



Photometric Test Report

Relevant Standards

- IES LM-79-2008
- ANSI C82.77-10-2014
- UL1598-2008

Prepared For

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Catalog Number

SKYBT-22-35-303540

Project Number

4790770285

Report Number

4790770285-2a

Test Date

2023-03-24

Issue Date

2023-04-07

Revision Date

N/A

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The results contained in this report pertain only to the tested sample.

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1.0 Test List

Sample Received Date: 2023-03-21

Test No.	Test Item	Sample ID	Model Number	Test Conducted By
1	Goniophotometer Test	5905088-2S	SKYBT-22-35-303540	James Tan
2	THD and PF Test	5905088-2S	SKYBT-22-35-303540	James Tan

Remark (if any)

1. UL test equipment information is recorded on Meter Use in UL's Aurora database.

2.0 Product Description

Luminaire Description: 2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces

Model Number: SKYBT-22-35-303540

Electrical Ratings and CCT: 120-277 Vac, 50/60 Hz, 35 W, 3000K/3500K/4000K

LED Package: SMD3035

Family Model and Variation: N/A

Photos of Luminaire Characteristics



3.0 LM-79 Measurement and Test Results

3.2 Goniophotometer Test - 3000K

Model No.	SKYBT-22-35-303540	Sample ID.	5905088-2S
Operate time (Min.)	60	Stabilization time (Min.)	50

Test Method

- 1.The sample was tested according to the IES LM-79-2008, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using a type C goniophotometer and software.
- 3.The ambient temperature shall be maintained at 25° C ± 1° C, measured at a point not more than 1 m from the sample and at the same height as the sample. The reference standard lamp is power 400W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 4.The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals. Photometric distance was more than five times of the largest dimension of the test SSL product.

Goniophotometer Test Conditions

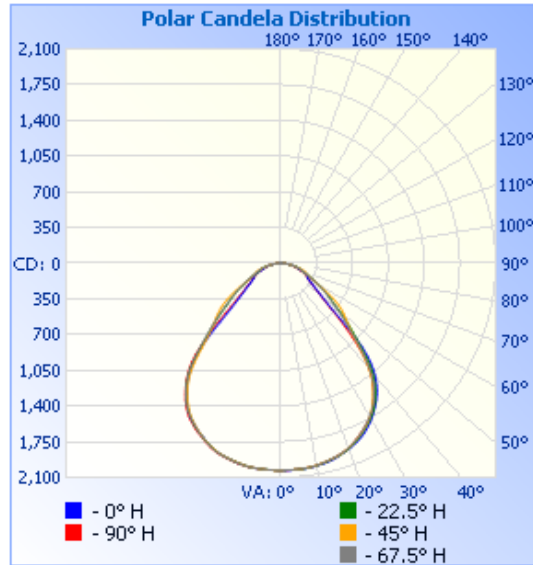
Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.5	120.09	60	0.289	34.21	0.9858	Horizontal

Test Result

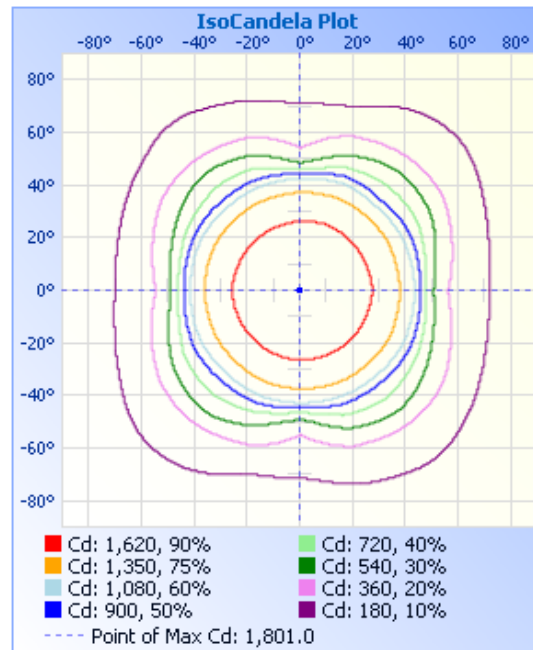
Flux (lm)	Zonal Lumen Requirement (0°-60°)	Beam Angle (50%)		Spacing Criteria (0-180°)	Spacing Criteria (90°-270°)	Luminous Efficacy (lm/W)
		Horizontal Spread	Vertical Spread			
3933.3	87.3%	89.7	88.9	1.30	1.26	114.98

3.2 Goniophotometer Test (Cont'd)

Light Distribution Curve



IsoCandela Plot



3.2 Goniophotometer Test (Cont'd)

Zonal Lumen Summary

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,422.3	36.2%
0-40	2,300.2	58.5%
0-60	3,435.4	87.3%
60-90	489.0	12.4%
70-100	220.5	5.6%
90-120	2.5	0.1%
0-90	3,924.3	99.8%
90-180	8.9	0.2%
0-180	3,933.3	100%

Lumens Per Zone

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	171.1	4.4%	90-100	1.0	0%
10-20	496.0	12.6%	100-110	0.7	0%
20-30	755.2	19.2%	110-120	0.9	0%
30-40	877.9	22.3%	120-130	1.1	0%
40-50	697.2	17.7%	130-140	1.3	0%
50-60	438.0	11.1%	140-150	1.4	0%
60-70	269.4	6.8%	150-160	1.3	0%
70-80	163.8	4.2%	160-170	1.0	0%
80-90	55.8	1.4%	170-180	0.4	0%

3.2 Goniophotometer Test (Cont'd)

Intensity Data(cd)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
1	1801	1800	1800	1798	1798	1796	1796	1798	1800	1798	1801	1798	1797	1796	1796	1800	1799
2	1799	1799	1797	1798	1797	1798	1797	1798	1799	1798	1798	1797	1800	1796	1796	1798	1797
3	1801	1799	1797	1797	1797	1797	1799	1796	1800	1798	1796	1798	1798	1798	1798	1799	1798
4	1800	1797	1796	1795	1797	1795	1795	1796	1796	1797	1797	1798	1798	1796	1798	1796	1798
5	1797	1796	1795	1794	1796	1795	1794	1795	1797	1796	1796	1795	1797	1796	1795	1798	1798
6	1796	1796	1795	1796	1795	1793	1794	1795	1795	1794	1793	1795	1797	1798	1795	1796	1799
7	1793	1794	1792	1794	1791	1792	1790	1792	1793	1795	1793	1793	1794	1794	1794	1796	1795
8	1796	1793	1791	1791	1789	1787	1789	1791	1790	1792	1792	1793	1794	1794	1791	1793	1793
9	1791	1789	1788	1786	1785	1784	1785	1786	1792	1789	1787	1789	1791	1789	1790	1789	1790
10	1787	1784	1784	1781	1785	1778	1779	1781	1787	1786	1783	1786	1788	1787	1786	1786	1785
11	1782	1779	1775	1776	1779	1774	1773	1778	1779	1778	1779	1780	1782	1783	1779	1778	1780
12	1775	1775	1770	1772	1775	1769	1767	1770	1774	1774	1774	1775	1780	1777	1775	1777	1778
13	1771	1767	1764	1767	1770	1764	1764	1765	1768	1768	1769	1770	1775	1772	1768	1771	1771
14	1764	1762	1757	1757	1760	1758	1755	1757	1762	1761	1759	1762	1767	1767	1765	1767	1766
15	1758	1755	1749	1752	1755	1752	1752	1751	1755	1754	1754	1759	1764	1761	1757	1763	1760
16	1751	1748	1745	1747	1746	1747	1743	1747	1748	1749	1748	1752	1757	1756	1748	1756	1755
17	1744	1741	1738	1739	1739	1737	1735	1738	1741	1740	1740	1745	1750	1750	1743	1746	1747
18	1738	1734	1729	1730	1732	1727	1725	1729	1733	1732	1732	1738	1742	1739	1740	1738	1737
19	1731	1726	1719	1720	1720	1715	1714	1719	1723	1724	1725	1727	1730	1729	1729	1727	1728
20	1721	1714	1709	1708	1709	1703	1702	1705	1713	1713	1714	1716	1718	1721	1718	1715	1715
25	1648	1639	1630	1632	1638	1627	1622	1633	1639	1640	1639	1646	1652	1649	1647	1654	1649
30	1560	1546	1530	1537	1542	1526	1526	1543	1554	1550	1542	1558	1570	1562	1551	1566	1570
35	1441	1420	1399	1402	1400	1382	1376	1404	1423	1424	1415	1431	1434	1429	1429	1433	1433
40	1246	1218	1167	1195	1204	1171	1143	1208	1222	1229	1201	1245	1258	1245	1221	1271	1249
45	873	900	856	878	836	889	854	893	826	902	883	944	942	945	882	978	920
50	483	691	697	626	495	692	708	644	477	695	723	678	557	722	720	693	516
55	350	511	545	476	356	514	573	497	352	520	579	503	378	553	578	510	372
60	278	372	371	361	283	368	381	367	281	379	395	384	291	398	400	383	284
65	243	280	268	261	236	275	270	258	245	288	282	278	243	289	284	274	244
70	200	221	220	186	185	221	228	187	192	227	226	202	196	227	231	197	197
75	139	165	157	145	136	159	160	156	138	176	168	158	145	174	174	154	141
80	96	90	89	94	92	95	95	104	98	96	99	108	103	107	97	110	101
85	49	50	50	42	43	48	56	47	54	57	66	56	57	57	62	53	53
90	2	3	2	2	2	2	2	2	3	4	7	9	8	9	5	4	3
95	1	0	0	0	1	0	0	1	0	0	1	1	0	1	0	1	1
100	1	1	0	1	1	0	1	0	0	0	1	1	0	1	0	1	1
105	1	1	0	1	1	0	0	1	1	0	1	1	0	1	1	1	1
110	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1
115	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
120	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
125	1	1	1	1	1	1	2	1	1	1	2	1	1	1	1	1	1
130	2	1	1	1	1	2	2	2	2	2	2	1	1	1	1	2	2
135	2	1	1	2	2	2	2	2	2	2	2	1	2	1	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
145	2	2	2	2	3	2	2	2	3	3	2	2	2	3	2	3	3
150	3	3	3	3	3	2	2	3	3	3	2	2	3	2	3	3	3
155	2	3	3	3	3	3	3	3	2	3	3	2	3	3	3	3	3
160	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
165	3	3	3	3	4	4	4	4	4	4	3	3	4	3	3	4	4
170	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	3
175	4	4	4	4	5	5	4	4	4	5	4	4	4	4	4	4	4
180	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

4.0 THD and PF Test

Model No.	SKYBT-22-35-303540	Sample ID.	5905088-2S
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Test Method

1. The samples were tested according to the ANSI C82.77-10-2014.
2. The ambient temperature condition was maintained at 25° C ± 1° C. The sample measurement was made using a digital power meter and power supply. The sample was operated at rated voltage and stabilized before measurement. The total harmonic distortion were calculated from the digital power meter.

Test Results

CCT Range	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Current THD
0%-3000K	120	60	0.289	34.21	0.9858	10.79%
	277	60	0.133	34.43	0.9381	10.23%
50%-3500K	120	60	0.282	33.35	0.9855	10.85%
	277	60	0.129	33.51	0.9378	10.29%
100%-4000K	120	60	0.291	34.4	0.9857	10.81%
	277	60	0.133	34.55	0.9379	10.26%



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