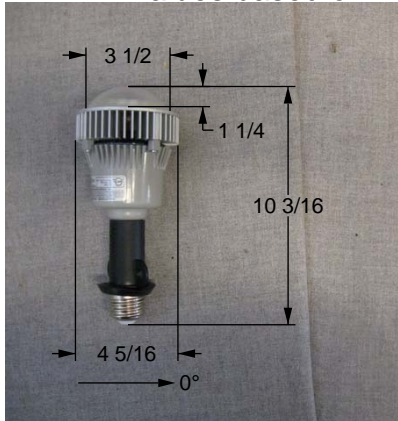




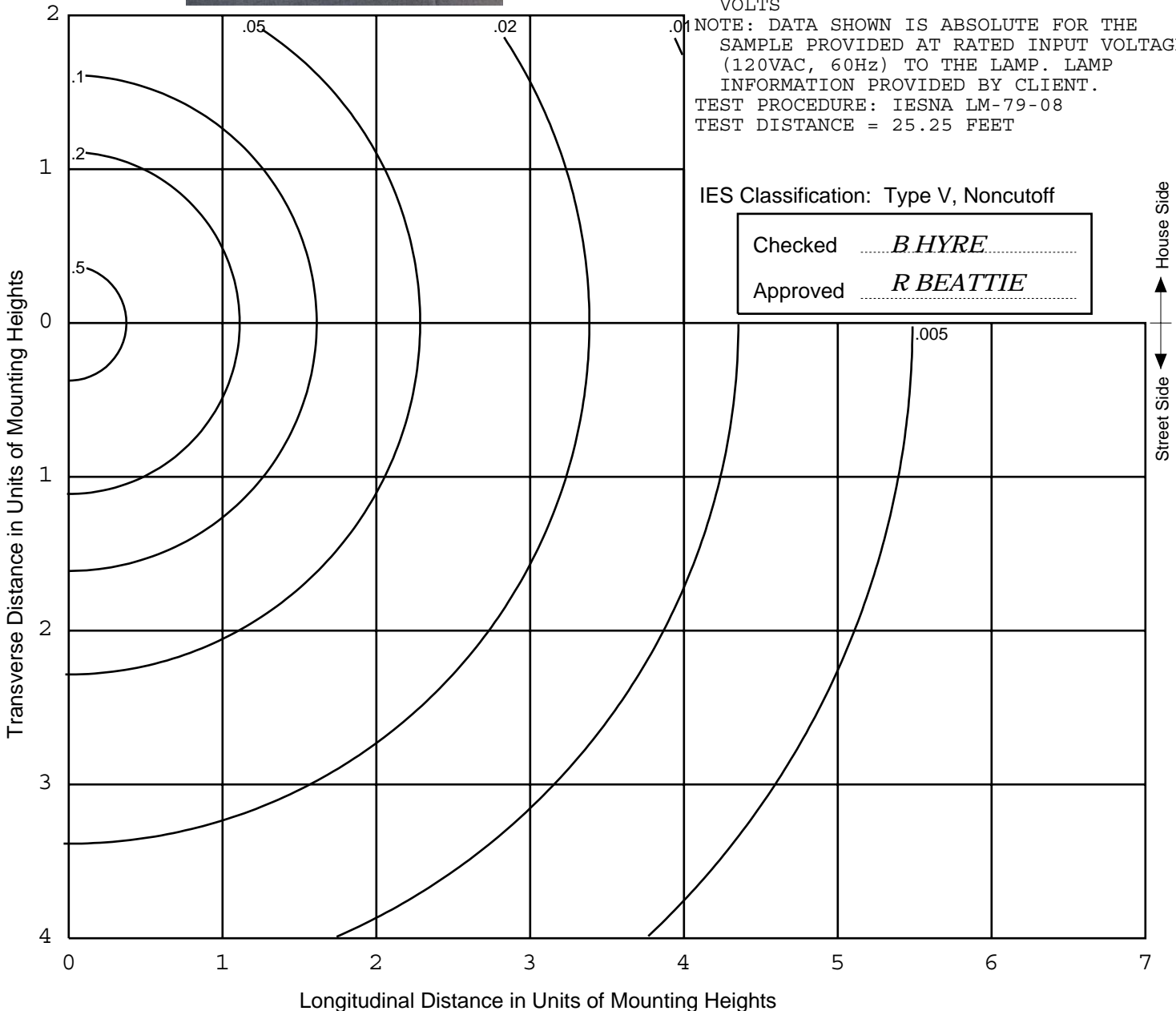
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION
Values based on 25 foot mounting height.

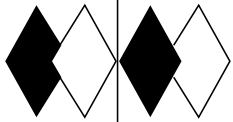


REPORT NUMBER: ITL69386
ISSUE DATE: 07/15/11 PAGE: 1 OF 6
PREPARED FOR: EVLUMA
CATALOG NUMBER: 91635049 (06/20/2011)
LAMP: ONE 50-WATT MOGUL BASE LED LAMP WITH INTEGRAL LED DRIVER, CAST FINNED DIFFUSE METAL BODY, CAST GRAY-PAINTED METAL TOP, MOLDED BLACK PLASTIC NECK, ONE WHITE CIRCUIT BOARD WITH 16 WHITE LIGHT EMITTING DIODES (LEDS) EACH WITH CLEAR HEMISPHERICAL INTEGRAL LENS, FABRICATED SPECULAR SEGMENTED METAL REFLECTOR, FROSTED SEMI-HEMISPHERICAL PLASTIC LENS, CLEAR PLASTIC LENS RETAINING CENTER POST.
TOTAL INPUT WATTS = 47.0 AT 120.0 VOLTS
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LAMP. LAMP INFORMATION PROVIDED BY CLIENT.
TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 25.25 FEET

IES Classification: Type V, Noncutoff

Checked	<i>B HYRE</i>
Approved	<i>R BEATTIE</i>





REPORT NUMBER: ITL69386
ISSUE DATE: 07/15/11 PAGE: 2 OF 6
PREPARED FOR: EVLUMA

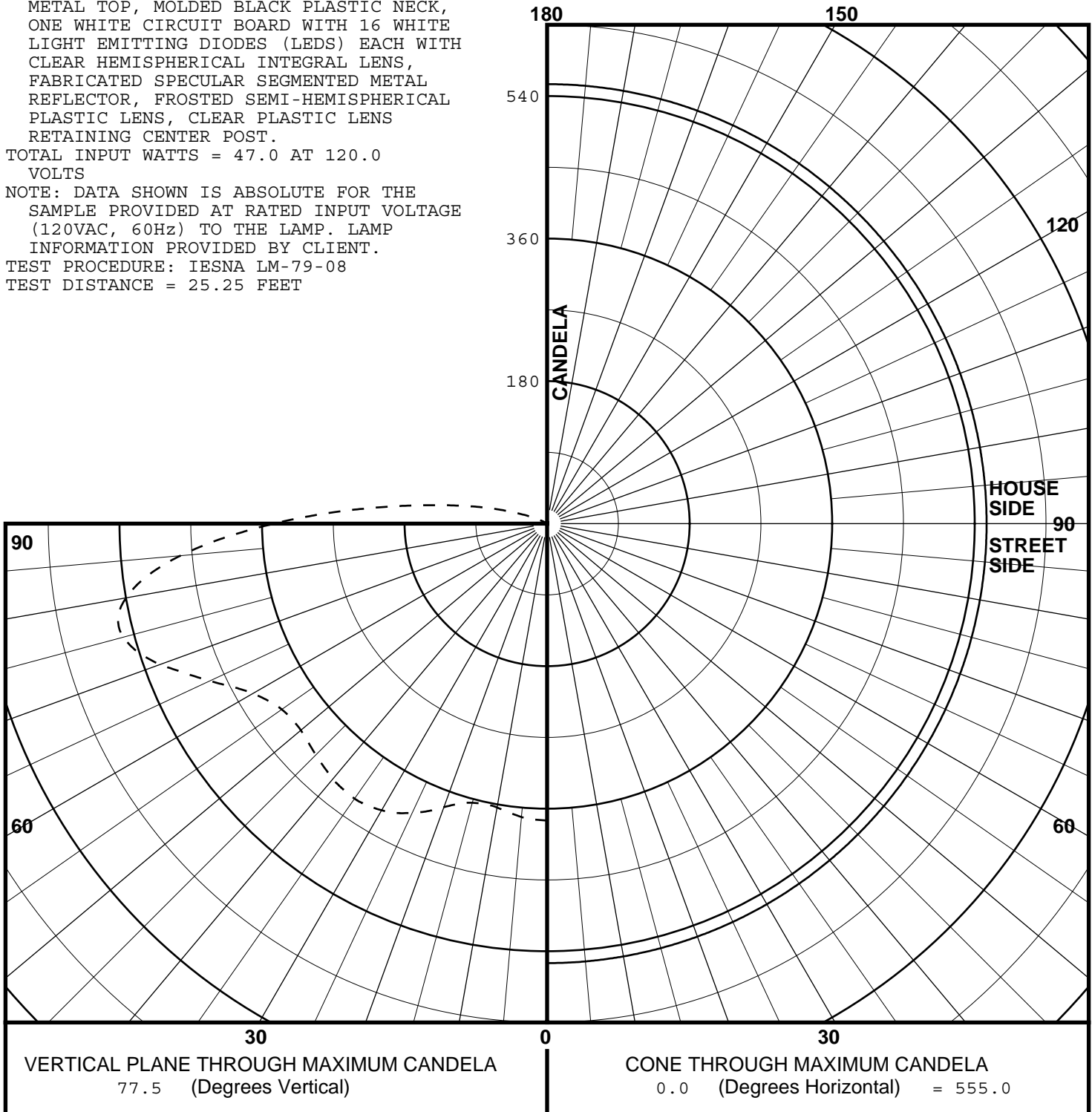
CATALOG NUMBER: 91635049 (06/20/2011)
LAMP: ONE 50-WATT MOGUL BASE LED LAMP
WITH INTEGRAL LED DRIVER, CAST FINNED
DIFFUSE METAL BODY, CAST GRAY-PAINTED
METAL TOP, MOLDED BLACK PLASTIC NECK,
ONE WHITE CIRCUIT BOARD WITH 16 WHITE
LIGHT EMITTING DIODES (LEDS) EACH WITH
CLEAR HEMISPHERICAL INTEGRAL LENS,
FABRICATED SPECULAR SEGMENTED METAL
REFLECTOR, FROSTED SEMI-HEMISPHERICAL
PLASTIC LENS, CLEAR PLASTIC LENS
RETAINING CENTER POST.

TOTAL INPUT WATTS = 47.0 AT 120.0
VOLTS

NOTE: DATA SHOWN IS ABSOLUTE FOR THE
SAMPLE PROVIDED AT RATED INPUT VOLTAGE
(120VAC, 60Hz) TO THE LAMP. LAMP
INFORMATION PROVIDED BY CLIENT.

TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 25.25 FEET

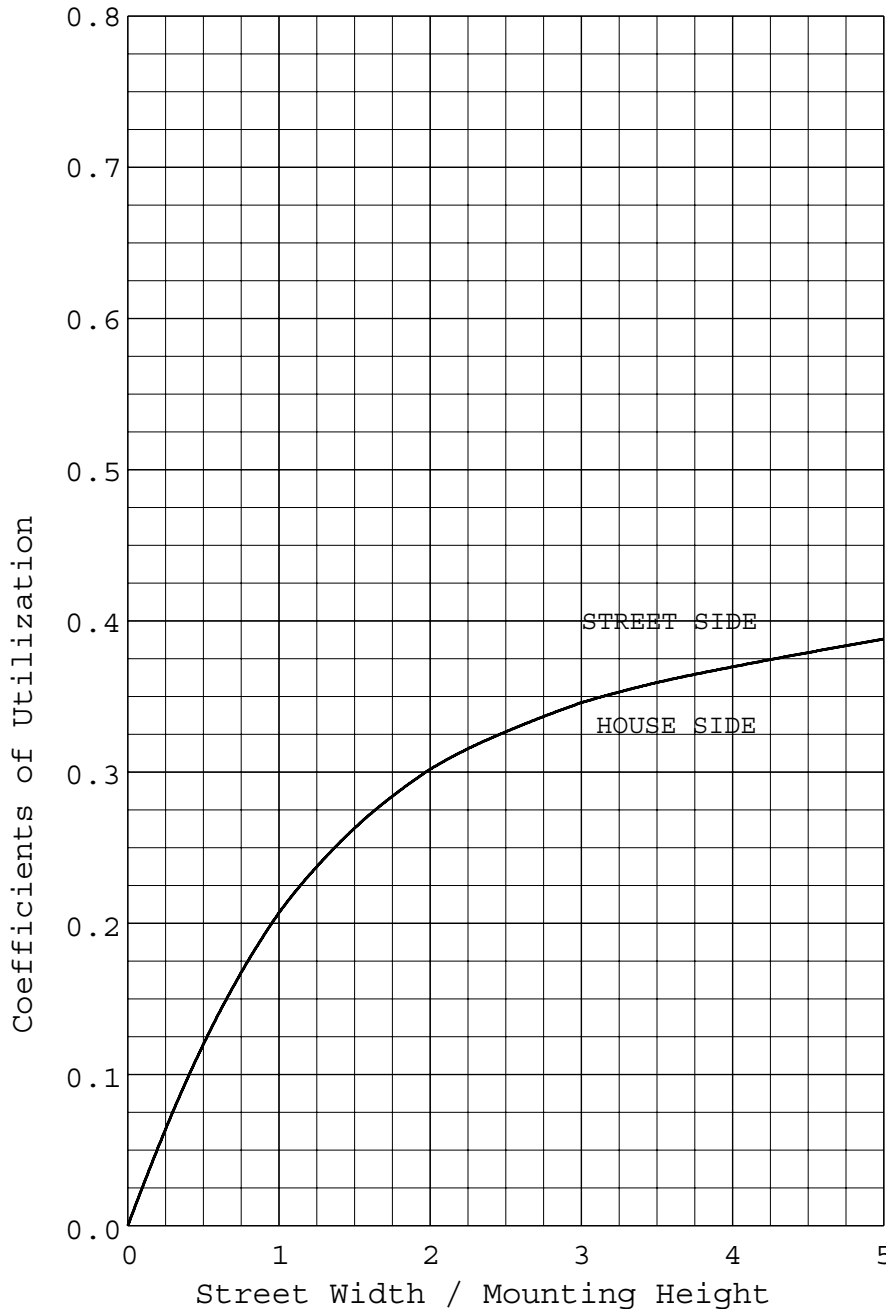
MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA



REPORT NUMBER: ITL69386
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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	1412	44.4
DOWNWARD HOUSE SIDE	1412	44.4
DOWNWARD TOTAL	2824	88.9
UPWARD STREET SIDE	177	5.6
UPWARD HOUSE SIDE	177	5.6
UPWARD TOTAL	353	11.1
TOTAL FLUX	3177	100.0
EFFICACY = 67.6 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.

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FLUX DISTRIBUTION BY SOLID ANGLE

(PER IESNA TM-15-07, LUMINAIRE CLASSIFICATION SYSTEM FOR OUTDOOR LUMINAIRES)

	LUMENS	PERCENT OF FIXTURE	BUG ZONE RATINGS
FORWARD LIGHT	1412.	44.4	
FL (0- 30)	163.1	5.1	
FM (30- 60)	477.6	15.0	
FH (60- 80)	522.6	16.4	G0
FVH(80- 90)	248.8	7.8	U3 G1
BACK LIGHT	1412.	44.4	
BL (0- 30)	163.1	5.1	B1
BM (30- 60)	477.6	15.0	B1
BH (60- 80)	522.6	16.4	B2 G0
BVH(80- 90)	248.8	7.8	U3 G1
UPLIGHT	353.	11.1	
UL (90-100)	251.9	7.9	U3
UH (100-180)	101.2	3.2	U3
TRAPPED LIGHT	0.	0.0	
TOTAL FLUX	3177.	100.0	

BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS
(PER ADDENDUM A FOR IESNA TM-15-07)

BUG RATING: B2 U3 G1



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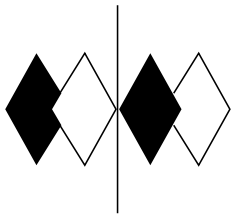
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CANDELA TABULATION

TYPE V

	180.0	0.
	175.0	0.
	165.0	0.
	155.0	0.
	145.0	0.
	135.0	0.
	125.0	0.
	115.0	14.
	105.0	76.
	95.0	225.
	92.5	283.
	90.0	345.
	87.5	408.
	85.0	465.
V	82.5	510.
E	80.0	540.
R	77.5<<	555.
T	75.0	554.
I	72.5	541.
C	70.0	520.
A	67.5	494.
L	65.0	470.
	62.5	447.
A	60.0	429.
N	57.5	417.
G	55.0	409.
L	52.5	406.
E	50.0	406.
	47.5	409.
	45.0	413.
	42.5	417.
	40.0	421.
	37.5	423.
	35.0	424.
	32.5	422.
	30.0	418.
	25.0	403.
	20.0	381.
	15.0	365.
	10.0	364.
	5.0	372.
	0.0	375.

CONE OF MAXIMUM CANDELA



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ADDRESS: 624 RAINIER AVE SOUTH
SEATTLE, WA 98144

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REPORT NUMBER: ITL69387
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REVISED: 07/19/11
PREPARED FOR: EVLUMA

Page 1 of 3

ADDRESS: 624 RAINIER AVE SOUTH
SEATTLE, WA 98144

CATALOG NUMBER: 91635049 (06/20/2011)

LAMP: ONE 50-WATT MOGUL BASE LED LAMP WITH INTEGRAL LED DRIVER, CAST FINNED DIFFUSE METAL BODY, CAST GRAY-PAINTED METAL TOP, MOLDED BLACK PLASTIC NECK, ONE WHITE CIRCUIT BOARD WITH 16 WHITE LIGHT EMITTING DIODES (LEDS) EACH WITH CLEAR HEMISPHERICAL INTEGRAL LENS, FABRICATED SPECULAR SEGMENTED METAL REFLECTOR, FROSTED SEMI-HEMISPHERICAL PLASTIC LENS, CLEAR PLASTIC LENS RETAINING CENTER POST.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60HZ) TO THE LAMP. LAMP INFORMATION PROVIDED BY CLIENT.

INSTRUMENTS: Kikusui PCR500L AC Power Source
Yokogawa WT210 Digital Power Meter
Optronic Laboratories OL770 Spectroradiometer
ITL 1.5 Meter Diameter Integrating Sphere, 4π Geometry

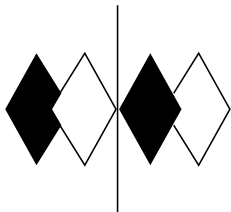
OBJECT OF TEST: Measure the Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRIa,9), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and electrical data including Power Factor (PF) to the lamp.

PROCEDURE: The lamp was provided by the customer and had an unknown number of burn hours. The lamp was mounted inside the integrating sphere in a vertical base-up position (LEDs facing down). The lamp was allowed to stabilize at 120VAC input. After stabilization occurred, Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRIa,9), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and electrical data including Power Factor (PF) were measured with the lamp operating in the integrating sphere. In order to measure mean performance, multiple data sets were recorded and averaged. Readings were taken with the luminaire operating at 120VAC input in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. All data are traceable to the National Institute of Standards and Technology.

RESULTS: (continued subsequent pages)

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Checked L Brockman
Approved N Gully
Lighting Engineer



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PREPARED FOR: EVLUMA
CATALOG NUMBER: 91635049 (06/20/2011)
RESULTS:

SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3690
Chromaticity Ordinate y	0.3561
Correlated Color Temp CCT (K)	4184
Color Rendering Index (CRIa)	78
Color Rendering Index 9 (Strong red)	11
ANSI C78.377-2008 Duv	-0.006
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (mA AC)	447
Input Power (Watts)	46.8
Input Power Factor (%)	87.2

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.984	515	29.160	650	30.061
385	0.961	520	33.652	655	27.486
390	1.060	525	37.845	660	25.013
395	1.184	530	41.180	665	22.565
400	1.390	535	43.601	670	20.356
405	1.820	540	45.771	675	18.275
410	2.800	545	47.590	680	16.320
415	4.684	550	49.089	685	14.485
420	8.066	555	50.317	690	12.827
425	14.184	560	51.306	695	11.312
430	23.090	565	52.177	700	9.961
435	34.518	570	52.782	705	8.761
440	49.412	575	53.160	710	7.720
445	67.195	580	53.351	715	6.810
450	70.320	585	53.354	720	5.927
455	53.079	590	53.027	725	5.135
460	35.650	595	52.432	730	4.459
465	25.241	600	51.535	735	3.900
470	17.929	605	50.399	740	3.414
475	13.213	610	48.926	745	2.991
480	10.729	615	47.204	750	2.607
485	9.613	620	45.357	755	2.280
490	9.781	625	42.936	760	1.999
495	11.469	630	40.520	765	1.739
500	14.636	635	37.976	770	1.519
505	18.947	640	35.396	775	1.328
510	23.919	645	32.759	780	1.215

