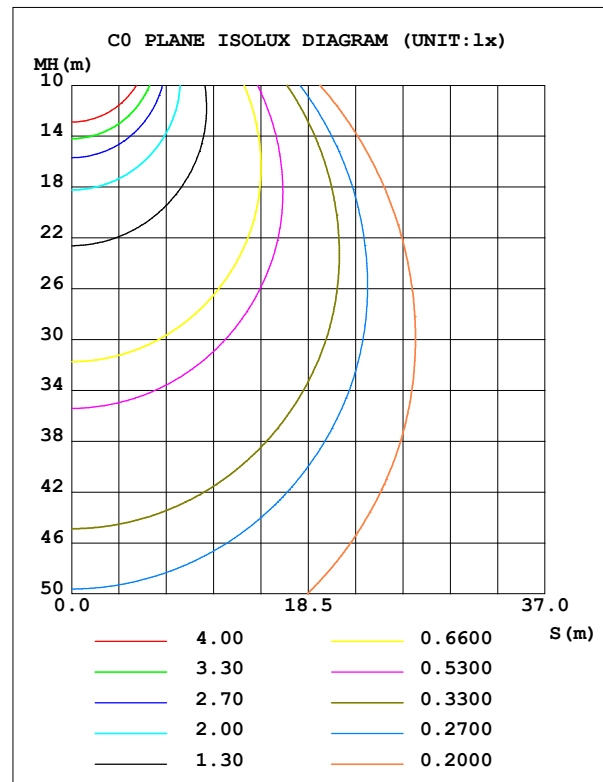
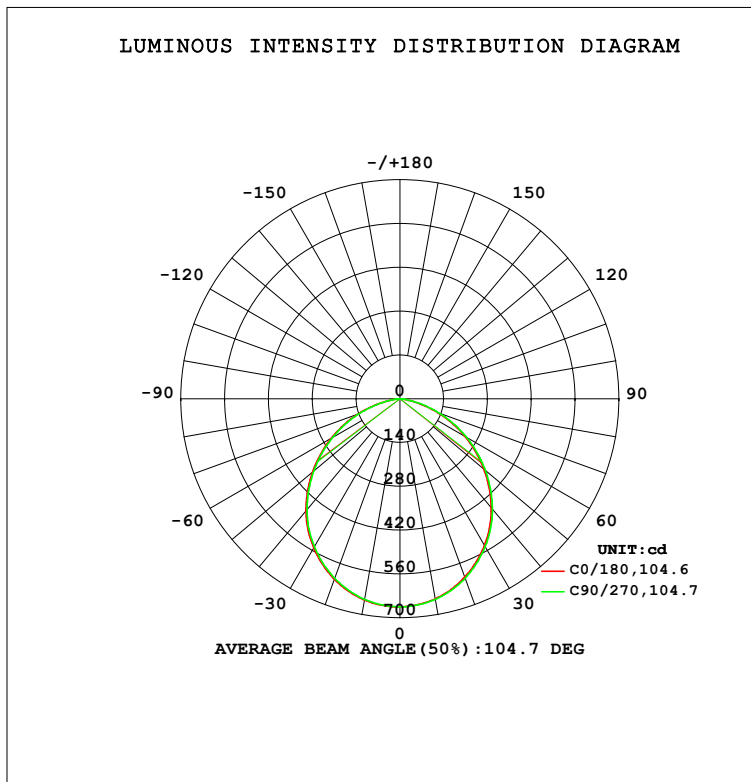


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 78.72 lm/W
MODEL	G3 160mm 3000lm 830 ADV	I <sub>max</sub> (cd)	665.0	S/MH (C0/180)	1.24	
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.23	
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	1699.2	η UP,DN (C0-180)	0.0,49.7	
NOMINAL FLUX (lm)	1699.16	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.3	
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: 18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [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
5	660.5	660.1	661.4	662.0	662.4	662.9	661.4	659.5	0- 5	15.85	15.85	0.93,0.93
10	649.2	648.4	651.1	653.1	653.0	653.9	651.2	648.1	5- 10	46.95	62.80	3.7,3.7
15	631.1	629.6	633.7	637.1	636.8	638.0	634.0	629.9	10- 15	76.22	139.0	8.18,8.18
20	606.5	604.2	610.1	614.2	613.7	615.6	610.5	605.3	15- 20	102.5	241.5	14.2,14.2
25	576.0	573.3	580.2	585.6	584.8	587.2	580.9	574.9	20- 25	124.9	366.4	21.6,21.6
30	540.6	537.3	545.2	551.6	550.8	553.3	546.5	539.7	25- 30	142.5	508.9	29.9,29.9
35	500.6	496.7	505.8	513.3	512.4	515.5	507.7	500.1	30- 35	155.0	663.8	39.1,39.1
40	454.1	449.6	459.7	468.3	467.4	471.3	462.1	453.6	35- 40	161.4	825.3	48.6,48.6
45	403.5	398.9	409.4	418.7	417.8	421.9	412.3	403.1	40- 45	161.3	986.6	58.1,58.1
50	350.2	345.4	356.6	366.2	365.2	369.6	359.7	349.9	45- 50	155.3	1142	67.2,67.2
55	295.3	290.4	301.7	311.7	310.5	315.3	305.0	294.9	50- 55	143.7	1286	75.7,75.7
60	239.2	234.4	245.6	256.0	254.9	259.6	249.2	238.8	55- 60	127.1	1413	83.1,83.1
65	182.8	177.8	188.7	199.6	198.5	203.2	193.0	182.9	60- 65	106.4	1519	89.4,89.4
70	126.3	121.5	132.3	142.6	142.2	146.9	136.6	126.2	65- 70	82.27	1601	94.2,94.2
75	71.79	67.49	77.70	87.38	86.40	91.07	81.23	71.33	70- 75	55.63	1657	97.5,97.5
80	25.74	23.16	30.22	37.46	36.46	40.31	32.55	25.35	75- 80	28.97	1686	99.2,99.2
85	10.06	9.372	10.83	11.66	11.55	11.98	11.24	9.960	80- 85	9.798	1696	99.8,99.8
90	0.8175	0.8175	0.7957	2.434	2.064	3.052	0.8299	0.8299	85- 90	3.418	1699	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 986.62 lm

%lum = 58.1%  
%lamp = 58.1%

Conical surface Flux(120deg): 1412.7 lm

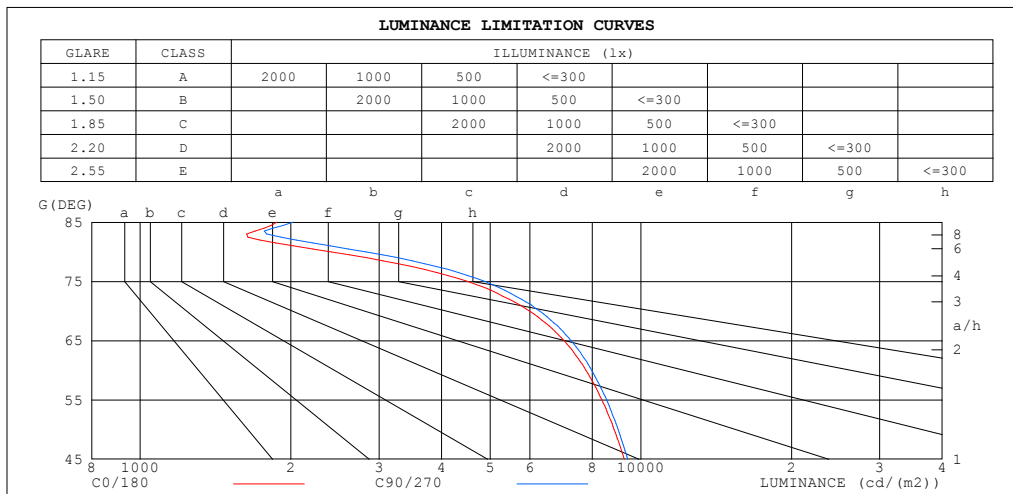
%lum = 83.1%  
%lamp = 83.1%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:18 May 2017

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1875	2019
80	2408	2827
75	4505	4876
70	5999	6282
65	7024	7251
60	7772	7977
55	8361	8542
50	8849	9009
45	9269	9404

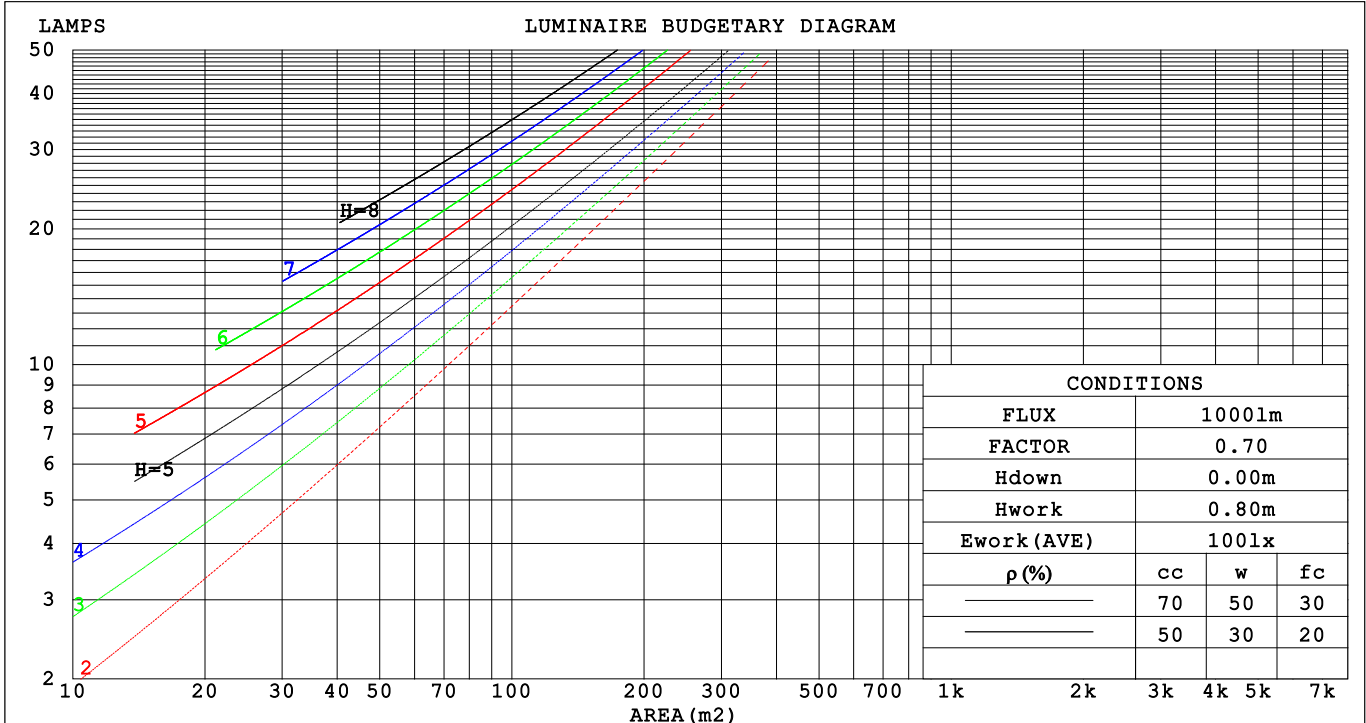
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Ky  
 Test Date: 18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	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: 18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm																	
NAME: DEEP C 310 LED_WHT_500mA_3K									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	.284	.161	.051	.277	.158	.050	.263	.151	.048	.251	.145	.047	.240	.139	.045	
2.0	.273	.150	.046	.267	.147	.045	.255	.142	.044	.245	.137	.043	.235	.133	.042	
3.0	.256	.136	.041	.250	.134	.040	.240	.130	.040	.231	.126	.039	.222	.123	.038	
4.0	.238	.124	.036	.233	.122	.036	.224	.119	.036	.216	.116	.035	.208	.113	.034	
5.0	.222	.113	.033	.217	.112	.033	.209	.109	.032	.202	.107	.032	.195	.104	.031	
6.0	.207	.104	.030	.203	.102	.030	.196	.100	.029	.189	.098	.029	.183	.096	.029	
7.0	.193	.095	.027	.190	.095	.027	.183	.093	.027	.177	.091	.026	.172	.089	.026	
8.0	.181	.088	.025	.178	.088	.025	.172	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.170	.082	.023	.167	.082	.023	.162	.080	.023	.157	.079	.023	.153	.078	.022	
10.0	.160	.077	.021	.158	.076	.021	.153	.075	.021	.149	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.178	.156	.136	.153	.134	.117	.104	.092	.081	.060	.053	.047	.019	.017	.015		
2.0	.170	.132	.100	.145	.114	.087	.100	.079	.060	.057	.046	.035	.018	.015	.012		
3.0	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009		
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007		
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006		
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005		
7.0	.133	.075	.034	.115	.065	.030	.079	.046	.021	.046	.027	.012	.015	.009	.004		
8.0	.127	.069	.029	.109	.060	.026	.076	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003		
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Ky  
Test Date:18 May 2017

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.220m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm											
NAME: DEEP C 310 LED_WHT_500mA_3K					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	2H	20.0	21.5	20.3	21.7	21.9	20.1	21.6	20.4	21.8	22.0
	3H	21.1	22.5	21.4	22.7	23.0	21.3	22.6	21.6	22.9	23.1
	4H	21.4	22.7	21.7	23.0	23.2	21.6	22.9	21.9	23.1	23.4
	6H	21.5	22.7	21.8	23.0	23.3	21.7	22.9	22.0	23.2	23.5
	8H	21.5	22.6	21.8	22.9	23.2	21.7	22.8	22.0	23.1	23.4
	12H	21.4	22.6	21.8	22.9	23.2	21.7	22.8	22.0	23.1	23.4
4H	2H	20.5	21.8	20.8	22.0	22.3	20.6	21.9	20.9	22.1	22.4
	3H	21.8	22.9	22.1	23.2	23.5	21.9	23.0	22.2	23.3	23.6
	4H	22.1	23.1	22.5	23.5	23.8	22.3	23.3	22.7	23.6	23.9
	6H	22.2	23.1	22.6	23.5	23.8	22.4	23.3	22.8	23.7	24.0
	8H	22.2	23.1	22.6	23.4	23.8	22.4	23.3	22.8	23.6	24.0
	12H	22.2	23.0	22.6	23.4	23.8	22.4	23.2	22.8	23.6	24.0
8H	4H	22.2	23.0	22.6	23.4	23.8	22.4	23.2	22.8	23.6	23.9
	6H	22.4	23.0	22.8	23.5	23.9	22.5	23.2	23.0	23.6	24.1
	8H	22.4	23.0	22.8	23.4	23.8	22.6	23.2	23.0	23.6	24.0
	12H	22.4	22.9	22.9	23.3	23.8	22.6	23.1	23.1	23.5	24.0
12H	4H	22.2	22.9	22.6	23.3	23.7	22.3	23.1	22.7	23.5	23.9
	6H	22.3	22.9	22.8	23.4	23.8	22.5	23.1	23.0	23.6	24.0
	8H	22.4	22.9	22.8	23.3	23.8	22.5	23.1	23.0	23.5	24.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.3					
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					
2.0H	+ 0.5 / - 0.4					+ 0.5 / - 0.5					

CIE Pub.117 Corrected 1699 lm Total Lamp Luminous Flux. (8log(F/F0) = 1.8)

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Ky  
 Test Date: 18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:

## UTILIZATION FACTORS TABLE

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

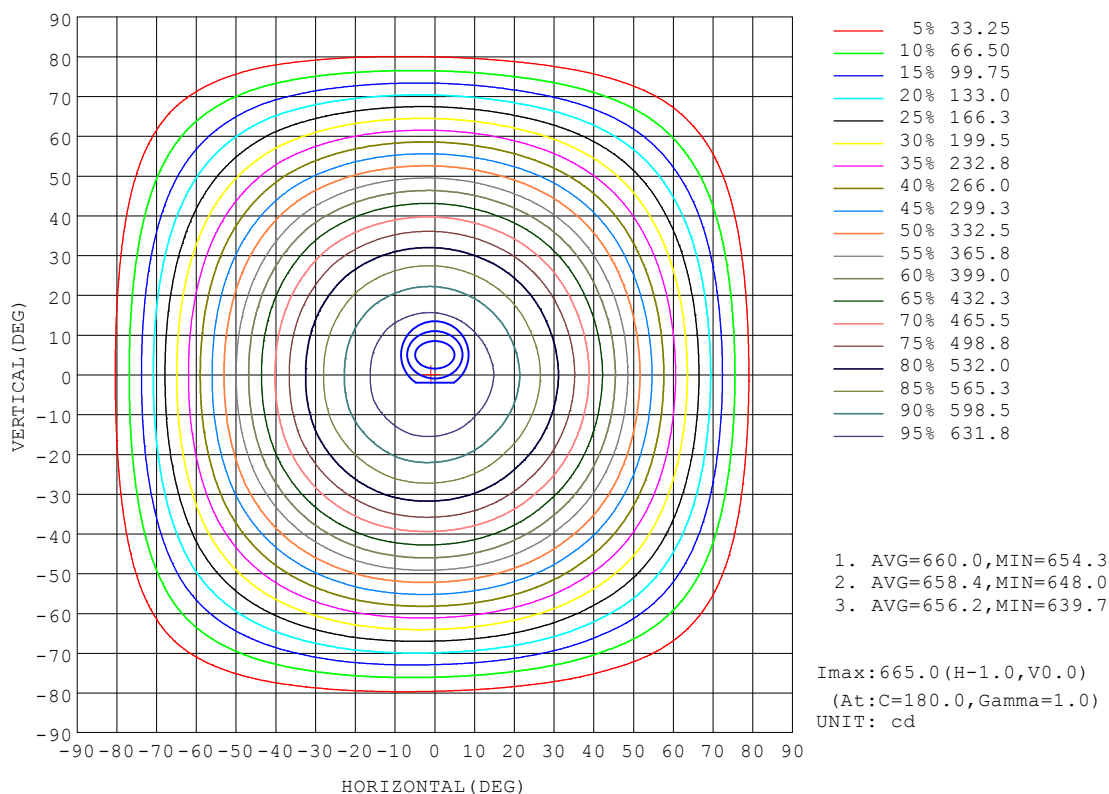
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	60	48	42	59	48	42	58	48	41	35
0.80	70	59	52	69	58	51	67	57	51	44
1.00	78	68	61	77	67	61	75	68	60	53
1.25	85	75	69	84	75	68	81	73	68	61
1.50	90	81	74	89	80	74	86	78	73	66
2.00	97	89	83	95	88	82	92	86	81	73
2.50	101	93	88	99	92	87	95	89	85	77
3.00	104	97	92	102	96	91	98	93	89	81
4.00	107	102	98	105	100	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
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:18 May 2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:7.220m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



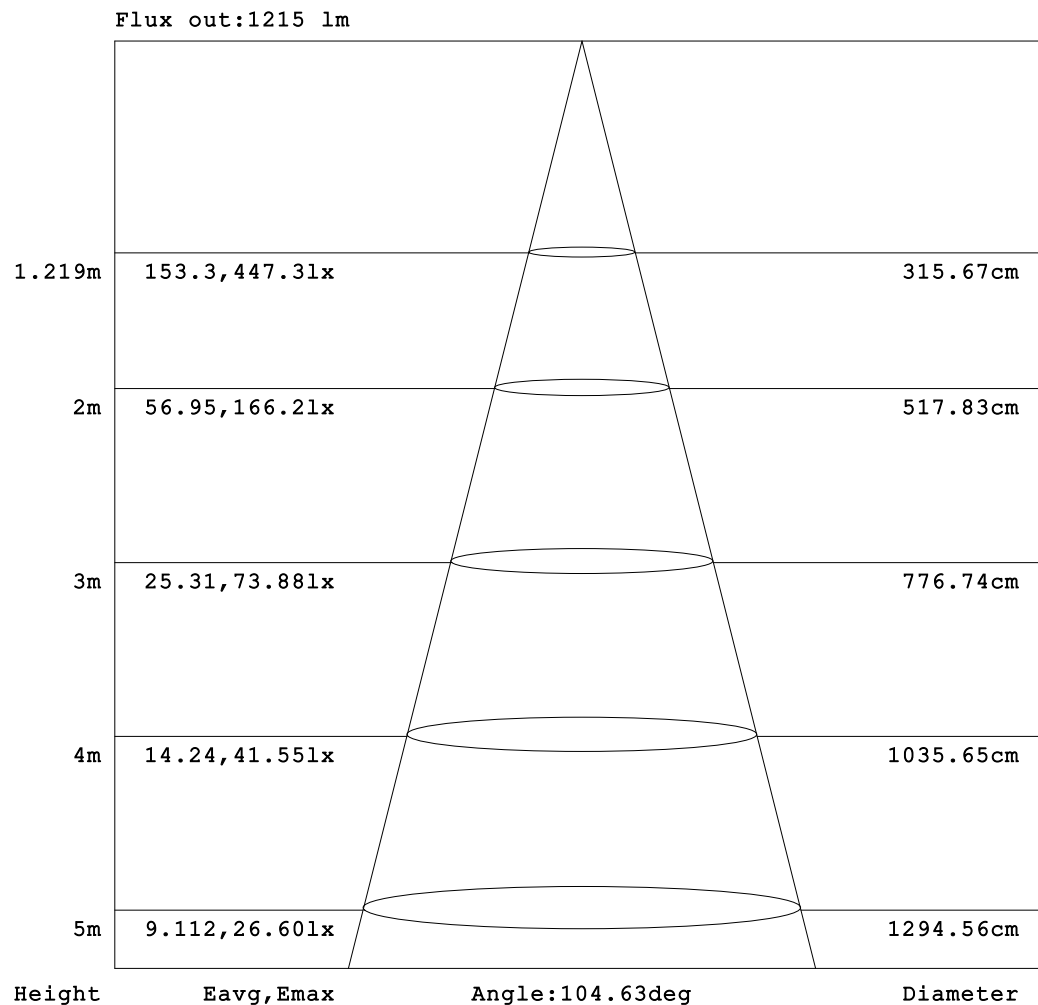
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Ky  
 Test Date: 18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:



### AAI Figure

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



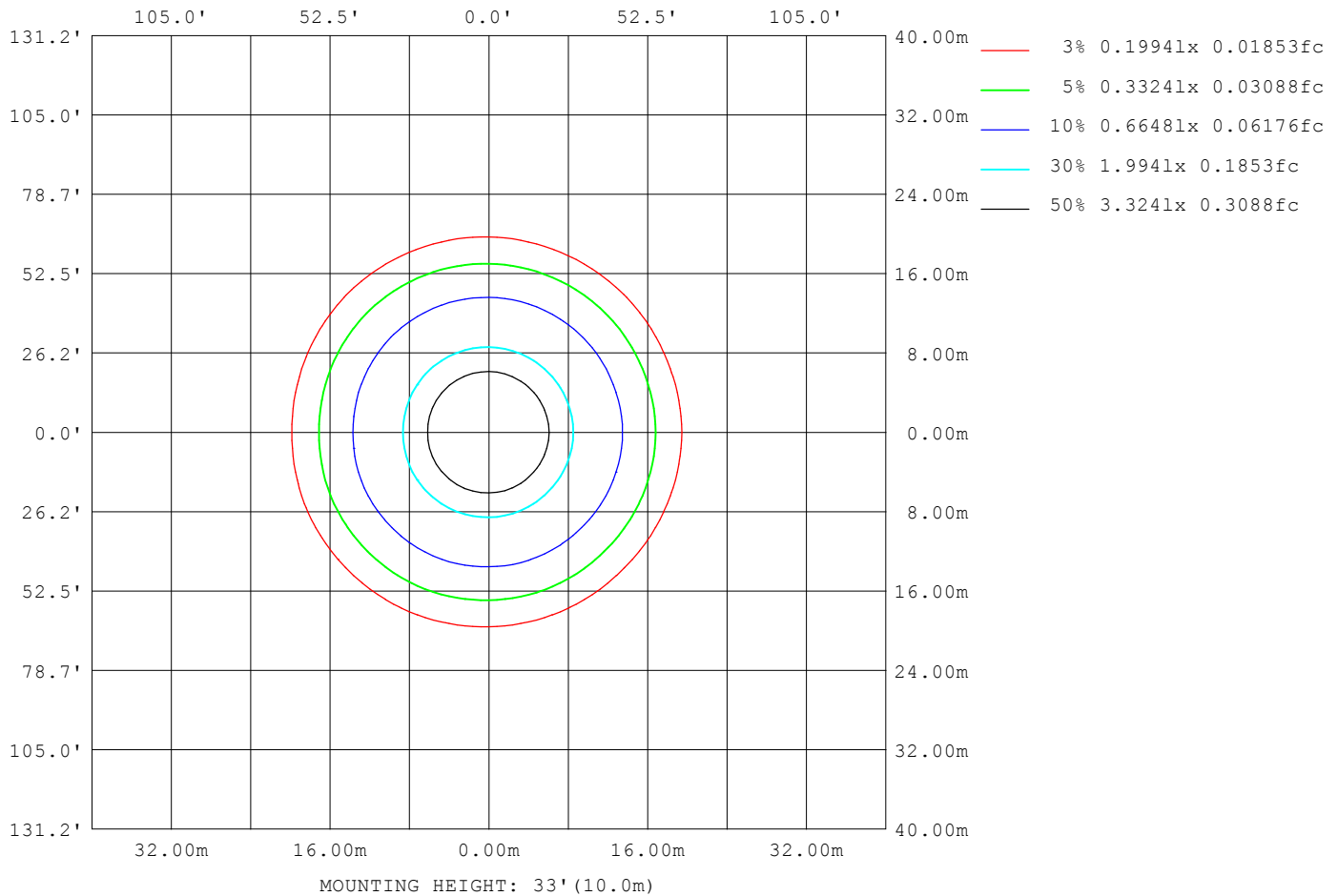
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Ky  
 Test Date: 18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:

## ISOLUX DIAGRAM

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	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: 18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:

## LED Avg.L Report

Test:U:240.1V I:0.0955A P:21.58W PF:0.9409 Lamp Flux:1699.16x1 lm		
NAME: DEEP C 310 LED_WHT_500mA_3K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

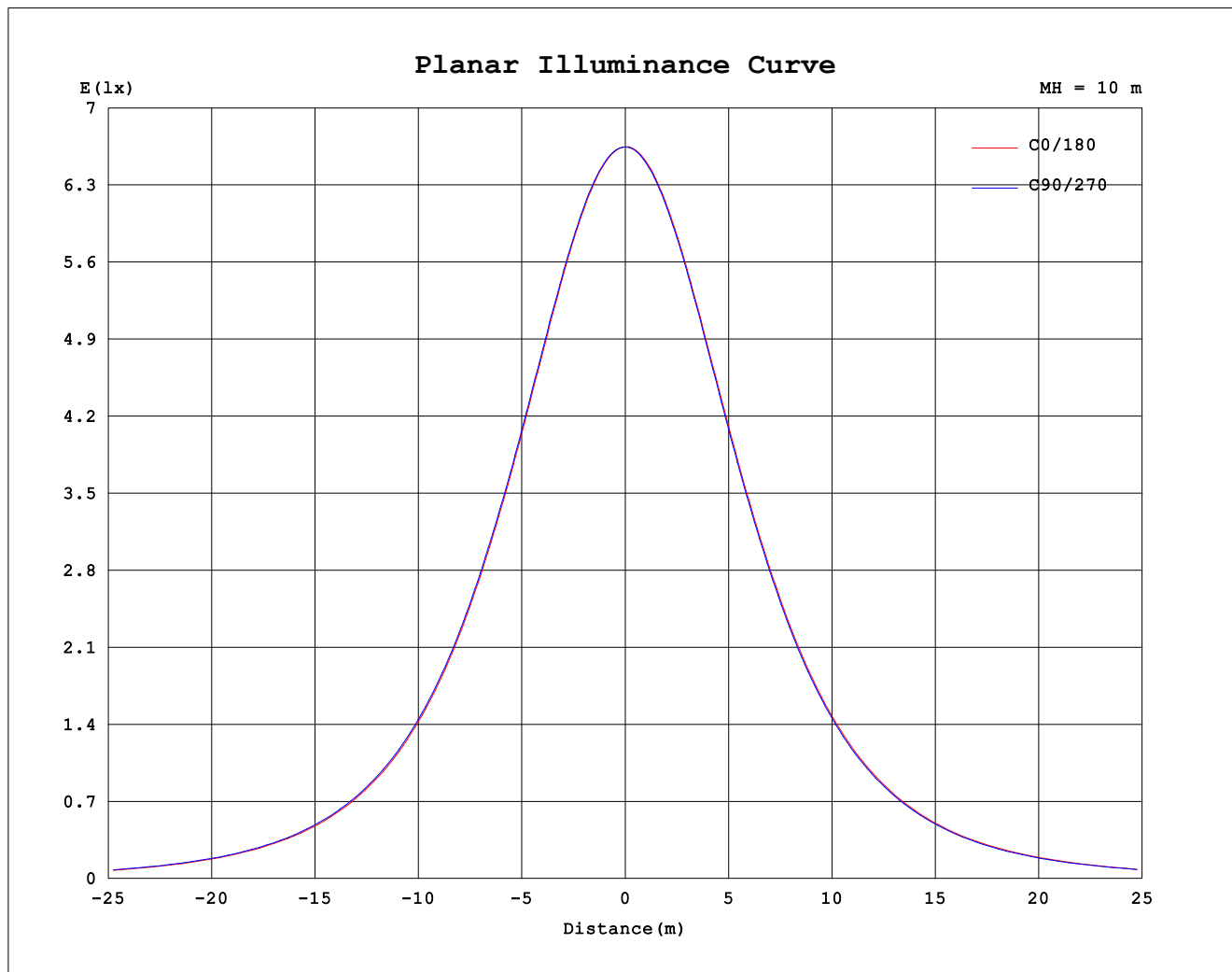
AvgL	cd/m2
L_0~180 (65) av	7327
L_0~180 (75) av	4963
L_0~180 (85) av	2013
L_90~270 (65) av	7333
L_90~270 (75) av	4987
L_90~270 (85) av	2057
L_45 (65) av	7336
L_45 (75) av	4977
L_45 (85) av	2002

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Ky  
 Test Date:18 May 2017

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 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: 18 May 2017

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.220m [K=1.0000]  
 Remarks:

