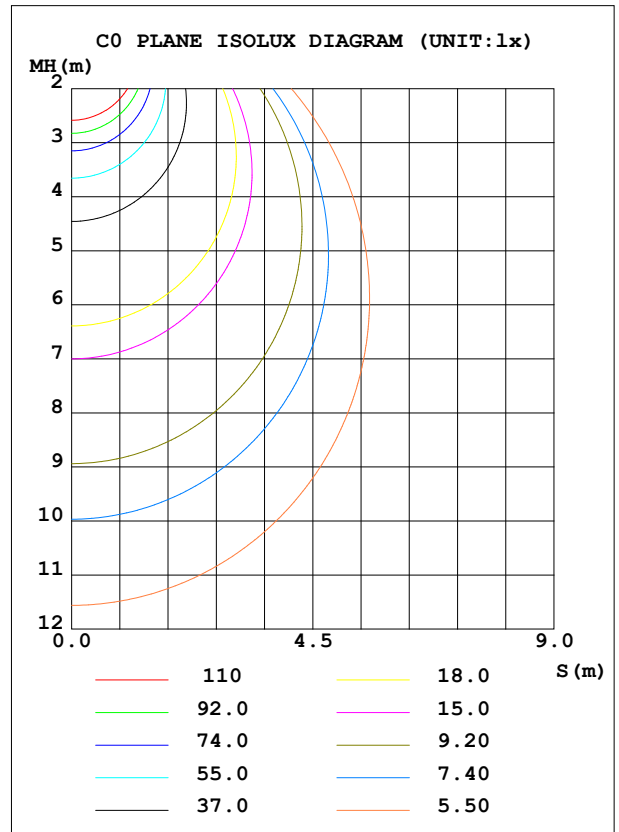
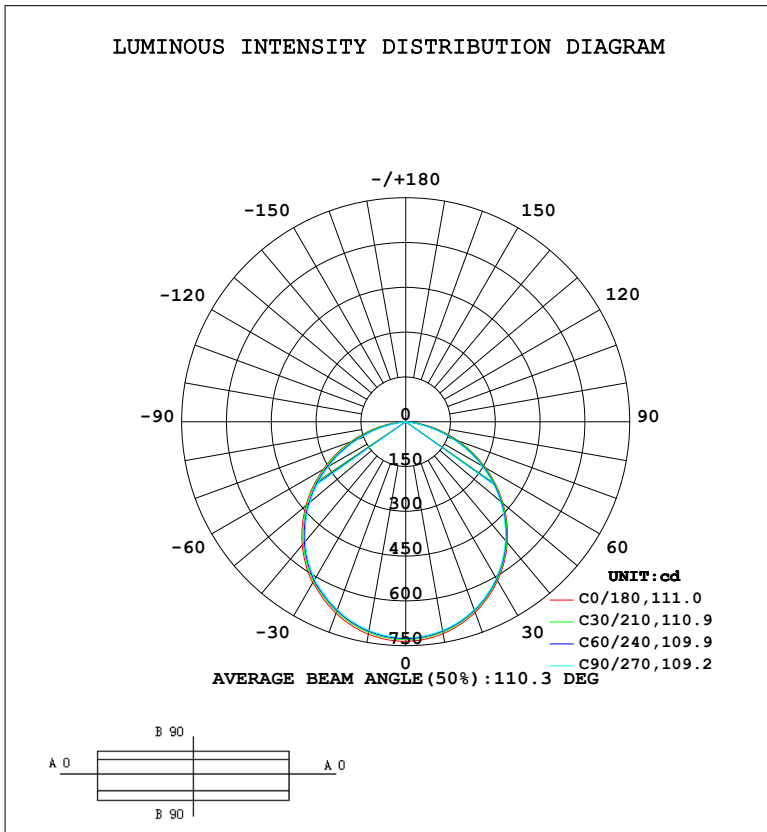


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.14V I:0.1640A P:20.066W PF:0.5558 Freq:50.00Hz Lamp Flux:1987.72x1 lm		
NAME: 116E-20W 6500K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	735.2	S/MH (C0/180)	1.26
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	1987.7	η UP, DN (C0-180)	0.0, 49.9
NOMINAL FLUX (lm)	1987.72	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	--	η 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

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	720.4	713.4	709.5	707.2	722.2	713.9	709.4	706.2	0- 10	68.54	68.54	3.45,3.45
20	679.2	673.6	669.5	668.2	682.6	674.1	669.6	665.9	10- 20	195.9	264.5	13.3,13.3
30	614.5	614.0	605.5	609.7	622.1	610.9	609.9	602.5	20- 30	296.3	560.8	28.2,28.2
40	528.9	528.8	519.1	525.6	538.9	526.4	523.2	517.9	30- 40	356.4	917.1	46.1,46.1
50	425.3	424.1	413.7	422.3	435.9	422.9	418.0	414.7	40- 50	366.3	1283	64.6,64.6
60	308.8	305.5	293.0	304.8	319.3	306.1	297.4	298.2	50- 60	324.9	1608	80.9,80.9
70	187.0	178.5	164.9	178.6	195.9	181.5	168.2	174.5	60- 70	238.8	1847	92.9,92.9
80	69.29	55.47	38.21	54.47	76.12	58.91	39.65	52.96	70- 80	122.6	1970	99.1,99.1
90	1.045	1.052	0.8691	1.043	1.298	1.263	1.028	1.231	80- 90	17.97	1988	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): 1102.3 lm

%lum = 55.5%
 %lamp = 55.5%

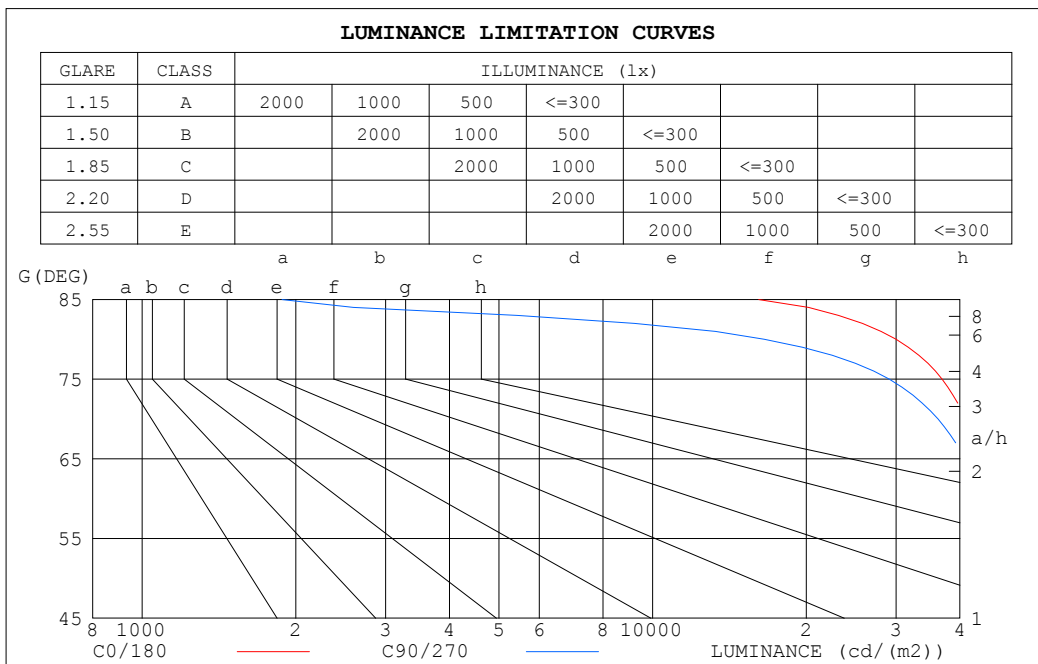
Conical surface Flux(120deg): 1608.3 lm

%lum = 80.9%
 %lamp = 80.9%

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



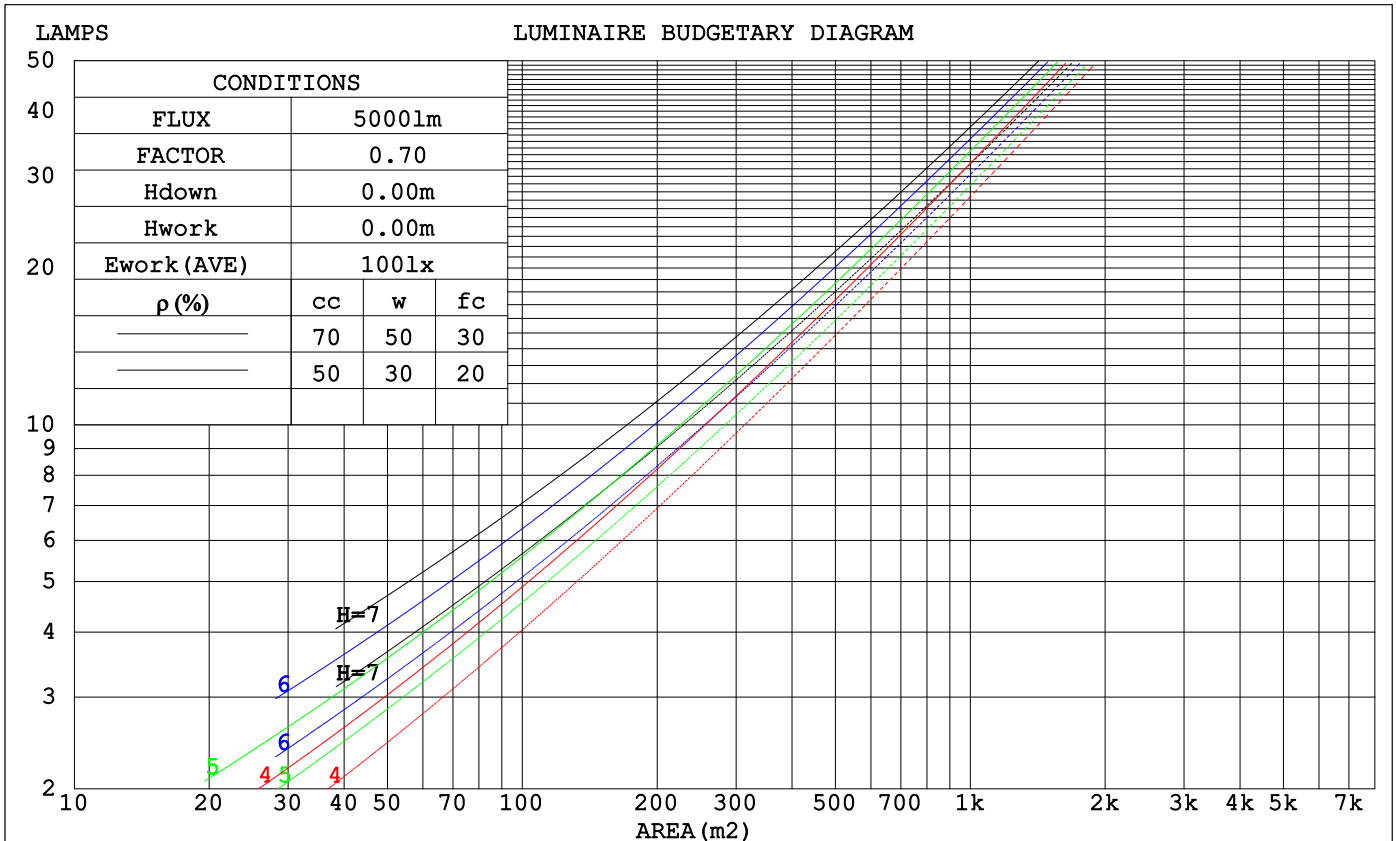
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	16146	1880
80	30003	16543
75	36894	29091
70	41115	36241
65	44236	40907
60	46434	44057
55	48287	46521
50	49752	48390
45	50944	49818

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

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	.97	1.02	.99	.95	.98	.95	.92	.94	.92	.89	.91	.89	.87	.85
2.0	.91	.85	.79	.90	.83	.78	.86	.81	.76	.83	.78	.75	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.68	.63	.71	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.56	.67	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.63	.54	.48	.60	.53	.47	.58	.52	.47	.57	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.55	.47	.42	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.39	.33	.45	.38	.33	.44	.38	.33	.43	.37	.32	.31
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.29	.40	.34	.29	.27
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.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

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:

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	.294	.167	.053	.287	.164	.052	.274	.157	.050	.262	.151	.049	.251	.145	.047	
2.0	.282	.155	.047	.276	.152	.047	.264	.147	.046	.254	.142	.045	.244	.138	.043	
3.0	.263	.140	.042	.258	.138	.042	.248	.134	.041	.238	.130	.040	.229	.127	.039	
4.0	.244	.127	.037	.239	.125	.037	.230	.122	.036	.222	.119	.036	.214	.116	.035	
5.0	.227	.115	.033	.222	.114	.033	.214	.112	.033	.207	.109	.032	.200	.107	.032	
6.0	.211	.106	.030	.207	.105	.030	.200	.102	.030	.193	.100	.029	.187	.098	.029	
7.0	.197	.097	.028	.193	.096	.027	.187	.094	.027	.181	.093	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.170	.086	.025	.165	.084	.025	
9.0	.172	.083	.023	.170	.083	.023	.165	.081	.023	.160	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.147	.074	.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	.171	.132	.099	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.034	.116	.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	.117	.060	.023	.100	.052	.020	.070	.037	.014	.041	.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	26.4	27.9	26.7	28.1	28.3	26.2	27.7	26.5	27.9	28.1
3H	27.9	29.3	28.2	29.5	29.7	27.5	28.9	27.8	29.1	29.3
4H	28.4	29.7	28.7	30.0	30.2	27.9	29.2	28.2	29.4	29.7
6H	28.8	30.0	29.1	30.3	30.5	28.0	29.3	28.3	29.5	29.8
8H	28.8	30.0	29.2	30.3	30.6	28.0	29.2	28.3	29.5	29.8
12H	28.8	30.0	29.2	30.3	30.6	27.9	29.1	28.3	29.4	29.7
4H 2H	27.0	28.3	27.3	28.5	28.8	26.8	28.1	27.1	28.4	28.6
3H	28.6	29.7	28.9	30.0	30.3	28.2	29.4	28.6	29.7	30.0
4H	29.3	30.3	29.6	30.6	30.9	28.7	29.8	29.1	30.1	30.4
6H	29.7	30.6	30.1	31.0	31.3	28.9	29.9	29.3	30.2	30.6
8H	29.8	30.7	30.2	31.0	31.4	28.9	29.8	29.3	30.1	30.5
12H	29.8	30.6	30.3	31.0	31.4	28.9	29.7	29.3	30.1	30.5
8H 4H	29.4	30.3	29.8	30.6	31.0	28.9	29.8	29.4	30.2	30.6
6H	30.0	30.7	30.4	31.1	31.5	29.2	29.9	29.7	30.3	30.8
8H	30.1	30.8	30.6	31.2	31.6	29.2	29.9	29.7	30.3	30.7
12H	30.2	30.7	30.7	31.2	31.7	29.2	29.7	29.7	30.2	30.7
12H 4H	29.4	30.2	29.8	30.6	31.0	28.9	29.7	29.4	30.1	30.5
6H	30.0	30.6	30.4	31.0	31.5	29.2	29.9	29.7	30.3	30.7
8H	30.2	30.7	30.6	31.1	31.6	29.3	29.8	29.7	30.2	30.7
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4				

CIE Pub.117, 1988 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.4)
 Area: 0.0133 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:

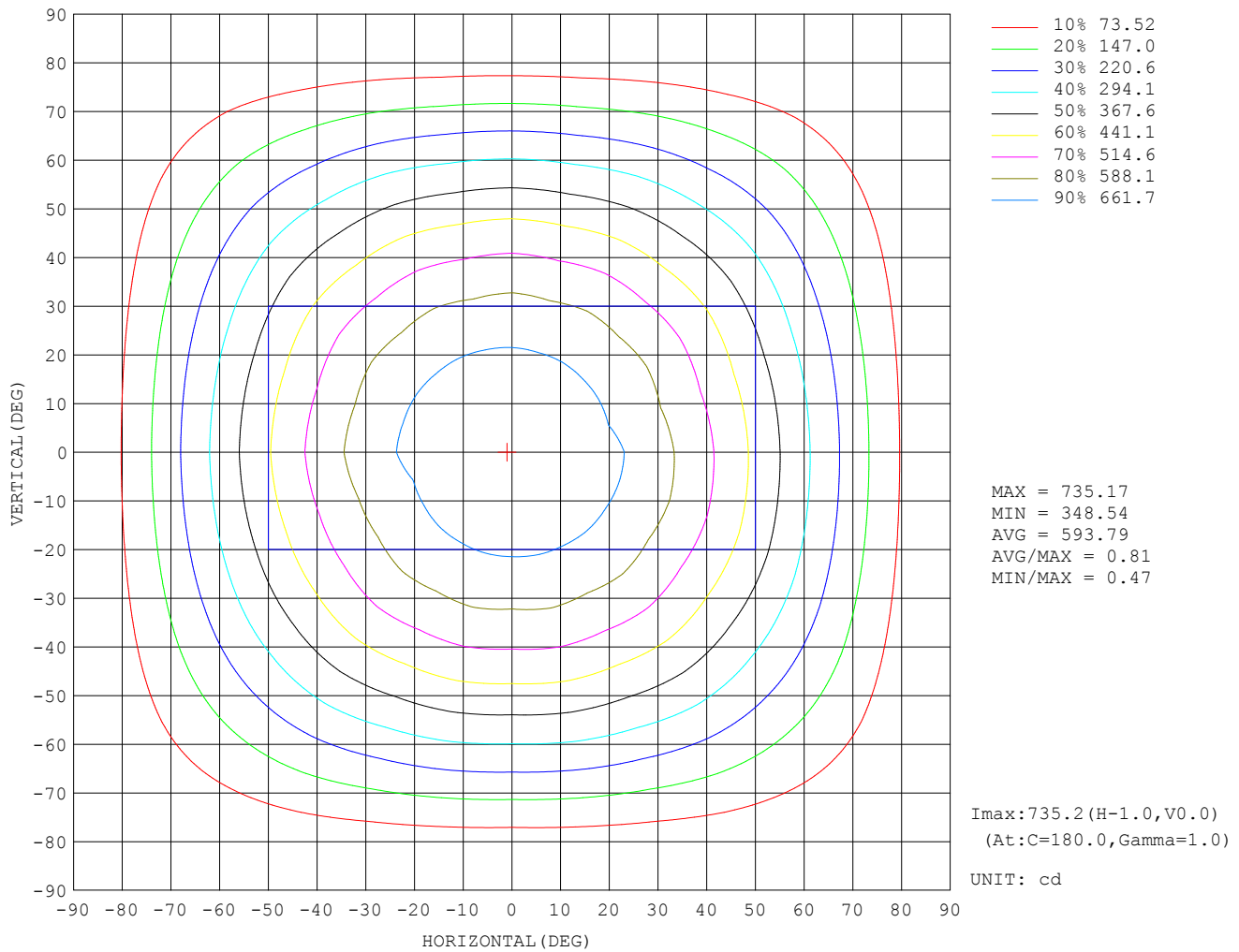
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	56	46	40	33
0.80	68	57	50	67	57	50	66	56	49	42
1.00	77	66	59	76	65	59	74	67	58	51
1.25	84	74	67	83	73	66	80	72	66	58
1.50	89	79	73	87	79	72	84	77	71	64
2.00	96	88	81	94	86	81	91	84	79	71
2.50	100	92	86	98	91	85	94	88	84	75
3.00	103	96	91	101	95	90	97	92	88	80
4.00	107	101	97	105	100	96	100	96	93	84
5.00	109	105	101	107	103	99	102	99	96	87
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

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:

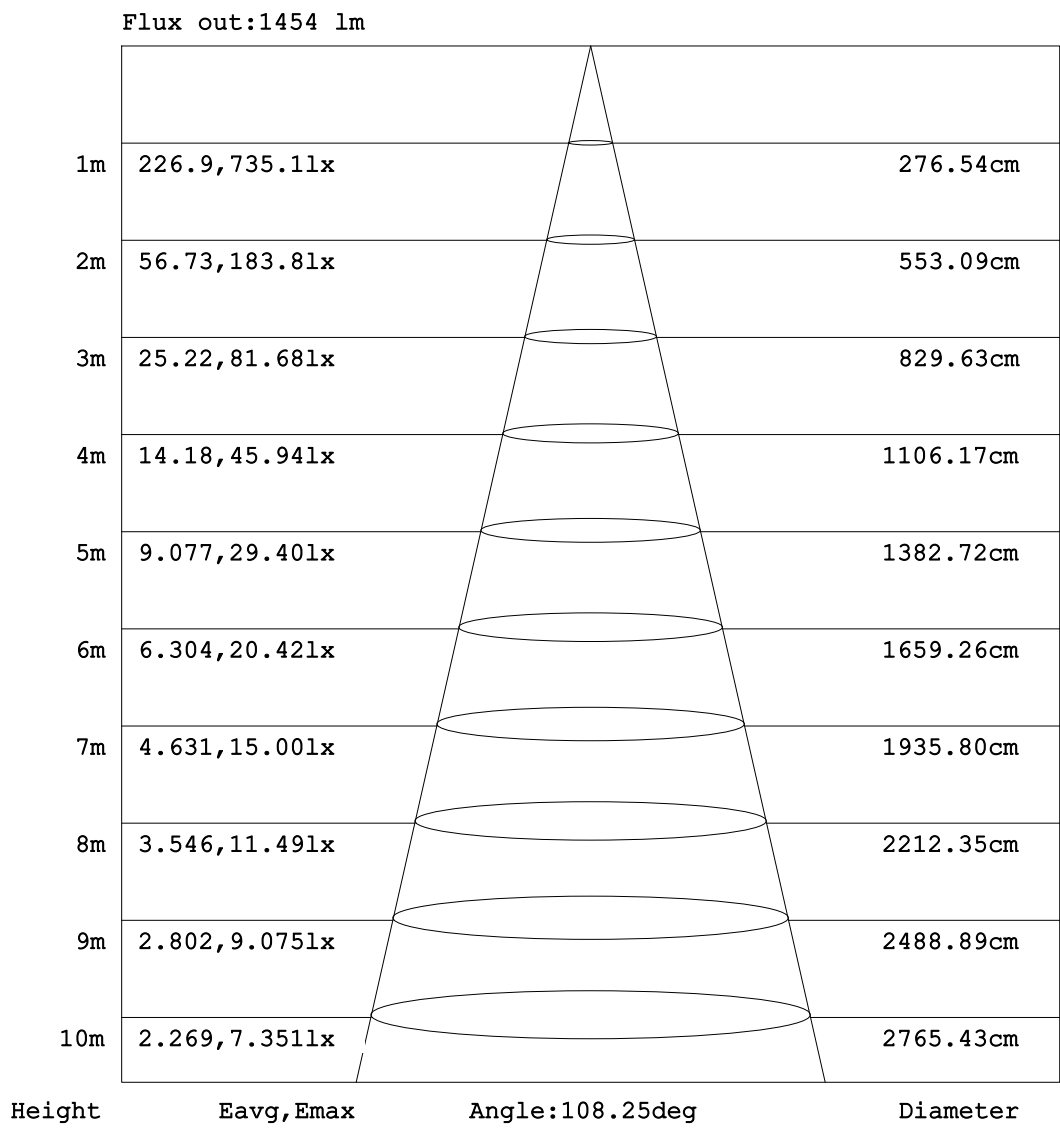
ISOCANDELA DIAGRAM



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

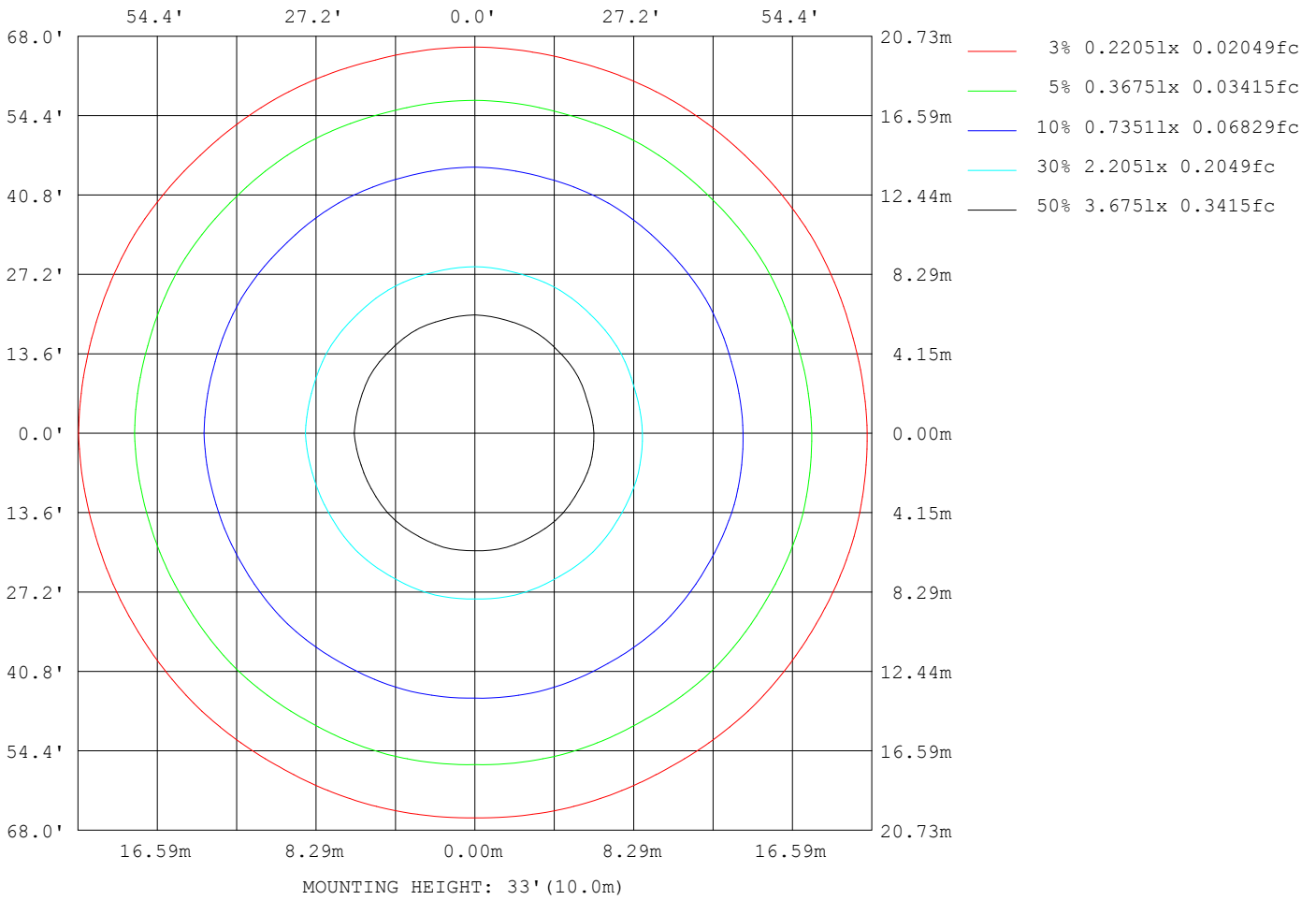


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

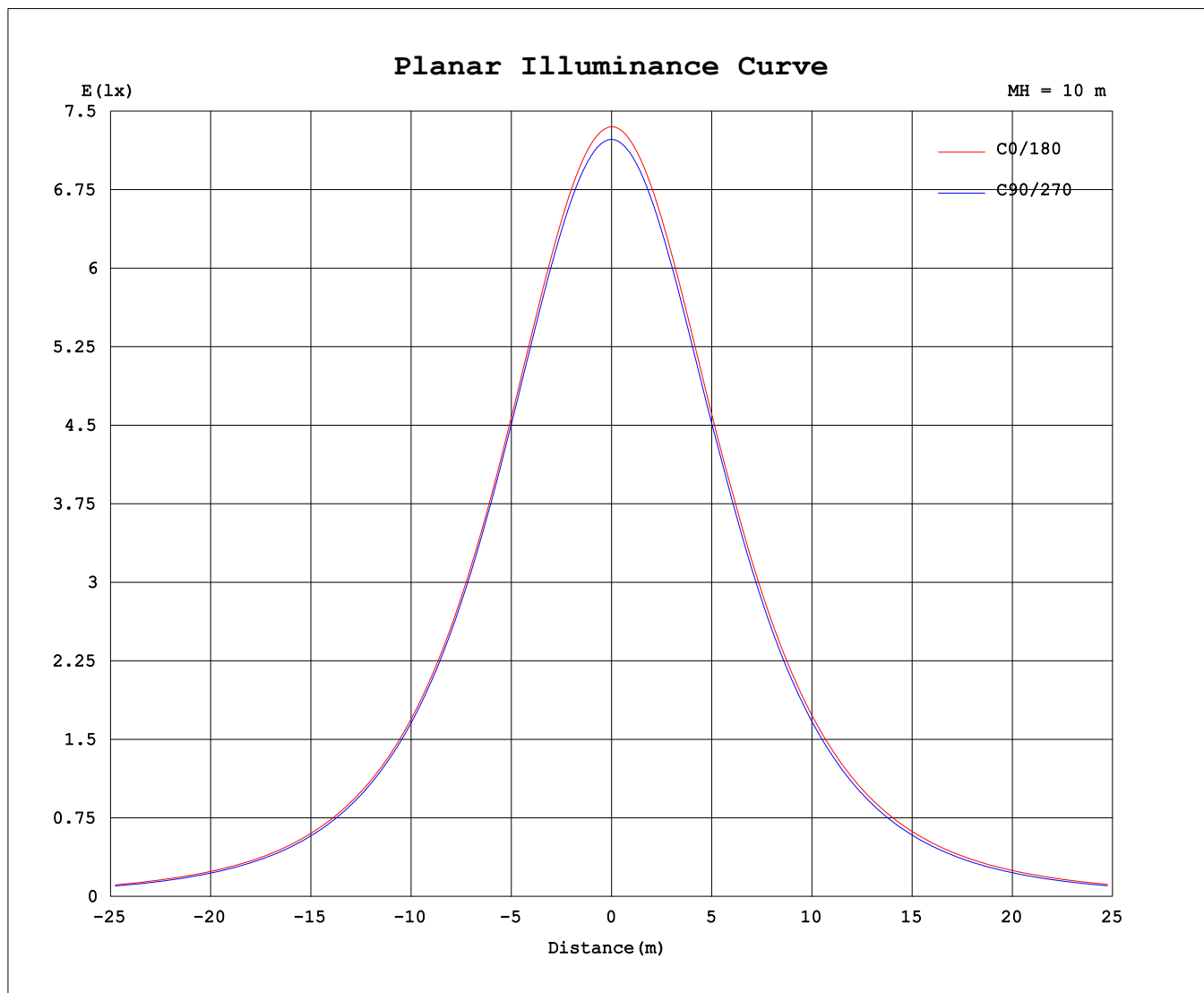
ISOLUX DIAGRAM



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:

