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Photometric Test Report

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

Prepared For
Specialty Lighting Industries, Inc

Awi Salomon
1306 Doris Ave
Ocean, NJ 07712-4041
United States

Catalog Number

4540

Order Number

10825714

Test Number

1113762

Test Date

2015-06-24 - 2015-06-25

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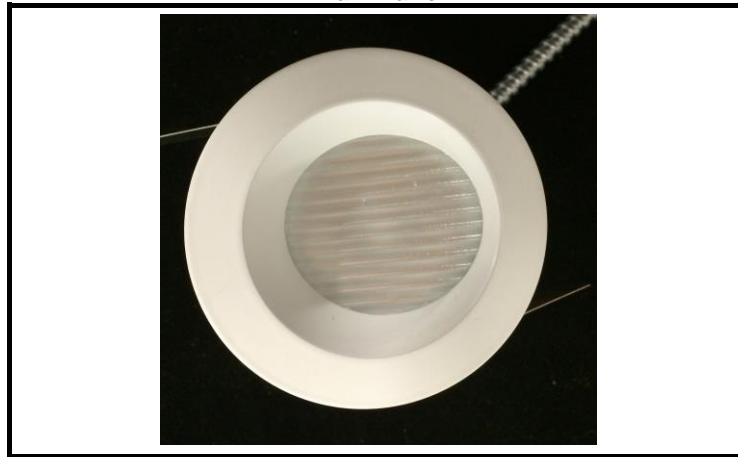
Laboratory results may not be representative of field performance
Ballast factors have not been applied

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



Luminaire Description: Aluminum heatsink, white aluminum housing / trim, plastic linear prismatic frosted lens enclosure
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: One Cool LED CL33-700SA-UNI-B

Luminaire



Luminaire Characteristics
Luminous Diameter: 2.50 in.

Summary of Results

Integrating Sphere

Luminous Flux: 643 Lumens
Efficacy: 33.6 lm/w
CCT: 2625 K
CRI (Ra): 96.1

Distribution

Total Luminaire Output: 605.6 Lumens
Luminaire Efficacy: 31.5 lm/w
Maximum Candela: 797 Candela

Electrical Data at 120 VAC

Test Temperature: 25.2 °C
Voltage: 120.0 VAC
Current: 0.1620 A
Power: 19.17 W
Power Factor: 0.986
Frequency: 60 Hz
Current THD: 4.72 %



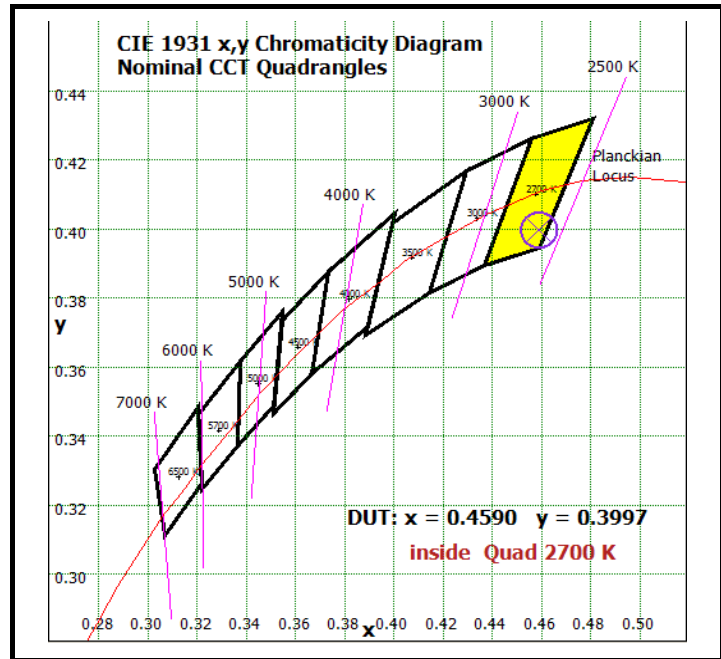
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.0 VAC	0.1620 A	19.17 W	0.986	60 Hz	4.72 %

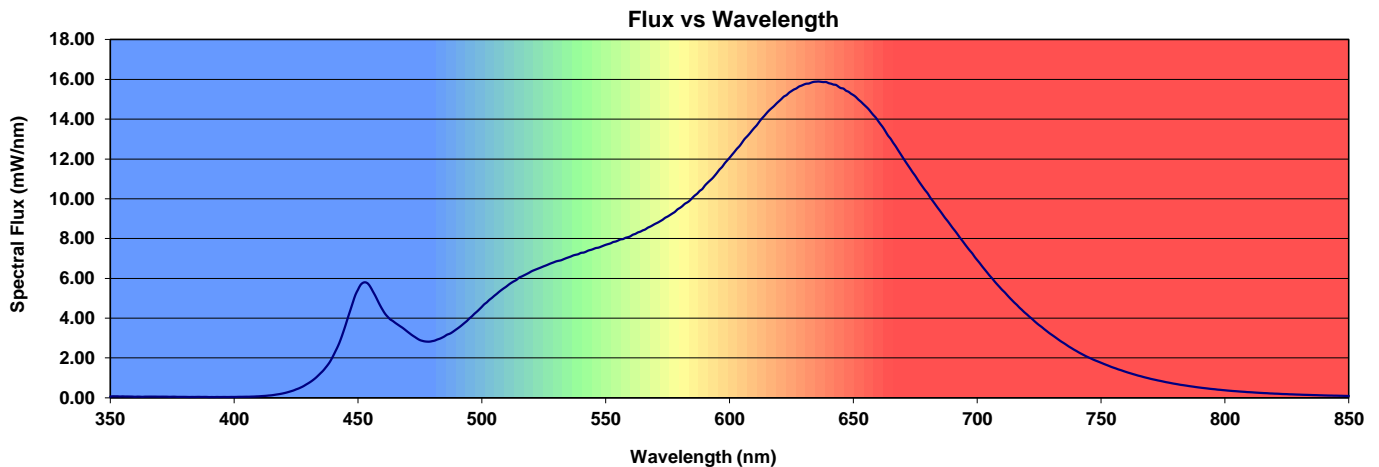
Summary of Results

Total Output:	643 Lumens
Efficacy:	33.6 lm/w
CCT:	2625 K
CRI (Ra):	96.1
CRI (R9):	95.9
Chromaticity (x):	0.4590
Chromaticity (y):	0.3997
Chromaticity (u):	0.2669
Chromaticity (v):	0.3487
Chromaticity (u'):	0.2669
Chromaticity (v'):	0.5230
Duv:	-0.0041



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
96.1	95.9	96.7	98.6	95.3	95.4	92.7	96.4	97.5	95.9	94.5	90.8	88.3	95.4	98.3





Distribution - Goniophotometer

Distribution Test Conditions

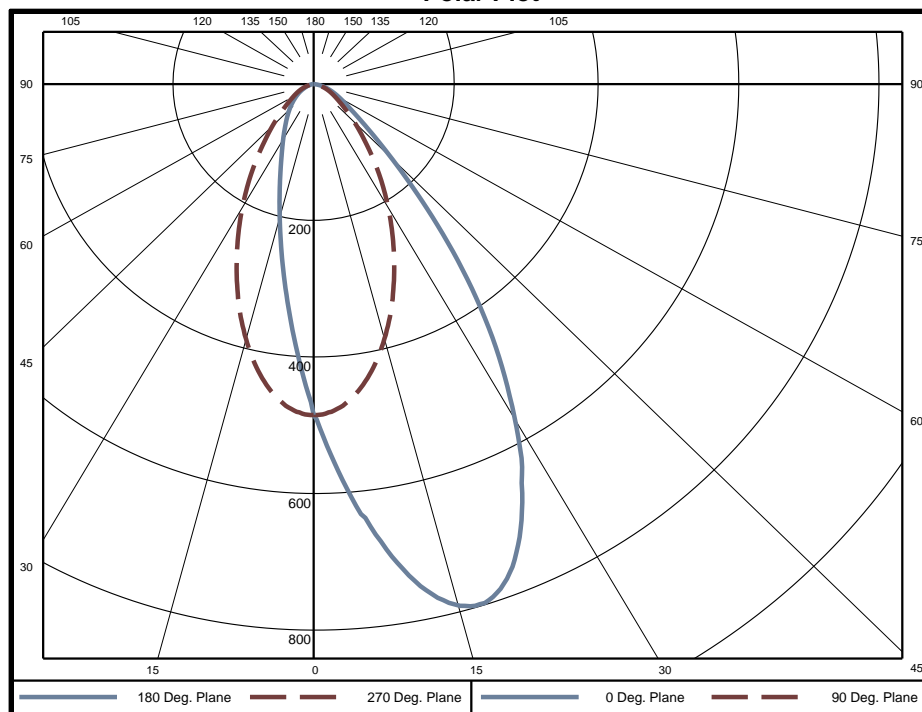
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.1621 A	19.20 W	0.987	60 Hz	4.36 %

Summary of Results

Spacing Criteria
 0-180: 1.37
 90-270: 0.38

Total Lumen Output: 605.6 Lumens
Luminaire Efficacy: 31.5 lm/w
Maximum Candela: 797 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	11.56	1.9%	60-65	14.22	2.3%	120-125	0	0.0%
5-10	34.01	5.6%	65-70	10.51	1.7%	125-130	0	0.0%
10-15	54.12	8.9%	70-75	7.04	1.2%	130-135	0	0.0%
15-20	69.42	11.5%	75-80	4.02	0.7%	135-140	0	0.0%
20-25	77.26	12.8%	80-85	1.73	0.3%	140-145	0	0.0%
25-30	77.01	12.7%	85-90	0.41	0.1%	145-150	0	0.0%
30-35	69.67	11.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	57.25	9.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	43.32	7.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	31.84	5.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	23.79	3.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	18.36	3.0%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	450	74.4%
0-60	568	93.7%
0-90	606	100.0%
90-180	0	0.0%



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	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9
5	607.9	605.1	569.4	522.7	473.4	429.3	395.7	376.0	362.3	376.0	395.7	429.3	473.4	522.7	569.4	605.1
10	721.6	700.4	630.3	532.4	437.8	362.9	310.9	282.3	267.2	282.3	310.9	362.9	437.8	532.4	630.3	700.4
15	791.4	753.7	645.9	512.6	386.3	296.0	239.0	209.4	196.1	209.4	239.0	296.0	386.3	512.6	645.9	753.7
20	779.1	735.5	621.9	465.3	327.5	236.5	183.2	157.0	146.3	157.0	183.2	236.5	327.5	465.3	621.9	735.5
25	690.5	646.9	543.8	396.6	267.6	185.8	141.8	120.7	112.8	120.7	141.8	185.8	267.6	396.6	543.8	646.9
30	562.4	523.0	436.8	318.1	211.4	145.6	111.2	95.8	90.4	95.8	111.2	145.6	211.4	318.1	436.8	523.0
35	417.9	384.9	322.5	239.2	161.1	112.3	87.9	77.5	73.6	77.5	87.9	112.3	161.1	239.2	322.5	384.9
40	270.2	251.4	216.4	168.1	117.4	85.8	69.9	63.3	60.8	63.3	69.9	85.8	117.4	168.1	216.4	251.4
45	156.7	151.2	137.1	113.8	85.1	65.4	56.0	51.9	50.2	51.9	56.0	65.4	85.1	113.8	137.1	151.2
50	94.0	91.5	87.4	76.6	60.2	49.8	44.6	42.0	40.7	42.0	44.6	49.8	60.2	76.6	87.4	91.5
55	62.0	61.1	58.7	52.7	43.6	38.0	35.1	33.3	32.3	33.3	35.1	38.0	43.6	52.7	58.7	61.1
60	44.7	43.9	41.9	37.6	32.5	29.2	27.0	25.6	24.8	25.6	27.0	29.2	32.5	37.6	41.9	43.9
65	32.5	32.0	30.4	27.0	24.0	21.5	19.7	18.6	18.0	18.6	19.7	21.5	24.0	27.0	30.4	32.0
70	22.8	22.4	21.0	18.5	16.4	14.3	13.0	12.3	12.2	12.3	13.0	14.3	16.4	18.5	21.0	22.4
75	14.5	14.0	12.7	11.0	9.4	7.9	7.7	8.2	8.2	8.2	7.7	7.9	9.4	11.0	12.7	14.0
80	7.0	6.4	5.6	4.7	3.9	4.2	4.6	4.9	4.9	4.9	4.6	4.2	3.9	4.7	5.6	6.4
85	1.5	1.3	1.3	1.5	1.6	1.9	2.0	2.2	2.1	2.2	2.0	1.9	1.6	1.5	1.3	1.3
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

	0	45	90
0	153100	153100	153100
45	69960	61240	37980
55	34130	32300	24000
65	24270	22680	17930
75	17670	15490	11440
85	5519	4790	5944



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	721	721	721	721	704	704	704	704	673	673	673	644	644	644	618	618	618	606
1	678	658	639	622	663	644	628	612	619	606	593	596	586	576	575	567	559	547
2	635	599	569	543	621	588	560	537	568	545	525	549	530	514	532	516	503	492
3	594	547	510	481	581	538	504	477	521	492	469	506	482	461	492	471	454	443
4	557	502	461	430	545	494	457	427	481	448	422	468	440	417	456	432	412	401
5	523	462	420	389	512	456	416	387	444	410	383	434	403	379	424	397	376	365
6	491	427	385	354	481	422	382	352	413	377	350	403	372	347	395	367	345	335
7	463	397	354	324	454	392	352	323	384	348	321	376	344	319	369	340	318	308
8	437	370	328	299	429	366	326	298	359	322	297	352	319	295	346	316	294	284
9	413	346	304	277	405	342	303	276	336	300	275	330	297	274	325	295	273	264
10	391	324	284	257	384	321	283	257	316	280	256	311	278	255	306	276	254	245

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	30.3	3.83
6.00	13.5	5.75
8.00	7.58	7.66
10.0	4.85	9.58
12.0	3.37	11.5
14.0	2.47	13.4
16.0	1.89	15.3

Cone of Light Plot

