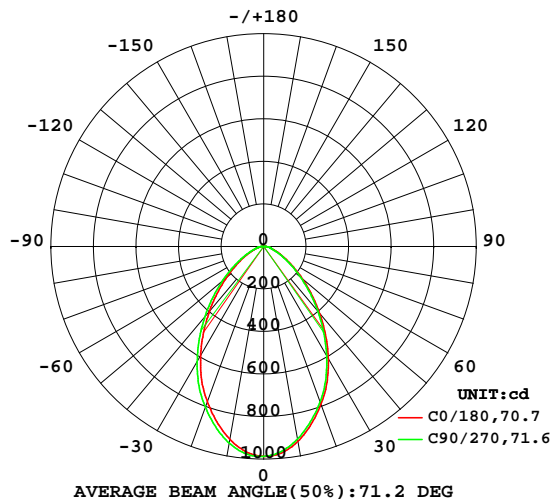
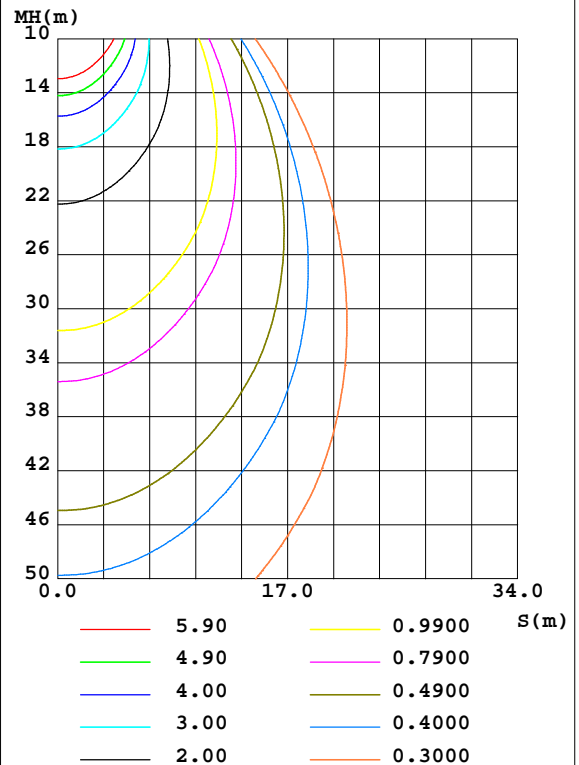


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:240.2V I:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 60.24 lm/W			
MODEL		Imax(cd)	987.6	S/MH(C0/180)	0.97
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.01
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	1507.7	$\eta$ UP,DN(C0-180)	0.0,49.1
NOMINAL FLUX(lm)	1507.72	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.9
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.10

**LUMINOUS INTENSITY DISTRIBUTION DIAGRAM**

**C0 PLANE ISOLUX DIAGRAM (UNIT:lx)**

**C Range: 0 - 360DEG**
**C Interval: 22.5DEG**
**Test Speed: HIGH**
**Temperature:24.7DEG**
**Operators:KY**
**Test Date:21 August 2015**
 **$\gamma$  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:**

**ZONAL FLUX DIAGRAM**

**ZONAL FLUX DIAGRAM:**

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
5	973.7	968.8	967.0	965.7	968.4	973.4	977.7	976.3	0- 5	23.41	23.41	1.55,1.55
10	929.9	922.6	919.1	917.7	920.2	930.0	938.1	937.4	5- 10	67.88	91.29	6.05,6.05
15	864.6	856.0	852.4	850.3	853.4	865.2	877.1	875.0	10- 15	106.0	197.3	13.1,13.1
20	788.8	779.3	777.1	774.2	776.0	789.3	803.1	800.3	15- 20	135.6	332.9	22.1,22.1
25	704.7	694.8	690.7	689.2	691.6	704.8	722.1	719.0	20- 25	156.0	489.0	32.4,32.4
30	607.7	596.4	592.7	591.3	593.8	608.9	626.2	623.0	25- 30	165.2	654.2	43.4,43.4
35	507.4	495.3	492.7	491.0	493.3	510.0	527.1	523.3	30- 35	163.1	817.3	54.2,54.2
40	409.2	397.5	395.9	394.0	396.8	413.6	429.3	425.2	35- 40	151.8	969.1	64.3,64.3
45	318.8	307.9	307.0	305.4	307.7	323.5	337.4	333.4	40- 45	133.8	1103	73.1,73.1
50	239.0	229.8	228.6	227.6	229.8	243.3	255.4	251.4	45- 50	111.7	1214	80.6,80.6
55	172.7	165.5	164.2	163.6	166.0	176.4	185.7	182.6	50- 55	88.48	1303	86.4,86.4
60	121.8	116.5	114.7	114.4	116.8	123.9	130.0	128.3	55- 60	67.03	1370	90.9,90.9
65	84.73	80.29	78.40	78.03	80.24	84.88	88.51	87.68	60- 65	48.96	1419	94.1,94.1
70	55.20	51.94	50.09	49.81	51.66	54.53	57.09	56.53	65- 70	34.09	1453	96.4,96.4
75	37.15	35.51	34.15	34.16	35.26	36.31	37.77	37.40	70- 75	22.96	1476	97.9,97.9
80	27.67	26.56	26.00	25.44	26.01	27.39	29.17	28.43	75- 80	16.82	1493	99,99
85	12.41	12.94	11.83	11.82	9.070	13.94	15.08	15.67	80- 85	11.14	1504	99.8,99.8
90	2.759	1.558	2.001	1.884	2.452	1.847	2.816	2.681	85- 90	3.734	1508	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): 1102.8 lm

%lum = 73.1%  
%lamp = 73.1%

Conical surface Flux(120deg): 1370 lm

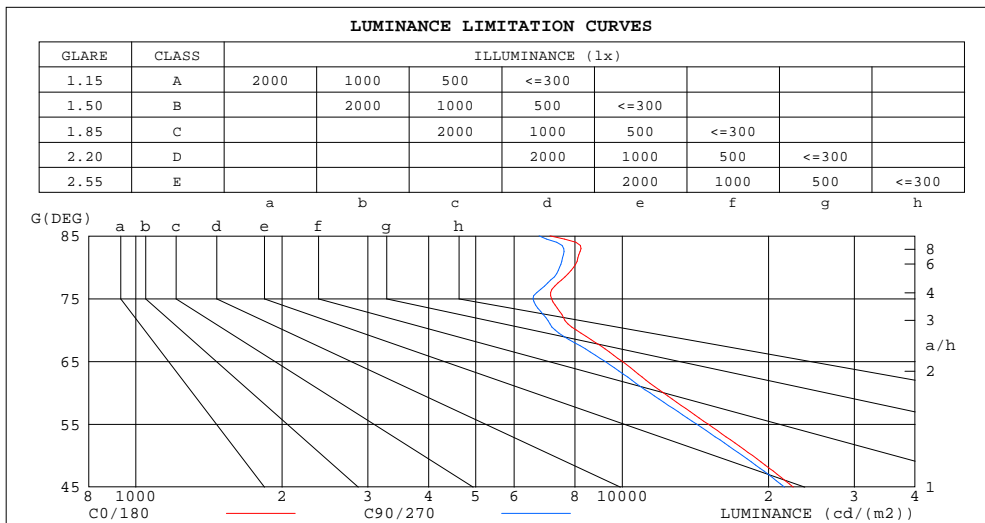
%lum = 90.9%  
%lamp = 90.9%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.7DEG  
Operators:KY  
Test Date:21 August 2015

$\gamma$  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:

**LUMINANCE LIMITATION CURVES**

Test:U:240.2V I:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	7102	6746
80	7946	7440
75	7159	6557
70	8050	7277
65	10000	9217
60	12154	11400
55	15021	14222
50	18546	17670
45	22489	21570

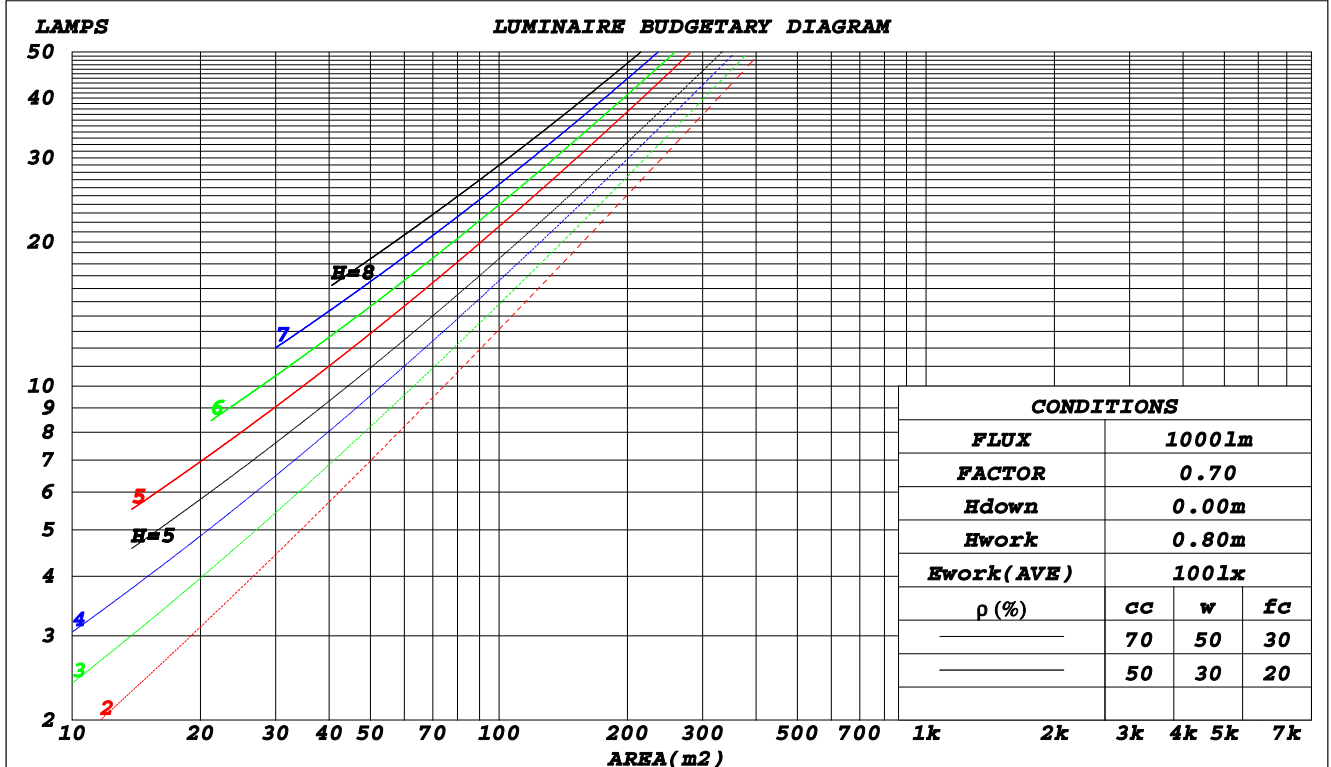
**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature:24.7DEG**  
**Operators:KY**  
**Test Date:21 August 2015**

**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:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.94	.92	.90	.88
2.0	.96	.91	.86	.95	.90	.85	.91	.87	.83	.88	.85	.82	.85	.82	.80	.78
3.0	.87	.80	.75	.86	.79	.74	.83	.77	.73	.80	.76	.72	.78	.74	.71	.69
4.0	.79	.72	.66	.78	.71	.66	.75	.69	.65	.73	.68	.64	.71	.67	.63	.61
5.0	.72	.64	.59	.71	.64	.59	.69	.63	.58	.67	.62	.57	.65	.61	.57	.55
6.0	.66	.58	.53	.65	.58	.53	.63	.57	.52	.62	.56	.52	.60	.55	.51	.50
7.0	.61	.53	.48	.60	.53	.48	.59	.52	.47	.57	.51	.47	.56	.51	.47	.45
8.0	.56	.49	.44	.56	.48	.43	.54	.48	.43	.53	.47	.43	.52	.47	.43	.41
9.0	.52	.45	.40	.52	.45	.40	.51	.44	.40	.50	.44	.40	.49	.43	.39	.38
10.0	.49	.42	.37	.48	.41	.37	.47	.41	.37	.46	.41	.37	.46	.40	.36	.35



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 24.7DEG  
 Operators: KY  
 Test Date: 21 August 2015

$\gamma$  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:

**WEC AND CCEC**

Test:U:240.2V I:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.245	.139	.044	.238	.136	.043	.225	.129	.041	.213	.123	.039	.202	.117	.038		
2.0	.234	.128	.039	.228	.126	.039	.217	.121	.037	.207	.116	.036	.197	.111	.035		
3.0	.220	.117	.035	.215	.115	.035	.205	.111	.034	.196	.108	.033	.188	.104	.032		
4.0	.207	.108	.032	.202	.106	.031	.194	.103	.031	.186	.100	.030	.178	.097	.030		
5.0	.194	.099	.029	.190	.098	.028	.183	.095	.028	.176	.093	.028	.169	.090	.027		
6.0	.183	.092	.026	.179	.091	.026	.172	.088	.026	.166	.086	.025	.160	.084	.025		
7.0	.172	.085	.024	.169	.084	.024	.163	.082	.024	.157	.081	.023	.152	.079	.023		
8.0	.163	.079	.022	.160	.079	.022	.154	.077	.022	.149	.076	.022	.145	.074	.022		
9.0	.154	.074	.021	.151	.074	.021	.146	.072	.021	.142	.071	.020	.138	.070	.020		
10.0	.146	.070	.019	.144	.069	.019	.139	.068	.019	.135	.067	.019	.131	.066	.019		

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	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	.176	.157	.139	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016		
2.0	.165	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012		
3.0	.155	.114	.081	.133	.098	.070	.091	.068	.049	.053	.040	.029	.017	.013	.010		
4.0	.146	.100	.065	.126	.086	.056	.086	.060	.040	.050	.035	.023	.016	.011	.008		
5.0	.139	.089	.053	.119	.077	.046	.082	.054	.032	.048	.032	.019	.015	.010	.006		
6.0	.132	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005		
7.0	.125	.073	.037	.108	.064	.032	.075	.045	.023	.043	.026	.014	.014	.009	.004		
8.0	.119	.067	.032	.103	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004		
9.0	.114	.062	.028	.098	.054	.024	.068	.038	.017	.040	.022	.010	.013	.007	.003		
10.0	.109	.058	.024	.094	.050	.021	.065	.035	.015	.038	.021	.009	.012	.007	.003		

**C Range: 0 - 360DEG**
**C Interval: 22.5DEG**
**Test Speed: HIGH**
**Temperature:24.7DEG**
**Operators:KY**
**Test Date:21 August 2015**
 **$\gamma$  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:**

**UGR(Unified Glare Rating) Table**

Test:U:240.2V I:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm										
NAME: DeepC160_WHT_25.2W_700mA_4K					TYPE:LED			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
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	21.2	22.5	21.4	22.7	22.8	21.0	22.3	21.3	22.5	22.7
3H	21.7	22.9	22.0	23.1	23.3	21.5	22.7	21.8	22.9	23.1
4H	21.9	23.0	22.2	23.3	23.5	21.7	22.8	22.0	23.0	23.3
6H	22.1	23.2	22.5	23.4	23.7	21.9	22.9	22.2	23.2	23.4
8H	22.2	23.3	22.6	23.5	23.8	22.0	23.0	22.3	23.3	23.5
12H	22.3	23.3	22.7	23.6	23.9	22.0	23.0	22.4	23.3	23.6
4H 2H	21.4	22.5	21.7	22.7	23.0	21.2	22.3	21.5	22.6	22.8
3H	22.0	23.0	22.4	23.3	23.6	21.8	22.8	22.2	23.1	23.4
4H	22.3	23.2	22.7	23.5	23.9	22.1	23.0	22.5	23.3	23.6
6H	22.7	23.5	23.1	23.8	24.2	22.5	23.2	22.9	23.6	23.9
8H	22.9	23.6	23.3	24.0	24.3	22.6	23.4	23.0	23.7	24.1
12H	23.0	23.7	23.4	24.0	24.4	22.8	23.4	23.2	23.8	24.2
8H 4H	22.4	23.1	22.8	23.5	23.9	22.2	22.9	22.6	23.3	23.7
6H	22.9	23.5	23.4	23.9	24.3	22.7	23.3	23.2	23.7	24.1
8H	23.2	23.7	23.7	24.1	24.6	23.0	23.5	23.4	23.9	24.4
12H	23.4	23.9	23.9	24.3	24.8	23.2	23.6	23.7	24.1	24.6
12H 4H	22.4	23.1	22.8	23.5	23.9	22.2	22.9	22.6	23.2	23.6
6H	23.0	23.5	23.4	23.9	24.4	22.8	23.3	23.2	23.7	24.2
8H	23.3	23.7	23.8	24.2	24.6	23.1	23.5	23.5	24.0	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.7					+ 0.6 / - 0.7				
1.5H	+ 0.4 / - 0.3					+ 0.4 / - 0.3				
2.0H	+ 1.2 / - 0.9					+ 1.2 / - 0.9				

CIE Pub.117 Corrected 1508 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.4)

**C Range:** 0 - 360DEG  
**C Interval:** 22.5DEG  
**Test Speed:** HIGH  
**Temperature:**24.7DEG  
**Operators:**KY  
**Test Date:**21 August 2015

**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:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

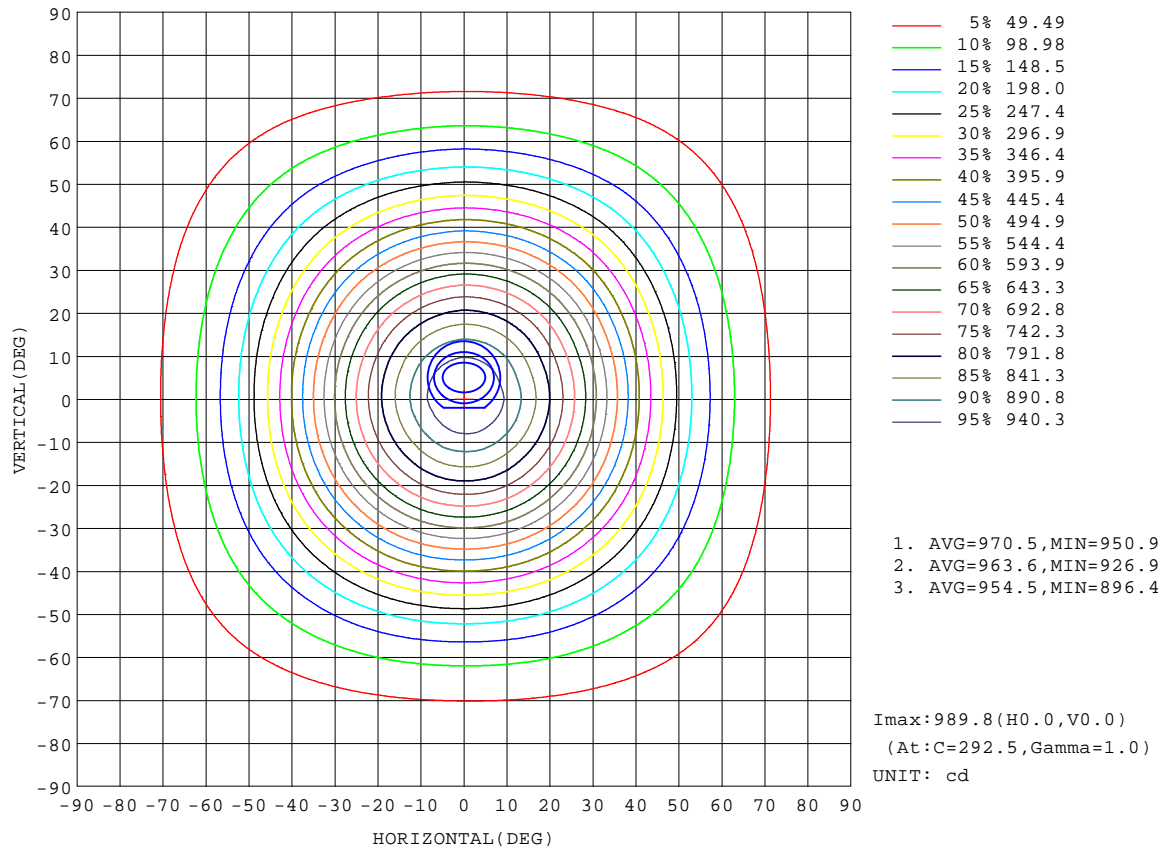
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	69	60	54	68	59	54	67	59	54	48
0.80	79	69	63	78	69	63	76	68	63	57
1.00	86	77	72	85	77	71	83	78	71	65
1.25	92	84	78	91	83	78	88	82	77	71
1.50	96	89	83	95	88	83	92	86	82	76
2.00	101	95	90	100	94	89	97	92	88	81
2.50	104	98	94	102	97	93	99	94	91	84
3.00	107	101	97	105	100	96	101	97	94	87
4.00	110	105	102	107	104	100	104	100	98	90
5.00	111	108	105	109	106	103	105	102	100	92
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNM = 1.25		

**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature:24.7DEG**  
**Operators:KY**  
**Test Date:21 August 2015**

**$\gamma$  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:240.2V I:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



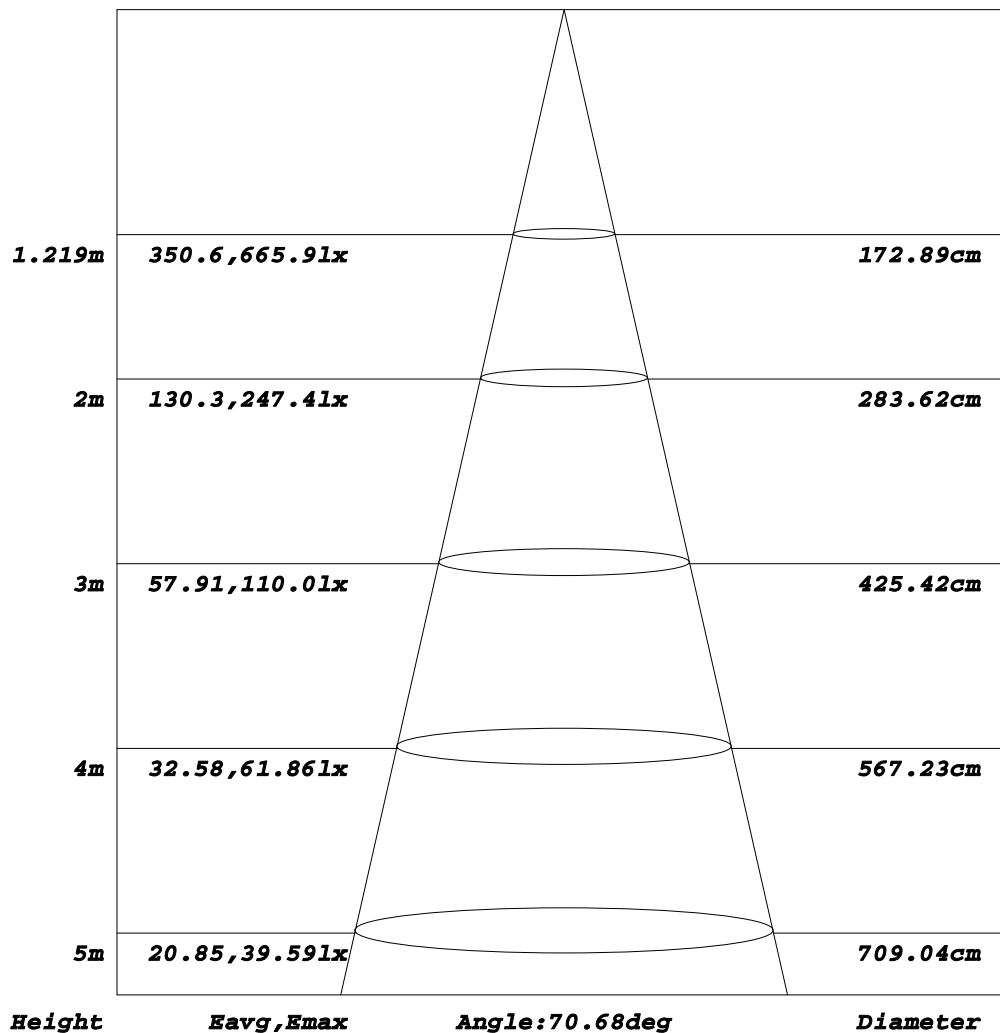
**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature:24.7DEG**  
**Operators:KY**  
**Test Date:21 August 2015**

**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:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

**Flux out:833.1 lm**


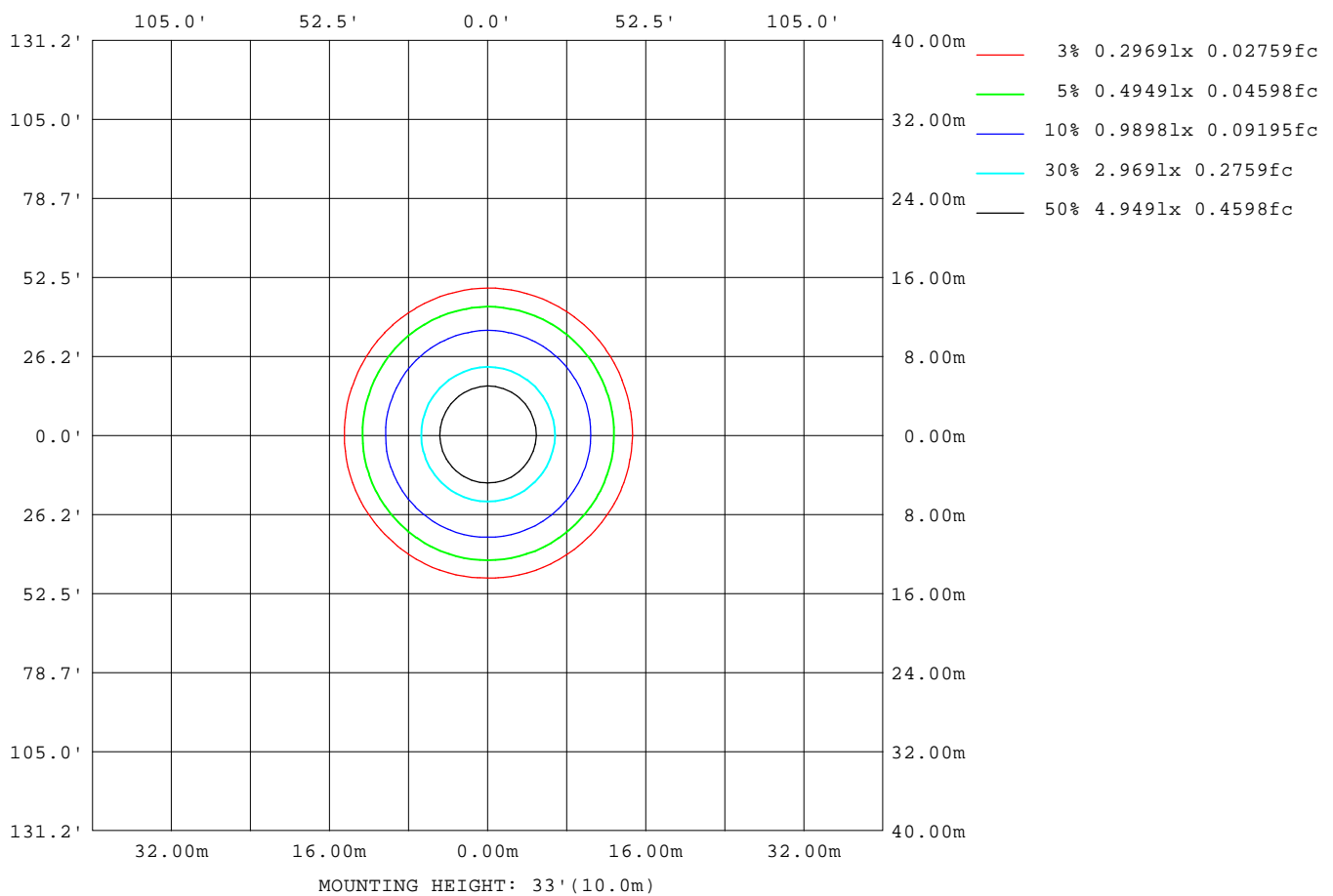
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature: 24.7DEG**  
**Operators: KY**  
**Test Date: 21 August 2015**

**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:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature: 24.7DEG**  
**Operators: KY**  
**Test Date: 21 August 2015**

**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:0.1152A P:25.03W PF:0.9046 Lamp Flux:1507.72x1 lm		
NAME: DeepC160_WHT_25.2W_700mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

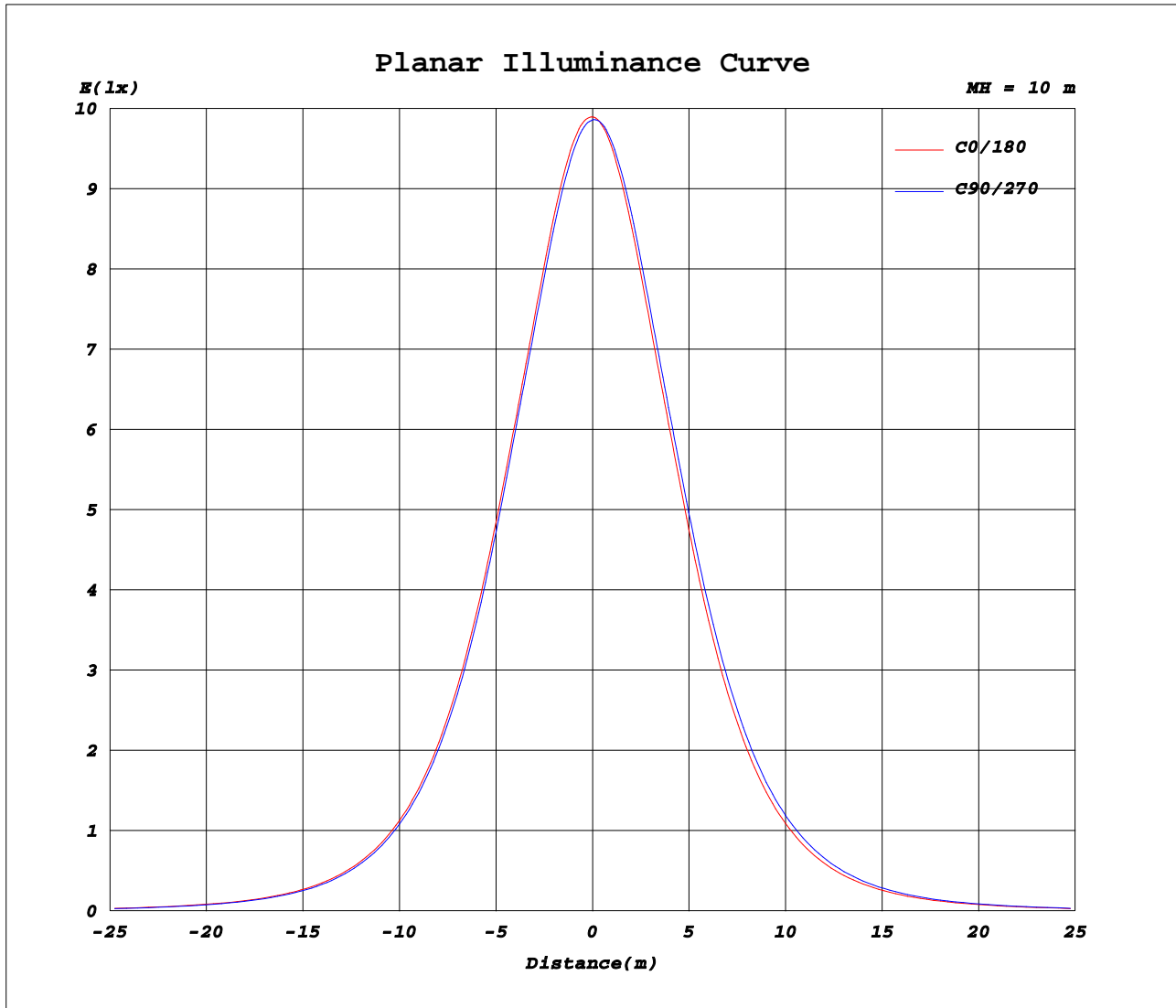
AvgL	cd/m2
L_0~180(65)av	9707
L_0~180(75)av	6957
L_0~180(85)av	6129
L_90~270(65)av	9822
L_90~270(75)av	6911
L_90~270(85)av	7679
L_45(65)av	9735
L_45(75)av	6888
L_45(85)av	7756

Standard: GB/T 29293-2012

**C Range: 0 - 360DEG**  
**C Interval: 22.5DEG**  
**Test Speed: HIGH**  
**Temperature:24.7DEG**  
**Operators:KY**  
**Test Date:21 August 2015**

**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: 24.7DEG**  
**Operators: KY**  
**Test Date: 21 August 2015**

**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:**

