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Photometric Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002
UL1598-2008

Prepared For
SloanLED
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Catalog Number
701946-6WSRP1
Order Number
11162629
Test Number
1210925

Test Date

2016-02-26

Prepared By

A handwritten signature in black ink, appearing to read 'Khang Nguyen', written over a light gray rectangular background.

Khang Nguyen, Technician

Approved By

A handwritten signature in black ink, appearing to read 'Eric M. Gaudreau', written over a light gray rectangular background.

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 4 geometry method.
Absorption correction was employed for Sphere measurement



Luminaire Description: Aluminum housing with heat sink, white plastic inclosure with three (3) circular linear prismatic lenses.

Lamp: Three (3) White LEDs

Mounting: Surface

Luminaire



Luminaire Characteristics

Luminous Length: 9.50 in.
Luminous Width: 1.500 in.

Summary of Results

Integrating Sphere

Luminous Flux: 865 Lumens
Efficacy: 124.1 lm/w
CCT: 6626 K
CRI (Ra): 77.3

Distribution

Total Luminaire Output: 856.3 Lumens
Luminaire Efficacy: 122.7 lm/w
Maximum Candela: 2932 Candela

Electrical Data at 24 VDC

Test Temperature: 25.3 °C
Voltage: 24.05 VDC
Current: 0.2890 A
Power: 6.966 W

In-Situ

LED Temperature: 53.7 °C
Measured LED Current: 0.2860 A

Temperature is offset to an ambient temperature of 25°C as described in UL1598-2008.



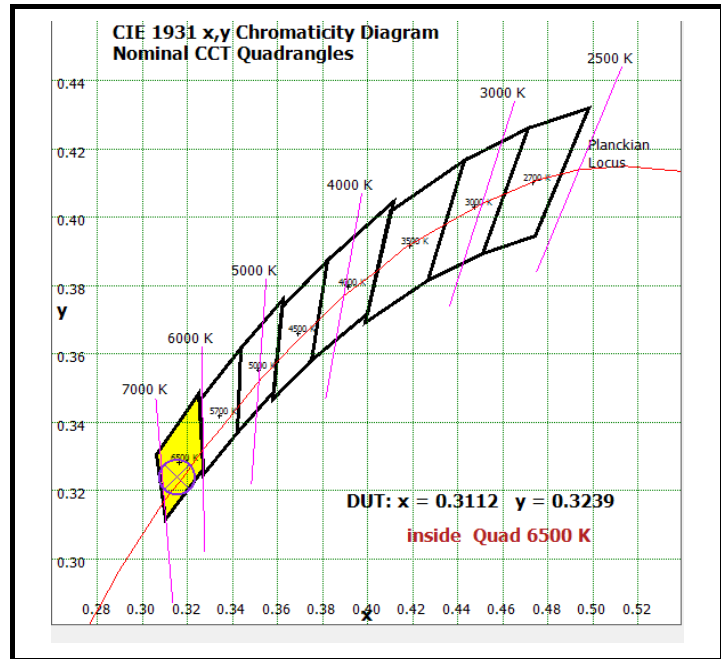
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.3 °C	24.05 VOC	0.2890 A	6.966 W	N/A	N/A	N/A

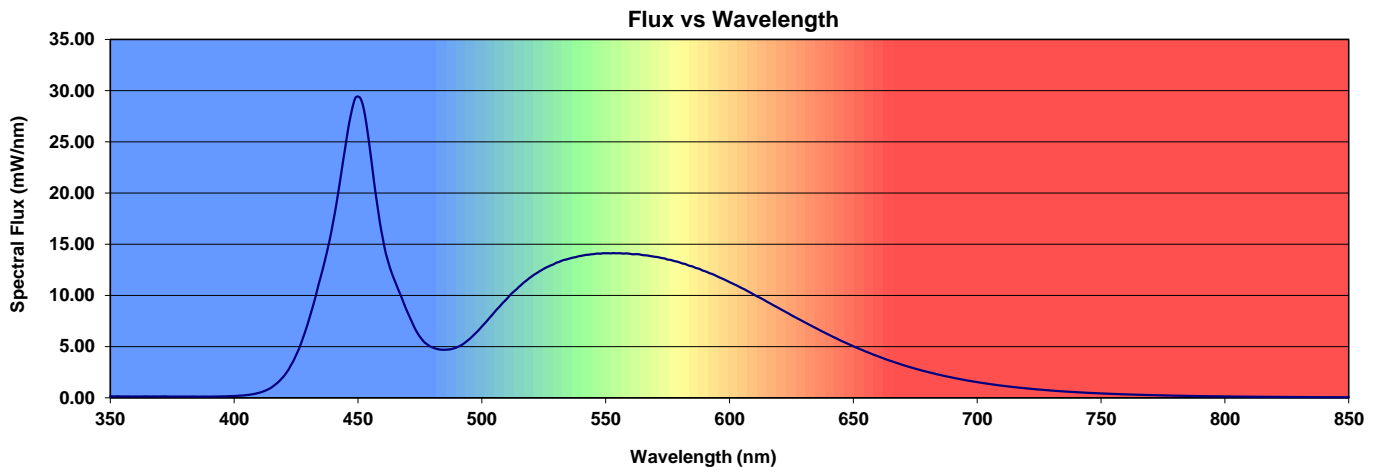
Summary of Results

Total Output:	865 Lumens
Efficacy:	124.1 lm/w
CCT:	6626 K
CRI (Ra):	77.3
CRI (R9):	-4.7
Chromaticity (x):	0.3112
Chromaticity (y):	0.3239
Chromaticity (u):	0.1987
Chromaticity (v):	0.3102
Chromaticity (u')	0.1987
Chromaticity (v')	0.4654
Duv:	0.0013



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
77.3	76.1	80.4	81.3	78.6	76.8	72.5	84.7	67.8	-4.7	51.5	76.4	49.5	76.6	89.5





Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	24.08 VDC	0.2897 A	6.980 W	N/A	N/A	N/A

Summary of Results

Spacing Criteria

0-180: 0.62
90-270: 0.62

Total Lumen Output:

856.3 Lumens

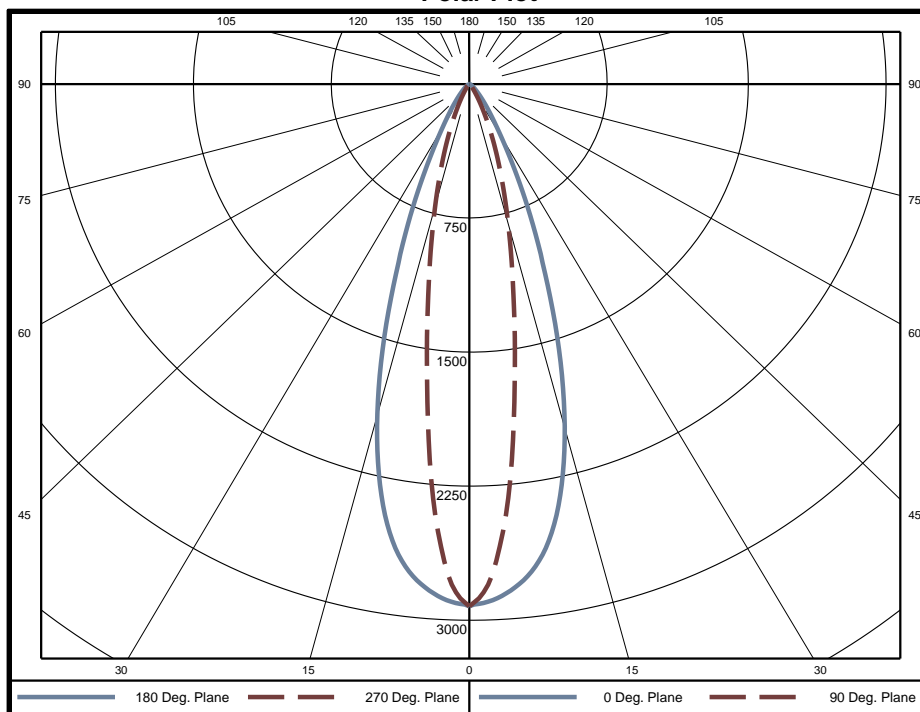
Luminaire Efficacy:

122.7 lm/w

Maximum Candela:

2932 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	65.6	7.7%	60-65	5.8	0.7%	120-125	0	0.0%
5-10	156.2	18.2%	65-70	4.5	0.5%	125-130	0	0.0%
10-15	178.1	20.8%	70-75	3.3	0.4%	130-135	0	0.0%
15-20	153.3	17.9%	75-80	2.2	0.3%	135-140	0	0.0%
20-25	109.2	12.8%	80-85	1.2	0.1%	140-145	0	0.0%
25-30	68.6	8.0%	85-90	0.4	0.0%	145-150	0	0.0%
30-35	40.3	4.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	24.2	2.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	15.8	1.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	11.4	1.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	8.9	1.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	7.3	0.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	796	92.9%
0-60	839	98.0%
0-90	856	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical 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	2922	2922	2922	2922	2922	2922	2922	2922	2922	2922	2922	2922	2922	2922	2922	2922
	5	2826	2762	2555	2396	2325	2396	2555	2762	2826	2762	2555	2396	2325	2396	2555	2762
	10	2549	2280	1748	1452	1353	1452	1748	2280	2549	2280	1748	1452	1353	1452	1748	2280
	15	1983	1580	1041	834	762	834	1041	1580	1983	1580	1041	834	762	834	1041	1580
	20	1274	917	595	465	411	465	595	917	1274	917	595	465	411	465	595	917
	25	709	495	324	236	196	236	324	495	709	495	324	236	196	236	324	495
	30	351	261	174	110	84	110	174	261	351	261	174	110	84	110	174	261
	35	183	139	91	49	36	49	91	139	183	139	91	49	36	49	91	139
	40	100	79	50	27	22	27	50	79	100	79	50	27	22	27	50	79
	45	56	48	31	20	19	20	31	48	56	48	31	20	19	20	31	48
	50	34	31	21	17	17	17	21	31	34	31	21	17	17	17	21	31
	55	21	22	17	15	15	15	17	22	21	22	17	15	15	15	17	22
	60	14	15	14	13	13	13	14	15	14	15	14	13	13	13	14	15
	65	10	10	10	10	11	10	10	10	10	10	10	10	11	10	10	10
	70	7	8	7	8	8	8	7	8	7	8	7	8	8	8	7	8
	75	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
80	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
85	2	2	1	1	1	1	1	2	2	2	1	1	1	1	1	2	
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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)	0	45	90	
	0	317800	317800	317800
	45	8634	4765	2871
	55	4070	3209	2852
	65	2575	2629	2793
	75	2247	2074	2301
	85	1994	1618	1638



Utilization of Lumens - Zonal Cavity Method

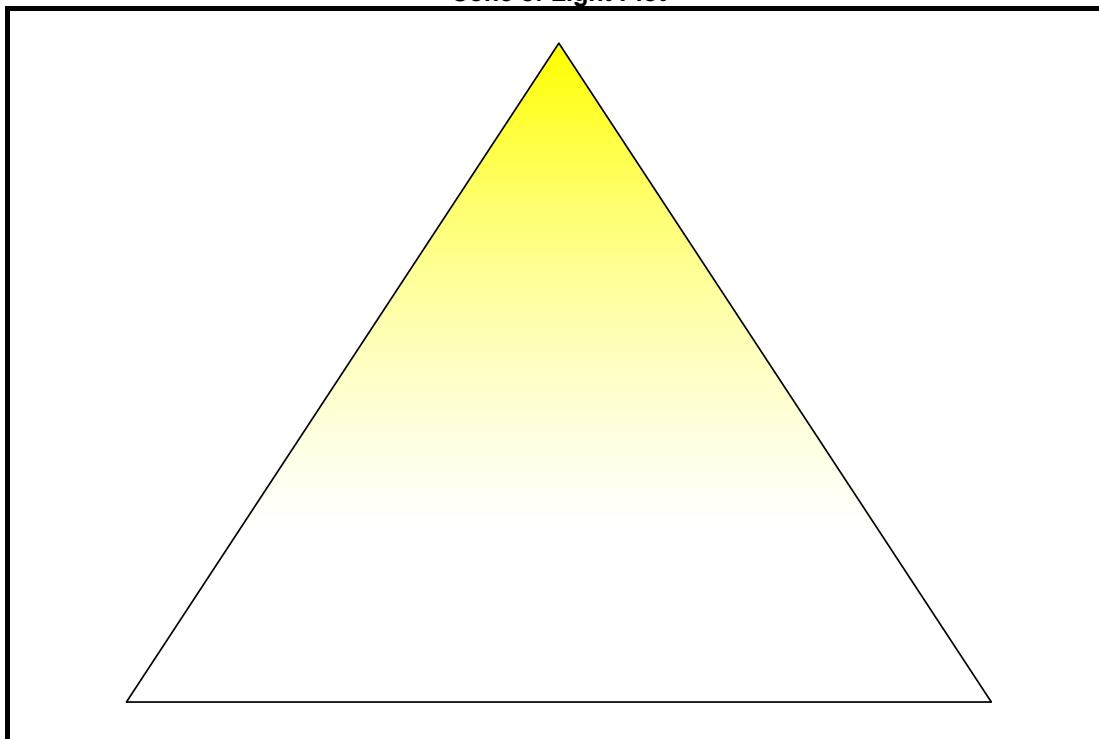
Effective Floor Cavity Reflectance 20%

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	1019	1019	1019	1019	996	996	996	996	951	951	951	911	911	911	874	874	874	856
1	977	956	937	920	957	938	921	905	903	890	877	872	861	851	842	834	827	812
2	937	900	870	844	919	886	858	835	859	836	817	834	815	799	810	796	783	770
3	899	852	815	786	883	840	806	779	818	790	767	798	775	755	780	760	744	732
4	864	809	769	738	850	800	762	734	782	750	725	766	739	717	750	728	709	697
5	831	771	729	698	819	764	724	695	749	715	689	736	706	683	723	698	678	667
6	801	737	695	664	789	731	691	662	719	684	657	708	677	653	697	670	649	639
7	772	707	664	634	762	701	661	633	691	655	629	682	650	626	673	645	623	613
8	746	679	637	608	737	674	634	606	666	630	604	658	625	602	650	621	599	590
9	721	653	612	584	713	650	610	583	642	606	581	635	603	579	629	599	578	568
10	698	630	589	562	690	627	588	562	620	585	560	614	582	559	609	579	558	548

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	183	1.72
6.00	81.2	2.58
8.00	45.7	3.44
10.0	29.2	4.30
12.0	20.3	5.16
14.0	14.9	6.02
16.0	11.4	6.88

Cone of Light Plot





In-Situ Test

In-Situ Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
23.0 °C	24.00 VDC	N/A	N/A	N/A	N/A	N/A

Summary of Results

LED Temperature: 53.7 °C

Measured LED Current: 0.2860 A

Temperatures are offset to an ambient temperature of 25°C as described in UL1598-2008

LED Temperature Location

