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Photometric Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
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Catalog Number
SR111-18-09D-930-03-S3
Order Number
11087122
Test Number
1187214

Test Date

2016-01-19 - 2016-01-20

Prepared By

A handwritten signature in black ink, appearing to read 'Tony Rubio'.

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Eric Gaudreau, Senior Engineering Associate

The results contained in this report pertain only to the tested sample.
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Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 2-meter integrating sphere using the 4π geometry method.
Absorption correction was employed for Sphere measurement



Luminaire Description: Silver aluminum heatsink with clear radial linear prismatic lens
Lamp: One (1) white LED
Mounting: VBU

Luminaire



Luminaire Characteristics
Luminous Diameter: 3.25 in.

Summary of Results

Integrating Sphere

Luminous Flux: 782 Lumens
Efficacy: 41.1 lm/w
CCT: 2917 K
CRI (Ra): 95.3

Distribution

Total Luminaire Output: 797.3 Lumens
Luminaire Efficacy: 41.9 lm/w
Maximum Candela: 23038 Candela

Electrical Data at 12 VAC

Test Temperature: 25.0 °C
Voltage: 12.03 VAC
Current: 1.705 A
Power: 19.01 W
Power Factor: 0.926
Frequency: 60 Hz
Current THD: 38.3 %



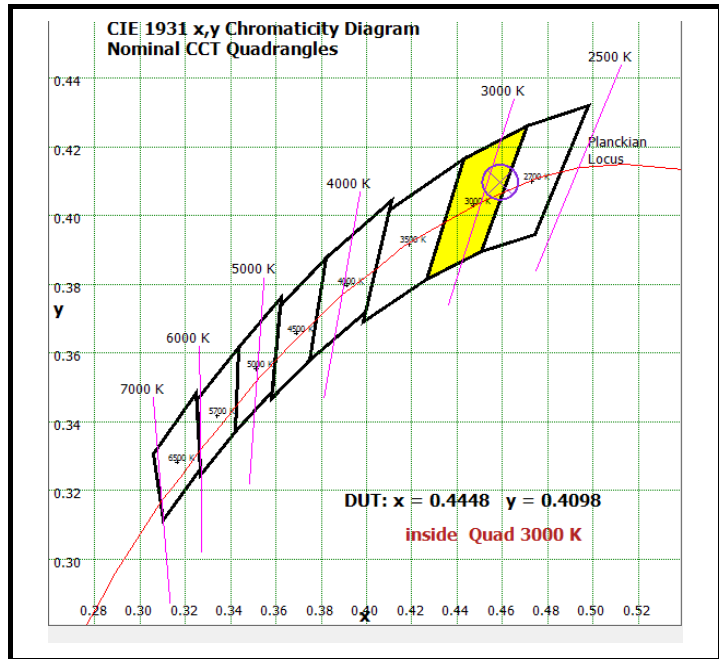
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	12.03 VAC	1.705 A	19.01 W	0.926	60 Hz	38.3 %

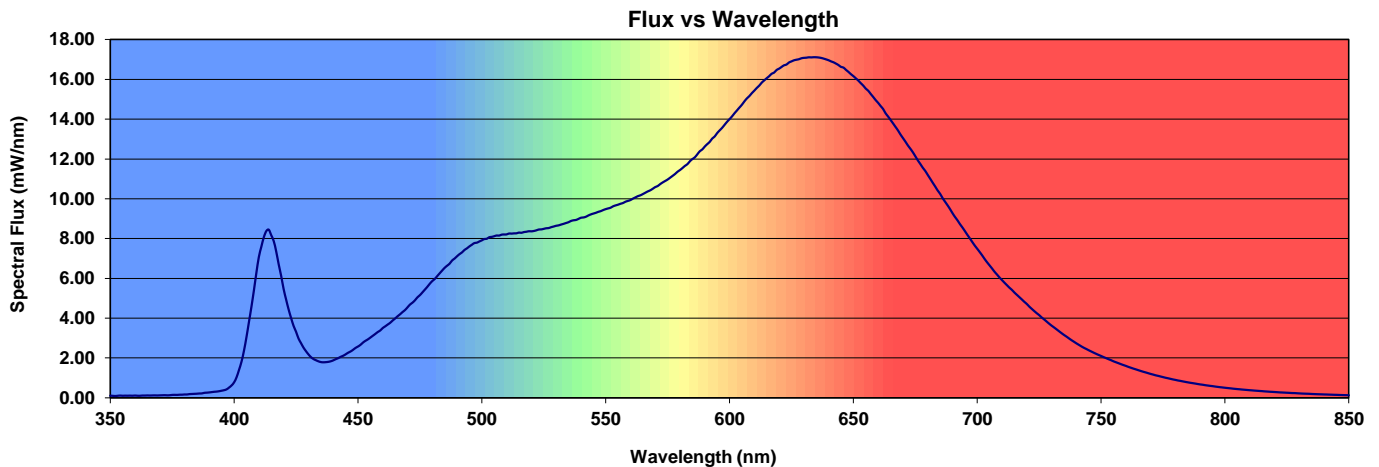
Summary of Results

Total Output:	782 Lumens
Efficacy:	41.1 lm/w
CCT:	2917 K
CRI (Ra):	95.3
CRI (R9):	95.8
Chromaticity (x):	0.4448
Chromaticity (y):	0.4098
Chromaticity (u):	0.2531
Chromaticity (v):	0.3499
Chromaticity (u')	0.2531
Chromaticity (v')	0.5248
Duv:	0.0009



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
95.3	95.8	96.2	96.4	94.2	94.3	91.1	96.8	97.5	95.8	90.8	90.0	81.3	95.4	98.4





Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	12.03 VAC	1.732 A	19.02 W	0.913	60 Hz	30.4 %

Summary of Results

Spacing Criteria

0-180: 0.14
90-270: 0.14

Total Lumen Output:

797.3 Lumens

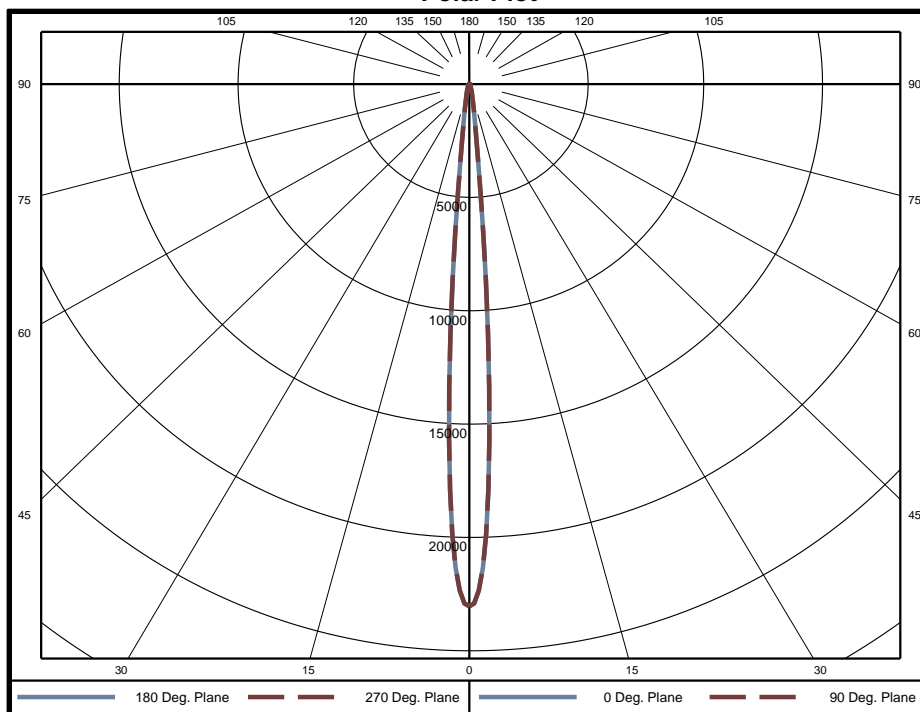
Luminaire Efficacy:

41.9 lm/w

Maximum Candela:

23038 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	333.1	41.8%	60-65	7.7	1.0%	120-125	0	0.0%
5-10	154.5	19.4%	65-70	6.7	0.8%	125-130	0	0.0%
10-15	70.2	8.8%	70-75	5.5	0.7%	130-135	0	0.0%
15-20	48.5	6.1%	75-80	4.2	0.5%	135-140	0	0.0%
20-25	34.1	4.3%	80-85	2.5	0.3%	140-145	0	0.0%
25-30	29.0	3.6%	85-90	0.6	0.1%	145-150	0	0.0%
30-35	26.8	3.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	26.1	3.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	18.1	2.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	11.3	1.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	9.7	1.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	8.5	1.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	722	90.6%
0-60	770	96.6%
0-90	797	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	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	23040	23040	23040	23040	23040	23040	23040	23040	23040	23040	23040	23040	23040	23040	23040	23040
5	6542	6542	6542	6542	6542	6542	6542	6542	6542	6542	6542	6542	6542	6542	6542	6542
10	964	964	964	964	964	964	964	964	964	964	964	964	964	964	964	964
15	412	412	412	412	412	412	412	412	412	412	412	412	412	412	412	412
20	209	209	209	209	209	209	209	209	209	209	209	209	209	209	209	209
25	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
30	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106
35	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
40	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
45	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
55	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
60	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
65	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
70	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
75	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
80	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
85	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	4304000	4304000	4304000
45	9154	9154	9154
55	6536	6536	6536
65	6463	6463	6463
75	6639	6639	6639
85	4724	4724	4724



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	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	949	949	949	949	927	927	927	927	886	886	886	848	848	848	814	814	814	797
1	915	897	880	866	896	880	865	852	848	836	826	819	810	802	792	785	779	765
2	883	853	828	807	866	839	817	798	815	796	780	792	777	764	770	759	748	737
3	855	817	787	763	841	806	779	757	786	764	745	768	750	734	751	736	723	713
4	830	786	754	730	817	778	749	726	762	737	718	748	727	710	734	716	702	692
5	808	761	728	704	797	754	724	701	741	715	695	729	707	690	718	699	684	675
6	788	739	706	683	778	733	703	681	723	696	677	713	690	672	704	684	668	660
7	770	720	688	666	761	716	685	664	707	680	661	699	675	658	691	670	655	647
8	753	704	672	651	746	700	670	650	693	666	647	686	662	645	679	658	643	635
9	738	689	659	638	732	686	657	637	680	654	635	674	650	634	669	647	632	625
10	725	676	647	627	719	673	645	626	668	643	625	663	640	624	659	638	622	616

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	1440	0.542
6.00	640	0.813
8.00	360	1.08
10.0	230	1.35
12.0	160	1.63
14.0	118	1.90
16.0	90.0	2.17

Cone of Light Plot

