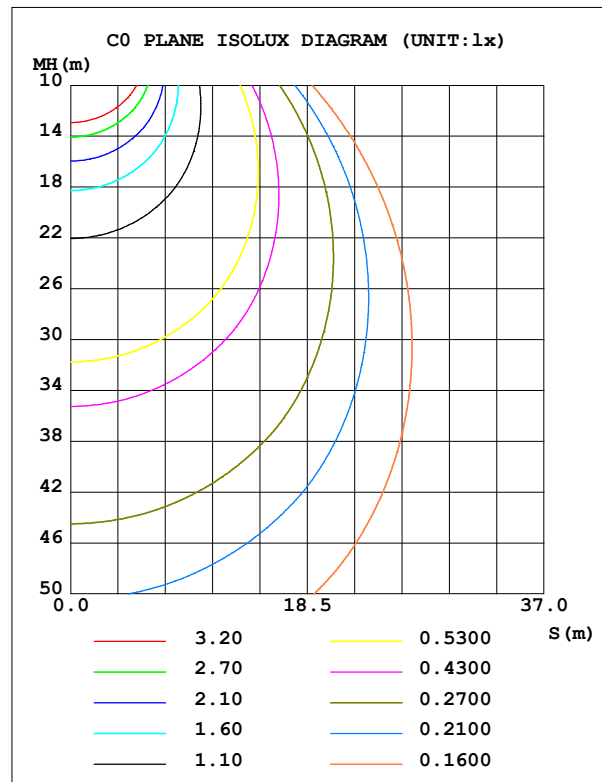
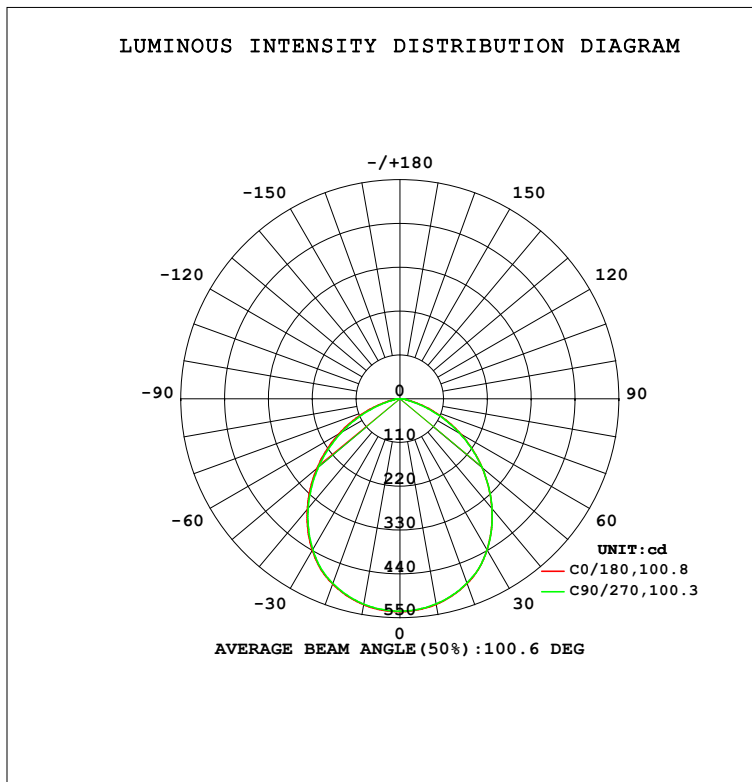


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 81.52 lm/W
MODEL	G3 160mm 3000lm 840 ADV	I _{max} (cd)	534.8	S/MH (C0/180)	1.23	
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.22	
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	1283.8	η UP,DN (C0-180)	0.0, 50.2	
NOMINAL FLUX (lm)	1283.79	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0, 49.8	
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	531.8	531.1	530.6	530.3	532.2	531.7	530.9	530.5	0- 5	12.73	12.73	0.99,0.99
10	524.3	523.5	523.2	523.2	525.0	524.6	523.6	522.9	5- 10	37.73	50.45	3.93,3.93
15	511.3	510.6	510.4	510.5	512.5	512.0	511.1	509.5	10- 15	61.37	111.8	8.71,8.71
20	493.5	492.7	492.4	492.7	494.9	494.3	493.3	491.2	15- 20	82.73	194.6	15.2,15.2
25	469.9	469.0	469.4	469.5	471.6	471.2	469.7	468.0	20- 25	101.0	295.6	23,23
30	437.8	437.2	437.8	438.3	440.2	439.5	437.8	436.4	25- 30	114.9	410.5	32,32
35	400.5	400.1	400.9	401.7	403.1	402.2	400.3	400.0	30- 35	123.5	534.0	41.6,41.6
40	359.5	359.4	360.0	361.1	362.2	360.9	358.7	358.0	35- 40	126.9	660.9	51.5,51.5
45	315.5	315.7	315.8	317.5	318.5	317.0	314.2	313.9	40- 45	125.1	786.0	61.2,61.2
50	269.7	269.8	269.4	271.5	272.6	270.1	267.3	267.7	45- 50	118.3	904.3	70.4,70.4
55	222.7	222.6	221.4	224.3	225.3	222.3	218.8	220.1	50- 55	106.9	1011	78.8,78.8
60	175.4	174.7	172.8	176.2	177.9	174.6	170.3	172.8	55- 60	91.50	1103	85.9,85.9
65	128.7	127.2	124.7	128.8	130.5	126.7	122.0	125.1	60- 65	73.02	1176	91.6,91.6
70	84.48	82.08	79.19	83.53	85.48	81.23	76.03	80.10	65- 70	52.48	1228	95.7,95.7
75	45.19	42.68	38.86	43.52	45.26	41.51	36.10	40.91	70- 75	31.89	1260	98.1,98.1
80	18.17	18.12	18.23	18.16	17.83	17.58	17.59	17.29	75- 80	14.72	1275	99.3,99.3
85	8.313	8.612	8.178	8.343	8.436	7.995	7.363	7.840	80- 85	7.224	1282	99.9,99.9
90	0.5160	0.4725	0.4414	0.4631	0.4911	0.5036	0.4880	0.4973	85- 90	1.846	1284	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): 785.99 lm

%lum = 61.2%
%lamp = 61.2%

Conical surface Flux(120deg): 1102.6 lm

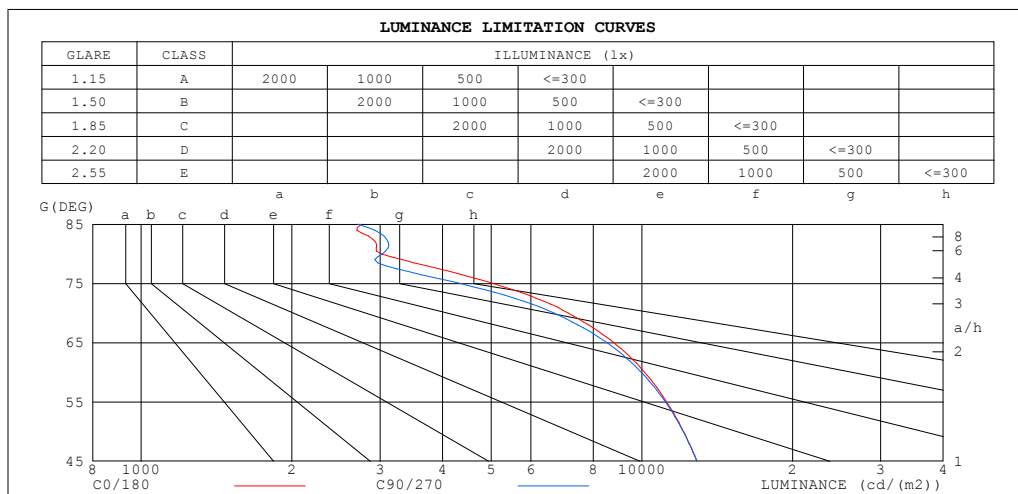
%lum = 85.9%
%lamp = 85.9%

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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2754	2710
80	3021	3031
75	5042	4336
70	7132	6686
65	8791	8522
60	10128	9978
55	11213	11147
50	12115	12104
45	12884	12895

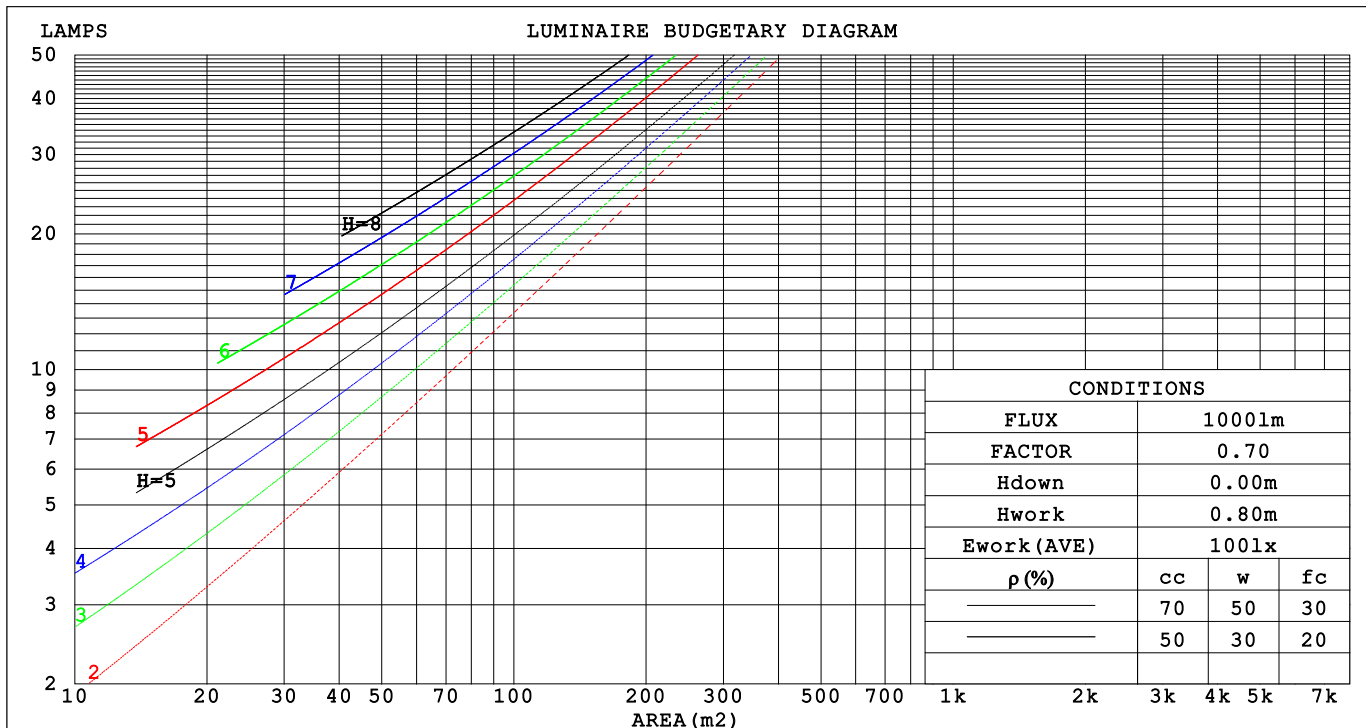
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Ky
 Test Date: 18 May 2017

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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_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: 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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_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	.271	.154	.049	.264	.151	.048	.251	.144	.046	.239	.138	.044	.228	.132	.043	
2.0	.262	.144	.044	.256	.141	.043	.245	.136	.042	.234	.131	.041	.224	.127	.040	
3.0	.247	.131	.039	.242	.129	.039	.232	.126	.038	.222	.122	.037	.214	.118	.037	
4.0	.231	.120	.035	.226	.118	.035	.217	.115	.034	.209	.112	.034	.201	.109	.033	
5.0	.216	.110	.032	.212	.109	.032	.204	.106	.031	.196	.104	.031	.190	.101	.030	
6.0	.202	.101	.029	.198	.100	.029	.191	.098	.028	.185	.096	.028	.178	.094	.028	
7.0	.189	.094	.027	.186	.093	.026	.180	.091	.026	.174	.089	.026	.168	.087	.026	
8.0	.178	.087	.024	.175	.086	.024	.169	.084	.024	.164	.083	.024	.159	.081	.024	
9.0	.167	.081	.023	.165	.080	.023	.159	.079	.022	.155	.078	.022	.150	.076	.022	
10.0	.158	.076	.021	.155	.075	.021	.151	.074	.021	.146	.073	.021	.142	.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	.048	.019	.017	.015		
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012		
3.0	.160	.114	.078	.137	.098	.067	.094	.068	.047	.054	.040	.028	.017	.013	.009		
4.0	.152	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007		
5.0	.145	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006		
6.0	.138	.082	.041	.119	.071	.036	.082	.049	.025	.048	.029	.015	.015	.010	.005		
7.0	.132	.075	.035	.113	.065	.030	.078	.045	.021	.045	.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	.013	.008	.003		
10.0	.114	.060	.023	.099	.052	.020	.068	.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: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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm											
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_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	21.1	22.5	21.4	22.7	22.9	21.1	22.5	21.3	22.7	22.9	
	3H	22.0	23.3	22.3	23.6	23.8	21.9	23.2	22.2	23.5	23.7
	4H	22.2	23.5	22.5	23.7	24.0	22.1	23.3	22.4	23.6	23.8
	6H	22.3	23.4	22.6	23.7	24.0	22.1	23.2	22.4	23.5	23.8
	8H	22.3	23.4	22.6	23.7	24.0	22.1	23.2	22.4	23.5	23.8
	12H	22.2	23.3	22.6	23.6	23.9	22.1	23.1	22.4	23.4	23.7
4H	2H	21.5	22.8	21.8	23.0	23.3	21.5	22.7	21.8	23.0	23.2
	3H	22.6	23.7	22.9	24.0	24.2	22.5	23.5	22.8	23.8	24.1
	4H	22.9	23.8	23.2	24.2	24.5	22.7	23.7	23.0	24.0	24.3
	6H	22.9	23.8	23.3	24.2	24.5	22.7	23.6	23.1	23.9	24.3
	8H	23.0	23.8	23.4	24.1	24.5	22.8	23.6	23.2	23.9	24.3
	12H	23.0	23.7	23.4	24.1	24.5	22.8	23.5	23.2	23.9	24.3
8H	4H	22.9	23.7	23.3	24.1	24.4	22.7	23.5	23.1	23.9	24.3
	6H	23.0	23.7	23.5	24.1	24.5	22.8	23.5	23.3	23.9	24.3
	8H	23.1	23.7	23.5	24.1	24.5	22.9	23.5	23.4	23.9	24.4
	12H	23.1	23.6	23.6	24.1	24.5	22.9	23.4	23.4	23.9	24.4
12H	4H	22.9	23.6	23.3	24.0	24.4	22.7	23.4	23.1	23.8	24.2
	6H	23.0	23.6	23.5	24.0	24.5	22.8	23.4	23.3	23.8	24.3
	8H	23.1	23.6	23.6	24.0	24.5	22.9	23.4	23.4	23.8	24.3
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 / - 0.5					+ 0.6 / - 0.5					

CIE Pub.117 Corrected 1284 lm Total Lamp Luminous Flux. (8log(F/F0) = 0.9)

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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

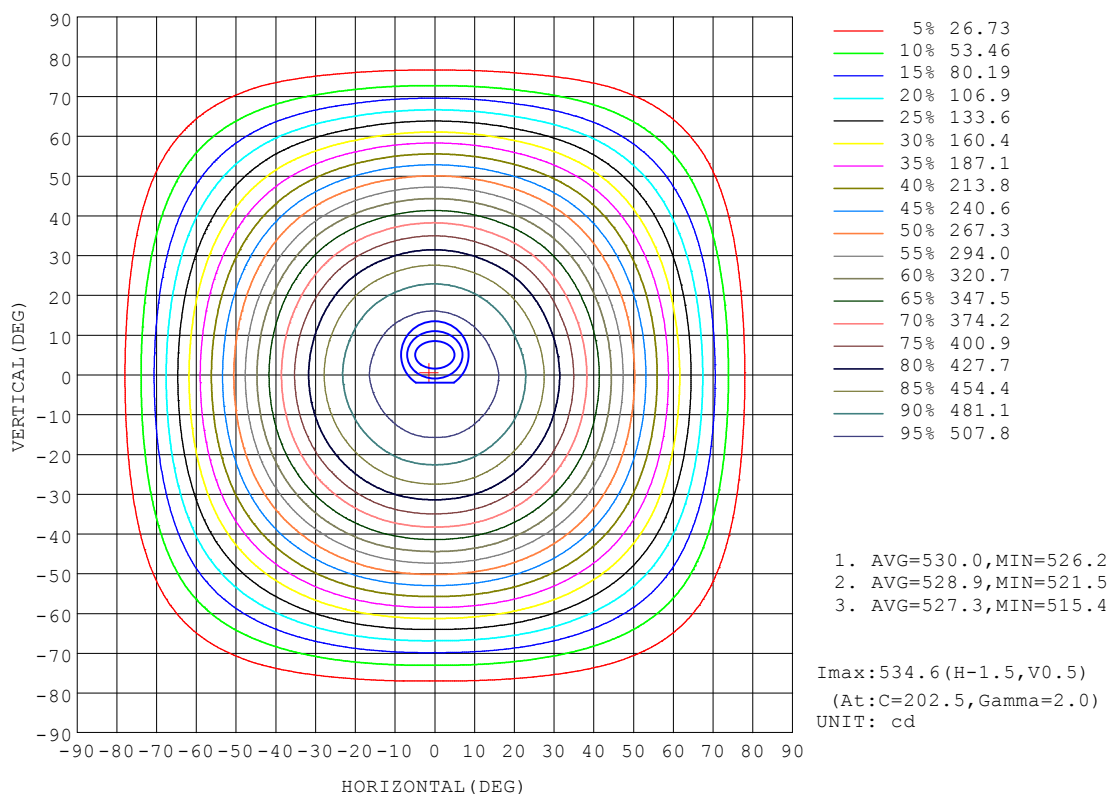
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	61	50	44	60	50	44	59	50	43	37
0.80	71	61	54	70	60	54	69	59	53	47
1.00	80	70	63	79	69	63	77	70	62	56
1.25	87	77	71	86	77	71	83	75	70	63
1.50	92	83	77	90	82	76	87	80	75	68
2.00	98	90	85	96	89	84	93	87	82	75
2.50	101	95	89	100	93	88	96	91	87	79
3.00	105	99	94	102	97	93	99	94	90	82
4.00	108	103	99	106	101	98	102	98	95	87
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: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:

ISOCANDELA DIAGRAM

Test:U:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

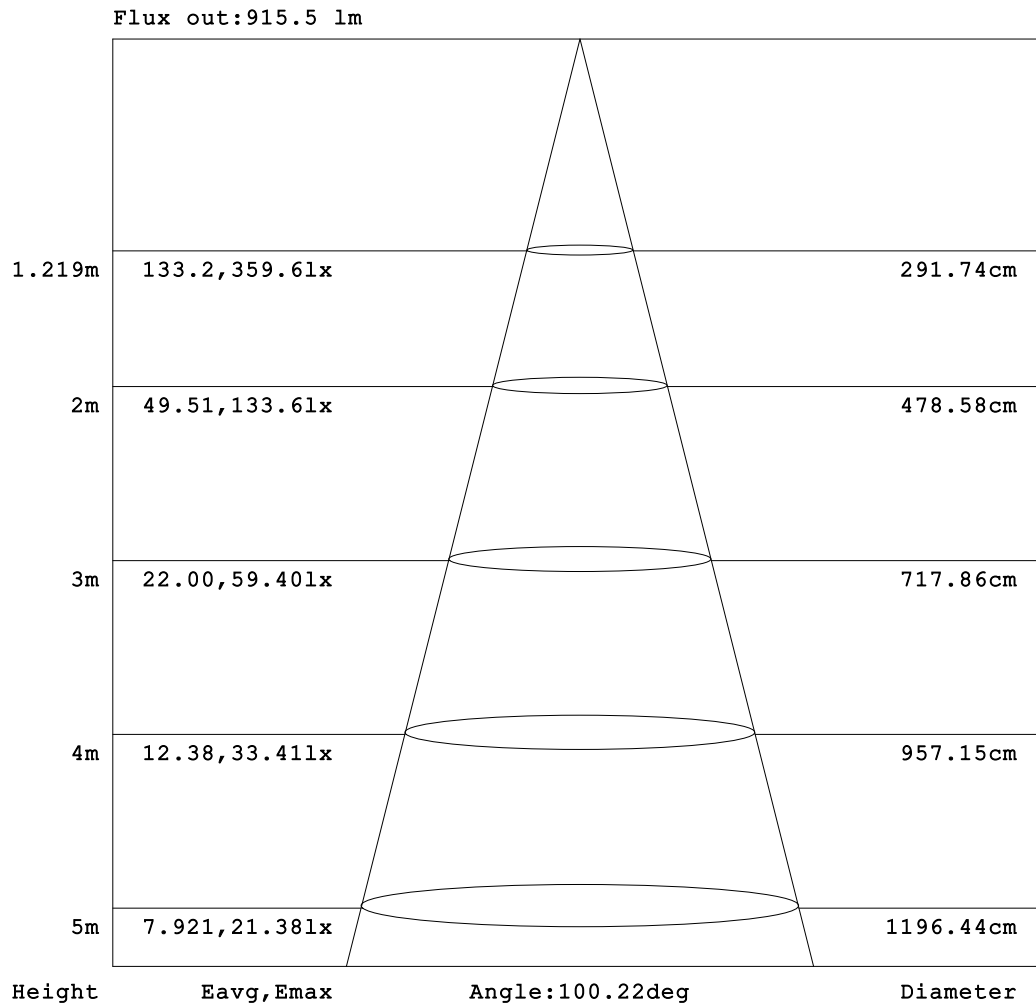


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Ky
 Test Date:18 May 2017

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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



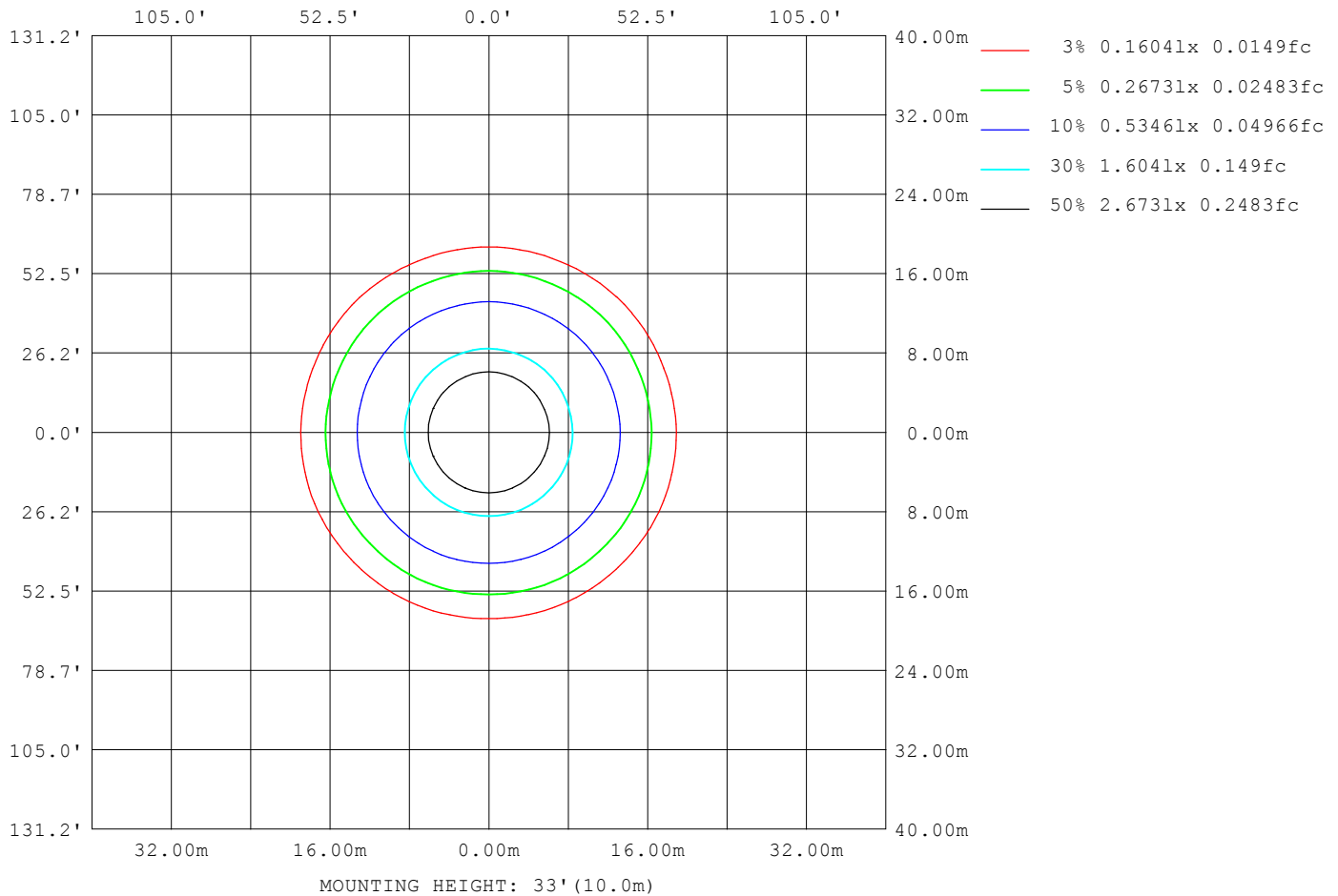
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Ky
 Test Date: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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_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: 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:240.2V I:0.0689A P:15.75W PF:0.9521 Lamp Flux:1283.79x1 lm		
NAME: DEEP C 210 LED_WHT_CLE160G3_350mA_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

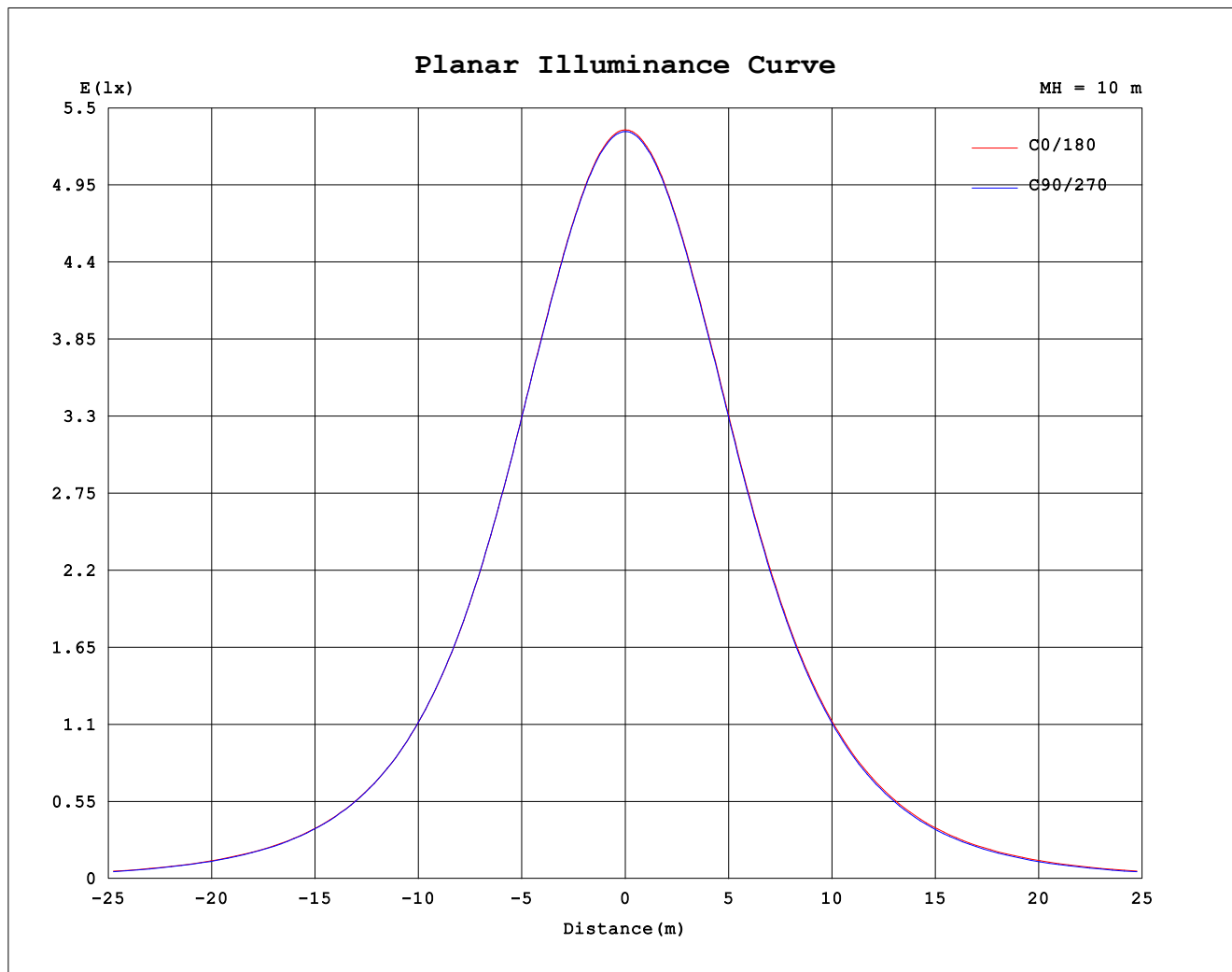
AvgL	cd/m2
L_0~180 (65) av	8853
L_0~180 (75) av	5046
L_0~180 (85) av	2775
L_90~270 (65) av	8429
L_90~270 (75) av	4182
L_90~270 (85) av	2575
L_45 (65) av	8674
L_45 (75) av	4703
L_45 (85) av	2716

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

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:

