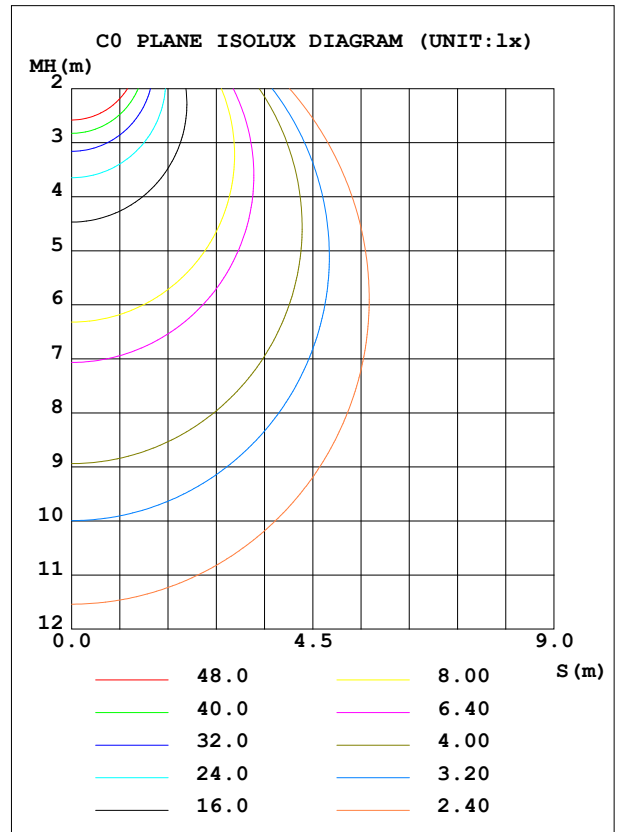
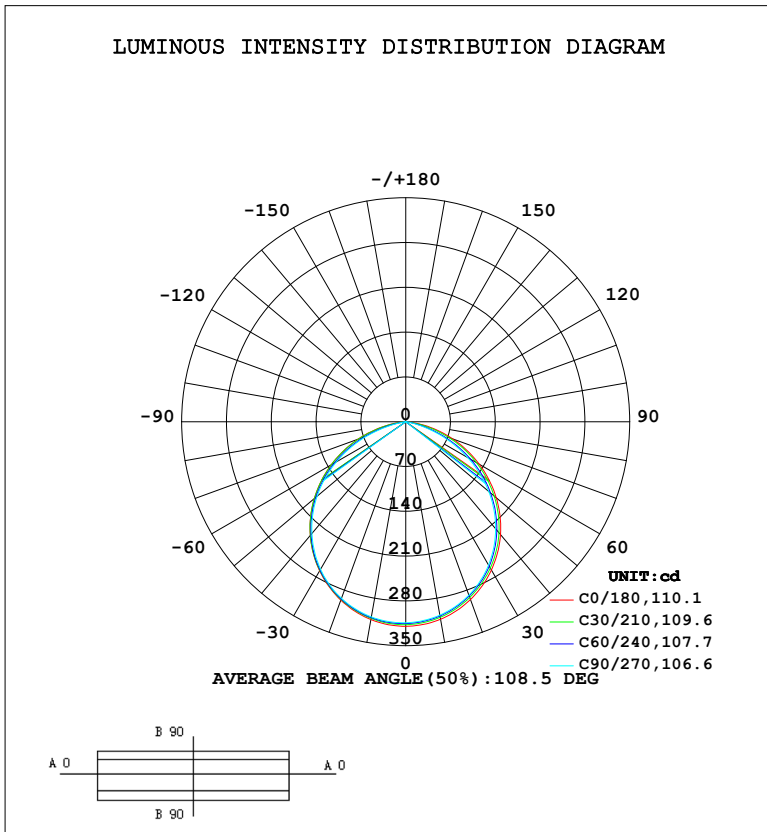


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.15V I:0.0804A P:9.8474W PF:0.5566 Freq:50.00Hz Lamp Flux:833.92lx1 lm		
NAME: 116E-10W 6500K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	319.6	S/MH (C0/180)	1.25
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	833.92	$\eta$ UP, DN (C0-180)	0.0, 49.1
NOMINAL FLUX (lm)	833.921	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 50.9
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	--	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-09-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [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	313.4	309.5	306.8	306.2	313.9	311.2	309.6	307.7	0- 10	29.78	29.78	3.57,3.57
20	295.6	291.5	288.4	288.6	296.7	294.7	293.6	291.3	10- 20	85.17	115.0	13.8,13.8
30	267.6	263.3	258.7	260.8	269.1	267.5	266.3	264.4	20- 30	128.7	243.6	29.2,29.2
40	230.4	225.1	218.4	222.9	232.2	230.4	228.1	227.5	30- 40	154.1	397.7	47.7,47.7
50	184.6	177.7	169.2	175.9	186.6	183.9	180.8	181.4	40- 50	157.2	554.9	66.5,66.5
60	132.5	123.6	111.7	122.2	134.4	130.7	124.7	128.4	50- 60	137.0	691.9	83,83
70	77.49	65.01	51.36	63.96	79.07	72.75	63.03	70.78	60- 70	95.89	787.8	94.5,94.5
80	24.54	11.83	3.718	11.58	25.23	16.97	5.777	15.82	70- 80	42.05	829.9	99.5,99.5
90	0.4027	0.3652	0.3102	0.3536	0.4952	0.4162	0.3228	0.4066	80- 90	4.068	833.9	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): 477.37 lm

%lum = 57.2%  
 %lamp = 57.2%

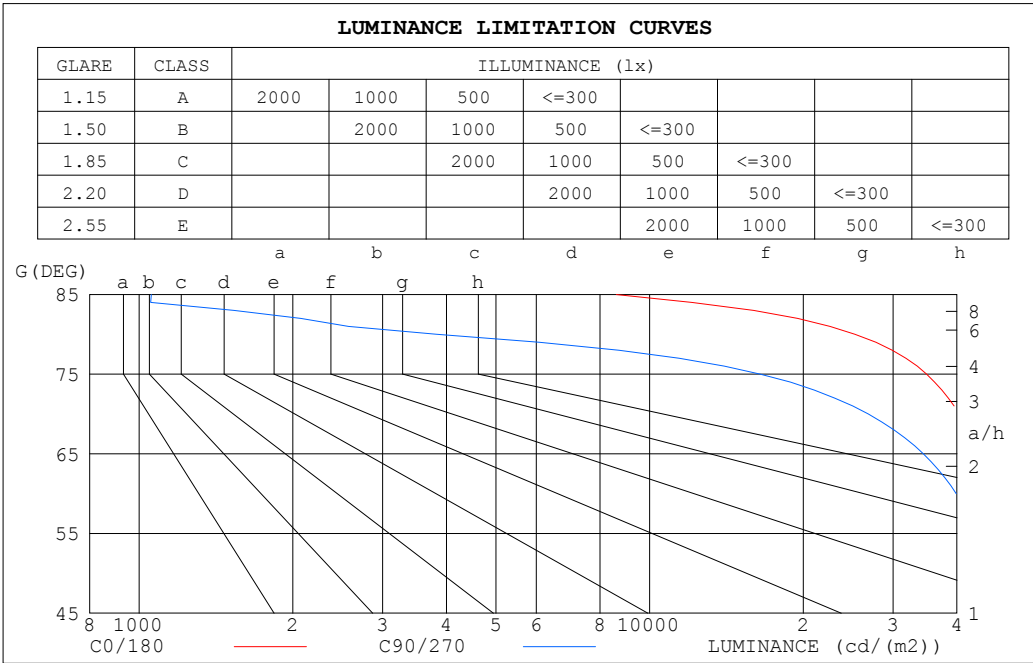
Conical surface Flux(120deg): 691.92 lm

%lum = 83.0%  
 %lamp = 83.0%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:2023-09-05

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES



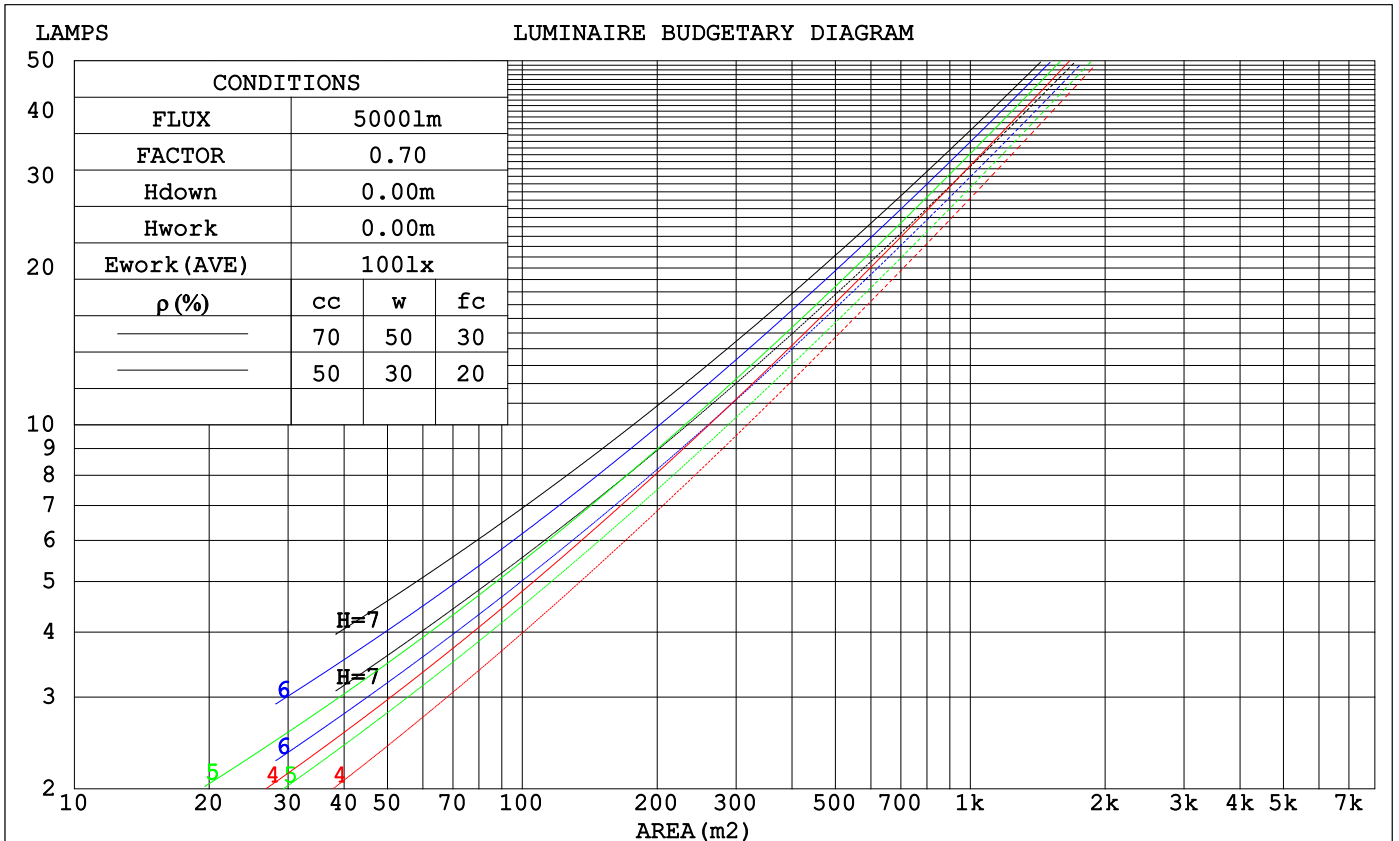
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8611	1057
80	25236	3823
75	34888	16463
70	40460	26815
65	44399	34385
60	47324	39884
55	49547	43968
50	51285	47011
45	52648	49231

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-09-05

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

$\rho_{cc}$	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	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.90	.91	.89	.88	.86
2.0	.92	.86	.80	.90	.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	.62	.56	.66	.60	.55	.64	.59	.55	.52
5.0	.65	.56	.49	.64	.55	.49	.61	.54	.49	.59	.53	.48	.58	.52	.48	.46
6.0	.58	.50	.43	.57	.49	.43	.56	.48	.43	.54	.47	.42	.52	.46	.42	.40
7.0	.53	.44	.38	.52	.44	.38	.51	.43	.38	.49	.42	.38	.48	.42	.37	.35
8.0	.48	.40	.34	.48	.40	.34	.46	.39	.34	.45	.38	.34	.44	.38	.33	.32
9.0	.44	.36	.31	.44	.36	.31	.43	.35	.30	.41	.35	.30	.40	.35	.30	.28
10.0	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.38	.32	.27	.26



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:2023-09-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

WEC AND CCEC

$\rho_{cc}$	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	.283	.161	.051	.276	.157	.050	.263	.151	.048	.251	.145	.046	.240	.139	.045	
2.0	.274	.150	.046	.268	.147	.045	.256	.142	.044	.245	.138	.043	.236	.133	.042	
3.0	.257	.137	.041	.252	.135	.041	.241	.131	.040	.232	.127	.039	.223	.124	.038	
4.0	.240	.124	.037	.235	.123	.036	.226	.120	.036	.217	.117	.035	.210	.114	.035	
5.0	.223	.114	.033	.219	.112	.033	.211	.110	.032	.203	.107	.032	.196	.105	.032	
6.0	.208	.104	.030	.204	.103	.030	.197	.101	.029	.190	.099	.029	.184	.097	.029	
7.0	.194	.096	.027	.191	.095	.027	.184	.093	.027	.178	.091	.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	

$\rho_{cc}$	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	.178	.156	.136	.153	.134	.117	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.145	.114	.087	.100	.079	.060	.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	.154	.101	.060	.133	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.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	.121	.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: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:2023-09-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

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	26.5	28.0	26.8	28.2	28.4	25.8	27.3	26.1	27.5	27.7
3H	27.9	29.2	28.2	29.5	29.7	26.7	28.1	27.0	28.3	28.6
4H	28.3	29.6	28.7	29.9	30.1	26.9	28.2	27.2	28.4	28.7
6H	28.6	29.8	28.9	30.1	30.3	26.8	28.0	27.2	28.3	28.6
8H	28.6	29.8	29.0	30.1	30.3	26.8	27.9	27.1	28.2	28.5
12H	28.6	29.7	28.9	30.0	30.3	26.7	27.8	27.1	28.1	28.4
4H 2H	26.9	28.2	27.3	28.5	28.7	26.4	27.7	26.7	28.0	28.2
3H	28.5	29.6	28.8	29.9	30.2	27.4	28.6	27.8	28.9	29.2
4H	29.0	30.1	29.4	30.4	30.7	27.6	28.7	28.0	29.0	29.3
6H	29.4	30.3	29.8	30.6	31.0	27.6	28.5	28.0	28.9	29.2
8H	29.4	30.3	29.8	30.6	31.0	27.6	28.4	28.0	28.8	29.2
12H	29.4	30.2	29.8	30.6	31.0	27.5	28.3	28.0	28.7	29.1
8H 4H	29.1	29.9	29.5	30.3	30.7	27.8	28.6	28.2	29.0	29.4
6H	29.5	30.2	29.9	30.6	31.0	27.8	28.5	28.2	28.9	29.3
8H	29.6	30.2	30.0	30.6	31.0	27.8	28.4	28.2	28.8	29.2
12H	29.5	30.1	30.0	30.5	31.0	27.7	28.2	28.2	28.7	29.2
12H 4H	29.1	29.8	29.5	30.2	30.6	27.8	28.5	28.2	28.9	29.3
6H	29.4	30.1	29.9	30.5	30.9	27.8	28.4	28.2	28.8	29.3
8H	29.5	30.0	30.0	30.5	31.0	27.7	28.3	28.2	28.7	29.2
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4				
1.5H	+ 0.2 / - 0.4					+ 0.3 / - 0.5				
2.0H	+ 0.3 / - 0.3					+ 0.5 / - 0.5				

CIE Pub.117, 833.9 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -0.6)  
 Area: 0.0056 m2

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:2023-09-05

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

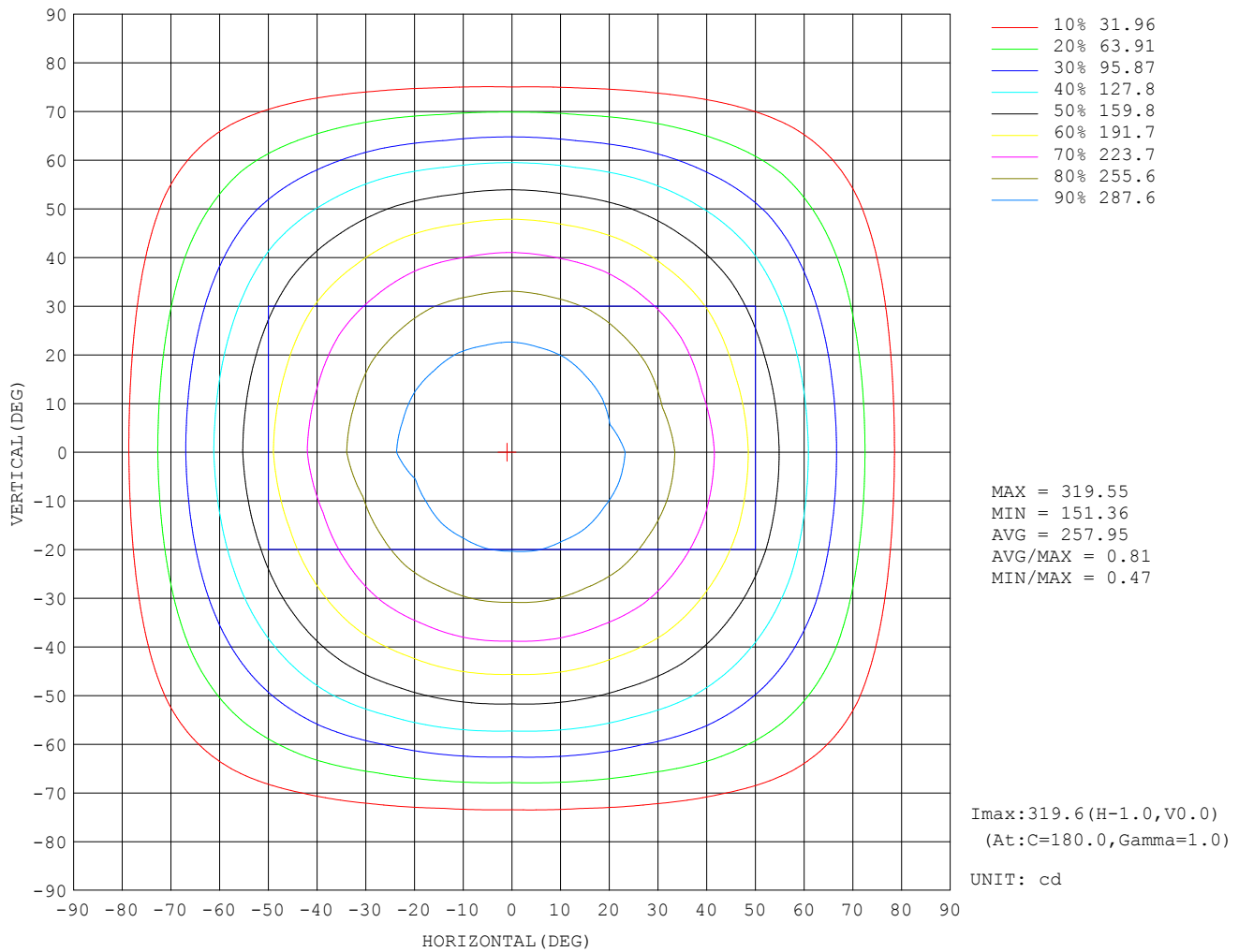
**UTILIZATION FACTORS TABLE**

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	75	68	59	53
1.25	85	75	68	84	74	68	81	73	67	60
1.50	90	81	74	88	80	74	85	78	72	65
2.00	97	89	83	95	88	82	92	85	80	73
2.50	100	93	88	98	92	87	95	89	85	77
3.00	104	97	92	102	96	91	98	93	89	81
4.00	107	102	98	105	100	97	101	97	94	85
5.00	110	105	102	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: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-09-05

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

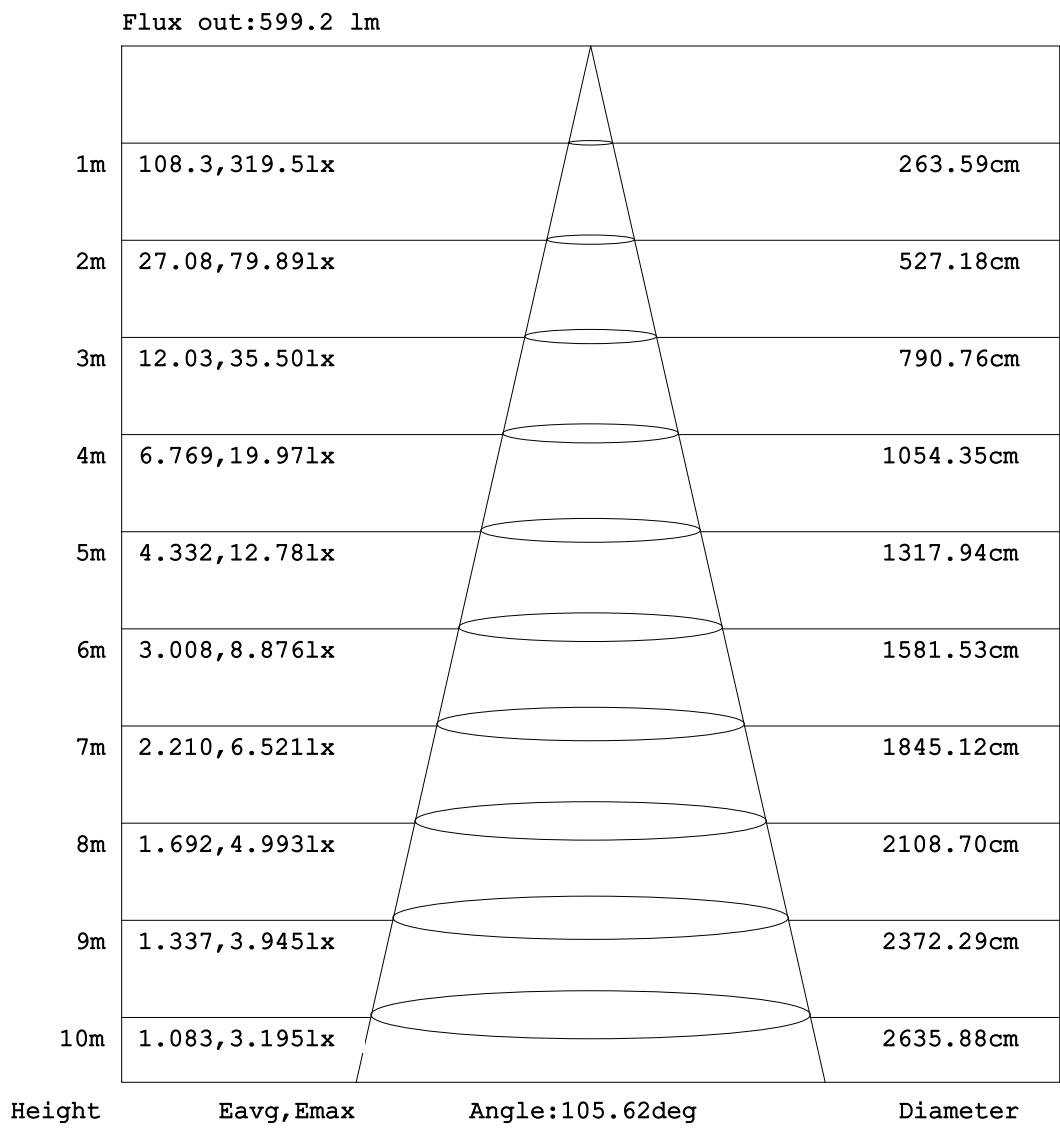


C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-09-05

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:



**AAI Figure**

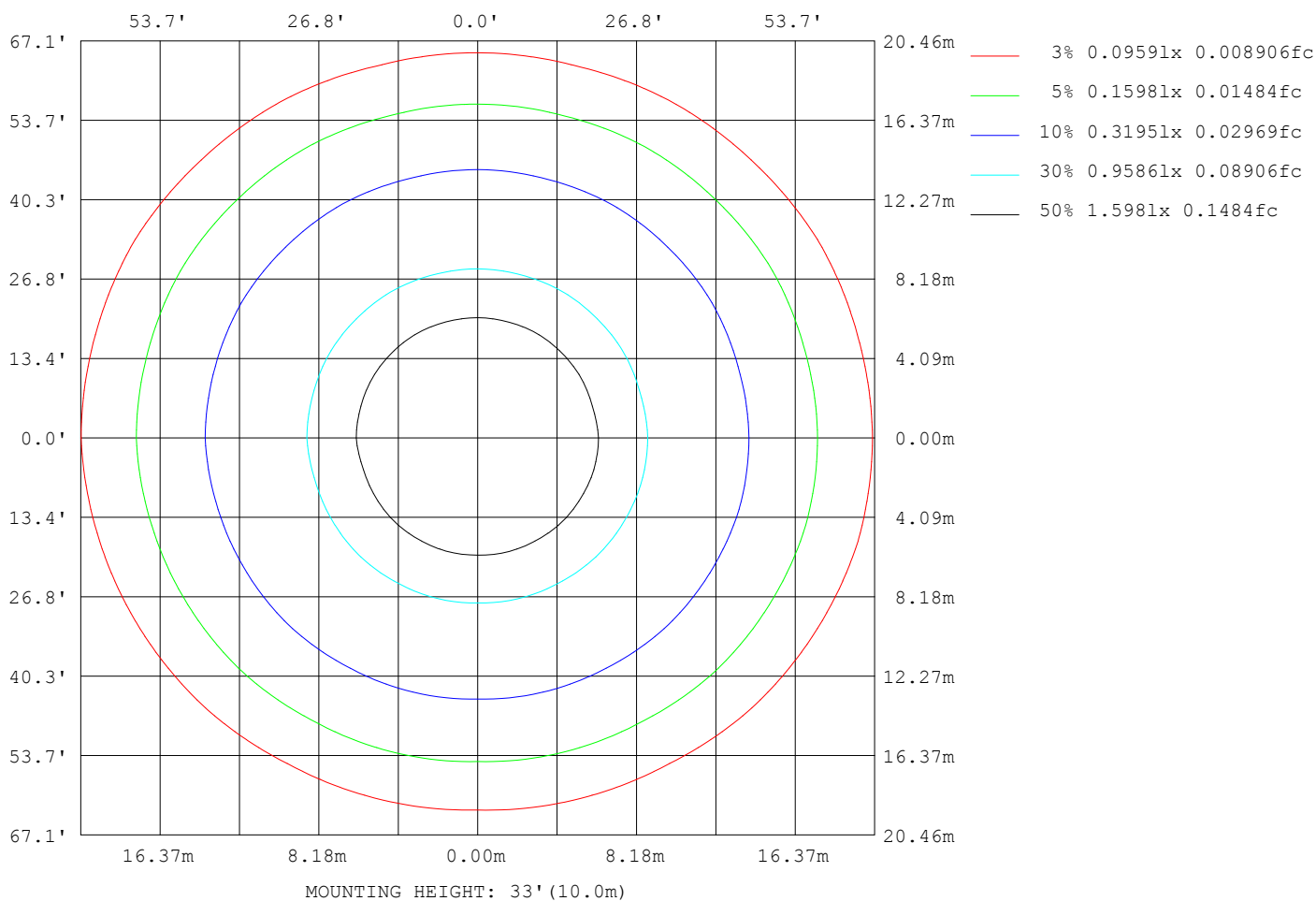


**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:DAMIN  
 Test Date:2023-09-05

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

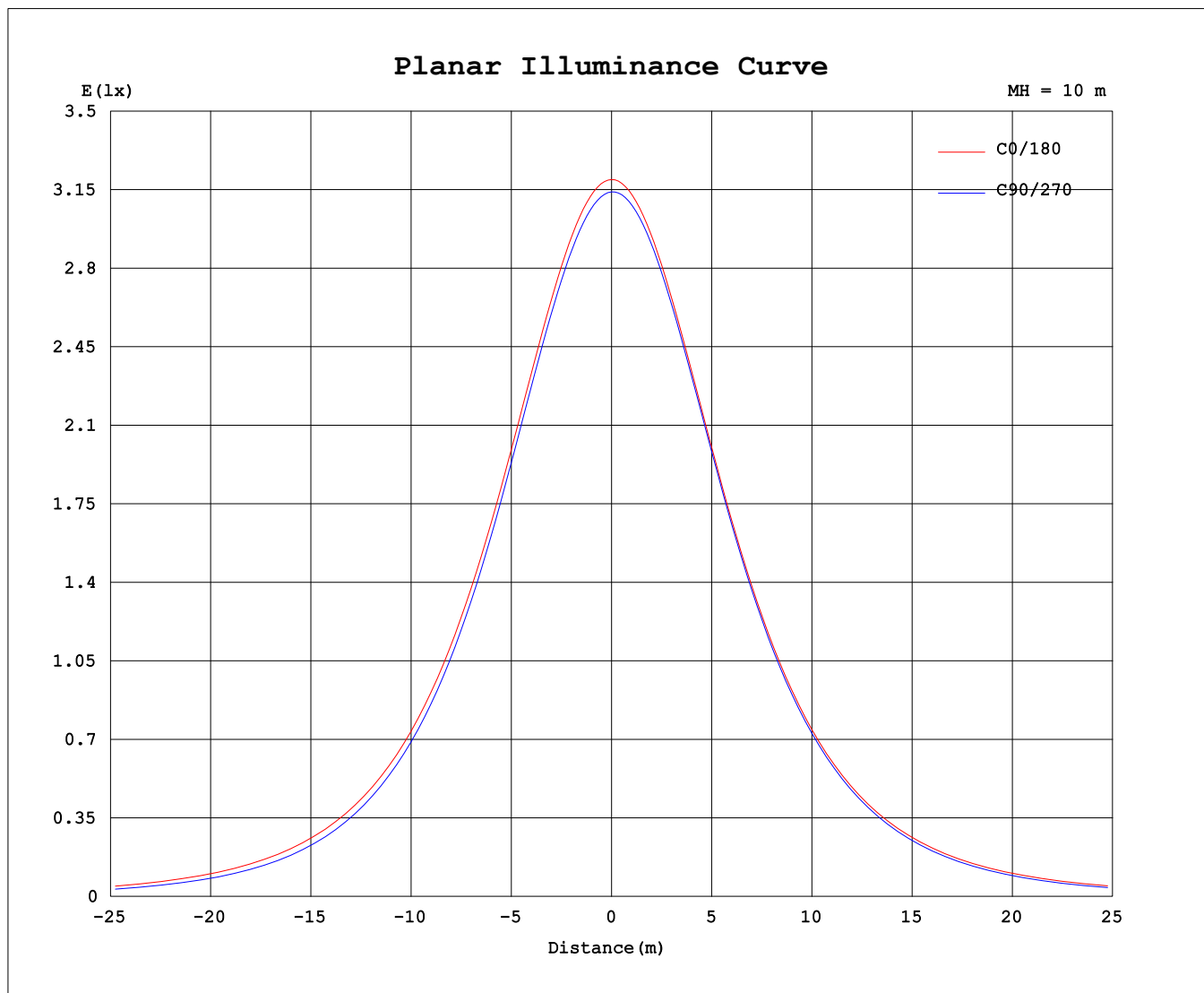
ISOLUX DIAGRAM



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-09-05

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-09-05

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:



