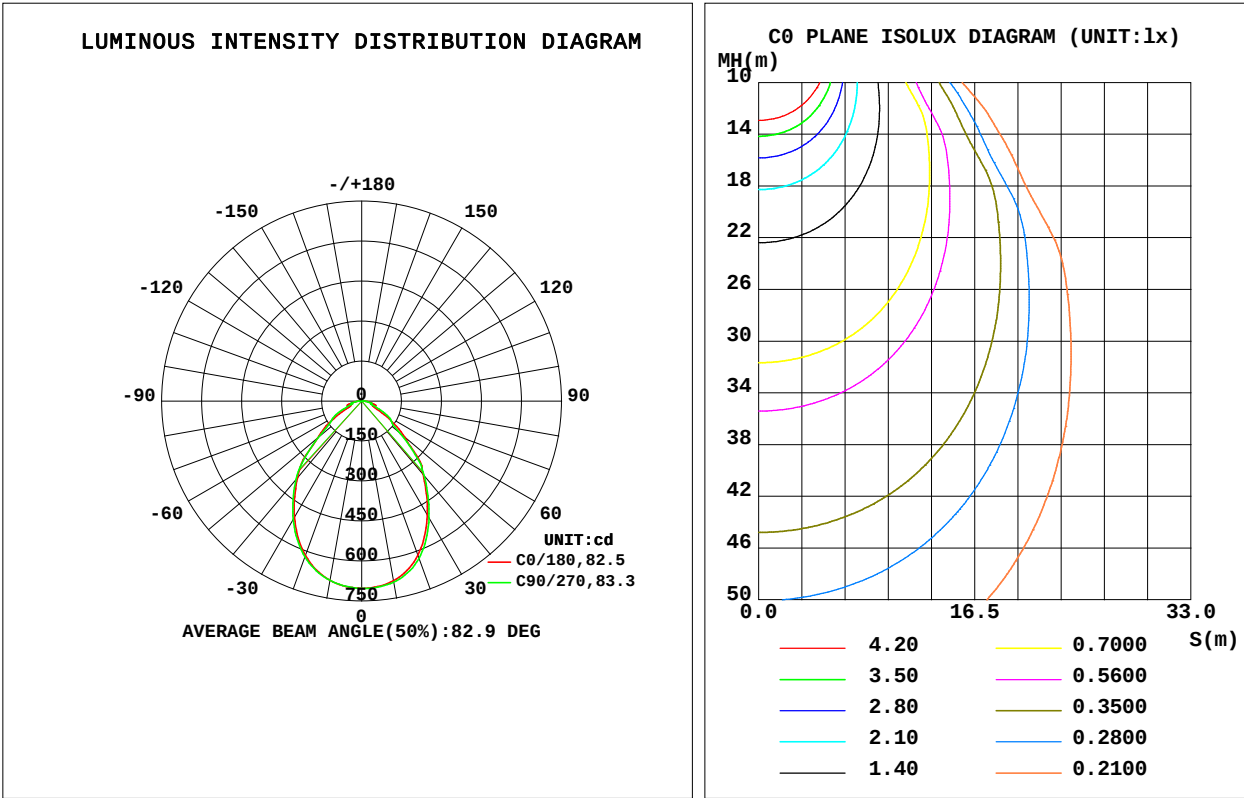


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 78.45 lm/W			
MODEL		I _{max} (cd)	702.7	S/MH(C0/180)	1.08
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.10
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1286.5	η UP, DN(C0-180)	0.0,51.0
NOMINAL FLUX(lm)	1286.51	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,49.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.526m [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	682.9	683.1	683.4	684.4	684.5	687.0	689.7	686.7	0- 10	66.26	66.26	5.15, 5.15
20	616.9	619.4	622.4	621.8	616.3	618.1	628.5	624.0	10- 20	185.4	251.7	19.6, 19.6
30	504.5	508.7	513.8	509.7	493.5	490.5	506.0	508.0	20- 30	260.3	512.0	39.8, 39.8
40	374.6	379.0	383.1	375.6	358.6	352.6	364.3	369.0	30- 40	272.5	784.5	61, 61
50	217.2	225.2	213.9	211.2	211.7	192.0	190.5	199.4	40- 50	224.9	1009	78.5, 78.5
60	97.24	121.4	122.7	116.8	86.84	107.0	115.6	111.7	50- 60	138.0	1147	89.2, 89.2
70	50.14	68.61	47.51	62.93	53.16	60.19	40.07	61.30	60- 70	76.05	1223	95.1, 95.1
80	32.16	28.27	35.04	27.95	32.76	25.45	29.06	25.47	70- 80	46.02	1270	98.7, 98.7
90	1.374	1.832	1.102	0.8988	0.5973	0.7422	0.6205	0.6784	80- 90	17.00	1287	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): 909.04 lm

%lum = 70.7%
%lamp = 70.7%

Conical surface Flux(120deg): 1147.4 lm

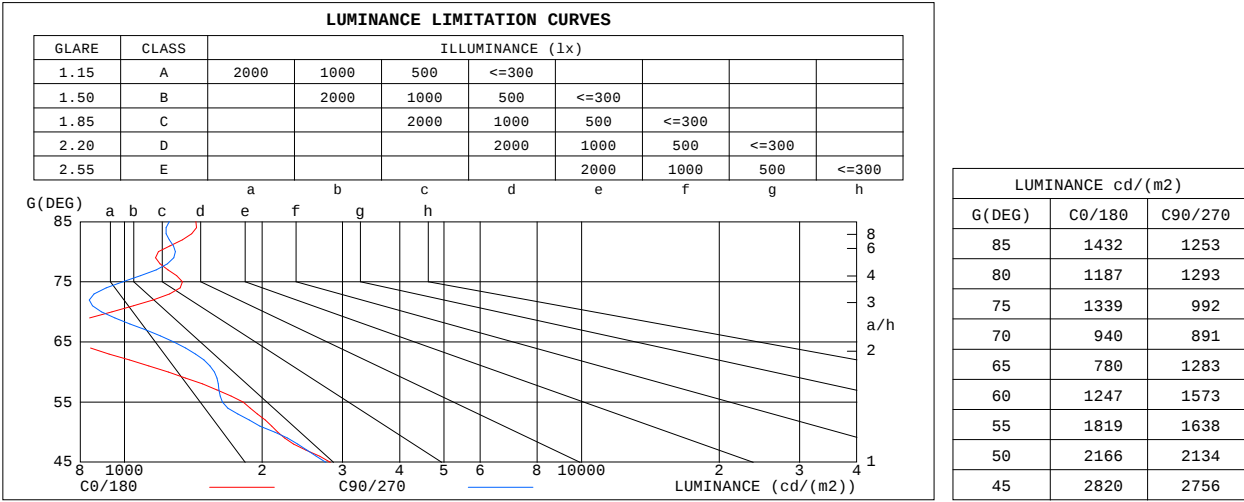
%lum = 89.2%
%lamp = 89.2%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.526m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



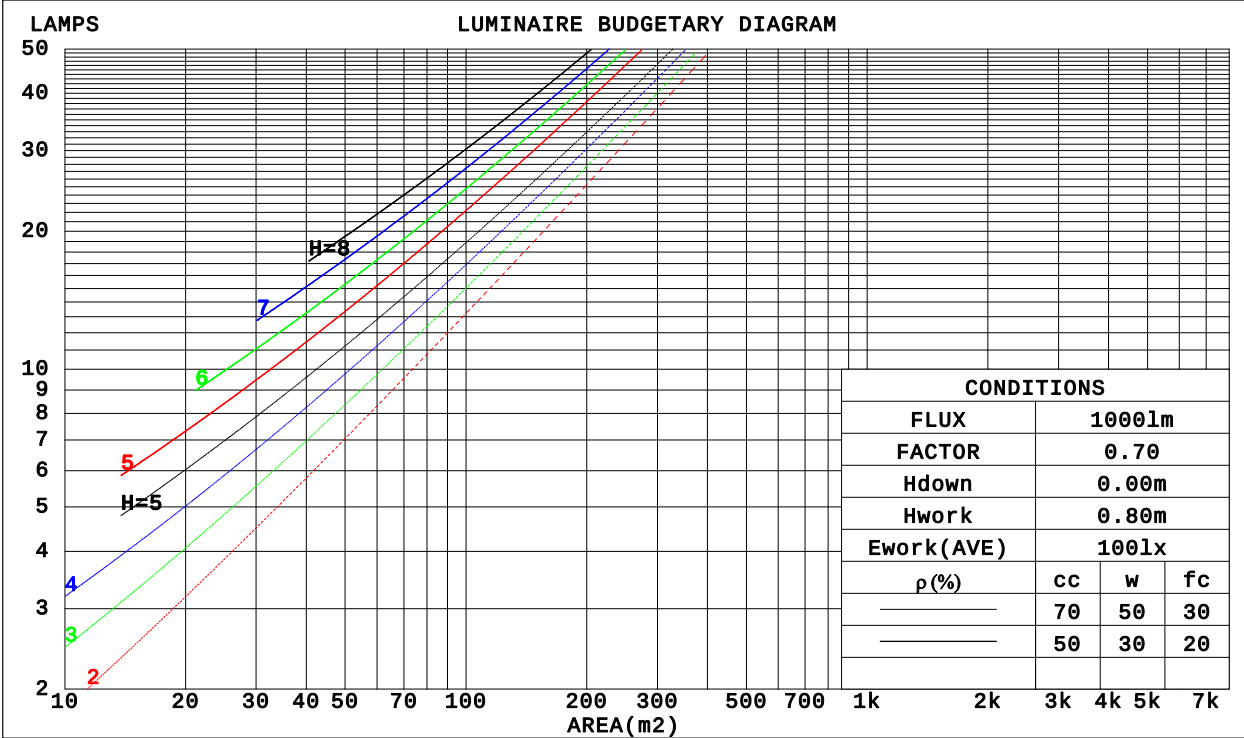
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

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	.00
1.0	1.07	1.03	.00	1.04	1.01	.98	1.00	.98	.95	.96	.94	.92	.93	.91	.89	.88
2.0	.95	.90	.85	.94	.88	.84	.90	.86	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.86	.79	.73	.84	.78	.73	.81	.76	.71	.79	.74	.70	.76	.72	.69	.67
4.0	.77	.70	.64	.76	.69	.64	.74	.68	.63	.72	.66	.62	.70	.65	.61	.59
5.0	.70	.62	.57	.69	.62	.56	.67	.61	.56	.65	.60	.55	.64	.59	.55	.53
6.0	.64	.56	.51	.63	.56	.50	.62	.55	.50	.60	.54	.50	.59	.53	.49	.47
7.0	.59	.51	.46	.58	.51	.45	.57	.50	.45	.55	.49	.45	.54	.49	.45	.43
8.0	.54	.47	.41	.54	.46	.41	.52	.46	.41	.51	.45	.41	.50	.45	.41	.39
9.0	.50	.43	.38	.50	.43	.38	.49	.42	.38	.48	.42	.37	.47	.41	.37	.36
10.0	.47	.40	.35	.46	.39	.35	.45	.39	.34	.44	.39	.34	.44	.38	.34	.33



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm					
NAME: UNF-20210015-TDC 单下 5000K			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:		Shielding Angle:

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						Wall Exitance Coefficients(WEC)												
0.0																			
1.0	.258	.147	.046	.251	.143	.045	.238	.137	.044	.226	.130	.042	.215	.125	.040				
2.0	.245	.134	.041	.239	.131	.040	.227	.126	.039	.217	.122	.038	.207	.117	.037				
3.0	.229	.122	.037	.224	.120	.036	.214	.116	.035	.205	.112	.034	.197	.109	.034				
4.0	.214	.111	.033	.210	.110	.032	.201	.107	.032	.193	.104	.031	.186	.101	.031				
5.0	.201	.102	.030	.197	.101	.029	.189	.098	.029	.182	.096	.029	.175	.094	.028				
6.0	.188	.094	.027	.185	.093	.027	.178	.091	.027	.172	.089	.026	.166	.087	.026				
7.0	.177	.088	.025	.174	.087	.025	.168	.085	.024	.162	.083	.024	.157	.082	.024				
8.0	.167	.082	.023	.164	.081	.023	.159	.079	.023	.154	.078	.022	.149	.076	.022				
9.0	.158	.076	.021	.155	.076	.021	.150	.074	.021	.146	.073	.021	.141	.072	.021				
10.0	.150	.072	.020	.147	.071	.020	.143	.070	.020	.139	.069	.020	.135	.068	.019				

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			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.157	.138	.151	.134	.119	.103	.092	.082	.060	.054	.048	.019	.017	.015	
2.0	.166	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.157	.114	.080	.134	.098	.069	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.063	.127	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.008	
5.0	.141	.089	.052	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.079	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.127	.074	.036	.109	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.121	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.116	.063	.027	.100	.055	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.111	.059	.024	.095	.051	.021	.066	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm											
NAME: UNF-20210015-TDC 单下 5000K						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	14.1	15.4	14.3	15.6	15.8	14.3	15.7	14.6	15.8	16.0	
	3H	14.5	15.7	14.8	16.0	16.2	14.9	16.1	15.2	16.3	16.6
	4H	15.1	16.2	15.4	16.5	16.7	15.1	16.3	15.4	16.5	16.8
	6H	15.5	16.5	15.8	16.8	17.1	15.6	16.6	15.9	16.9	17.2
	8H	15.7	16.7	16.0	17.0	17.3	15.7	16.8	16.1	17.0	17.3
	12H	15.9	16.9	16.2	17.1	17.4	15.9	16.9	16.2	17.1	17.4
4H	2H	14.4	15.5	14.7	15.8	16.0	14.6	15.8	14.9	16.0	16.2
	3H	15.1	16.1	15.5	16.4	16.7	15.4	16.4	15.7	16.7	17.0
	4H	15.8	16.7	16.2	17.0	17.3	15.8	16.7	16.1	17.0	17.3
	6H	16.3	17.1	16.7	17.5	17.8	16.3	17.2	16.7	17.5	17.9
	8H	16.6	17.4	17.0	17.7	18.1	16.6	17.3	17.0	17.7	18.1
	12H	16.9	17.6	17.3	17.9	18.3	16.8	17.5	17.2	17.9	18.3
8H	4H	16.0	16.7	16.4	17.1	17.5	16.0	16.7	16.4	17.1	17.5
	6H	16.7	17.3	17.1	17.7	18.1	16.7	17.3	17.1	17.7	18.1
	8H	17.1	17.6	17.5	18.0	18.5	17.0	17.6	17.5	18.0	18.5
	12H	17.5	17.9	17.9	18.4	18.9	17.4	17.8	17.8	18.3	18.8
12H	4H	16.0	16.7	16.4	17.1	17.5	16.0	16.7	16.4	17.0	17.4
	6H	16.7	17.3	17.2	17.7	18.1	16.8	17.3	17.2	17.7	18.2
	8H	17.2	17.7	17.7	18.1	18.6	17.2	17.6	17.6	18.1	18.6
Variations with the observer position at spacings:											
S = 1.0H	+ 0.5 / - 0.5					+ 0.5 / - 0.6					
1.5H	+ 0.3 / - 0.2					+ 0.3 / - 0.5					
2.0H	+ 1.0 / - 0.9					+ 0.9 / - 0.4					

CIE Pub.117 Corrected 1287 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.9)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

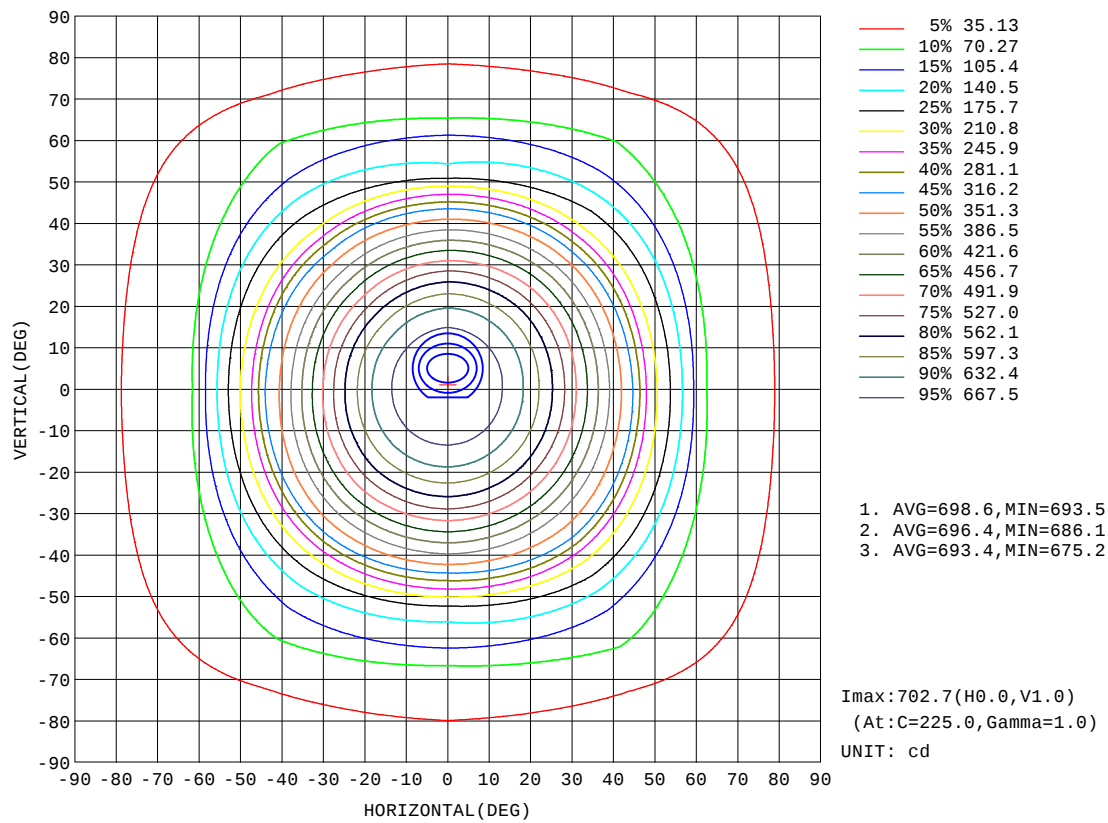
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	69	57	50	67	57	50	65	56	49	43
0.80	78	67	59	76	66	59	73	64	58	51
1.00	85	75	67	83	74	67	80	72	66	58
1.25	91	82	75	89	80	74	85	78	73	65
1.50	95	87	80	93	85	79	89	83	78	70
2.00	101	94	89	99	93	88	95	90	86	77
2.50	104	98	93	102	96	92	98	93	89	80
3.00	107	101	97	104	99	95	100	96	92	83
4.00	110	105	101	107	103	100	102	99	96	87
5.00	111	108	104	109	106	103	104	101	99	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Ceiling Mounted					SHRNOM = 1.00		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2024-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



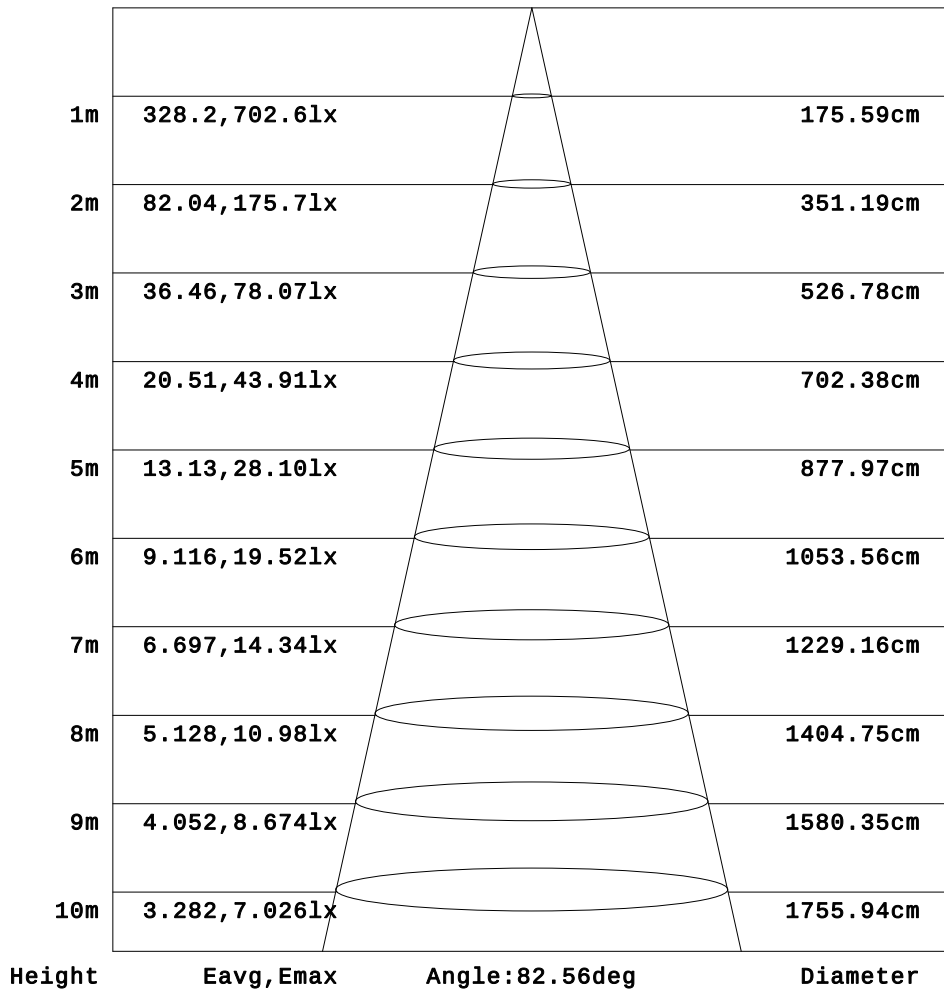
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.526m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:835.9 lm



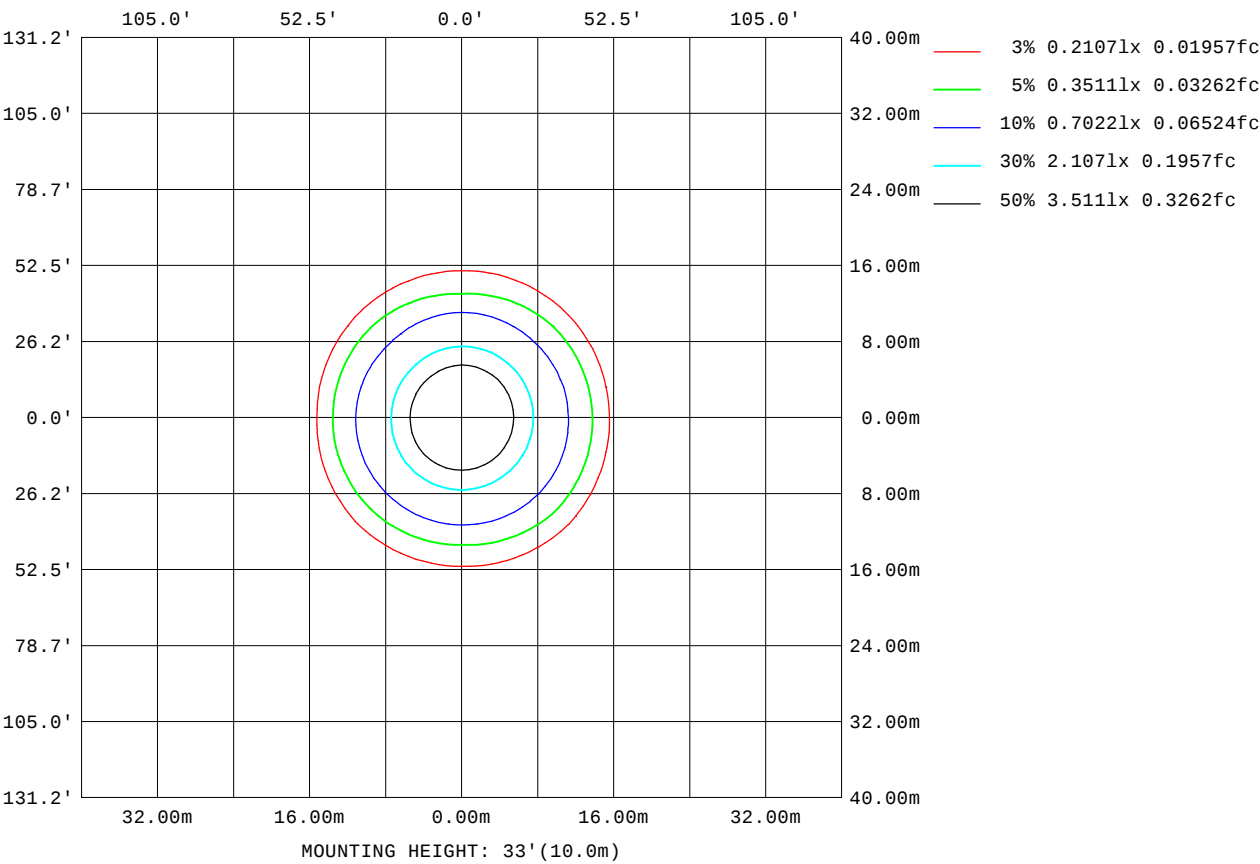
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.526m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-12-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:220.9V I:0.1600A P:16.40W PF:0.4680 Lamp Flux:1286.51x1 lm		
NAME: UNF-20210015-TDC 单下 5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

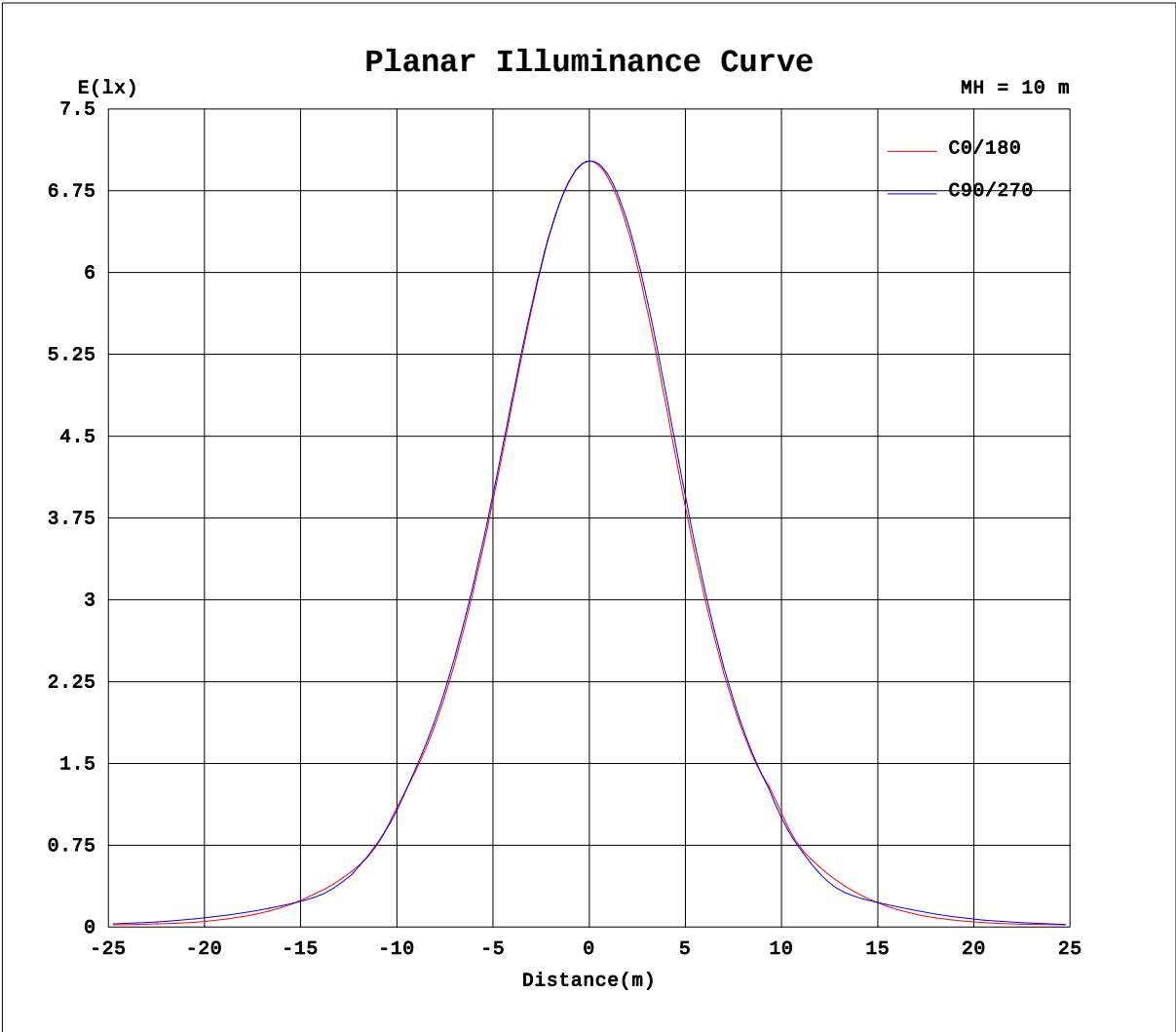
AvgL	cd/m2
L_0~180(65)av	754
L_0~180(75)av	1276
L_0~180(85)av	1319
L_90~270(65)av	1195
L_90~270(75)av	983
L_90~270(85)av	1121
L_45(65)av	1267
L_45(75)av	1083
L_45(85)av	1170

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-12-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000A_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0000]
Remarks: