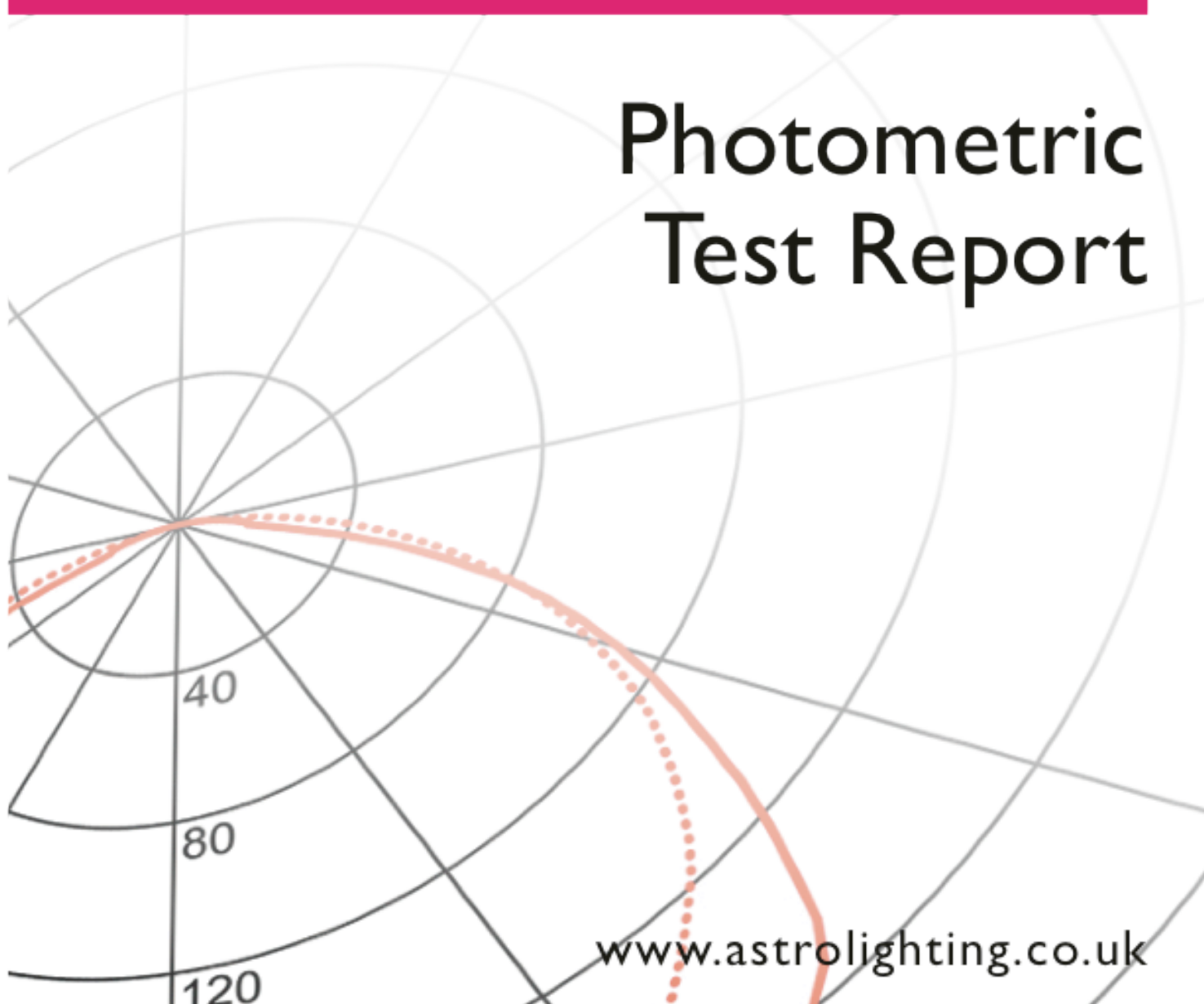




Photometric Test Report



Photometric Test Report

Report Number: POTS/GJ13077	Report Date: 04-03-2013	Prepared By: G John
Test Laboratory: Photometric and Optical Testing Services, Cotswold Business Centre, 42 A P Ellis Road, Rissington Business Park, Upper Rissington, Gloucestershire, GL54 2QB		
Company Registration Number: Registered in England & Wales No. OC352911		
Registered Address: Thistle Down Barn, Holcot Lane, Sywell, Northampton, NN6 0BG		

Client Details

Company: Astro Lighting	Email: technical@astrolighting.co.uk
Address: Astro Lighting Limited, G2 River Way, Harlow CM20 2DP, Great Britain	

Details of Product Tested

Manufacturer: Astro Lighting	Source Type: Domestic light
Model: MASHIKO CHROME	Serial Number: 0584
Lamp Type: CFL	
Power Supply Used: Uninterruptible AC power supply	
Voltage(AC V) = 243.5	Current (mA)= 212.7
Power (Watts)= 28.62	Power factor= 0.5529

Integrating Sphere Test

Date of Test: 01-02-2013	Ambient Temperature: 25°C
Measurement Filename:	
Instrument Used: Labsphere model CSLMS HALOGEN 4060 integrating sphere spectroradiometer	
Integrating Sphere Size: 1m	Measurement Geometry ($2\pi / 4\pi$): 2π
Sample Orientation: Horizontal	Auxiliary Correction Applied: YES
Comments:	
Date of Last Calibration (Operating Hours): 08-11-2012 (02:36)	Spectral Flux Standard Lamp Used: SCL-1400
Standard Lamp Serial Number: K75	Traceable: to NIST standards
Calibration Certificate Number: DM-02008-001	Calibration Certificate Date: 19 th February 2010
Calibration Lamp Uncertainty: $\pm 0.67\%$ ($k=2$)	

Results

Flux (lumens): 897.6	Rated lamp flux (lumens): 950.5*2
CIE 1931 Chromaticity Cx: 0.4527	CIE 1931 Chromaticity Cy: 0.4277
CRI (%): 81.53	CCT (K): 2942
LOR (%): 47.0	

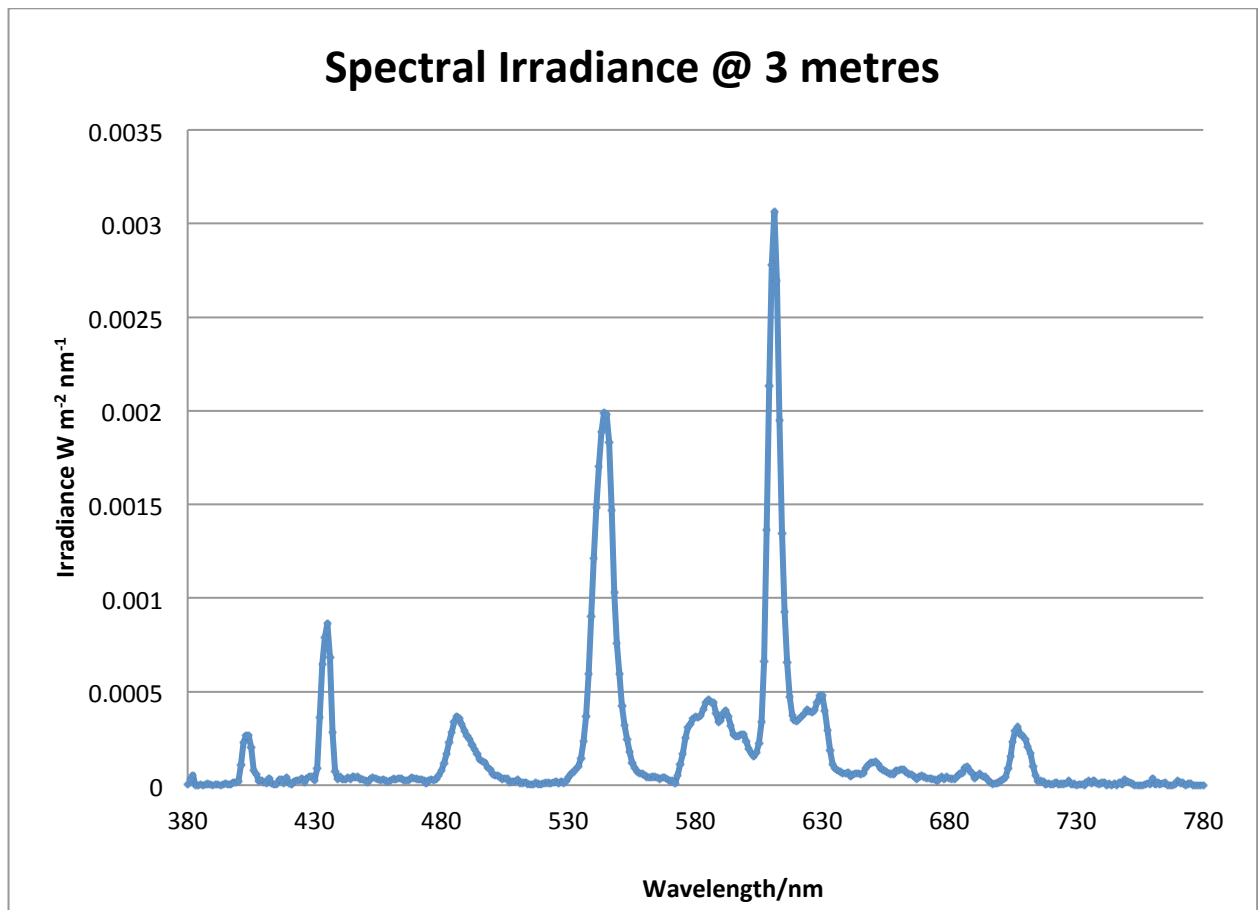


Figure 1: Spectral Irradiance

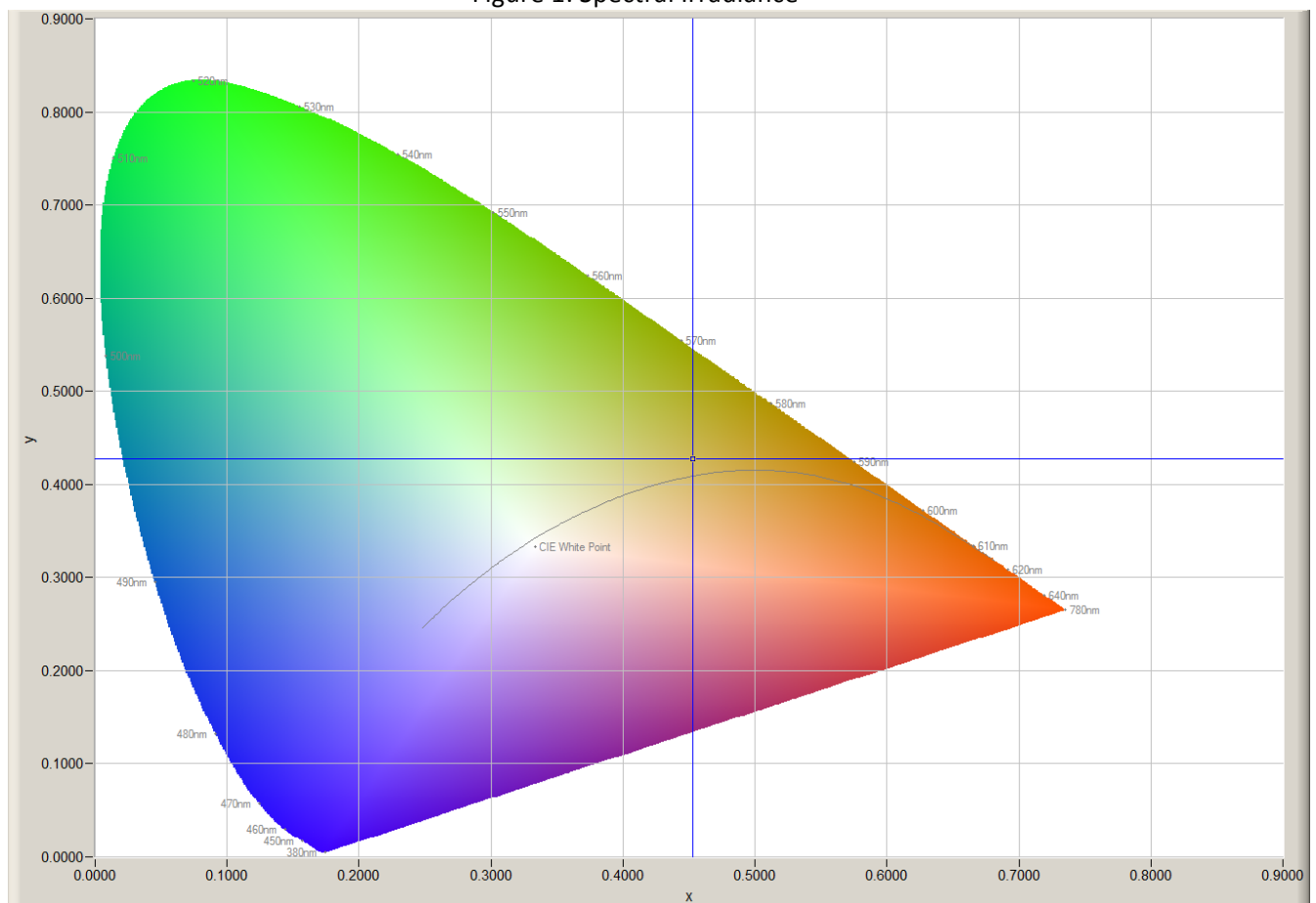


Figure 2: CIE 1931 diagram.

Goniophotometer Test		
Date of Test: 01-02-2013		Ambient Temperature: 25°C
Measurement Filename:		
Instrument Used: Radiant Imaging NFMS0800 Goniometer with ProMetric PM-1200N-1 Imaging Photometer		
Photometer Working Distance: 3 m		Measurement Geometry: Near-Field
Comments: 0584 MASHIKO CHROME		
Reference Photometer Used: Specbos1201		Reference Photometer Serial Number: 2911670
Traceable: to NPL standards, UKAS Accredited		Calibration Certificate Number: 121104
Calibration Certificate Date: 25 th October 2011		Sample Stabilisation Time (minutes):10
Reference Photometer Calibration Uncertainty: $\pm 2.4\%$ ($k=2$, 20-200 lux, CIE illuminant A source)		
Scan Set Up		
Direction	Range	Increment
Inclination Zone 1	0-180°	3°
Azimuth	0-360°	10°
Results		
Integrated Luminous Flux (lumens):897.6	Peak Intensity (3° Spot, candelas): 207.5	Efficacy (lumens/Watt): 31.36
Beam Angle (50% of max intensity C0-180, degrees): 129.4		
Photometric Filename (IES LM-63-2002): 0584 MASHIKO CHROME		
IES File – Absolute or Relative Format? Relative		
Photometric Filename (EULUMDAT): 0584 MASHIKO CHROME		
EULUMDAT File – Absolute or Relative Format? Relative		

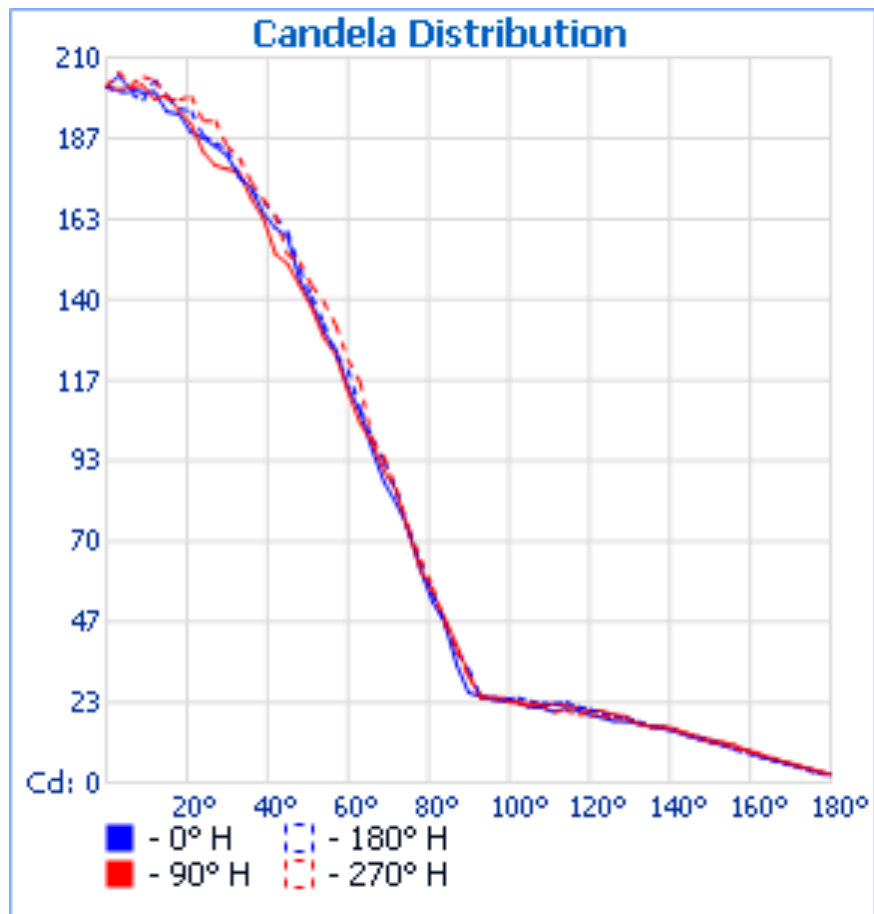


Figure 3: Far-Field Luminous Intensity (C0-180, Cartesian Coordinates)

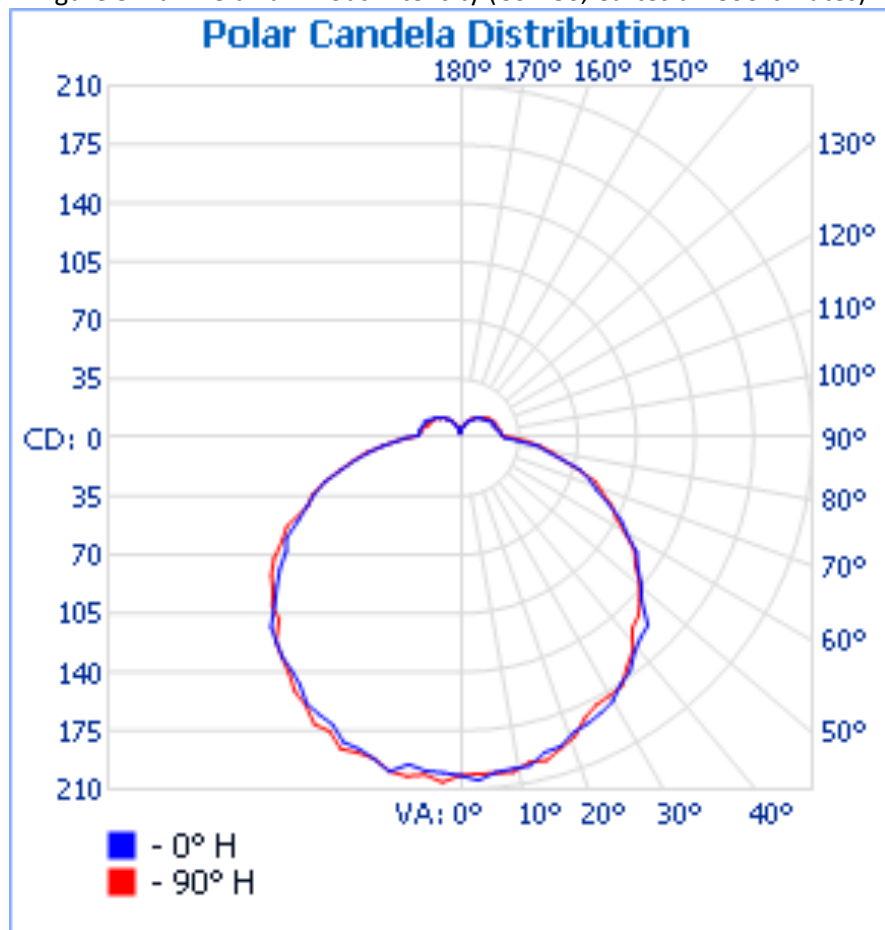


Figure 4: Far-Field Luminous Intensity (C0-180, C90-270, Polar Coordinates)

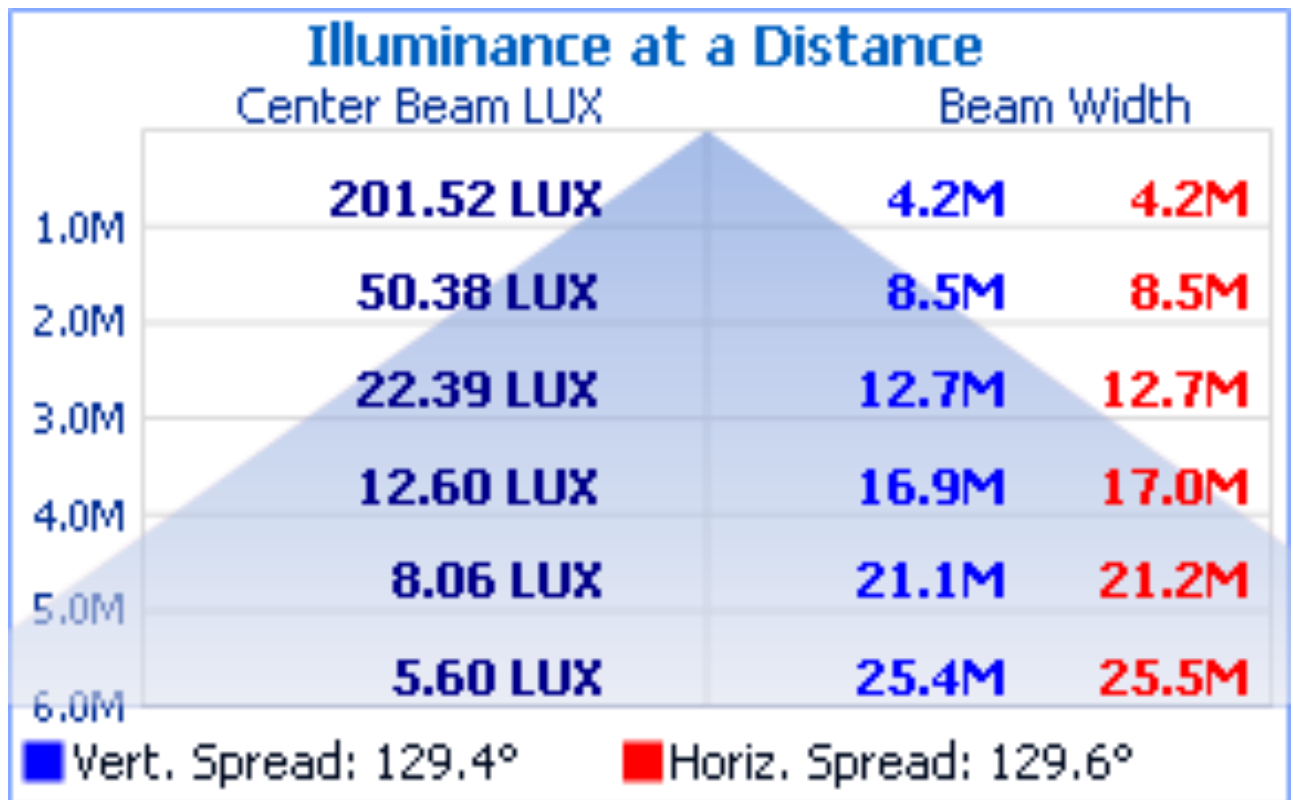


Figure 4. Illuminance cone diagram.

Reflectance of											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Floor Cavity		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimension		Viewed crosswise					Viewed endwise				
x	y										
2H	2H	13.3	14.8	13.9	15.3	16.0	14.3	15.7	14.9	16.3	17.0
	3H	15.1	16.4	15.7	17.1	17.7	16.5	17.8	17.1	18.4	19.1
	4H	16.0	17.2	16.6	17.8	18.5	17.6	18.8	18.2	19.4	20.1
	6H	16.7	17.9	17.3	18.5	19.2	18.6	19.7	19.2	20.4	21.1
	8H	17.0	18.1	17.6	18.7	19.5	19.1	20.2	19.7	20.8	21.6
	12H	17.3	18.3	17.9	19.0	19.7	19.6	20.7	20.2	21.3	22.1
4H	2H	14.3	15.5	14.9	16.1	16.8	15.1	16.3	15.7	16.9	17.6
	3H	16.3	17.3	16.9	18.0	18.7	17.4	18.5	18.0	19.1	19.8
	4H	17.3	18.2	17.9	18.9	19.7	18.6	19.6	19.3	20.3	21.0
	6H	18.1	19.0	18.8	19.7	20.4	19.8	20.7	20.5	21.4	22.1
	8H	18.5	19.3	19.2	20.0	20.8	20.4	21.2	21.1	21.9	22.7
	12H	18.9	19.6	19.5	20.3	21.1	21.1	21.8	21.7	22.5	23.3
8H	4H	17.8	18.6	18.5	19.3	20.1	19.0	19.8	19.7	20.5	21.3
	6H	18.8	19.5	19.5	20.2	21.1	20.3	21.0	21.0	21.7	22.5
	8H	19.4	20.0	20.1	20.7	21.5	21.1	21.7	21.8	22.5	23.3
	12H	19.9	20.4	20.6	21.1	21.9	21.9	22.4	22.6	23.2	24.0
12H	4H	17.9	18.7	18.6	19.4	20.2	19.0	19.8	19.7	20.5	21.3
	6H	19.1	19.7	19.8	20.4	21.2	20.5	21.1	21.2	21.8	22.6
	8H	19.6	20.2	20.4	20.9	21.7	21.3	21.8	22.0	22.5	23.4

Table 1. UGR values