



## Photometric Indoor Test Report

Relevant Standards  
LM-79-2008

Prepared For  
Sea Gull Lighting  
Andre Duljas  
301 W. Washington Street  
Riverside, NJ 08075

Catalog Number  
96119S-32

LTL Test Number  
21914

Test Date

2010-12-21

Prepared By

Signature

Approved By

Signature

Name and Title: Brian Moyer, Engineer

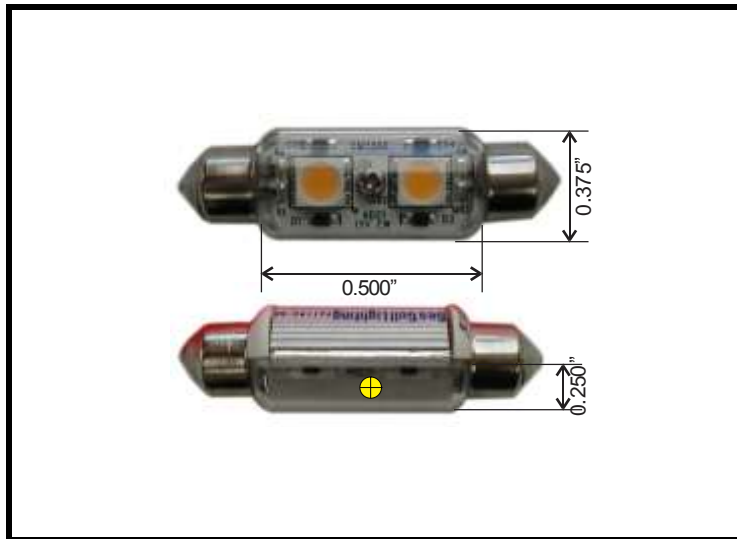
Name and Title: Michael Grather, PDE

The results contained in this report pertain only to the tested sample.  
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Luminaire Description: Extruded aluminum heatsink housing, clear plastic enclosure
Catalog Number: 96119S-32
Lamp: Two white LEDs
Mounting: Track

Luminaire



Zonal Lumen Summary

Table with 4 columns: Zone (Degrees), Lumens, % of Lamp, % of Luminaire. Rows include zones from 0-30 to 0-180.

Test Conditions

Test Temperature: 24.8 °C
Voltage: 12.00 VAC
Current: 0.05943 A
Power: 0.6611 W
Power Factor: 0.968
Frequency: 60 Hz

Summary of Results

Total Lumen Output: 26.15 Lumens
Luminaire Efficacy: 39.6 Lumens/Watt
CIE Type: Direct
Spacing Criterion: 0 Degree: 1.29, 90 degree: 1.29, 180 Degree: 1.29, 270 degree: 1.29

Data was acquired using the calibrated photodetector method of absolute photometry. A spectral mismatch correction factor was employed based on the spectral responsivity of the photodetector and the spectral power distribution of the test subject.



Candela Tabulation  
Horizontal Angle (Degrees)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520	9.520
5	9.491	9.441	9.447	9.453	9.508	9.453	9.447	9.441	9.491	9.441	9.447	9.453	9.508	9.453	9.447	9.441
10	9.371	9.356	9.330	9.309	9.380	9.309	9.330	9.356	9.371	9.356	9.330	9.309	9.380	9.309	9.330	9.356
15	9.251	9.175	9.149	9.080	9.130	9.080	9.149	9.175	9.251	9.175	9.149	9.080	9.130	9.080	9.149	9.175
20	8.950	8.986	8.926	8.804	8.877	8.804	8.926	8.986	8.950	8.986	8.926	8.804	8.877	8.804	8.926	8.986
25	8.728	8.673	8.602	8.498	8.577	8.498	8.602	8.673	8.728	8.673	8.602	8.498	8.577	8.498	8.602	8.673
30	8.283	8.261	8.243	8.099	8.130	8.099	8.243	8.261	8.283	8.261	8.243	8.099	8.130	8.099	8.243	8.261
35	7.799	7.799	7.756	7.805	8.037	7.805	7.756	7.799	7.799	7.799	7.756	7.805	8.037	7.805	7.756	7.799
40	7.181	7.227	7.230	7.804	8.121	7.804	7.230	7.227	7.181	7.227	7.230	7.804	8.121	7.804	7.230	7.227
45	6.505	6.532	6.705	7.415	6.643	7.415	6.705	6.532	6.505	6.532	6.705	7.415	6.643	7.415	6.705	6.532
50	5.674	5.705	6.151	6.017	5.202	6.017	6.151	5.705	5.674	5.705	6.151	6.017	5.202	6.017	6.151	5.705
55	4.743	4.747	5.307	4.675	4.087	4.675	5.307	4.747	4.743	4.747	5.307	4.675	4.087	4.675	5.307	4.747
60	3.915	3.888	4.368	3.637	3.420	3.637	4.368	3.888	3.915	3.888	4.368	3.637	3.420	3.637	4.368	3.888
65	3.142	3.051	3.187	2.842	2.284	2.842	3.187	3.051	3.142	3.051	3.187	2.842	2.284	2.842	3.187	3.051
70	2.327	2.329	2.156	1.586	1.209	1.586	2.156	2.329	2.327	2.329	2.156	1.586	1.209	1.586	2.156	2.329
75	1.446	1.473	1.271	0.785	0.750	0.785	1.271	1.473	1.446	1.473	1.271	0.785	0.750	0.785	1.271	1.473
80	0.571	0.592	0.504	0.325	0.167	0.325	0.504	0.592	0.571	0.592	0.504	0.325	0.167	0.325	0.504	0.592
85	0.122	0.096	0.125	0.075	0.043	0.075	0.125	0.096	0.122	0.096	0.125	0.075	0.043	0.075	0.125	0.096
90	0.037	0.015	0.081	0.032	0.000	0.032	0.081	0.015	0.037	0.015	0.081	0.032	0.000	0.032	0.081	0.015
95	0.000	0.004	0.071	0.000	0.000	0.000	0.071	0.004	0.000	0.004	0.071	0.000	0.000	0.000	0.071	0.004
100	0.000	0.001	0.010	0.000	0.000	0.000	0.010	0.001	0.000	0.001	0.010	0.000	0.000	0.000	0.010	0.001
105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Zonal Lumen Tabulation (5 degree zones)

Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens
0-5	0.2266	45-50	2.549	90-95	0.01450	135-140	0
5-10	0.6717	50-55	2.300	95-100	0.004789	140-145	0
10-15	1.097	55-60	1.998	100-105	0.0001096	145-150	0
15-20	1.489	60-65	1.656	105-110	0	150-155	0
20-25	1.837	65-70	1.236	110-115	0	155-160	0
25-30	2.125	70-75	0.8060	115-120	0	160-165	0
30-35	2.354	75-80	0.4205	120-125	0	165-170	0
35-40	2.551	80-85	0.1247	125-130	0	170-175	0
40-45	2.661	85-90	0.02634	130-135	0	175-180	0



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **											
0	31.89	31.89	31.89	31.89	31.12	31.12	31.12	31.12	30.40	30.40	30.40	30.40
1	29.42	28.15	27.03	26.02	28.68	27.54	26.51	25.58	27.98	26.95	26.01	25.17
2	26.91	24.67	22.85	21.32	26.20	24.16	22.48	21.07	25.52	23.67	22.13	20.81
3	24.61	21.72	19.52	17.79	23.94	21.30	19.25	17.63	23.30	20.89	18.99	17.47
4	22.57	19.26	16.89	15.09	21.94	18.90	16.68	14.99	21.35	18.56	16.48	14.88
5	20.76	17.21	14.77	12.99	20.18	16.90	14.61	12.92	19.64	16.61	14.46	12.85
6	19.16	15.48	13.05	11.33	18.63	15.22	12.93	11.28	18.14	14.97	12.81	11.23
7	17.75	14.01	11.64	10.00	17.27	13.79	11.54	9.96	16.82	13.58	11.44	9.92
8	16.50	12.77	10.46	8.90	16.07	12.58	10.38	8.88	15.66	12.40	10.30	8.85
9	15.40	11.70	9.48	8.00	15.00	11.54	9.41	7.98	14.64	11.38	9.35	7.96
10	14.41	10.78	8.64	7.24	14.06	10.64	8.59	7.22	13.72	10.50	8.53	7.21

Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **										
0	29.04	29.04	29.04	29.04	27.80	27.80	27.80	26.66	26.66	26.66	26.13
1	26.68	25.84	25.07	24.37	24.82	24.20	23.63	23.89	23.39	22.92	22.39
2	24.27	22.75	21.45	20.33	21.90	20.82	19.87	21.12	20.22	19.43	18.88
3	22.12	20.11	18.49	17.16	19.40	18.02	16.86	18.73	17.57	16.57	16.01
4	20.26	17.91	16.10	14.67	17.30	15.74	14.47	16.74	15.39	14.28	13.72
5	18.64	16.06	14.16	12.71	15.54	13.88	12.57	15.06	13.61	12.43	11.89
6	17.23	14.50	12.57	11.13	14.06	12.34	11.03	13.65	12.13	10.93	10.40
7	15.99	13.18	11.25	9.85	12.80	11.07	9.78	12.45	10.89	9.70	9.19
8	14.91	12.05	10.15	8.79	11.73	10.00	8.74	11.42	9.85	8.68	8.19
9	13.95	11.08	9.22	7.91	10.80	9.09	7.87	10.53	8.97	7.83	7.35
10	13.11	10.24	8.42	7.17	9.99	8.32	7.14	9.76	8.22	7.11	6.65

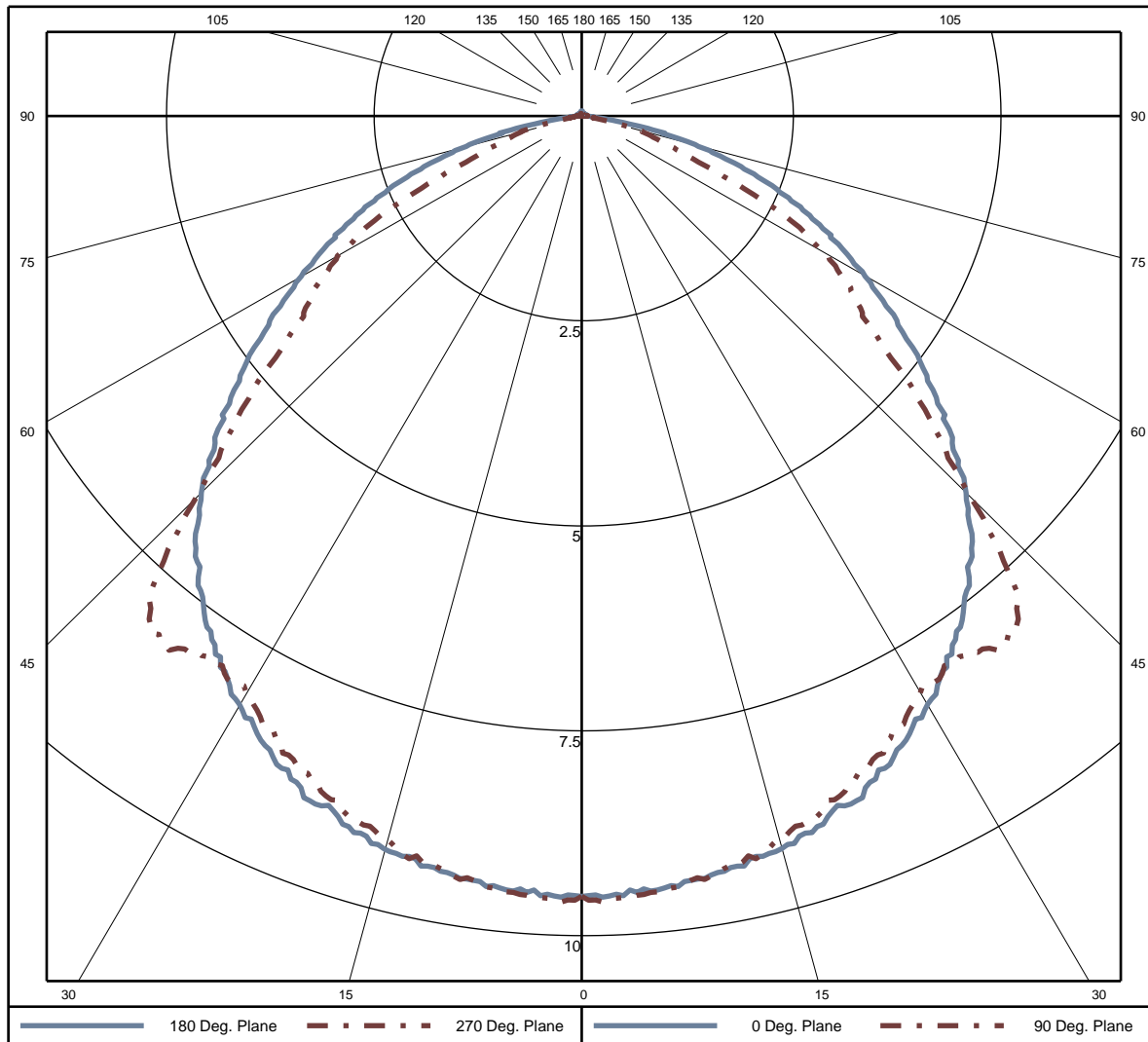
Average Luminance Table (cd/m<sup>2</sup>)

		Horizontal Angle (Degrees)		
		0	45	90
Vertical Angle (Degree)	0	77660	77660	77660
	45	45830	51960	79210
	55	35010	45700	57590
	65	25630	30880	44260
	75	13180	15160	23260
	85	1350	3330	3330

This test was conducted using photometry techniques according to standard IES procedures. The user must therefore use caution in the following situations: 1) This test was performed using a specific ballast/lamp combination. Extrapolation of this data for other ballast/lamp combinations may produce erroneous results. 2) This test was conducted in a controlled laboratory environment where the ambient temperature was held at 25°C ±1°C. Field performance may differ particularly in regards to change in luminous output as a result of difference in ambient temperature and method of mounting the luminaire.



Polar Plot (Candela)





## Integrating Sphere Test Report

Relevant Standards

LM-79-2008

Prepared For

Sea Gull Lighting

Andre Duljas

301 W. Washington Street

Riverside, NJ 08075

Catalog Number

96119S-32

LTL Test Number

21915

Test Date

2010-12-23

Prepared By

Signature

Approved By

Signature

Name and Title: Brian Moyer, Engineer

Name and Title: Michael Grather, PDE

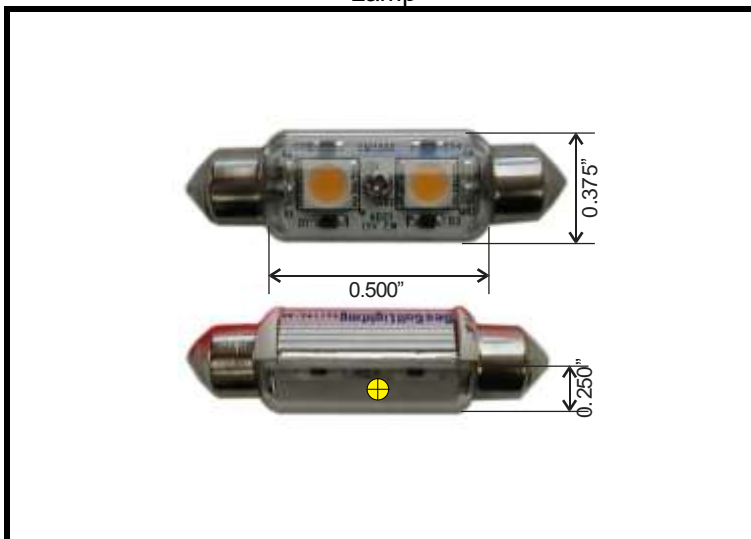
The results contained in this report pertain only to the tested sample.

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Lamp Description: Extruded aluminum heatsink housing , clear plastic enclosure  
Catalog Number: 96119S-32  
Lamp: Two white LEDs  
Mounting: Track

Lamp



Summary of Results

Radiant Flux: 84.76 mW  
Luminous Flux: 26.26 Lumens  
Lamp Efficacy: 38.15 Lumens/Watt  
CCT: 3666 K  
CRI (Ra): 90.3  
Chromaticity (x): 0.3987  
Chromaticity (y): 0.3932  
Chromaticity (u): 0.2304  
Chromaticity (v): 0.3409  
Duv: 0.0020

Test Conditions

Test Temperature: 24.6 °C  
Voltage: 12.00 VAC  
Current: 0.06011 A  
Power: 0.6883 W  
Power Factor: 0.927  
Frequency: 60 Hz

Testing was performed in a Labsphere SLMS7650 two meter integrating sphere using the 4π geometry method, a Labsphere CDS 1100 spectrometer, and LightMtrX software. Absorption correction was employed for this measurement.

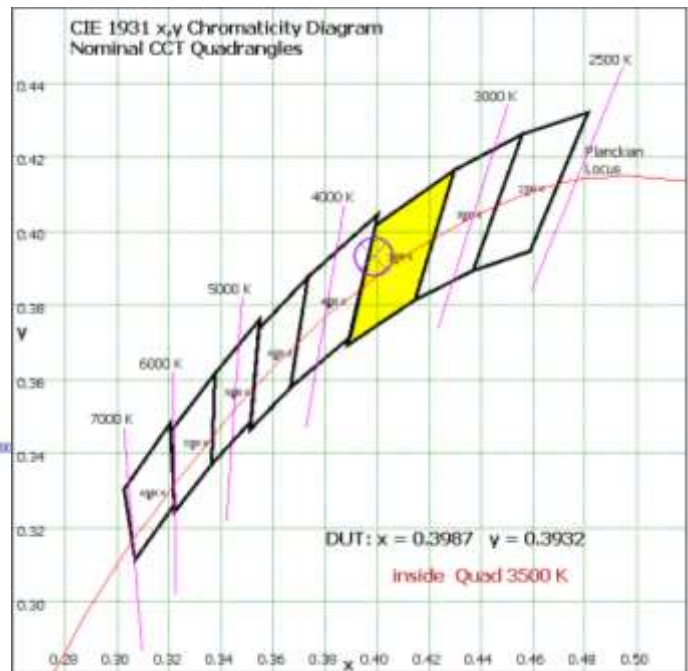
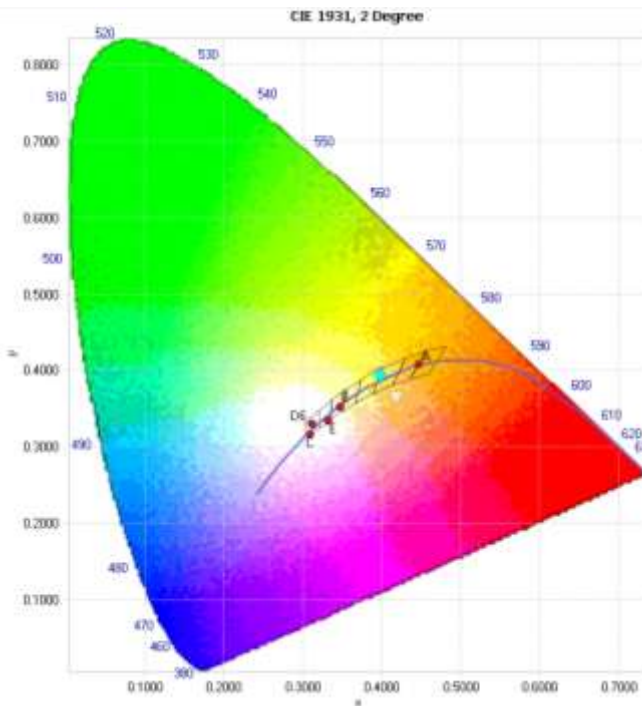


Chromaticity Coordinates

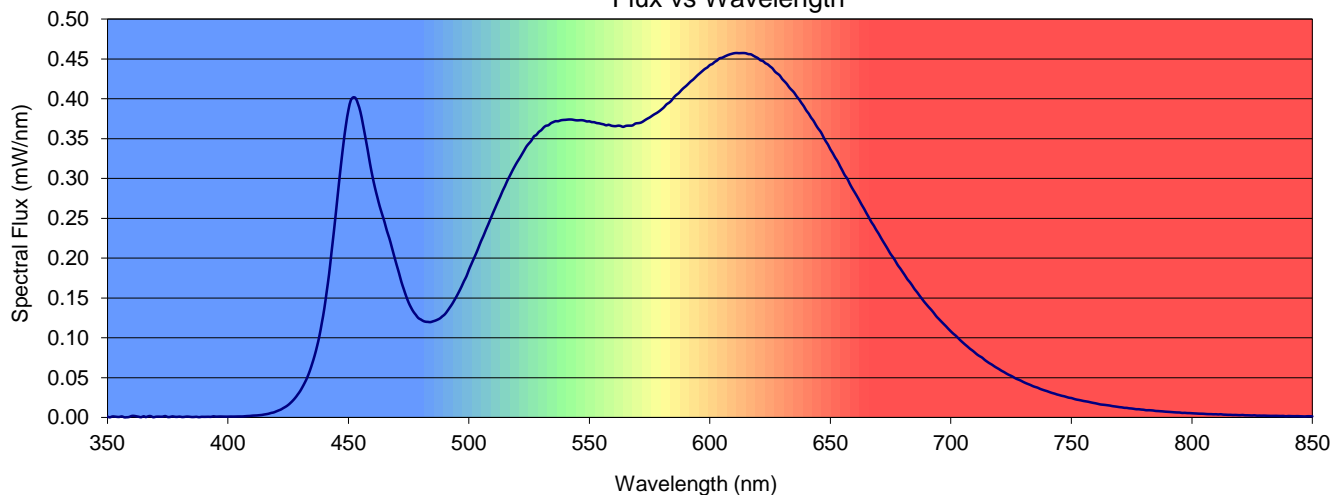
x	y	u	v	u'	v'	Duv
0.3987	0.3932	0.2304	0.3409	0.2304	0.5113	0.0020

Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
90.3	91.2	92.5	92.0	91.9	89.3	89.3	94.0	82.1	51.8	80.1	91.2	63.8	91.7	94.7



Flux vs Wavelength





Spectral Power Distribution

Table with 16 columns (λ(nm), mW/nm) and 40 rows of spectral data points.