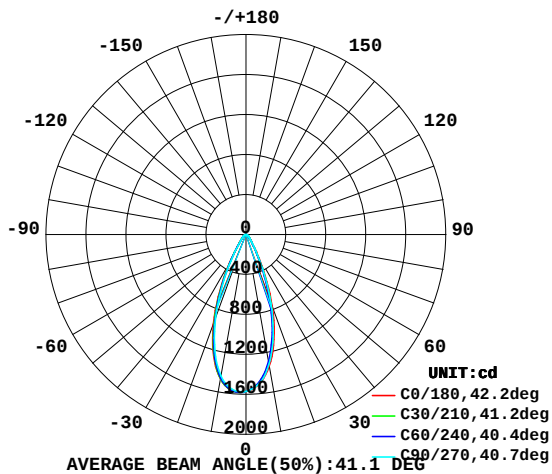


LUMINAIRE PHOTOMETRIC TEST REPORT

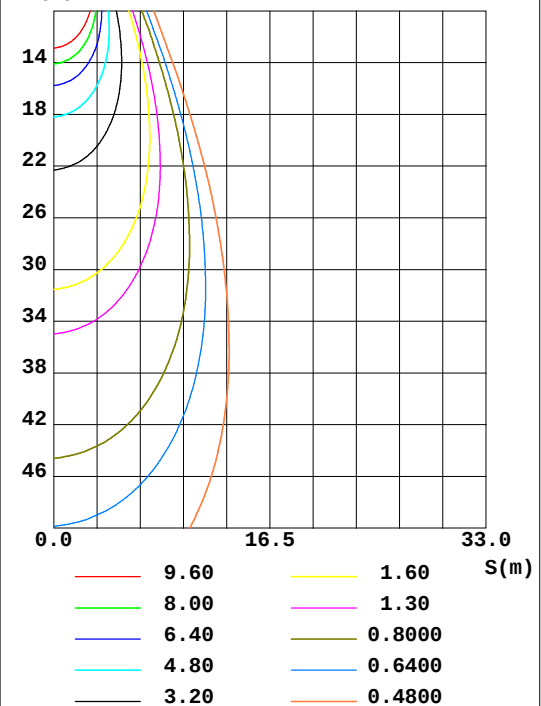
Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm		
NAME: 5RS019-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:001
MFR.: Suzhou Radiant Lighting Technology Co.,Ltd	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 89.46 lm/W			
MODEL	5RS019-4000K	I _{max} (cd)	1582	S/MH(C0/180)	0.63
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.62
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	891.72	h UP, DN(C0-180)	0.0, 46.9
NOMINAL FLUX(lm)	891.72	CIE CLASS	DIRECT	h UP, DN(C180-360)	0.0, 53.1
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230.3	h down(%)	100.0	CIBSE SHR MAX	0.70

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 01
Test Date: 2017-04-27

g Range: 0 - 90DEG
g Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.279
Humidity: 65.0%
Test Distance: 8.989m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum, lamp
10	1340	1298	1325	1398	1470	1464	1439	1408	0- 10	141.9	141.9	15.9, 15.9
20	772.3	707.7	732.7	842.7	954.9	920.9	889.0	868.5	10- 20	313.7	455.6	51.1, 51.1
30	236.6	210.0	223.2	271.9	333.5	321.2	306.9	291.1	20- 30	237.8	693.3	77.8, 77.8
40	75.01	71.98	76.56	79.25	92.68	90.56	85.03	79.12	30- 40	92.76	786.1	88.2, 88.2
50	40.81	39.37	39.76	40.53	45.81	44.74	43.63	41.67	40- 50	44.37	830.5	93.1, 93.1
60	23.53	23.20	23.68	24.16	26.53	25.83	25.88	24.49	50- 60	29.16	859.6	96.4, 96.4
70	12.38	12.27	12.89	13.40	14.45	13.88	14.35	13.53	60- 70	18.36	878.0	98.5, 98.5
80	5.640	5.527	6.022	6.069	7.222	7.005	7.332	6.040	70- 80	10.28	888.3	99.6, 99.6
90	0.0305	0.0092	0.0185	0.0373	0.8286	0.9030	0.6117	0.0311	80- 90	3.457	891.7	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

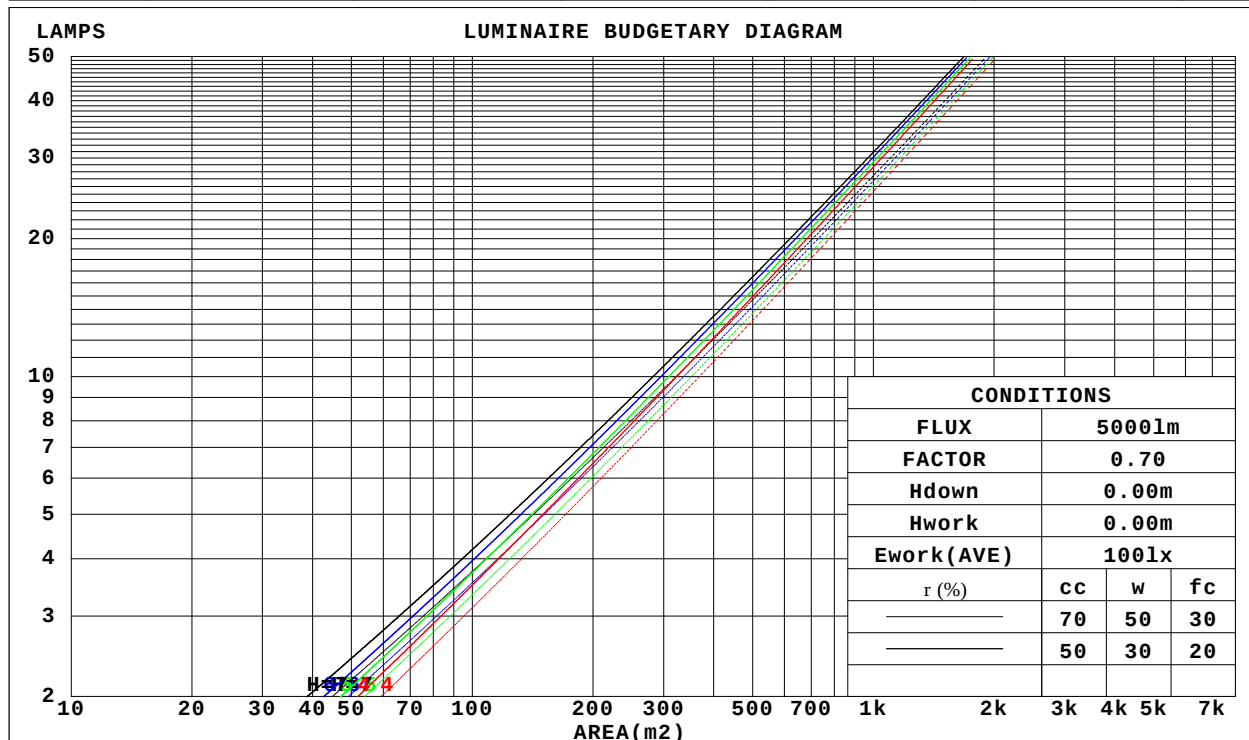
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 01
 Test Date: 2017-04-27

g Range: 0 - 90DEG
 g Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.279
 Humidity: 65.0%
 Test Distance: 8.989m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm		
NAME: 5RS019-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:001
MFR.: Suzhou Radiant Lighting Technology Co.,Ltd	SUR.:	PROTECTION ANGLE:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87
3.0	.96	.91	.87	.95	.90	.87	.92	.88	.85	.90	.87	.84	.88	.85	.83	.81
4.0	.90	.85	.81	.89	.84	.80	.87	.83	.79	.85	.82	.79	.83	.80	.78	.76
5.0	.85	.80	.75	.84	.79	.75	.83	.78	.74	.81	.77	.74	.79	.76	.73	.72
6.0	.81	.75	.71	.80	.74	.71	.78	.74	.70	.77	.73	.70	.76	.72	.69	.68
7.0	.77	.71	.67	.76	.70	.67	.75	.70	.66	.73	.69	.66	.72	.68	.66	.64
8.0	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.66	.63	.69	.65	.62	.61
9.0	.69	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.59	.58
10.0	.66	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.57	.64	.60	.57	.55



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 01
 Test Date: 2017-04-27

g Range: 0 - 90DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity: 65.0%
 Test Distance: 8.989m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm					
NAME: 5RS019-4000K			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:001
MFR.: Suzhou Radiant Lighting Technology Co.,Ltd			SUR.:		PROTECTION ANGLE:

R _{CC}	80%			70%			50%			30%			10%			0
R _W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
R _{fc}	20%			20%			20%			20%			20%			0
R _{CR}	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)															
0.0																
1.0	.183	.104	.033	.176	.100	.032	.163	.094	.030	.152	.088	.028	.141	.082	.026	
2.0	.172	.094	.029	.166	.092	.028	.156	.087	.027	.146	.082	.026	.137	.078	.024	
3.0	.162	.086	.026	.157	.084	.025	.148	.080	.024	.139	.076	.023	.132	.073	.023	
4.0	.152	.079	.023	.148	.077	.023	.140	.074	.022	.133	.071	.022	.126	.069	.021	
5.0	.143	.073	.021	.140	.072	.021	.133	.069	.020	.127	.067	.020	.121	.065	.019	
6.0	.136	.068	.019	.133	.067	.019	.127	.065	.019	.121	.063	.019	.116	.061	.018	
7.0	.129	.064	.018	.126	.063	.018	.121	.061	.018	.116	.059	.017	.111	.058	.017	
8.0	.123	.060	.017	.120	.059	.017	.116	.058	.016	.111	.056	.016	.107	.055	.016	
9.0	.117	.057	.016	.115	.056	.016	.111	.055	.016	.107	.053	.015	.103	.052	.015	
10.0	.112	.054	.015	.110	.053	.015	.106	.052	.015	.103	.051	.014	.099	.050	.014	

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.156	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.090	.123	.098	.078	.085	.068	.054	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.078	.060	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.089	.055	.032	.061	.039	.023	.036	.023	.014	.012	.008	.004	
9.0	.098	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.093	.054	.028	.080	.047	.024	.055	.033	.017	.032	.019	.010	.010	.006	.003	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:01
 Test Date:2017-04-27

g Range: 0 - 90DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:65.0%
 Test Distance:8.989m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm											
NAME: 5RS019-4000K					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:001			
MFR.: Suzhou Radiant Lighting Technology Co., Ltd					SUR.:			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	21.4	22.3	21.6	22.4	22.6	21.1	22.0	21.3	22.2	22.3	
	3H	22.1	22.9	22.3	23.1	23.3	21.9	22.7	22.1	22.9	23.1
	4H	22.4	23.2	22.7	23.4	23.6	22.3	23.1	22.5	23.3	23.5
	6H	22.7	23.4	23.0	23.7	23.9	22.6	23.3	22.9	23.6	23.8
	8H	22.8	23.5	23.1	23.8	24.0	22.7	23.4	23.0	23.7	23.9
	12H	22.8	23.5	23.2	23.8	24.1	22.8	23.5	23.1	23.7	24.0
4H	2H	21.6	22.4	21.9	22.6	22.9	21.4	22.2	21.7	22.4	22.7
	3H	22.5	23.2	22.8	23.5	23.8	22.4	23.1	22.7	23.4	23.6
	4H	23.0	23.6	23.3	23.9	24.2	22.9	23.5	23.2	23.8	24.1
	6H	23.4	23.9	23.7	24.3	24.6	23.3	23.9	23.7	24.2	24.6
	8H	23.5	24.0	23.9	24.4	24.8	23.5	24.0	23.9	24.4	24.7
	12H	23.6	24.1	24.0	24.5	24.9	23.6	24.1	24.0	24.5	24.8
8H	4H	23.1	23.6	23.5	24.0	24.4	23.0	23.5	23.4	23.9	24.3
	6H	23.6	24.1	24.1	24.5	24.9	23.6	24.0	24.0	24.4	24.8
	8H	23.8	24.2	24.3	24.6	25.1	23.8	24.2	24.3	24.6	25.1
	12H	24.0	24.3	24.5	24.8	25.2	24.0	24.3	24.5	24.8	25.3
12H	4H	23.1	23.6	23.5	24.0	24.3	23.0	23.5	23.4	23.9	24.3
	6H	23.7	24.0	24.1	24.5	24.9	23.6	24.0	24.1	24.4	24.9
	8H	23.9	24.2	24.4	24.7	25.1	23.9	24.2	24.4	24.7	25.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.4 / - 0.6					+ 0.5 / - 0.5					
1.5H	+ 0.7 / - 0.3					+ 0.8 / - 0.3					
2.0H	+ 0.7 / - 0.5					+ 0.7 / - 0.5					

CIE Pub.117 Corrected 891.7 lm Total Lamp Luminous Flux. (8log(F/F0) = -0.4)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 01
 Test Date: 2017-04-27

g Range: 0 - 90DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity: 65.0%
 Test Distance: 8.989m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm		
NAME: 5RS019-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:001
MFR.: Suzhou Radiant Lighting Technology Co.,Ltd	SUR.:	PROTECTION ANGLE:

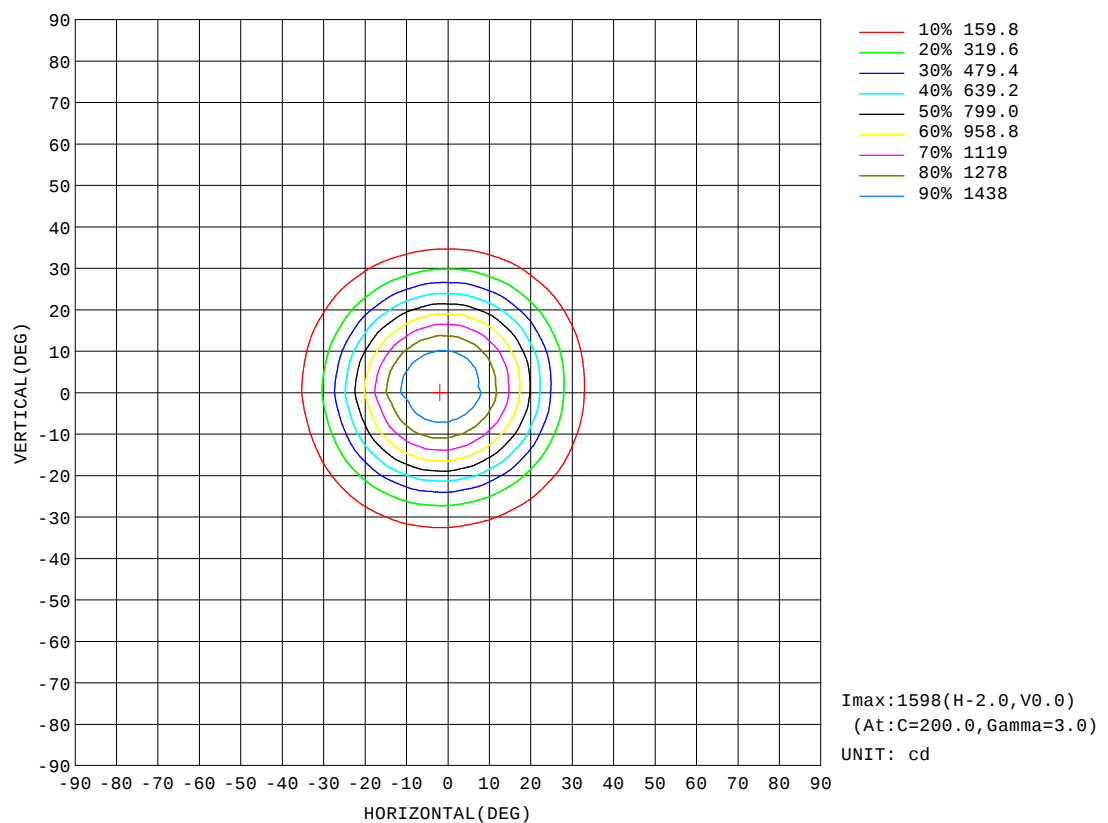
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	77	73	84	77	73	83	77	73	69
0.80	92	85	81	91	85	81	90	84	81	77
1.00	97	90	86	96	90	86	94	90	86	81
1.25	101	95	91	100	95	91	98	93	90	86
1.50	104	99	95	103	98	94	100	96	93	88
2.00	107	102	99	106	101	98	103	99	97	91
2.50	109	105	101	107	103	100	104	101	99	92
3.00	111	107	104	109	105	103	105	103	101	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	110	112	110	108	108	106	105	97
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: 25.3DEG
 Operators: 01
 Test Date: 2017-04-27

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.279
 Humidity: 65.0%
 Test Distance: 8.989m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm		
NAME: 5RS019-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:001
MFR.: Suzhou Radiant Lighting Technology Co.,Ltd	SUR.:	PROTECTION ANGLE:



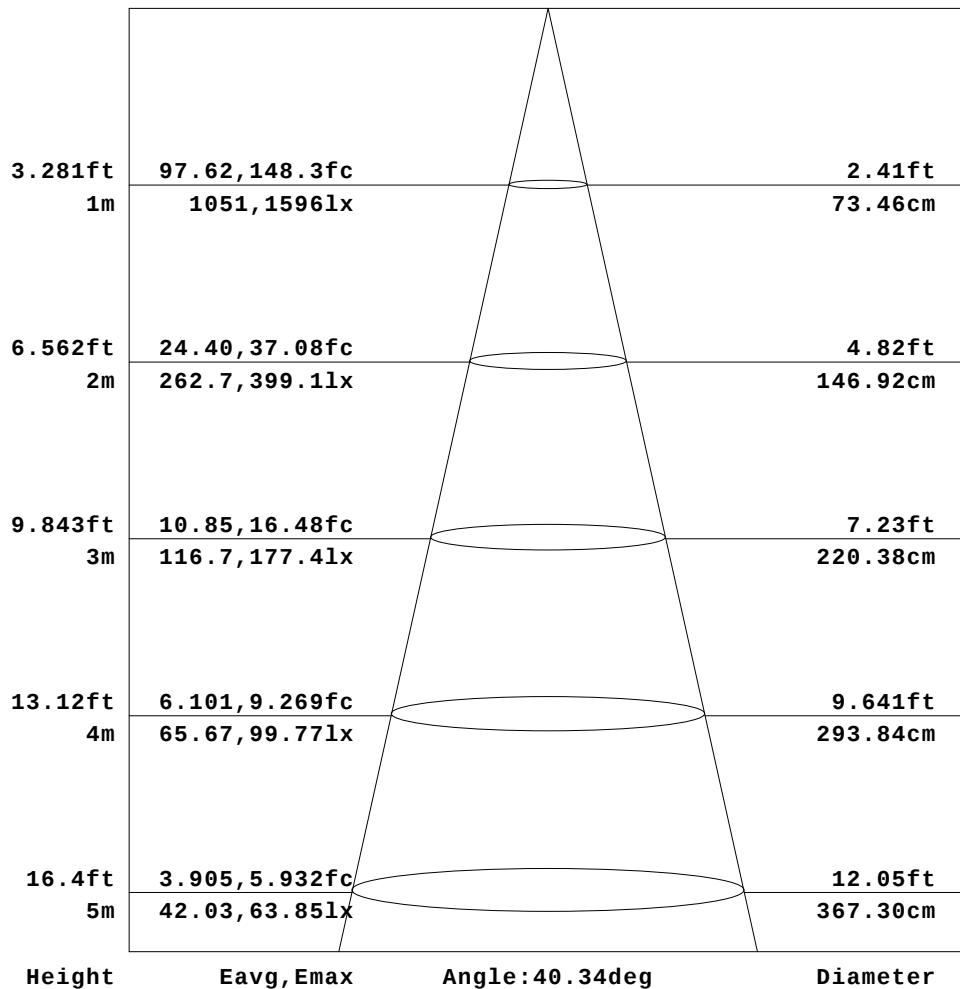
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:01
Test Date:2017-04-27

g Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.279
Humidity:65.0%
Test Distance:8.989m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm		
NAME: 5RS019-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:001
MFR.: Suzhou Radiant Lighting Technology Co.,Ltd	SUR.:	PROTECTION ANGLE:

Flux out:486.4 lm



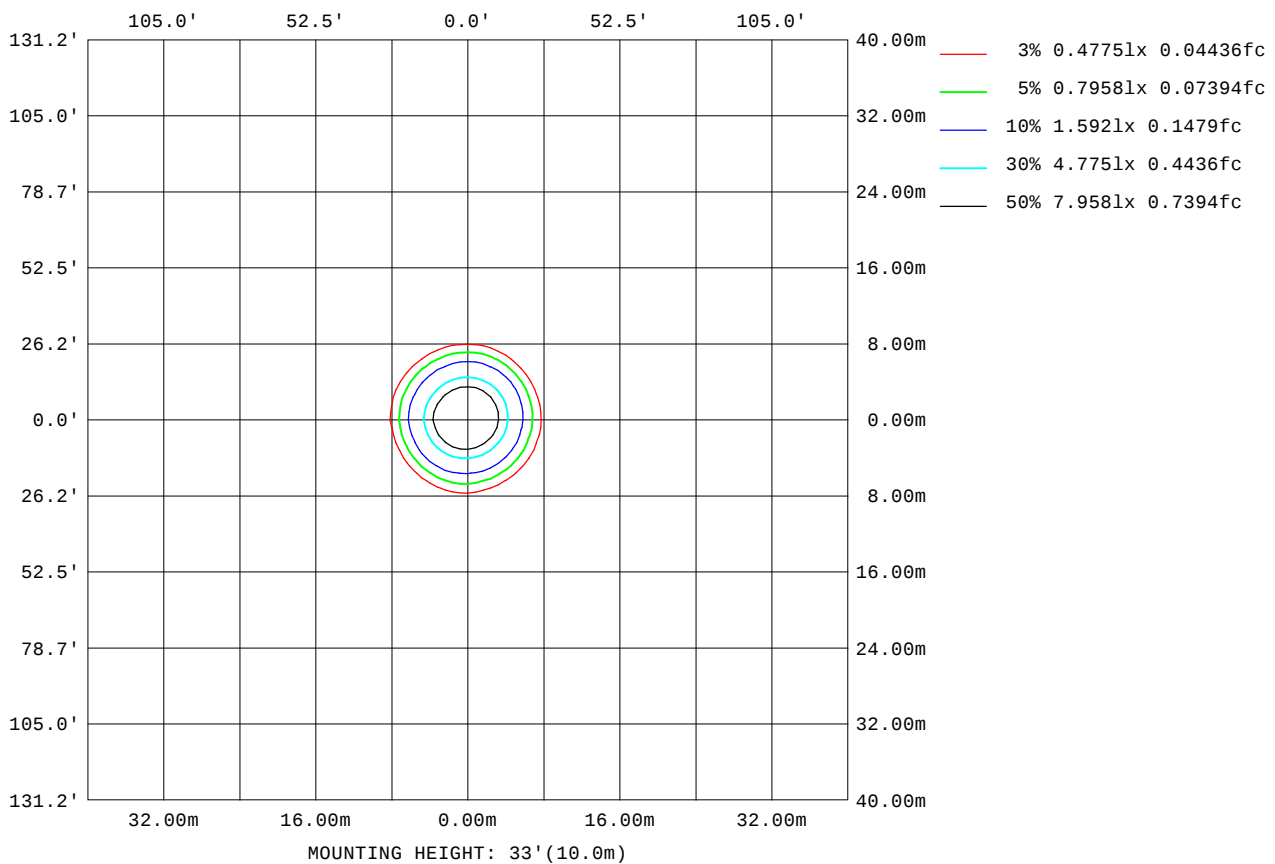
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 01
Test Date: 2017-04-27

g Range: 0 - 90DEG
g Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.279
Humidity: 65.0%
Test Distance: 8.989m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

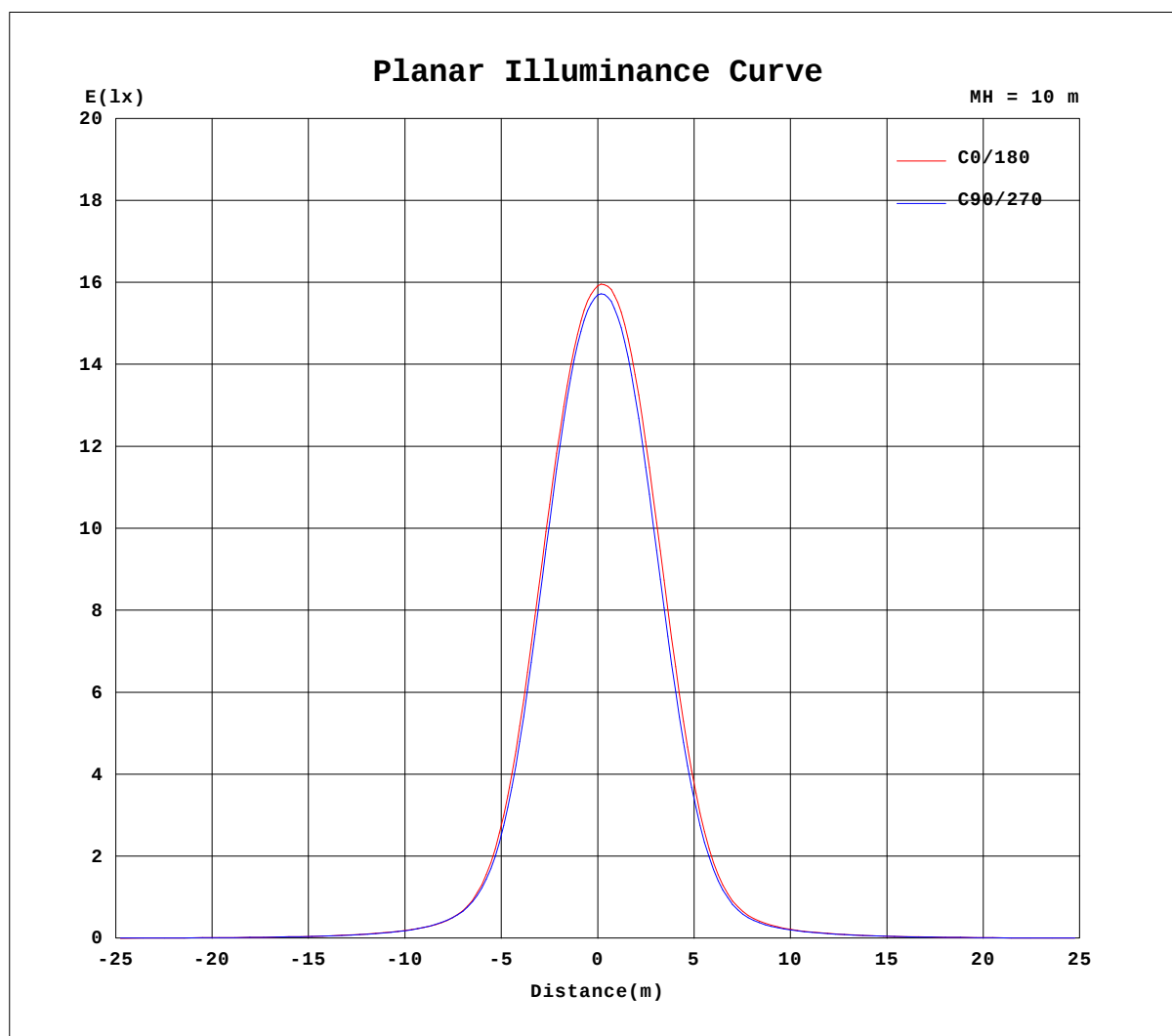
Test:U:230.3V I:0.0477A P:9.968W PF:0.9069 Lamp Flux:891.72x1 lm		
NAME: 5RS019-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:001
MFR.: Suzhou Radiant Lighting Technology Co.,Ltd	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 01
Test Date: 2017-04-27

g Range: 0 - 90DEG
g Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.279
Humidity: 65.0%
Test Distance: 8.989m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 01
Test Date: 2017-04-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.279
Humidity: 65.0%
Test Distance: 8.989m [K=1.0000]
Remarks:

