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Photometric Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-2002, CIE 13.3-1995
CIE 15-2004, ANSI C78.377-2015, IES TM-30-2015

Prepared For
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Catalog Number
HLP-LED-e72-WHP-B
Order Number
11717110
Test Number
11717110.03A
Revised:
2017-05-04
Test Date

2017-04-21 - 2017-04-26

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 2-meter integrating sphere using the 4π geometry method.

Absorption correction was employed for Sphere measurement

Tested in 30 planes left side, 30 planes right side, left and right averaged
Vertical test increments are 2.5 degrees

Test distance exceeds five times the greatest luminous opening of luminaire



Luminaire Description: White metal shade/reflector, clear plastic lens, and metal base
Lamp: One (1) white LED
Mounting: Ground recessed
Ballast/Driver: Unmarked power supply

Luminaire



Luminaire Characteristics

Luminous Diameter: 4.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 104 Lumens
Efficacy: 30.7 lm/w
CCT: 3951 K
CRI (Ra): 81.2

Distribution

Roadway Classification: Type V, Very Short
Cutoff Classification: Full Cutoff
BUG Rating: B0 U0 G0

Electrical Data at 120 VAC

Test Temperature: 24.9 °C
Voltage: 120.2 VAC
Current: 0.05080 A
Power: 3.389 W
Power Factor: 0.554
Frequency: 60 Hz
Current THD: 150 %



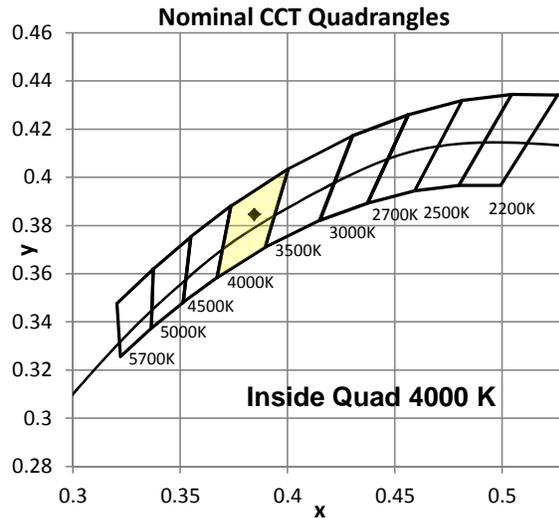
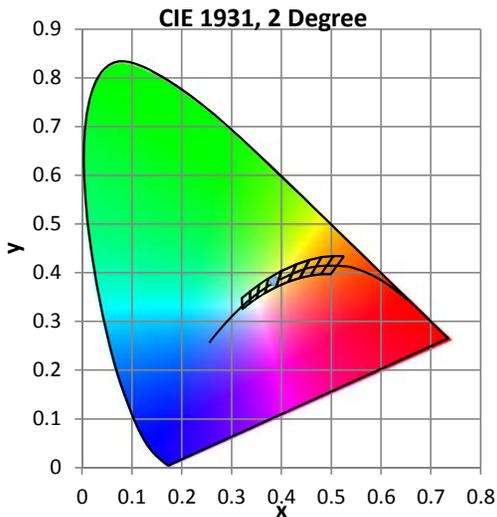
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.2 VAC	0.05080 A	3.389 W	0.554	60 Hz	150 %

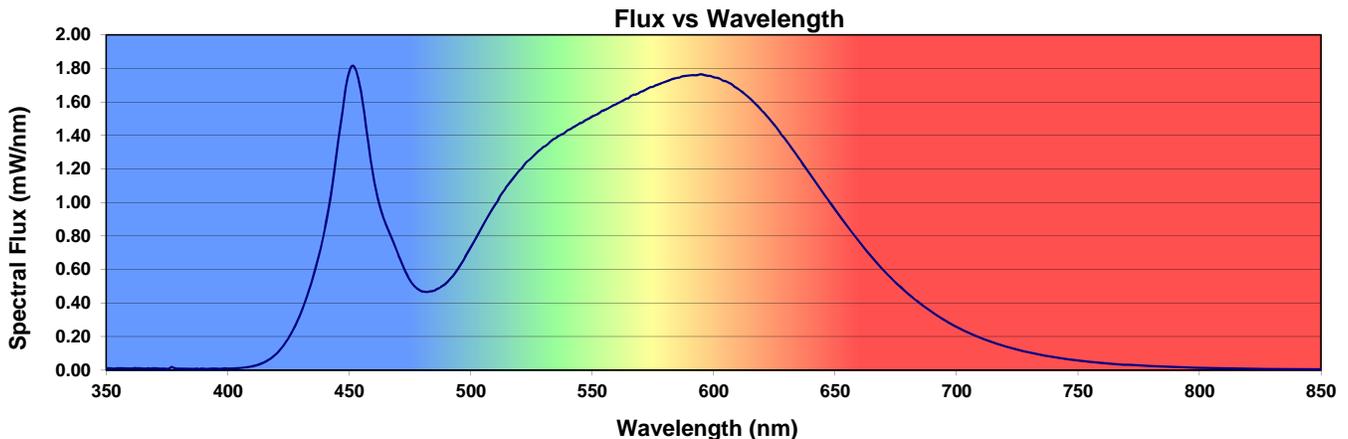
Summary of Results

Total Output:	104 Lumens	Chromaticity (x):	0.3844
Efficacy:	30.7 lm/w	Chromaticity (y):	0.3846
CCT:	3951 K	Chromaticity (u'):	0.2246
CRI (Ra):	81.2	Chromaticity (v'):	0.5056
CRI (R9):	7.3	TM-30 R_r:	80.9
Peak Wavelength:	451.6 nm	TM-30 R_g:	95.4
Dominant Wavelength:	578 nm	Duv:	0.0024
S/P Ratio:	1.627		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81.2	79.3	86.5	91.9	80.4	78.6	80.9	87.0	65.0	7.3	67.3	77.8	56.1	80.8	95.3





Distribution - Goniophotometer

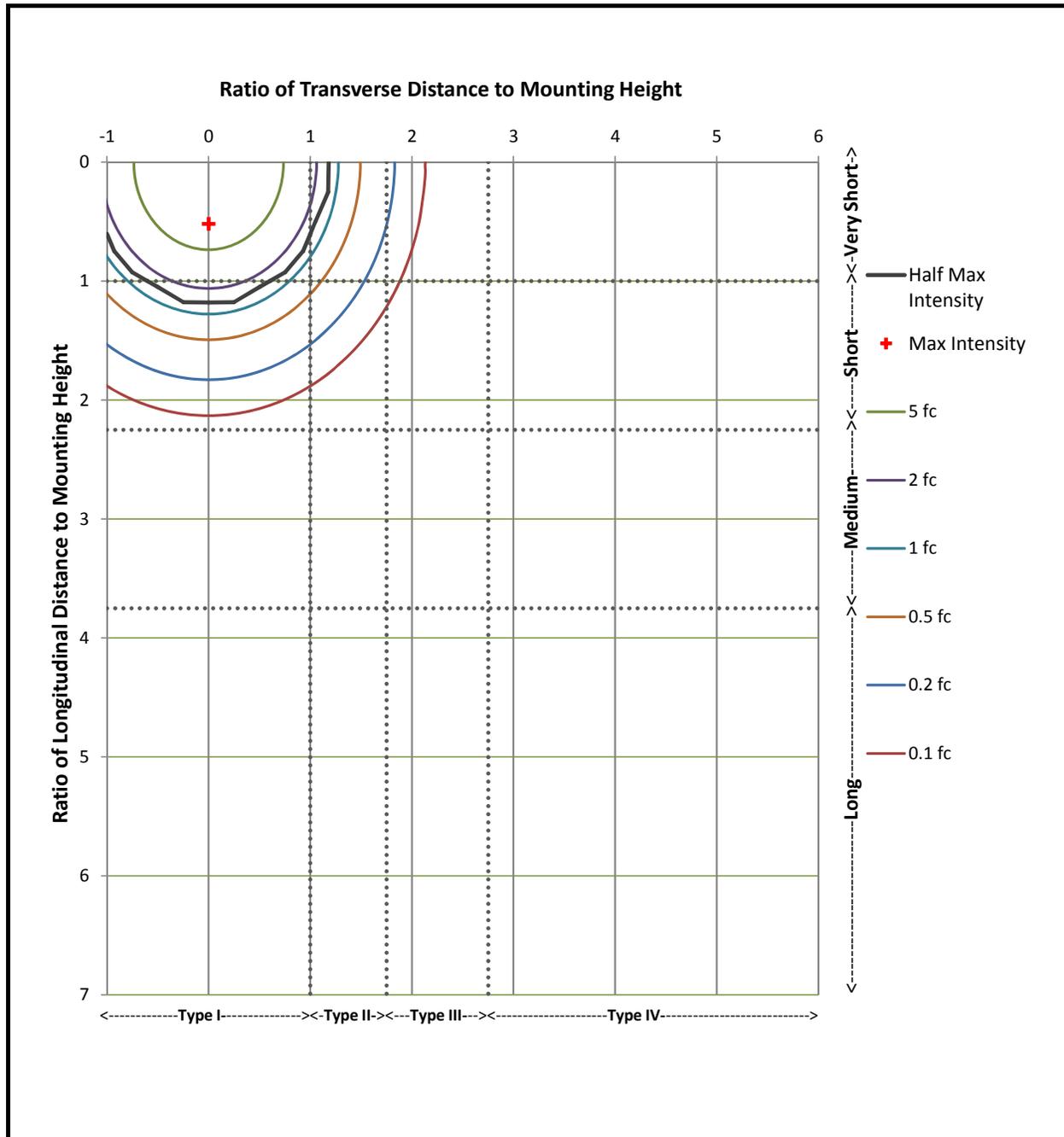
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.1 VAC	0.05050 A	3.396 W	0.560	60 Hz	148 %

Summary of Results

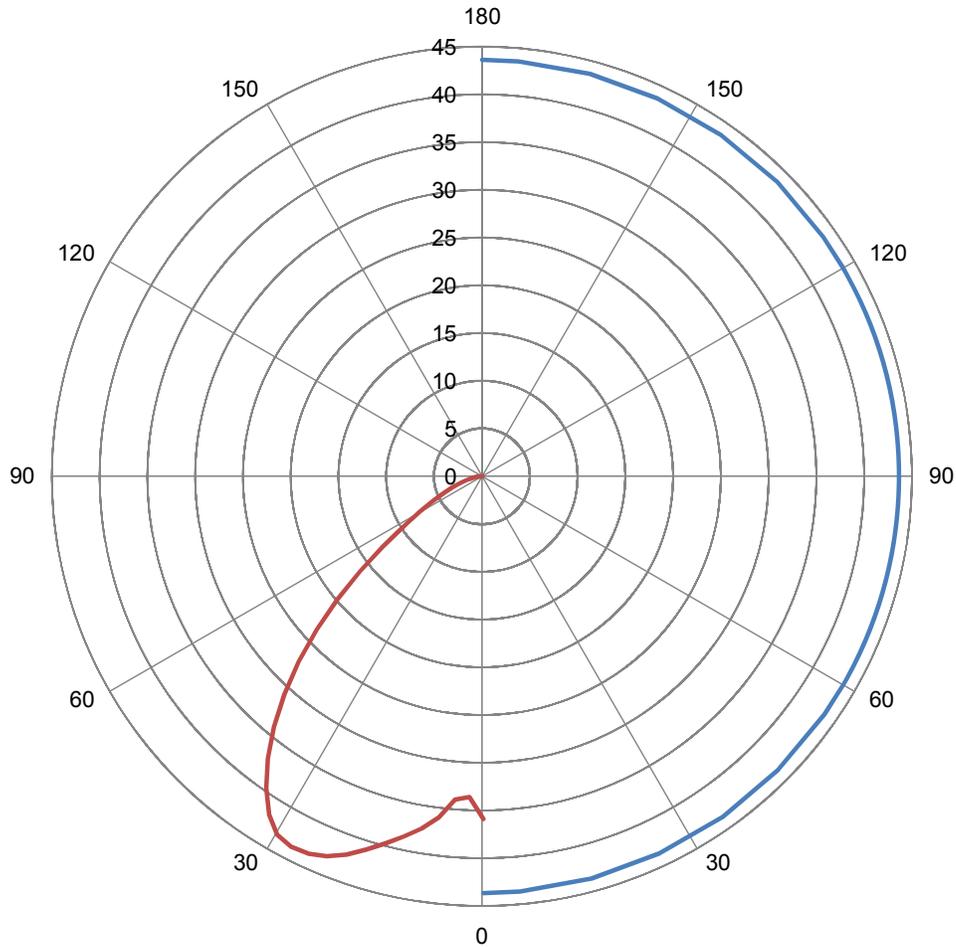
IES Roadway Classification:	Type V, Very Short	Total Lumen Output:	100 Lumens
Cutoff Classification	Full Cutoff	Luminaire Efficacy:	29.5 lm/w
BUG Rating:	B0 U0 G0	Maximum Candela:	44 Candela

ISO FootCandle Plot at 2 Feet





Maximum Plane and Cone Plots of Candela



Vertical Plane Through

0 ° Lateral

Lateral Cone Through

27.5 ° Vertical

Maximum Intensity (Candlepower):

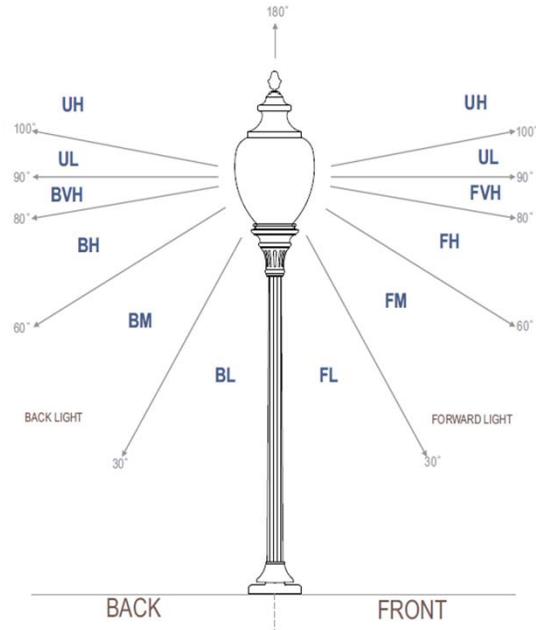
44 Candela

Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.9	0.9%	60-65	3.1	3.1%	120-125	0.0	0.0%
5-10	2.6	2.6%	65-70	2.1	2.1%	125-130	0.0	0.0%
10-15	4.6	4.6%	70-75	1.4	1.4%	130-135	0.0	0.0%
15-20	6.8	6.7%	75-80	0.9	0.9%	135-140	0.0	0.0%
20-25	9.0	9.0%	80-85	0.5	0.5%	140-145	0.0	0.0%
25-30	11.0	11.0%	85-90	0.2	0.2%	145-150	0.0	0.0%
30-35	12.2	12.2%	90-95	0.0	0.0%	150-155	0.0	0.0%
35-40	12.3	12.3%	95-100	0.0	0.0%	155-160	0.0	0.0%
40-45	11.3	11.3%	100-105	0.0	0.0%	160-165	0.0	0.0%
45-50	9.5	9.5%	105-110	0.0	0.0%	165-170	0.0	0.0%
50-55	7.0	7.0%	110-115	0.0	0.0%	170-175	0.0	0.0%
55-60	4.7	4.7%	115-120	0.0	0.0%	175-180	0.0	0.0%



IES "BUG" Rating
 (Back Light, Uplight, Glare)
 Per IES TM-15-11



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	17.4	17.4%
FM	(30-60)	28.6	28.5%
FH	(60-80)	3.7	3.7%
FVH	(80-90)	0.4	0.4%
BL	(0-30)	17.4	17.4%
BM	(30-60)	28.6	28.5%
BH	(60-80)	3.7	3.7%
BVH	(80-90)	0.4	0.4%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		100.1	100.0%
BUG Rating	B0 U0 G0		