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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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701946-6WLRP1
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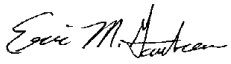
Prepared By

Khang Nguyen, Technician

Approved By



Eric Gaudreau, Senior Engineering Associate

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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: Aluminum housing with heat sink, white plastic inclosure with six (6) circular linear prismatic lenses.

Lamp: Six (6) White LEDs

Mounting: Surface

Luminaire

Luminaire Characteristics

Luminous Length:	19.30 in.
Luminous Width:	1.500 in.

Summary of Results

Integrating Sphere

Luminous Flux:	1718	Lumens
Efficacy:	128.0	lm/w
CCT:	6387	K
CRI (Ra):	77.2	

Distribution

Total Luminaire Output:	1722 Lumens
Luminaire Efficacy:	128.4 lm/w
Maximum Candela:	7802 Candela

Electrical Data at 24 VDC

Test Temperature:	24.9	°C
Voltage:	24.05	VDC
Current:	0.5578	A
Power:	13.42	W

In-Situ

LED Temperature:	53.7 °C
Measured LED Current:	0.5600 A

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

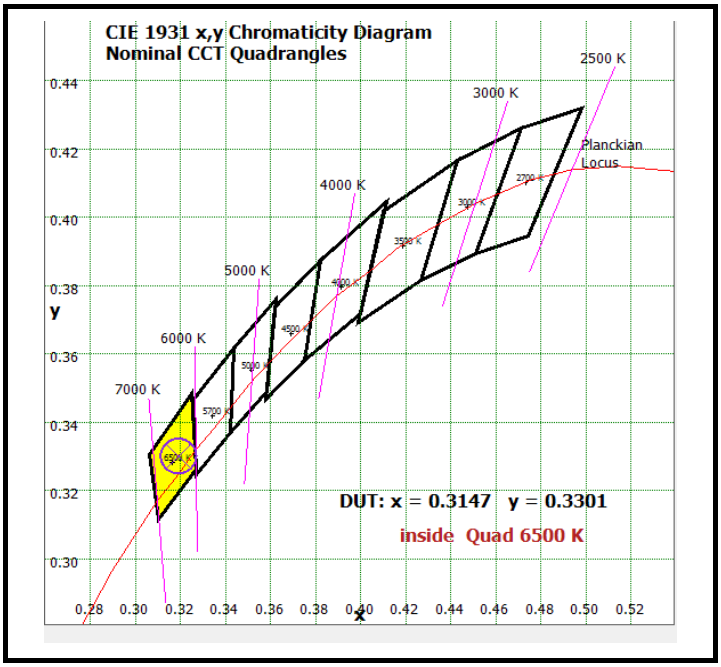
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	24.05 VAC	0.5578 A	13.42 W	N/A	N/A	N/A

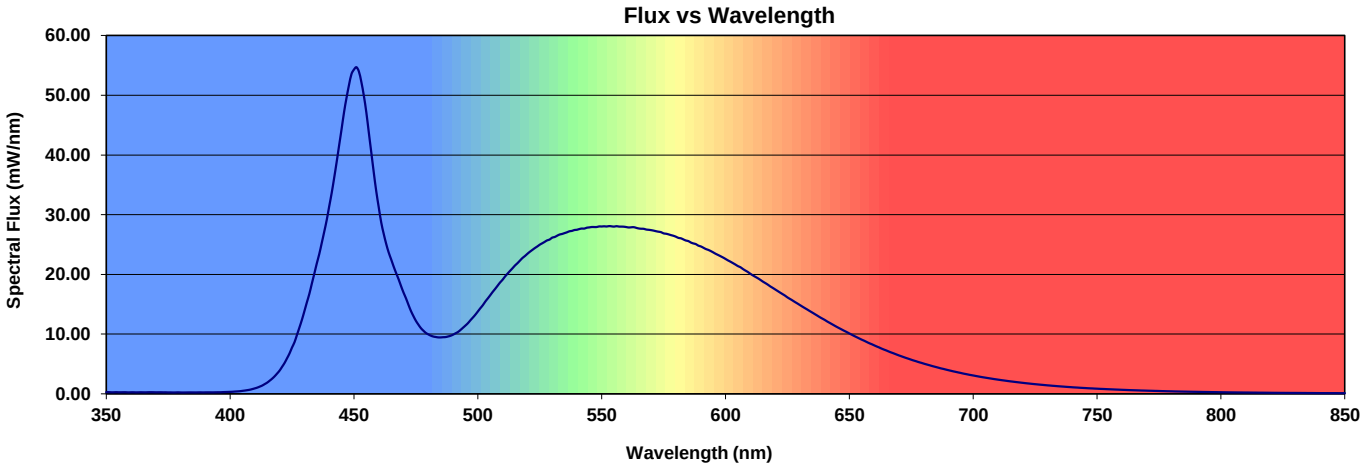
Summary of Results

Total Output:	1718	Lumens
Efficacy:	128.0	lm/w
CCT:	6387	K
CRI (Ra):	77.2	
CRI (R9):	-7.7	
Chromaticity (x):	0.3147	
Chromaticity (y):	0.3301	
Chromaticity (u):	0.1988	
Chromaticity (v):	0.3128	
Chromaticity (u'):	0.1988	
Chromaticity (v'):	0.4692	
Duv:	0.0027	



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
77.2	75.3	80.7	82.7	77.9	76.1	72.9	85.0	66.5	-7.7	52.4	75.4	49.5	76.2	90.3



Distribution - Goniophotometer

Distribution Test Conditions

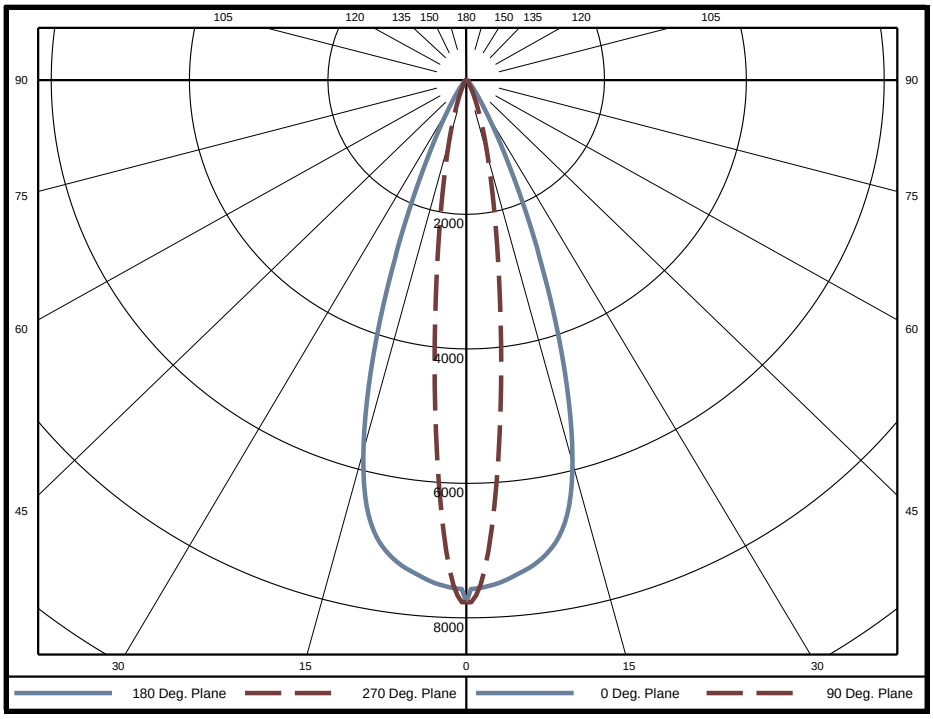
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	24.05 VDC	0.5578 A	13.41 W	N/A	N/A	N/A

Summary of Results

Spacing Criteria
0-180: 0.65
90-270: 0.65

Total Lumen Output: 1722 Lumens
Luminaire Efficacy: 128.4 lm/w
Maximum Candela: 7802 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	167.6	9.7%	60-65	11.1	0.6%	120-125	0	0.0%
5-10	366.0	21.3%	65-70	8.6	0.5%	125-130	0	0.0%
10-15	391.4	22.7%	70-75	6.2	0.4%	130-135	0	0.0%
15-20	313.4	18.2%	75-80	4.1	0.2%	135-140	0	0.0%
20-25	194.6	11.3%	80-85	2.3	0.1%	140-145	0	0.0%
25-30	103.9	6.0%	85-90	0.8	0.0%	145-150	0	0.0%
30-35	55.0	3.2%	90-95	0	0.0%	150-155	0	0.0%
35-40	31.5	1.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	20.9	1.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	16.6	1.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	14.8	0.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	13.3	0.8%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1623	94.3%
0-60	1689	98.1%
0-90	1722	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	7769	7769	7769	7769	7769	7769	7769	7769	7769	7769	7769	7769	7769	7769	7769	7769
5	7423	7180	6241	5551	5274	5551	6241	7180	7423	7180	6241	5551	5274	5551	6241	7180
10	7053	5682	3686	2694	2415	2694	3686	5682	7053	5682	3686	2694	2415	2694	3686	5682
15	5835	3742	1853	1245	1098	1245	1853	3742	5835	3742	1853	1245	1098	1245	1853	3742
20	3549	1930	885	572	494	572	885	1930	3549	1930	885	572	494	572	885	1930
25	1591	869	417	257	220	257	417	869	1591	869	417	257	220	257	417	869
30	629	387	197	124	106	124	197	387	629	387	197	124	106	124	197	387
35	268	183	102	66	56	66	102	183	268	183	102	66	56	66	102	183
40	131	95	60	41	38	41	60	95	131	95	60	41	38	41	60	95
45	76	58	42	33	33	33	42	58	76	58	42	33	33	33	42	58
50	51	42	34	30	31	30	34	42	51	42	34	30	31	30	34	42
55	38	34	30	28	29	28	30	34	38	34	30	28	29	28	30	34
60	26	27	26	26	26	26	26	27	26	27	26	26	26	26	26	27
65	19	19	19	21	22	21	19	19	19	19	19	21	22	21	19	19
70	14	14	13	15	16	15	13	14	14	14	13	15	16	15	13	14
75	10	10	9	10	11	10	9	10	10	10	9	10	11	10	9	10
80	6	6	5	5	6	5	5	6	6	6	5	5	6	5	5	6
85	3	3	3	2	2	2	3	3	3	3	3	2	2	2	3	3
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/m^2)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
0	415900	415900	415900
45	5781	3164	2505
55	3564	2809	2739
65	2362	2423	2728
75	2046	1844	2317
85	1868	1582	1477

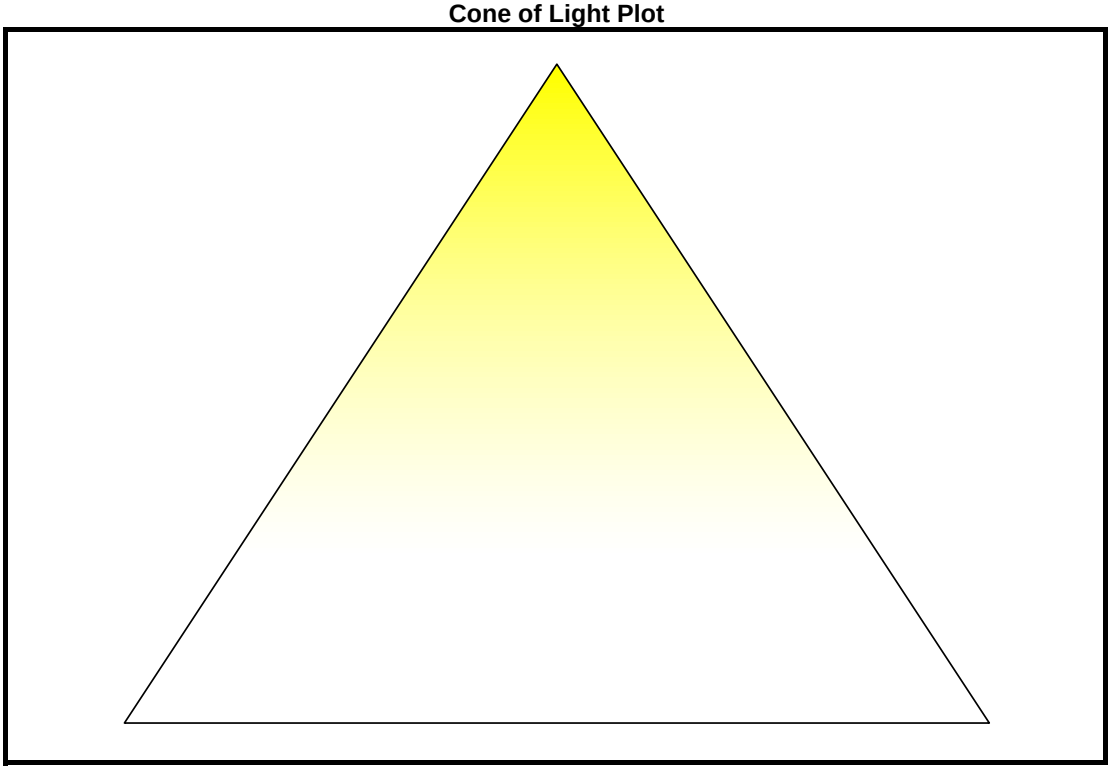
Utilization of Lumens - Zonal Cavity Method

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	2050	2050	2050	2050	2002	2002	2002	2002	1913	1913	1913	1832	1832	1832	1757	1757	1757	1722
1	1971	1930	1893	1860	1929	1893	1860	1831	1824	1798	1775	1761	1740	1722	1702	1687	1672	1643
2	1895	1826	1768	1719	1859	1797	1744	1700	1742	1700	1663	1692	1658	1628	1646	1619	1595	1569
3	1826	1736	1666	1611	1794	1713	1649	1598	1669	1616	1573	1629	1586	1549	1592	1556	1526	1502
4	1761	1657	1581	1523	1733	1639	1569	1514	1604	1544	1497	1571	1521	1480	1541	1499	1464	1442
5	1701	1588	1509	1450	1676	1573	1499	1444	1544	1481	1432	1518	1463	1420	1493	1446	1408	1387
6	1645	1525	1445	1388	1623	1513	1438	1384	1490	1424	1375	1468	1410	1366	1447	1397	1357	1338
7	1592	1469	1390	1334	1573	1459	1384	1330	1439	1373	1324	1421	1362	1317	1404	1351	1311	1292
8	1544	1418	1340	1285	1526	1410	1335	1283	1393	1326	1278	1377	1317	1273	1363	1309	1268	1250
9	1498	1372	1294	1242	1482	1364	1291	1240	1350	1283	1236	1337	1276	1233	1324	1269	1229	1211
10	1455	1329	1253	1203	1441	1322	1250	1201	1310	1244	1198	1299	1238	1195	1288	1232	1193	1176

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	486	1.46
6.00	216	2.19
8.00	121	2.91
10.0	77.7	3.64
12.0	53.9	4.37
14.0	39.6	5.10
16.0	30.3	5.83

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: 0.5600 A

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

LED Temperature Location