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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
SP30L-18-09D-930-03
Order Number
11085322
Test Number
1186895

Test Date

2015-12-09

Prepared By

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

Tony Rubio, Technician

Approved By

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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



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

Lamp



Lamp Characteristics

Luminous Diameter: 3.25 in.

Summary of Results

Integrating Sphere

Luminous Flux: 975 Lumens
Efficacy: 55.2 lm/w
CCT: 2974 K
CRI (Ra): 95.8

Distribution

Total Lamp Output: 988.0 Lumens
Lamp Efficacy: 56 lm/w
Maximum Candela: 20229 Candela

Electrical Data at 120 VAC

Test Temperature: 25.2 °C
Voltage: 120.1 VAC
Current: 0.1480 A
Power: 17.68 W
Power Factor: 0.991
Frequency: 60 Hz
Current THD: 11.4 %



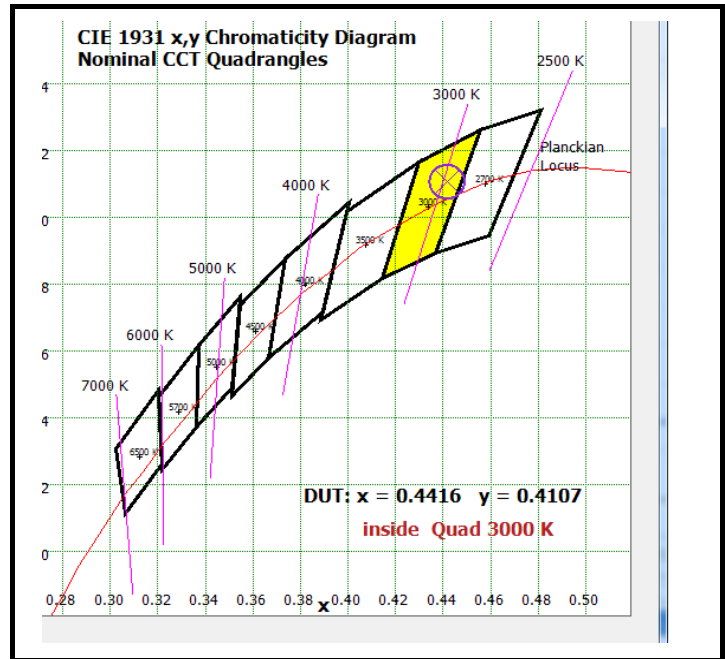
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.1 VAC	0.1480 A	17.68 W	0.991	60 Hz	11.4 %

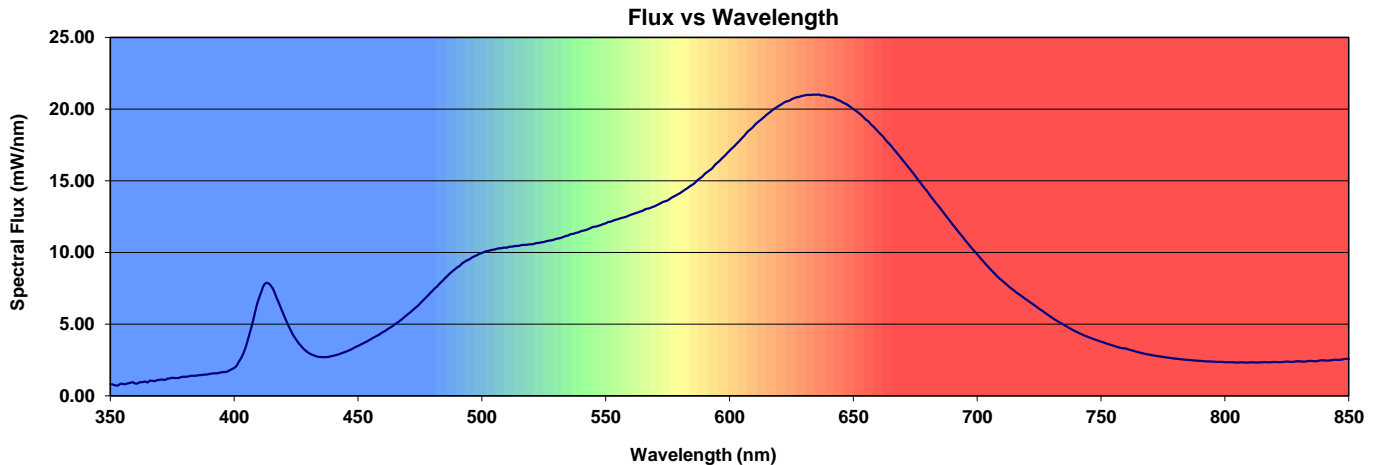
Summary of Results

Total Output:	975 Lumens
Efficacy:	55.2 lm/w
CCT:	2974 K
CRI (Ra):	95.8
CRI (R9):	97.9
Chromaticity (x):	0.4416
Chromaticity (y):	0.4107
Chromaticity (u):	0.2507
Chromaticity (v):	0.3498
Chromaticity (u')	0.2507
Chromaticity (v')	0.5246
Duv:	0.0018



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
95.8	95.9	96.7	97.1	94.3	94.8	92.3	97.2	98.1	97.9	92.1	90.6	84.8	95.7	98.7





Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.1 VAC	0.1480 A	17.63 W	0.989	60 Hz	11.3 %

Summary of Results

Spacing Criteria

0-180: 0.17
90-270: 0.17

Total Lumen Output:

988.0 Lumens

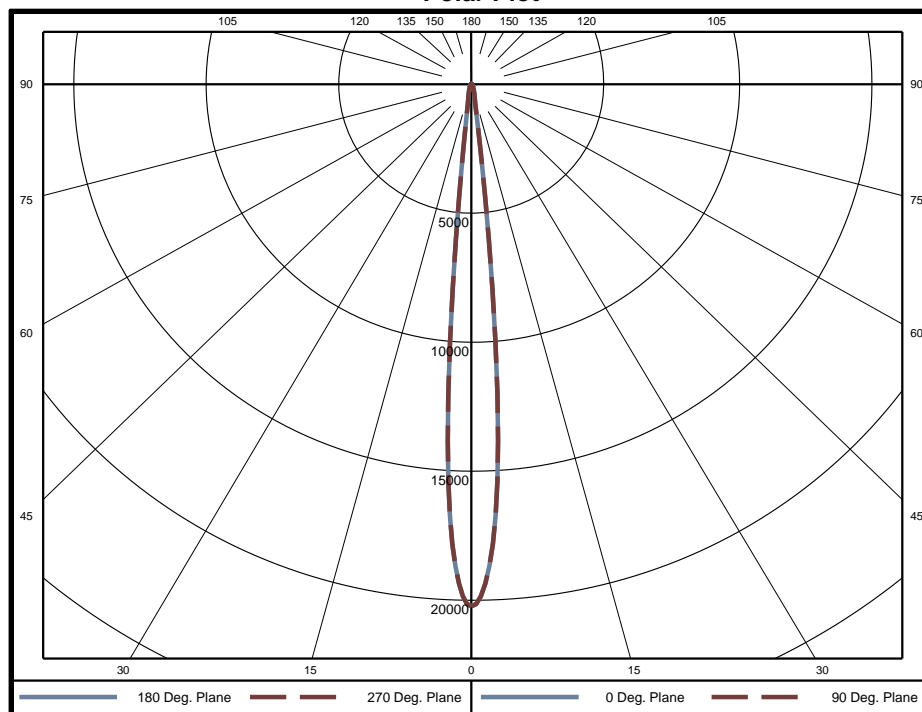
Lamp Efficacy:

56.0 lm/w

Maximum Candela:

20229 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	366.9	37.1%	60-65	12.0	1.2%	120-125	0	0.0%
5-10	216.9	22.0%	65-70	10.9	1.1%	125-130	0	0.0%
10-15	71.4	7.2%	70-75	9.5	1.0%	130-135	0	0.0%
15-20	57.5	5.8%	75-80	7.5	0.8%	135-140	0	0.0%
20-25	46.4	4.7%	80-85	4.9	0.5%	140-145	0	0.0%
25-30	40.5	4.1%	85-90	2.2	0.2%	145-150	0	0.0%
30-35	36.8	3.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	33.1	3.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	26.1	2.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	17.1	1.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	15.1	1.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	13.2	1.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	870	88.0%
0-60	941	95.2%
0-90	988	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	20230	20230	20230	20230	20230	20230	20230	20230	20230	20230	20230	20230	20230	20230	20230	20230
5	10010	10010	10010	10010	10010	10010	10010	10010	10010	10010	10010	10010	10010	10010	10010	10010
10	910	910	910	910	910	910	910	910	910	910	910	910	910	910	910	910
15	452	452	452	452	452	452	452	452	452	452	452	452	452	452	452	452
20	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272
25	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
30	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145
35	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
40	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
45	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
50	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
55	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
60	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
65	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
70	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
75	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
80	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
85	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
90	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
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	3780000	3780000	3780000
45	13690	13690	13690
55	10170	10170	10170
65	10280	10280	10280
75	11600	11600	11600
85	11510	11510	11510



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	1176	1176	1176	1176	1149	1149	1149	1149	1098	1098	1098	1051	1051	1051	1008	1008	1008	988
1	1129	1105	1083	1064	1105	1084	1065	1047	1044	1029	1015	1008	996	985	974	965	957	939
2	1087	1046	1013	985	1066	1030	1000	974	999	974	953	970	950	933	943	928	914	899
3	1049	998	959	928	1031	985	949	920	961	931	906	938	913	892	916	896	879	865
4	1016	959	917	884	1000	948	909	879	928	895	869	910	882	859	893	869	850	838
5	987	925	882	850	973	917	877	847	901	866	839	886	856	833	872	846	826	814
6	961	897	854	823	949	890	849	820	877	841	815	864	833	810	853	826	805	794
7	937	872	830	800	926	866	827	798	855	820	795	845	814	791	836	808	787	777
8	916	851	810	781	906	846	807	780	837	802	777	828	797	774	820	792	771	762
9	897	832	792	765	888	828	790	764	820	786	762	813	782	760	806	778	757	748
10	879	815	777	751	872	812	775	750	805	772	748	799	768	747	793	765	745	736

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	1260	0.692
6.00	562	1.04
8.00	316	1.38
10.0	202	1.73
12.0	140	2.08
14.0	103	2.42
16.0	79.0	2.77

Cone of Light Plot

