



DLC V4.0 TEST REPORT

Applicant's name	Shanghai Supertek Lighting Co., Ltd.
Address	No.455,laodongRoad,caowang industrial Zone, Jiading District, shanghai
Brand Name	SUPERTEK
Report No.	BTR66.181.15.0046.36
Product Name	Outdoor Wall-mounted Area Luminaires
Basic Model	WP01A-40-4000K
Tested by (printed name and signature)	David Zhang
Title	Test Engineer 
Approved by (printed name and signature)	Steven Su
Title	Approved Signatory 
Date of issue	July 06, 2016
Testing Laboratory Name	BEST Test Service Shenzhen Co., Ltd.
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Accreditation	DLC/Lighting Facts/UL/ETL/ELI/NVLAP/EPA/DOE
Test specification	
Standard	DLC V4.0
Test procedure	DLC Test Procedure
Non-standard test method	No
Test Report Form No.	BEST_DLC-V4.0
TRF originator	BEST Test Service Shenzhen Co., Ltd. Mr Tseng
Master TRF	BEST_DLC V4.0.doc

Note:

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Product description:		
Sample received date	June 27, 2016	
Sample Quantity	1 pcs per model	
Model Number	WP01A-40-4000K; WP01A-40-5000K	
Rating(s) (V; Hz)	AC 120V-277V	
Nominal Power.....	40W	
Nominal Power Factor	N/A	
Nominal Lumen Output.....	4100lm; 4150lm	
Nominal CCT	4000K; 5000K	
Nominal CRI(Ra)	80	
Nominal Life	50000H	
Product Classification	<input type="checkbox"/> Premium	<input checked="" type="checkbox"/> Standard
Category	<input type="checkbox"/> Indoor	<input type="checkbox"/> Indoor Retrofit Kit
	<input checked="" type="checkbox"/> Outdoor	<input type="checkbox"/> Outdoor Retrofit Kit
	<input type="checkbox"/> Linear Replacement Lamp	<input type="checkbox"/> E39 Replacements for HID Lamps
General Applicant	Outdoor –Low Output	
Primary use.....	Outdoor Non-Cutoff and Semi-Cutoff Wall-mounted Area Luminaires	
Dimmable	<input checked="" type="checkbox"/> Yes,	<input type="checkbox"/> No
If Yes, Select Dimming Mechanism ...:	<input checked="" type="checkbox"/> Continuous dimming,	<input type="checkbox"/> Step dimming
If Yes, Mini Dimming Level	≤10%	
Integral Controller	<input checked="" type="checkbox"/> Yes,	<input type="checkbox"/> No
LED Lighting Source Manufacture	Seoul Semiconductor Co.,Ltd	
LED Lighting Source Model	STWxC2SB	
LED Driver Brand.....	N/A	
LED Driver Model Number.....	N/A	
Maximum Recommended Temperature (°C) During Normal Operation	N/A	
Fixtures Band (Retrofit Kit/Lamp Only)	N/A	
Fixtures Model No. (Retrofit Kit/Lamp Only)	N/A	

Test Method Description

ANSI C78.376-2001 Specifications for the Chromaticity of Fluorescent Lamps
 ANSI/NEMA/ANSLG C78.377-2011 Specifications for the Chromaticity of Solid State Lighting Products
 ANSI C78.5-2003 Specifications for Performance of Self-ballasted Compact Fluorescent Lamps
 ANSI/ANSLG C78.81-2010 Double-Capped Fluorescent Lamps—Dimensional and Electrical Characteristics
 ANSI C78.901-2014 Single-Based Fluorescent Lamps—Dimensional and Electrical Characteristics
 ANSI/ANSLG C81.61-2009 Specifications for Bases (Caps) for Electric Lamps
 ANSI/ANSLG C81.62-2009 Lamp holders for Electric Lamps
 ANSI C82.11-2011 High-Frequency Fluorescent Lamp Ballasts
 ANSI/ANSLG C82.16-2015 (anticipated) Light Emitting Diode Drivers—Methods of Measurement
 ANSI C82.2-2002 Method of Measurement of Fluorescent Lamp Ballasts
 ANSI C82.77-10:2014 Harmonic Emission Limits—Related Power Quality Requirements for Lighting Equipment
 ANSI/IEEE C62.41.1-2002 IEEE Guide on the Surge Environment in Low-Voltage (1000 V and Less) AC Power Circuits
 ANSI/IEEE C62.41.2-2002 IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000V and Less) AC Power Circuits
 ANSI/UL 153-2002 Standard for Safety of Portable Electric Luminaires
 ANSI/UL 935-2009 Standard for Safety of Fluorescent-Lamp Ballasts
 ANSI/UL 1310-2010 Standard for Safety of Class 2 Power Units
 ANSI/UL 1574-2004 Standard for Safety of Track Lighting Systems
 ANSI/UL 1598-2008 Standard for Safety of Luminaires
 ANSI/UL 1598C Light-Emitting Diode (LED) Retrofit Luminaire Conversion Kits
 ANSI/UL 1598B-2010 Standard for Supplemental Requirements for Luminaire Reflector Kits for Installation on Previously Installed Fluorescent Luminaires
 ANSI/UL 1993-2009 Standard for Safety of Self-Ballasted Lamps and Lamp Adapters
 ANSI/UL 2108-2004 Standard for Low-Voltage Lighting Systems
 ANSI/UL 8750-2009 Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products
 ASTM E283-04 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
 CIE Pub. No. 13.3-1995 Method of Measuring and Specifying Color Rendering of Light Sources
 CIE Pub. No. 15:2004 Colorimetry
 EU Directive 2002/95/EC Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the Restriction of the Use of Certain Hazardous Substances In Electrical and Electronic Equipment
 FCC CFR Title 47 Part 15 Radio Frequency Devices
 FCC CFR Title 47 Part 18 Industrial, Scientific, and Medical Equipment
 IEC 60061-1 (2012) Lamp Caps and Holders Together with Gauges for the Control of Interchangeability and Safety – Part 1: Lamp Caps
 IEC 60081 Amend 4 Ed 5.0 (2010) Double-capped Fluorescent Lamps - Performance Specifications
 IEC 60901 (2011) Single-capped Fluorescent Lamps - Performance Specifications
 IEC 62301 ED.2.0 B:2011 Household electrical appliances - Measurement of standby power
 IEC 61347-2-3-am2 ed1.0 b.2011 Amendment 2 - Lamp Control Gear - Part 2-3: Particular Requirements for A.C. Supplied Electronic Ballasts for Fluorescent Lamps
 IEC 62321 Ed. 1.0 Electrotechnical Products - Determination Of Levels Of Six Regulated Substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)
 IEEE PAR1789 IEEE Recommending Practices for Modulating Current in High Brightness LEDs for Mitigating Health Risks to Viewers
 IES LM-9-09 Electric and Photometric Measurements of Fluorescent Lamps
 IES LM-10-96 or LM-10-XX Photometric Testing of Outdoor Fluorescent Luminaires (2015 update anticipated)
 IES LM-31-95 Photometric Testing of Roadway Luminaires Using Incandescent Filament and High Intensity Discharge (HID) Lamps
 IES LM-40-10 Life Testing of Fluorescent Lamps
 IES LM-41-14 Approved Method for Photometric Testing of Indoor Fluorescent Luminaires
 IES LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or Incandescent Filament Lamps
 IES LM-49-12 Life Testing of Incandescent Filament Lamps
 IES LM-58-13 Method for Spectroradiometric Measurement Methods for Light Sources
 IES LM-65-14 Life Testing of Compact Fluorescent Lamps
 IES LM-66-14 Electrical and Photometric Measurements of Single-Ended Compact Fluorescent Lamps
 IES LM-79-08 Electrical and Photometric Measurements of Solid-State Lighting Products
 IES LM-80-08 Measuring Lumen Maintenance of LED Light Sources
 IES LM-82-12 Method for the Characterization of LED Light Engines and Integrated LED Lamps for Electrical and Photometric Properties as a Function of Temperature
 IES LM-84-14 Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires
 IES RP-16-10 Nomenclature and Definitions for Illuminating Engineering
 IES TM-21-11 Projecting Long Term Lumen Maintenance of LED Sources
 IES TM-28-14 Projecting Long-Term Luminous Flux Maintenance of LED Lamps and Luminaires
 NEMA LL 9-2009 Dimming of T8 Fluorescent Lighting Systems
 NEMA LSD 45-2009 Recommendations for Solid State Lighting Sub-Assembly Interfaces for Luminaires
 NEMA SSL 7A-2013 Phase Cut Dimming for Solid State Lighting: Basic Compatibility

Initial Photometric and Electrical Test Data

EUT	Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
WP01A-40-4000K	120.0	60.0	0.360	9.8%	42.96	0.993	4580.40	106.62
WP01A-40-4000K	277.0	60.0	0.162	8.5%	43.34	0.965	/	/

EUT	CCT (K)	CRI Ra	R9	x CIE1931	y CIE1931
WP01A-40-4000K	4217	83.6	13	0.3732	0.3789
WP01A-40-5000K	5152	83.9	12	0.3413	0.3533

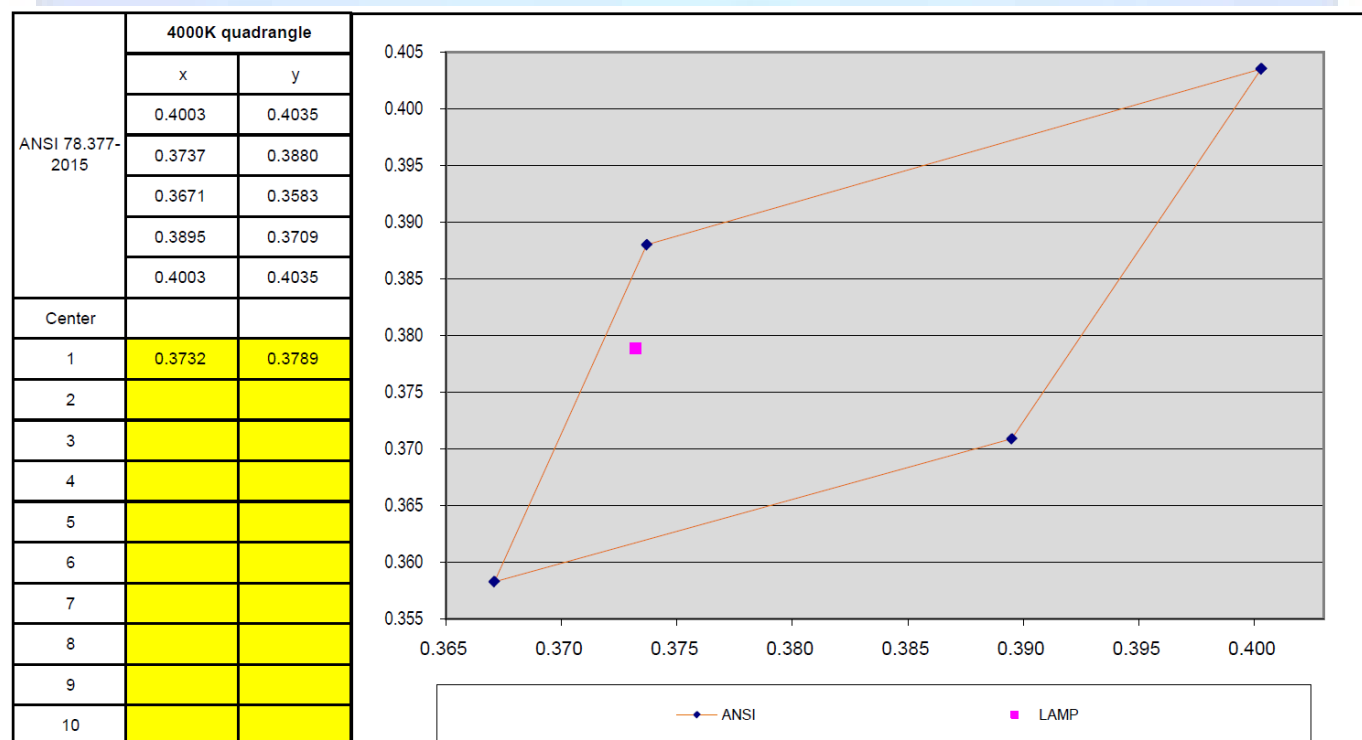
EUT	u' CIE1976	v' CIE1976	Duv	Rf	Rg
WP01A-40-4000K	0.2195	0.5015	0.0030	84	94
WP01A-40-5000K	0.2082	0.4849	0.0024	82	94

EUT	Zonal Lumen Density zone (80-90°)
WP01A-40-4000K	10.8% (3% tolerance)

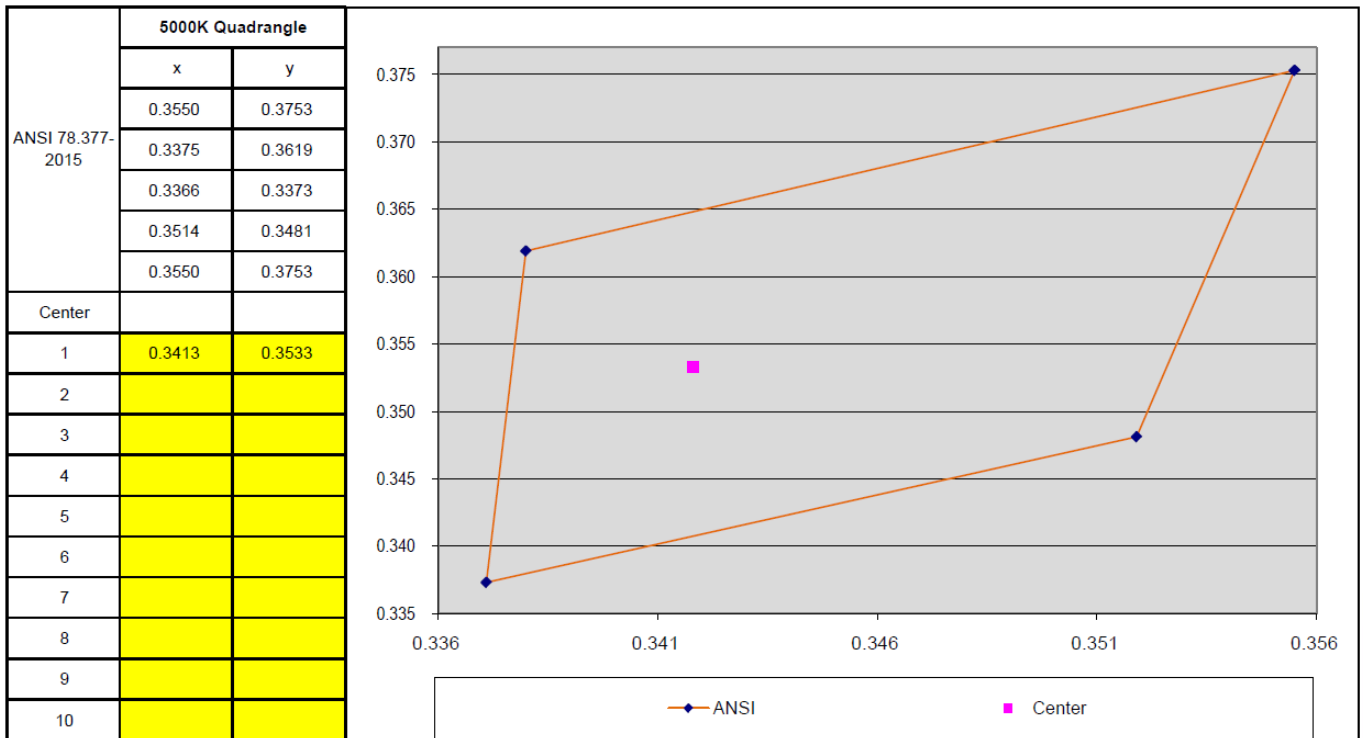
Note: see the annex of Luminous Intensity Distribution Test Plots

7 Step Quadrangle

WP01A-40-4000K



WP01A-40-5000K



Spectral Energy Distribution

WP01A-40-4000K

WL(nm)	Spectrum	Spectrum	WL(nm)	Spectrum	Spectrum
380	0.0178	1.3370	585	0.8677	65.2600
385	0.0112	0.8453	590	0.8708	65.5000
390	0.0084	0.6292	595	0.8684	65.3100
395	0.0072	0.5435	600	0.8619	64.8300
400	0.0063	0.4746	605	0.8474	63.7300
405	0.0086	0.6467	610	0.8258	62.1100
410	0.0160	1.2040	615	0.7969	59.9400
415	0.0327	2.4600	620	0.7615	57.2700
420	0.0620	4.6610	625	0.7184	54.0300
425	0.1114	8.3750	630	0.6717	50.5200
430	0.1869	14.0600	635	0.6221	46.7900
435	0.2950	22.1800	640	0.5719	43.0200
440	0.4380	32.9400	645	0.5199	39.1100
445	0.6647	49.9900	650	0.4689	35.2600
450	0.9549	71.8200	655	0.4226	31.7900
455	0.9194	69.1500	660	0.3775	28.3900
460	0.6275	47.2000	665	0.3363	25.3000
465	0.4863	36.5800	670	0.2972	22.3600
470	0.4039	30.3800	675	0.2625	19.7400
475	0.3236	24.3400	680	0.2299	17.2900
480	0.3050	22.9400	685	0.2005	15.0800
485	0.3363	25.2900	690	0.1749	13.1600
490	0.3793	28.5300	695	0.1523	11.4600
495	0.4370	32.8700	700	0.1316	9.8960
500	0.4951	37.2400	705	0.1134	8.5320
505	0.5446	40.9600	710	0.0981	7.3800
510	0.5802	43.6400	715	0.0843	6.3390
515	0.6055	45.5400	720	0.0723	5.4360
520	0.5922	44.5400	725	0.0625	4.7010
525	0.6392	48.0800	730	0.0535	4.0230
530	0.6690	50.3200	735	0.0460	3.4620
535	0.6919	52.0400	740	0.0395	2.9740
540	0.7171	53.9300	745	0.0341	2.5610
545	0.7388	55.5700	750	0.0295	2.2170
550	0.7643	57.4900	755	0.0256	1.9230
555	0.7879	59.2600	760	0.0223	1.6780
560	0.8086	60.8200	765	0.0190	1.4300
565	0.8266	62.1700	770	0.0165	1.2410
570	0.8406	63.2200	775	0.0146	1.0970
575	0.8520	64.0800	780	0.0133	1.0010
580	0.8626	64.8800			

WP01A-40-5000K

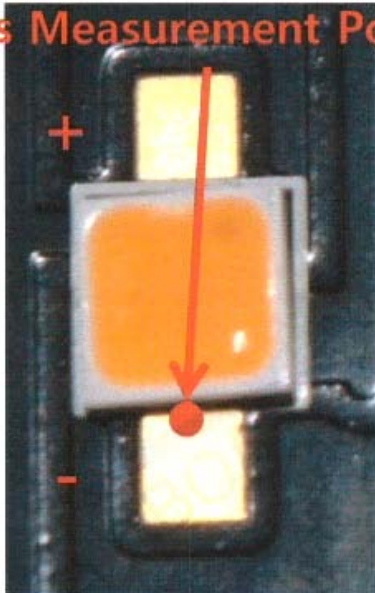
WL(nm)	Spectrum	Spectrum	WL(nm)	Spectrum	Spectrum
380	0.0057	0.1740	585	0.6353	19.3100
385	0.0038	0.1146	590	0.6291	19.1200
390	0.0024	0.0744	595	0.6185	18.8000
395	0.0029	0.0868	600	0.6036	18.3500
400	0.0031	0.0950	605	0.5846	17.7700
405	0.0049	0.1494	610	0.5630	17.1100
410	0.0098	0.2985	615	0.5374	16.3400
415	0.0220	0.6697	620	0.5071	15.4200
420	0.0449	1.3660	625	0.4754	14.4500
425	0.0825	2.5080	630	0.4412	13.4100
430	0.1432	4.3520	635	0.4058	12.3300
435	0.2380	7.2330	640	0.3722	11.3100
440	0.3716	11.3000	645	0.3383	10.2800
445	0.5589	16.9900	650	0.3045	9.2550
450	0.8162	24.8100	655	0.2737	8.3190
455	0.9999	30.3900	660	0.2436	7.4050
460	0.8813	26.7900	665	0.2168	6.5890
465	0.6459	19.6300	670	0.1913	5.8160
470	0.5068	15.4100	675	0.1691	5.1410
475	0.4062	12.3500	680	0.1475	4.4850
480	0.3327	10.1100	685	0.1295	3.9360
485	0.3079	9.3600	690	0.1123	3.4120
490	0.3175	9.6520	695	0.0980	2.9800
495	0.3432	10.4300	700	0.0848	2.5780
500	0.3778	11.4800	705	0.0736	2.2390
505	0.4166	12.6600	710	0.0639	1.9410
510	0.4521	13.7400	715	0.0550	1.6710
515	0.4820	14.6500	720	0.0476	1.4480
520	0.5064	15.3900	725	0.0413	1.2550
525	0.5279	16.0500	730	0.0354	1.0770
530	0.5460	16.6000	735	0.0305	0.9286
535	0.5622	17.0900	740	0.0265	0.8045
540	0.5771	17.5400	745	0.0230	0.6985
545	0.5902	17.9400	750	0.0198	0.6015
550	0.6028	18.3200	755	0.0174	0.5282
555	0.6134	18.6500	760	0.0148	0.4509
560	0.6232	18.9400	765	0.0129	0.3918
565	0.6299	19.1500	770	0.0112	0.3403
570	0.6355	19.3200	775	0.0099	0.3016
575	0.6377	19.3900	780	0.0091	0.2752
580	0.6394	19.4400			

Driver Case Temperature/ LED Drive Current/TMP_{LED} Test Data

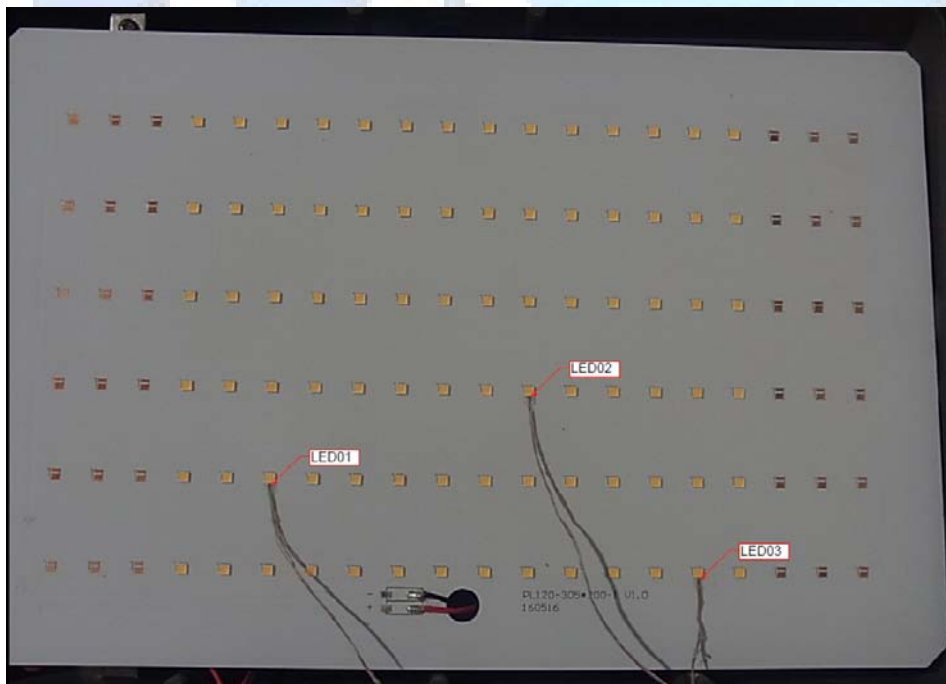
EUT	Driver Max Tc (°C)	Driver In-Situ Temperature (°C)	LED In-Situ Current (mA)	LED In-Situ Temperature (°C)(1#)	LED In-Situ Temperature (°C)(2#)	LED In-Situ Temperature (°C)(3#)
WP01A-40-4000K	N/A	N/A	79.0	60.8	58.9	59.3

LED Lighting Source Temperature Measurement Point in LM-80 Report

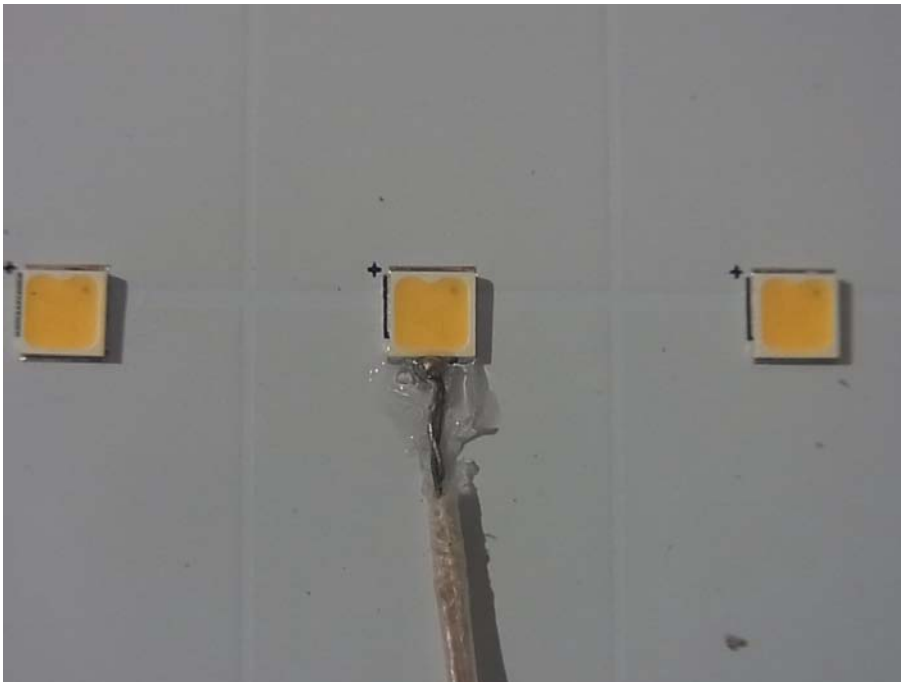
T_s Measurement Point



LED Lighting Source In Situ Temperature Measurement



TOP: LED 01



Lumen Maintenance and Lighting Source Life Test Data

TM-21 Inputs

Instructions

Yellow fields are completed by the user. Fields not used should be left blank. Cyan fields are calculated based on user entries.

First, enter a description of the LED light source tested. Then complete the fields labeled "LM-80 Testing Details". Test duration must be at least 6,000 hours. If only one case temperature data set is to be used (no interpolation), complete only "Tested case temperature 1". For only two case temperature data sets, complete 1 and 2.

Next, further to the right, in the corresponding box(es) for each tested case temperature, enter the test data along with the time (in hours) at which each measurement was taken. Data entered must be normalized then averaged measured data (per TM-21 sections 5.2.1 and 5.2.2). If case temperatures have different test durations, enter data up to the lowest of the test durations for all of the case temperatures.

Enter drive current, *in-situ* temperature data and the percentage of initial lumens to project to in the fields labeled "In-Situ Inputs".

Results can be tailored to estimate lumen maintenance at a specific time by entering a value (t) in the yellow field. A complete TM-21 report will appear on the next tab labeled "Report".

Description of LED Light Source Tested (manufacturer, model, catalog number)		LM-80 Test Inputs		Test Data for 55°C Case Temperature		Test Data for 85°C Case Temperature		Test Data for 105°C Case Temperature	
		Time (hours)	Lumen Maintenance (%)	Time (hours)	Lumen Maintenance (%)	Time (hours)	Lumen Maintenance (%)	Time (hours)	Lumen Maintenance (%)
Seoul, 3030B (STWxC2SB)		0	100.00%	0	100.00%	0	100.00%	0	100.00%
		1000	101.20%	1000	101.00%	1000	99.20%	1000	99.20%
		2000	100.80%	2000	100.10%	2000	98.10%	2000	98.10%
		3000	101.20%	3000	99.80%	3000	96.90%	3000	96.90%
		4000	101.10%	4000	98.80%	4000	95.90%	4000	95.90%
		5000	100.80%	5000	97.50%	5000	94.30%	5000	94.30%
		6000	99.90%	6000	97.00%	6000	92.30%	6000	92.30%
		7000	99.10%	7000	96.10%	7000	90.20%	7000	90.20%

LM-80 Testing Details	
Total number of units tested per case temperature:	25
Number of failures:	0
Number of units measured:	25
Test duration (hours):	7000
Tested drive current (mA):	200
Tested case temperature 1 (T _c , °C):	55
Tested case temperature 2 (T _c , °C):	85
Tested case temperature 3 (T _c , °C):	105

In-Situ Inputs	
Drive current for each LED package/array/module (mA):	79
In-situ case temperature (T _c , °C):	60.8
Percentage of initial lumens to project to (e.g. for L ₇₀ , enter 70):	70

Results	
Time (t) at which to estimate lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	82.20%
Reported L70 (hours):	>42000

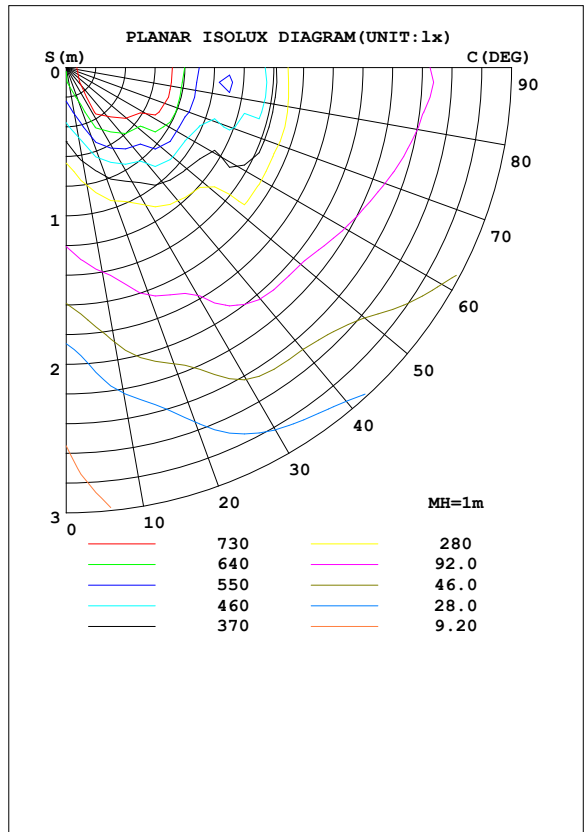
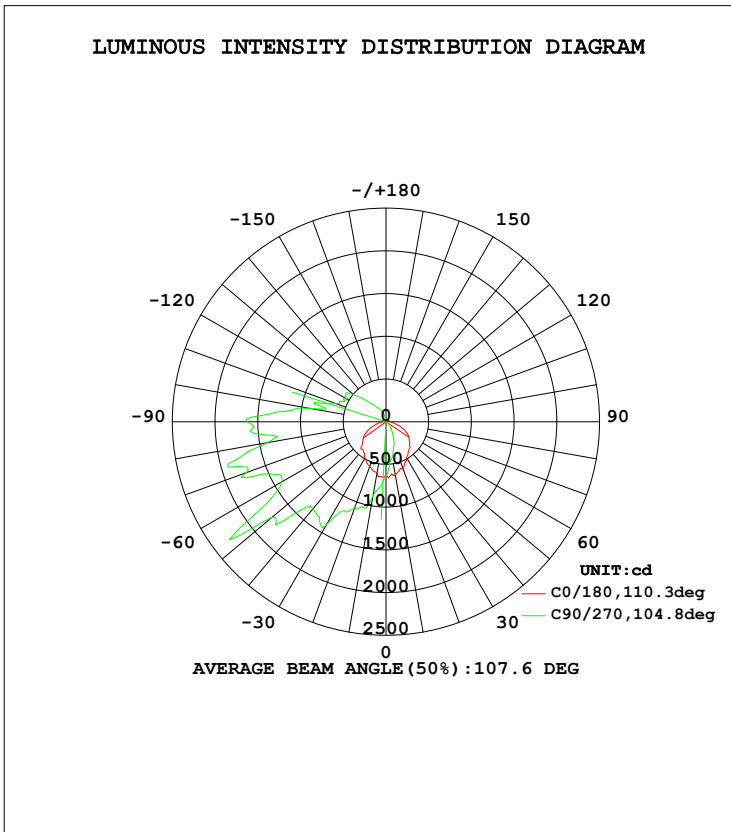
EUT Photo



LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 106.62 lm/W			
MODEL	WP01A-40-4000K	Initial (cd)	2339	S/MH (C0/180)	1.15
NOMINAL POWER (W)	40	LOR (%)	100.0	S/MH (C90/270)	0.50
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm)	4580.4	η UP, DN (C0-180)	21.6, 69.6
NOMINAL FLUX (lm)	4580.4	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	0.6, 8.2
LAMPS INSIDE	1	η up (%)	22.2	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120.0	η down (%)	77.8	CIBSE SHR MAX	1.30



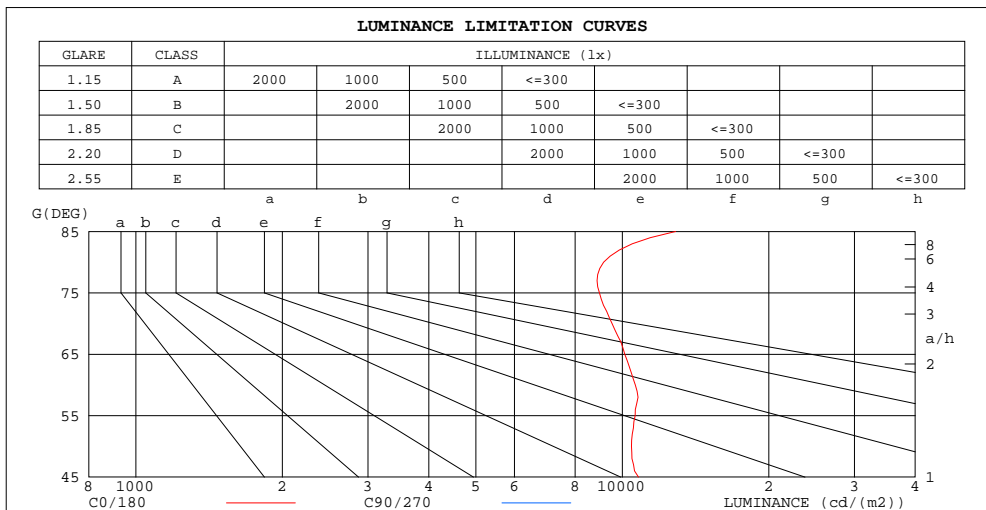
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

**ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES**

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	#lum,lamp
10	613.4	796.2	878.2	782.1	632.9	453.5	425.3	456.3	0- 10	60.44	60.44	1.32,1.32
20	564.6	954.1	1072	971.6	581.3	345.7	275.3	336.6	10- 20	181.6	242.0	5.28,5.28
30	490.3	1034	1387	1059	487.7	233.3	149.8	224.4	20- 30	291.8	533.8	11.7,11.7
40	423.6	1124	1329	1129	422.8	145.1	88.47	136.7	30- 40	393.8	927.6	20.3,20.3
50	355.9	1067	1741	1069	358.0	87.56	48.96	78.93	40- 50	468.3	1396	30.5,30.5
60	281.8	1218	1418	1264	294.7	46.37	10.42	41.97	50- 60	570.5	1966	42.9,42.9
70	172.6	924.0	1737	950.1	192.1	15.86	2.197	11.89	60- 70	530.2	2497	54.5,54.5
80	84.21	990.2	1414	1080	94.09	10.45	3.415	8.327	70- 80	574.0	3071	67,67
90	48.35	837.6	1625	878.8	49.80	7.805	4.098	5.979	80- 90	494.4	3565	77.8,77.8
100	32.31	414.9	907.7	448.5	34.49	7.061	8.028	6.023	90-100	398.6	3964	86.5,86.5
110	41.02	249.1	616.5	239.2	41.50	7.076	7.400	5.709	100-110	205.4	4169	91,91
120	30.98	249.7	536.6	271.1	33.05	5.201	7.448	3.868	110-120	149.6	4319	94.3,94.3
130	17.33	198.6	494.7	216.1	20.46	3.316	3.396	2.905	120-130	123.6	4442	97,97
140	9.706	138.3	287.9	146.0	10.91	2.704	3.113	2.304	130-140	74.86	4517	98.6,98.6
150	2.559	101.2	184.3	104.5	3.648	2.274	2.712	2.090	140-150	39.16	4556	99.5,99.5
160	1.847	61.79	118.4	66.15	1.557	2.110	1.770	1.674	150-160	18.79	4575	99.9,99.9
170	1.738	2.105	10.39	1.767	1.775	2.377	2.584	2.017	160-170	5.291	4580	100,100
180	1.992	2.239	2.306	2.018	1.992	2.130	2.085	1.869	170-180	0.1987	4580	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	12868	337135
80	9150	153621
75	8976	139738
70	9524	95841
65	10112	64989
60	10635	53497
55	10623	59773
50	10446	51112
45	10795	40972

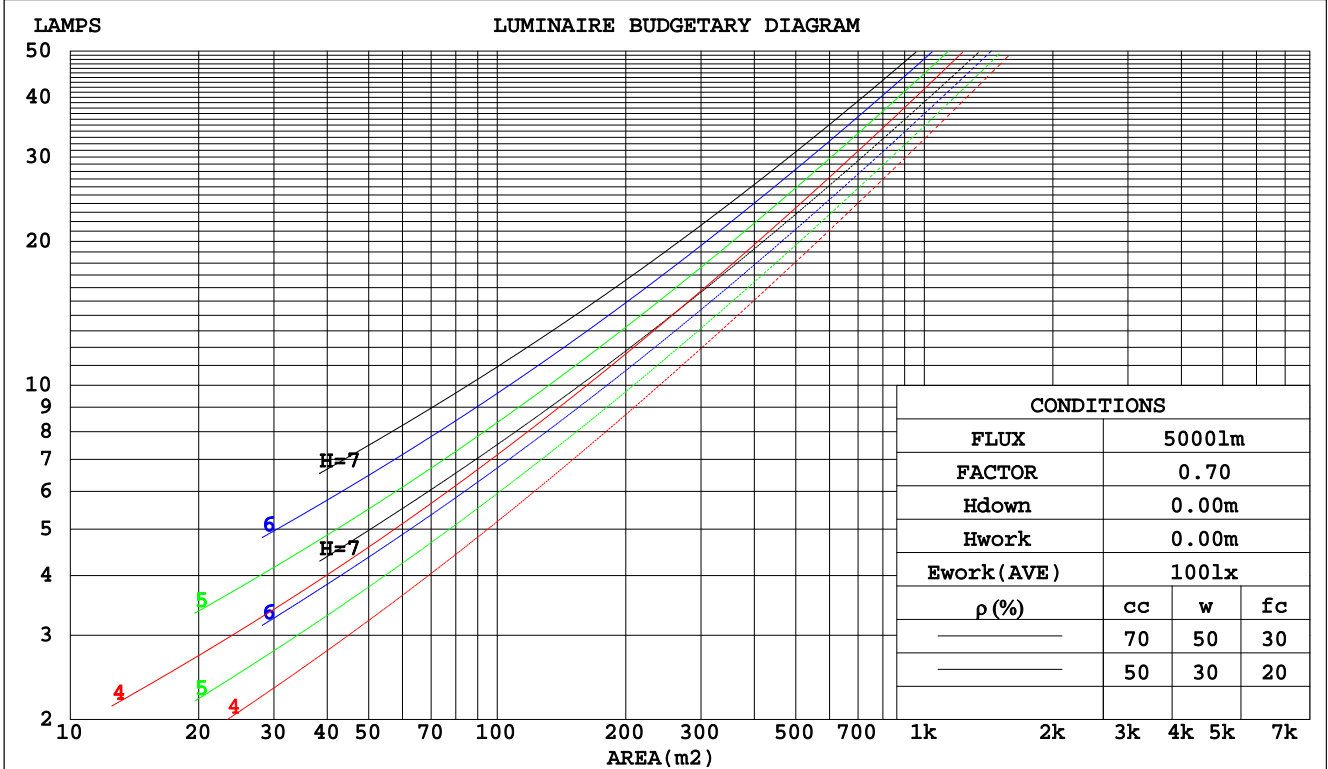
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.14	1.14	1.14	1.09	1.09	1.09	.99	.99	.99	.90	.90	.90	.82	.82	.82	.78
1.0	.92	.86	.80	.87	.82	.77	.79	.74	.70	.71	.67	.64	.64	.61	.58	.54
2.0	.77	.69	.61	.73	.65	.59	.66	.60	.54	.59	.54	.49	.53	.49	.45	.41
3.0	.66	.56	.49	.63	.54	.47	.56	.49	.43	.51	.45	.39	.45	.40	.36	.33
4.0	.58	.48	.40	.55	.45	.38	.49	.41	.35	.44	.38	.32	.39	.34	.30	.27
5.0	.51	.41	.33	.48	.39	.32	.44	.36	.30	.39	.33	.27	.35	.29	.25	.22
6.0	.45	.35	.28	.43	.34	.27	.39	.31	.25	.35	.28	.23	.31	.26	.21	.19
7.0	.41	.31	.25	.39	.30	.24	.35	.27	.22	.32	.25	.20	.28	.23	.19	.16
8.0	.37	.28	.21	.35	.27	.21	.32	.25	.19	.29	.22	.18	.26	.21	.16	.14
9.0	.33	.25	.19	.32	.24	.18	.29	.22	.17	.26	.20	.16	.24	.19	.15	.12
10.0	.31	.22	.17	.29	.22	.16	.27	.20	.15	.24	.18	.14	.22	.17	.13	.11



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.440	.250	.079	.425	.243	.077	.399	.229	.073	.375	.216	.069	.352	.204	.066	
2.0	.368	.202	.062	.355	.195	.060	.331	.184	.057	.309	.173	.054	.288	.163	.051	
3.0	.320	.170	.051	.309	.165	.050	.287	.155	.047	.267	.146	.045	.248	.137	.042	
4.0	.284	.148	.043	.274	.143	.042	.254	.135	.040	.235	.126	.038	.218	.119	.036	
5.0	.256	.130	.038	.246	.126	.037	.228	.119	.035	.211	.111	.033	.196	.105	.031	
6.0	.232	.117	.033	.224	.113	.033	.207	.106	.031	.192	.100	.029	.177	.093	.028	
7.0	.213	.105	.030	.205	.102	.029	.190	.096	.028	.176	.090	.026	.163	.084	.025	
8.0	.197	.096	.027	.189	.093	.026	.175	.088	.025	.162	.082	.024	.150	.077	.022	
9.0	.182	.088	.025	.176	.086	.024	.163	.081	.023	.151	.076	.022	.140	.071	.020	
10.0	.170	.082	.023	.164	.079	.022	.152	.075	.021	.141	.070	.020	.130	.066	.019	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.359	.359	.359	.307	.307	.307	.210	.210	.210	.120	.120	.120	.039	.039	.039	
1.0	.360	.325	.294	.308	.279	.253	.210	.192	.175	.121	.111	.102	.039	.036	.033	
2.0	.354	.303	.260	.303	.261	.225	.208	.180	.157	.120	.105	.092	.038	.034	.030	
3.0	.347	.287	.240	.297	.248	.208	.204	.172	.146	.118	.100	.086	.038	.033	.028	
4.0	.339	.275	.226	.291	.238	.197	.200	.166	.138	.116	.097	.082	.037	.032	.027	
5.0	.331	.265	.217	.284	.230	.189	.196	.160	.133	.113	.094	.079	.037	.031	.026	
6.0	.323	.258	.211	.278	.223	.183	.191	.156	.130	.111	.092	.077	.036	.030	.025	
7.0	.315	.251	.206	.271	.218	.179	.187	.153	.127	.109	.090	.076	.035	.029	.025	
8.0	.308	.246	.202	.266	.213	.176	.184	.150	.125	.107	.088	.075	.035	.029	.025	
9.0	.302	.241	.200	.260	.209	.174	.180	.147	.124	.105	.087	.074	.034	.028	.024	
10.0	.296	.237	.197	.255	.206	.172	.177	.145	.122	.103	.085	.073	.033	.028	.024	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm										
NAME:		TYPE:WP01A-40-4000K				WEIGHT:				
SPEC.:		DIM.:				SERIAL No.:				
MFR.: Supertek		SUR.:0.19*0.28				PROTECTION ANGLE:				
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	22.5	23.9	23.1	24.5	25.1	28.5	29.9	29.1	30.5	31.2
3H	24.1	25.5	24.7	26.1	26.8	32.1	33.4	32.7	34.0	34.7
4H	24.9	26.1	25.5	26.7	27.5	34.5	35.8	35.2	36.4	37.1
6H	25.4	26.6	26.1	27.3	28.0	36.3	37.5	37.0	38.1	38.9
8H	25.6	26.8	26.3	27.4	28.2	37.0	38.2	37.7	38.8	39.6
12H	25.8	26.9	26.4	27.6	28.3	38.2	39.3	38.9	40.0	40.8
4H 2H	25.2	26.5	25.9	27.1	27.8	28.9	30.2	29.5	30.8	31.5
3H	27.1	28.2	27.8	28.9	29.6	32.8	33.9	33.5	34.6	35.3
4H	28.1	29.1	28.7	29.7	30.5	35.6	36.6	36.2	37.3	38.1
6H	28.9	29.8	29.6	30.5	31.4	37.6	38.5	38.3	39.2	40.0
8H	29.2	30.1	29.9	30.8	31.6	38.4	39.3	39.1	40.0	40.8
12H	29.4	30.2	30.2	31.0	31.8	39.8	40.6	40.5	41.3	42.2
8H 4H	30.5	31.4	31.3	32.1	33.0	35.9	36.7	36.6	37.4	38.3
6H	31.9	32.6	32.6	33.3	34.2	38.1	38.9	38.9	39.6	40.5
8H	32.4	33.1	33.2	33.8	34.7	39.2	39.9	40.0	40.6	41.5
12H	32.9	33.5	33.6	34.2	35.2	40.9	41.5	41.6	42.2	43.2
12H 4H	31.3	32.1	32.0	32.8	33.7	35.8	36.6	36.6	37.4	38.2
6H	32.8	33.5	33.6	34.2	35.2	38.2	38.9	39.0	39.6	40.5
8H	33.6	34.2	34.4	35.0	35.9	39.4	40.0	40.2	40.8	41.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.1					+ 0.3 / - 0.4				
2.0H	+ 0.5 / - 0.6					+ 0.4 / - 0.7				

CIE Pub.117 Corrected 4580 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.3)

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:26.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:

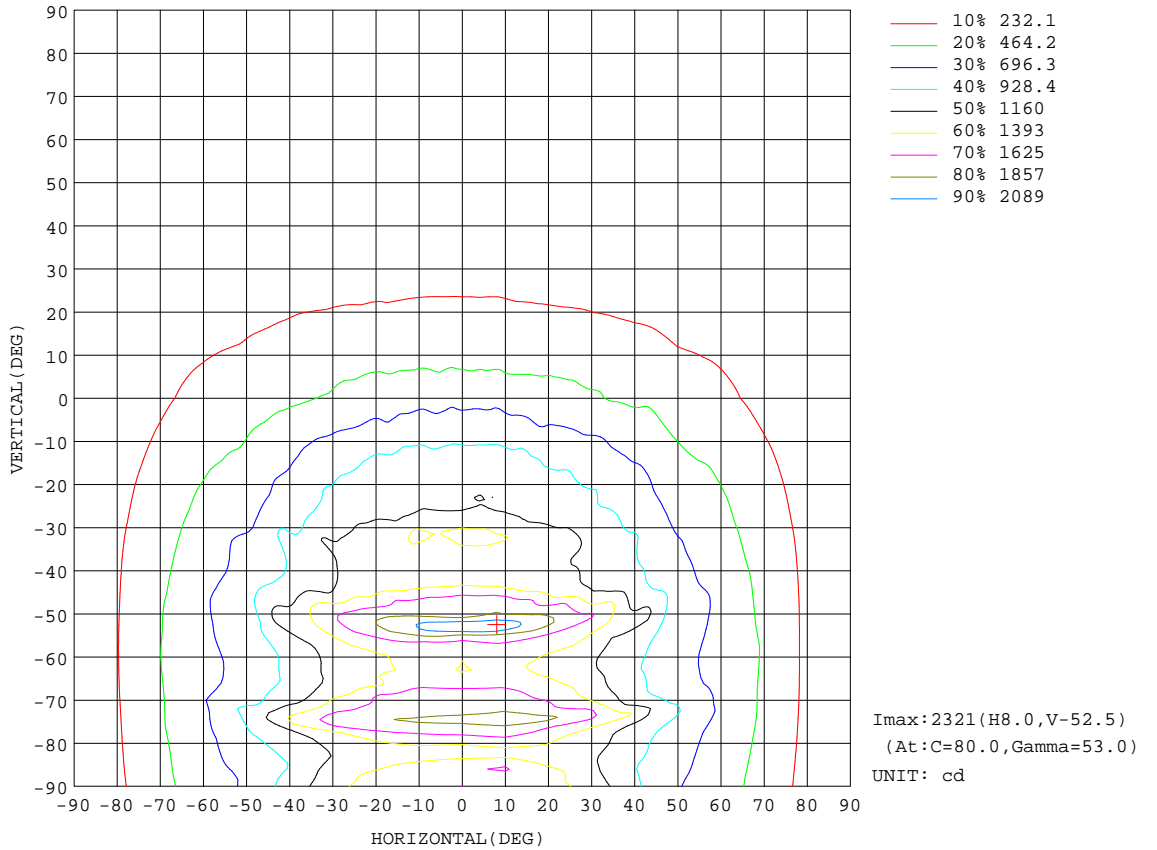
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	43	30	22	42	29	22	39	28	21	14
0.80	52	38	29	50	37	29	47	35	28	19
1.00	59	45	36	57	44	35	53	44	34	25
1.25	66	52	43	63	51	42	59	48	40	30
1.50	71	58	48	68	56	47	63	53	45	33
2.00	79	66	57	75	64	55	69	60	52	40
2.50	84	72	63	80	69	61	73	64	57	44
3.00	88	77	68	84	74	66	76	69	62	47
4.00	93	84	76	89	80	73	81	74	68	52
5.00	96	88	81	92	84	78	83	78	72	56
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:

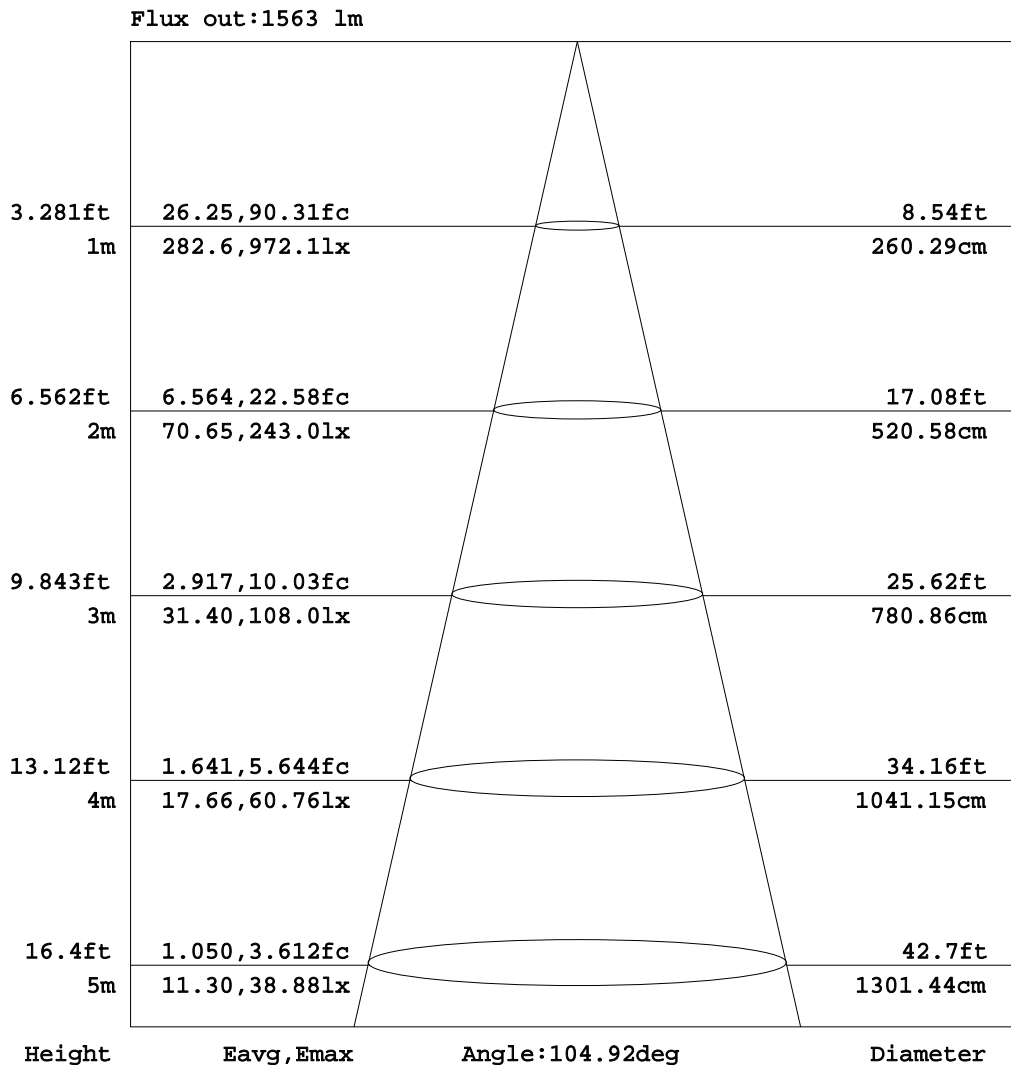


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:



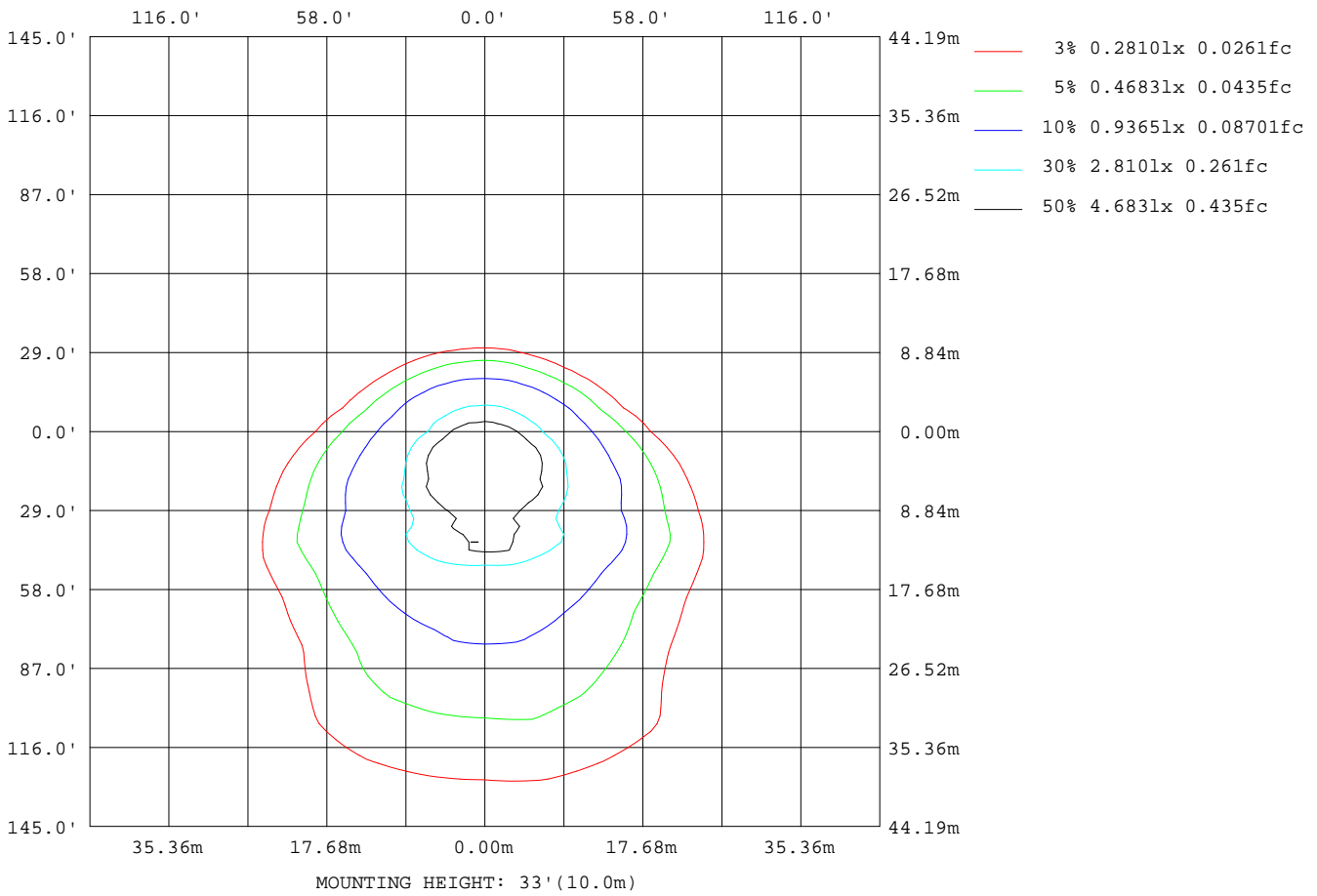
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

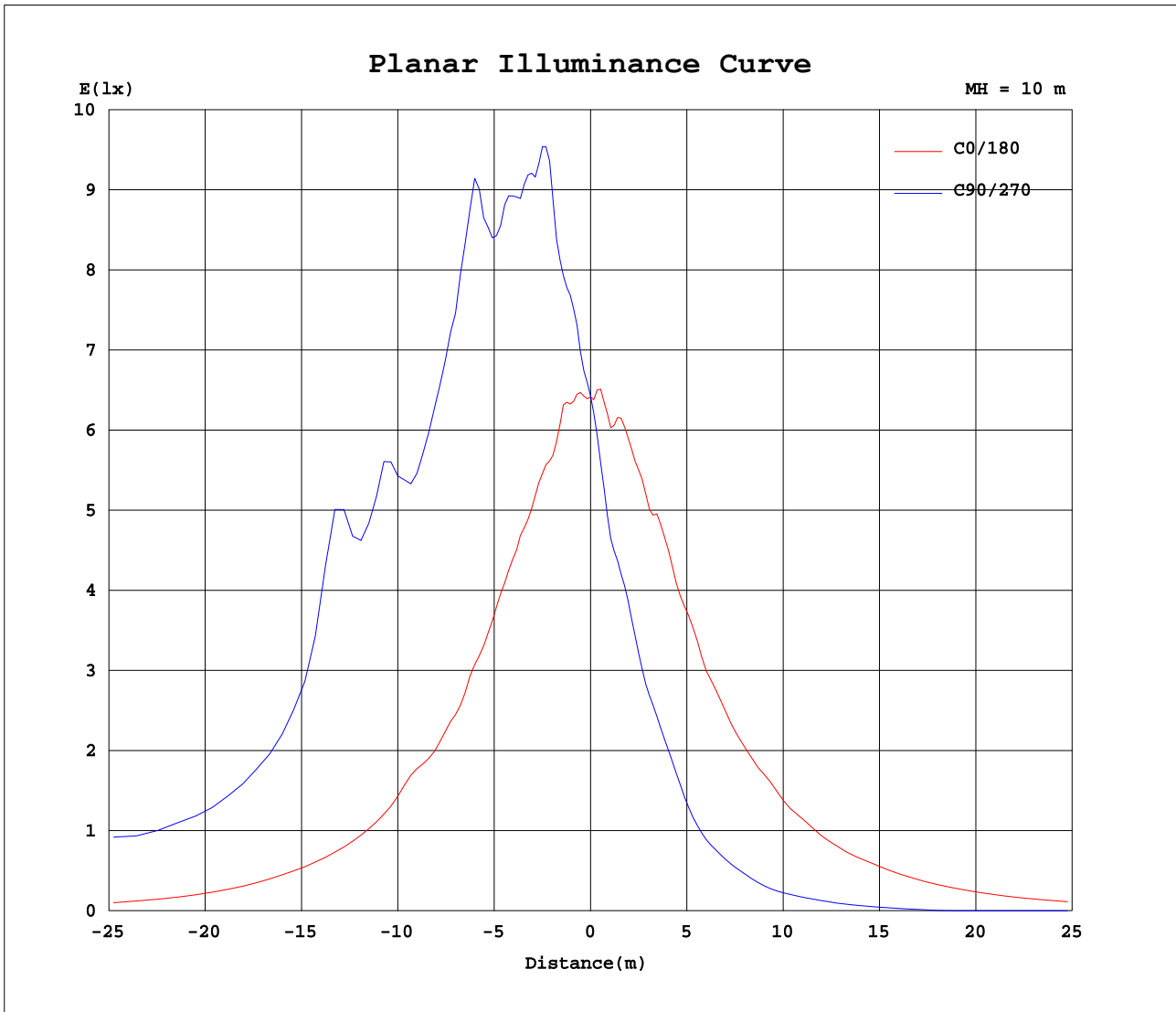
Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.: 0.19*0.28	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	642	643	644	644	644	642	645	642	644	643	642	645	641	643	643	642	642	642	642
5	643	660	674	696	720	743	759	760	763	760	760	771	772	749	709	681	658	644	628
10	613	650	709	762	798	794	828	861	860	878	887	856	804	776	788	770	725	672	633
15	594	657	724	758	834	950	1039	1026	1038	1036	1045	992	976	972	867	775	740	668	598
20	565	661	702	850	938	970	1001	1078	1079	1072	1070	1021	1062	1000	943	860	732	681	581
25	532	620	781	881	942	1015	1072	1146	1159	1149	1138	1124	1105	1030	980	921	789	629	527
30	490	619	770	911	998	1069	1148	1181	1320	1387	1298	1217	1132	1077	1041	909	811	631	488
35	446	609	783	903	995	1092	1295	1375	1374	1358	1299	1409	1326	1143	1000	925	802	631	454
40	424	581	754	878	999	1249	1280	1306	1301	1329	1281	1319	1305	1240	1018	903	755	587	423
45	405	565	739	871	1092	1136	1220	1306	1467	1535	1443	1318	1265	1179	1164	837	718	548	391
50	356	491	664	913	1024	1110	1340	1712	1847	1741	1755	1680	1370	1147	992	957	655	506	358
55	323	466	620	831	1017	1379	1789	1972	1900	1817	1992	1916	1788	1416	998	796	636	479	332
60	282	455	634	770	1112	1324	1446	1413	1491	1418	1480	1431	1469	1375	1152	811	668	464	295
65	226	416	592	776	983	1070	1251	1371	1516	1456	1448	1393	1276	1112	990	811	605	433	249
70	173	375	554	765	835	1013	1359	1522	1853	1737	1764	1651	1260	1056	844	813	576	399	192
75	123	333	522	667	815	1105	1731	1924	2051	1917	1894	1842	1633	1154	840	667	549	357	138
80	84.2	279	490	690	916	1065	1290	1420	1497	1414	1427	1399	1302	1168	992	715	514	315	94.1
85	59.4	216	435	610	774	975	1191	1335	1600	1557	1448	1333	1197	958	817	642	454	249	65.7
90	48.4	160	371	567	708	967	1302	1490	1619	1625	1605	1522	1313	1030	727	579	400	187	49.8
95	41.6	93.4	237	393	553	763	982	1170	1329	1296	1283	1207	1013	846	604	445	253	113	44.6
100	32.3	51.5	144	216	325	505	685	835	912	908	929	890	676	533	364	232	148	75.8	34.5
105	22.7	22.9	144	177	186	347	490	661	797	869	837	667	564	398	224	142	153	54.0	21.4
110	41.0	32.2	131	228	232	266	421	566	632	617	621	587	436	291	187	210	146	54.0	41.5
115	36.7	25.8	103	176	248	286	376	471	583	560	556	486	367	274	239	198	118	45.2	37.9
120	31.0	20.5	82.2	134	206	294	393	490	545	537	547	493	402	315	227	151	93.5	37.6	33.1
125	24.5	16.0	66.0	109	179	265	384	509	575	574	579	515	406	289	197	126	76.3	31.5	26.7
130	17.3	9.33	53.8	91.7	157	240	346	429	480	495	484	443	360	261	171	104	62.4	25.3	20.5
135	12.6	8.42	45.2	81.2	130	199	275	335	370	380	373	345	285	210	141	89.2	51.6	14.8	10.8
140	9.71	9.25	39.0	69.0	112	164	223	259	283	288	280	264	231	173	120	74.7	44.3	4.41	10.9
145	5.66	6.97	30.3	61.1	95.3	138	177	207	229	232	228	210	184	142	101	65.0	38.0	5.86	7.10
150	2.56	2.46	13.4	54.4	85.4	117	145	165	183	184	181	166	149	122	87.2	58.6	28.6	4.02	3.65
155	1.90	1.67	1.73	43.8	73.4	97.0	115	135	148	149	148	136	118	101	77.2	48.3	3.91	1.87	1.58
160	1.85	1.67	1.57	3.08	51.9	71.7	90.5	107	117	118	118	109	93.6	76.2	56.1	31.2	2.00	1.82	1.56
165	1.77	1.69	1.60	1.62	1.83	40.2	54.7	67.2	75.6	78.3	77.1	70.1	58.9	45.1	15.2	1.85	1.87	1.78	1.56
170	1.74	1.76	1.73	1.84	2.57	1.64	1.56	1.78	5.06	10.4	8.59	3.11	1.94	1.68	1.85	1.93	1.79	1.74	1.77
175	1.76	1.84	1.77	1.95	1.97	1.84	1.67	1.80	1.98	2.05	2.04	1.89	1.76	1.78	2.04	2.02	1.96	1.72	2.01
180	1.99	2.00	1.82	2.08	2.36	2.12	1.80	1.88	2.11	2.31	2.31	1.98	1.76	2.00	2.04	2.13	2.03	1.91	1.99

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.3604A P:42.96W PF:0.9933 Lamp Flux:4580.4x1 lm		
NAME:	TYPE:WP01A-40-4000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Supertek	SUR.:0.19*0.28	PROTECTION ANGLE:

Table--2

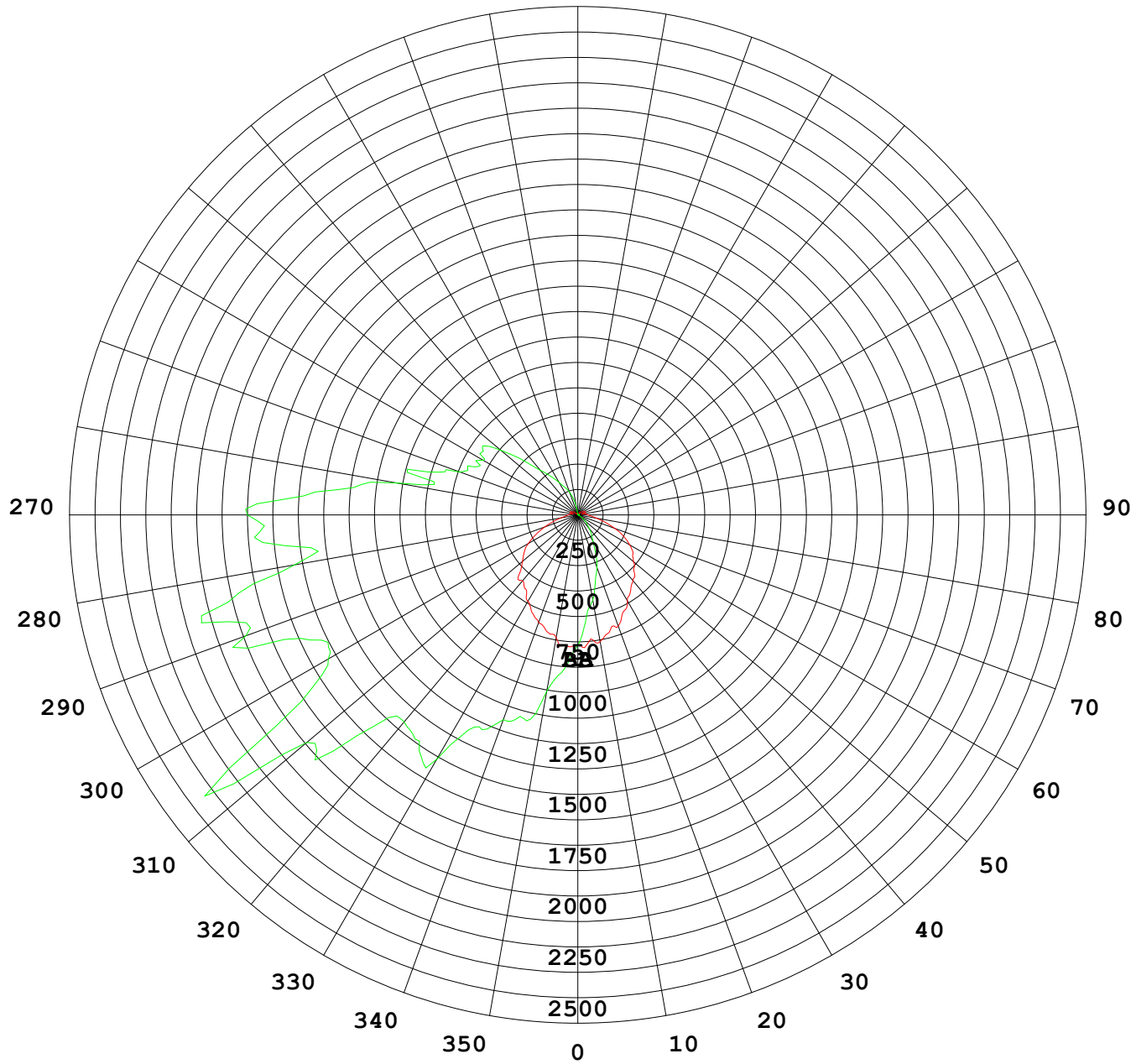
UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	643	644	644	644	642	645	642	644	643	642	645	641	643	643	642	642	642		
5	614	598	581	562	545	535	520	506	499	499	502	514	533	553	579	601	624		
10	597	551	507	467	440	430	431	432	425	421	427	436	445	467	498	535	578		
15	555	487	440	419	399	375	345	344	335	336	347	375	395	407	429	469	536		
20	516	444	386	364	327	300	282	277	275	275	289	298	318	355	382	423	499		
25	461	396	345	309	262	246	230	215	211	215	230	237	260	295	339	384	458		
30	426	357	297	250	217	188	167	153	150	152	165	182	207	242	293	336	416		
35	387	315	250	205	168	141	128	119	117	119	126	137	159	195	241	301	381		
40	340	269	205	161	130	111	96.9	90.7	88.5	89.9	95.9	103	122	151	195	253	342		
45	292	223	165	125	100	84.4	70.3	65.5	63.9	64.5	68.5	77.1	92.0	117	154	214	296		
50	253	180	131	97.9	77.2	61.5	52.9	50.2	49.0	49.0	51.2	56.6	70.1	87.7	121	173	239		
55	211	146	102	73.6	55.5	45.2	35.9	32.7	31.2	31.8	33.9	40.0	51.3	66.2	93.9	136	199		
60	170	118	78.6	55.0	37.7	26.0	18.6	12.8	10.4	11.8	16.9	22.9	33.7	50.2	72.0	108	159		
65	136	92.7	61.5	39.3	20.7	4.55	1.86	1.88	1.85	1.89	1.87	2.55	16.3	33.7	56.3	84.9	125		
70	107	74.0	47.5	23.3	8.47	3.25	2.19	2.23	2.20	2.17	2.15	2.38	6.62	17.2	41.0	68.1	97.4		
75	82.3	58.4	34.0	16.1	7.38	3.40	2.83	2.83	2.79	2.81	2.78	2.72	5.87	13.2	28.9	53.2	74.3		
80	63.3	47.3	29.1	14.0	6.94	3.68	3.46	3.45	3.42	3.42	3.37	3.03	5.31	11.3	24.7	43.6	57.7		
85	52.2	42.0	26.2	12.2	6.24	3.75	3.88	3.97	3.93	3.77	3.63	3.22	4.70	9.38	21.4	39.2	48.3		
90	48.3	39.1	22.4	10.1	5.46	3.67	3.85	4.10	4.10	3.96	3.69	3.26	4.17	7.79	17.6	36.1	44.7		
95	45.2	37.4	19.7	9.57	6.10	5.06	5.93	6.56	6.74	6.61	6.00	5.14	5.15	7.96	16.0	33.6	41.9		
100	32.2	25.9	12.8	7.53	6.59	6.12	7.19	7.83	8.03	7.88	7.03	6.12	5.57	6.48	8.94	19.0	27.6		
105	21.1	16.3	10.6	7.10	5.08	5.93	7.21	7.92	8.06	7.73	6.94	5.71	4.52	5.78	11.7	9.01	23.6		
110	37.2	24.7	13.1	8.18	5.97	5.84	6.90	7.44	7.40	7.23	6.53	5.49	4.94	6.48	10.3	8.50	34.6		
115	31.3	19.5	11.2	7.16	5.72	6.30	7.23	7.63	7.60	7.30	6.53	5.53	4.64	5.45	8.50	7.30	27.9		
120	25.2	15.5	8.81	5.91	4.49	6.02	7.20	7.65	7.45	6.97	6.29	5.19	3.42	4.31	6.94	6.71	22.0		
125	19.9	12.3	7.42	4.95	3.62	3.34	4.79	5.84	5.85	5.95	4.72	3.20	3.26	3.75	5.54	6.38	17.3		
130	15.3	9.13	6.49	3.67	2.96	3.95	3.65	3.56	3.40	3.72	3.80	3.88	2.92	2.89	4.91	3.51	11.9		
135	3.37	8.10	3.53	3.20	2.45	3.05	3.89	4.06	4.04	3.70	3.55	2.88	2.52	2.68	3.59	6.64	7.66		
140	3.62	6.38	3.80	2.83	2.58	2.65	2.54	3.02	3.11	2.68	2.55	2.51	2.55	2.05	2.56	4.88	3.55		
145	3.49	4.57	2.93	2.39	2.56	2.81	2.85	2.84	2.92	2.90	2.79	2.66	2.29	2.04	2.18	3.25	1.98		
150	2.66	2.17	2.08	2.21	2.34	2.64	2.85	2.73	2.71	2.51	2.51	2.57	2.16	2.02	2.09	2.09	1.76		
155	1.67	1.79	2.06	2.13	1.93	2.22	2.26	2.40	2.25	2.20	2.05	1.99	1.77	1.89	1.98	1.77	1.59		
160	1.69	1.77	1.95	2.14	2.08	1.76	1.75	1.90	1.77	1.68	1.65	1.48	1.54	1.81	1.81	1.70	1.50		
165	1.60	1.70	1.74	1.98	2.05	1.97	1.73	1.76	1.74	1.67	1.60	1.50	1.42	1.69	1.76	1.67	1.50		
170	1.82	2.01	2.24	2.27	2.48	2.35	2.00	2.29	2.58	2.61	2.61	2.33	1.89	2.15	2.35	2.11	1.71		
175	1.98	2.11	2.02	2.23	2.48	2.37	2.00	2.05	2.45	2.55	2.59	2.27	1.87	2.20	2.37	2.20	1.98		
180	1.98	2.01	1.82	2.03	2.23	2.09	1.78	1.86	2.08	2.26	2.26	2.01	1.76	1.98	2.07	2.09	2.04		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2016-06-28

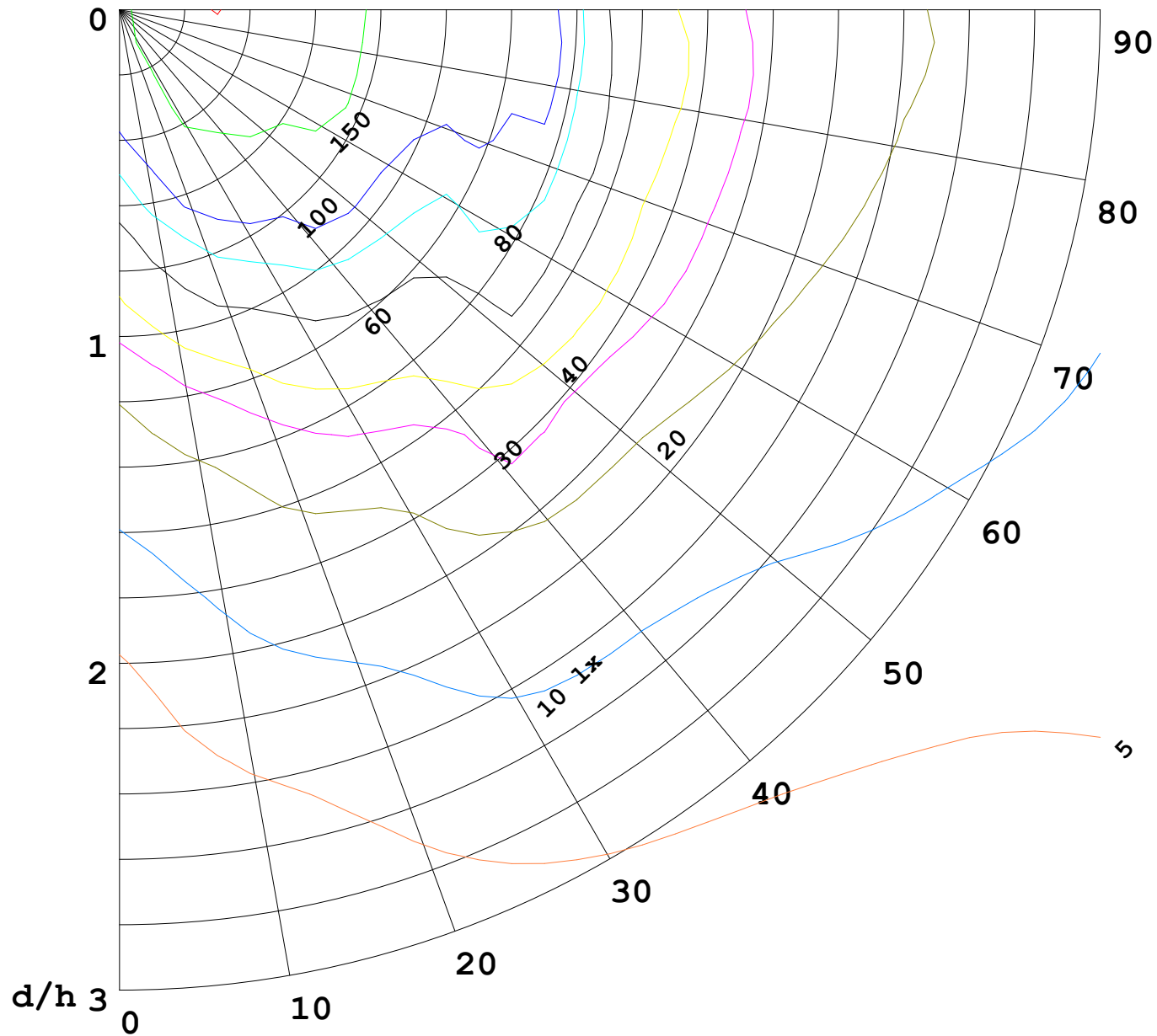
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

I (cd)



1000 lm

$K = 1$



F = 5000 lm
K = 0.7
Hcc = 0.0 m
Hfc = 0.0 m
Eave = 100 lx

	Pcc	Pw	Pfc
—————	70	50	30
—————	50	30	20

