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THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL61999 DATE: 03/13/09 Page 1 of 6
PREPARED FOR: LEDTRONICS, INC.
CATALOG NUMBER: PAR30-15W-XIW-001M

LAMP: ONE "PAR-30" STYLE MEDIUM BASE LED LAMP WITH INTEGRAL LED DRIVER, CAST FINNED METAL BODY, MOLDED PLASTIC TOP, ONE CIRCUIT BOARD WITH FIVE WHITE LIGHT EMITTING DIODES (LEDS) EACH WITH CLEAR CONICAL GLASS INTEGRAL LENS, MICRO-PRISMATIC PLASTIC NON-INTEGRAL LENS WITH RECESSED TOP AND FLAT BOTTOM, EACH REFRACTOR IS ENCASED IN A MOLDED WHITE PLASTIC FRAME, FORMED BLACK PAINTED METAL TRIM PLATE, VERTICAL BASE-UP POSITION.

MOUNTING: MEDIUM BASE

INSTRUMENTATION: Yokogawa WT210 Digital Power Meter
Optronics Laboratories OL770 Spectroradiometer
1.5 meter integrating sphere
Elgar CW2501 AC Power Source
Omega HH-81 Digital Thermometer with Type J thermocouples

OBJECT OF TEST: Measure the total flux output in lumens, Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x/y; u'/v'), ANSI C78.377 Duv, and Spectral Power Distribution (SPD) of the lamp and input electrical parameters when operated in the integrating sphere. Measure surface temperature of the lamp at one location.

PROCEDURE: The lamp was supplied by client with an unknown number of burn hours. The lamp was prewarmed overnight before the test. Stabilization data was recorded to assure stable operation (stabilization data available on request). CCT, CRI, x/y and u'/v' chromaticity coordinates, SPD, ANSI C78.377 Duv, total flux, and input electrical data were measured with the lamp operating in the integrating sphere. In order to measure the mean performance, twenty data sets were averaged using the Optronics OL770. A Type J thermocouple was attached to the surface of the lamp to measure the operating temperature (see photograph in the report for location). All data are traceable to the National Institute of Standards and Technology. All testing performed with the lamp operated at 120V AC in a 25 +/-1 degree Celsius free air ambient.

Checked: <u>NGULLY</u>
Approved: <u>R BERGIN</u>



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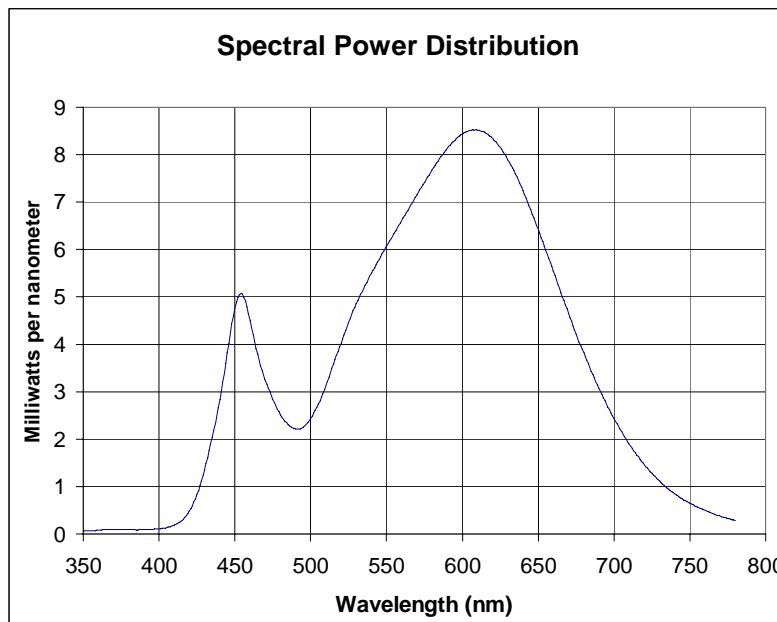
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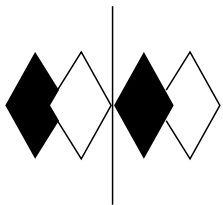
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RESULTS:

SPECTORADIOMETRIC TESTING IN INTEGRATING SPHERE	
PHOTOMETRIC	
Total Integrated Flux (Lumens)	451*
SPECTORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4219
Chromaticity Ordinate y	0.3878
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2479
Chromaticity Ordinate v'	0.5125
Correlated Color Temp CCT (K)	3132
Color Rendering Index (CRI)	86
Total Radiant Flux (milliWatts)	1516*
ANSI C78.377-2008 Duv	-0.004
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (mA AC)	226
Input Power (Watts)	13.8
EFFICACY	
Lumens/Watt	32.68



*NOTE: Proper calibration of integrating spheres for measuring total flux output of non-directional lamps will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of lamps with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results. For this test, the integrating sphere was calibrated using a directional incandescent flux standard with a distribution similar to the luminaire under test, per IESNA LM78-06.



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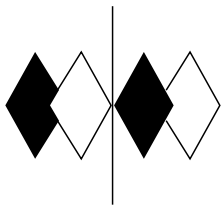
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RESULTS:

Tabulated Spectral Power Distribution

Wavelength (nm)	mWatts/nm	Wavelength (nm)	mWatts/nm
350.0	0.06430	570.0	7.14784
360.0	0.07761	580.0	7.67619
370.0	0.09229	590.0	8.13030
380.0	0.09489	600.0	8.43365
390.0	0.09142	610.0	8.51853
400.0	0.11042	620.0	8.33874
410.0	0.18631	630.0	7.89775
420.0	0.48047	640.0	7.24133
430.0	1.35571	650.0	6.42229
440.0	2.83117	660.0	5.54657
450.0	4.76226	670.0	4.65879
460.0	4.50389	680.0	3.81800
470.0	3.24968	690.0	3.07410
480.0	2.51330	700.0	2.43337
490.0	2.21796	710.0	1.90203
500.0	2.43475	720.0	1.46127
510.0	3.12616	730.0	1.11536
520.0	4.01839	740.0	0.84804
530.0	4.85644	750.0	0.64912
540.0	5.49950	760.0	0.49486
550.0	6.07260	770.0	0.37637
560.0	6.61082	780.0	0.28508



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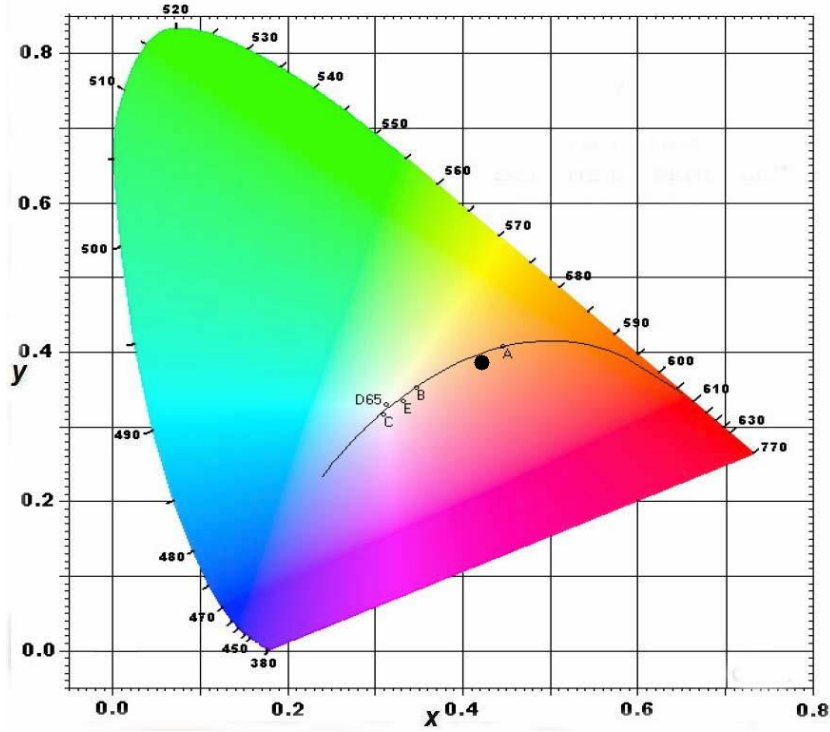
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CIE Chromaticity Diagram

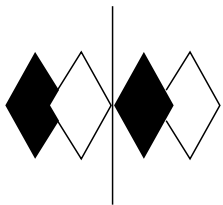


Temperature Measurements

At thermocouple #1 location: 71.9°C

THERMOCOUPLE
ATTACHMENT POINT





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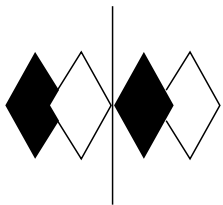
PHOTOGRAPHS

LUMINAIRE – SIDE VIEW



LUMINAIRE – BOTTOM VIEW





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LUMINAIRE – FULL VIEW



LIGHTING SCIENCES, INC.
7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

CERTIFIED TEST REPORT No.24747

LEDTRONICS INC - LED PAR 30 LAMP,CAT# PAR30-15W-XIW-001
WITH INDIVIDUAL FLAT PLASTIC TEXTURED LENSES

CERTIFIED BY:

DATE:
JAN 26, 2009

PREPARED FOR:
LEDTRONICS INC
TORRANCE, CA

TESTED IN ACCORDANCE WITH IES PROCEDURES.

Luminaire Photometric Report

Filename: PAR30-15W-XIW-001M

Manufacturer: LEDTRONICS -

Luminaire: WITH LED LENS, 120VAC, 14.1W

Luminaire Cat: PAR30-15W-XIW-001M

Lamp: . LUMEN RATING: 477.8Lms.

Lamp Output: 1 lamp(s), rated lamp lumens: 477.8

Max Candela: 824.8 at Horizontal: 0, Vertical: 0

Luminous Opening: Point

Test: 1-26-09LSI

Flood Summary

	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	86.1%	411.2	70.4	70.4
Beam (50%):	57.8%	276.3	44.8	44.8
Total:	100%	477.8		

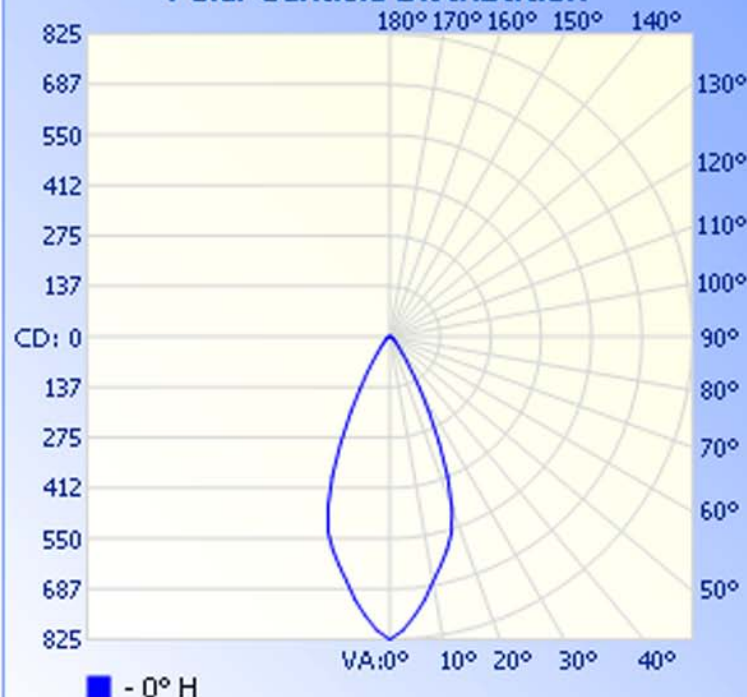
Illuminance at a Distance

Center Beam FC Beam Width

1.7ft	296.93 fc	1.4ft
3.3ft	74.23 fc	2.8ft
5.0ft	32.99 fc	4.1ft
6.7ft	18.56 fc	5.5ft
8.3ft	11.88 fc	6.9ft
10.0ft	8.25 fc	8.3ft

■ Beam Spread: 44.8°

Polar Candela Distribution



Isofootcandle Plot

