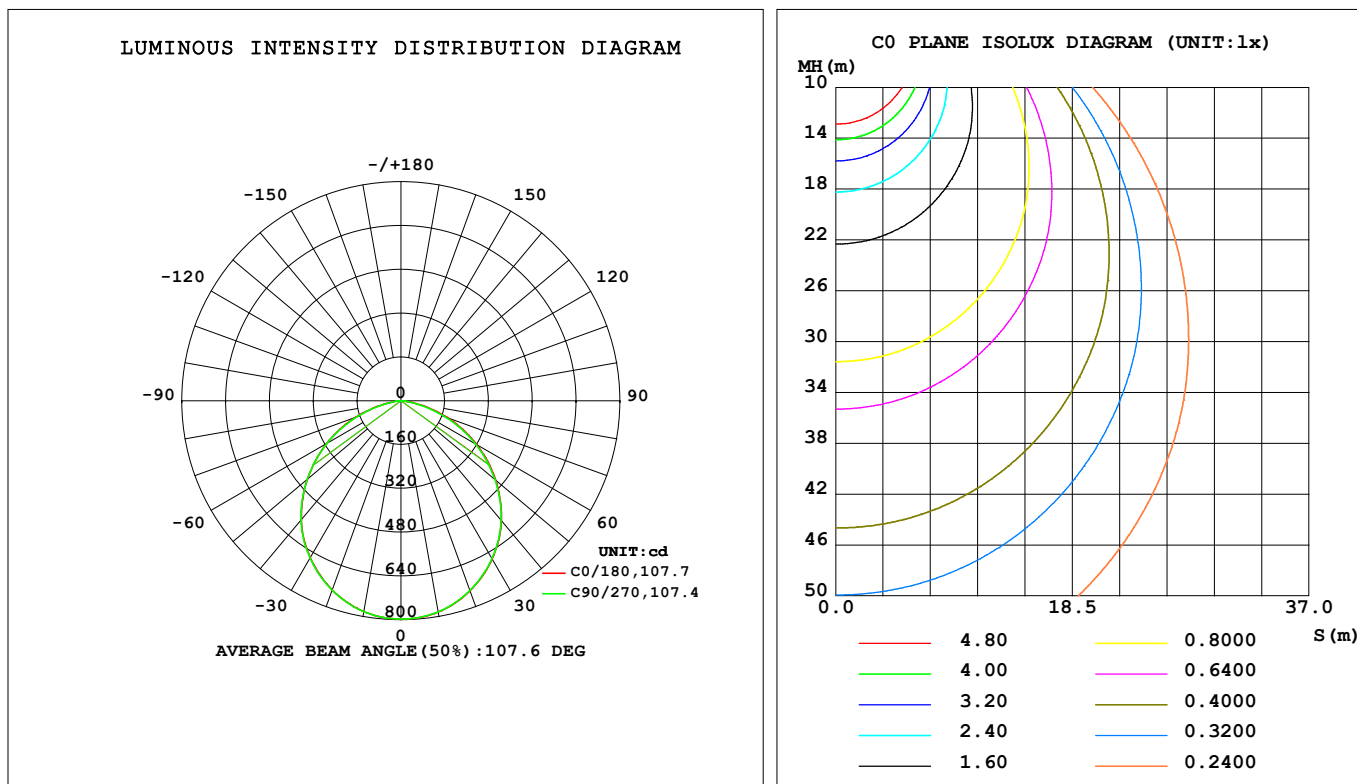


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 102.85 lm/W
MODELE	160mm 3000lm 830 ADV4	I _{max} (cd)	797.8	S/MH (C0/180)	1.24	
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.24	
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	2106.4	η UP,DN (C0-180)	0.0,50.1	
NOMINAL FLUX (lm)	2106.42	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.9	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	1.35	



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [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
10	783.7	783.6	783.0	782.1	781.7	781.6	782.2	782.8	0- 10	75.42	75.42	3.58,3.58
20	738.6	738.6	737.4	736.0	735.2	735.1	735.9	737.1	10- 20	215.3	290.7	13.8,13.8
30	666.9	666.8	665.5	663.7	662.5	662.6	663.6	665.0	20- 30	324.2	614.9	29.2,29.2
40	571.3	570.8	569.0	567.2	566.3	566.5	567.5	569.4	30- 40	387.6	1003	47.6,47.6
50	451.7	451.0	448.3	447.1	446.4	446.6	446.8	449.3	40- 50	393.5	1396	66.3,66.3
60	319.6	317.9	313.9	314.3	314.1	313.9	312.4	316.5	50- 60	342.1	1738	82.5,82.5
70	180.3	177.2	170.2	173.5	175.2	173.8	169.9	176.5	60- 70	242.5	1981	94,94
80	46.10	39.42	36.48	37.39	42.12	37.39	36.35	39.29	70- 80	109.3	2090	99.2,99.2
90	1.388	1.078	0.9591	1.053	1.075	1.094	1.019	1.131	80- 90	16.39	2106	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): 1202.3 lm

%lum = 57.1%

%lamp = 57.1%

Conical surface Flux(120deg): 1738.2 lm

%lum = 82.5%

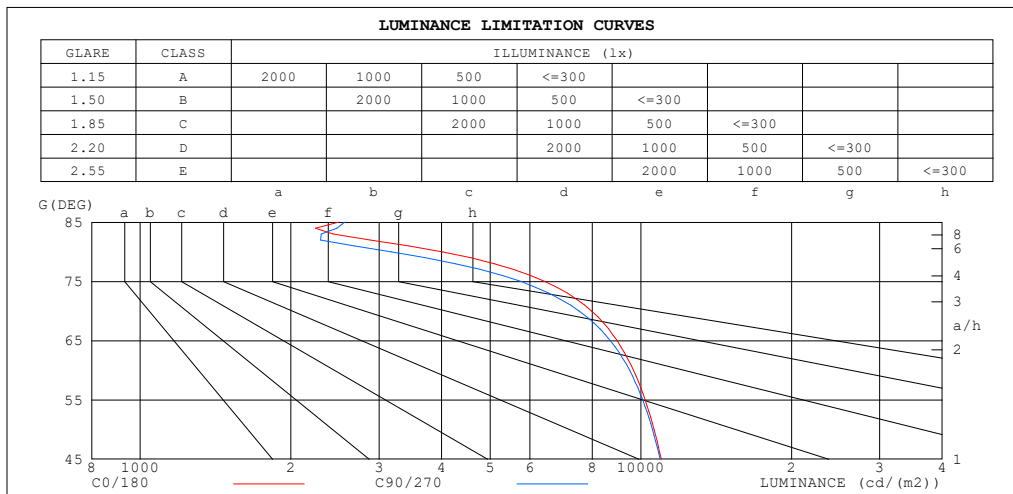
%lamp = 82.5%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2491	2560
80	4017	3178
75	6421	5760
70	7977	7530
65	8967	8694
60	9669	9497
55	10203	10090
50	10630	10552
45	10987	10930

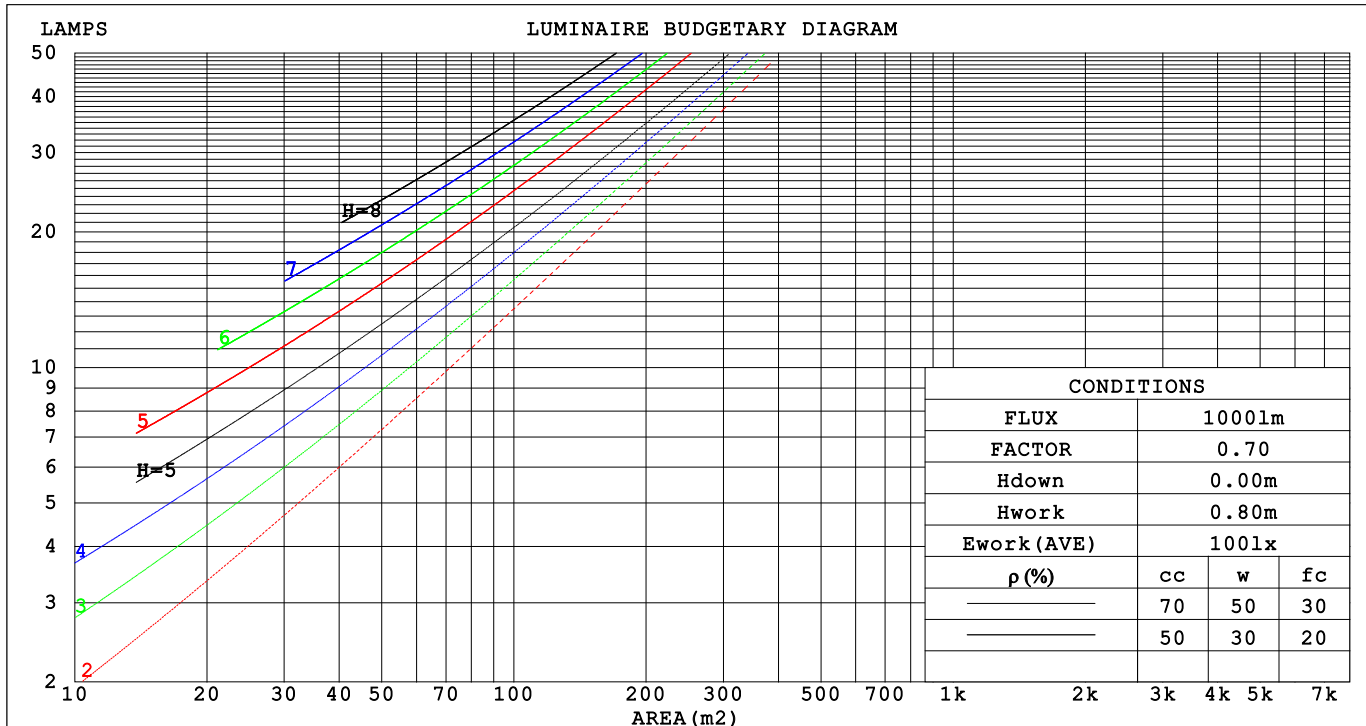
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	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:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	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	.286	.163	.052	.279	.159	.051	.266	.153	.049	.254	.147	.047	.243	.141	.045	
2.0	.276	.151	.046	.269	.148	.046	.258	.143	.045	.247	.139	.043	.237	.134	.042	
3.0	.258	.137	.041	.253	.135	.041	.243	.131	.040	.233	.128	.039	.224	.124	.038	
4.0	.240	.125	.037	.235	.123	.036	.226	.120	.036	.218	.117	.035	.210	.114	.035	
5.0	.223	.114	.033	.219	.113	.033	.211	.110	.032	.204	.107	.032	.197	.105	.032	
6.0	.208	.104	.030	.204	.103	.030	.197	.101	.029	.191	.099	.029	.184	.097	.029	
7.0	.194	.096	.027	.191	.095	.027	.185	.093	.027	.179	.092	.027	.173	.090	.026	
8.0	.182	.089	.025	.179	.088	.025	.173	.087	.025	.168	.085	.025	.163	.084	.024	
9.0	.171	.083	.023	.168	.082	.023	.163	.081	.023	.158	.079	.023	.154	.078	.023	
10.0	.161	.077	.021	.159	.077	.021	.154	.075	.021	.150	.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	.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	.012	
3.0	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.060	.133	.087	.052	.091	.061	.036	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.127	.078	.042	.087	.055	.030	.051	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.029	.079	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.127	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.026	.105	.056	.022	.073	.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:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm											
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K						TYPE:LED		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	18.4	19.9	18.6	20.1	20.3	18.3	19.8	18.6	20.0	20.2	
	19.7	21.0	20.0	21.3	21.5	19.5	20.9	19.8	21.1	21.4	
	20.1	21.3	20.4	21.6	21.9	19.9	21.2	20.2	21.4	21.7	
	20.2	21.4	20.5	21.7	22.0	20.0	21.2	20.3	21.4	21.7	
	20.2	21.4	20.5	21.6	21.9	19.9	21.1	20.3	21.4	21.7	
	20.2	21.3	20.5	21.6	21.9	19.9	21.0	20.3	21.3	21.6	
4H 2H	18.9	20.2	19.2	20.5	20.7	18.9	20.2	19.2	20.4	20.7	
	20.4	21.5	20.7	21.8	22.1	20.2	21.4	20.6	21.7	22.0	
	20.8	21.9	21.2	22.2	22.5	20.7	21.7	21.0	22.0	22.3	
	21.0	21.9	21.4	22.3	22.7	20.8	21.7	21.2	22.1	22.4	
	21.0	21.9	21.5	22.3	22.6	20.8	21.6	21.2	22.0	22.4	
	21.0	21.8	21.5	22.2	22.6	20.8	21.6	21.2	21.9	22.3	
8H 4H	20.9	21.8	21.4	22.2	22.5	20.8	21.6	21.2	22.0	22.4	
	21.2	21.9	21.7	22.3	22.7	21.0	21.7	21.4	22.1	22.5	
	21.2	21.9	21.7	22.3	22.7	21.0	21.6	21.5	22.0	22.5	
	21.3	21.8	21.7	22.2	22.7	21.0	21.6	21.5	22.0	22.5	
12H 4H	20.9	21.7	21.3	22.1	22.5	20.8	21.5	21.2	21.9	22.3	
	21.2	21.8	21.7	22.2	22.7	21.0	21.6	21.4	22.0	22.5	
	21.2	21.8	21.7	22.2	22.7	21.0	21.5	21.5	22.0	22.5	
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 / - 0.3					+ 0.3 / - 0.4					

CIE Pub.117, 2106 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.6)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: DARKON	SUR.:	Shielding Angle:

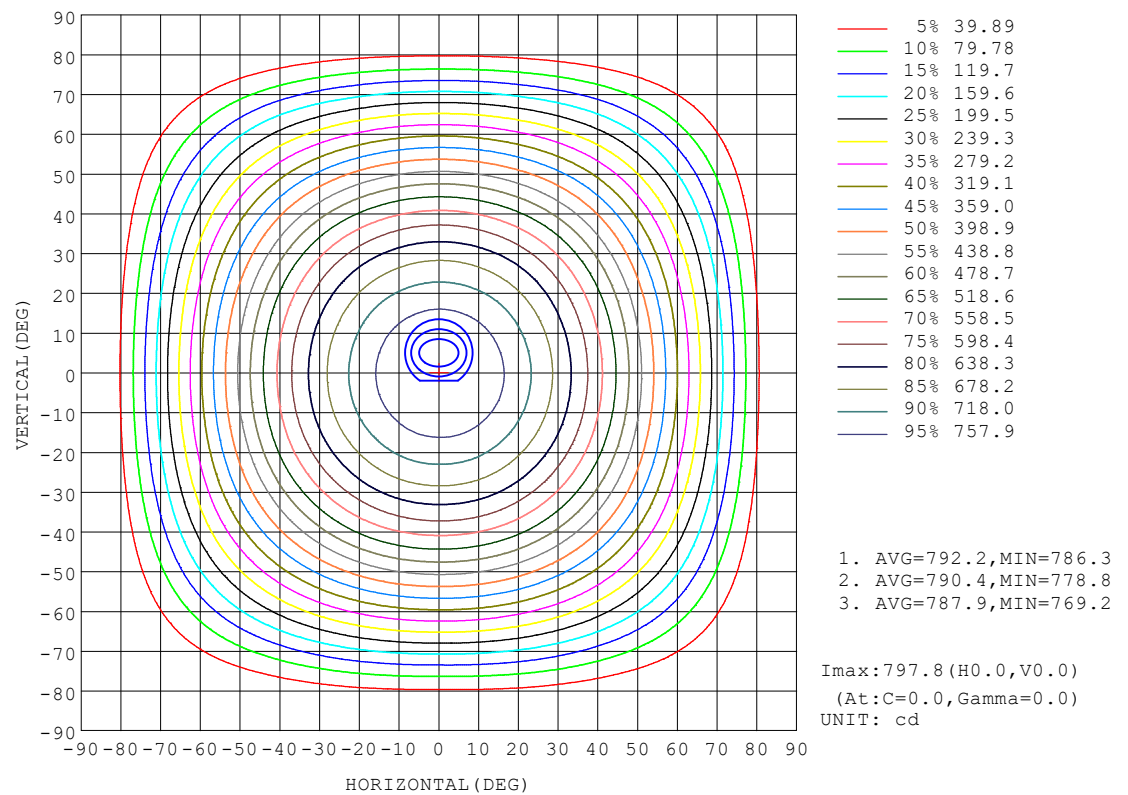
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	58	47	41	57	47	41	34
0.80	69	58	51	68	58	51	67	57	50	44
1.00	78	67	60	77	67	60	74	68	59	52
1.25	85	75	68	83	74	68	81	73	67	60
1.50	90	80	74	88	80	73	85	78	72	65
2.00	97	89	82	95	87	82	91	85	80	73
2.50	100	93	87	98	92	86	95	89	85	77
3.00	104	97	92	101	96	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:20 August 2020

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: DARKON	SUR.:	Shielding Angle:

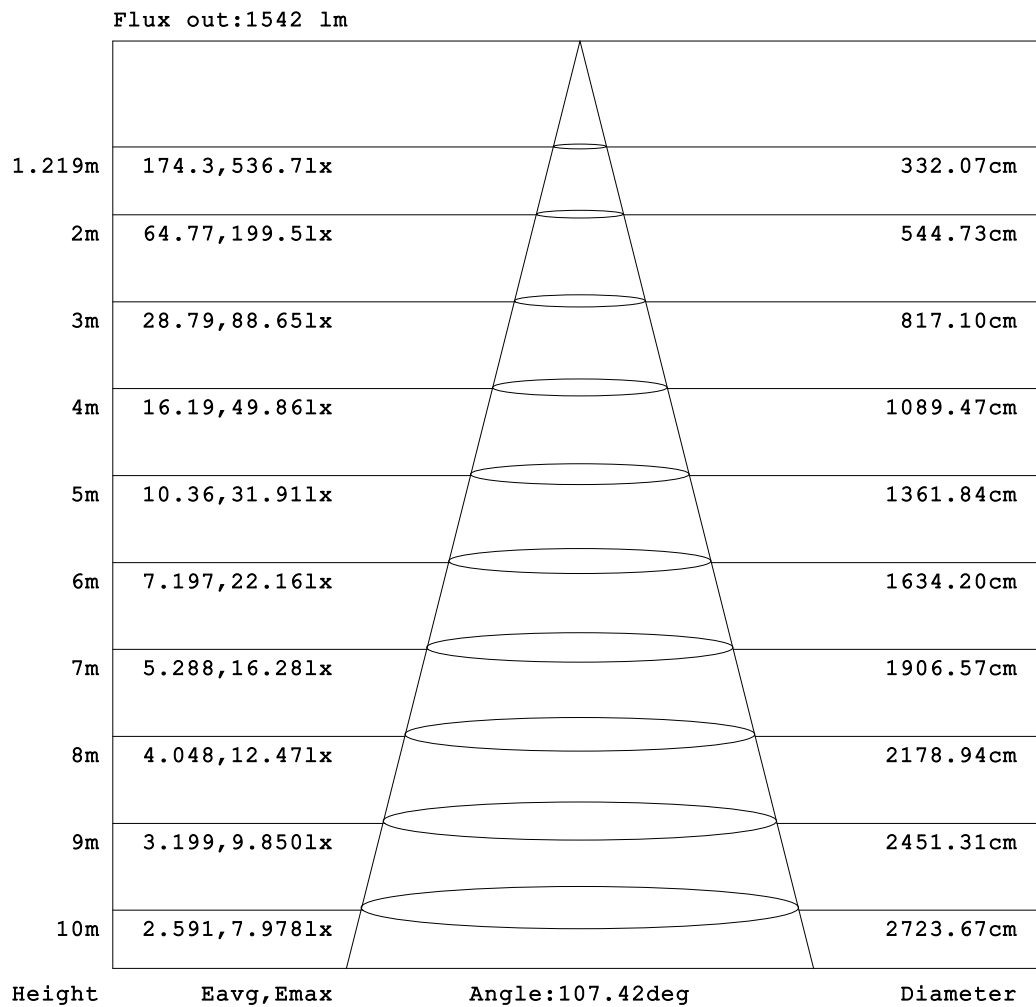


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: DARKON	SUR.:	Shielding Angle:



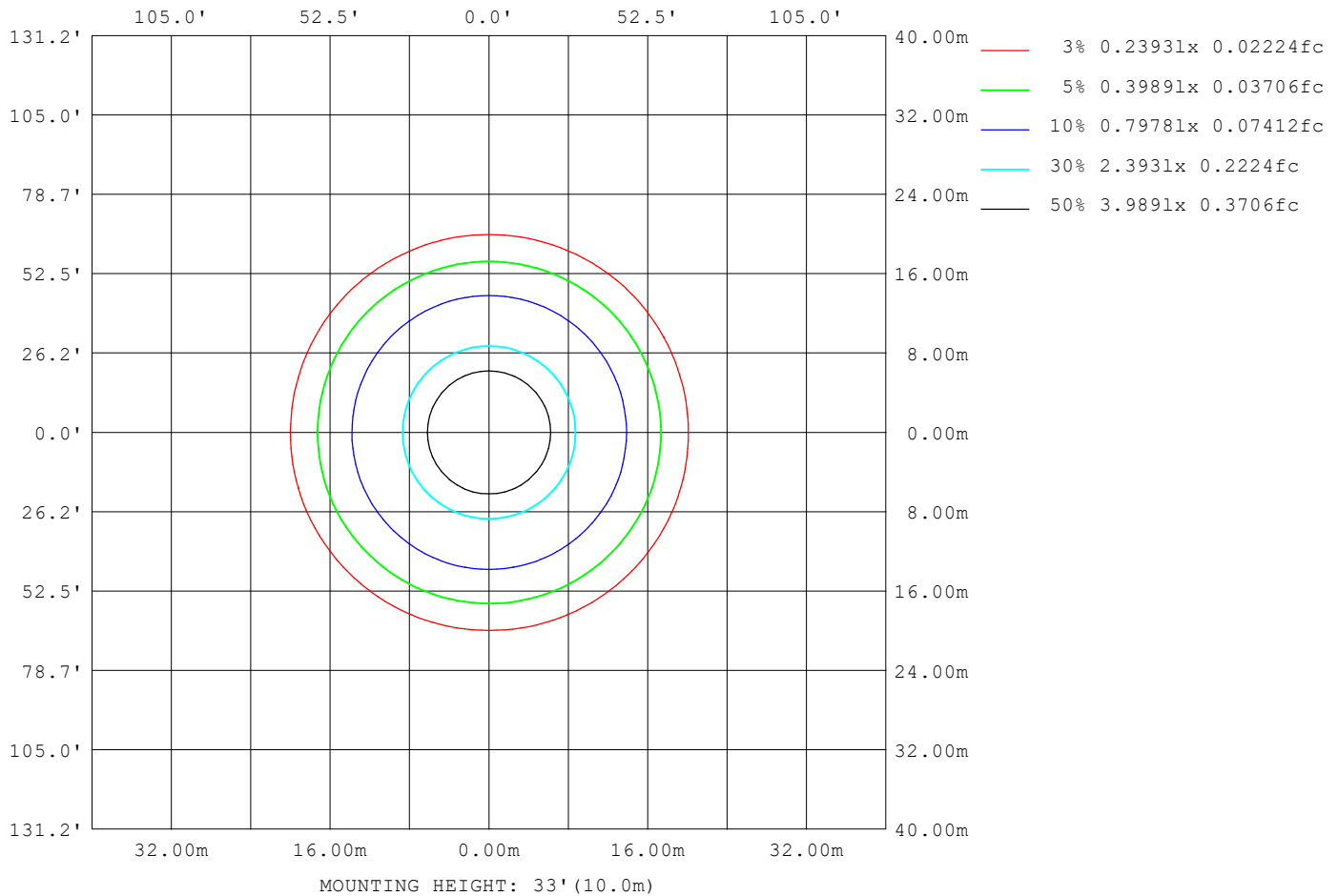
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	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:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:240.02V I:0.0941A P:20.480W PF:0.9065 Freq:50.09Hz Lamp Flux:2106.42x1 lm		
NAME: DEEP C 310 LED_WHT_CLE160 ADV4_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: DARKON	SUR.:	Shielding Angle:

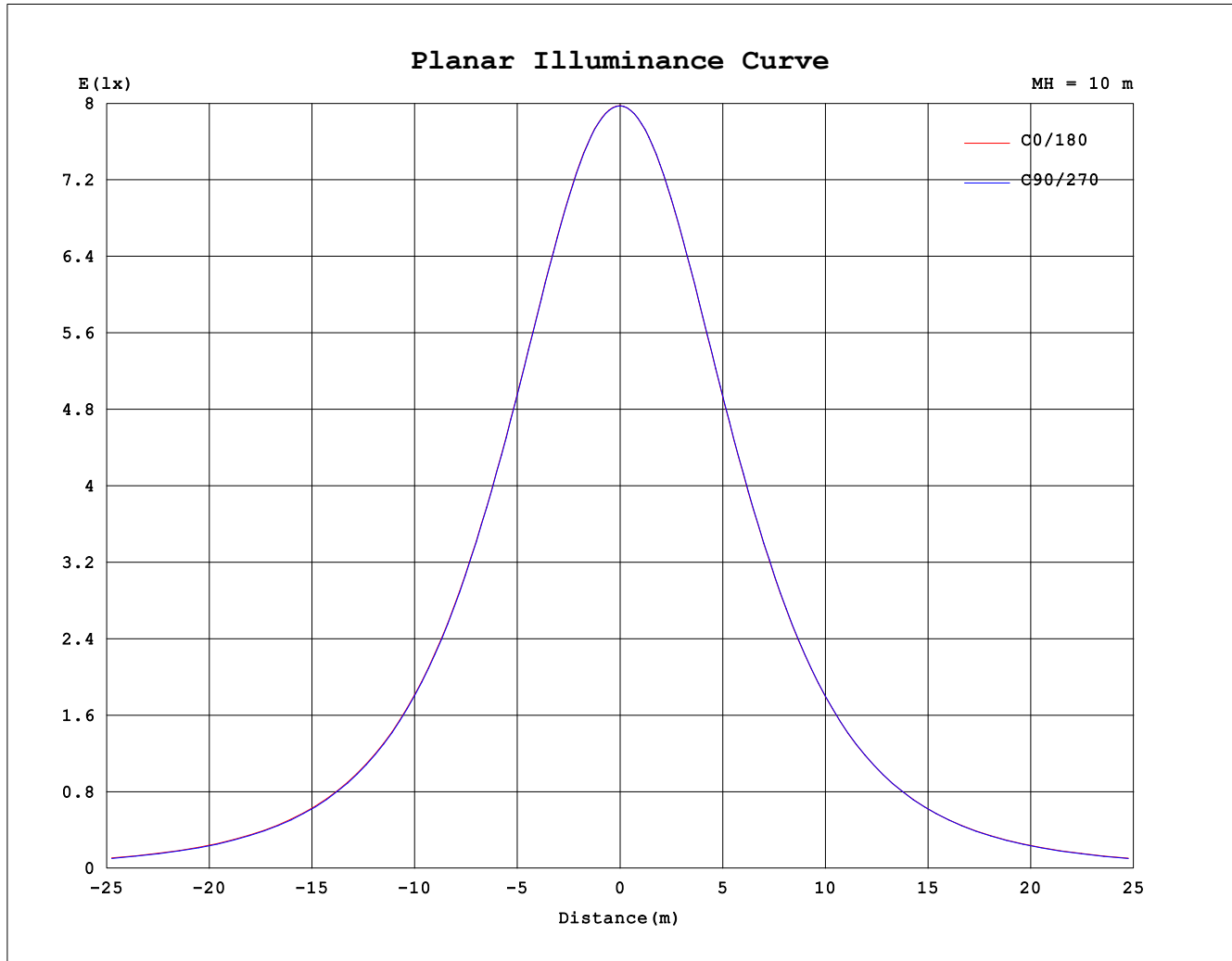
AvgL	cd/m2
L_0~180 (65) av	8869
L_0~180 (75) av	6286
L_0~180 (85) av	2474
L_90~270 (65) av	8672
L_90~270 (75) av	5742
L_90~270 (85) av	2578
L_45 (65) av	8806
L_45 (75) av	5962
L_45 (85) av	2389

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:20 August 2020

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [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: 20 August 2020

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 7.250m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.250m [K=1.0000]
Remarks:

```