



LUMINAIRE TESTING LABORATORY, INC.

SUSTAINING MEMBER of the IESNA

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LTL NUMBER: 18850

DATE: 04-05-2010

PREPARED FOR: RELUME TECHNOLOGIES

CATALOG NUMBER: BILLBOARD FIXTURE

LUMINAIRE: EXTRUDED BROWN ENAMEL ALUMINUM HOUSING, MOLDED SPECULAR PATTERNED PLASTIC REFLECTORS. CLEAR PLASTIC ENCLOSURE.

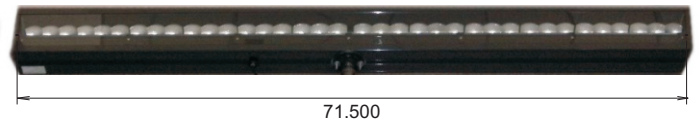
LAMP: 36 WHITE LEDS

LED POWER SUPPLY: INTERNAL

ELECTRICAL VALUES: 120.0VAC, 0.8127A, 97.06W, PF=0.995

LUMINAIRE EFFICACY: 19.5 LUMENS/WATT

NOTE: THIS TEST WAS PERFORMED USING THE CALIBRATED PHOTODETECTOR METHOD OF ABSOLUTE PHOTOMETRY.\*



IES CLASSIFICATION: AREA LIGHT
CUTOFF CLASSIFICATION: NON-CUTOFF\*\*

\*\*CUTOFF DESIGNATION IS NOT DEFINED FOR ABSOLUTE PHOTOMETRIC TESTS. THIS CUTOFF RATING IS BASED ON THE MAXIMUM CANDELA READING PER LUMINAIRE RATED AT 1000 LUMENS.



FLUX DISTRIBUTION

Table with 4 columns: LUMENS, DOWNWARD, UPWARD, TOTALS. Rows include HOUSE SIDE, STREET SIDE, and TOTALS.

Approved By: MG

\*DATA WAS ACQUIRED USING THE CALIBRATED PHOTODETECTOR METHOD OF ABSOLUTE PHOTOMETRY. A UDT MODEL #211 PHOTODETECTOR AND UDT MODEL #S370 OPTOMETER COMBINATION WERE USED AS A STANDARD.

TESTING WAS PERFORMED IN ACCORDANCE WITH IES LM-79-08. TEST ANGULAR INCREMENTS AND REPORT FORMATTING WAS BASED ON IES LM-31-95.



CANDELA DISTRIBUTION

Table with 12 columns (0-90) and 24 rows (0-180) showing Candela Distribution values.

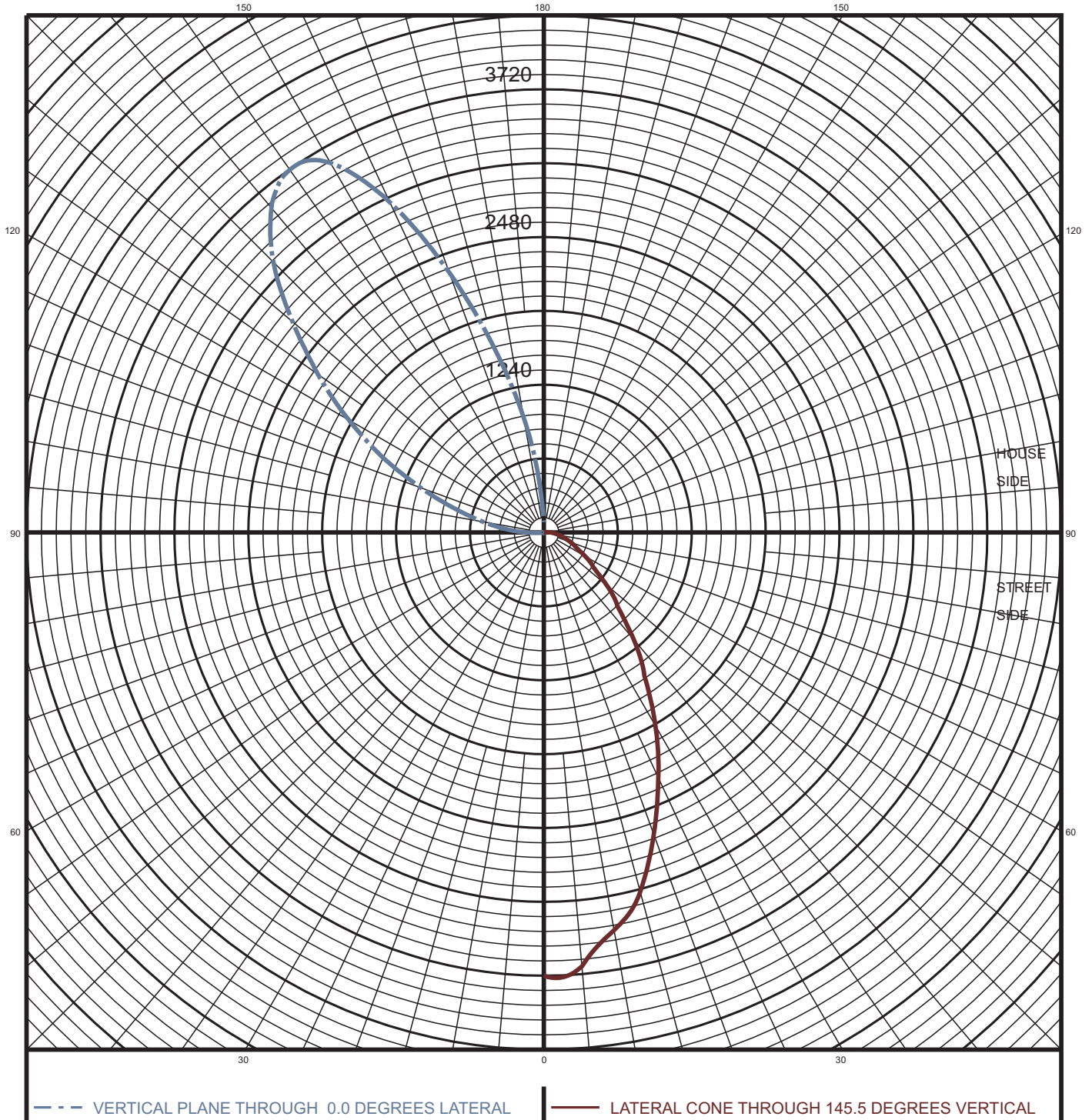


CANDELA DISTRIBUTION

Table with 11 columns (95, 105, 115, 125, 135, 145, 155, 165, 175, 180) and 21 rows (180, 175, 165, 155, 145.5, 145, 135, 125, 115, 105, 95, 90, 87.5, 85, 82.5, 80, 77.5, 75, 72.5, 70, 67.5, 65, 62.5, 60, 57.5, 55, 52.5, 50, 47.5, 45, 40, 35, 30, 25, 20, 15, 10, 5, 0). Values represent candela distribution for various beam angles.



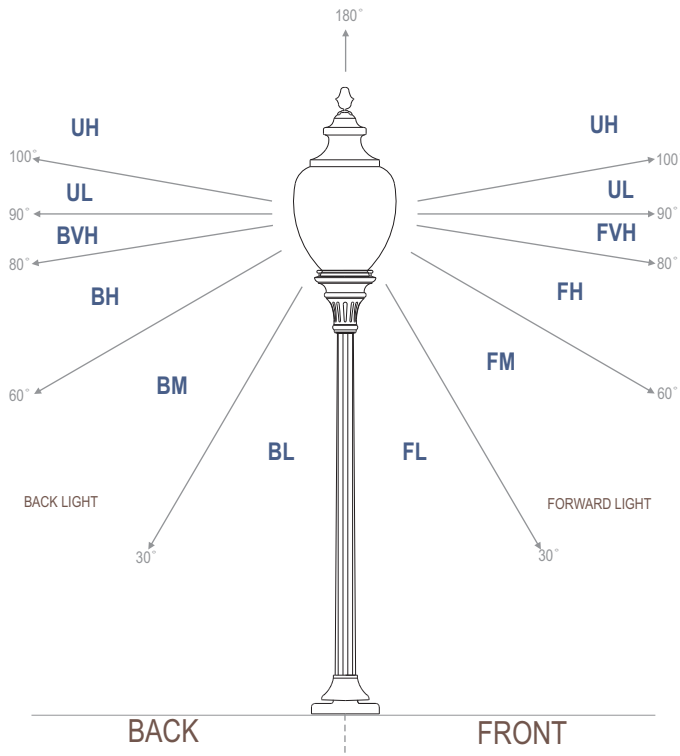
MAXIMUM PLANE AND CONE PLOTS OF CANDELA





FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM

FLUX



ZONE	LUMINAIRE LUMENS	% OF LUMINAIRE LUMENS
FORWARD LIGHT	8	0.4
FL ( 0°-30°)	0	0.0
FM (30°-60°)	0	0.0
FH (60°-80°)	1	0.1
FVH (80°-90°)	7	0.4

BACK LIGHT	0	0.0
BL ( 0°-30°)	0	0.0
BM (30°-60°)	0	0.0
BH (60°-80°)	0	0.0
BVH (80°-90°)	0	0.0

UPLIGHT	1887	99.6
UL (90°-100°)	43	2.3
UH (100°-180°)	1844	97.3

TRAPPED LIGHT	NA	NA
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BUG (Backlight, Uplight, Glare) Rating	
Asymmetrical Luminaire Types (Type I, II, III, IV)	B0 U5 G0
Quadrilateral Symmetrical Luminaire Types (Type V, Area Light)	B0 U5 G0



LTL Number: 18851

Date: 04-05-2010

Prepared For: Relume Technologies

Catalog Number: Billboard Fixture

Luminaire: Extruded brown enamel aluminum housing, molded patterned specular plastic reflectors, clear plastic enclosure.

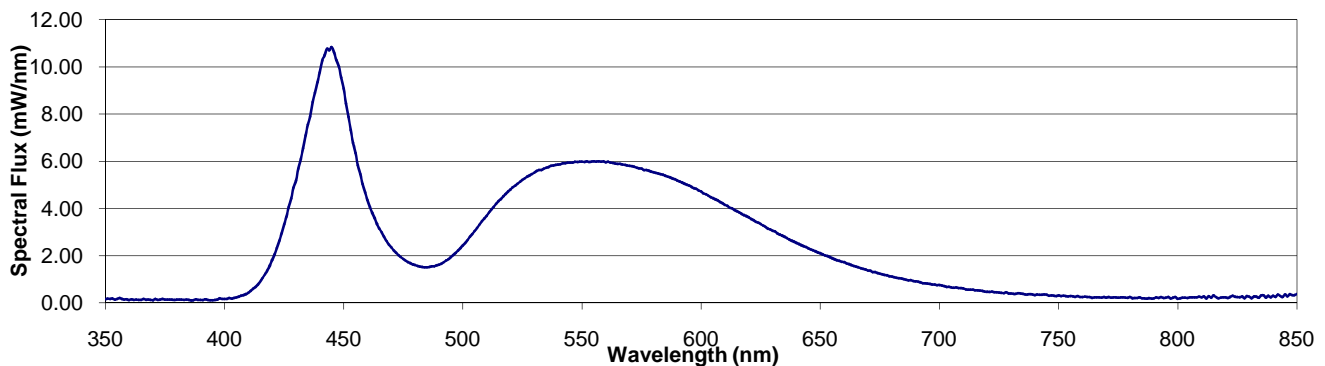
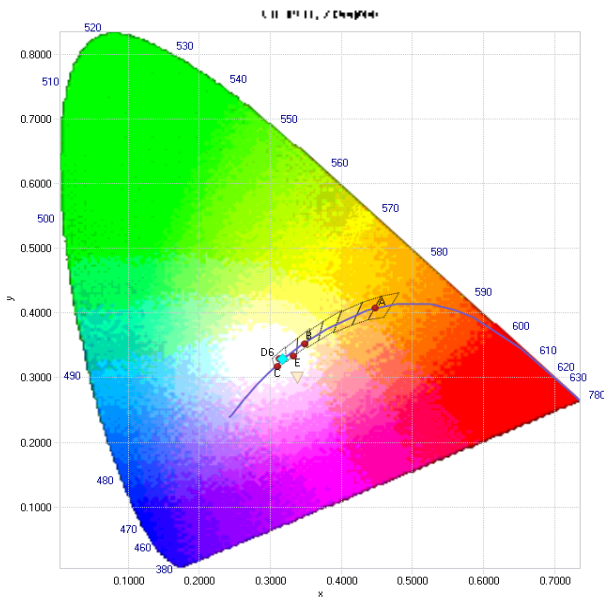
Lamp: 36 White LEDs

LED Power Supply: Internal

Note: Data presented in this report was measured using a modified integrating sphere technique.

Luminaire Input Voltage	Input Current	Luminaire Watts	Power Factor
120.0VAC	0.8141A	97.25W	0.995
Radiant Flux mW	Luminous Flux lumen	Corr.Color Temperature K	Color Rend. Index Ra
NA	NA	6234	73.4
Chroma x	Chroma y	Chroma u	Chroma v
0.3177	0.3290	0.2013	0.3127

Wavelength in nm	Spectral Flux in mW/nm	Wavelength in nm	Spectral Flux in mW/nm
350	0.1516	610	4.1572
360	0.1214	620	3.6243
370	0.1206	630	3.0602
380	0.1430	640	2.5399
390	0.1319	650	2.1034
400	0.1639	660	1.7227
410	0.4278	670	1.3730
420	1.8131	680	1.1141
430	5.1793	690	0.9089
440	9.7574	700	0.7572
450	9.0652	710	0.6106
460	4.3502	720	0.4743
470	2.3496	730	0.4012
480	1.6035	740	0.3322
490	1.6180	750	0.3122
500	2.4303	760	0.2495
510	3.6965	770	0.2278
520	4.7991	780	0.2493
530	5.5189	790	0.1920
540	5.8659	800	0.1736
550	5.9845	810	0.2416
560	5.9557	820	0.2364
570	5.8066	830	0.2571
580	5.5377	840	0.3042
590	5.1879	850	0.3870
600	4.7171		



Approved By: MG