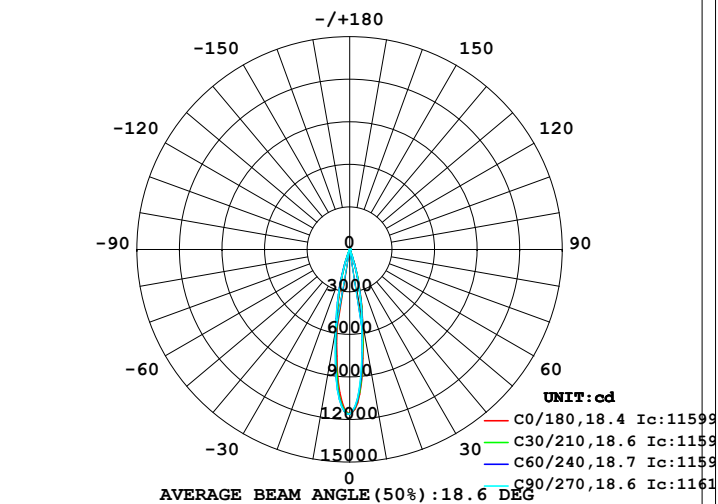


## LUMINAIRE PHOTOMETRIC TEST REPORT

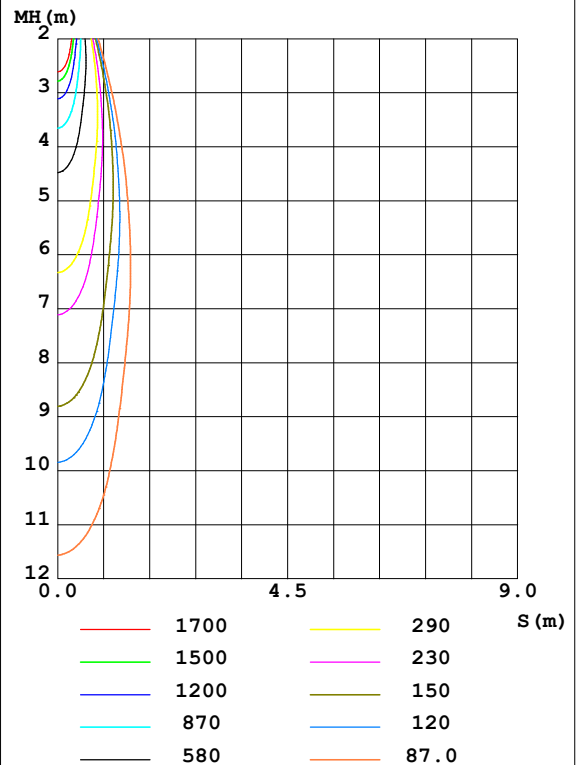
Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm					
NAME: REG2095RF-20E40-S			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:85		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 79.18 lm/W
MODEL	4000K CRI80	I <sub>max</sub> (cd)	11611	S/MH(C0/180)	0.31	
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.34	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	1567.7	η UP,DN(C0-180)	0.0,47.8	
NOMINAL FLUX(lm)	1567.74	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.2	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	225.3	η down(%)	100.0	CIBSE SHR MAX	1.00	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:AE  
 Test Date:2020-04-03

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	532.7	521.5	495.6	498.7	519.8	543.9	572.6	555.1	0- 10	759.3	759.3	48.4, 48.4
20	78.72	68.17	59.88	64.69	70.28	72.91	86.71	84.39	10- 20	697.5	1457	92.9, 92.9
30	5.763	5.523	5.213	5.140	5.331	5.513	5.781	5.747	20- 30	84.48	1541	98.3, 98.3
40	1.153	1.075	0.9849	0.9397	1.082	1.183	1.224	1.237	30- 40	18.76	1560	99.5, 99.5
50	0.2836	0.2462	0.2181	0.1858	0.2522	0.2950	0.3229	0.3184	40- 50	4.802	1565	99.8, 99.8
60	0.0423	0.0121	0.0126	0.0102	0.0663	0.0732	0.0633	0.0623	50- 60	1.179	1566	99.9, 99.9
70	0.0257	0.0294	0.0313	0.0298	0.0551	0.0555	0.0541	0.0516	60- 70	0.3125	1566	99.9, 99.9
80	0.0675	0.0716	0.0701	0.0721	0.0675	0.0731	0.0685	0.0744	70- 80	0.6038	1567	99.9, 99.9
90	0.1050	0.1087	0.1104	0.1092	0.0371	0.0395	0.0403	0.0403	80- 90	0.8140	1568	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: $\times 10\text{cd}$									UNIT: lm		

Conical surface Flux(90deg): 1563.2 lm

%lum = 99.7%

%lamp = 99.7%

Conical surface Flux(120deg): 1566 lm

%lum = 99.9%

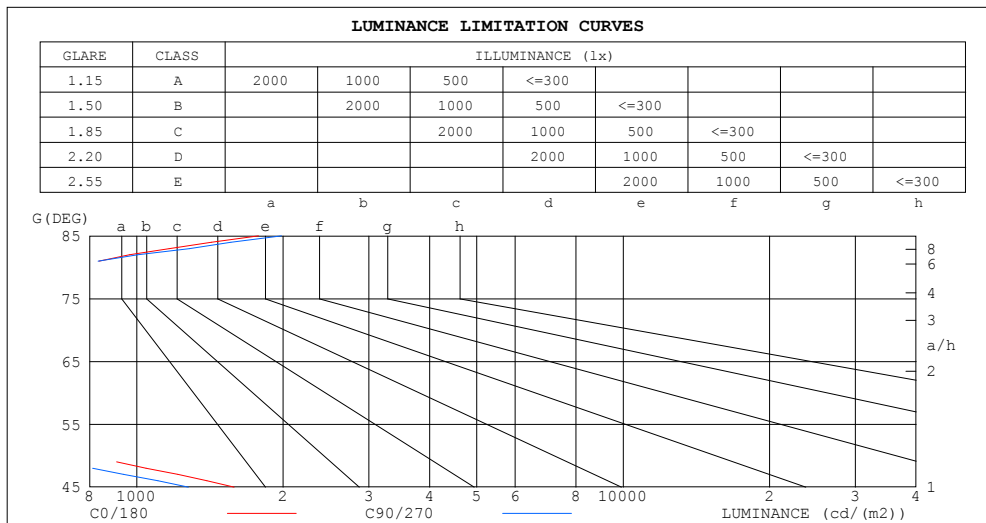
%lamp = 99.9%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: AE  
 Test Date: 2020-04-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity: 65.0%  
 Test Distance: 7.240m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm		
NAME: REG2095RF-20E40-S	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1780	1985
80	687	711
75	346	325
70	133	161
65	94	59
60	149	45
55	388	277
50	780	597
45	1585	1277

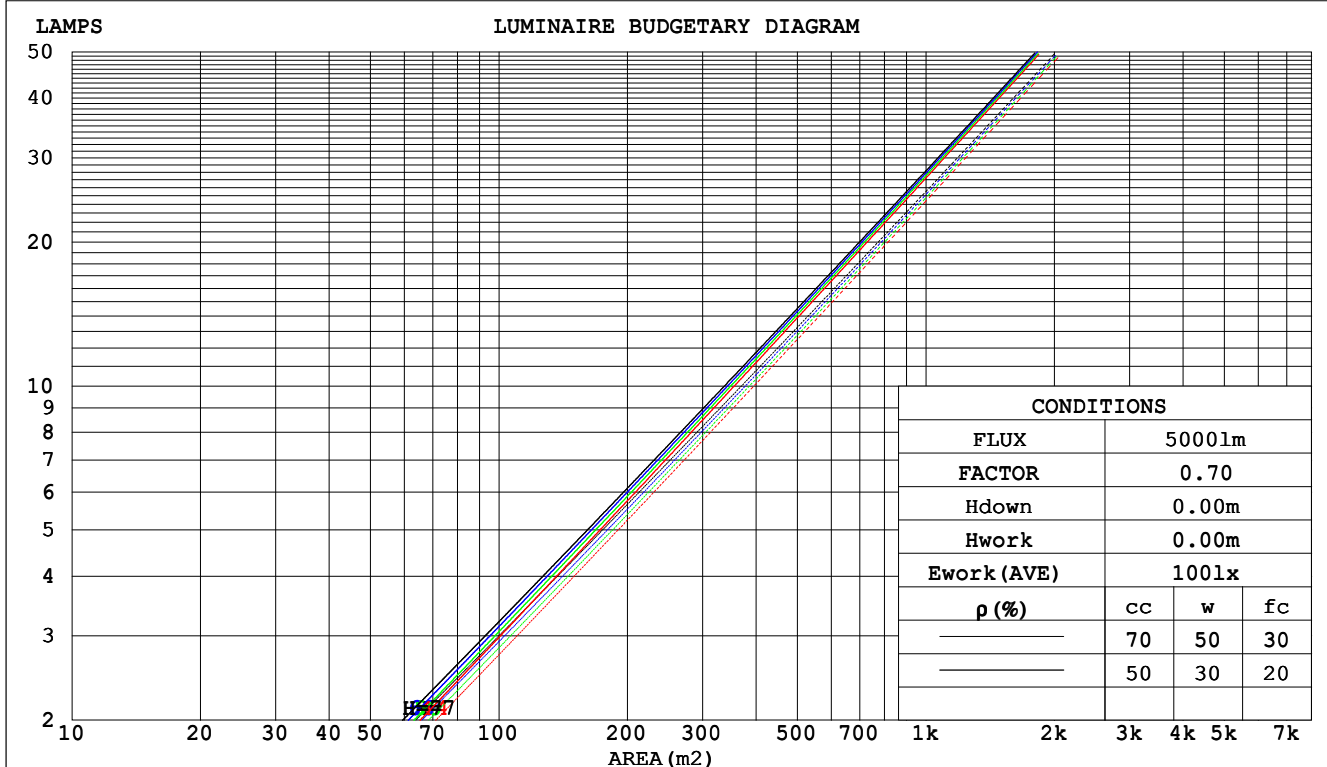
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-04-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm		
NAME: REG2095RF-20E40-S	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding 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						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	1.00
1.0	1.14	1.12	1.10	1.11	1.10	1.09	1.08	1.06	1.05	1.04	1.03	1.02	1.01	.00	.99	.98
2.0	1.09	1.06	1.04	1.07	1.05	1.03	1.04	1.03	1.01	1.02	1.00	.99	.99	.98	.97	.95
3.0	1.05	1.02	.00	1.04	1.01	.99	1.02	.99	.97	.99	.97	.96	.97	.96	.94	.93
4.0	1.02	.99	.96	1.01	.98	.95	.99	.96	.94	.97	.95	.93	.96	.94	.92	.91
5.0	.99	.96	.93	.98	.95	.93	.97	.94	.92	.95	.93	.91	.94	.92	.90	.89
6.0	.97	.93	.90	.96	.93	.90	.95	.92	.90	.93	.91	.89	.92	.90	.89	.88
7.0	.94	.91	.88	.94	.90	.88	.93	.90	.88	.92	.89	.87	.91	.89	.87	.86
8.0	.92	.89	.86	.92	.88	.86	.91	.88	.86	.90	.87	.85	.89	.87	.85	.84
9.0	.90	.87	.84	.90	.86	.84	.89	.86	.84	.88	.86	.84	.88	.85	.84	.83
10.0	.88	.85	.83	.88	.85	.83	.87	.84	.82	.87	.84	.82	.86	.84	.82	.81



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:AE  
 Test Date:2020-04-03

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm					
NAME: REG2095RF-20E40-S			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:85		Shielding 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	.123	.070	.022	.117	.067	.021	.105	.060	.019	.093	.054	.017	.083	.048	.015	
2.0	.113	.062	.019	.107	.059	.018	.097	.054	.017	.088	.049	.015	.079	.045	.014	
3.0	.104	.055	.017	.099	.053	.016	.091	.049	.015	.083	.046	.014	.076	.042	.013	
4.0	.096	.050	.015	.093	.048	.014	.086	.045	.014	.079	.042	.013	.073	.040	.012	
5.0	.090	.046	.013	.087	.045	.013	.081	.042	.012	.075	.040	.012	.070	.038	.011	
6.0	.085	.042	.012	.082	.041	.012	.077	.039	.011	.072	.037	.011	.068	.036	.011	
7.0	.080	.039	.011	.078	.039	.011	.073	.037	.011	.069	.035	.010	.065	.034	.010	
8.0	.076	.037	.010	.074	.036	.010	.070	.035	.010	.066	.034	.010	.063	.032	.009	
9.0	.072	.035	.010	.070	.034	.010	.067	.033	.009	.064	.032	.009	.061	.031	.009	
10.0	.069	.033	.009	.067	.033	.009	.064	.032	.009	.062	.031	.009	.059	.030	.009	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.167	.158	.149	.143	.135	.128	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.148	.133	.120	.127	.114	.103	.087	.079	.072	.050	.046	.042	.016	.015	.014	
3.0	.132	.113	.098	.114	.098	.085	.078	.068	.059	.045	.040	.035	.014	.013	.011	
4.0	.119	.098	.081	.102	.084	.070	.070	.059	.050	.041	.034	.029	.013	.011	.010	
5.0	.108	.085	.068	.093	.074	.059	.064	.051	.042	.037	.030	.025	.012	.010	.008	
6.0	.099	.075	.058	.085	.065	.050	.058	.045	.036	.034	.027	.021	.011	.009	.007	
7.0	.090	.066	.049	.078	.058	.043	.054	.040	.031	.031	.024	.018	.010	.008	.006	
8.0	.084	.059	.043	.072	.052	.037	.050	.036	.026	.029	.021	.016	.009	.007	.005	
9.0	.078	.054	.037	.067	.046	.032	.046	.033	.023	.027	.019	.014	.009	.006	.005	
10.0	.073	.049	.033	.063	.042	.029	.043	.030	.020	.025	.018	.012	.008	.006	.004	

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-04-03

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm											
NAME: REG2095RF-20E40-S					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:85			Shielding 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		-1.3	-0.8	-1.1	-0.6	-0.5	-2.0	-1.4	-1.8	-1.3	-1.1
	3H	-1.4	-0.9	-1.2	-0.7	-0.6	-2.1	-1.6	-1.9	-1.4	-1.2
	4H	-1.4	-1.0	-1.2	-0.7	-0.5	-2.1	-1.6	-1.8	-1.4	-1.2
	6H	-1.3	-0.8	-1.0	-0.6	-0.3	-1.8	-1.3	-1.5	-1.1	-0.9
	8H	-1.0	-0.5	-0.7	-0.3	-0.0	-1.4	-1.0	-1.1	-0.7	-0.5
	12H	-0.4	0.0	-0.1	0.3	0.5	-0.7	-0.2	-0.4	0.0	0.3
4H	2H	-1.5	-1.0	-1.3	-0.8	-0.6	-2.2	-1.7	-1.9	-1.5	-1.3
	3H	-1.7	-1.2	-1.4	-1.0	-0.7	-2.3	-1.8	-2.0	-1.6	-1.3
	4H	-1.6	-1.2	-1.3	-0.9	-0.6	-2.2	-1.8	-1.9	-1.5	-1.2
	6H	-1.2	-0.9	-0.9	-0.6	-0.2	-1.7	-1.4	-1.4	-1.0	-0.7
	8H	-0.7	-0.4	-0.3	-0.0	0.3	-1.1	-0.7	-0.7	-0.4	-0.0
	12H	0.2	0.5	0.6	0.9	1.2	0.1	0.4	0.5	0.7	1.1
8H	4H	-1.7	-1.3	-1.3	-1.0	-0.6	-2.2	-1.9	-1.9	-1.6	-1.2
	6H	-1.0	-0.7	-0.6	-0.4	0.1	-1.5	-1.2	-1.0	-0.8	-0.4
	8H	-0.2	0.0	0.2	0.4	0.9	-0.5	-0.3	-0.1	0.2	0.6
	12H	1.0	1.3	1.5	1.7	2.2	1.0	1.3	1.5	1.7	2.2
12H	4H	-1.6	-1.3	-1.2	-1.0	-0.6	-2.2	-1.9	-1.8	-1.5	-1.1
	6H	-0.9	-0.6	-0.4	-0.2	0.2	-1.3	-1.0	-0.8	-0.6	-0.2
	8H	0.0	0.3	0.5	0.7	1.2	-0.2	0.0	0.3	0.5	0.9
Variations with the observer position at spacings:											
S = 1.0H	+ 2.1 / - 1.7					+ 1.1 / - 1.3					
1.5H	+ 3.7 / - 1.6					+ 2.3 / - 1.2					
2.0H	+ 2.1 / - 0.8					+ 1.5 / - 0.6					

CIE Pub.117, 1568 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 1.6$ )

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-04-03

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm		
NAME: REG2095RF-20E40-S	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:

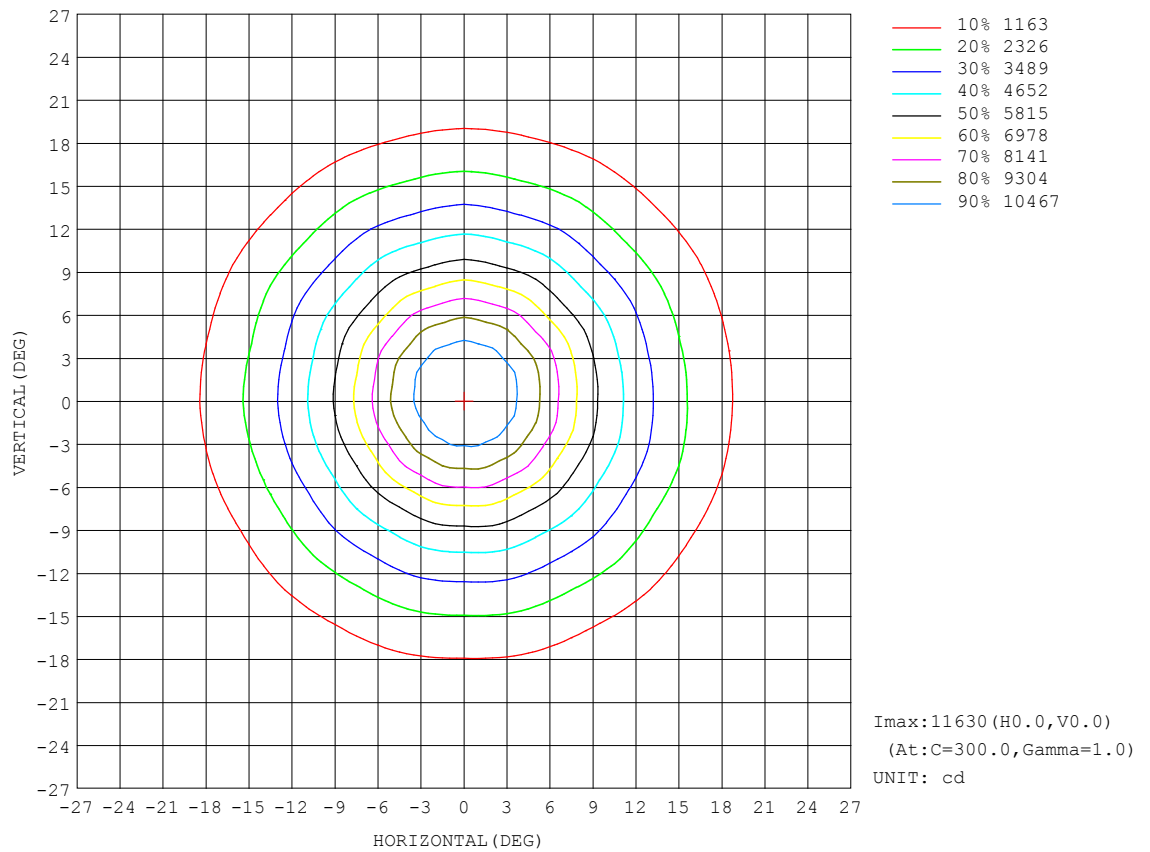
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	86	82	91	85	82	90	85	82	79
0.80	98	93	90	98	93	90	96	92	89	86
1.00	102	97	94	101	96	93	100	96	93	89
1.25	105	101	98	104	100	97	103	99	97	93
1.50	108	104	101	107	103	100	104	101	99	95
2.00	110	106	103	109	105	103	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	106	104	98
4.00	115	112	110	113	110	109	109	107	106	99
5.00	116	114	112	114	112	111	110	109	107	100
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-04-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm		
NAME: REG2095RF-20E40-S	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:



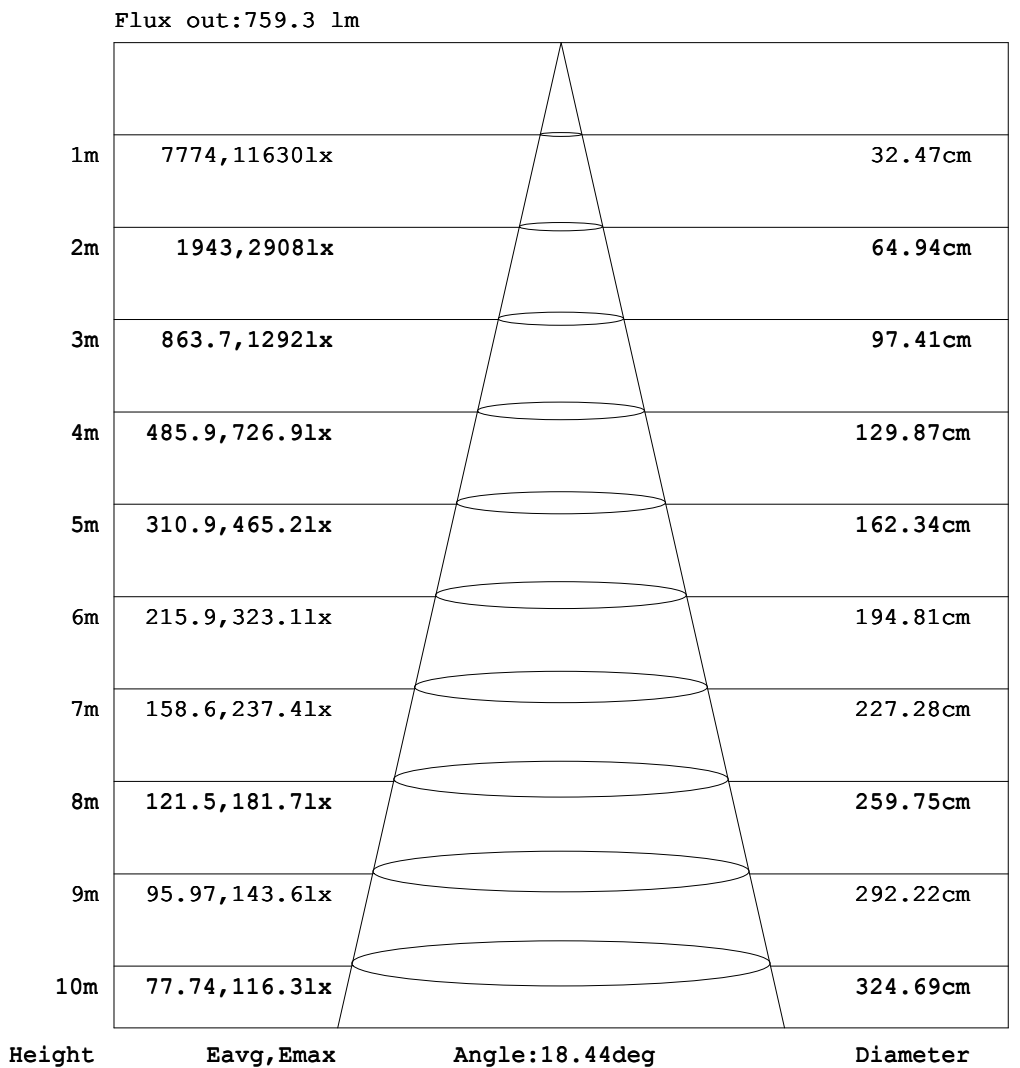
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-04-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm		
NAME: REG2095RF-20E40-S	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:



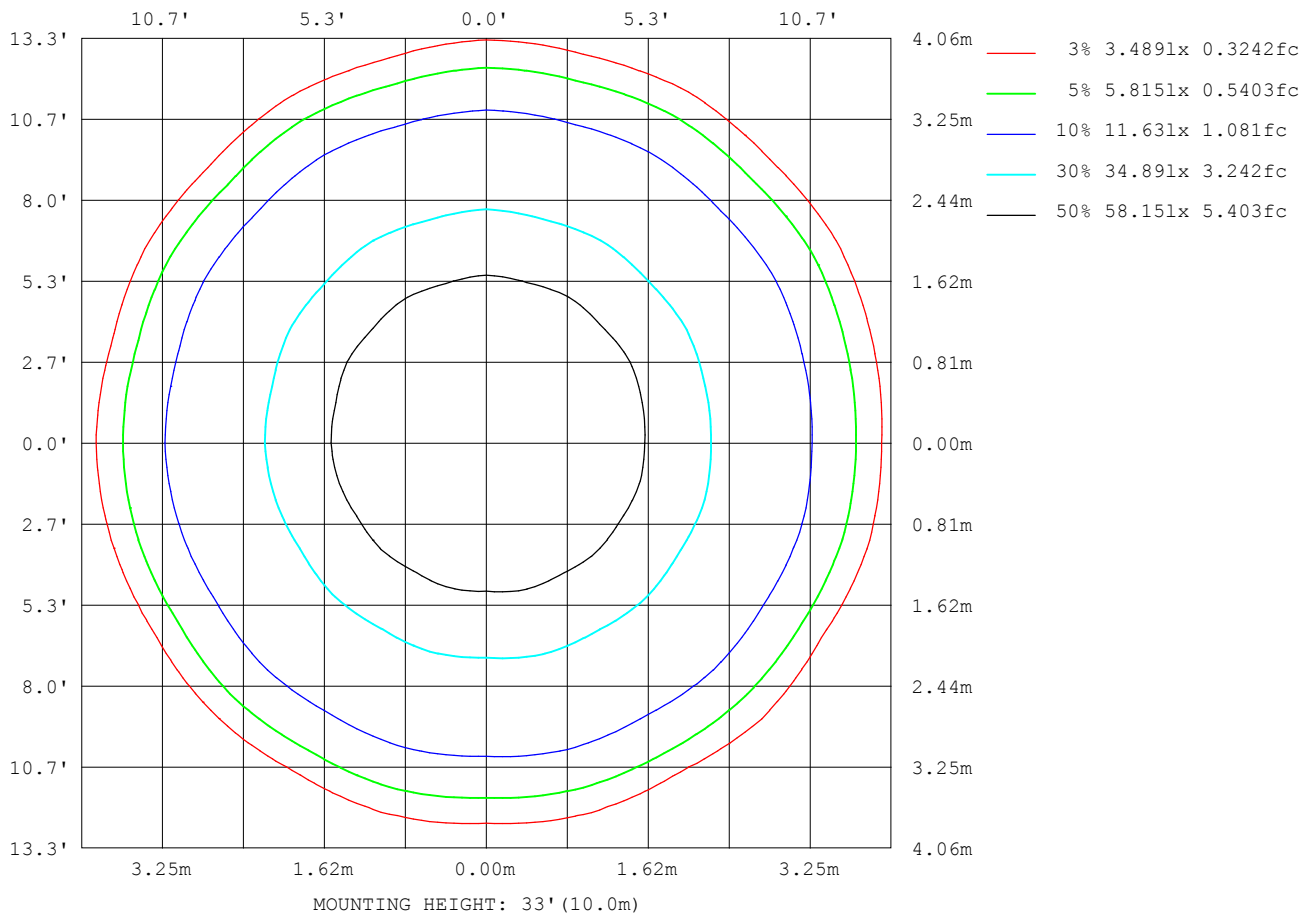
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: AE  
 Test Date: 2020-04-03

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity: 65.0%  
 Test Distance: 7.240m [K=1.0000]  
 Remarks:

# ISOLUX DIAGRAM

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm		
NAME: REG2095RF-20E40-S	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:AE  
Test Date:2020-04-03

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:7.240m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:225.3V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1567.74x1 lm		
NAME: REG2095RF-20E40-S	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:

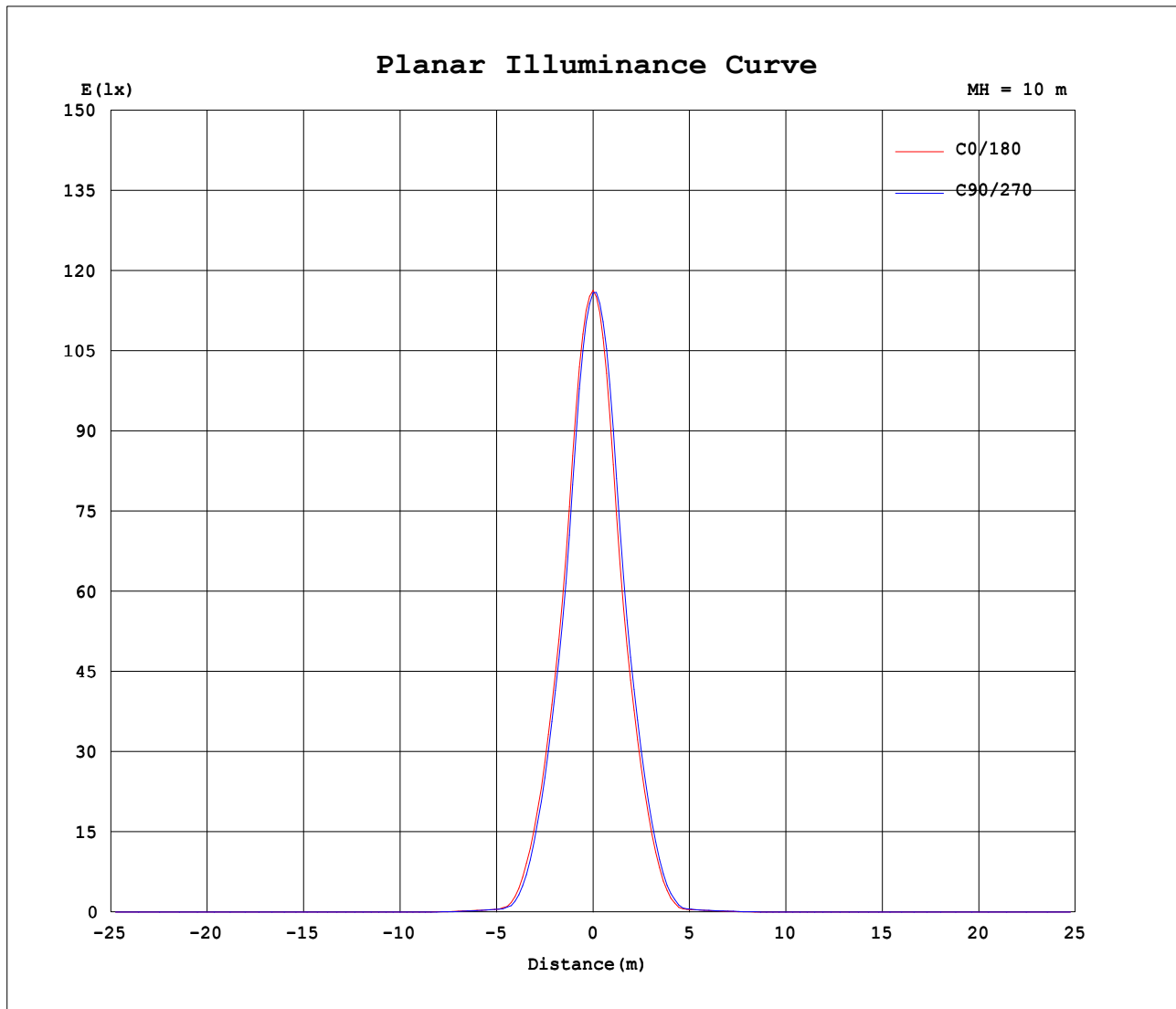
AvgL	cd/m2
L_0~180 (65) av	130
L_0~180 (75) av	409
L_0~180 (85) av	1455
L_90~270 (65) av	110
L_90~270 (75) av	387
L_90~270 (85) av	1579
L_45 (65) av	110
L_45 (75) av	398
L_45 (85) av	1548

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:AE  
 Test Date:2020-04-03

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:7.240m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: AE  
Test Date: 2020-04-03

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 7.240m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```