

Project Number
15.00756



HUBBELL
Lighting

Date
5/12/2015

LAB 1

Test Sample Description

Catalog Number: P3650-3030K9
Description: 10" Round "Bulkheads" Surface-Mount w/ AC HAL 17W LED Module

Test Method: IES LM-79-08 § 10
Preburn Time: 0:00
Time To Stabilize: 1:43
Total Operating Time: 2:55

Input Voltage (Volts): 119.8
Input Current (Amps): 0.152
Input Wattage (Watts): 16.9
Ambient Temp (°C): 25.3



Hubbell Lighting, Inc.

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

Checked: D. BLACK
Approved: P. McCARTHY





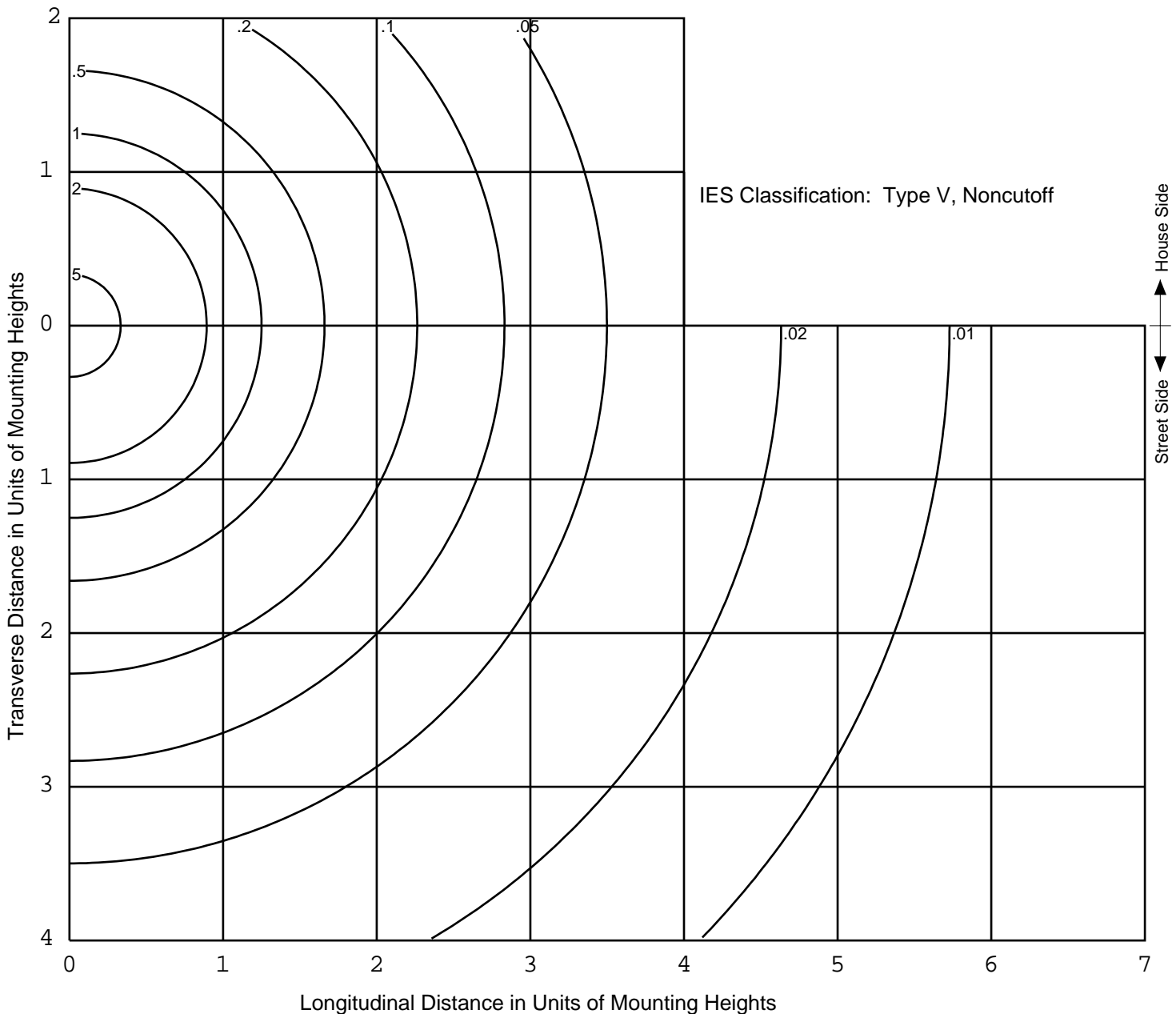
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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION
Values based on 6 foot mounting height.

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 CATALOG NUMBER: P3650-3030K9
 LUMINAIRE: 10" Round "Bulkheads"
 Surface-Mount w/ AC HAL 17W LED Module
 LENS: Opal Polycarbonate with Wire Guard
 Part #93061256
 LAMP CAT. NO.: 93047261-4130
 LAMP: 40- Nichia 3000K LEDs
 MOUNTING: Ceiling
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE
 SAMPLE PROVIDED.





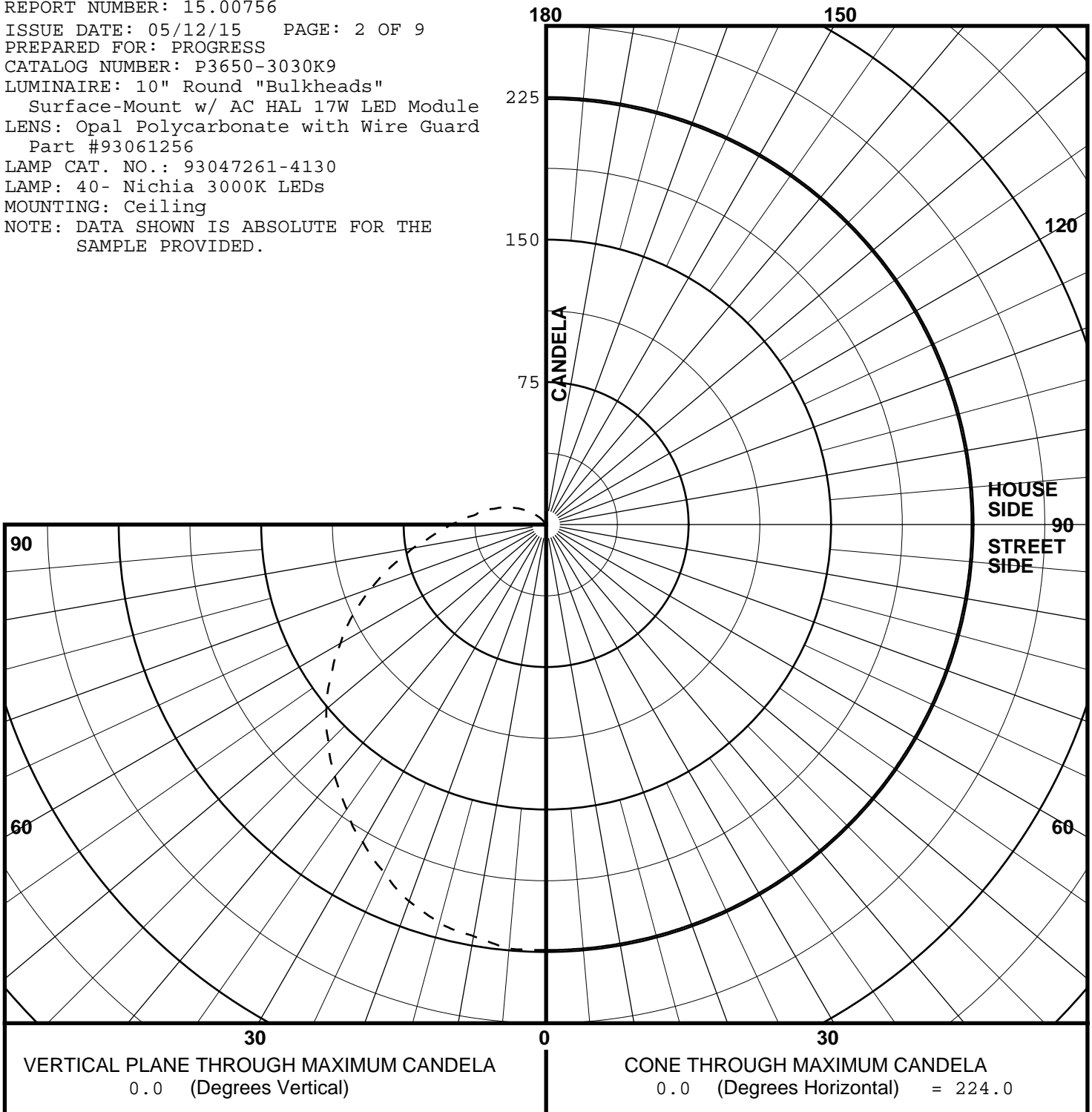
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MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

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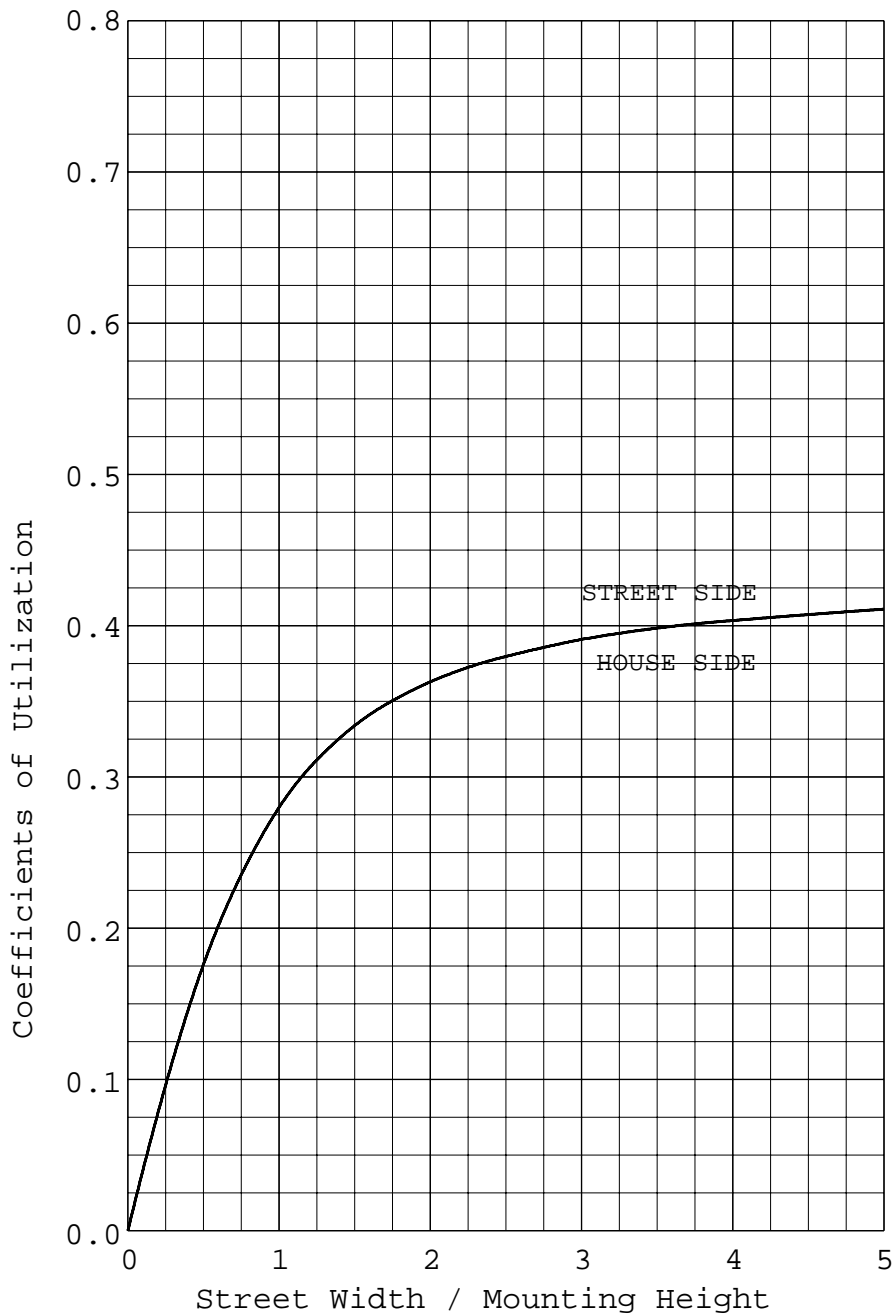
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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	402.	43.6
DOWNWARD HOUSE SIDE	402.	43.6
DOWNWARD TOTAL	804.	87.3
UPWARD STREET SIDE	59.	6.4
UPWARD HOUSE SIDE	59.	6.4
UPWARD TOTAL	117.	12.7
TOTAL FLUX	922.	100.0
TOTAL INPUT WATTS = 16.9		
EFFICACY = 54.6 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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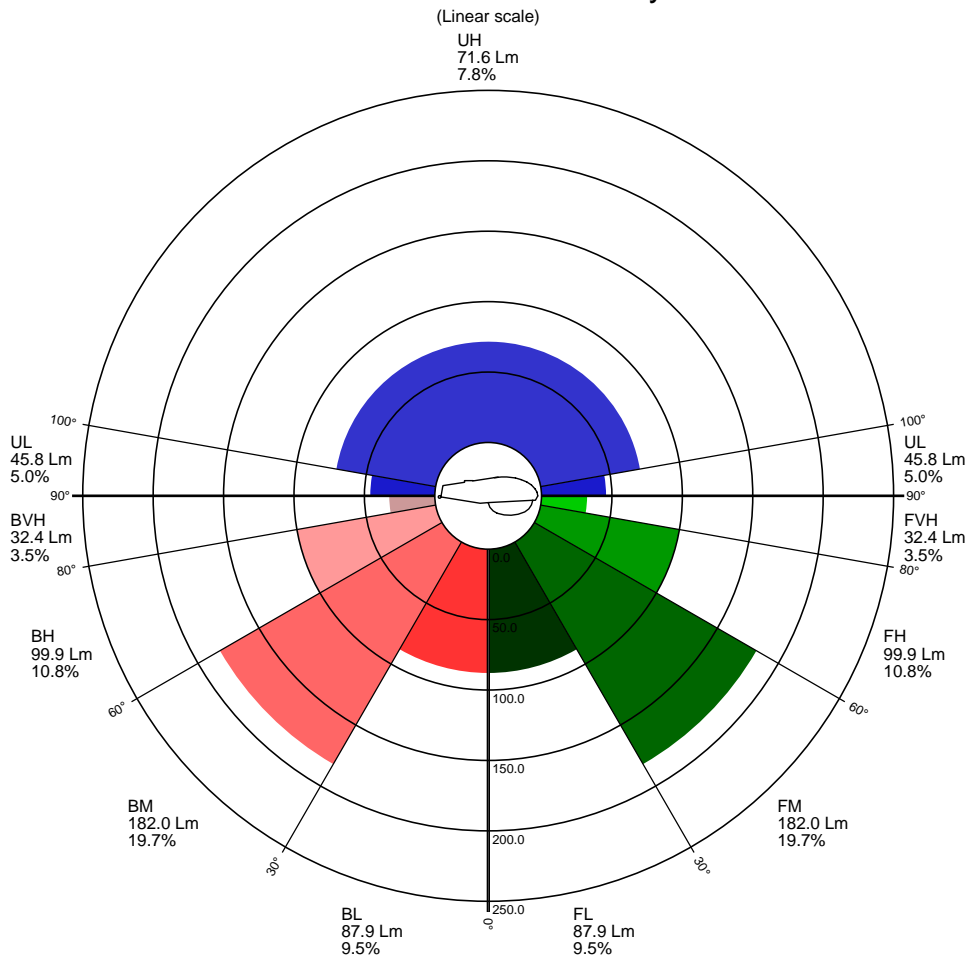


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BUG Rating:			B0 U3 G1			
Zonal Summary			Zone Ratings			
		Lumens	% of Fixture	B	U	G
Forward		402	43.6			
FL	(0° - 30°)	87.9	9.5			
FM	(30° - 60°)	182.0	19.7			
FH	(60° - 80°)	99.9	10.8			G0
FVH	(80° - 90°)	32.4	3.5			G1
Backward		402	43.6			
BL	(0° - 30°)	87.9	9.5	B0		
BM	(30° - 60°)	182.0	19.7	B0		
BH	(60° - 80°)	99.9	10.8	B0		G0
BVH	(80° - 90°)	32.4	3.5			G1
Upward		117	12.7			
UL	(90° - 100°)	45.8	5.0		U2	
UH	(100° - 180°)	71.6	7.8		U3	
Trapped Light		0	0.0			
Total Flux		922	100.0			

Zonal Lumen Summary





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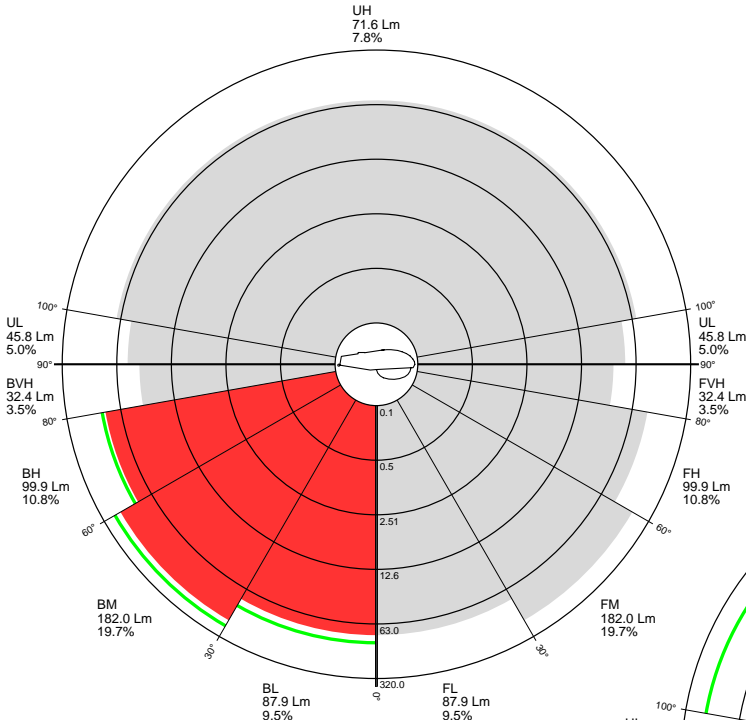
NVLAP LAB CODE: 201003-0

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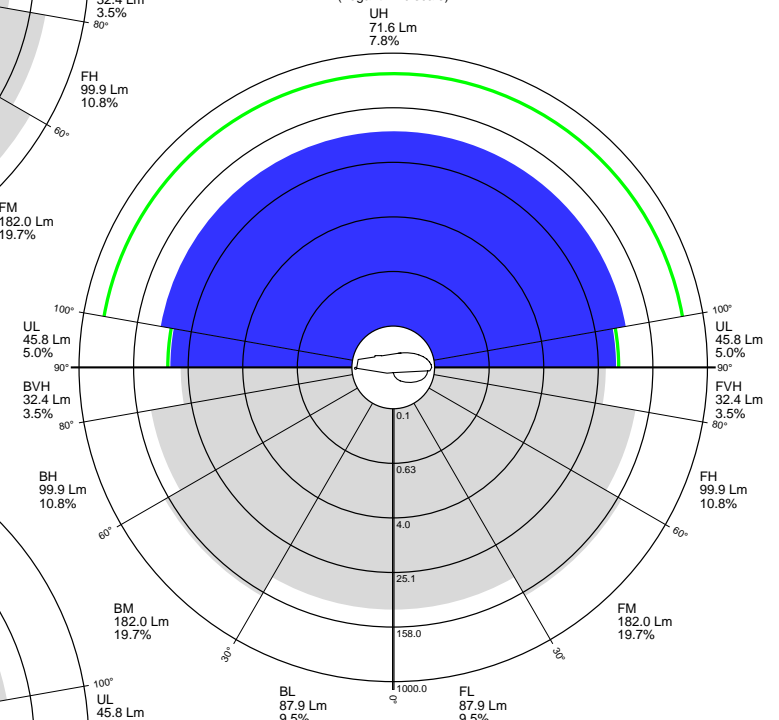
Backlight Rating Details

(Logarithmic scale)



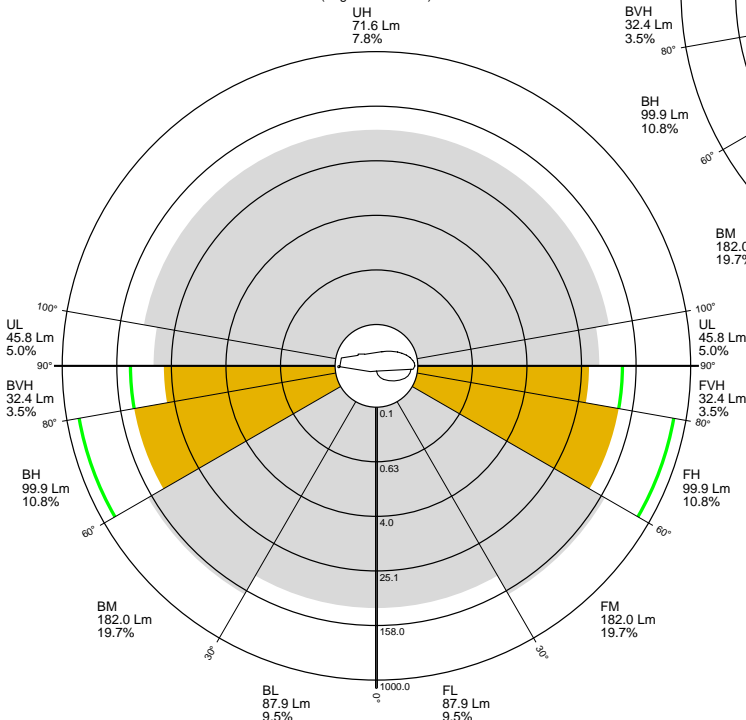
Uplight Rating Details

(Logarithmic scale)



Glare Rating Details

(Logarithmic scale)





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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	1.
135.0	6.
125.0	13.
115.0	21.
105.0	31.
95.0	42.
90.0	50.
87.5	54.
85.0	59.
82.5	64.
80.0	71.
77.5	77.
75.0	84.
72.5	91.
70.0	98.
67.5	105.
65.0	112.
62.5	119.
60.0	125.
57.5	132.
55.0	138.
52.5	145.
50.0	151.
47.5	157.
45.0	162.
42.5	168.
40.0	173.
37.5	178.
35.0	183.
30.0	193.
25.0	202.
20.0	211.
15.0	217.
10.0	220.
5.0	224.<<
0.0	224.<<

<< INDICATES MAXIMUM CANDELA



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	5
5- 10	16
10- 15	26
15- 20	35
20- 25	43
25- 30	50
30- 35	55
35- 40	59
40- 45	62
45- 50	63
50- 55	63
55- 60	61
60- 65	58
65- 70	53
70- 75	48
75- 80	41
80- 85	35
85- 90	30
90- 95	25
95-100	21
100-105	18
105-110	15
110-115	12
115-120	9
120-125	7
125-130	5
130-135	3
135-140	2
140-145	1
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	21
0- 20	82
0- 30	176
0- 40	291
0- 50	416
0- 60	540
0- 70	651
0- 80	740
0- 90	804
0-100	850
0-110	883
0-120	904
0-130	916
0-140	921
0-150	922
0-160	922
0-170	922
0-180	922

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5/12/2015

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