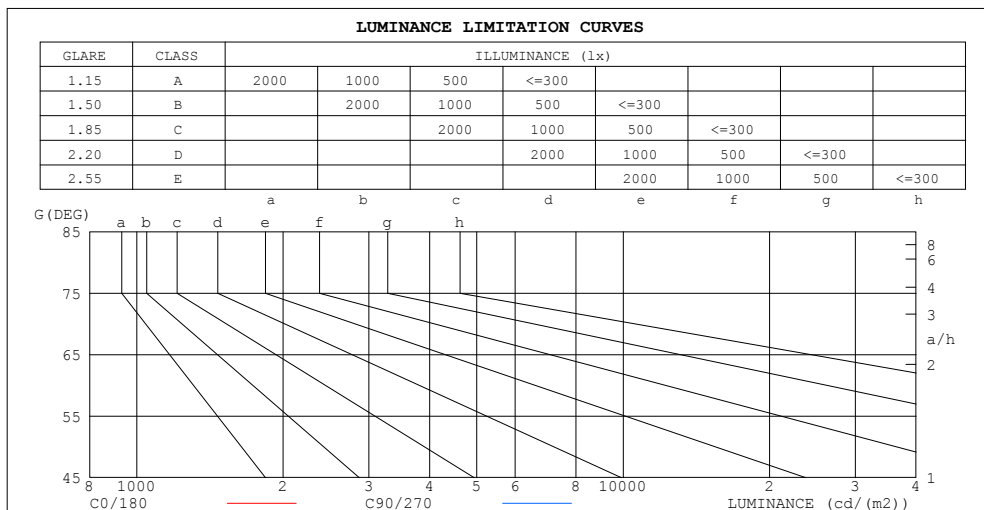




### ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

#### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	13.15	13.37	13.52	13.55	13.01	13.27	13.51	13.58	0- 10	1.291	1.291	3.27,3.27
20	12.40	12.66	12.83	12.79	12.22	12.48	12.74	12.81	10- 20	3.690	4.980	12.6,12.6
30	11.22	11.50	11.70	11.59	10.98	11.25	11.54	11.60	20- 30	5.572	10.55	26.7,26.7
40	9.642	9.921	10.14	9.984	9.411	9.667	9.958	9.986	30- 40	6.687	17.24	43.7,43.7
50	7.767	8.042	8.286	8.094	7.582	7.792	8.088	8.066	40- 50	6.900	24.14	61.1,61.2
60	5.691	5.951	6.215	6.013	5.591	5.709	6.007	5.912	50- 60	6.211	30.35	76.9,76.9
70	3.485	3.707	3.988	3.807	3.495	3.477	3.761	3.641	60- 70	4.731	35.08	88.9,88.9
80	1.414	1.536	1.717	1.626	1.450	1.404	1.575	1.455	70- 80	2.708	37.79	95.7,95.8
90	0.1614	0.1936	0.2691	0.2287	0.1101	0.1966	0.2213	0.1671	80- 90	0.7775	38.56	97.7,97.7
100	0.0754	0.1503	0.2491	0.1815	0.0201	0.1081	0.2003	0.0954	90-100	0.1609	38.73	98.1,98.1
110	0.0754	0.1483	0.2291	0.1819	0.0403	0.1081	0.1826	0.0966	100-110	0.1411	38.87	98.5,98.5
120	0.0754	0.1608	0.2155	0.1863	0.0654	0.1081	0.1737	0.0995	110-120	0.1340	39.00	98.8,98.8
130	0.1004	0.1684	0.2060	0.1890	0.0854	0.1106	0.1709	0.1075	120-130	0.1250	39.13	99.1,99.2
140	0.1174	0.1684	0.1960	0.1908	0.1084	0.1281	0.1709	0.1271	130-140	0.1132	39.24	99.4,99.4
150	0.1233	0.1740	0.1960	0.1952	0.1457	0.1337	0.1709	0.1495	140-150	0.0985	39.34	99.6,99.7
160	0.1357	0.1737	0.1960	0.1942	0.1476	0.1375	0.1709	0.1632	150-160	0.0757	39.41	99.8,99.9
170	0.1529	0.1734	0.1939	0.1923	0.1495	0.1436	0.1709	0.1723	160-170	0.0474	39.46	100,100
180	0.1558	0.1734	0.1910	0.1960	0.1508	0.1483	0.1809	0.1759	170-180	0.0162	39.48	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	431	523
80	494	599
75	562	665
70	618	707
65	658	733
60	690	753
55	713	767
50	732	781
45	750	792

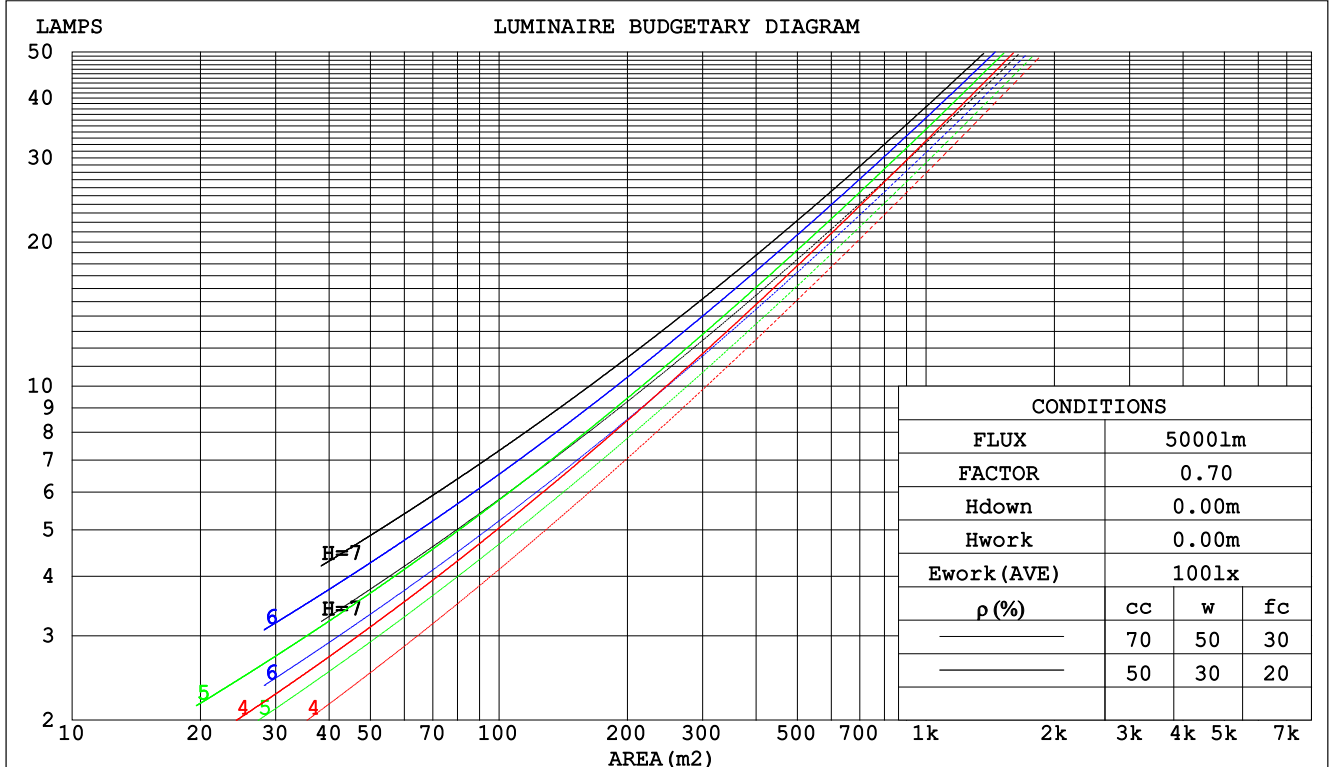
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:HXJ  
Test Date:2022-05-12

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.269  
Humidity:65.0%  
Test Distance:9.200m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.1891A P:4.538W PF:1.000 Lamp Flux:39.4584x1 lm		
NAME: SF15-24V-5050-56SPI4-RGBW- (4000) -R	TYPE: 硅胶	WEIGHT:
DIM.: 21mm*11.5mm	SPEC.:	SERIAL No.:20220512
MFR.: OLYMPIA	SUR.:1*0.0165	PROTECTION ANGLE:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.10	1.10	1.10	1.05	1.05	1.05	.00	.00	.00	.98
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.89	.87	.88	.86	.84	.82
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.80	.76	.72	.77	.73	.70	.68
3.0	.79	.71	.64	.77	.70	.64	.74	.67	.62	.71	.65	.61	.68	.63	.59	.57
4.0	.70	.61	.54	.68	.60	.54	.66	.59	.53	.63	.57	.52	.61	.55	.51	.49
5.0	.62	.53	.47	.61	.53	.46	.59	.51	.46	.57	.50	.45	.54	.49	.44	.42
6.0	.56	.47	.41	.55	.47	.41	.53	.46	.40	.51	.45	.39	.49	.44	.39	.37
7.0	.51	.42	.36	.50	.42	.36	.48	.41	.35	.47	.40	.35	.45	.39	.35	.33
8.0	.46	.38	.32	.46	.38	.32	.44	.37	.32	.43	.36	.31	.41	.35	.31	.29
9.0	.43	.34	.29	.42	.34	.29	.41	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.36	.30	.26	.35	.30	.25	.24



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:HXJ  
Test Date:2022-05-12

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.269  
Humidity:65.0%  
Test Distance:9.200m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:24.00V I:0.1891A P:4.538W PF:1.000 Lamp Flux:39.4584x1 lm					
NAME: SF15-24V-5050-56SPI4-RGBW-(4000)-R			TYPE:硅胶		WEIGHT:
DIM.: 21mm*11.5mm			SPEC.:		SERIAL No.:20220512
MFR.: OLYMPIA			SUR.:1*0.0165		PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.310	.176	.056	.302	.172	.055	.287	.165	.053	.274	.158	.051	.262	.152	.049		
2.0	.291	.159	.049	.284	.156	.048	.271	.151	.047	.259	.145	.046	.248	.140	.044		
3.0	.269	.143	.043	.263	.141	.042	.252	.136	.041	.241	.132	.040	.231	.128	.040		
4.0	.248	.129	.038	.243	.127	.038	.233	.123	.037	.223	.120	.036	.214	.116	.035		
5.0	.229	.117	.034	.225	.115	.034	.216	.112	.033	.207	.109	.032	.199	.106	.032		
6.0	.213	.107	.031	.209	.105	.030	.200	.103	.030	.193	.100	.029	.186	.098	.029		
7.0	.198	.098	.028	.194	.097	.028	.187	.094	.027	.180	.092	.027	.174	.090	.026		
8.0	.185	.090	.025	.182	.089	.025	.175	.087	.025	.169	.085	.025	.163	.084	.024		
9.0	.173	.084	.023	.170	.083	.023	.164	.081	.023	.159	.080	.023	.153	.078	.023		
10.0	.163	.078	.022	.160	.077	.022	.155	.076	.021	.150	.074	.021	.145	.073	.021		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.208	.208	.208	.178	.178	.178	.121	.121	.121	.070	.070	.070	.022	.022	.022	
1.0	.198	.174	.152	.170	.149	.131	.116	.103	.091	.067	.059	.053	.021	.019	.017	
2.0	.190	.150	.116	.163	.129	.100	.112	.089	.070	.064	.052	.041	.021	.017	.013	
3.0	.182	.132	.092	.156	.114	.080	.107	.079	.056	.062	.046	.033	.020	.015	.011	
4.0	.175	.119	.077	.150	.103	.066	.103	.072	.047	.060	.042	.028	.019	.014	.009	
5.0	.167	.109	.065	.144	.094	.057	.099	.066	.040	.057	.039	.024	.018	.013	.008	
6.0	.160	.100	.057	.138	.087	.050	.095	.061	.035	.055	.036	.021	.018	.012	.007	
7.0	.153	.093	.052	.132	.081	.045	.091	.057	.032	.053	.033	.019	.017	.011	.006	
8.0	.147	.088	.047	.126	.076	.041	.088	.053	.029	.051	.032	.017	.016	.010	.006	
9.0	.141	.083	.044	.121	.072	.038	.084	.051	.027	.049	.030	.016	.016	.010	.005	
10.0	.135	.079	.041	.117	.068	.036	.081	.048	.025	.047	.028	.015	.015	.009	.005	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:HXJ  
 Test Date:2022-05-12

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.269  
 Humidity:65.0%  
 Test Distance:9.200m [K=1.0000]  
 Remarks:

### Uncorrected UGR Table

Test:U:24.00V I:0.1891A P:4.538W PF:1.000 Lamp Flux:39.4584x1 lm										
NAME: SF15-24V-5050-56SPI4-RGBW- (4000) -R					TYPE: 硅胶			WEIGHT:		
DIM.: 21mm*11.5mm					SPEC.:			SERIAL No.:20220512		
MFR.: OLYMPIA					SUR.:1*0.0165			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	11.6	13.0	11.9	13.3	13.5	11.9	13.4	12.2	13.6	13.9
3H	13.0	14.4	13.3	14.7	14.9	13.5	14.9	13.8	15.1	15.4
4H	13.6	14.9	13.9	15.2	15.5	14.1	15.4	14.5	15.7	16.0
6H	13.9	15.2	14.3	15.5	15.8	14.6	15.8	15.0	16.1	16.5
8H	14.1	15.2	14.4	15.6	15.9	14.7	15.9	15.1	16.3	16.6
12H	14.1	15.3	14.5	15.6	16.0	14.8	16.0	15.2	16.3	16.7
4H 2H	12.2	13.5	12.5	13.8	14.1	12.5	13.8	12.8	14.1	14.4
3H	13.8	15.0	14.2	15.3	15.7	14.2	15.4	14.6	15.7	16.1
4H	14.5	15.5	14.9	15.9	16.3	15.0	16.0	15.4	16.4	16.8
6H	15.0	15.9	15.4	16.3	16.7	15.6	16.5	16.0	16.9	17.3
8H	15.2	16.0	15.6	16.4	16.9	15.8	16.7	16.2	17.1	17.5
12H	15.3	16.1	15.7	16.5	16.9	15.9	16.7	16.4	17.1	17.6
8H 4H	14.8	15.6	15.2	16.1	16.5	15.2	16.1	15.7	16.5	16.9
6H	15.4	16.1	15.9	16.6	17.1	16.0	16.7	16.4	17.1	17.6
8H	15.7	16.3	16.2	16.8	17.3	16.2	16.9	16.7	17.3	17.8
12H	15.8	16.4	16.4	16.9	17.4	16.5	17.0	17.0	17.5	18.0
12H 4H	14.8	15.6	15.3	16.0	16.5	15.2	16.0	15.7	16.4	16.9
6H	15.5	16.1	16.0	16.6	17.1	16.0	16.6	16.5	17.1	17.6
8H	15.8	16.3	16.3	16.8	17.3	16.3	16.9	16.8	17.4	17.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				

CIE Pub.117 Corrected 39.46 lm Total Lamp Luminous Flux. (8log(F/F0) = -11.2)

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:HXJ  
Test Date:2022-05-12

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.269  
Humidity:65.0%  
Test Distance:9.200m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.1891A P:4.538W PF:1.000 Lamp Flux:39.4584x1 lm		
NAME: SF15-24V-5050-56SPI4-RGBW- (4000) -R	TYPE: 硅胶	WEIGHT:
DIM.: 21mm*11.5mm	SPEC.:	SERIAL No.:20220512
MFR.: OLYMPIA	SUR.:1*0.0165	PROTECTION ANGLE:

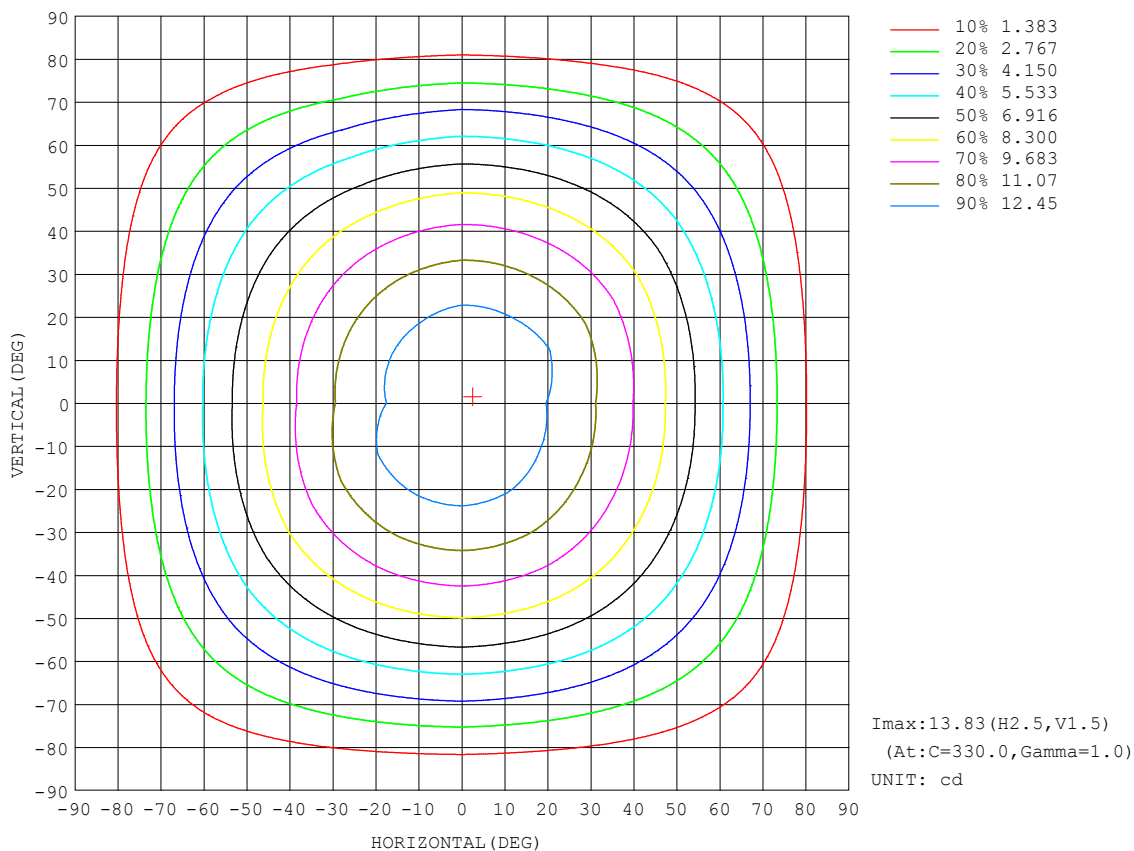
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	32
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	63	56	72	65	56	48
1.25	82	72	65	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	82	74	69	61
2.00	94	86	79	92	84	78	88	82	76	68
2.50	98	90	84	96	89	83	92	86	81	72
3.00	102	95	89	99	93	88	95	90	85	76
4.00	106	100	95	103	98	94	98	94	91	81
5.00	108	103	99	105	101	97	100	97	94	84
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:HXJ  
 Test Date:2022-05-12

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.269  
 Humidity:65.0%  
 Test Distance:9.200m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:24.00V I:0.1891A P:4.538W PF:1.000 Lamp Flux:39.4584x1 lm		
NAME: SF15-24V-5050-56SPI4-RGBW- (4000) -R	TYPE: 硅胶	WEIGHT:
DIM.: 21mm*11.5mm	SPEC.:	SERIAL No.:20220512
MFR.: OLYMPIA	SUR.:1*0.0165	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:HXJ  
Test Date:2022-05-12

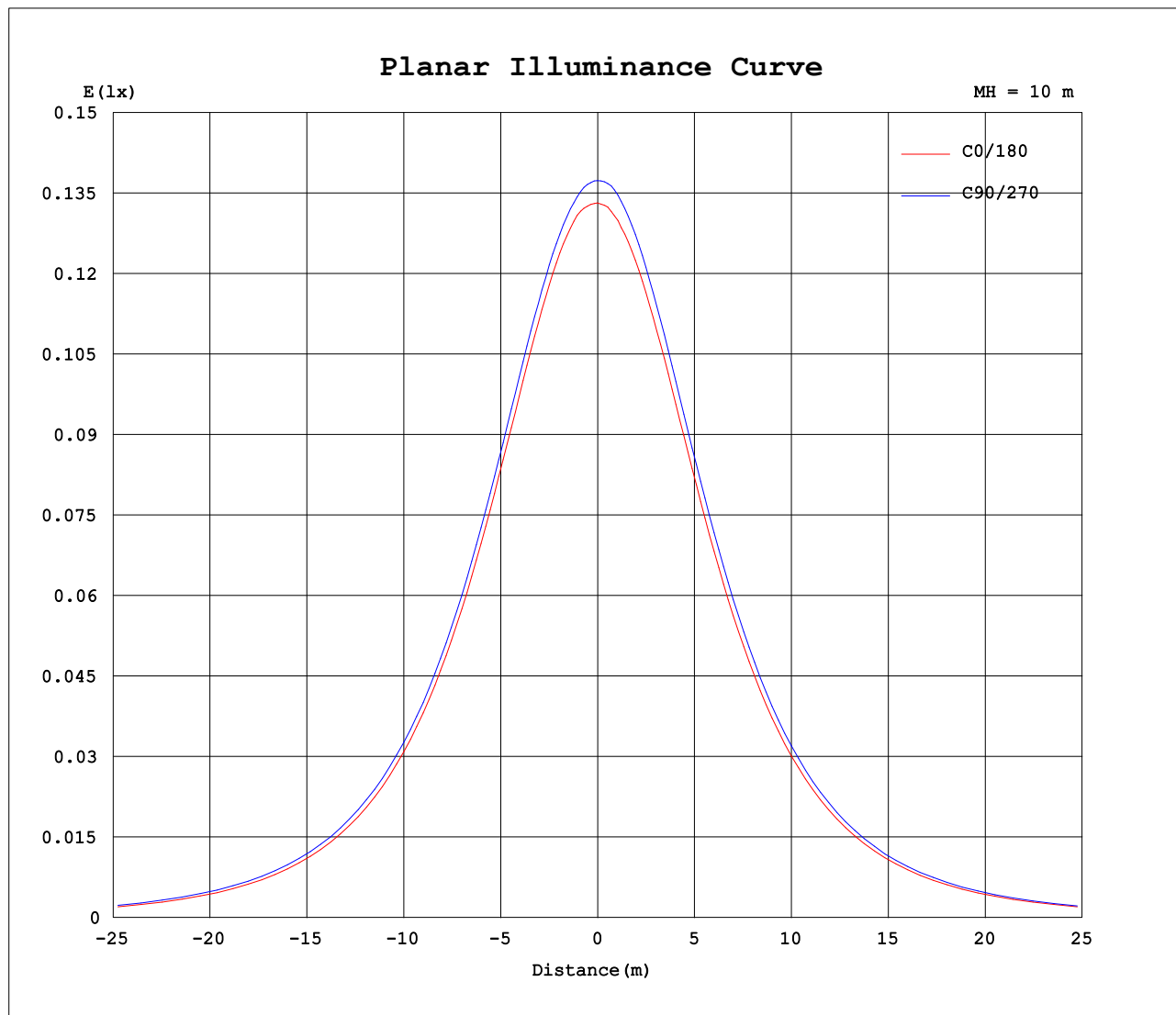
$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.269  
Humidity:65.0%  
Test Distance:9.200m [K=1.0000]  
Remarks:







## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: HXJ  
Test Date: 2022-05-12

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.269  
Humidity: 65.0%  
Test Distance: 9.200m [K=1.0000]  
Remarks:





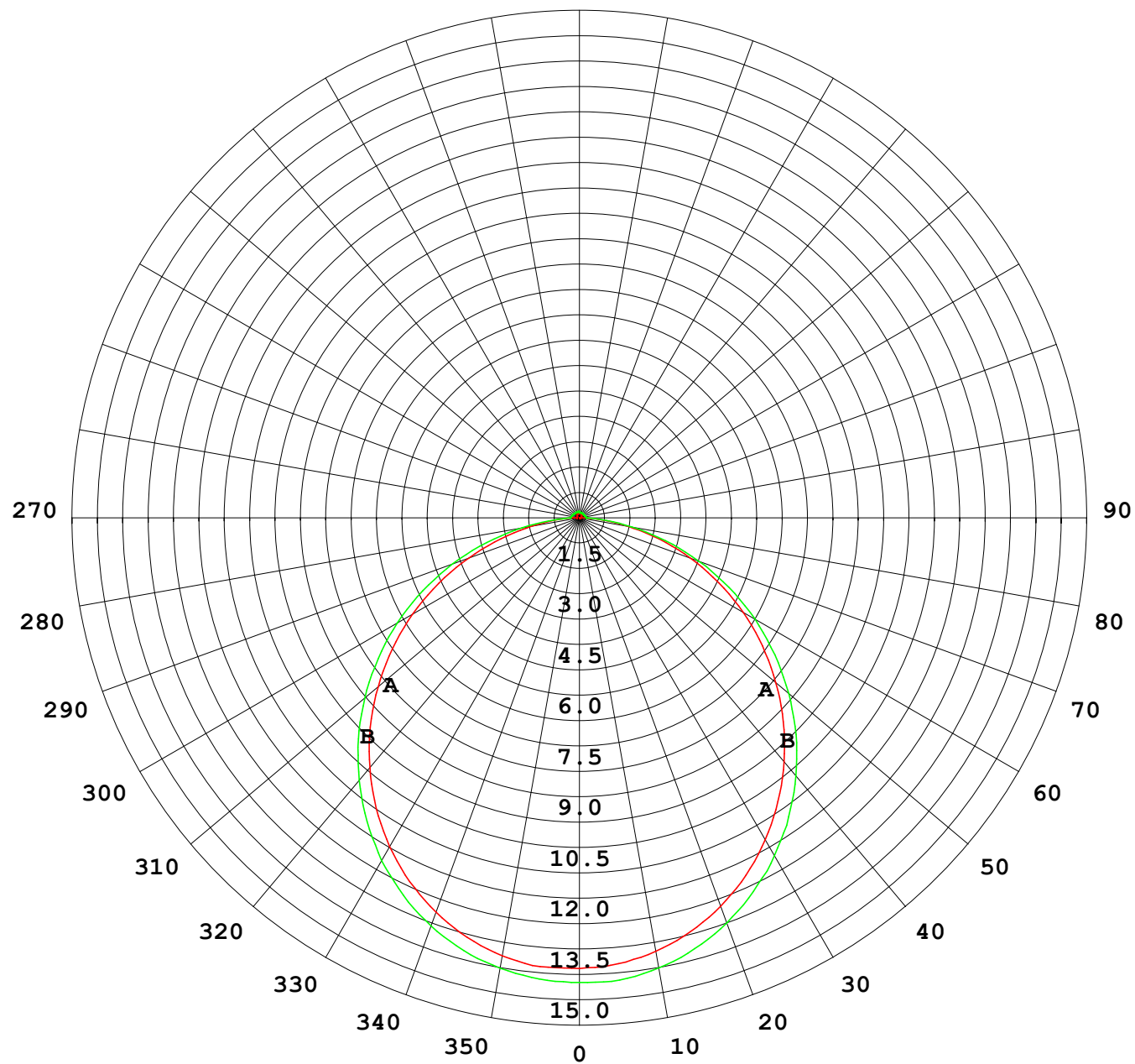
33.0	11.12	11.19
36.0	10.64	10.70
39.0	10.13	10.18
42.0	9.597	9.636
45.0	9.044	9.078
48.0	8.456	8.475
51.0	7.848	7.857
54.0	7.225	7.229
57.0	6.596	6.588
60.0	5.928	5.897
63.0	5.259	5.234
66.0	4.581	4.535
69.0	3.902	3.832
72.0	3.214	3.178
75.0	2.536	2.470
78.0	1.882	1.836
81.0	1.279	1.248
84.0	0.7469	0.7354
87.0	0.3307	0.3527
90.0	0.2132	0.1211
93.0	0.1873	0.0553
96.0	0.1615	0.0452
99.0	0.1480	0.0452
102.0	0.1456	0.0452
105.0	0.1457	0.0452
108.0	0.1471	0.0452
111.0	0.1485	0.0452
114.0	0.1499	0.0452
117.0	0.1518	0.0452
120.0	0.1538	0.0452
123.0	0.1556	0.0452
126.0	0.1574	0.0452
129.0	0.1591	0.0602
132.0	0.1614	0.0603
135.0	0.1641	0.0653
138.0	0.1670	0.0753
141.0	0.1699	0.0854
144.0	0.1729	0.1080
147.0	0.1760	0.1156
150.0	0.1784	0.1206
153.0	0.1809	0.1255
156.0	0.1834	0.1298
159.0	0.1889	0.1342
162.0	0.1940	0.1370
165.0	0.1952	0.1398
168.0	0.1954	0.1457
171.0	0.1956	0.1508
174.0	0.1958	0.1538
177.0	0.1960	0.1558
180.0	0.1960	0.1558

```

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity:65.0%
Test Distance:9.200m [K=1.0000]
Remarks:

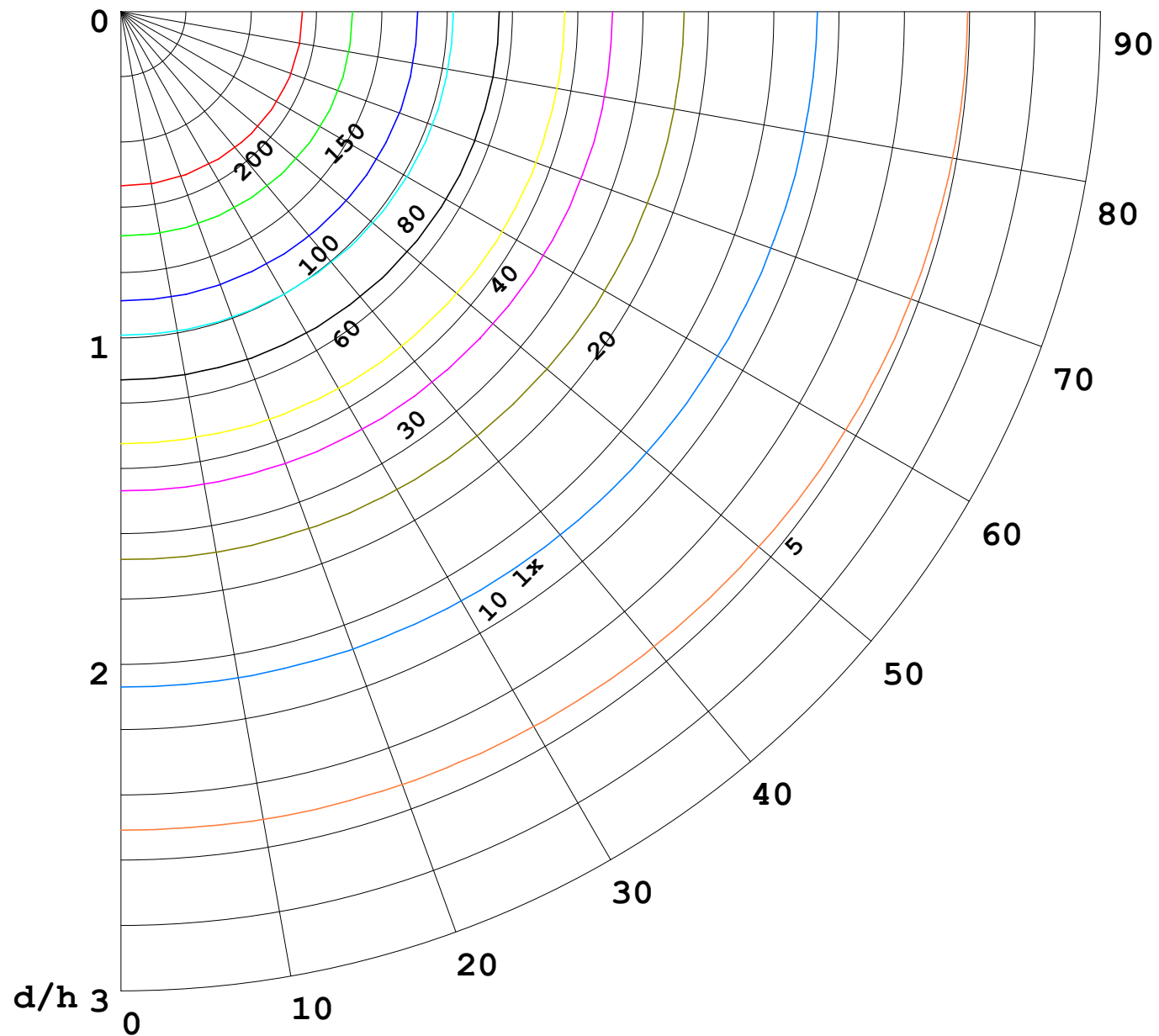
```

I (cd)



1000 lm

$\kappa = 1$



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

