	1.0	1.0	0.9	1.1	1.1	1.2	1.2	1.1
N 57.5	1.3	1.3	1.4	1.4	1.3	1.3	1.4	1.6	1.7	1.7	1.7
G 55.0	1.5	1.6	1.6	1.7	1.6	1.4	1.7	2.0	2.1	2.1	2.0
L 52.5	1.6	1.7	1.7	1.7	1.7	1.4	1.6	2.1	2.3	2.4	2.5
E 50.0	2.1	2.1	2.1	2.1	2.0	1.8	2.0	2.5	2.8	3.0	3.1
47.5	2.8	2.8	2.8	2.8	2.5	2.4	2.6	3.3	3.7	4.0	3.9
45.0	3.5	3.5	3.5	3.3	2.9	2.7	2.9	3.9	4.5	4.8	4.9
42.5	4.4	4.4	4.3	4.0	3.6	3.1	3.4	4.6	5.5	5.9	5.9
40.0	5.3	5.4	5.4	5.0	4.4	4.0	4.3	5.8	6.8	7.3	7.4
37.5	6.5	6.5	6.4	6.1	5.5	4.8	5.3	6.9	8.1	8.8	8.8
35.0	7.2	7.2	7.0	6.9	6.2	5.3	6.1	8.0	9.1	10.0	10.0
30.0	9.5	9.3	9.3	9.8	8.5	6.5	8.0	10.4	11.6	12.6	12.5
25.0	14.1	13.9	14.1	14.3	11.8	8.7	10.8	14.2	15.9	16.8	16.7
20.0	21.9	21.7	21.4	20.2	16.4	13.2	15.1	19.4	21.7	22.7	22.7
15.0	28.8	28.8	27.6	24.5	21.2	20.1	20.8	23.4	26.1	28.2	28.3
10.0	25.9	25.9	24.6	23.3	22.3	21.9	22.1	22.6	24.1	25.2	25.4
5.0	2.0	1.9	1.8	1.8	1.9	1.7	1.8	2.2	2.8	3.1	3.4
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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PAGE: 9 OF 10

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	0
5- 10	1
10- 15	3
15- 20	4
20- 25	3
25- 30	3
30- 35	3
35- 40	2
40- 45	2
45- 50	1
50- 55	1
55- 60	1
60- 65	0
65- 70	0
70- 75	0
75- 80	1
80- 85	2
85- 90	3
90- 95	5
95-100	7
100-105	9
105-110	12
110-115	15
115-120	17
120-125	19
125-130	19
130-135	18
135-140	17
140-145	14
145-150	8
150-155	3
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	1
0- 20	8
0- 30	14
0- 40	19
0- 50	21
0- 60	23
0- 70	24
0- 80	25
0- 90	30
0-100	42
0-110	63
0-120	96
0-130	134
0-140	169
0-150	192
0-160	196
0-170	196
0-180	196

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Date
5/8/2015

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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