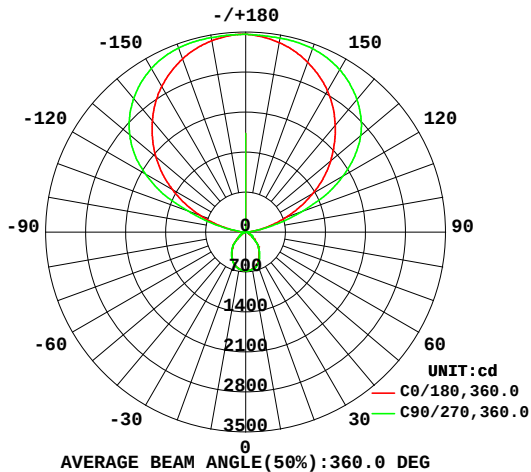


LUMINAIRE PHOTOMETRIC TEST REPORT

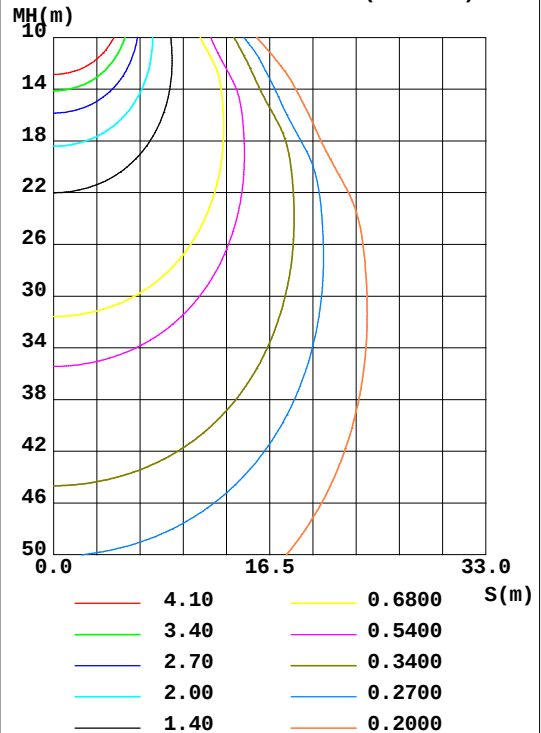
Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 123.56 lm/W			
MODEL		I _{max} (cd)	3465	S/MH(C0/180)	1.09
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.11
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	11998	η UP, DN(C0-180)	44.9, 5.2
NOMINAL FLUX(lm)	11997.5	CIE CLASS	SEMI-IND.	η UP, DN(C180-360)	44.7, 5.1
LAMPS INSIDE	1	η up(%)	89.6	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220.0	η down(%)	10.4	CIBSE SHR MAX	1.15

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.526m [K=1.0498]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	ϕ zone	ϕ total	%lum,lamp
5	673.1	672.6	672.3	673.7	674.8	676.1	676.8	675.2	0- 5	16.17	16.17	0.13,0.13
10	658.6	658.0	658.7	660.4	661.9	664.8	667.0	663.1	5- 10	47.80	63.97	0.53,0.53
15	632.7	632.4	634.9	636.7	637.2	640.7	645.8	639.7	10- 15	77.10	141.1	1.18,1.18
20	594.0	594.9	599.0	600.2	597.7	600.8	609.5	603.2	15- 20	102.0	243.1	2.03,2.03
25	543.7	545.6	550.6	551.2	543.2	544.9	556.6	552.5	20- 25	120.5	363.6	3.03,3.03
30	485.0	487.2	493.9	492.4	480.1	479.1	492.2	491.4	25- 30	131.1	494.7	4.12,4.12
35	421.8	423.8	431.6	427.7	412.9	409.9	422.5	424.0	30- 35	133.8	628.5	5.24,5.24
40	359.2	361.9	367.5	363.0	349.3	345.0	354.8	356.4	35- 40	129.6	758.1	6.32,6.32
45	296.8	306.4	290.2	294.0	292.6	268.6	278.5	276.8	40- 45	120.8	878.9	7.33,7.33
50	207.5	212.6	203.4	204.5	207.3	188.1	187.7	193.0	45- 50	96.92	975.9	8.13,8.13
55	154.2	160.4	140.5	149.7	146.9	146.1	133.9	149.1	50- 55	75.09	1051	8.76,8.76
60	91.27	114.6	117.4	112.7	86.51	106.0	113.1	107.6	55- 60	58.49	1109	9.25,9.25
65	48.51	85.00	80.05	81.98	47.05	77.65	71.83	78.18	60- 65	42.94	1152	9.61,9.61
70	49.14	64.96	44.81	60.91	50.81	59.16	39.30	59.34	65- 70	31.33	1184	9.87,9.87
75	51.28	44.01	38.80	42.90	48.26	40.73	37.80	41.02	70- 75	25.54	1209	10.1,10.1
80	30.69	26.57	33.26	26.91	32.05	25.01	28.73	24.58	75- 80	18.81	1228	10.2,10.2
85	17.87	16.87	15.93	16.85	16.90	14.05	13.57	13.70	80- 85	12.38	1240	10.3,10.3
90	6.732	6.367	4.343	7.573	3.595	6.837	4.146	5.520	85- 90	4.068	1244	10.4,10.4
95	71.95	84.78	32.88	38.37	48.74	41.00	25.81	78.77	90- 95	9.807	1254	10.5,10.5
100	247.8	358.8	237.8	274.6	208.7	302.2	205.2	366.6	95-100	83.41	1338	11.1,11.1
105	513.9	751.8	615.8	620.8	446.3	646.6	577.8	741.3	100-105	236.8	1574	13.1,13.1
110	831.7	1171	1065	1056	742.9	1053	1031	1181	105-110	432.8	2007	16.7,16.7
115	1159	1565	1601	1453	1047	1447	1556	1569	110-115	622.6	2630	21.9,21.9
120	1474	1923	2018	1821	1362	1823	1970	1951	115-120	788.9	3419	28.5,28.5
125	1779	2235	2375	2147	1667	2132	2331	2261	120-125	911.2	4330	36.1,36.1
130	2057	2495	2652	2421	1945	2392	2632	2520	125-130	986.1	5316	44.3,44.3
135	2308	2715	2873	2651	2198	2612	2853	2738	130-135	1017	6333	52.8,52.8
140	2542	2902	3051	2845	2440	2801	3031	2921	135-140	1011	7344	61.2,61.2
145	2759	3056	3195	3005	2666	2961	3175	3073	140-145	971.5	8316	69.3,69.3
150	2945	3181	3306	3134	2864	3092	3287	3194	145-150	902.4	9218	76.8,76.8
155	3098	3279	3384	3237	3027	3200	3368	3288	150-155	806.5	10024	83.6,83.6
160	3228	3353	3432	3316	3167	3287	3419	3358	155-160	688.5	10713	89.3,89.3
165	3332	3402	3454	3372	3285	3351	3444	3404	160-165	552.8	11266	93.9,93.9
170	3402	3434	3457	3411	3370	3397	3449	3434	165-170	403.5	11669	97.3,97.3
175	3450	3458	3461	3442	3430	3436	3454	3457	170-175	245.6	11915	99.3,99.3
180	3463	3463	3463	3463	3463	3463	3463	3463	175-180	82.61	11998	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 878.93 lm

%lum = 7.3%

%lamp = 7.3%

Conical surface Flux(120deg): 1109.4 lm

%lum = 9.2%

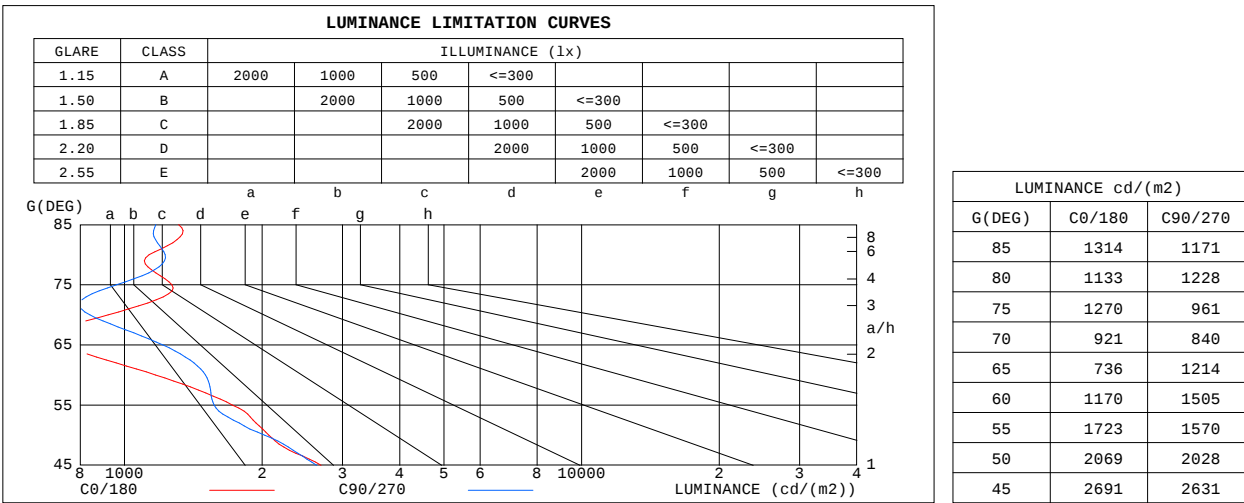
%lamp = 9.2%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0498]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



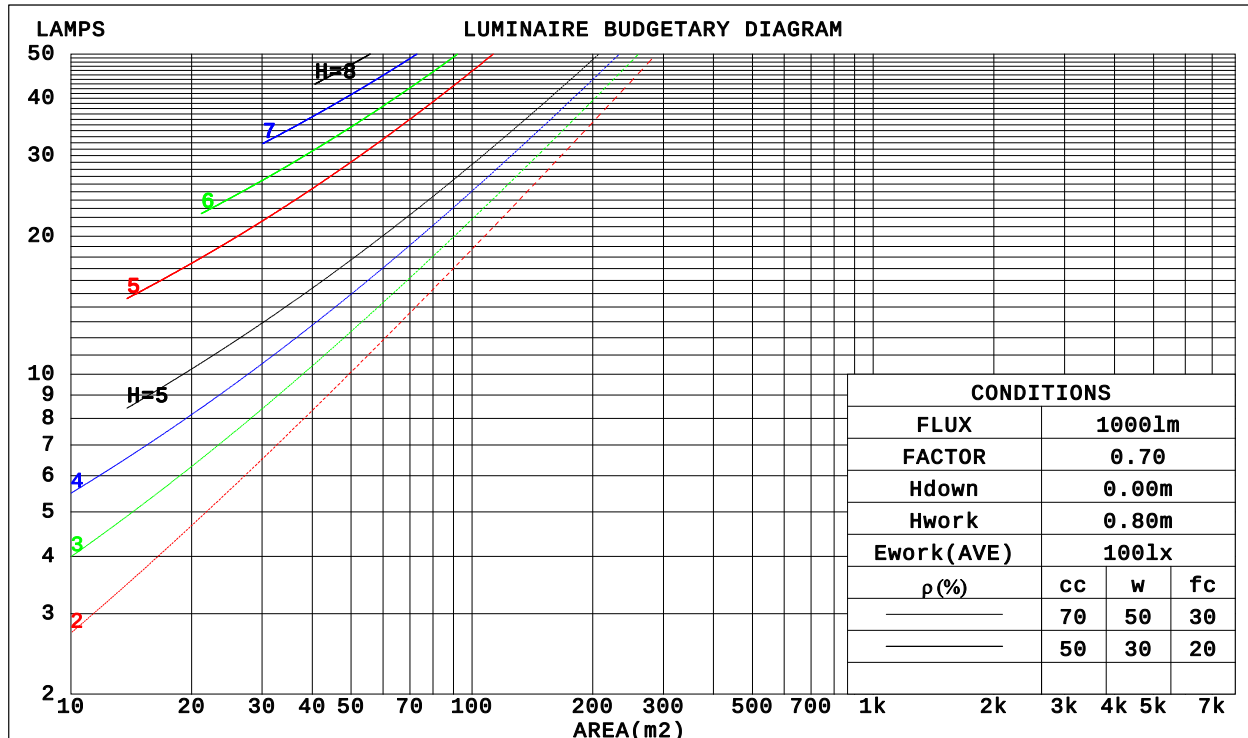
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	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	.98	.98	.98	.85	.85	.85	.61	.61	.61	.40	.40	.40	.20	.20	.20	.10	
1.0	.85	.82	.78	.74	.71	.69	.54	.52	.50	.35	.34	.33	.18	.17	.17	.09	
2.0	.74	.69	.64	.65	.60	.57	.47	.44	.42	.31	.29	.28	.16	.15	.14	.08	
3.0	.65	.59	.53	.57	.52	.47	.42	.38	.35	.27	.25	.24	.14	.13	.13	.07	
4.0	.58	.51	.45	.51	.45	.40	.37	.33	.30	.24	.22	.20	.13	.12	.11	.06	
5.0	.51	.44	.39	.45	.39	.34	.33	.29	.26	.22	.20	.18	.11	.10	.10	.05	
6.0	.46	.39	.33	.40	.34	.30	.30	.26	.22	.20	.17	.15	.10	.09	.08	.05	
7.0	.41	.34	.29	.36	.30	.26	.27	.23	.20	.18	.15	.14	.10	.08	.08	.04	
8.0	.37	.30	.25	.33	.27	.23	.24	.20	.17	.16	.14	.12	.09	.08	.07	.04	
9.0	.34	.27	.22	.30	.24	.20	.22	.18	.15	.15	.12	.11	.08	.07	.06	.04	
10.0	.31	.24	.20	.27	.22	.18	.20	.16	.14	.14	.11	.10	.07	.06	.06	.03	



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.526m [K=1.0498]
 Remarks:

WEC AND CCEC

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm					
NAME: UNF-20210015-TDC 上下 2700K			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	.257	.146	.046	.223	.127	.040	.160	.092	.029	.101	.058	.019	.047	.027	.009	
2.0	.237	.130	.040	.206	.114	.035	.148	.082	.026	.094	.053	.017	.045	.025	.008	
3.0	.219	.117	.035	.191	.102	.031	.137	.074	.023	.088	.048	.015	.042	.023	.007	
4.0	.204	.106	.031	.177	.093	.027	.128	.068	.020	.082	.044	.013	.039	.021	.006	
5.0	.189	.096	.028	.165	.085	.025	.119	.062	.018	.077	.040	.012	.037	.020	.006	
6.0	.177	.089	.025	.154	.078	.022	.112	.057	.017	.072	.037	.011	.035	.018	.005	
7.0	.165	.082	.023	.144	.072	.020	.105	.053	.015	.068	.035	.010	.033	.017	.005	
8.0	.155	.076	.021	.135	.067	.019	.098	.049	.014	.064	.032	.009	.031	.016	.005	
9.0	.146	.070	.020	.128	.062	.017	.093	.046	.013	.060	.030	.009	.029	.015	.004	
10.0	.137	.066	.018	.120	.058	.016	.088	.043	.012	.057	.028	.008	.028	.014	.004	

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	.873	.873	.873	.746	.746	.746	.509	.509	.509	.293	.293	.293	.094	.094	.094		
1.0	.865	.845	.827	.740	.725	.712	.506	.499	.492	.291	.289	.286	.093	.093	.093		
2.0	.858	.825	.798	.735	.710	.690	.504	.491	.481	.290	.286	.282	.093	.092	.092		
3.0	.852	.811	.778	.730	.699	.675	.501	.486	.473	.289	.284	.279	.093	.092	.091		
4.0	.846	.800	.765	.726	.691	.665	.499	.482	.468	.289	.282	.277	.093	.092	.091		
5.0	.840	.791	.756	.721	.685	.657	.497	.478	.464	.288	.281	.275	.093	.092	.091		
6.0	.834	.785	.749	.717	.679	.652	.495	.476	.461	.287	.280	.274	.093	.091	.091		
7.0	.829	.779	.744	.713	.675	.648	.493	.473	.459	.286	.279	.273	.092	.091	.090		
8.0	.824	.774	.740	.709	.672	.645	.491	.472	.458	.285	.278	.273	.092	.091	.090		
9.0	.819	.770	.737	.706	.669	.643	.489	.470	.457	.285	.278	.272	.092	.091	.090		
10.0	.815	.767	.735	.702	.666	.641	.487	.469	.456	.284	.277	.272	.092	.091	.090		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0498]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm											
NAME: UNF-20210015-TDC 上下 2700K					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	4.6	5.3	5.8	6.5	8.2	4.8	5.5	6.1	6.7	8.4	
	3H	5.0	5.6	6.2	6.7	8.4	5.2	5.8	6.4	7.0	8.7
	4H	5.4	5.9	6.6	7.1	8.8	5.4	5.9	6.6	7.1	8.8
	6H	5.6	6.1	6.9	7.3	9.1	5.7	6.2	6.9	7.4	9.1
	8H	5.8	6.2	7.0	7.4	9.2	5.8	6.2	7.0	7.4	9.2
	12H	5.9	6.3	7.1	7.5	9.3	5.8	6.3	7.1	7.5	9.2
4H	2H	4.6	5.2	5.9	6.4	8.1	4.8	5.4	6.1	6.6	8.3
	3H	5.2	5.7	6.5	6.9	8.6	5.4	5.8	6.6	7.0	8.8
	4H	5.8	6.2	7.0	7.4	9.1	5.6	6.0	6.9	7.3	9.0
	6H	6.1	6.5	7.4	7.7	9.4	6.1	6.4	7.3	7.7	9.4
	8H	6.3	6.6	7.6	7.9	9.6	6.3	6.6	7.5	7.8	9.6
	12H	6.5	6.8	7.8	8.0	9.8	6.4	6.7	7.6	7.9	9.7
8H	4H	5.7	6.1	7.0	7.3	9.1	5.6	6.0	6.9	7.2	8.9
	6H	6.2	6.5	7.5	7.7	9.5	6.2	6.5	7.5	7.7	9.5
	8H	6.5	6.7	7.8	8.0	9.8	6.5	6.7	7.8	8.0	9.7
	12H	6.8	7.0	8.1	8.3	10.1	6.7	6.9	8.0	8.2	10.0
12H	4H	5.7	6.0	6.9	7.2	9.0	5.6	5.9	6.8	7.1	8.9
	6H	6.2	6.4	7.5	7.7	9.5	6.2	6.4	7.5	7.7	9.5
	8H	6.6	6.8	7.8	8.0	9.8	6.5	6.7	7.8	8.0	9.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.5 / - 0.5					+ 0.5 / - 0.6					
1.5H	+ 0.3 / - 0.3					+ 0.3 / - 0.5					
2.0H	+ 1.0 / - 1.0					+ 0.9 / - 0.4					

CIE Pub.117 Corrected 11998 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.6)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.526m [K=1.0498]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

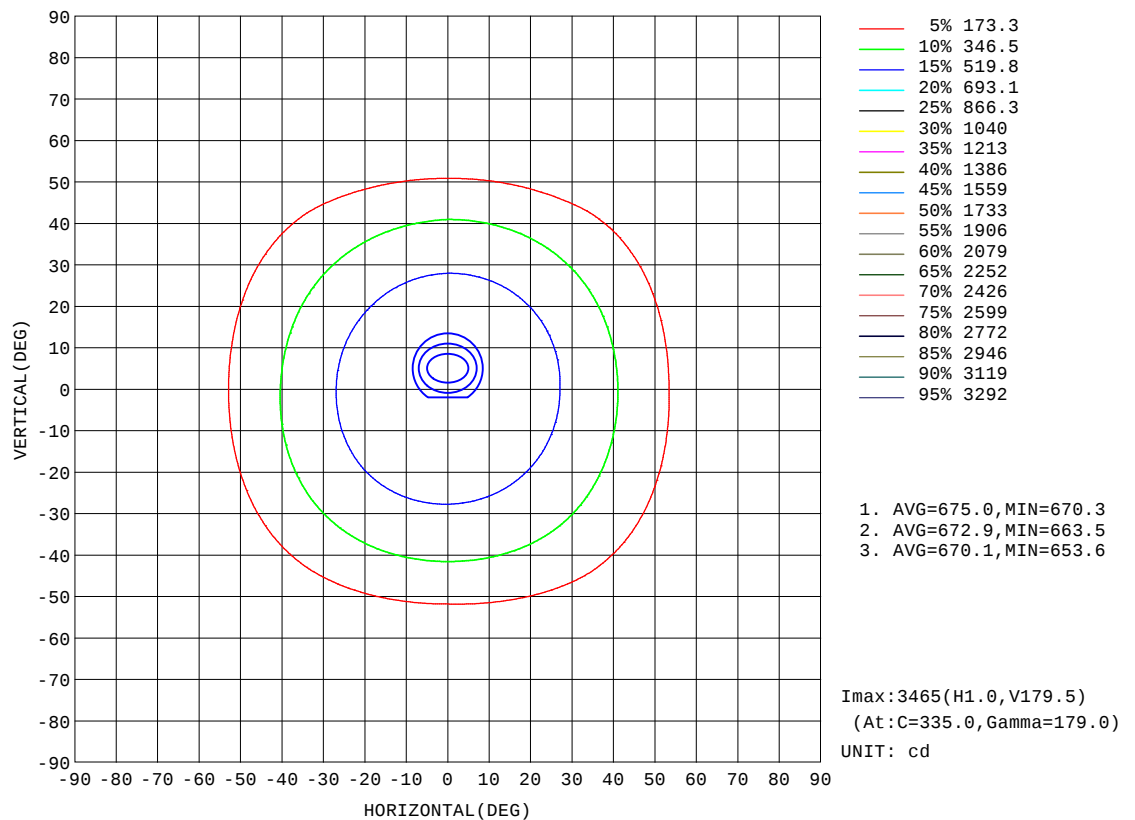
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	37	29	42	32	26	30	24	20	4
0.80	56	45	38	49	40	33	35	29	25	5
1.00	62	52	44	54	46	39	39	34	29	6
1.25	68	58	51	59	51	45	43	37	34	7
1.50	72	63	56	63	55	50	45	40	37	7
2.00	78	70	64	68	61	56	49	45	42	8
2.50	81	75	69	71	65	61	51	48	45	8
3.00	84	78	73	73	68	64	52	50	47	9
4.00	87	82	78	76	72	69	54	52	50	9
5.00	89	85	82	77	74	71	56	54	52	9
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Ceiling Mounted					SHRNOM = 1.00		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.526m [K=1.0498]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



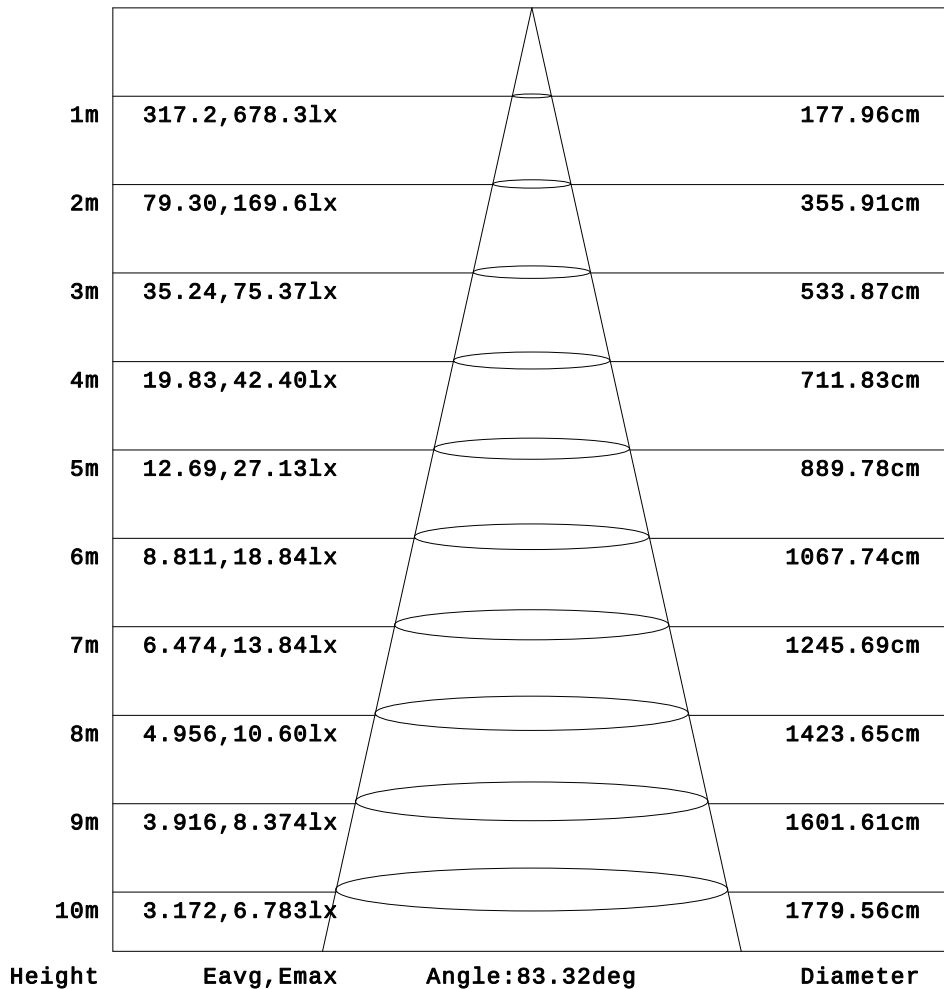
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.526m [K=1.0498]
Remarks:

AAI Figure

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:807.9 lm



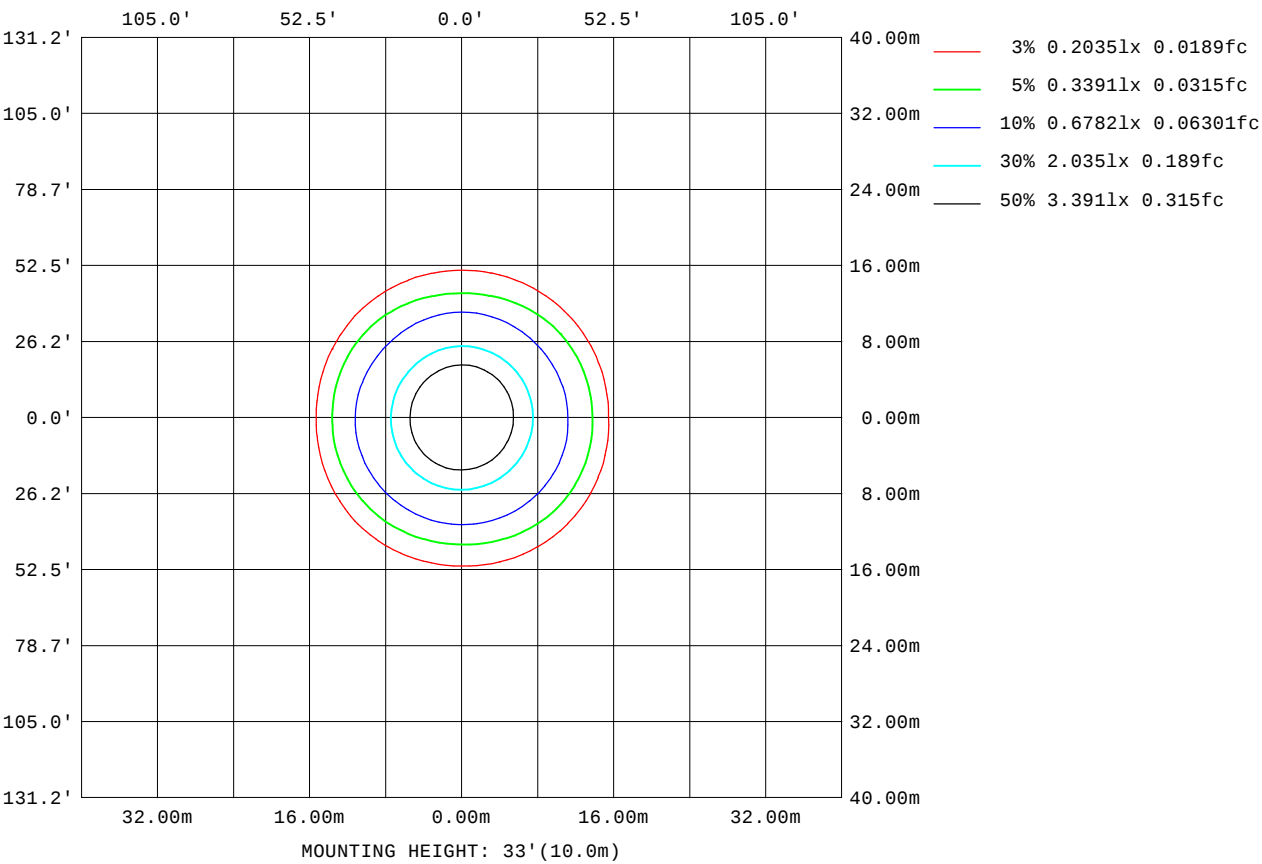
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.526m [K=1.0498]
 Remarks:

ISOLUX DIAGRAM

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

LED Avg.L Report

Test:U:221.0V I:0.4440A P:97.10W PF:0.9890 Lamp Flux:11997.5x1 lm		
NAME: UNF-20210015-TDC 上下 2700K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

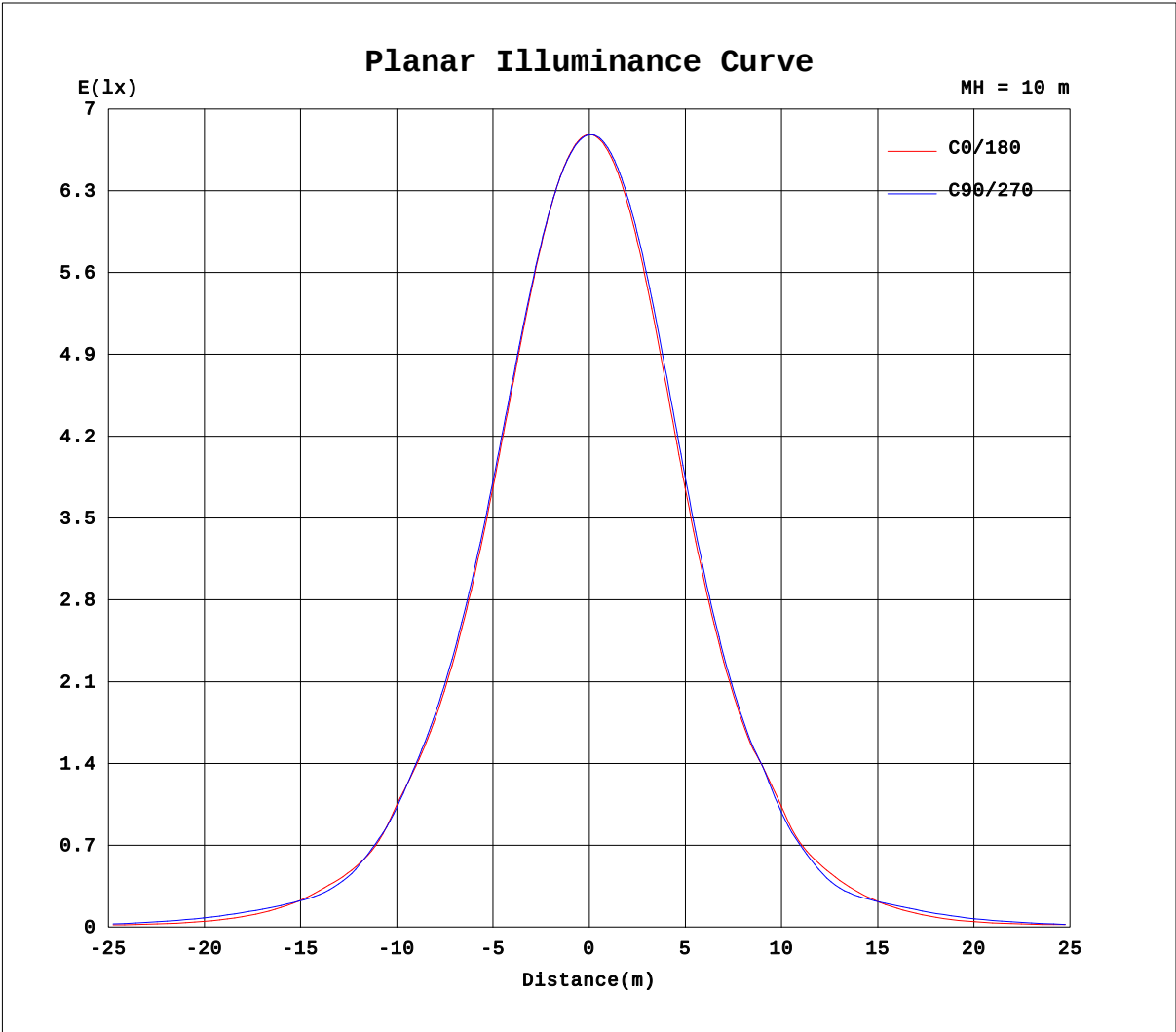
AvgL	cd/m2
L_0~180(65)av	725
L_0~180(75)av	1233
L_0~180(85)av	1279
L_90~270(65)av	1152
L_90~270(75)av	948
L_90~270(85)av	1085
L_45(65)av	1224
L_45(75)av	1044
L_45(85)av	1130

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.526m [K=1.0498]
Remarks: