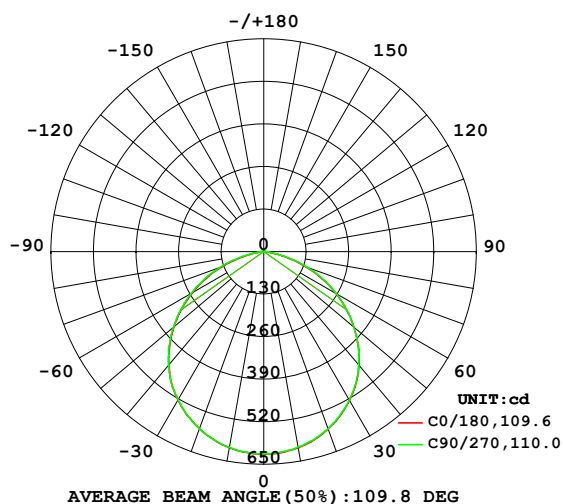


## LUMINAIRE PHOTOMETRIC TEST REPORT

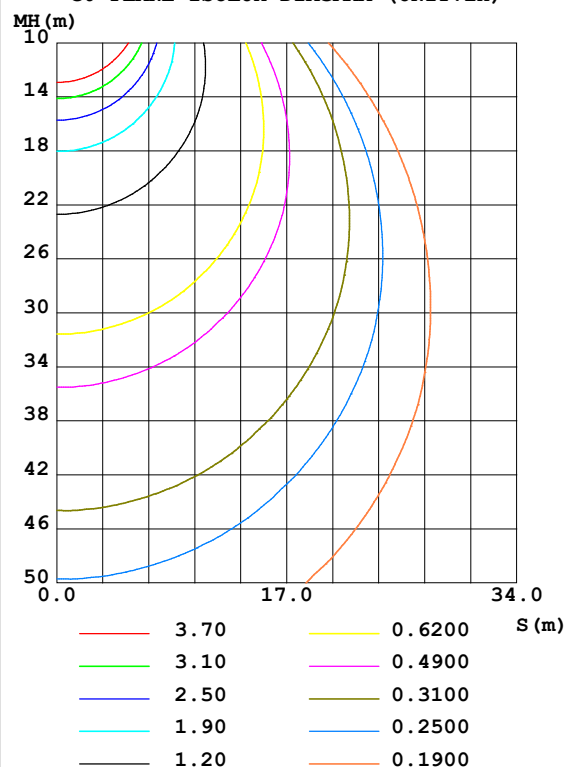
Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 79.47 lm/W			
MODEL 160mm 3000lm 930 ADV5		Imax(cd)	619.2	S/MH(C0/180)	1.26
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	1673.8	$\eta$ UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	1673.81	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:02 October 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [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	608.5	607.7	606.3	607.0	608.0	607.4	607.1	607.0	0- 10	58.52	58.52	3.5,3.5
20	576.6	575.3	575.5	575.4	576.0	575.2	575.5	575.8	10- 20	167.7	226.3	13.5,13.5
30	524.7	523.8	523.1	522.2	524.4	524.5	523.7	524.5	20- 30	254.5	480.7	28.7,28.7
40	453.1	452.6	451.6	449.9	451.7	451.6	452.8	453.2	30- 40	307.0	787.7	47.1,47.1
50	360.2	360.1	359.6	358.1	358.9	359.8	360.8	360.9	40- 50	314.4	1102	65.8,65.8
60	254.2	255.2	255.7	253.3	252.7	254.5	256.7	256.5	50- 60	275.6	1378	82.3,82.3
70	138.7	141.7	143.7	139.9	136.1	140.6	144.4	143.3	60- 70	196.2	1574	94,94
80	28.76	29.84	34.01	28.47	26.91	29.17	34.69	30.89	70- 80	87.53	1661	99.3,99.3
90	0.5646	0.5456	0.5274	0.5640	0.4106	0.4138	0.5017	0.4615	80- 90	12.38	1674	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): 946.97 lm

%lum = 56.6%

%lamp = 56.6%

Conical surface Flux(120deg): 1377.7 lm

%lum = 82.3%

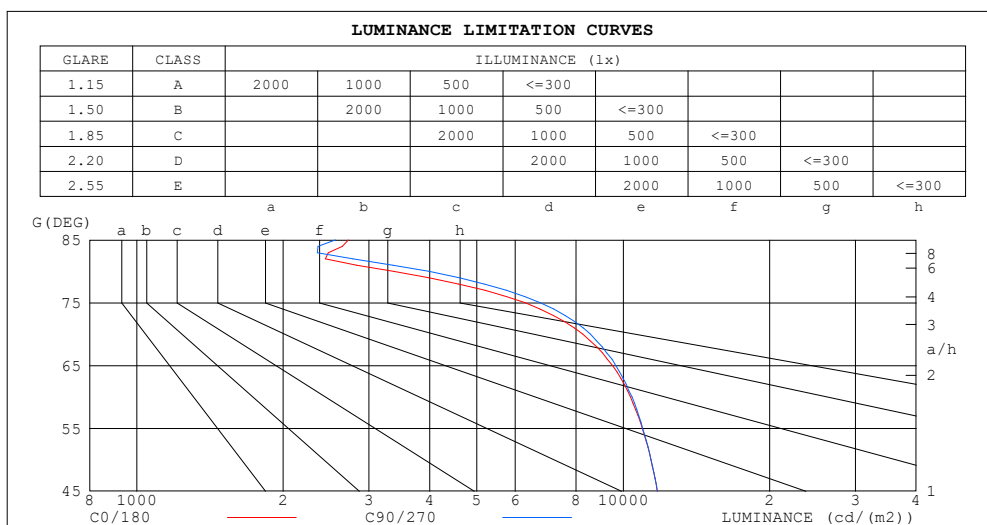
%lamp = 82.3%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JEFF  
 Test Date:02 October 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:7.888m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



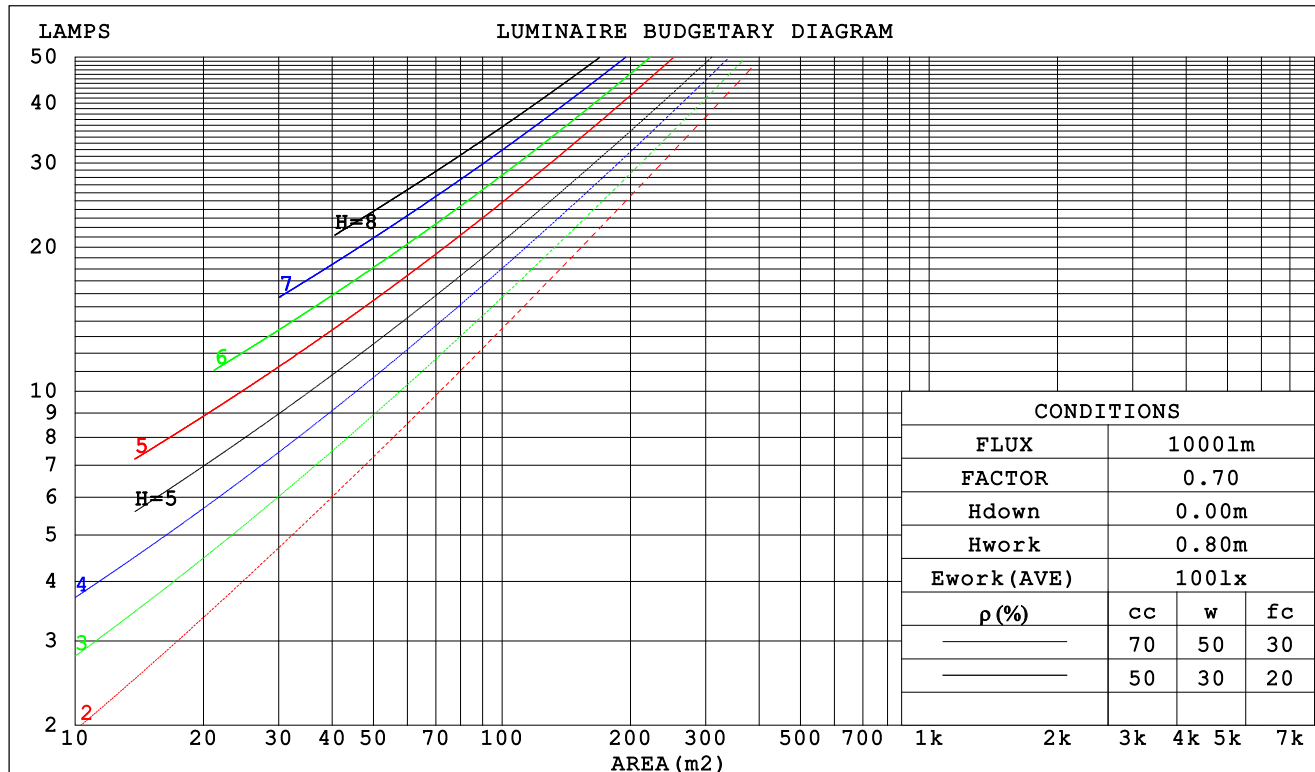
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:02 October 2024

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	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	1.05	1.01	.97	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.80	.90	.84	.79	.87	.82	.77	.83	.79	.75	.80	.77	.74	.72
3.0	.81	.73	.67	.79	.72	.66	.77	.70	.65	.74	.68	.64	.71	.67	.63	.61
4.0	.72	.63	.57	.71	.63	.56	.68	.61	.56	.66	.60	.55	.64	.58	.54	.52
5.0	.64	.55	.49	.63	.55	.49	.61	.54	.48	.59	.53	.48	.57	.52	.47	.45
6.0	.58	.49	.43	.57	.49	.43	.55	.48	.42	.53	.47	.42	.52	.46	.41	.39
7.0	.53	.44	.38	.52	.43	.38	.50	.43	.37	.49	.42	.37	.47	.41	.37	.35
8.0	.48	.40	.34	.47	.39	.34	.46	.39	.33	.45	.38	.33	.44	.37	.33	.31
9.0	.44	.36	.30	.43	.36	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.28
10.0	.41	.33	.28	.40	.33	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:JEFF

Test Date:02 October 2024

 $\gamma$  Range: 0 - 90DEG $\gamma$  Interval: 1.0DEG

Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295

Humidity:65.0%

Test Distance:7.888m [K=1.0000]

Remarks:

**WEC AND CCEC**

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
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	.287	.163	.052	.280	.160	.051	.267	.153	.049	.255	.147	.047	.244	.141	.046		
2.0	.277	.152	.047	.270	.149	.046	.259	.144	.045	.248	.139	.044	.238	.135	.043		
3.0	.259	.138	.041	.254	.136	.041	.244	.132	.040	.234	.128	.039	.225	.125	.039		
4.0	.241	.125	.037	.236	.124	.037	.227	.121	.036	.219	.118	.035	.211	.115	.035		
5.0	.224	.114	.033	.220	.113	.033	.212	.110	.033	.205	.108	.032	.198	.106	.032		
6.0	.209	.105	.030	.205	.104	.030	.198	.101	.030	.191	.099	.029	.185	.097	.029		
7.0	.195	.096	.027	.192	.096	.027	.185	.094	.027	.179	.092	.027	.174	.090	.027		
8.0	.183	.089	.025	.180	.088	.025	.174	.087	.025	.169	.085	.025	.163	.084	.024		
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.154	.078	.023		
10.0	.162	.077	.022	.159	.077	.021	.154	.076	.021	.150	.075	.021	.146	.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	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.018	.015	.011	
3.0	.162	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.133	.087	.052	.091	.061	.036	.053	.036	.022	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.030	.051	.032	.018	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:02 October 2024

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm										
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90					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	22.7	21.5	22.9	23.1	21.2	22.7	21.5	22.9	23.1
3H	22.4	23.8	22.7	24.0	24.3	22.5	23.9	22.8	24.1	24.4
4H	22.8	24.1	23.1	24.3	24.6	22.9	24.2	23.2	24.4	24.7
6H	22.9	24.1	23.2	24.4	24.6	23.0	24.2	23.3	24.5	24.8
8H	22.8	24.0	23.2	24.3	24.6	23.0	24.2	23.3	24.4	24.7
12H	22.8	23.9	23.2	24.2	24.5	23.0	24.1	23.3	24.4	24.7
4H 2H	21.8	23.1	22.1	23.3	23.6	21.8	23.1	22.1	23.3	23.6
3H	23.1	24.3	23.5	24.6	24.9	23.2	24.3	23.6	24.6	24.9
4H	23.6	24.6	23.9	24.9	25.2	23.7	24.7	24.0	25.0	25.3
6H	23.7	24.6	24.1	25.0	25.3	23.8	24.8	24.2	25.1	25.5
8H	23.7	24.5	24.1	24.9	25.3	23.8	24.7	24.2	25.0	25.4
12H	23.7	24.5	24.1	24.8	25.2	23.8	24.6	24.2	25.0	25.4
8H 4H	23.7	24.5	24.1	24.9	25.3	23.8	24.6	24.2	25.0	25.4
6H	23.9	24.6	24.3	25.0	25.4	24.0	24.7	24.4	25.1	25.5
8H	23.9	24.5	24.3	24.9	25.4	24.0	24.6	24.5	25.1	25.5
12H	23.9	24.4	24.4	24.9	25.4	24.0	24.6	24.5	25.0	25.5
12H 4H	23.7	24.4	24.1	24.8	25.2	23.7	24.5	24.2	24.9	25.3
6H	23.9	24.5	24.3	24.9	25.3	24.0	24.6	24.4	25.0	25.5
8H	23.9	24.4	24.4	24.9	25.3	24.0	24.5	24.5	25.0	25.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.3				

CIE Pub.117 Corrected 1674 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:JEFF  
Test Date:02 October 2024

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

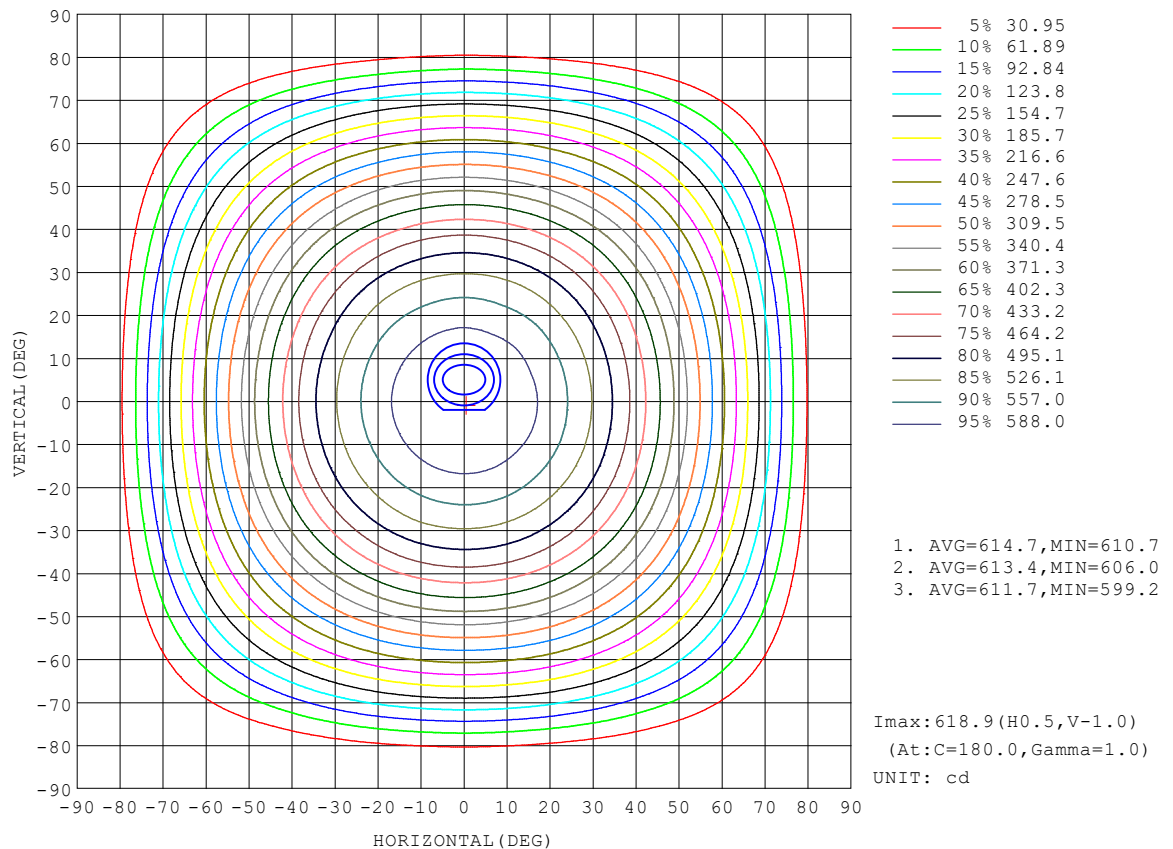
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	47	40	58	47	40	57	47	40	34
0.80	69	58	50	68	57	50	66	56	50	43
1.00	78	67	60	76	66	59	74	68	59	52
1.25	85	75	68	83	74	67	81	72	67	59
1.50	90	80	74	88	79	73	85	78	72	65
2.00	96	88	82	95	87	81	91	85	80	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	92	101	95	91	97	93	89	80
4.00	107	102	98	105	100	96	101	97	94	85
5.00	110	105	101	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:JEFF  
Test Date:02 October 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



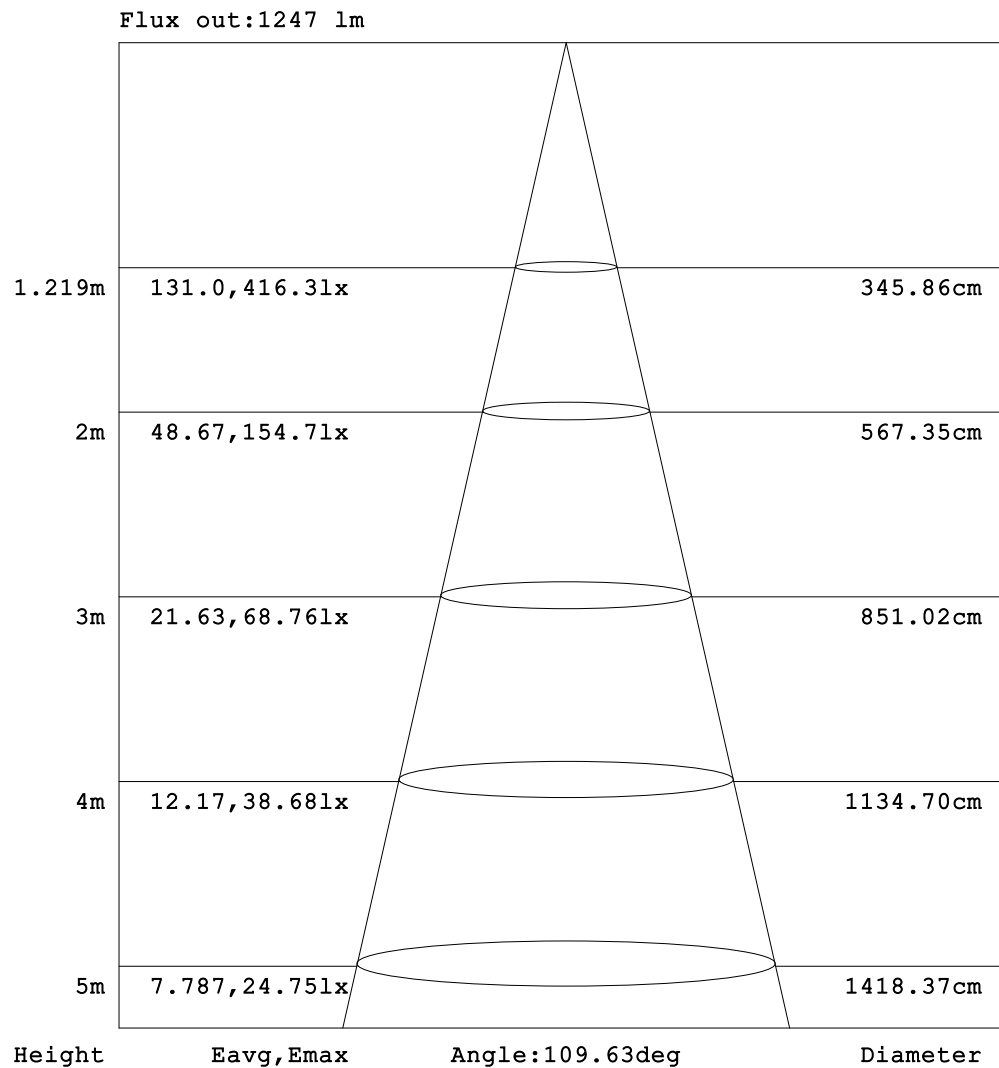
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:02 October 2024

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



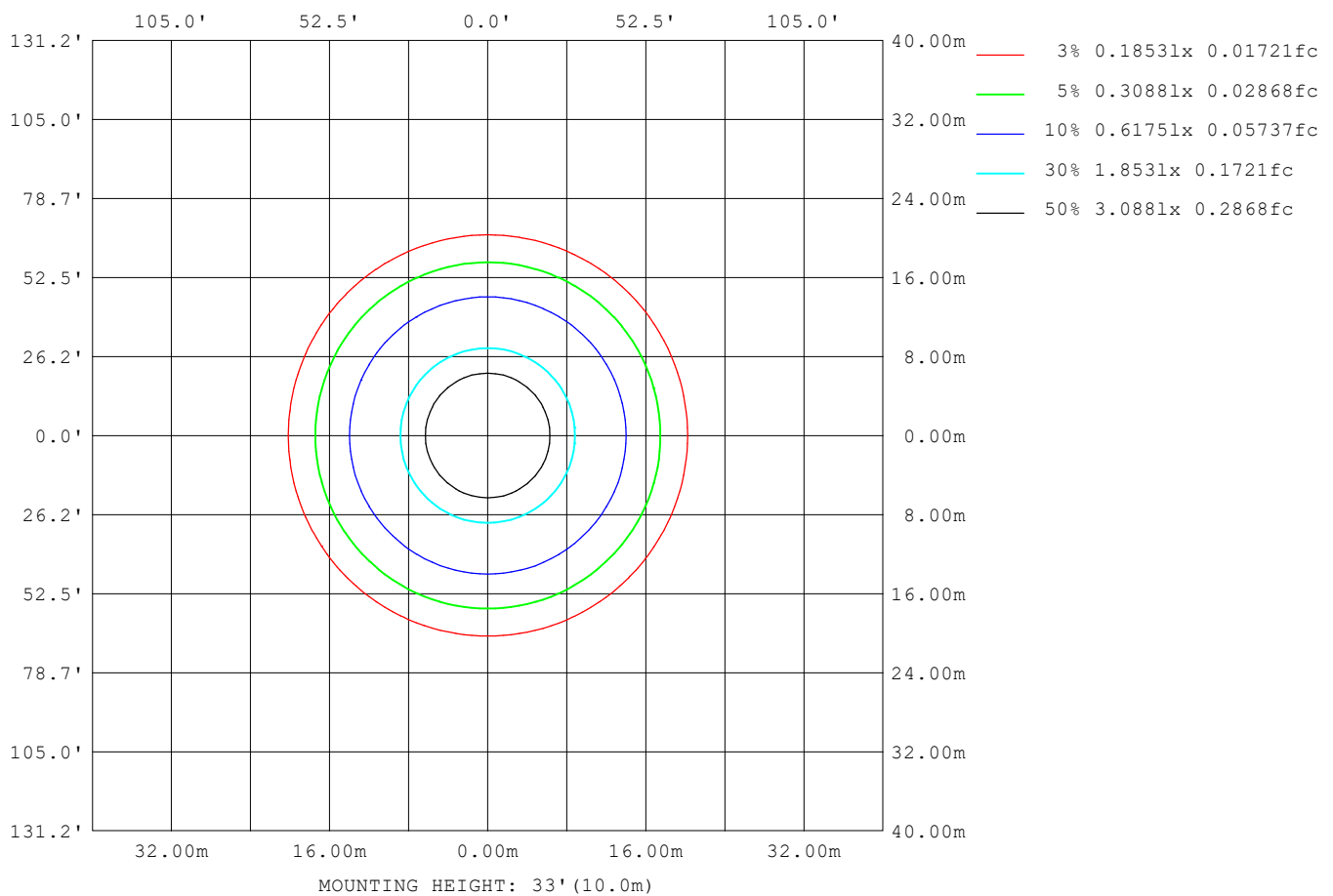
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:02 October 2024

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	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:25.3DEG  
Operators:JEFF  
Test Date:02 October 2024

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:239.9V I:0.0949A P:21.06W PF:0.9252 Lamp Flux:1673.81x1 lm		
NAME: DEEP C 310_NA_WHT_OPAL_500mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

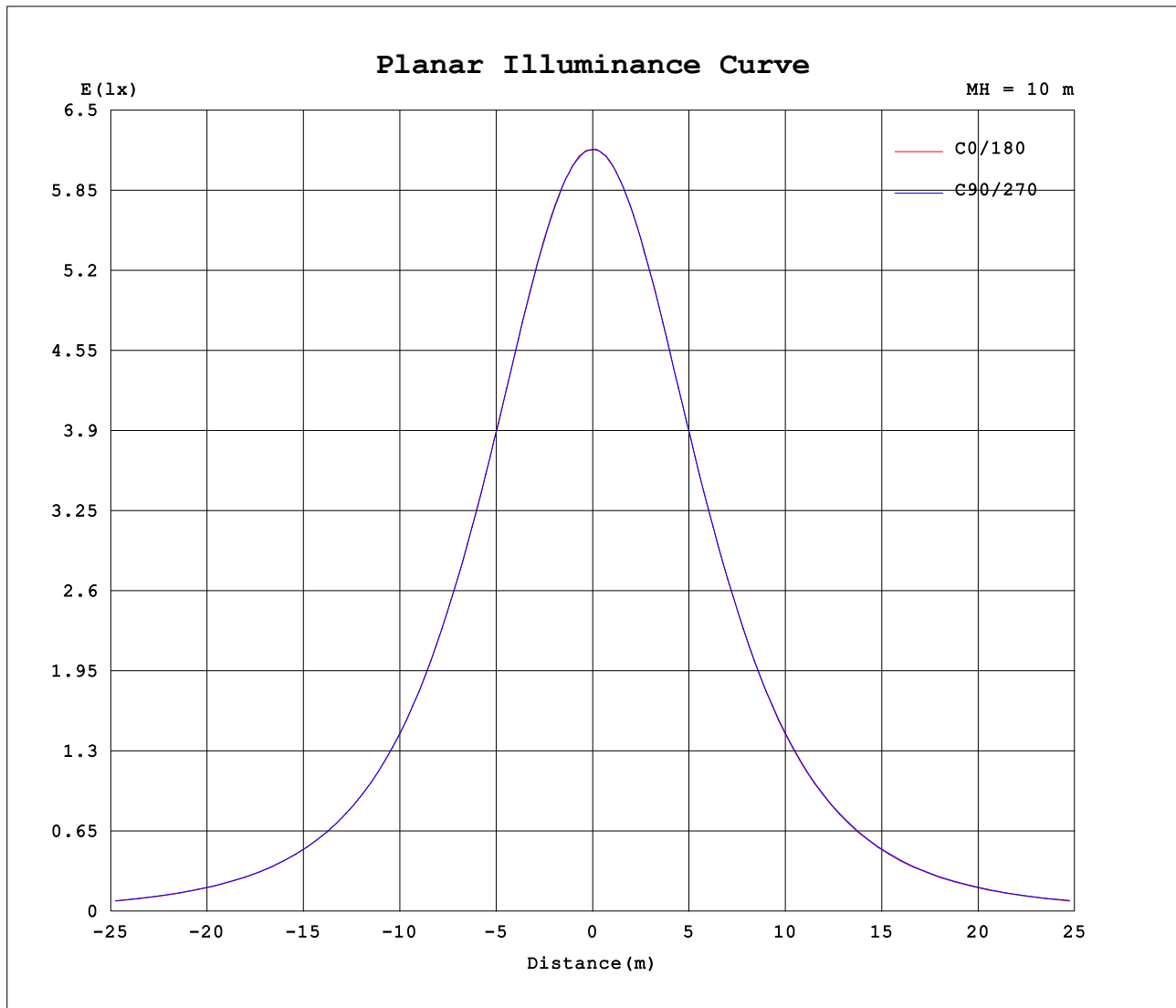
AvgL	cd/m2
L_0~180 (65) av	9458
L_0~180 (75) av	6186
L_0~180 (85) av	2631
L_90~270 (65) av	9661
L_90~270 (75) av	6789
L_90~270 (85) av	2588
L_45 (65) av	9587
L_45 (75) av	6426
L_45 (85) av	2432

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:02 October 2024

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 02 October 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.888m [K=1.0000]  
Remarks:

