

itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
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REPORT NUMBER:
DATE:
REVISED:
PREPARED FOR:
CATALOG NUMBER:

ITL63786
12/29/09
02/03/10
B-K LIGHTING, INC.
NS-LED-e23-MFL-12; AR-LED-TR-e23-MFL-12-C;
AR-LED-RM-e23-MFL-12-C; DS-LED-e23-MFL-12;
RM-LED-e23-MFL-12-C; SN-LED-e23-MFL-12-C;
ST-LED-e23-MFL-12-C; SF-LED-e23-MFL-12-C;
TF-LED-e23-MFL-12-C; WS-LED-e23-MFL-12; AW-LED-e23-MFL-12;
SW-LED-e23-MFL-12; VS-LED-e23-MFL-12; VQ-LED-e23-MFL-12;
GD-LED-e23-MFL-12; GQ-LED-e23-MFL-12; EC-LED-e23-MFL-12;
ED-LED-e23-MFL-12; SM-AR-LED-e23-MFL-12-C

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LUMINAIRE: MACHINED CYLINDRICAL METAL HOUSING, ONE CIRCUIT BOARD WITH 3 LEDS, ONE CLEAR CONICAL PLASTIC OPTIC PER LED WITH FROSTED SURFACE OPPOSITE LED, MOLDED BLACK PLASTIC OPTIC MOUNTING FRAME, CLEAR FLAT MICRO-PRISMATIC GLASS LENS IN MACHINED WHITE PAINTED CYLINDRICAL METAL FRAME WITH UNFINISHED INTERIOR, LENS PRISMS IN.

LAMPS: THREE 2.5-WATT WHITE LIGHT EMITTING DIODES (LEDS) EACH WITH CLEAR HEMISPHERICAL INTEGRAL PLASTIC LENS, LEDS AIMED AT THE HORIZON.

LED DRIVER: INTEGRAL

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (12VAC, 60Hz) TO THE LED DRIVER.

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

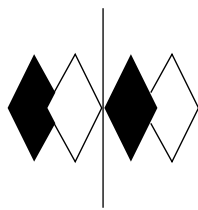
OBJECT OF TEST: Measure the Spectral Power Distribution, Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), ANSI C78.377 Duv, and input electrical parameters to the luminaire.

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 aimed at the horizon). The luminaire was allowed to stabilize at 12 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 12 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.

RESULTS:

SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3851
Chromaticity Ordinate y	0.4009
Correlated Color Temp CCT (K)	4047
Color Rendering Index (CRI)	68
ANSI C78.377-2008 Duv	0.010
ELECTRICAL	
Input Voltage (Volts AC)	12.0
Input Current (Amps AC)	1.00
Input Power (Watts)	8.2

Checked: <u>N Gully</u>
Approved: <u>R Bergin</u>



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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.081	515	3.043	650	2.821
385	0.083	520	3.655	655	2.593
390	0.088	525	4.255	660	2.362
395	0.099	530	4.764	665	2.115
400	0.112	535	5.138	670	1.871
405	0.146	540	5.460	675	1.658
410	0.233	545	5.695	680	1.504
415	0.433	550	5.855	685	1.395
420	0.840	555	5.960	690	1.300
425	1.526	560	6.011	695	1.201
430	2.451	565	6.024	700	1.096
435	3.396	570	5.996	705	0.995
440	4.285	575	5.937	710	0.899
445	5.025	580	5.849	715	0.807
450	4.726	585	5.730	720	0.726
455	3.301	590	5.595	725	0.650
460	2.017	595	5.423	730	0.582
465	1.403	600	5.219	735	0.520
470	1.060	605	4.992	740	0.464
475	0.837	610	4.762	745	0.416
480	0.739	615	4.542	750	0.371
485	0.733	620	4.334	755	0.334
490	0.798	625	4.077	760	0.300
495	0.980	630	3.827	765	0.267
500	1.321	635	3.572	770	0.238
505	1.802	640	3.316	775	0.213
510	2.383	645	3.067	780	0.190

