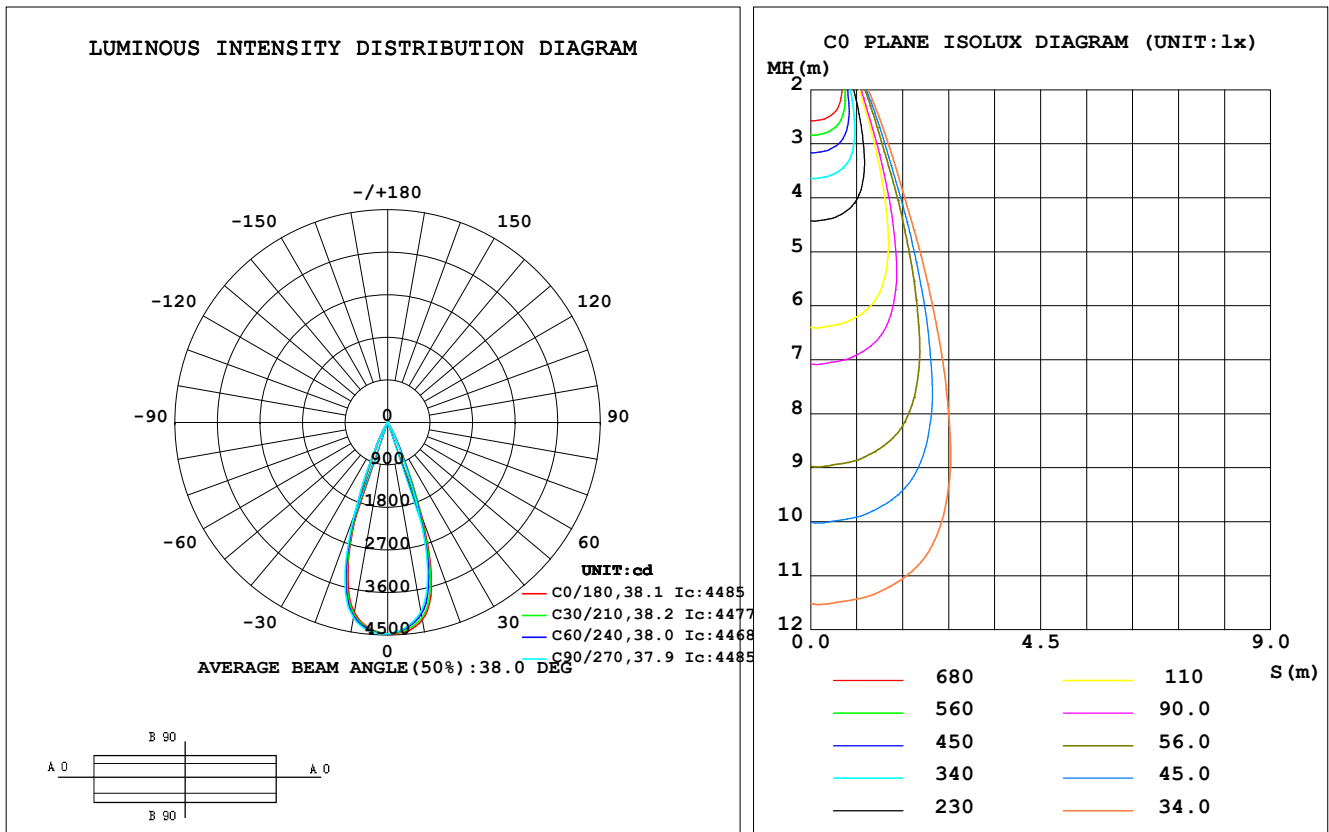


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm					
NAME: REG2095RF-20E30-F		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:85		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 85.10 lm/W
MODEL	3000K CRI80	I _{max} (cd)	4500	S/MH (C0/180)	0.55	
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.58	
RATED VOLTAGE (V)	226	TOTAL FLUX (lm)	1685.0	η UP, DN (C0-180)	0.0, 49.1	
NOMINAL FLUX (lm)	1684.96	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.9	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE (V)	225.2	η down (%)	100.0	CIBSE SHR MAX	0.55	



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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	4237	4158	4061	4071	4078	4134	4189	4249	0- 10	412.4	412.4	24.5,24.5
20	2081	1973	1742	1729	1763	1869	2058	2086	10- 20	894.1	1306	77.5,77.5
30	164.9	165.3	143.7	151.3	153.3	161.2	171.4	161.9	20- 30	339.6	1646	97.7,97.7
40	16.92	16.53	15.93	16.28	16.50	16.95	17.10	16.89	30- 40	29.99	1676	99.5,99.5
50	2.074	2.066	1.959	1.845	2.073	2.123	2.370	2.365	40- 50	6.166	1682	99.8,99.8
60	0.4275	0.3351	0.3885	0.3721	0.6264	0.6759	0.6565	0.7433	50- 60	1.051	1683	99.9,99.9
70	0.3218	0.3594	0.3720	0.3814	0.4841	0.4997	0.4904	0.4896	60- 70	0.3948	1684	99.9,99.9
80	0.6512	0.6913	0.6935	0.7077	0.4891	0.5107	0.4993	0.5095	70- 80	0.5346	1684	100,100
90	1.051	1.074	1.125	1.108	0.4965	0.5115	0.5055	0.5148	80- 90	0.7596	1685	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		

Conical surface Flux(90deg): 1680.4 lm

%lum = 99.7%

%lamp = 99.7%

Conical surface Flux(120deg): 1683.3 lm

%lum = 99.9%

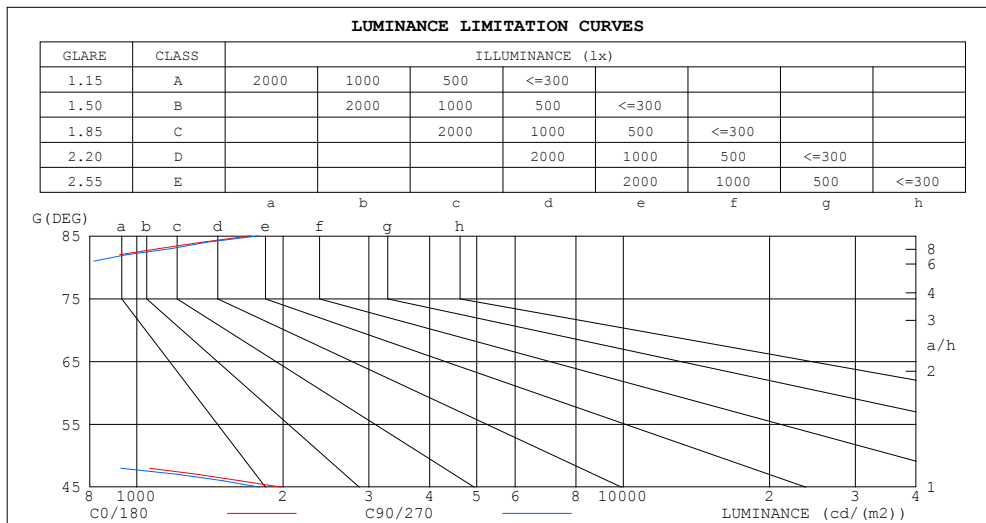
%lamp = 99.9%

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

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:

LUMINANCE LIMITATION CURVES

Test:U:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm		
NAME: REG2095RF-20E30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1716	1779
80	667	703
75	322	333
70	167	191
65	123	116
60	152	137
55	327	292
50	574	536
45	1981	1788

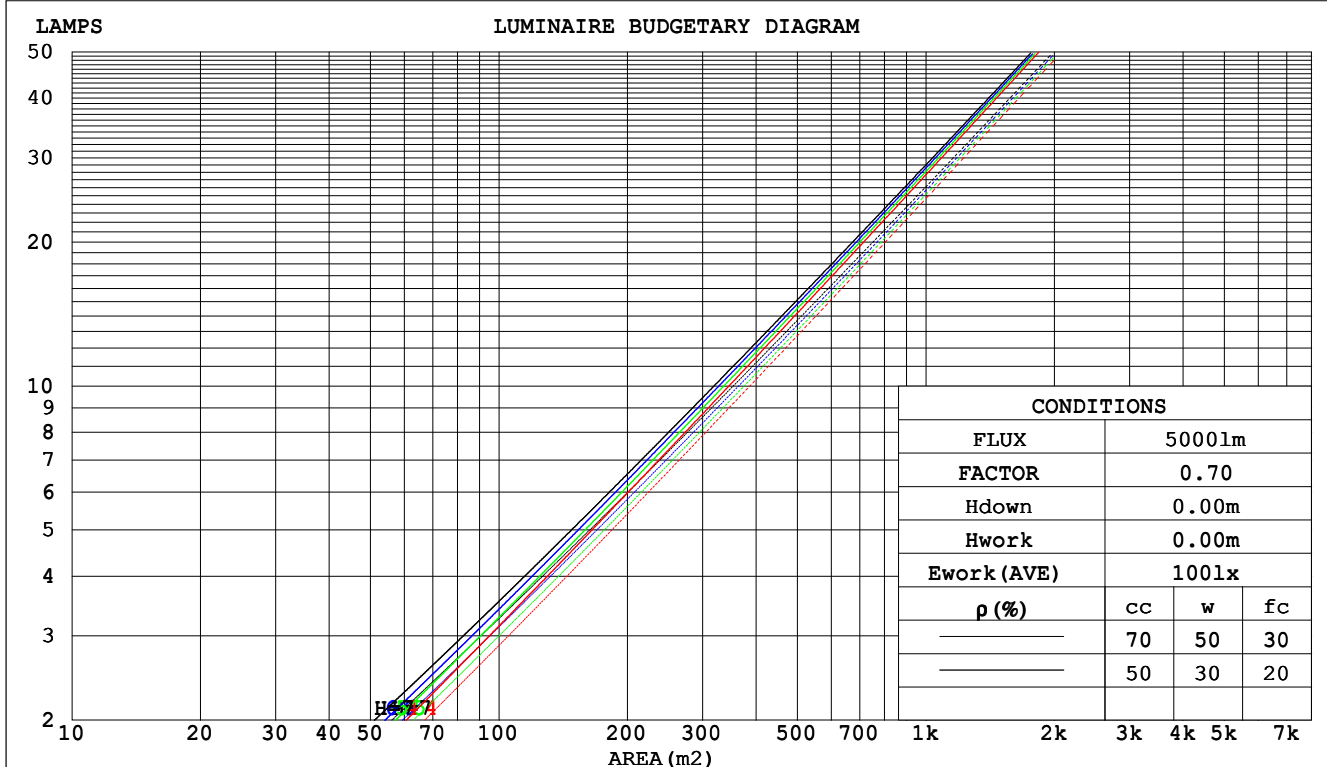
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:AE
Test Date:2020-04-03

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm		
NAME: REG2095RF-20E30-F	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	1.13	1.11	1.09	1.10	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.99	.99	.98	.96
2.0	1.07	1.04	1.01	1.05	1.03	1.00	1.02	1.00	.98	.99	.98	.96	.97	.95	.94	.93
3.0	1.02	.99	.96	1.01	.98	.95	.98	.96	.93	.96	.94	.92	.94	.92	.91	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.90	.88	.91	.89	.87	.86
5.0	.94	.90	.87	.93	.89	.86	.92	.88	.85	.90	.87	.85	.89	.86	.84	.83
6.0	.90	.86	.83	.90	.86	.83	.88	.85	.82	.87	.84	.82	.86	.83	.81	.80
7.0	.87	.83	.80	.87	.82	.80	.85	.82	.79	.84	.81	.79	.83	.81	.78	.77
8.0	.84	.80	.77	.84	.80	.77	.83	.79	.76	.82	.79	.76	.81	.78	.76	.75
9.0	.81	.77	.74	.81	.77	.74	.80	.76	.74	.79	.76	.74	.79	.76	.73	.72
10.0	.79	.74	.72	.78	.74	.72	.78	.74	.71	.77	.74	.71	.76	.73	.71	.70



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:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm					
NAME: REG2095RF-20E30-F			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	.142	.081	.026	.135	.077	.025	.123	.071	.023	.112	.064	.021	.101	.059	.019	
2.0	.132	.072	.022	.126	.070	.021	.116	.065	.020	.107	.060	.019	.098	.055	.017	
3.0	.123	.066	.020	.119	.064	.019	.110	.060	.018	.102	.056	.017	.095	.052	.016	
4.0	.116	.060	.018	.112	.059	.017	.105	.056	.017	.098	.053	.016	.092	.050	.015	
5.0	.110	.056	.016	.106	.055	.016	.100	.052	.015	.094	.050	.015	.089	.048	.014	
6.0	.104	.052	.015	.101	.051	.015	.096	.049	.014	.091	.047	.014	.086	.045	.013	
7.0	.099	.049	.014	.097	.048	.014	.092	.047	.013	.088	.045	.013	.084	.043	.013	
8.0	.095	.046	.013	.093	.046	.013	.089	.044	.013	.085	.043	.012	.081	.042	.012	
9.0	.091	.044	.012	.089	.043	.012	.085	.042	.012	.082	.041	.012	.079	.040	.012	
10.0	.088	.042	.012	.086	.041	.012	.083	.040	.011	.079	.039	.011	.077	.039	.011	

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	.169	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.151	.133	.117	.129	.114	.101	.089	.079	.071	.051	.046	.041	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.082	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.114	.086	.065	.098	.074	.057	.067	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.105	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.098	.068	.047	.084	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.092	.061	.040	.079	.053	.035	.055	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.086	.056	.035	.074	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.081	.051	.031	.070	.044	.027	.049	.031	.019	.028	.018	.011	.009	.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:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm											
NAME: REG2095RF-20E30-F					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	1.6	2.3	1.8	2.4	2.6	-0.6	0.1	-0.4	0.2	0.4	
	3H	1.4	2.1	1.7	2.3	2.5	-0.7	-0.1	-0.5	0.1	0.3
	4H	1.4	2.0	1.7	2.2	2.4	-0.8	-0.2	-0.5	0.0	0.3
	6H	1.4	2.0	1.7	2.2	2.4	-0.7	-0.1	-0.4	0.1	0.4
	8H	1.5	2.0	1.8	2.3	2.5	-0.5	0.1	-0.2	0.3	0.6
	12H	1.7	2.2	2.0	2.5	2.7	-0.1	0.5	0.2	0.7	1.0
4H	2H	1.4	2.0	1.6	2.2	2.4	-0.8	-0.2	-0.6	-0.0	0.2
	3H	1.2	1.7	1.5	2.0	2.3	-1.0	-0.4	-0.7	-0.2	0.1
	4H	1.2	1.6	1.5	1.9	2.2	-1.0	-0.5	-0.6	-0.2	0.1
	6H	1.2	1.7	1.6	2.0	2.3	-0.7	-0.3	-0.3	0.1	0.4
	8H	1.4	1.8	1.8	2.2	2.5	-0.3	0.1	0.0	0.4	0.8
	12H	1.8	2.2	2.2	2.5	2.9	0.3	0.7	0.7	1.1	1.5
8H	4H	1.1	1.5	1.4	1.8	2.2	-1.0	-0.6	-0.6	-0.3	0.1
	6H	1.2	1.6	1.7	2.0	2.4	-0.6	-0.3	-0.2	0.1	0.5
	8H	1.5	1.8	2.0	2.2	2.7	-0.0	0.3	0.4	0.7	1.1
	12H	2.2	2.4	2.6	2.9	3.3	1.0	1.3	1.5	1.7	2.2
12H	4H	1.0	1.4	1.4	1.8	2.1	-1.0	-0.7	-0.6	-0.3	0.1
	6H	1.3	1.5	1.7	2.0	2.4	-0.5	-0.2	-0.1	0.2	0.6
	8H	1.6	1.9	2.1	2.3	2.8	0.2	0.4	0.6	0.9	1.3
Variations with the observer position at spacings:											
S = 1.0H	+ 2.2 / - 3.0					+ 2.0 / - 2.6					
1.5H	+ 4.1 / - 3.1					+ 3.8 / - 2.6					
2.0H	+ 3.2 / - 0.9					+ 2.7 / - 0.8					

CIE Pub.117, 1685 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 1.8$)

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:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm		
NAME: REG2095RF-20E30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:

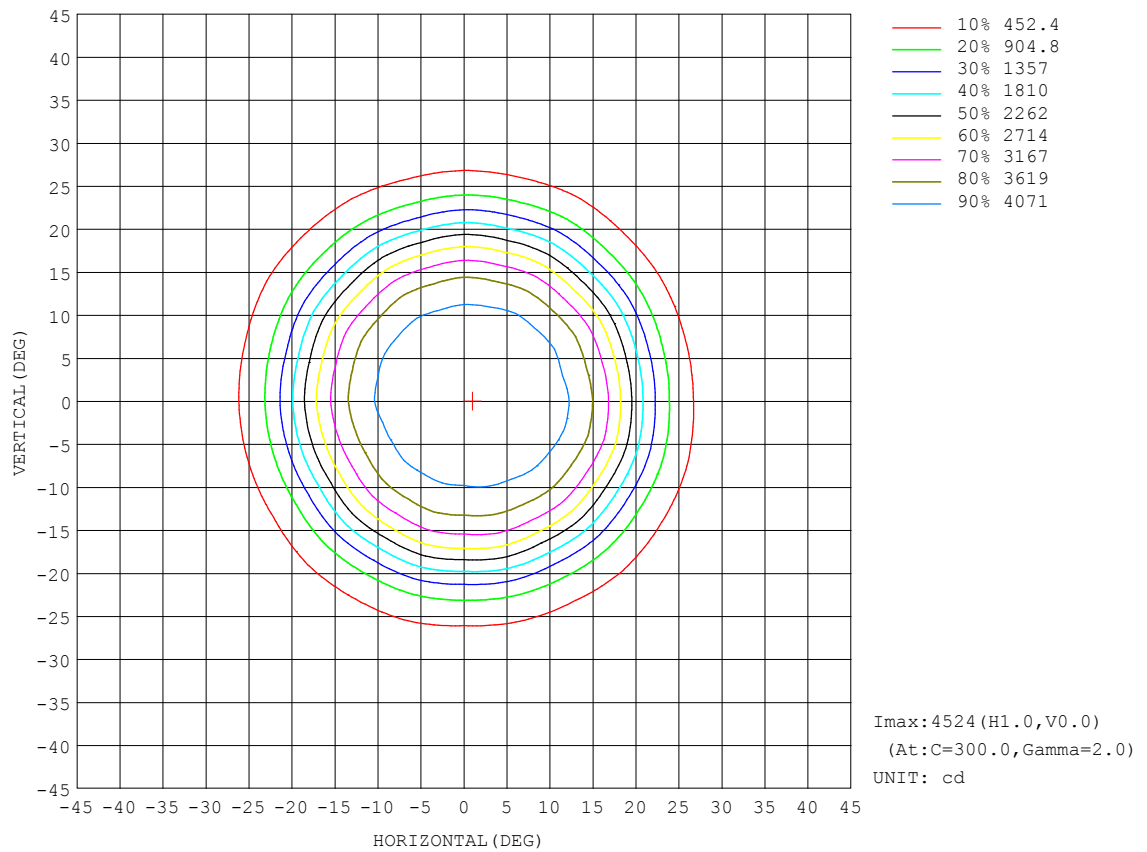
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	86	82	91	85	82	90	85	82	79
0.80	98	93	90	98	93	90	96	92	89	86
1.00	102	97	94	101	96	93	100	96	93	89
1.25	105	101	98	104	100	97	102	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

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:

ISOCANDELA DIAGRAM

Test:U:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm		
NAME: REG2095RF-20E30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:

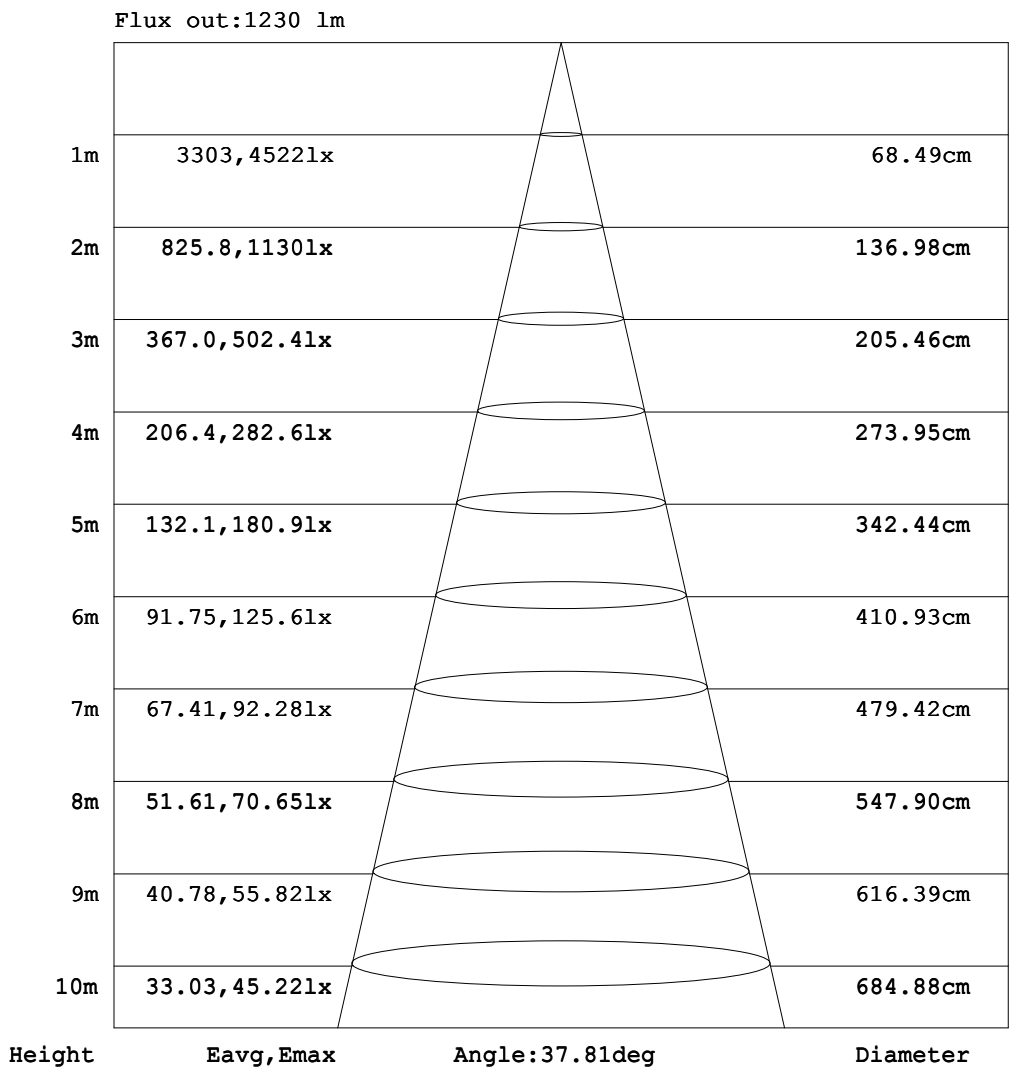


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: AE
Test Date: 2020-04-03

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:

AAI Figure

Test:U:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm		
NAME: REG2095RF-20E30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:



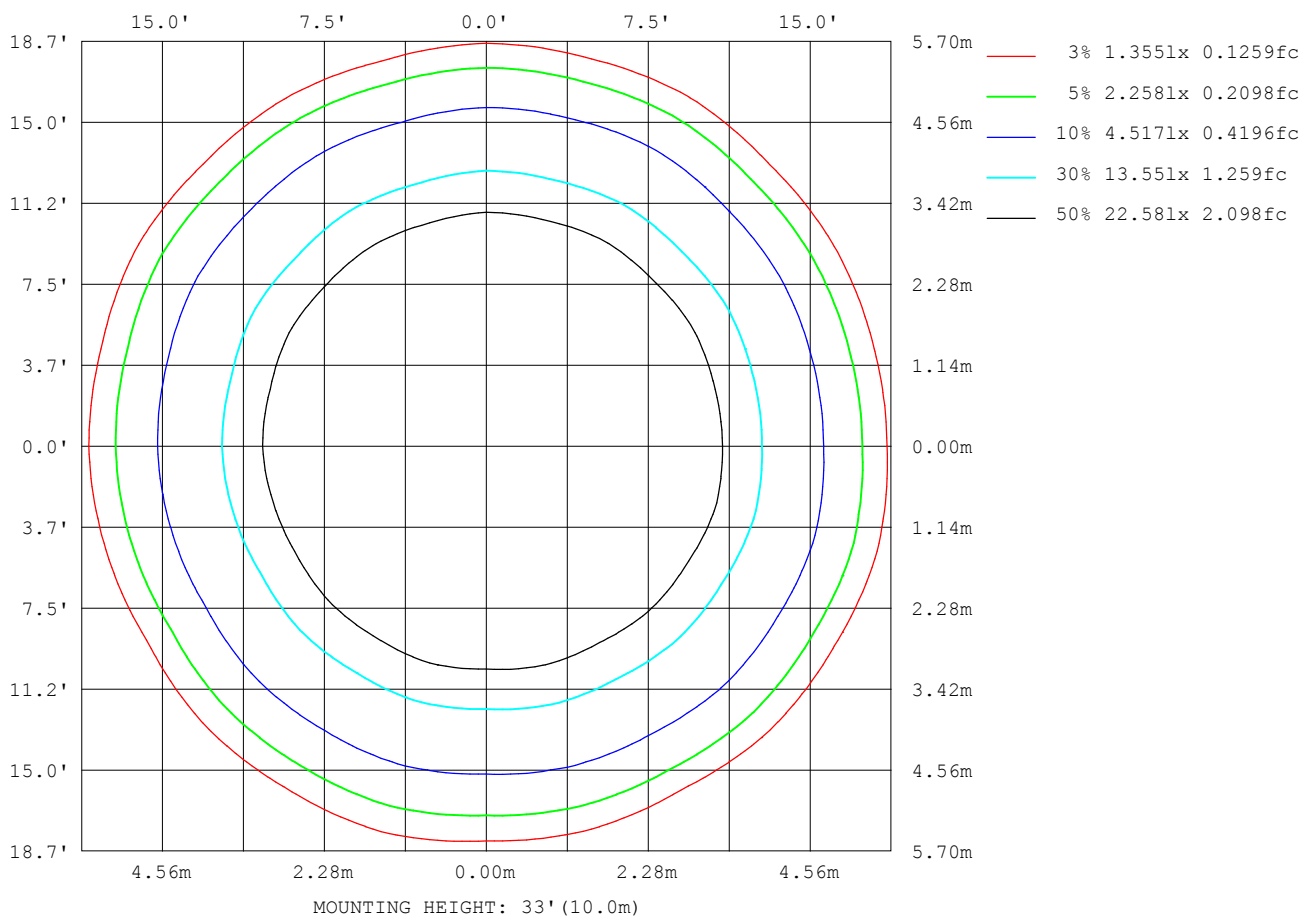
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm		
NAME: REG2095RF-20E30-F	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:225.2V I:0.0920A P:19.80W PF:0.9520 Freq:50.00Hz Lamp Flux:1684.96x1 lm		
NAME: REG2095RF-20E30-F	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:85	Shielding Angle:

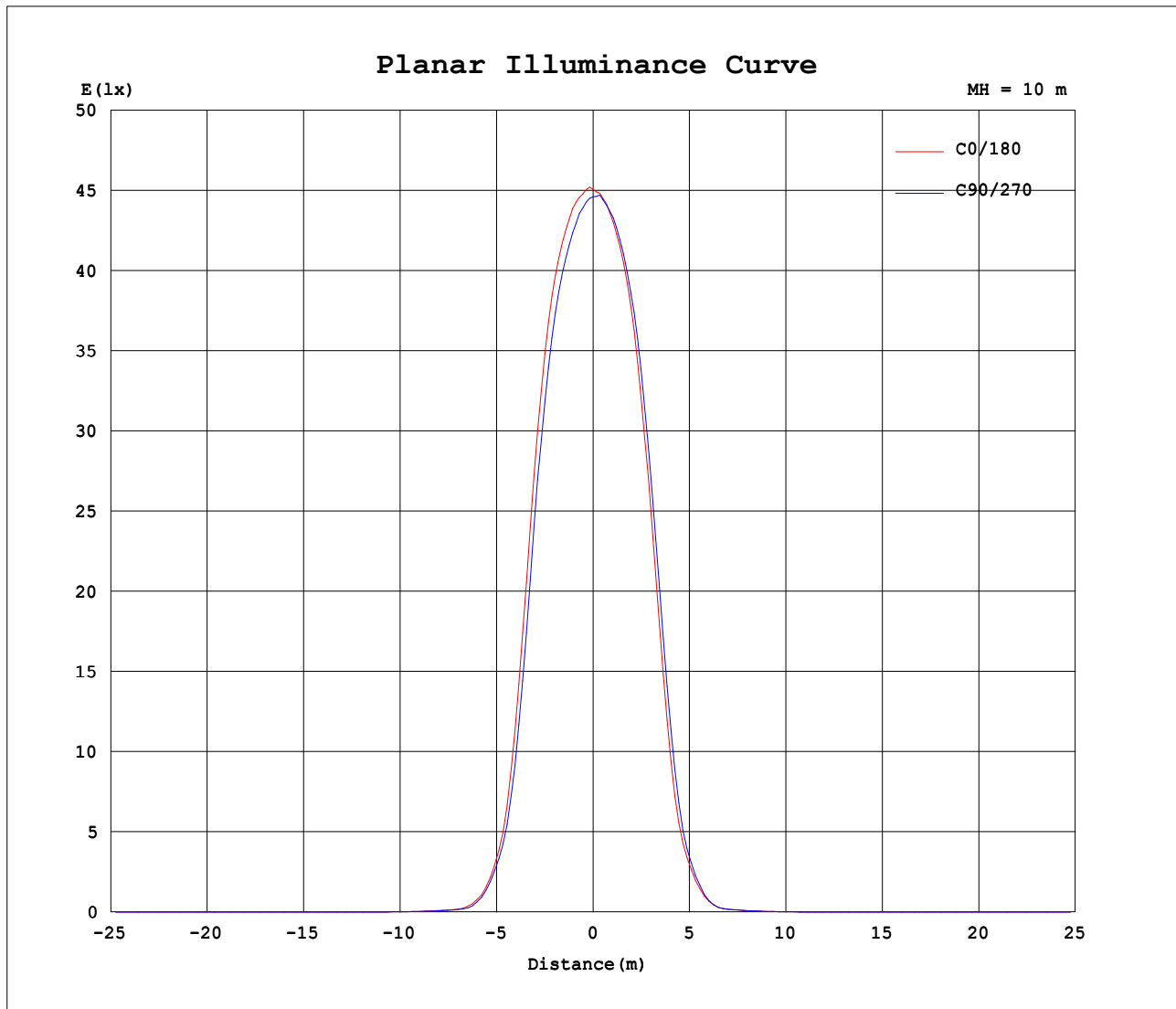
AvgL	cd/m2
L_0~180 (65) av	161
L_0~180 (75) av	325
L_0~180 (85) av	1348
L_90~270 (65) av	159
L_90~270 (75) av	335
L_90~270 (85) av	1400
L_45 (65) av	158
L_45 (75) av	346
L_45 (85) av	1426

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

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:

```

```

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:

```