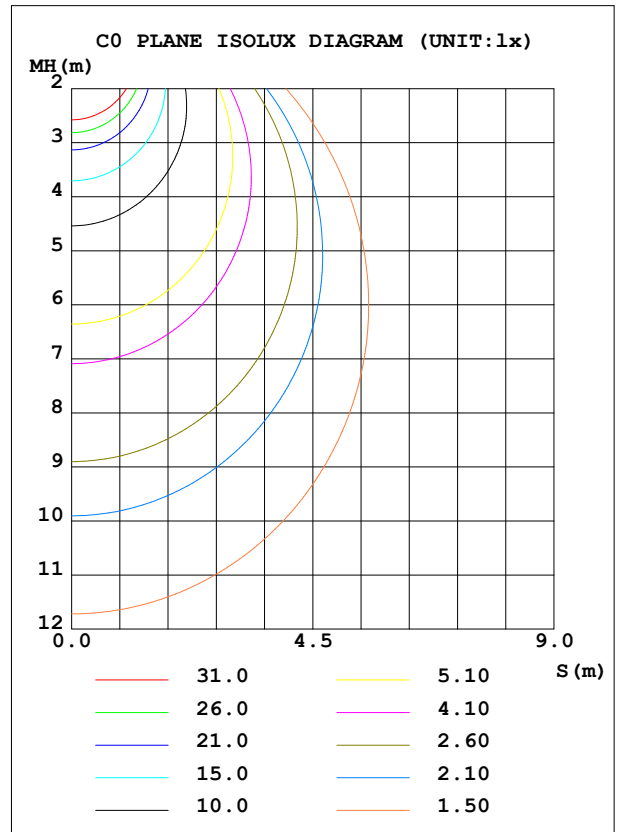
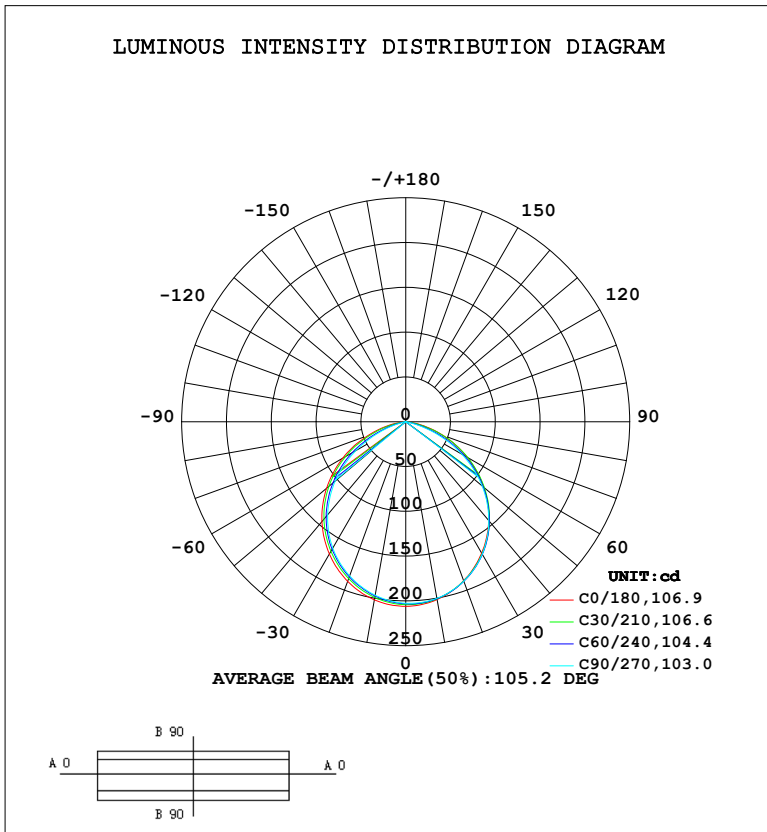


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.07V I:0.0586A P:6.7418W PF:0.5226 Freq:50.00Hz Lamp Flux:510.88x1 lm		
NAME: 116E-7W 6500K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.78 lm/W			
MODEL		Imax (cd)	206.0	S/MH (C0/180)	1.24
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.20
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	510.88	$\eta$ UP, DN (C0-180)	0.0, 51.1
NOMINAL FLUX (lm)	510.88	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 48.9
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	201.5	200.8	200.1	199.1	201.8	198.0	196.6	196.3	0- 10	19.18	19.18	3.76,3.76
20	188.9	189.8	189.3	188.1	189.6	184.7	183.1	183.0	10- 20	54.63	73.81	14.4,14.4
30	169.4	171.3	170.7	169.8	170.5	165.1	162.9	163.3	20- 30	81.94	155.8	30.5,30.5
40	144.1	146.3	144.1	145.0	145.6	139.8	135.6	137.8	30- 40	97.21	253.0	49.5,49.5
50	113.5	114.7	111.2	113.8	115.3	108.3	102.6	106.4	40- 50	97.77	350.7	68.7,68.7
60	79.25	78.82	72.20	78.25	81.14	72.82	64.39	70.92	50- 60	83.00	433.7	84.9,84.9
70	43.72	39.09	30.63	38.91	44.65	35.24	24.77	33.50	60- 70	54.73	488.5	95.6,95.6
80	12.16	5.167	1.491	5.292	13.11	4.201	1.361	3.738	70- 80	20.69	509.2	99.7,99.7
90	0.2255	0.1811	0.1416	0.1754	0.2717	0.2081	0.1522	0.2033	80- 90	1.725	510.9	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): 302.75 lm

%lum = 59.3%  
 %lamp = 59.3%

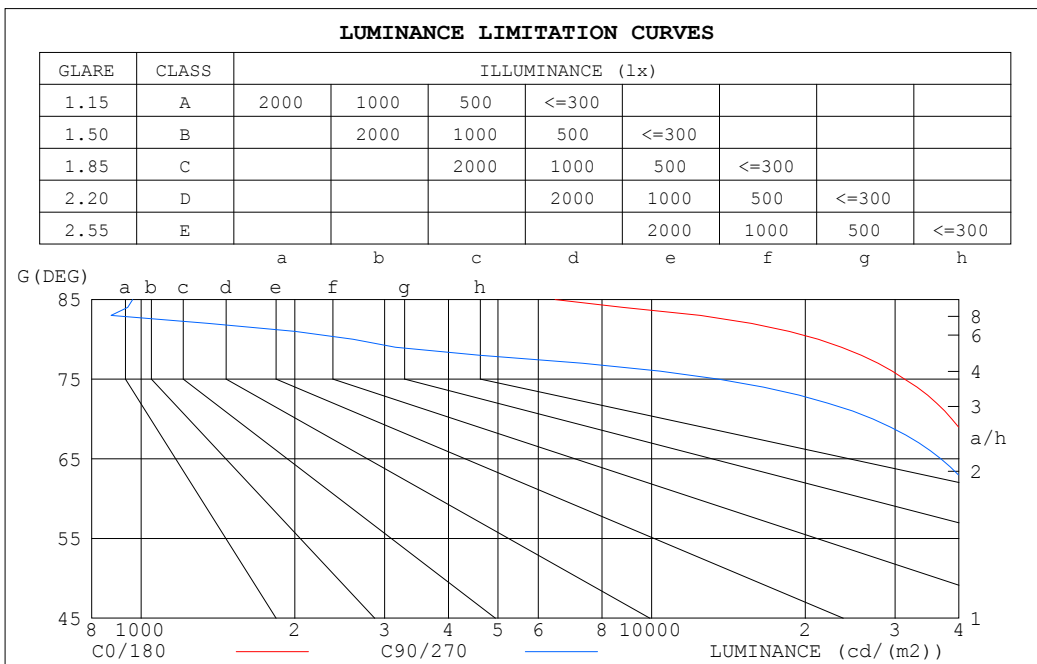
Conical surface Flux(120deg): 433.74 lm

%lum = 84.9%  
 %lamp = 84.9%

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



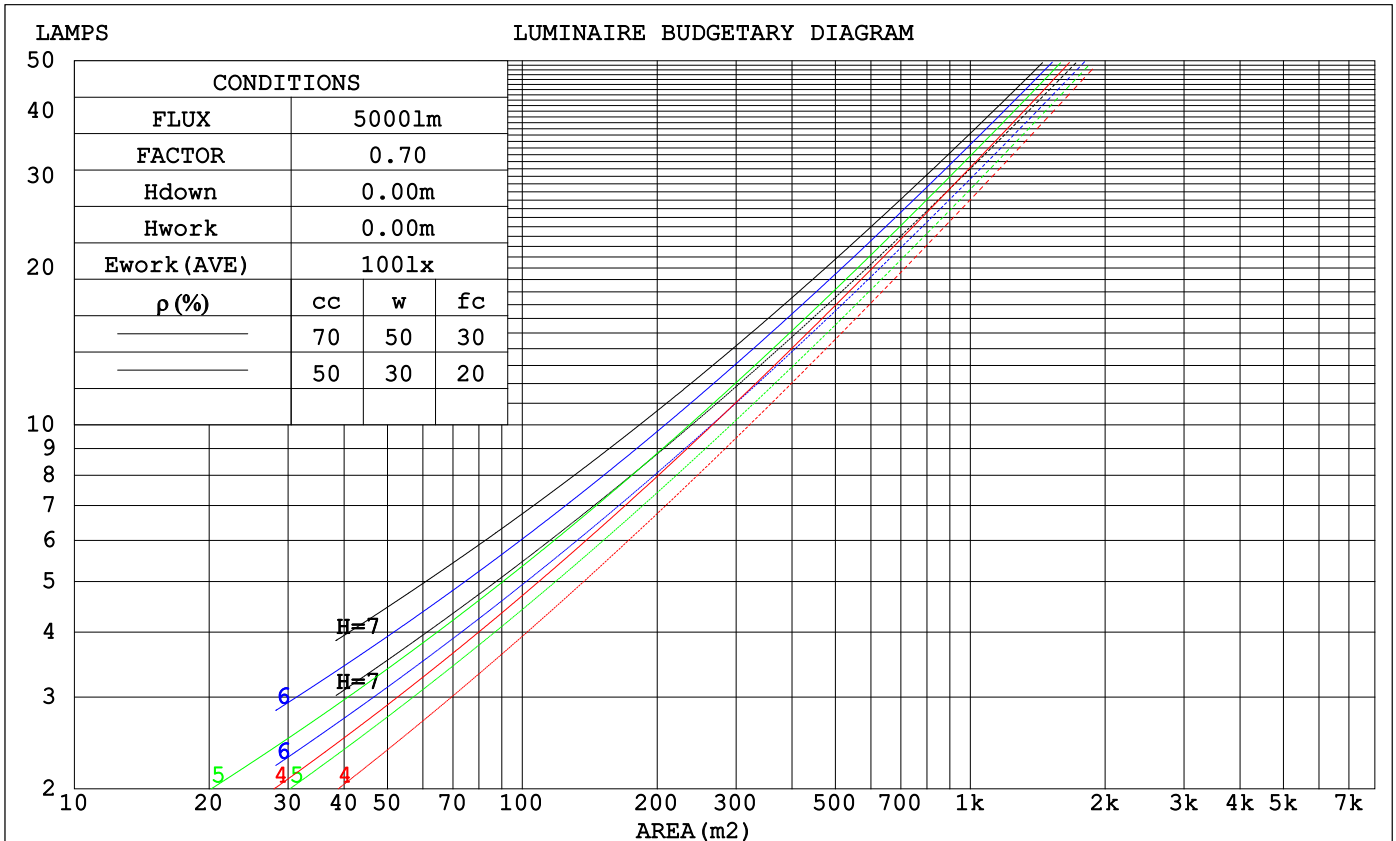
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6470	963
80	21213	2602
75	31313	13516
70	38737	27136
65	44030	36875
60	48030	43756
55	51080	48762
50	53507	52436
45	55440	55053

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	1.06	1.02	.99	1.04	1.00	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.87	.82	.91	.86	.81	.88	.83	.79	.85	.81	.77	.82	.78	.75	.73
3.0	.82	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.73	.68	.65	.62
4.0	.73	.65	.59	.72	.64	.58	.69	.63	.57	.67	.61	.57	.65	.60	.56	.54
5.0	.66	.57	.51	.65	.56	.50	.62	.55	.50	.61	.54	.49	.59	.53	.49	.47
6.0	.59	.51	.44	.58	.50	.44	.57	.49	.44	.55	.48	.43	.53	.48	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.44	.39	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.41	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.33
9.0	.45	.37	.32	.45	.37	.32	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.38	.33	.28	.27



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

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	.274	.156	.049	.267	.152	.048	.254	.145	.046	.242	.139	.045	.230	.134	.043	
2.0	.266	.146	.045	.260	.143	.044	.248	.138	.043	.238	.133	.042	.228	.129	.041	
3.0	.251	.134	.040	.246	.132	.040	.235	.128	.039	.226	.124	.038	.217	.120	.037	
4.0	.235	.122	.036	.230	.120	.036	.221	.117	.035	.213	.114	.034	.205	.111	.034	
5.0	.219	.112	.032	.215	.110	.032	.207	.108	.032	.199	.105	.031	.193	.103	.031	
6.0	.205	.103	.029	.201	.101	.029	.194	.099	.029	.187	.097	.029	.181	.095	.028	
7.0	.192	.095	.027	.188	.094	.027	.182	.092	.026	.176	.090	.026	.170	.088	.026	
8.0	.180	.088	.025	.177	.087	.025	.171	.085	.024	.166	.084	.024	.161	.082	.024	
9.0	.169	.082	.023	.166	.081	.023	.161	.080	.023	.156	.078	.022	.152	.077	.022	
10.0	.159	.076	.021	.157	.076	.021	.152	.075	.021	.148	.073	.021	.144	.072	.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	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.153	.101	.060	.132	.087	.053	.090	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.125	.078	.042	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.126	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.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

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:

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	26.7	28.2	27.0	28.4	28.6	26.4	27.8	26.6	28.0	28.2
3H	27.9	29.3	28.2	29.5	29.7	27.2	28.5	27.5	28.7	29.0
4H	28.3	29.6	28.6	29.8	30.1	27.2	28.5	27.6	28.8	29.0
6H	28.5	29.7	28.8	29.9	30.2	27.2	28.3	27.5	28.6	28.9
8H	28.5	29.6	28.8	29.9	30.2	27.1	28.2	27.4	28.5	28.8
12H	28.4	29.5	28.8	29.8	30.1	27.1	28.1	27.4	28.4	28.7
4H 2H	27.2	28.5	27.5	28.7	29.0	26.9	28.2	27.2	28.4	28.7
3H	28.6	29.7	28.9	30.0	30.3	27.8	28.9	28.2	29.2	29.5
4H	29.0	30.0	29.4	30.4	30.7	27.9	28.9	28.3	29.3	29.6
6H	29.3	30.2	29.7	30.5	30.9	27.9	28.8	28.3	29.1	29.5
8H	29.3	30.1	29.7	30.5	30.9	27.8	28.6	28.2	29.0	29.4
12H	29.3	30.0	29.7	30.4	30.8	27.8	28.5	28.2	28.9	29.3
8H 4H	29.1	29.9	29.5	30.3	30.6	28.0	28.9	28.5	29.2	29.6
6H	29.4	30.0	29.8	30.4	30.9	28.0	28.7	28.4	29.1	29.5
8H	29.4	30.0	29.9	30.4	30.9	27.9	28.5	28.4	29.0	29.4
12H	29.4	29.9	29.9	30.3	30.8	27.9	28.4	28.4	28.9	29.3
12H 4H	29.0	29.8	29.5	30.2	30.6	28.0	28.8	28.4	29.1	29.5
6H	29.3	29.9	29.8	30.3	30.8	28.0	28.6	28.4	29.0	29.4
8H	29.4	29.9	29.8	30.3	30.8	27.9	28.4	28.4	28.9	29.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.3 / - 0.3					+ 0.4 / - 0.4				
1.5H	+ 0.2 / - 0.4					+ 0.3 / - 0.5				
2.0H	+ 0.4 / - 0.5					+ 0.6 / - 0.6				

CIE Pub.117, 510.9 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -2.3)  
 Area: 0.0033 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:

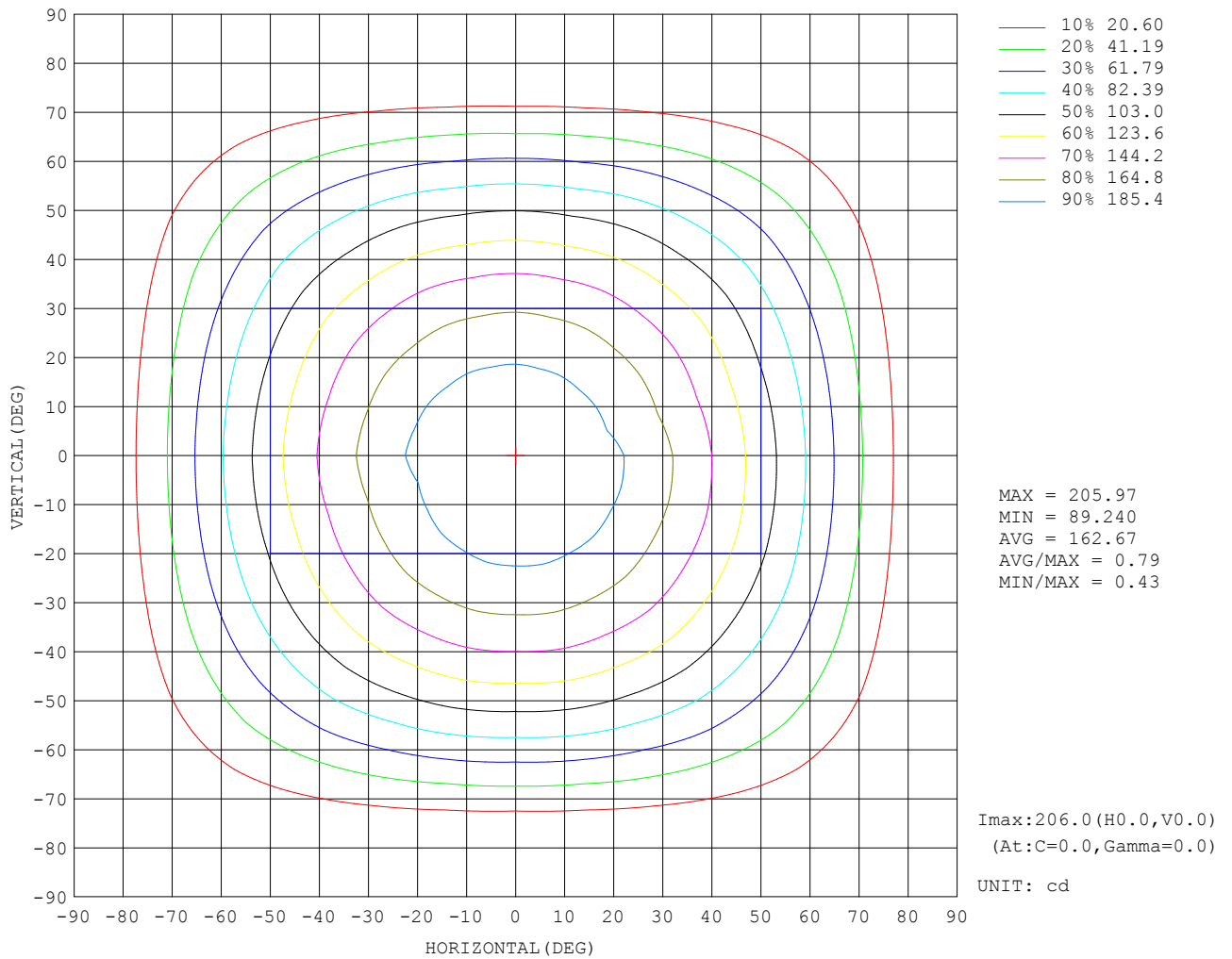
**UTILIZATION FACTORS TABLE**

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) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	49	42	58	48	42	36
0.80	70	59	52	69	59	52	68	58	52	45
1.00	79	69	62	78	68	61	76	69	61	54
1.25	86	76	70	85	76	69	82	74	69	62
1.50	91	82	75	89	81	75	86	79	74	67
2.00	98	90	84	96	89	83	92	86	82	74
2.50	101	94	89	99	93	88	95	90	86	78
3.00	104	98	93	102	97	92	98	94	90	82
4.00	108	103	99	106	101	97	101	98	95	86
5.00	110	106	102	108	104	101	103	100	98	89
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

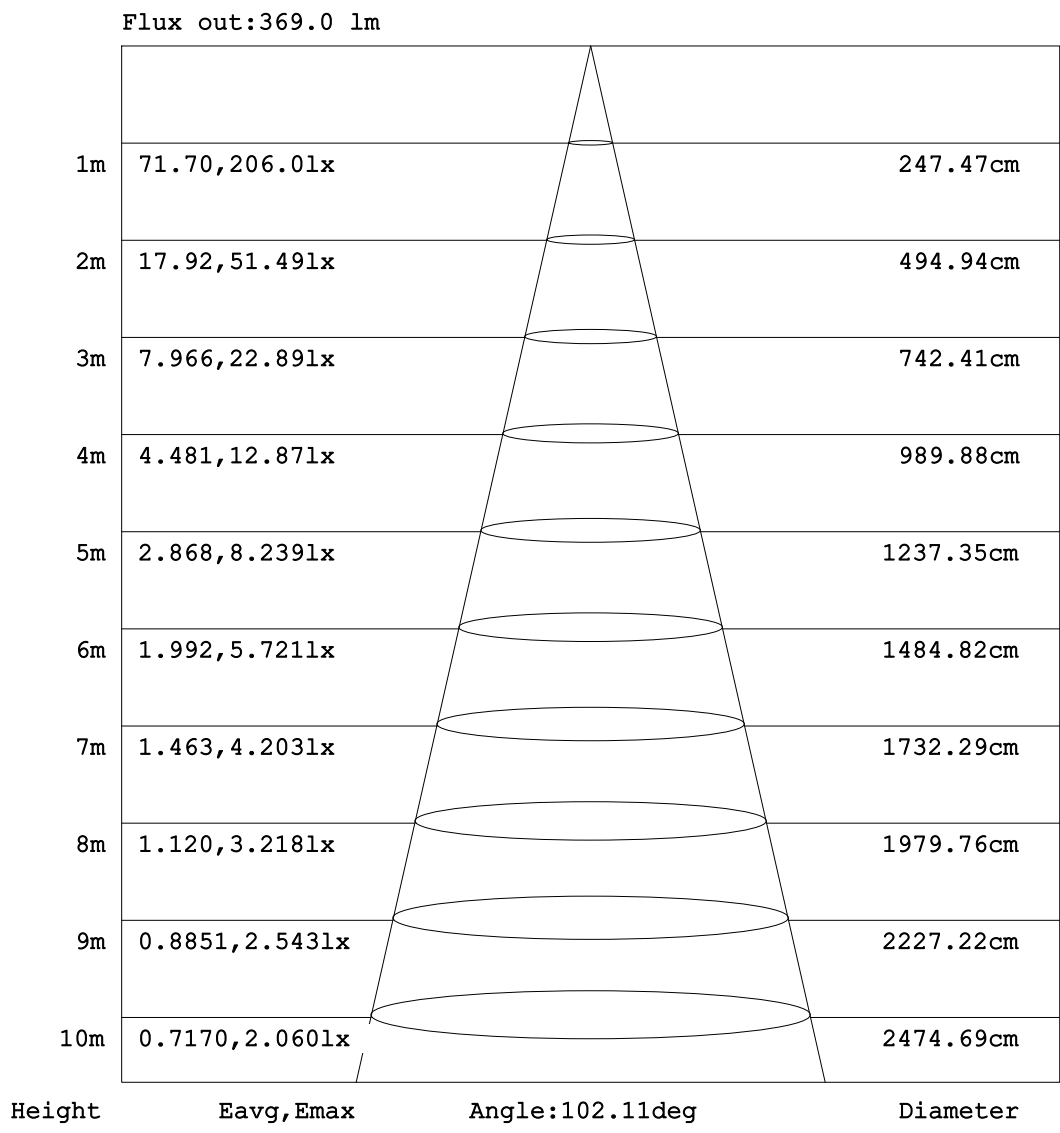


C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: DAMIN  
 Test Date: 2023-09-05

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**

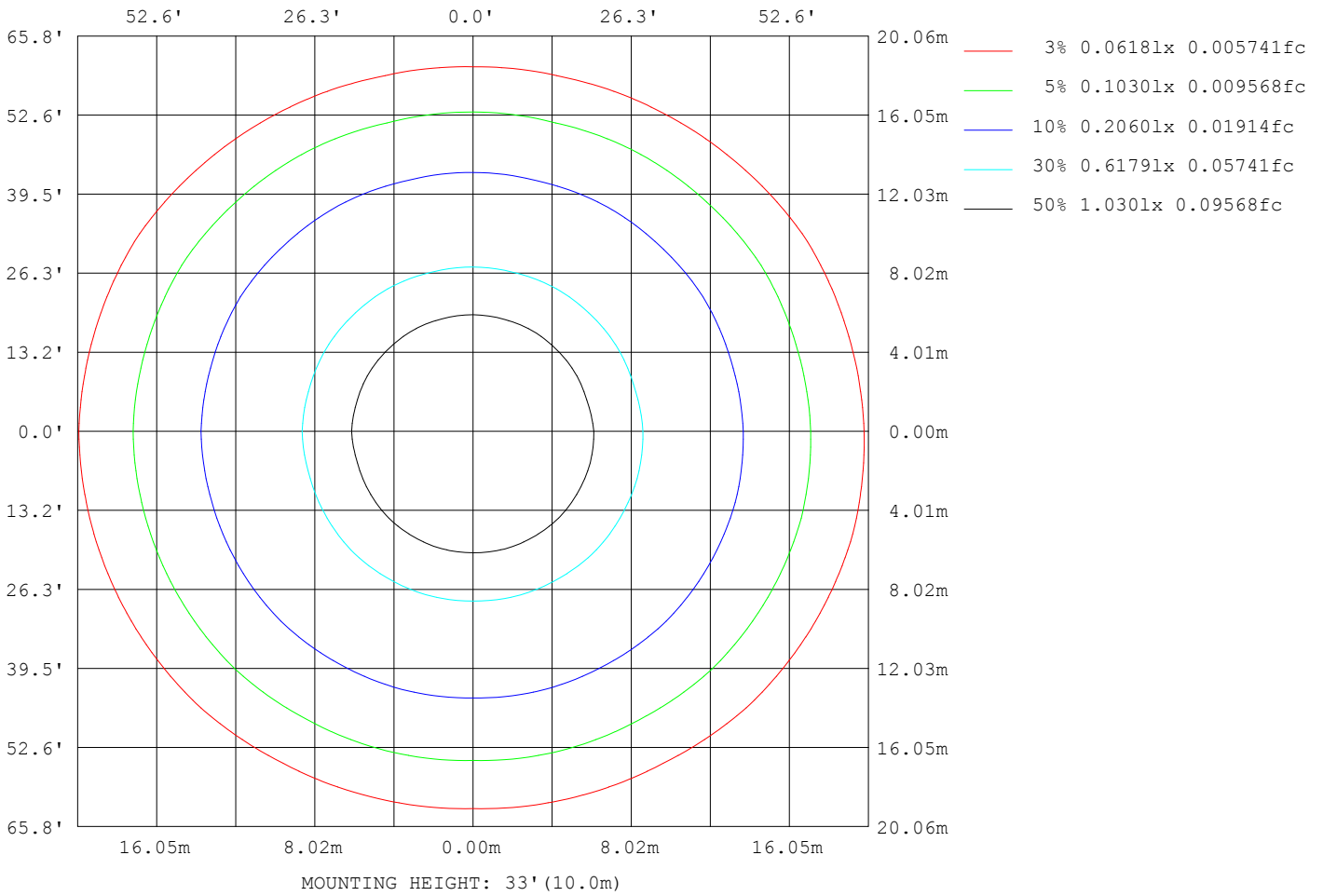


**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

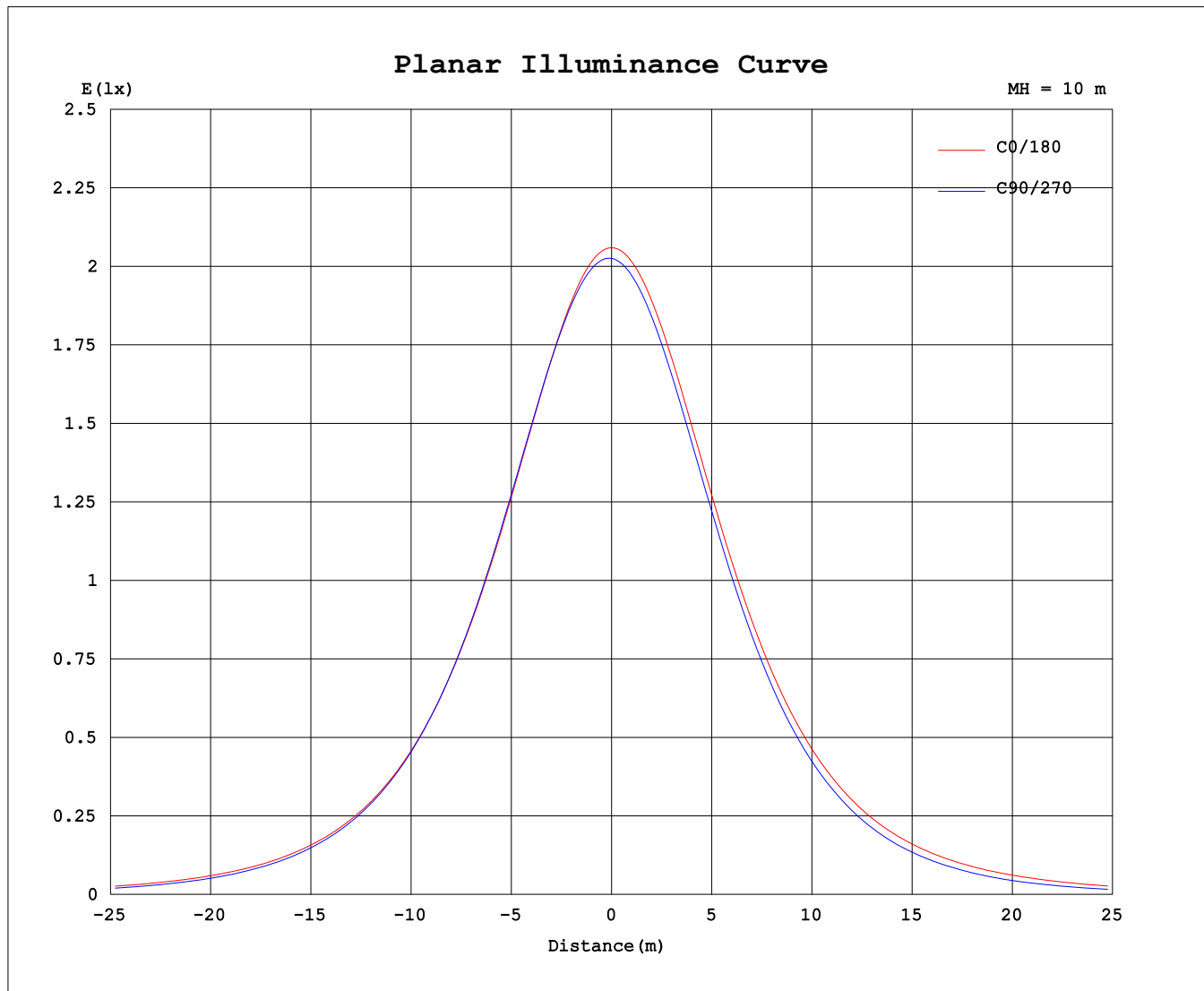
ISOLUX DIAGRAM



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:



