

# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.

3386 LONGHORN ROAD, BOULDER, CO 80302 USA

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REPORT NUMBER: ITL64304 Page 1 of 3  
DATE: 03/04/10  
PREPARED FOR: BETALED, A DIVISION OF RUUD LIGHTING

CATALOG NUMBER: ARE-EDG-4MB-\*\*-12-C-UL-BK or BXAL1J12C-UT (350mA)

LUMINAIRE: EXTRUDED BLACK PAINTED METAL HOUSING, FABRICATED BLACK PAINTED METAL BALLAST MOUNTING PLATE, CAST BLACK PAINTED METAL END CAPS, FORMED PERFORATED METAL TOP, SIX EXTRUDED FINNED METAL HEAT SINKS, EACH HEAT SINK CONTAINS ONE CIRCUIT BOARD WITH 20 LEDS AND CAST BLACK PAINTED METAL TRIM PLATE, ONE CLEAR PLASTIC NON-INTEGRAL LENS BELOW EACH LED, ONE SMALL RUBBER HOUSE SIDE SHIELD BELOW EACH LED.

LAMPS: ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

LED DRIVER: BETA LED CE366X01R0

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (240VAC, 60Hz) TO THE LED DRIVER. CLIENT STATES LEDS HAVE BEEN SEASONED FOR A MINIMUM OF 100 HOURS.

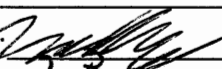
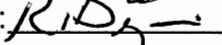
INSTRUMENTATION: Kikusui PCR500L AC Power Source  
Yokogawa WT210 Digital Power Meter  
Optronics OL770 Spectroradiometer  
ITL 1.5 Meter Diameter Integrating Sphere,  $4\pi$  Geometry

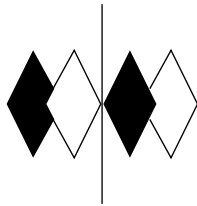
OBJECT OF TEST: Report the Absolute Flux in Lumens\*, measure the Spectral Power Distribution, Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and input electrical parameters including Total Harmonic Distortion (THD) to the luminaire.

PROCEDURE: The luminaire was provided by customer and the LEDs had an unknown number of burn hours. The luminaire was mounted inside the integrating sphere with the luminaire horizontal (LEDS facing down). The luminaire was allowed to stabilize at 240 VAC input. After stabilization occurred, spectral power distribution, CCT, CRI, x/y chromaticity coordinates, ANSI C78.377 Duv, and input electrical data were measured with the luminaire operating in the integrating sphere. In order to measure the mean performance, twenty data sets were recorded and averaged within the spectroradiometer. Readings were taken with the luminaire operating at 240 VAC 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.

\*NOTE: The total lumen output shown on this report was obtained from photometric test ITL64299.

RESULTS: (continued subsequent pages)

Checked: 
Approved: 



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Page 2 of 3

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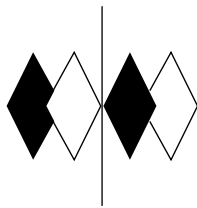
CATALOG NUMBER: ARE-EDG-4MB-\*\*-12-C-UL-BK or BXAL1J12C-UT (350mA)

## RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	7543*
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3218
Chromaticity Ordinate y	0.3419
Correlated Color Temp CCT (K)	5981
Color Rendering Index (CRI)	72
ANSI C78.377-2008 Duv	0.005
ELECTRICAL	
Input Voltage (Volts AC)	240.0
Input Current (mA AC)	614
Input Power (Watts)	144.7
Total Harmonic Distortion – Current (%)	6.1
Total Harmonic Distortion – Voltage (%)	0.0
EFFICACY (Lumens/Watt)	52.1

### \*NOTE:

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	2.780	515	91.663	650	43.154
385	2.935	520	100.610	655	38.908
390	3.110	525	110.550	660	34.873
395	3.623	530	117.596	665	31.200
400	4.217	535	121.759	670	27.921
405	5.624	540	125.058	675	24.860
410	8.692	545	126.631	680	22.095
415	15.338	550	127.290	685	19.624
420	29.169	555	127.385	690	17.426
425	52.916	560	126.378	695	15.422
430	85.977	565	125.062	700	13.659
435	122.371	570	122.759	705	12.089
440	163.755	575	119.750	710	10.681
445	200.859	580	116.421	715	9.427
450	190.156	585	112.418	720	8.325
455	139.929	590	108.175	725	7.337
460	96.931	595	103.226	730	6.457
465	71.412	600	97.887	735	5.700
470	53.714	605	92.220	740	5.018
475	42.395	610	86.521	745	4.425
480	36.356	615	80.657	750	3.909
485	33.974	620	75.075	755	3.455
490	35.359	625	68.986	760	3.058
495	40.819	630	63.441	765	2.692
500	52.261	635	57.963	770	2.373
505	65.195	640	52.825	775	2.092
510	77.675	645	47.951	780	1.864

