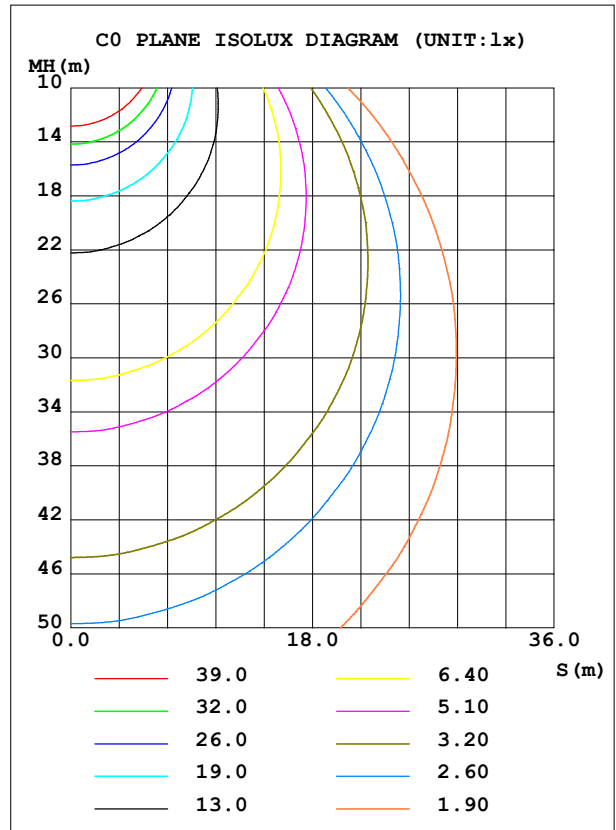
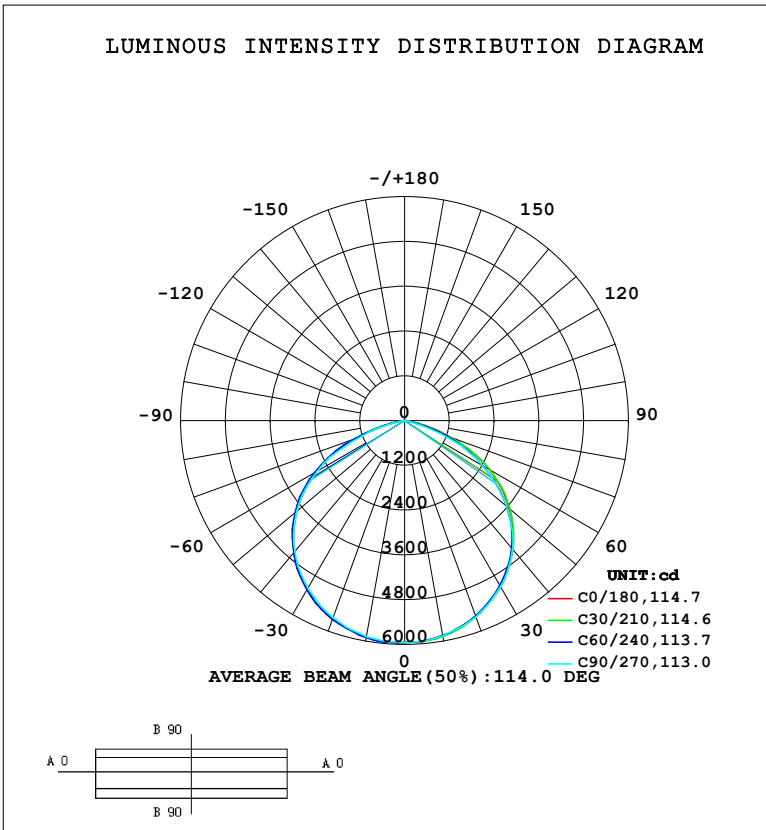


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	DFL-150W	Imax (cd)	5961	S/MH (C0/180)	1.30
NOMINAL POWER (W)	150	LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	16515	η UP, DN (C0-180)	0.0,49.0
NOMINAL FLUX (lm)	16515.5	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,51.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity: 65.0%  
 Test Distance: 9.410m [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	5850	5862	5862	5878	5891	5905	5879	5874	0- 10	564.8	564.8	3.42,3.42
20	5576	5585	5592	5609	5655	5650	5612	5612	10- 20	1628	2193	13.3,13.3
30	5126	5125	5142	5159	5226	5220	5183	5165	20- 30	2495	4688	28.4,28.4
40	4490	4489	4498	4538	4621	4606	4584	4551	30- 40	3054	7742	46.9,46.9
50	3666	3629	3580	3677	3794	3799	3774	3755	40- 50	3202	10945	66.3,66.3
60	2633	2536	2418	2556	2740	2744	2709	2724	50- 60	2855	13800	83.6,83.6
70	1305	1245	1031	1212	1369	1397	1220	1405	60- 70	1968	15767	95.5,95.5
80	226.6	146.6	52.25	123.7	211.8	206.1	104.2	215.4	70- 80	701.8	16469	99.7,99.7
90	6.513	6.646	6.372	6.599	3.473	3.376	2.991	3.281	80- 90	46.35	16515	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): 9675.8 lm

%lum = 58.6%

%lamp = 58.6%

Conical surface Flux(130deg): 15125 lm

%lum = 91.6%

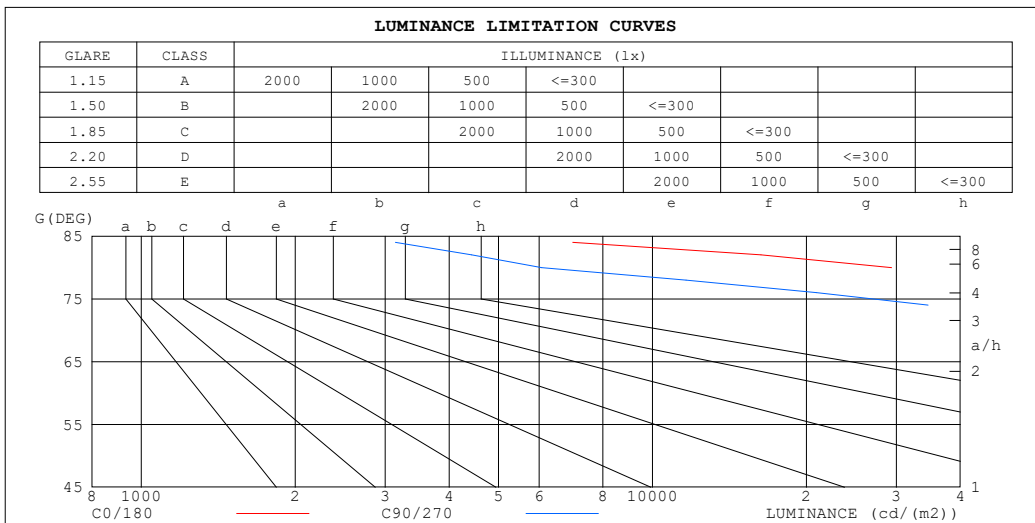
%lamp = 91.6%

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2024-04-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity:65.0%  
 Test Distance:9.410m [K=1.0000]  
 Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8375	3767
80	29355	6075
75	70202	36830
70	85816	60860
65	113777	90936
60	118469	97615
55	128603	110365
50	128319	112443
45	133093	118904

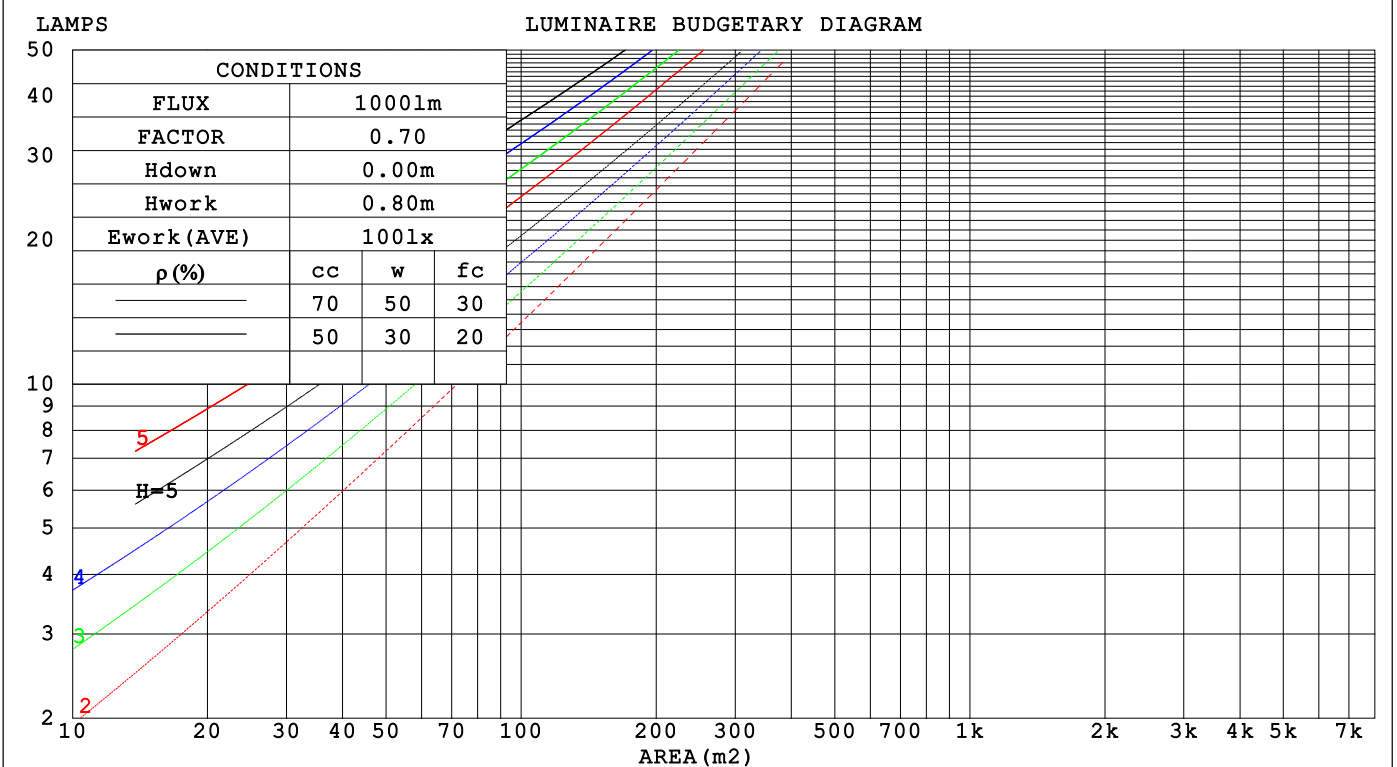
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity: 65.0%  
 Test Distance: 9.410m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz		
Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	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      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	1.02	.98	1.03	.90	.96	.99	.96	.93	.95	.93	.91	.92	.90	.88	.86
2.0	.92	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.77	.74	.72
3.0	.81	.74	.67	.80	.73	.67	.77	.71	.66	.74	.69	.64	.72	.67	.63	.61
4.0	.72	.64	.57	.71	.63	.57	.68	.61	.56	.66	.60	.55	.64	.59	.55	.52
5.0	.65	.56	.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	.54	.47	.42	.52	.46	.42	.40
7.0	.53	.44	.38	.52	.44	.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	.38	.33	.31
9.0	.44	.36	.30	.43	.36	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.28
10.0	.41	.33	.27	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity:65.0%  
 Test Distance:9.410m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz		
Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρ <sub>CC</sub>	80%			70%			50%			30%			10%			0
ρ <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.279	.159	.050	.272	.155	.049	.259	.149	.048	.247	.143	.046	.236	.137	.044	
2.0	.272	.149	.046	.266	.147	.045	.254	.142	.044	.244	.137	.043	.234	.132	.042	
3.0	.257	.137	.041	.251	.135	.041	.241	.131	.040	.232	.127	.039	.223	.123	.038	
4.0	.240	.125	.037	.235	.123	.036	.226	.120	.036	.218	.117	.035	.210	.114	.035	
5.0	.224	.114	.033	.219	.113	.033	.211	.110	.032	.204	.108	.032	.197	.105	.032	
6.0	.209	.105	.030	.205	.103	.030	.198	.101	.029	.191	.099	.029	.185	.097	.029	
7.0	.195	.096	.027	.192	.095	.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	.078	.022	.159	.077	.021	.155	.076	.021	.150	.075	.021	.146	.073	.021	

ρ <sub>CC</sub>	80%			70%			50%			30%			10%			0
ρ <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ <sub>fc</sub>	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	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.145	.114	.087	.100	.079	.061	.057	.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	.037	.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	.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: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity:65.0%  
 Test Distance:9.410m [K=1.0000]  
 Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz										
Lamp Flux:16515.5x1 lm										
NAME:			TYPE:			WEIGHT:				
SPEC.:			DIM.:			SERIAL No.:				
MFR.:			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	20.2	21.7	20.5	21.9	22.1	19.3	20.8	19.5	21.0	21.2
3H	21.3	22.7	21.6	22.9	23.1	20.2	21.5	20.5	21.8	22.0
4H	21.5	22.8	21.8	23.1	23.3	20.2	21.5	20.5	21.8	22.0
6H	21.5	22.8	21.9	23.0	23.3	20.1	21.4	20.5	21.6	21.9
8H	21.5	22.7	21.8	23.0	23.2	20.1	21.3	20.4	21.5	21.8
12H	21.5	22.6	21.8	22.9	23.2	20.0	21.2	20.4	21.5	21.8
4H 2H	20.6	21.9	20.9	22.2	22.4	19.9	21.2	20.2	21.4	21.7
3H	21.8	23.0	22.2	23.3	23.6	20.9	22.0	21.2	22.3	22.6
4H	22.1	23.2	22.5	23.5	23.8	21.0	22.0	21.3	22.3	22.6
6H	22.2	23.1	22.6	23.4	23.8	20.9	21.8	21.3	22.1	22.5
8H	22.2	23.0	22.6	23.4	23.7	20.9	21.7	21.3	22.0	22.4
12H	22.1	22.9	22.5	23.3	23.7	20.8	21.6	21.2	22.0	22.4
8H 4H	22.1	23.0	22.5	23.3	23.7	21.0	21.9	21.4	22.2	22.6
6H	22.2	22.9	22.7	23.3	23.7	21.0	21.7	21.4	22.1	22.5
8H	22.2	22.8	22.7	23.2	23.7	20.9	21.5	21.4	22.0	22.4
12H	22.2	22.7	22.6	23.1	23.6	20.9	21.4	21.4	21.9	22.3
12H 4H	22.1	22.9	22.5	23.2	23.6	21.0	21.8	21.4	22.1	22.5
6H	22.2	22.8	22.6	23.2	23.7	20.9	21.5	21.4	22.0	22.4
8H	22.2	22.7	22.6	23.1	23.6	20.9	21.4	21.4	21.9	22.3
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4				
1.5H	+ 0.3 / - 0.5					+ 0.3 / - 0.6				
2.0H	+ 0.4 / - 0.7					+ 0.5 / - 0.5				

CIE Pub.117, 16515 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 9.7)  
 Area: 0.048 m2

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity:65.0%  
 Test Distance:9.410m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

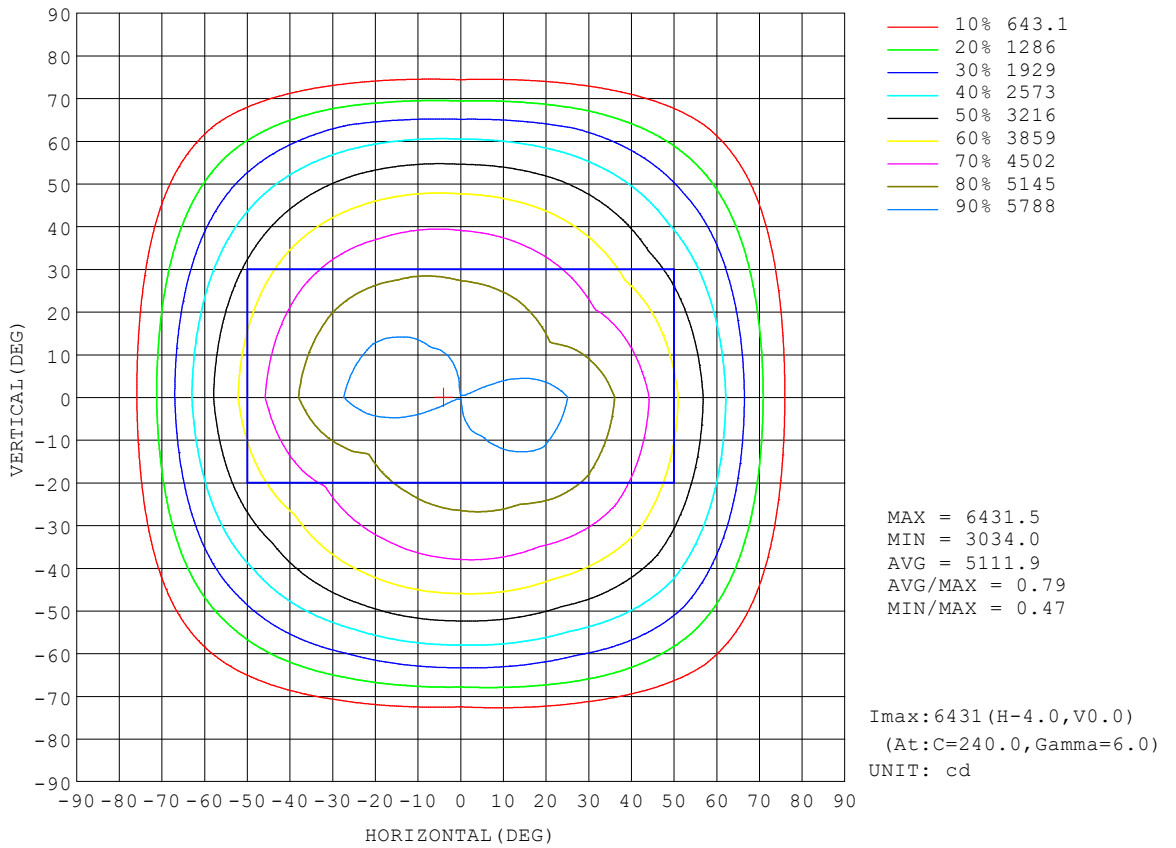
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	47	40	58	47	40	57	46	40	33
0.80	69	58	50	68	57	50	66	56	50	43
1.00	78	67	60	76	66	60	74	68	59	52
1.25	85	75	68	84	74	68	81	73	67	60
1.50	90	81	74	88	80	73	85	78	72	65
2.00	97	89	83	95	88	82	92	85	80	73
2.50	100	93	88	99	92	87	95	89	85	77
3.00	104	97	92	102	96	91	98	93	89	81
4.00	108	102	98	105	101	97	101	97	94	86
5.00	110	105	102	107	104	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: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2024-04-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity:65.0%  
 Test Distance:9.410m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

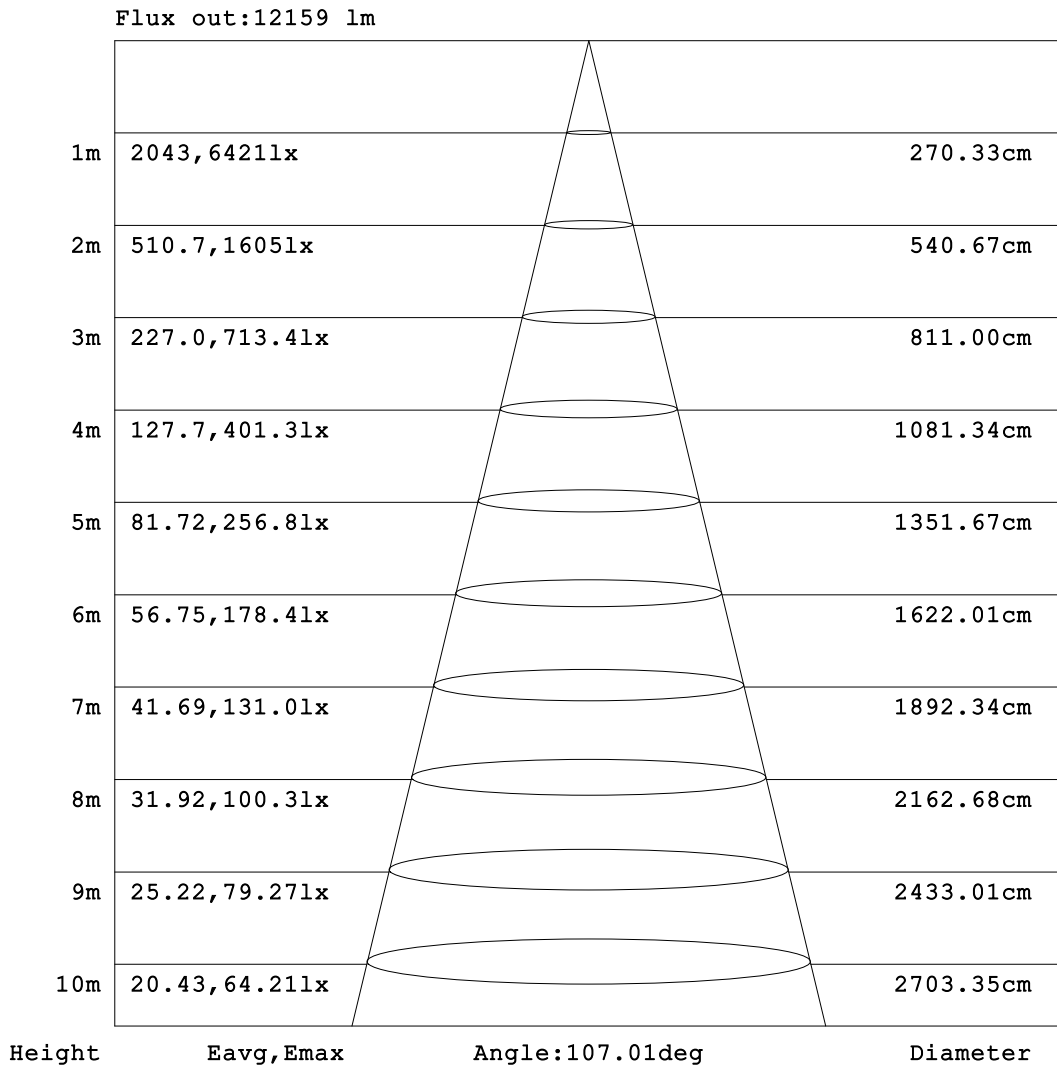


C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity: 65.0%  
 Test Distance: 9.410m [K=1.0000]  
 Remarks:

**AAI Figure**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



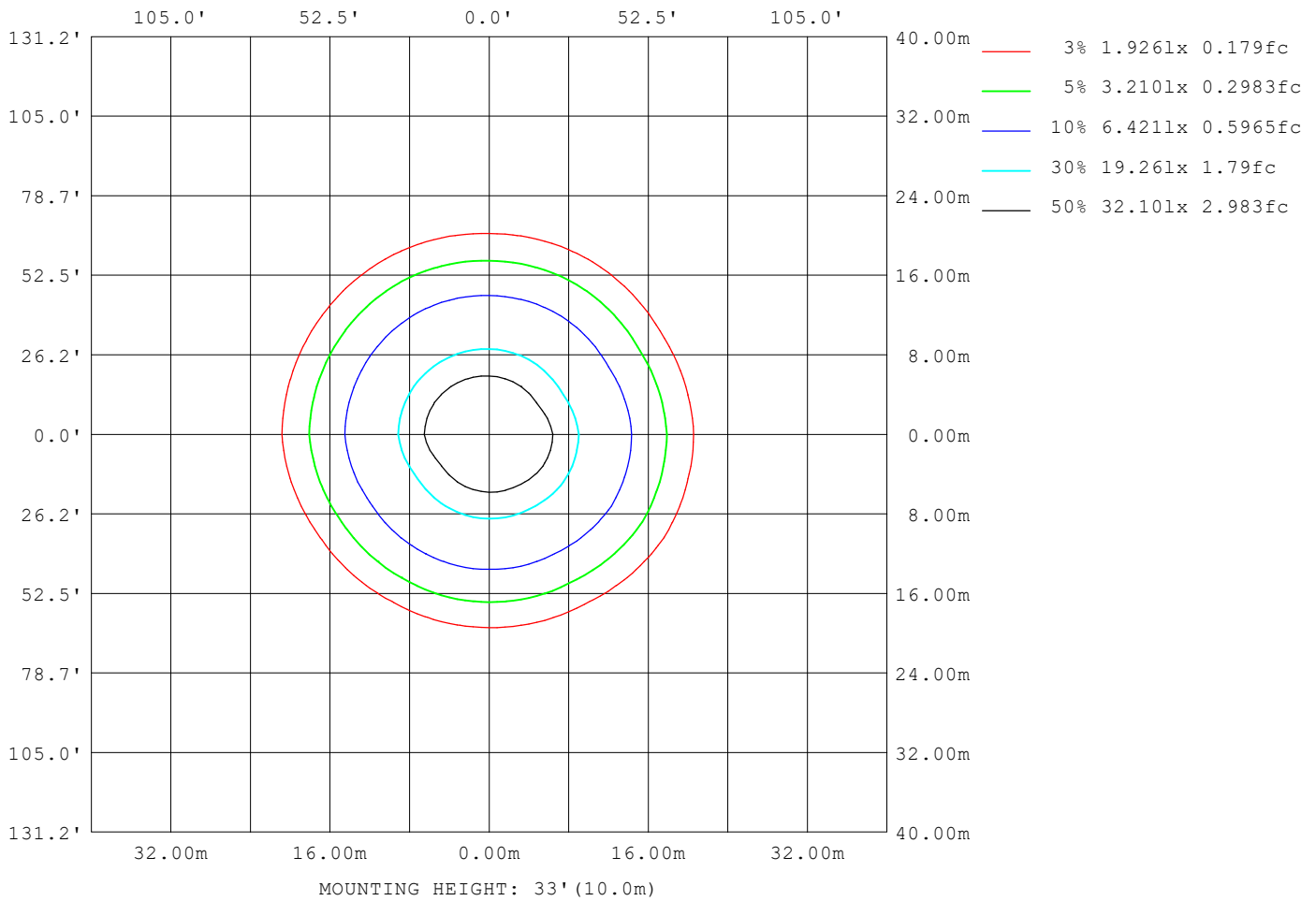
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity: 65.0%  
 Test Distance: 9.410m [K=1.0000]  
 Remarks:

**ISOLUX DIAGRAM**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity:65.0%  
 Test Distance:9.410m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

Test:U:220.49V I:0.6325A P:131.16W PF:0.9404 Freq:49.99Hz Lamp Flux:16515.5x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

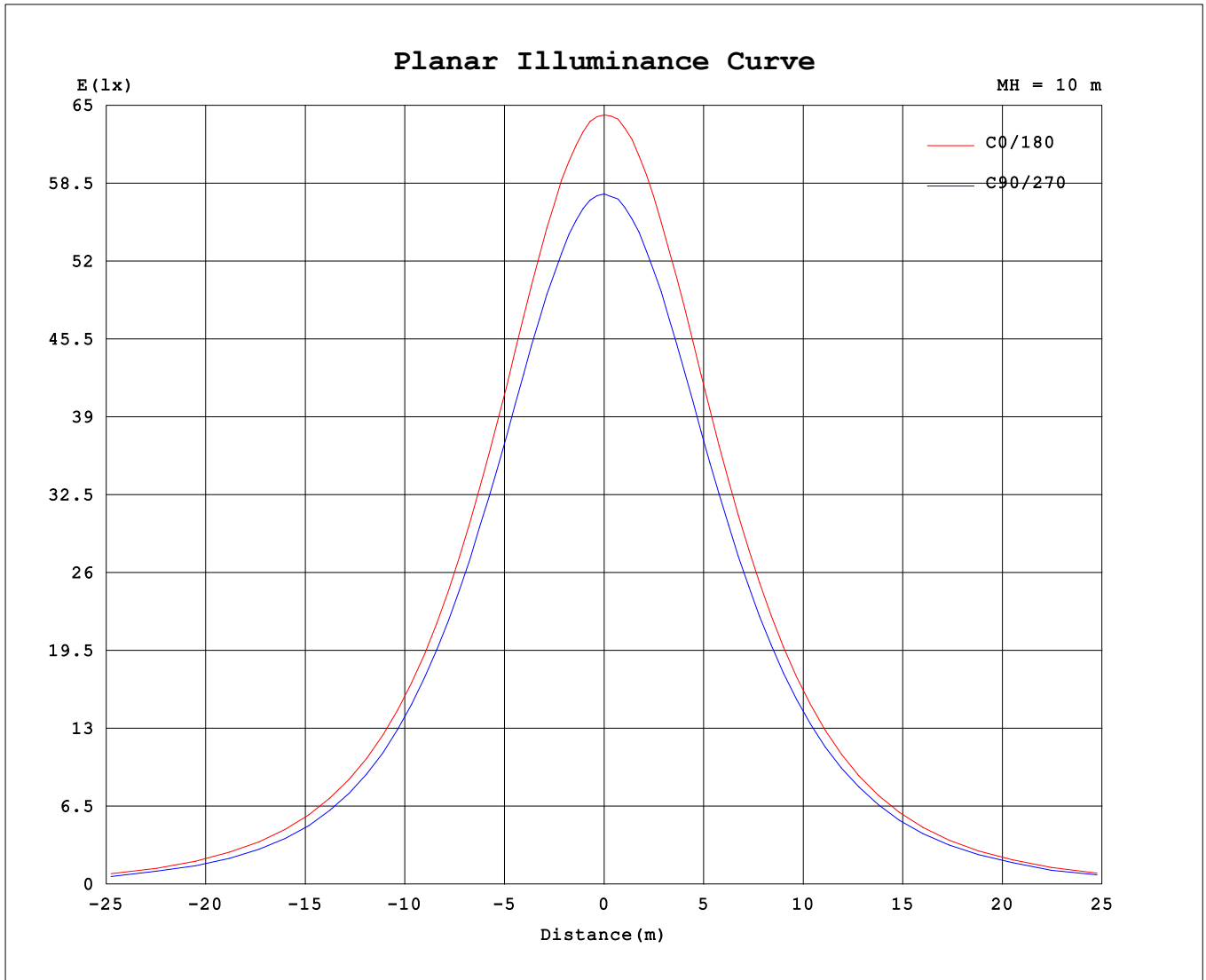
AvgL	cd/m2
L_0~180 (65) av	100963
L_0~180 (75) av	55880
L_0~180 (85) av	4503
L_90~270 (65) av	93958
L_90~270 (75) av	37688
L_90~270 (85) av	3742
L_45 (65) av	100303
L_45 (75) av	52972
L_45 (85) av	5347

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:  
 Test Date:2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity:65.0%  
 Test Distance:9.410m [K=1.0000]  
 Remarks:

**Planar Illuminance Curve**



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2024-04-10

γ Range: 0 - 90DEG  
 γ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.458  
 Humidity: 65.0%  
 Test Distance: 9.410m [K=1.0000]  
 Remarks:

