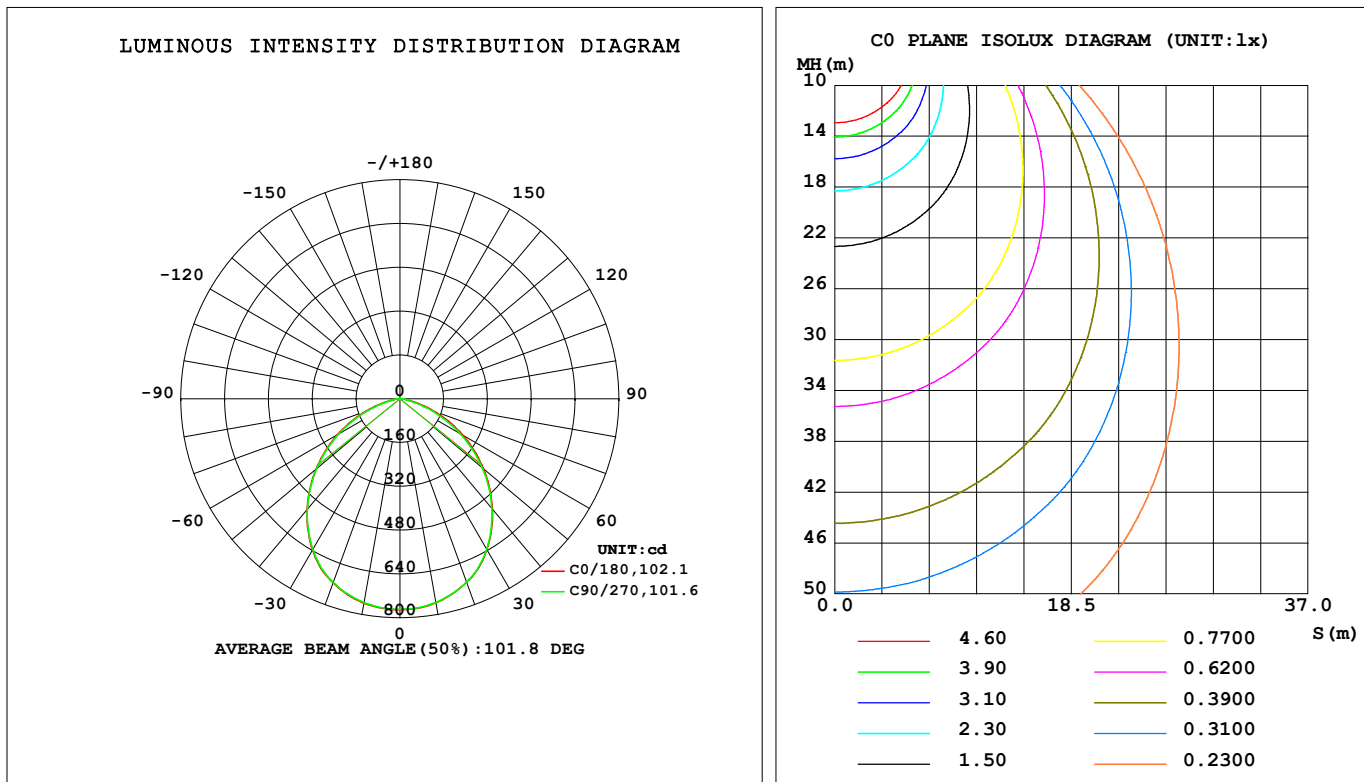


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 89.80 lm/W
MODEL	G3 160mm 3000lm 840 ADV	I <sub>max</sub> (cd)	770.6	S/MH (C0/180)	1.23	
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.23	
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	1884.3	η UP,DN (C0-180)	0.0,49.9	
NOMINAL FLUX (lm)	1884.32	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.1	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE (V)	220.0	η down (%)	100.0	CIBSE SHR MAX	1.35	



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Ky  
Test Date: 22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity: 65.0%  
Test Distance: 7.220m [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	756.5	755.8	755.6	755.2	757.9	757.1	755.7	754.1	0- 10	72.79	72.79	3.86,3.86
20	713.0	712.5	712.1	712.5	715.3	714.8	713.5	710.9	10- 20	208.2	281.0	14.9,14.9
30	635.5	634.4	634.2	634.7	638.4	637.7	636.3	634.6	20- 30	312.7	593.7	31.5,31.5
40	525.2	523.5	523.0	524.4	528.1	527.8	526.3	524.5	30- 40	364.3	958.0	50.8,50.8
50	398.5	395.6	392.9	396.7	400.1	400.0	397.3	397.0	40- 50	356.5	1315	69.8,69.8
60	263.5	258.9	253.5	259.3	264.8	263.5	258.3	261.1	50- 60	294.1	1609	85.4,85.4
70	130.3	123.4	115.7	123.7	131.4	128.2	121.3	126.5	60- 70	189.6	1798	95.4,95.4
80	27.61	26.92	27.48	27.07	27.45	28.09	28.17	28.07	70- 80	72.25	1870	99.3,99.3
90	0.8144	0.7584	0.7336	0.7740	0.8020	0.8299	0.7460	0.7895	80- 90	13.86	1884	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): 1140.9 lm

%lum = 60.5%

%lamp = 60.5%

Conical surface Flux(120deg): 1608.6 lm

%lum = 85.4%

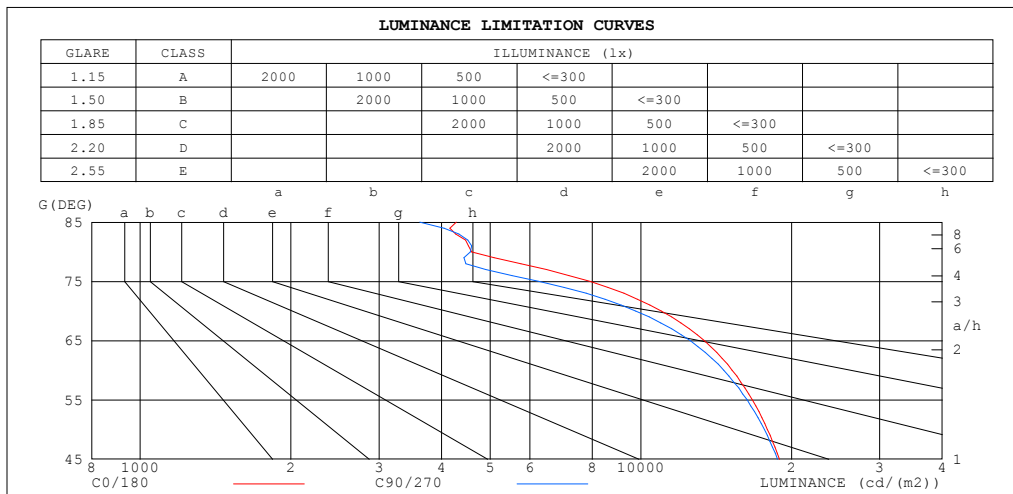
%lamp = 85.4%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4281	3619
80	4592	4570
75	7916	6256
70	11002	9770
65	13385	12546
60	15216	14639
55	16694	16300
50	17904	17651
45	18913	18766

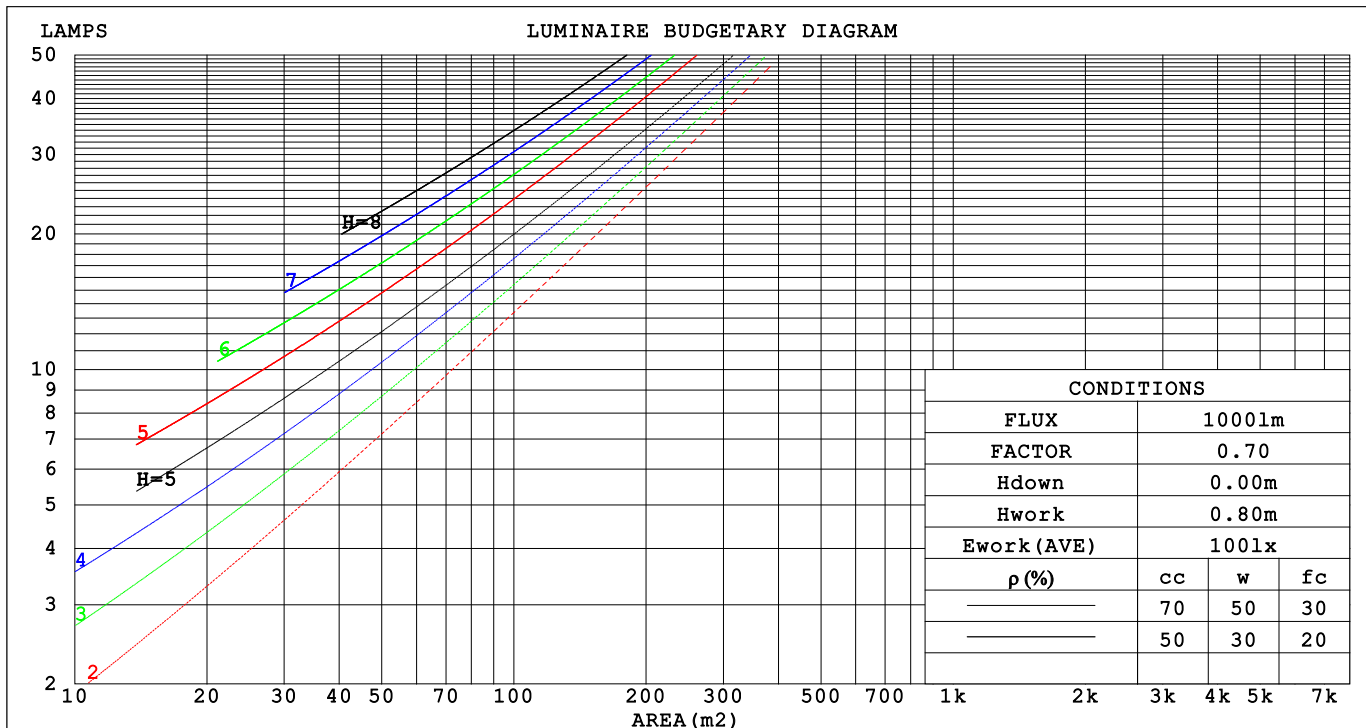
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	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															



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	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	.274	.156	.049	.267	.152	.048	.254	.146	.046	.242	.139	.045	.231	.134	.043	
2.0	.264	.145	.044	.258	.142	.044	.247	.137	.043	.236	.132	.041	.226	.128	.040	
3.0	.249	.132	.040	.243	.130	.039	.233	.126	.038	.224	.123	.038	.215	.119	.037	
4.0	.233	.121	.036	.228	.119	.035	.219	.116	.035	.211	.113	.034	.203	.110	.034	
5.0	.217	.111	.032	.213	.109	.032	.205	.107	.031	.198	.104	.031	.191	.102	.031	
6.0	.203	.102	.029	.199	.101	.029	.192	.098	.029	.186	.096	.028	.179	.094	.028	
7.0	.190	.094	.027	.187	.093	.027	.180	.091	.026	.174	.089	.026	.169	.088	.026	
8.0	.178	.087	.025	.175	.086	.024	.170	.085	.024	.164	.083	.024	.159	.082	.024	
9.0	.168	.081	.023	.165	.080	.023	.160	.079	.022	.155	.078	.022	.151	.077	.022	
10.0	.158	.076	.021	.156	.075	.021	.151	.074	.021	.147	.073	.021	.143	.072	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015		
2.0	.169	.132	.101	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012		
3.0	.160	.114	.077	.138	.098	.067	.094	.068	.047	.055	.040	.028	.018	.013	.009		
4.0	.153	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007		
5.0	.146	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006		
6.0	.139	.082	.041	.119	.071	.035	.082	.049	.025	.048	.029	.015	.015	.010	.005		
7.0	.132	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004		
8.0	.126	.069	.030	.108	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.120	.064	.026	.103	.055	.023	.072	.039	.016	.042	.023	.010	.014	.008	.003		
10.0	.115	.060	.023	.099	.052	.020	.069	.036	.014	.040	.022	.009	.013	.007	.003		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm											
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.: Darkon					SUR.:			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	20.3	21.7	20.6	21.9	22.1	20.2	21.6	20.4	21.8	22.0	
	3H	21.3	22.6	21.6	22.8	23.1	21.0	22.4	21.3	22.6	22.8
	4H	21.5	22.8	21.8	23.0	23.3	21.2	22.4	21.5	22.7	22.9
	6H	21.5	22.7	21.9	23.0	23.3	21.2	22.4	21.5	22.6	22.9
	8H	21.5	22.7	21.9	23.0	23.2	21.2	22.3	21.5	22.6	22.9
	12H	21.5	22.6	21.9	22.9	23.2	21.2	22.3	21.5	22.5	22.8
4H	2H	20.7	22.0	21.0	22.2	22.5	20.6	21.9	20.9	22.1	22.4
	3H	21.8	22.9	22.2	23.2	23.5	21.6	22.7	21.9	23.0	23.3
	4H	22.1	23.1	22.5	23.4	23.8	21.8	22.8	22.2	23.1	23.4
	6H	22.2	23.1	22.6	23.4	23.8	21.9	22.7	22.3	23.1	23.5
	8H	22.2	23.0	22.6	23.4	23.8	21.9	22.7	22.3	23.1	23.4
	12H	22.2	23.0	22.7	23.4	23.8	21.9	22.6	22.3	23.0	23.4
8H	4H	22.2	23.0	22.6	23.3	23.7	21.9	22.7	22.3	23.0	23.4
	6H	22.3	23.0	22.7	23.4	23.8	22.0	22.6	22.4	23.0	23.5
	8H	22.4	22.9	22.8	23.4	23.8	22.0	22.6	22.5	23.1	23.5
	12H	22.4	22.9	22.9	23.3	23.8	22.1	22.6	22.6	23.0	23.5
12H	4H	22.1	22.9	22.6	23.3	23.7	21.8	22.6	22.3	23.0	23.4
	6H	22.3	22.9	22.7	23.3	23.7	22.0	22.6	22.4	23.0	23.4
	8H	22.4	22.9	22.8	23.3	23.8	22.0	22.5	22.5	23.0	23.5
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.4					
2.0H	+ 0.5 / - 0.4					+ 0.6 / - 0.5					

CIE Pub.117, 1884 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.2)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

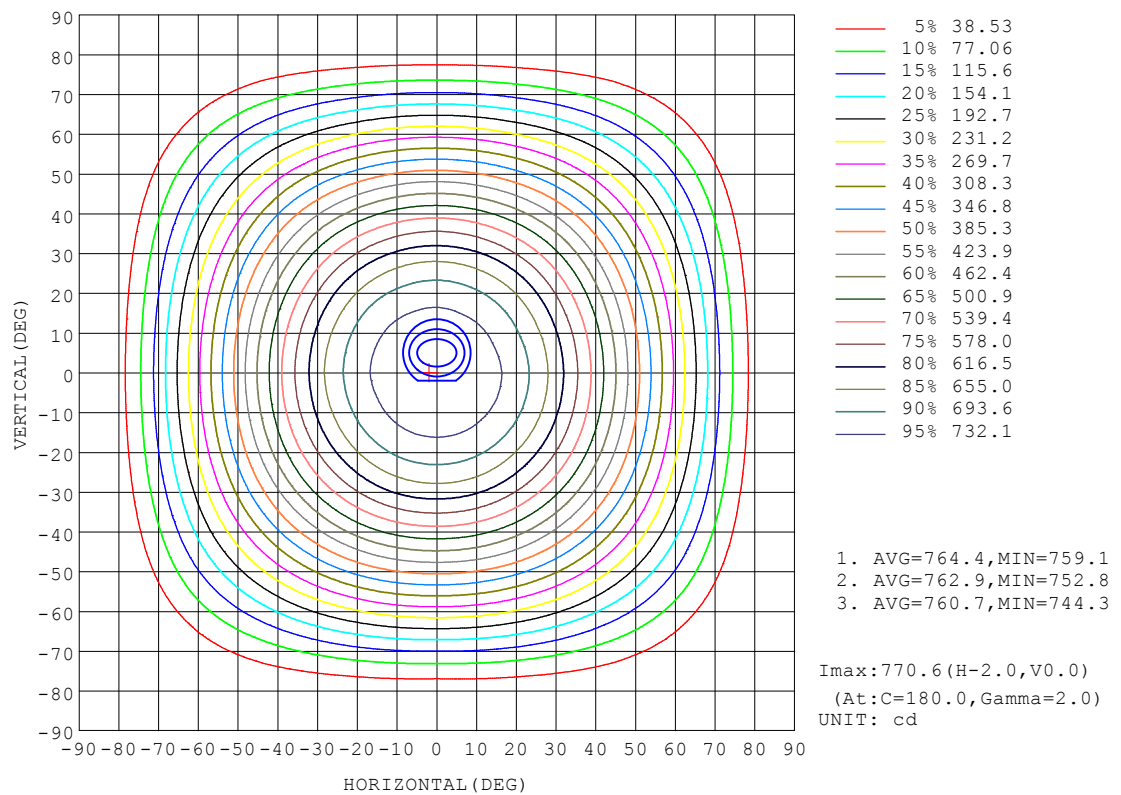
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	61	50	43	60	50	43	59	49	43	37
0.80	71	60	53	70	60	53	68	59	53	46
1.00	80	69	63	78	69	62	76	70	62	55
1.25	87	77	70	85	76	70	83	75	69	62
1.50	91	82	76	90	82	76	87	80	75	68
2.00	98	90	84	96	89	84	93	87	82	75
2.50	101	94	89	99	93	88	96	90	86	78
3.00	104	98	93	102	97	92	98	94	90	82
4.00	108	103	99	106	101	97	102	98	95	86
5.00	110	106	102	108	104	101	103	100	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

**ISOCANDELA DIAGRAM**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



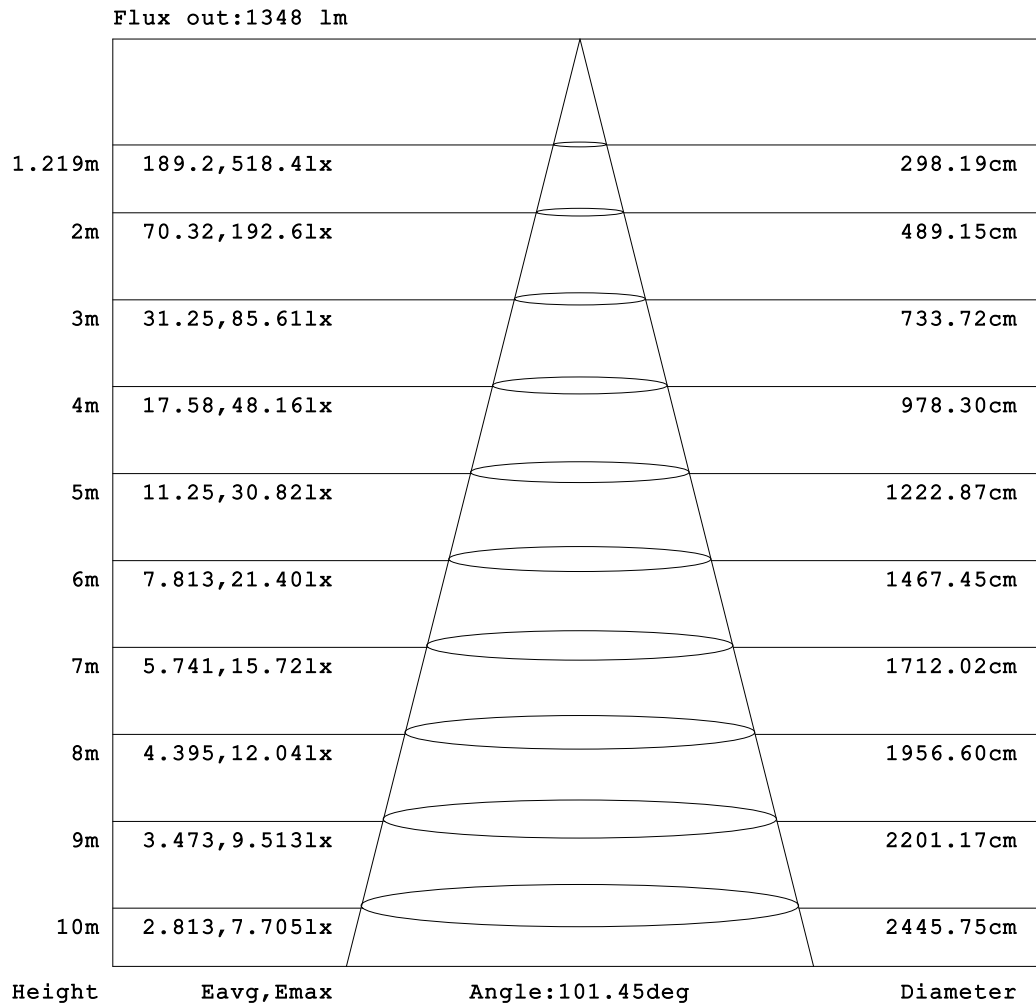
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Ky  
Test Date: 22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity: 65.0%  
Test Distance: 7.220m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



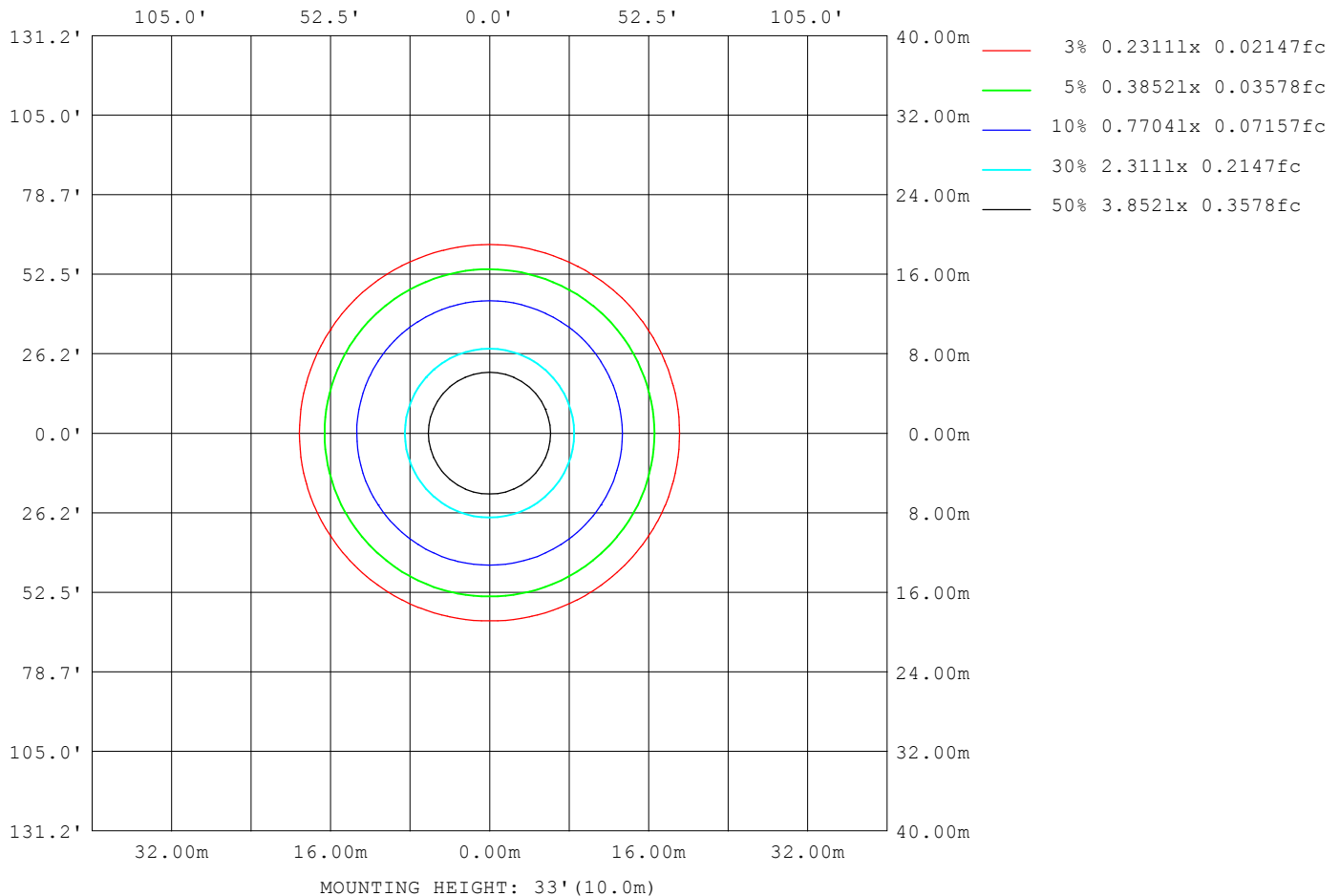
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Ky  
 Test Date: 22 November 2017

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

Test:U:239.93V I:0.0911A P:20.984W PF:0.9604 Freq:50.08Hz Lamp Flux:1884.32x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_500mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

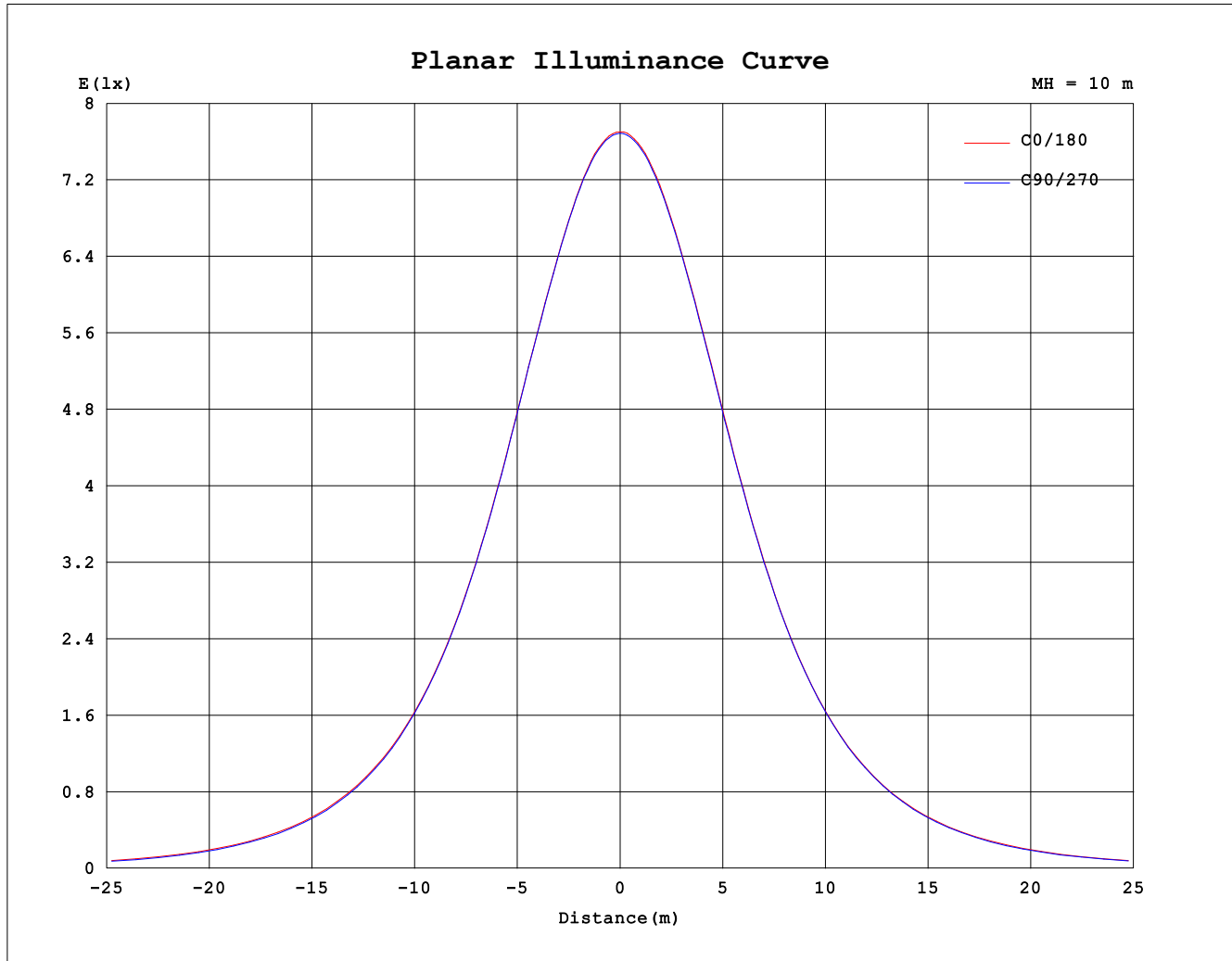
AvgL	cd/m2
L_0~180 (65) av	13424
L_0~180 (75) av	7933
L_0~180 (85) av	4205
L_90~270 (65) av	12729
L_90~270 (75) av	6482
L_90~270 (85) av	3884
L_45 (65) av	13116
L_45 (75) av	7351
L_45 (85) av	4126

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:22 November 2017

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Ky  
Test Date: 22 November 2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity: 65.0%  
Test Distance: 7.220m [K=1.0000]  
Remarks:

