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-24-35-303540

Project Number
4790770285
Report Number
4790770285-5a

Test Date
2023-03-24
Issue Date
2023-04-07
Revision Date
N/A

Prepared By	Approved By
Becky Fan	Lily Chen

1.0 Test List

Sample Received Date: 2023-03-21

Test No.	Test Item	Sample ID	Model Number	Test Conducted By
1	Goniophotometer Test	**5905101-2S**	**SKYBT-24-35-303540**	**James Tan**
2	THD and PF Test	**5905101-2S**	**SKYBT-24-35-303540**	**James Tan**

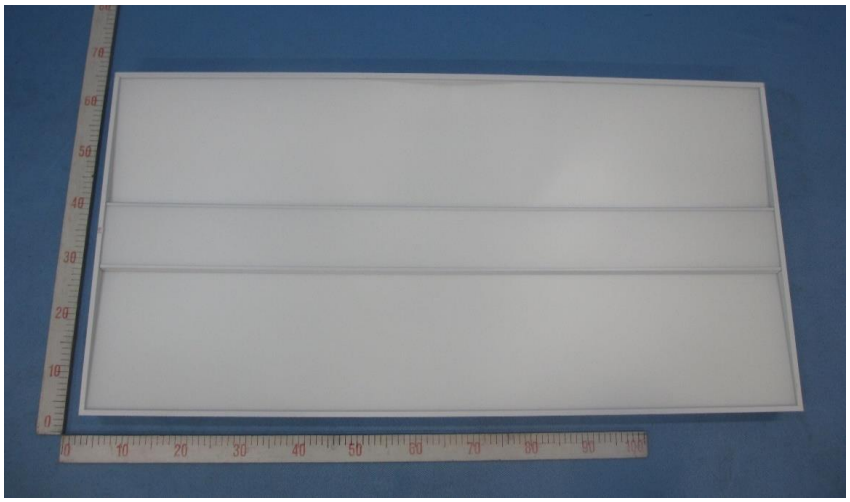
Remark (if any)

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

2.0 Product Description

Luminaire Description: 2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces
Model Number: SKYBT-24-35-303540
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

3.1 Goniophotometer Test - 3000K

Model No.	SKYBT-24-35-303540	Sample ID.	5905101-2S
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

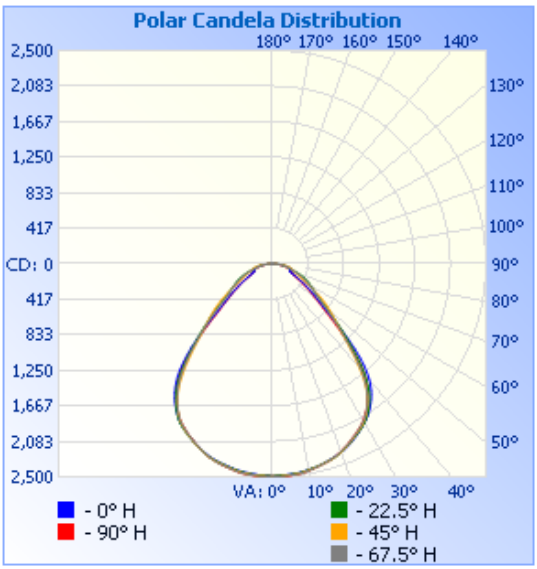
Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.5	120.01	60	0.289	34.24	0.9862	Horizontal

Test Result

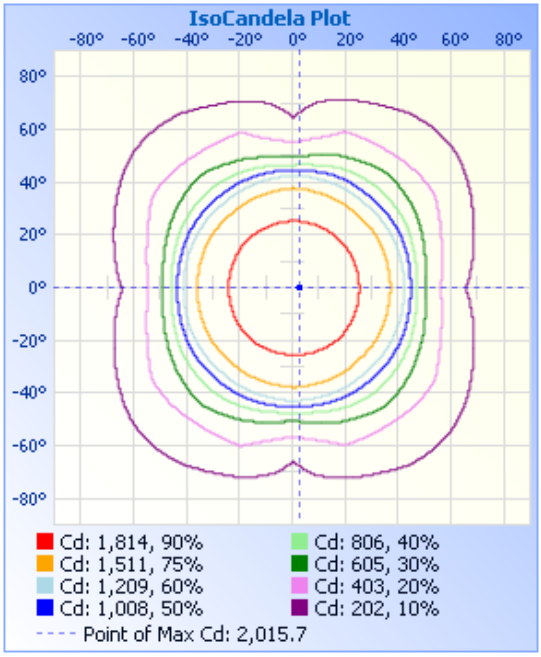
Flux (lm)	Zonal Lumen Requirement (0°-60°)	Beam Angle (50%)		Spacing Criteria (0-180°)	Spacing Criteria (90°-270°)	Luminous Efficacy (lm/W)
		Horizontal Spread	Vertical Spread			
4316.2	87.0%	88.3	89.7	1.28	1.26	126.06

3.1 Goniophotometer Test (Cont'd)

Light Distribution Curve



IsoCandela Plot



3.1 Goniophotometer Test (Cont'd)

Zonal Lumen Summary

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,576.2	36.5%
0-40	2,552.0	59.1%
0-60	3,756.9	87%
60-90	551.0	12.8%
70-100	259.1	6%
90-120	2.6	0.1%
0-90	4,307.8	99.8%
90-180	8.4	0.2%
0-180	4,316.2	100%

Lumens Per Zone

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	190.5	4.4%	90-100	1.1	0%
10-20	549.2	12.7%	100-110	0.7	0%
20-30	836.6	19.4%	110-120	0.8	0%
30-40	975.8	22.6%	120-130	1.0	0%
40-50	747.9	17.3%	130-140	1.2	0%
50-60	456.9	10.6%	140-150	1.3	0%
60-70	292.9	6.8%	150-160	1.1	0%
70-80	184.2	4.3%	160-170	0.8	0%
80-90	73.8	1.7%	170-180	0.4	0%

3.1 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	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010
1	2002	2002	2008	2012	2014	2010	2008	2002	2001	2005	2008	2012	2015	2010	2009	2003	1999
2	2004	2002	2009	2013	2014	2011	2007	2003	2002	2003	2009	2012	2014	2011	2006	2002	1998
3	1999	2001	2007	2010	2015	2011	2006	2000	2000	2003	2008	2012	**2016**	2010	2010	2002	1999
4	2000	2000	2005	2009	2011	2008	2004	1997	1997	2002	2006	2008	2013	2009	2004	1998	1998
5	1998	1999	2002	2005	2008	2007	1999	1997	1995	1997	2002	2007	2010	2005	2001	1997	1995
6	1995	1993	2001	2002	2006	2002	1997	1993	1992	1996	2003	2005	2008	2005	1998	1995	1994
7	1992	1992	1997	1999	2000	2000	1995	1994	1989	1992	1997	2002	2006	2003	1995	1991	1992
8	1985	1990	1995	1997	1999	1997	1993	1989	1985	1989	1996	2000	1999	1999	1992	1988	1984
9	1979	1982	1989	1993	1992	1989	1985	1983	1983	1987	1991	1996	1995	1994	1988	1982	1984
10	1975	1977	1982	1985	1987	1983	1979	1975	1974	1980	1982	1989	1990	1987	1983	1977	1978
11	1969	1972	1974	1975	1977	1974	1971	1969	1968	1971	1974	1978	1981	1978	1976	1972	1969
12	1965	1962	1966	1970	1970	1965	1961	1960	1961	1963	1970	1971	1973	1972	1965	1962	1962
13	1959	1958	1960	1961	1959	1958	1954	1952	1955	1957	1964	1964	1966	1964	1963	1956	1956
14	1953	1949	1953	1953	1953	1949	1948	1947	1946	1950	1953	1958	1957	1955	1952	1951	1945
15	1943	1940	1942	1943	1941	1942	1941	1939	1940	1943	1950	1951	1949	1947	1945	1943	1941
16	1934	1935	1938	1935	1932	1932	1931	1933	1931	1937	1943	1942	1940	1941	1938	1936	1935
17	1925	1928	1928	1925	1926	1921	1925	1923	1924	1928	1933	1931	1934	1933	1931	1928	1925
18	1913	1919	1919	1918	1916	1914	1913	1913	1914	1919	1922	1922	1923	1921	1921	1916	1917
19	1903	1908	1909	1902	1904	1902	1903	1901	1903	1908	1910	1910	1908	1909	1909	1904	1907
20	1890	1895	1894	1890	1888	1888	1891	1891	1891	1894	1896	1894	1893	1892	1896	1892	1891
25	1828	1818	1814	1807	1806	1804	1809	1814	1816	1822	1820	1814	1813	1815	1818	1819	1822
30	1731	1730	1719	1712	1709	1709	1717	1724	1734	1734	1727	1723	1724	1724	1730	1737	1738
35	1616	1599	1567	1566	1569	1560	1556	1585	1602	1588	1563	1568	1578	1578	1578	1602	1610
40	1423	1339	1268	1293	1333	1290	1263	1327	1390	1338	1281	1313	1361	1329	1296	1360	1411
45	1003	965	917	925	899	940	931	975	991	992	953	969	958	976	949	1010	1015
50	595	675	710	657	559	663	726	702	614	719	745	695	600	703	736	723	617
55	417	502	545	500	395	502	560	528	434	534	577	514	426	529	570	528	437
60	283	421	391	413	277	412	395	432	295	424	399	415	286	421	407	427	289
65	199	349	288	332	198	325	291	348	205	344	296	335	203	334	294	351	196
70	175	245	224	235	174	232	227	251	179	256	233	244	177	243	226	255	175
75	167	170	185	167	153	163	183	173	167	178	191	173	159	175	189	178	169
80	124	128	148	121	107	118	145	129	128	133	150	124	114	127	152	133	130
85	65	77	76	64	53	57	71	75	66	76	74	65	55	65	81	77	68
90	7	6	4	3	3	2	3	4	6	7	7	7	6	6	5	7	6
95	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	1
100	0	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	1
105	1	1	1	1	1	0	0	1	1	1	1	1	1	0	0	1	1
110	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1
115	1	1	1	0	1	1	1	1	1	0	1	1	1	0	1	0	1
120	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
125	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1
130	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1
135	2	2	2	2	2	2	2	2	1	2	2	1	2	1	1	1	2
140	2	2	2	2	2	1	2	2	2	2	2	2	2	2	1	1	2
145	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
150	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
155	2	3	2	2	2	3	2	2	2	3	2	2	3	2	2	2	2
160	2	2	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3
165	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
170	3	3	3	3	3	3	4	3	4	3	4	4	3	4	4	3	4
175	4	3	4	4	4	4	3	4	4	4	3	4	4	4	4	3	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-24-35-303540	Sample ID.	5905101-2S

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 thedigital power meter.

Test Results

CCT Range	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Current THD
0%-3000K	120	60	0.289	34.24	0.9862	10.72%
	277	60	0.131	34.23	0.9415	11.27%
50%-3500K	120	60	0.282	33.36	0.9858	10.81%
	277	60	0.127	33.12	0.9414	11.33%
100%-4000K	120	60	0.291	34.43	0.9861	10.75%
	277	60	0.132	34.42	0.9413	11.29%

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