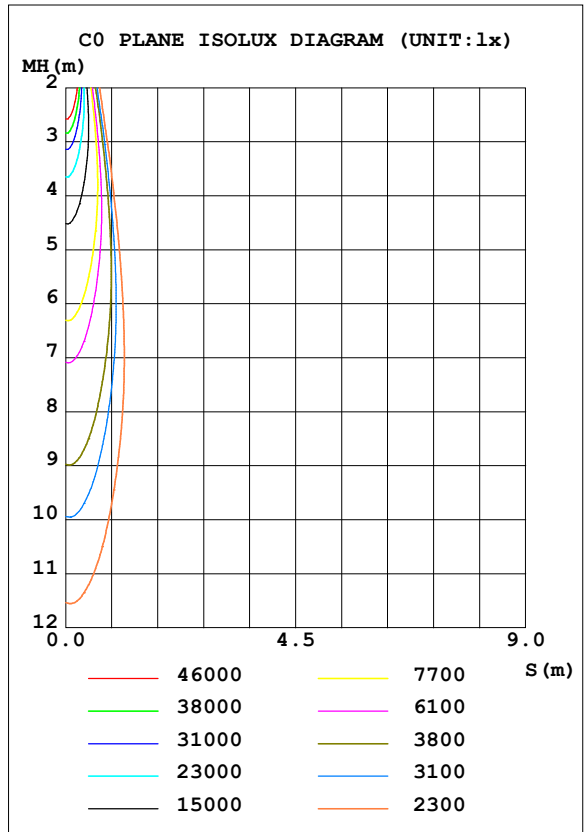
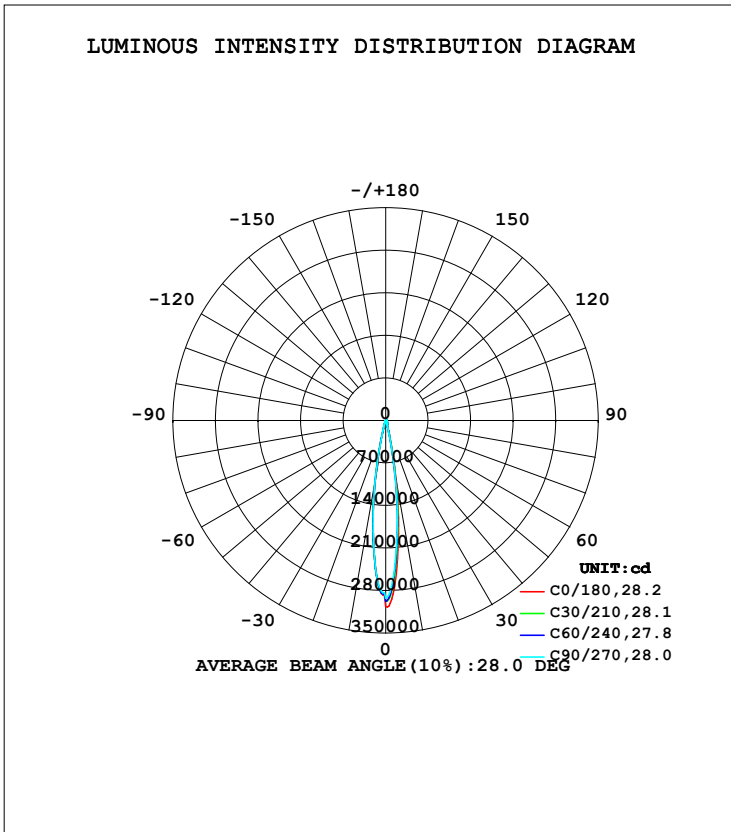




LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 36.45 lm/W			
MODEL	CLF SERA	I <sub>max</sub> (cd)	306955	S/MH (C0/180)	0.28
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	0.28
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	28495	η UP, DN (C0-180)	0.0, 49.0
NOMINAL FLUX (lm)	712.373	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 51.0
LAMPS INSIDE	40	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220.0	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Danny  
 Test Date: 2023-06-26

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity: 65.0%  
 Test Distance: 9.400m [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	1005	905.3	862.1	928.9	1009	1028	1012	989.9	0- 10	16750	16750	58.8,58.8
20	81.12	75.41	71.93	69.69	68.80	70.77	74.01	76.02	10- 20	7944	24693	86.7,86.7
30	21.80	20.48	19.19	19.26	19.32	19.86	20.16	20.51	20- 30	1849	26543	93.1,93.1
40	8.961	8.580	8.276	8.134	7.991	8.107	8.319	8.540	30- 40	791.1	27334	95.9,95.9
50	4.702	4.502	4.629	4.551	4.374	4.369	4.613	4.627	40- 50	475.7	27809	97.6,97.6
60	2.782	2.672	2.918	2.872	2.554	2.568	2.847	2.882	50- 60	309.3	28119	98.7,98.7
70	1.911	1.789	2.072	1.985	1.750	1.742	2.126	1.995	60- 70	232.1	28351	99.5,99.5
80	0.4169	0.4155	0.5197	0.5757	0.3997	0.4284	0.5506	0.6241	70- 80	130.1	28481	100,100
90	0.0101	0.0097	0.0098	0.0103	0.0097	0.0098	0.0100	0.0104	80- 90	14.03	28495	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: *100cd									UNIT: lm		

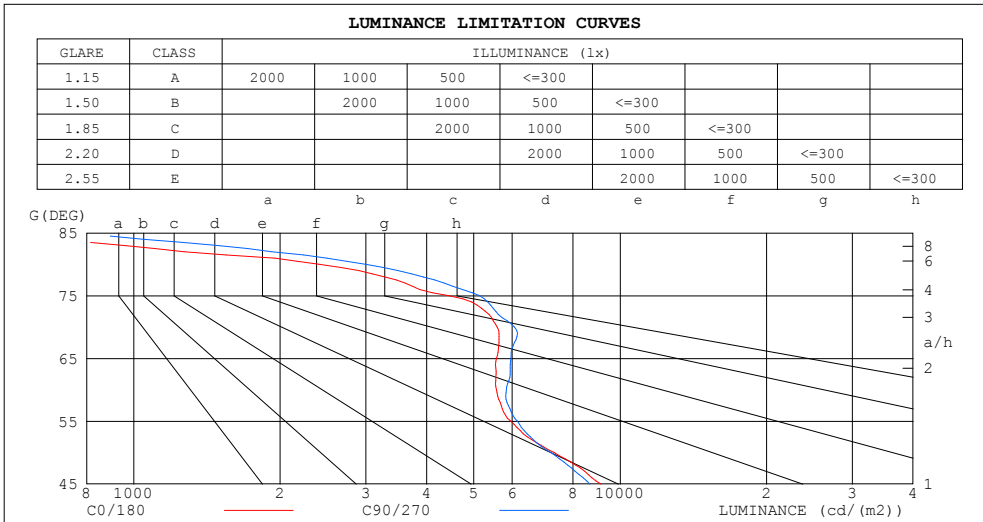
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Danny  
 Test Date: 2023-06-26

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity: 65.0%  
 Test Distance: 9.400m [K=1.0000]  
 Remarks:



LUMINANCE LIMITATION CURVES

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	466	774
80	2401	2993
75	4439	5139
70	5587	6059
65	5566	5959
60	5564	5836
55	5960	6140
50	7314	7202
45	9138	8668

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-06-26

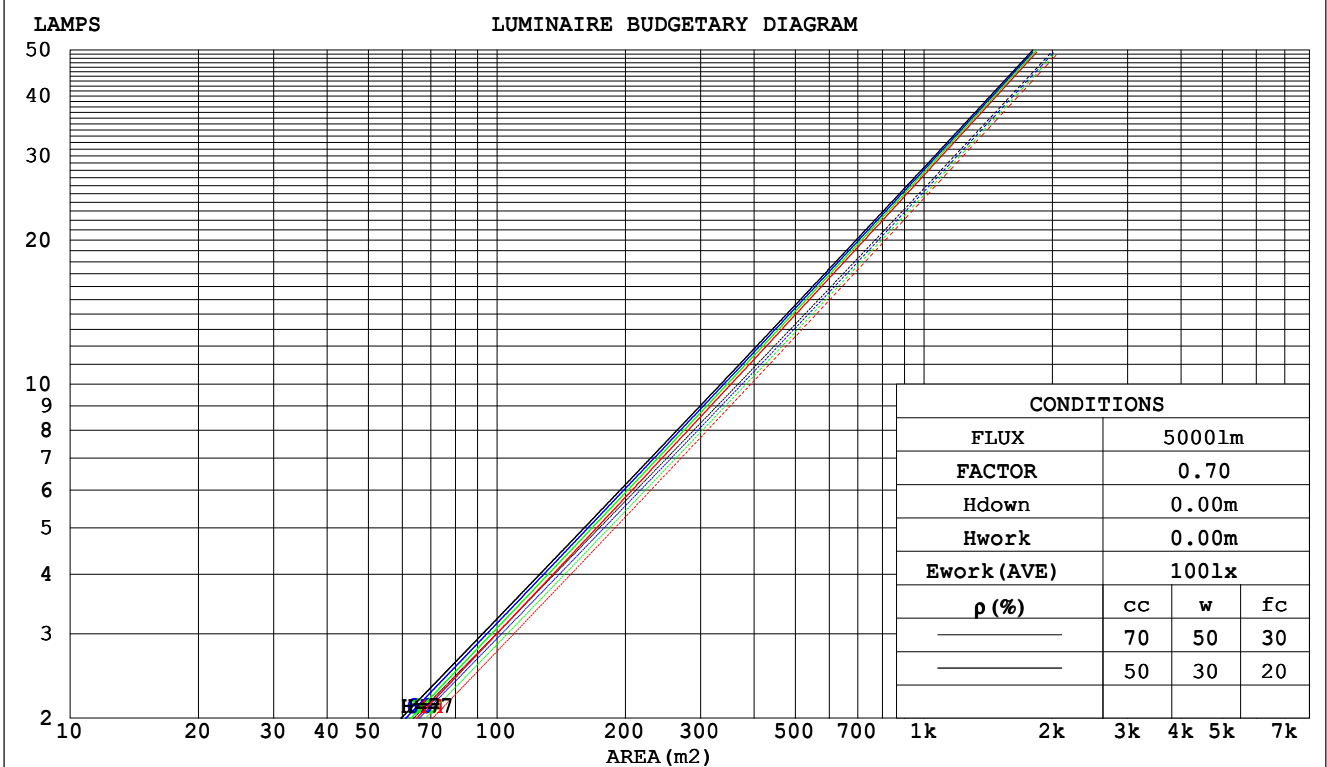
γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		

pcc	80%			70%			50%			30%			10%			0
	pw	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						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	1.13	1.12	1.10	1.11	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.02	1.00	.00	.99	.97
2.0	1.09	1.06	1.04	1.07	1.05	1.02	1.04	1.02	1.00	1.01	.00	.98	.98	.97	.96	.95
3.0	1.05	1.01	.99	1.03	1.00	.98	1.01	.99	.97	.99	.97	.95	.97	.95	.94	.92
4.0	1.01	.98	.95	1.00	.97	.95	.98	.96	.94	.97	.94	.93	.95	.93	.92	.90
5.0	.99	.95	.92	.98	.94	.92	.96	.93	.91	.95	.92	.90	.93	.91	.90	.89
6.0	.96	.92	.90	.95	.92	.90	.94	.91	.89	.93	.90	.88	.92	.90	.88	.87
7.0	.94	.90	.88	.93	.90	.88	.92	.89	.87	.91	.89	.87	.90	.88	.86	.85
8.0	.92	.88	.86	.91	.88	.86	.91	.88	.86	.90	.87	.85	.89	.87	.85	.84
9.0	.90	.87	.84	.90	.87	.84	.89	.86	.84	.88	.86	.84	.88	.85	.84	.83
10.0	.89	.85	.83	.88	.85	.83	.88	.85	.83	.87	.84	.83	.86	.84	.82	.82



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators: Danny  
 Test Date:2023-06-26

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



WEC AND CCEC

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm															
NAME:				DIM.:				WEIGHT:							
MFR.: CLF															

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.128	.073	.023	.121	.069	.022	.109	.062	.020	.097	.056	.018	.087	.050	.016	
2.0	.117	.064	.020	.112	.061	.019	.101	.056	.018	.092	.052	.016	.084	.047	.015	
3.0	.107	.057	.017	.103	.055	.017	.095	.051	.016	.087	.048	.015	.080	.044	.014	
4.0	.099	.052	.015	.096	.050	.015	.089	.047	.014	.082	.044	.013	.076	.041	.013	
5.0	.092	.047	.014	.089	.046	.013	.083	.043	.013	.078	.041	.012	.073	.039	.012	
6.0	.086	.043	.012	.084	.042	.012	.078	.040	.012	.074	.038	.011	.069	.036	.011	
7.0	.081	.040	.011	.079	.039	.011	.074	.038	.011	.070	.036	.010	.066	.034	.010	
8.0	.076	.037	.010	.074	.037	.010	.070	.035	.010	.067	.034	.010	.064	.033	.010	
9.0	.072	.035	.010	.070	.034	.010	.067	.033	.009	.064	.032	.009	.061	.031	.009	
10.0	.068	.033	.009	.067	.032	.009	.064	.031	.009	.061	.030	.009	.059	.030	.008	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.168	.158	.149	.143	.135	.128	.098	.093	.089	.056	.054	.051	.018	.017	.017	
2.0	.149	.133	.119	.128	.114	.103	.087	.079	.072	.050	.046	.042	.016	.015	.014	
3.0	.133	.113	.097	.114	.098	.084	.078	.068	.059	.045	.040	.035	.015	.013	.011	
4.0	.120	.098	.081	.103	.084	.070	.071	.059	.049	.041	.034	.029	.013	.011	.010	
5.0	.109	.085	.068	.093	.074	.059	.064	.051	.042	.037	.030	.025	.012	.010	.008	
6.0	.099	.075	.057	.085	.065	.050	.059	.045	.035	.034	.027	.021	.011	.009	.007	
7.0	.091	.066	.049	.078	.058	.043	.054	.040	.030	.031	.024	.018	.010	.008	.006	
8.0	.084	.059	.043	.072	.052	.037	.050	.036	.026	.029	.021	.016	.009	.007	.005	
9.0	.078	.054	.037	.067	.046	.032	.046	.033	.023	.027	.019	.014	.009	.006	.005	
10.0	.072	.049	.033	.062	.042	.029	.043	.030	.020	.025	.018	.012	.008	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-06-26

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



**UGR(Unified Glare Rating) Table**

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm												
NAME:			DIM.:				WEIGHT:					
MFR.: CLF												
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			-0.6	-0.0	-0.4	0.1	0.3	-0.7	-0.2	-0.5	-0.0	0.1
3H			0.6	1.2	0.9	1.3	1.5	0.6	1.1	0.8	1.3	1.5
4H			1.1	1.6	1.3	1.8	2.0	1.1	1.6	1.4	1.8	2.1
6H			1.2	1.7	1.5	1.9	2.2	1.3	1.8	1.6	2.1	2.3
8H			1.2	1.7	1.5	1.9	2.2	1.3	1.8	1.6	2.1	2.3
12H			1.2	1.6	1.5	1.9	2.1	1.3	1.8	1.6	2.0	2.3
4H 2H			-0.2	0.3	0.1	0.5	0.7	-0.3	0.2	-0.1	0.4	0.6
3H			1.3	1.7	1.6	2.0	2.2	1.2	1.7	1.5	1.9	2.2
4H			1.8	2.2	2.1	2.5	2.8	1.8	2.3	2.2	2.5	2.8
6H			2.0	2.4	2.3	2.7	3.0	2.1	2.5	2.4	2.8	3.1
8H			1.9	2.3	2.3	2.6	3.0	2.1	2.4	2.5	2.8	3.1
12H			1.9	2.2	2.3	2.6	3.0	2.0	2.3	2.4	2.7	3.1
8H 4H			1.9	2.3	2.3	2.6	3.0	2.0	2.3	2.3	2.7	3.0
6H			2.1	2.4	2.5	2.8	3.2	2.2	2.5	2.6	2.9	3.3
8H			2.1	2.4	2.5	2.8	3.2	2.2	2.5	2.7	2.9	3.3
12H			2.0	2.3	2.5	2.7	3.2	2.2	2.4	2.6	2.8	3.3
12H 4H			1.9	2.2	2.3	2.6	2.9	1.9	2.2	2.3	2.6	3.0
6H			2.1	2.3	2.5	2.8	3.2	2.2	2.4	2.6	2.8	3.3
8H			2.1	2.3	2.5	2.7	3.2	2.2	2.4	2.6	2.8	3.3
Variations with the observer position at spacings:												
S = 1.0H			+ 0.5 / - 0.6				+ 0.4 / - 0.5					
1.5H			+ 0.7 / - 0.4				+ 0.6 / - 0.5					
2.0H			+ 1.0 / - 0.6				+ 0.9 / - 0.5					

CIE Pub.117, 28495 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.6)  
 Area: 0.1 m2

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-06-26

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



**UTILIZATION FACTORS TABLE**

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		

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	89	83	79	89	83	79	88	83	79	76
0.80	96	91	87	96	90	87	94	90	87	83
1.00	100	95	91	99	94	91	98	94	91	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

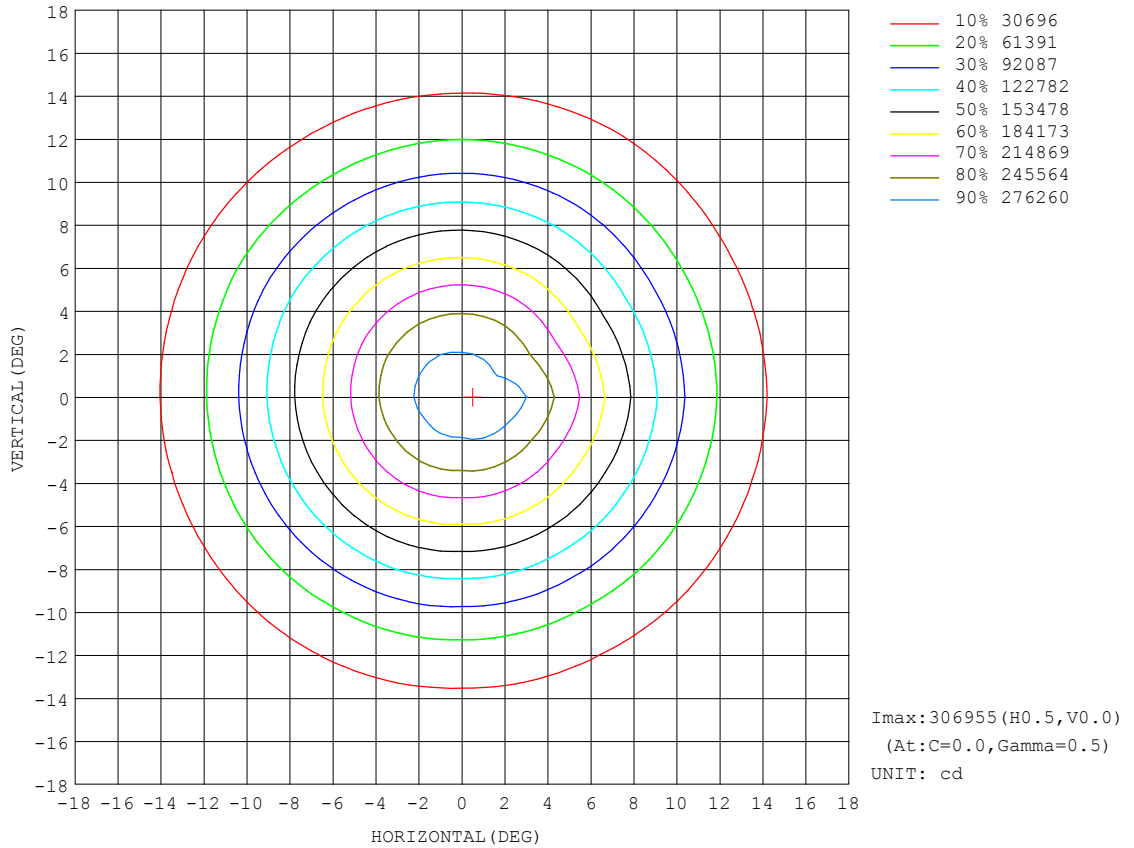
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-06-26

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



ISOCANDELA DIAGRAM

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Danny  
Test Date: 2023-06-26

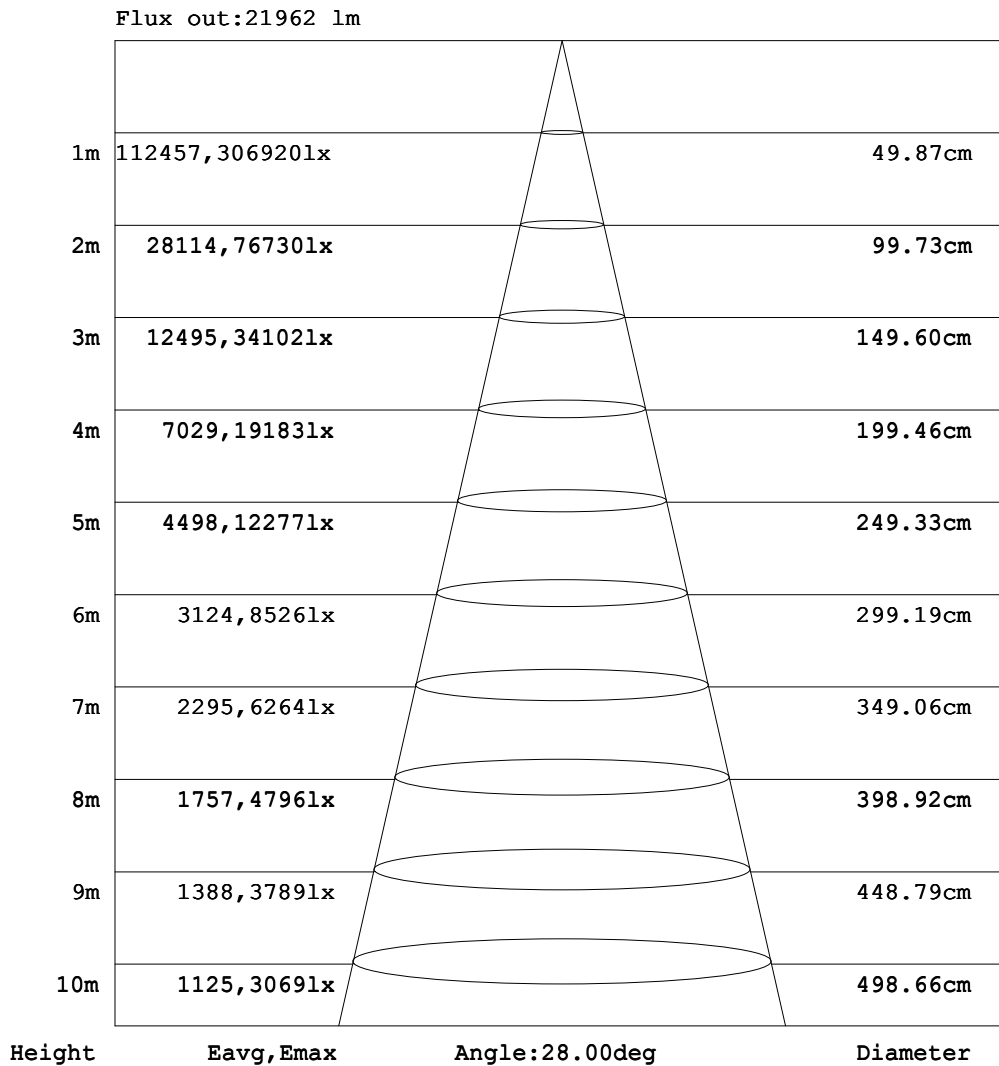
γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity: 65.0%  
Test Distance: 9.400m [K=1.0000]  
Remarks:





AAI Figure

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		



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

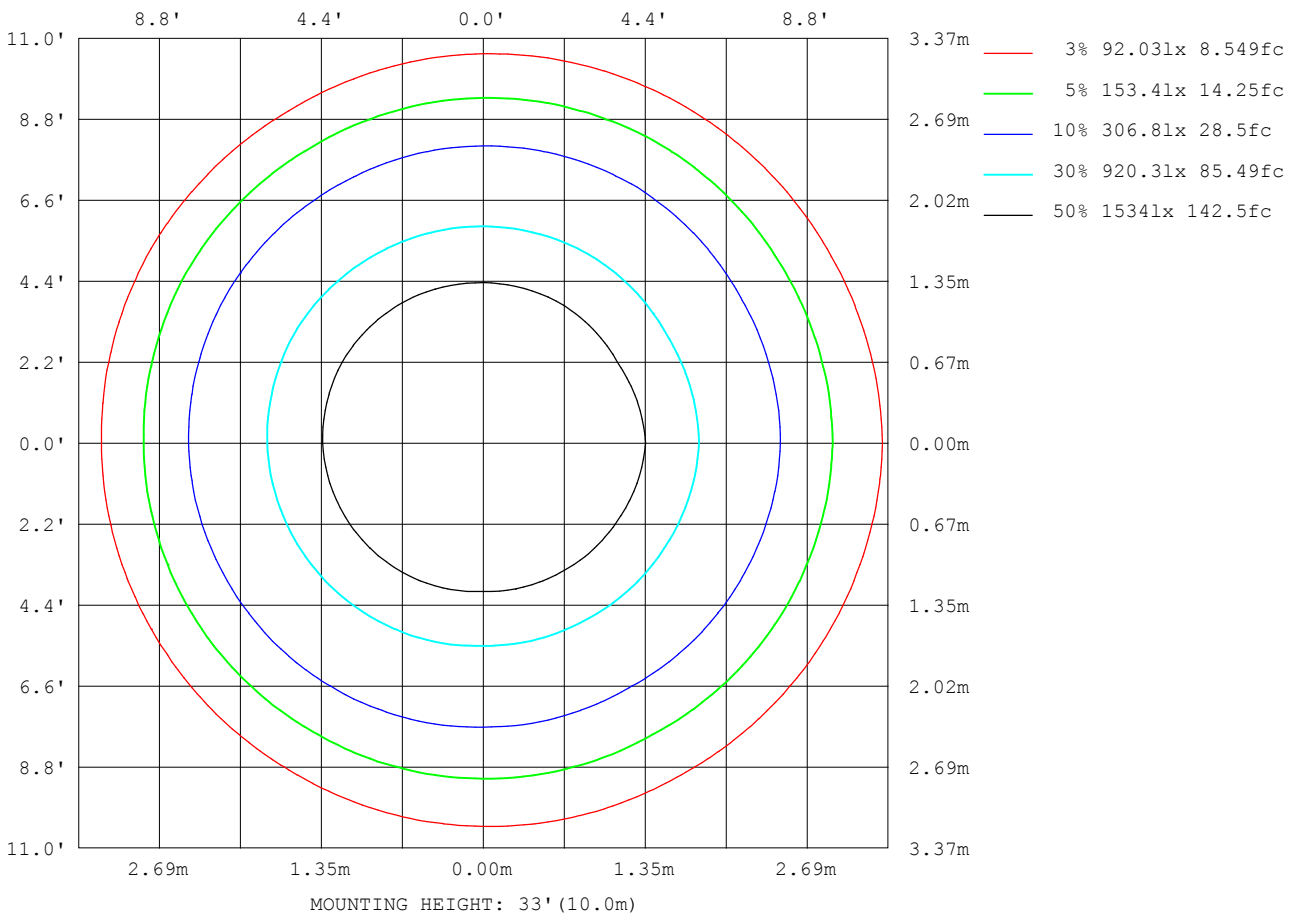
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-06-26

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



ISOLUX DIAGRAM

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Danny  
Test Date:2023-06-26

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity:65.0%  
Test Distance:9.400m [K=1.0000]  
Remarks:



## LED Avg.L Report

Test:U:219.83V I:3.5873A P:781.65W PF:0.9912 Freq:50.01Hz Lamp Flux:712.373x40 lm		
NAME:	DIM.:	WEIGHT:
MFR.: CLF		

AvgL	cd/m2
L_0~180 (65) av	5340
L_0~180 (75) av	4405
L_0~180 (85) av	480
L_90~270 (65) av	5917
L_90~270 (75) av	5144
L_90~270 (85) av	875
L_45 (65) av	5498
L_45 (75) av	4906
L_45 (85) av	756

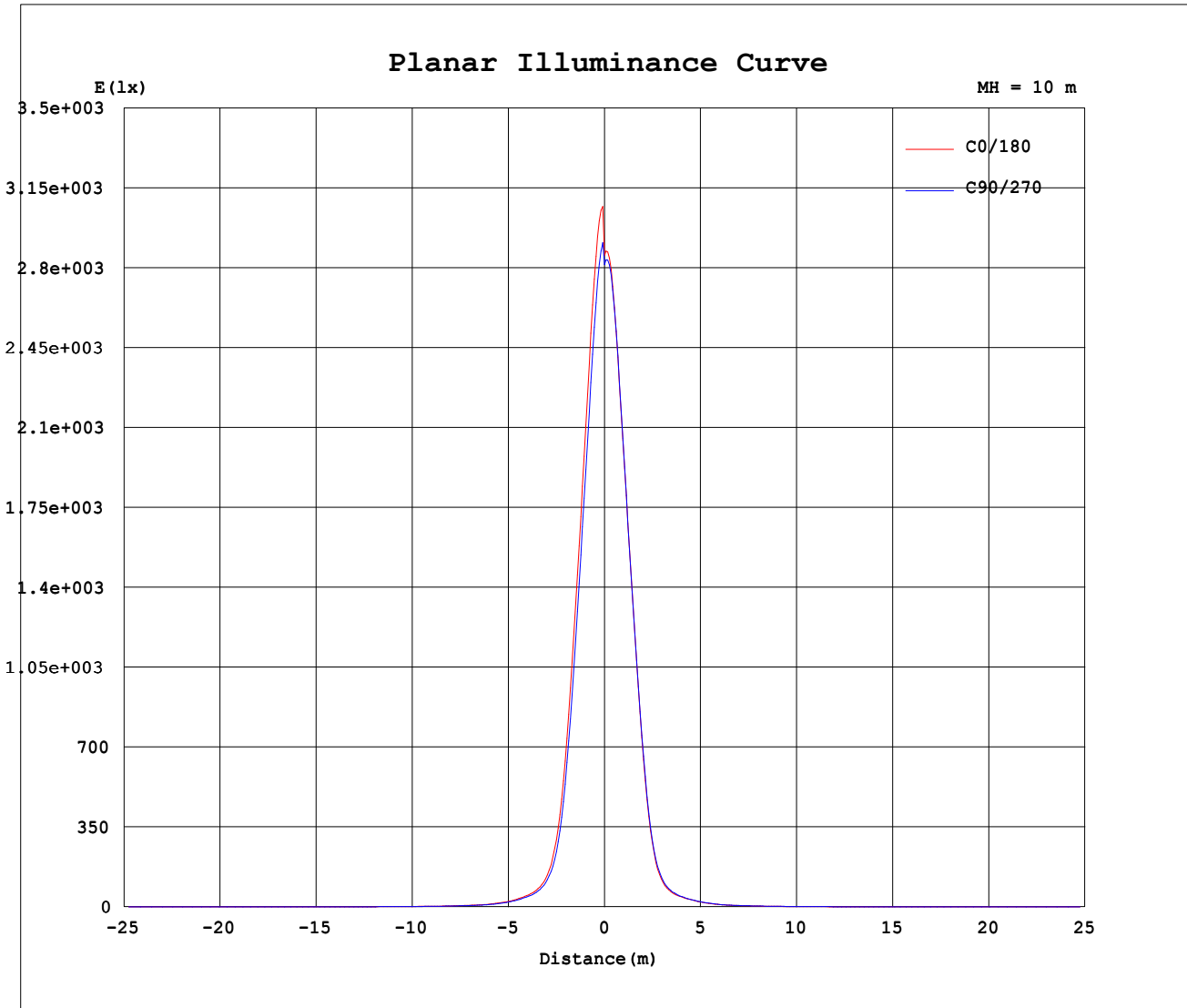
Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Danny  
Test Date:2023-06-26

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity:65.0%  
Test Distance:9.400m [K=1.0000]  
Remarks:



Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Danny  
Test Date:2023-06-26

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity:65.0%  
Test Distance:9.400m [K=1.0000]  
Remarks:

