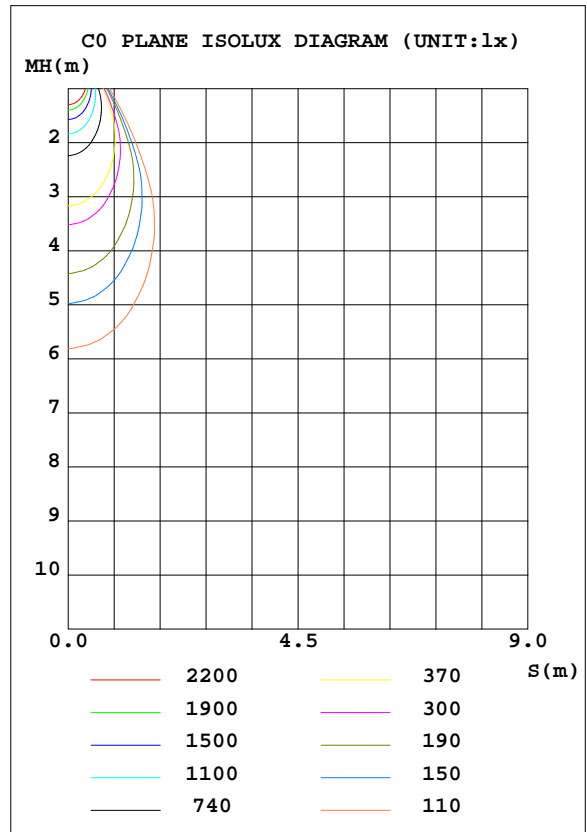
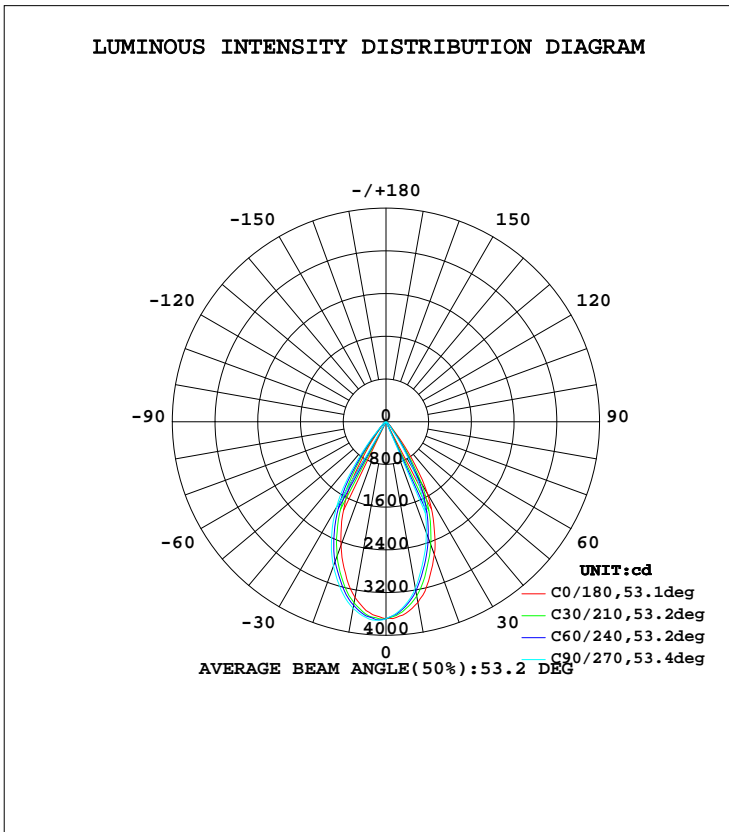


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 90.67 lm/W			
MODEL	TL30W-NW-B	I <sub>max</sub> (cd)	3723	S/MH(C0/180)	0.79
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.90
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	2729.3	η UP, DN(C0-180)	0.0, 55.6
NOMINAL FLUX(lm)	2729.29	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 44.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	240.7	η down(%)	100.0	CIBSE SHR MAX	0.85



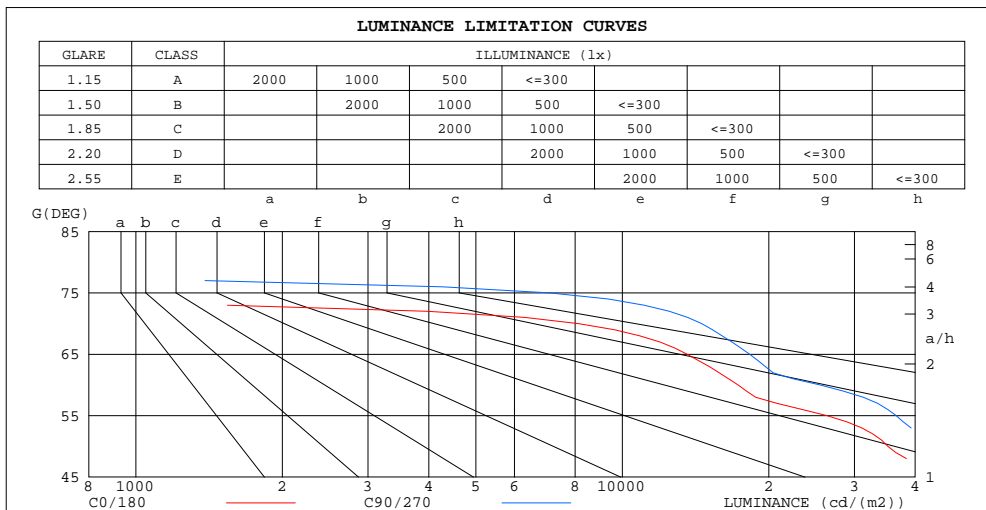
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:10.237m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM  
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	3342	3468	3549	3536	3436	3269	3166	3207	0- 10	336.7	336.7	12.3,12.3
20	2470	2734	2879	2831	2647	2381	2209	2276	10- 20	833.5	1170	42.9,42.9
30	1265	1615	1863	1798	1554	1232	989.5	1033	20- 30	920.5	2091	76.6,76.6
40	196.7	315.9	479.5	446.3	306.4	187.1	139.9	150.1	30- 40	469.3	2560	93.8,93.8
50	65.50	77.10	90.71	86.42	72.55	61.36	56.40	58.69	40- 50	104.6	2665	97.6,97.6
60	25.07	29.96	37.30	36.17	29.33	24.82	21.96	22.39	50- 60	43.28	2708	99.2,99.2
70	8.063	12.12	14.57	14.18	11.82	7.702	4.487	4.934	60- 70	18.12	2726	99.9,99.9
80	0.1536	0.1509	0.1196	0.1590	0.2020	0.1741	0.1551	0.1437	70- 80	3.082	2729	100,100
90	0.1047	0.1052	0.0986	0.0954	0.1256	0.1297	0.1409	0.1237	80- 90	0.1389	2729	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		



LUMINANCE cd/(m2)		
G( DEG)	C0/180	C90/270
85	470	387
80	305	235
75	279	7094
70	8133	14561
65	13583	18270
60	17297	25493
55	26360	36556
50	35152	48228
45	50859	83166

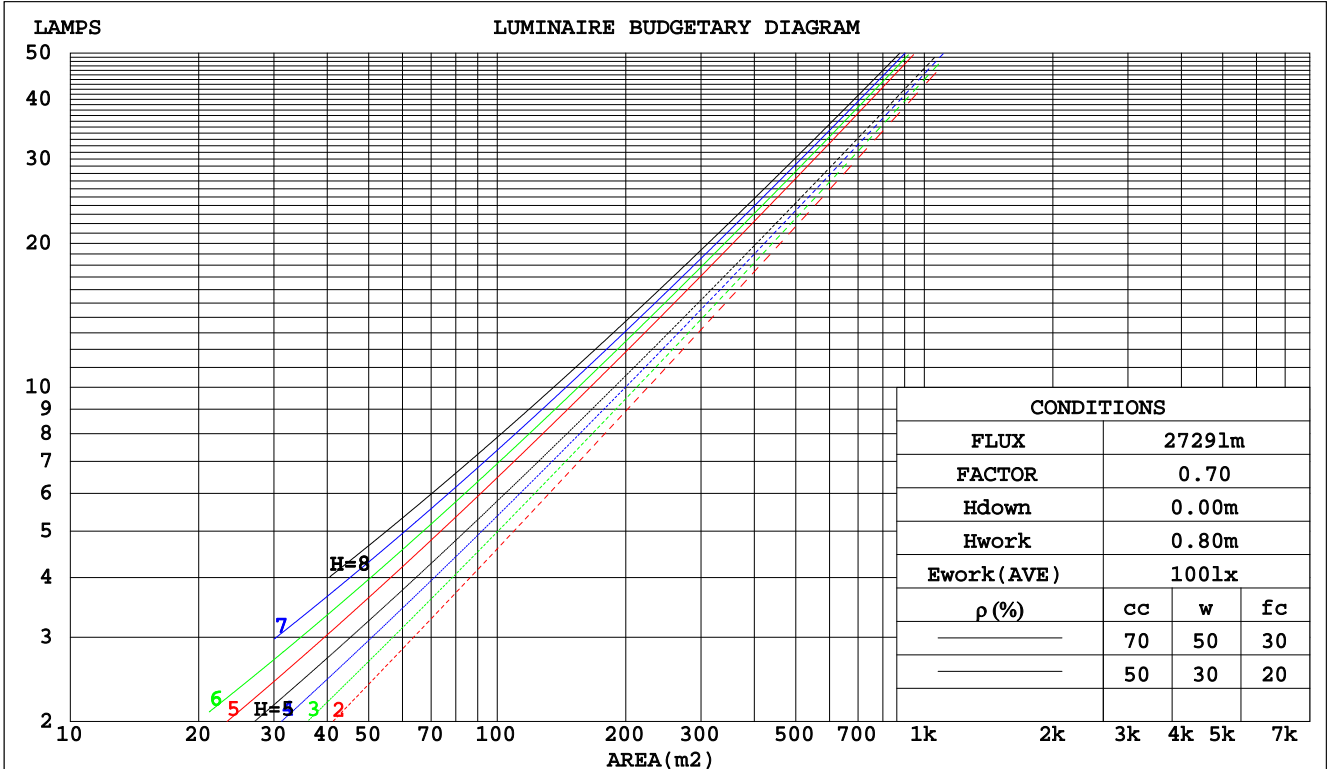
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2020-07-30

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
Humidity:65.0%  
Test Distance:10.237m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:

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						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	1.11	1.09	1.06	1.09	1.07	1.05	1.05	1.03	1.01	1.01	.00	.98	.98	.97	.96	.94
2.0	1.04	.00	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.92	.88	.95	.91	.88	.93	.89	.86	.90	.87	.85	.88	.86	.83	.82
4.0	.91	.85	.81	.90	.85	.81	.88	.83	.80	.86	.82	.79	.84	.81	.78	.77
5.0	.85	.80	.76	.84	.79	.75	.83	.78	.75	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.75	.71	.80	.74	.70	.78	.73	.70	.77	.73	.69	.75	.72	.69	.67
7.0	.76	.70	.66	.75	.70	.66	.74	.69	.66	.73	.68	.65	.72	.68	.65	.64
8.0	.72	.66	.62	.71	.66	.62	.70	.65	.62	.69	.65	.61	.68	.64	.61	.60
9.0	.68	.62	.59	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.57
10.0	.65	.59	.55	.64	.59	.55	.63	.58	.55	.63	.58	.55	.62	.58	.55	.54



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: 65.0%  
 Test Distance: 10.237m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.173	.099	.031	.167	.095	.030	.154	.088	.028	.143	.082	.026	.132	.076	.025	
2.0	.166	.091	.028	.160	.088	.027	.150	.083	.026	.140	.078	.025	.131	.074	.023	
3.0	.158	.084	.025	.153	.082	.025	.144	.078	.024	.136	.074	.023	.128	.071	.022	
4.0	.150	.078	.023	.146	.076	.023	.138	.073	.022	.131	.070	.021	.124	.068	.021	
5.0	.143	.073	.021	.139	.072	.021	.133	.069	.020	.126	.067	.020	.121	.064	.019	
6.0	.137	.068	.020	.133	.067	.019	.127	.065	.019	.122	.063	.019	.117	.061	.018	
7.0	.130	.064	.018	.128	.064	.018	.122	.062	.018	.118	.060	.018	.113	.059	.017	
8.0	.125	.061	.017	.122	.060	.017	.118	.059	.017	.113	.057	.017	.109	.056	.016	
9.0	.120	.058	.016	.117	.057	.016	.113	.056	.016	.109	.055	.016	.106	.054	.016	
10.0	.115	.055	.015	.113	.055	.015	.109	.053	.015	.106	.052	.015	.102	.051	.015	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.122	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.089	.055	.032	.062	.039	.023	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.094	.054	.028	.081	.047	.024	.056	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:10.237m [K=1.0000]  
 Remarks:

Uncorrected UGR Table

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm										
NAME: TL30W-NW-B					TYPE:30W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:1		
MFR.:					SUR.:0.0305			PROTECTION 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	22.8	23.7	23.0	23.9	24.1	25.1	26.0	25.3	26.2	26.3
3H	22.7	23.6	23.0	23.8	24.0	25.0	25.8	25.2	26.0	26.2
4H	22.6	23.4	22.9	23.6	23.9	24.9	25.7	25.2	25.9	26.1
6H	22.5	23.3	22.8	23.5	23.8	24.8	25.6	25.1	25.8	26.0
8H	22.5	23.2	22.8	23.5	23.7	24.8	25.5	25.1	25.7	26.0
12H	22.5	23.1	22.8	23.4	23.7	24.7	25.4	25.0	25.7	26.0
4H 2H	22.6	23.4	22.9	23.7	23.9	24.9	25.7	25.1	25.9	26.1
3H	22.6	23.3	22.9	23.5	23.8	24.8	25.5	25.1	25.7	26.0
4H	22.5	23.1	22.8	23.4	23.7	24.7	25.3	25.0	25.6	25.9
6H	22.4	22.9	22.8	23.3	23.6	24.6	25.1	25.0	25.5	25.8
8H	22.3	22.8	22.7	23.2	23.6	24.5	25.1	24.9	25.4	25.8
12H	22.3	22.7	22.7	23.1	23.5	24.5	25.0	24.9	25.3	25.7
8H 4H	22.3	22.8	22.7	23.2	23.6	24.6	25.1	24.9	25.4	25.8
6H	22.2	22.7	22.7	23.0	23.5	24.4	24.9	24.9	25.3	25.7
8H	22.2	22.5	22.6	23.0	23.4	24.4	24.8	24.8	25.2	25.6
12H	22.1	22.4	22.6	22.9	23.3	24.3	24.7	24.8	25.1	25.6
12H 4H	22.3	22.8	22.7	23.1	23.5	24.5	25.0	24.9	25.3	25.7
6H	22.2	22.5	22.6	23.0	23.4	24.4	24.8	24.8	25.2	25.6
8H	22.1	22.4	22.6	22.9	23.3	24.3	24.7	24.8	25.1	25.6
Variations with the observer position at spacings:										
S = 1.0H	+ 2.4 / - 5.4					+ 4.1 / - 6.8				
1.5H	+ 4.1 / - 3.5					+ 6.3 / - 5.2				
2.0H	+ 3.1 / - 3.0					+ 4.3 / - 3.7				

CIE Pub.117 Corrected 2729 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.5)

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:10.237m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:

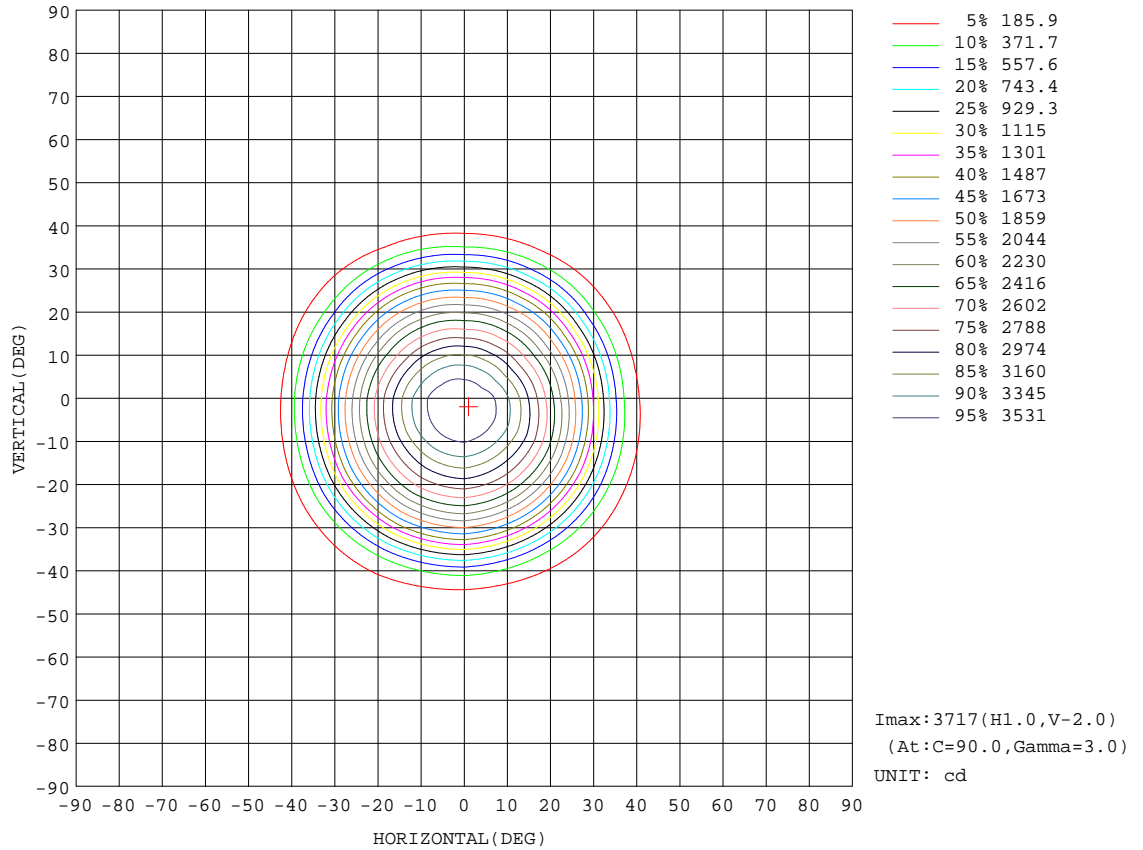
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	88	81	78	87	81	77	86	81	77	74
0.80	95	89	86	94	89	85	93	88	85	81
1.00	99	94	90	99	93	90	97	93	90	86
1.25	103	98	95	102	98	94	100	97	94	90
1.50	106	101	98	105	101	98	103	99	97	92
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	109	106	110	107	105	107	104	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	110	109	108	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-07-30

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:10.237m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:

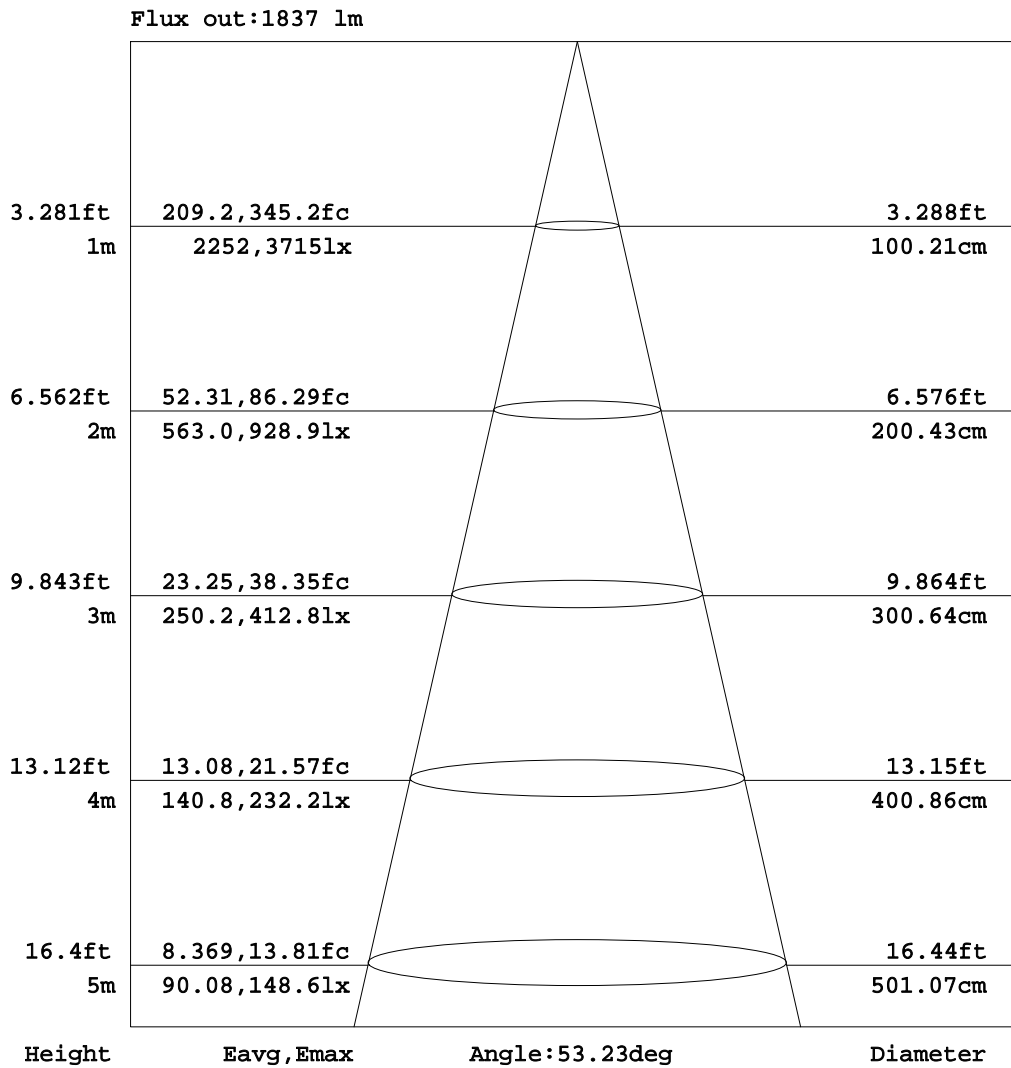


C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: 65.0%  
 Test Distance: 10.237m [K=1.0000]  
 Remarks:

AAI Figure

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:



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

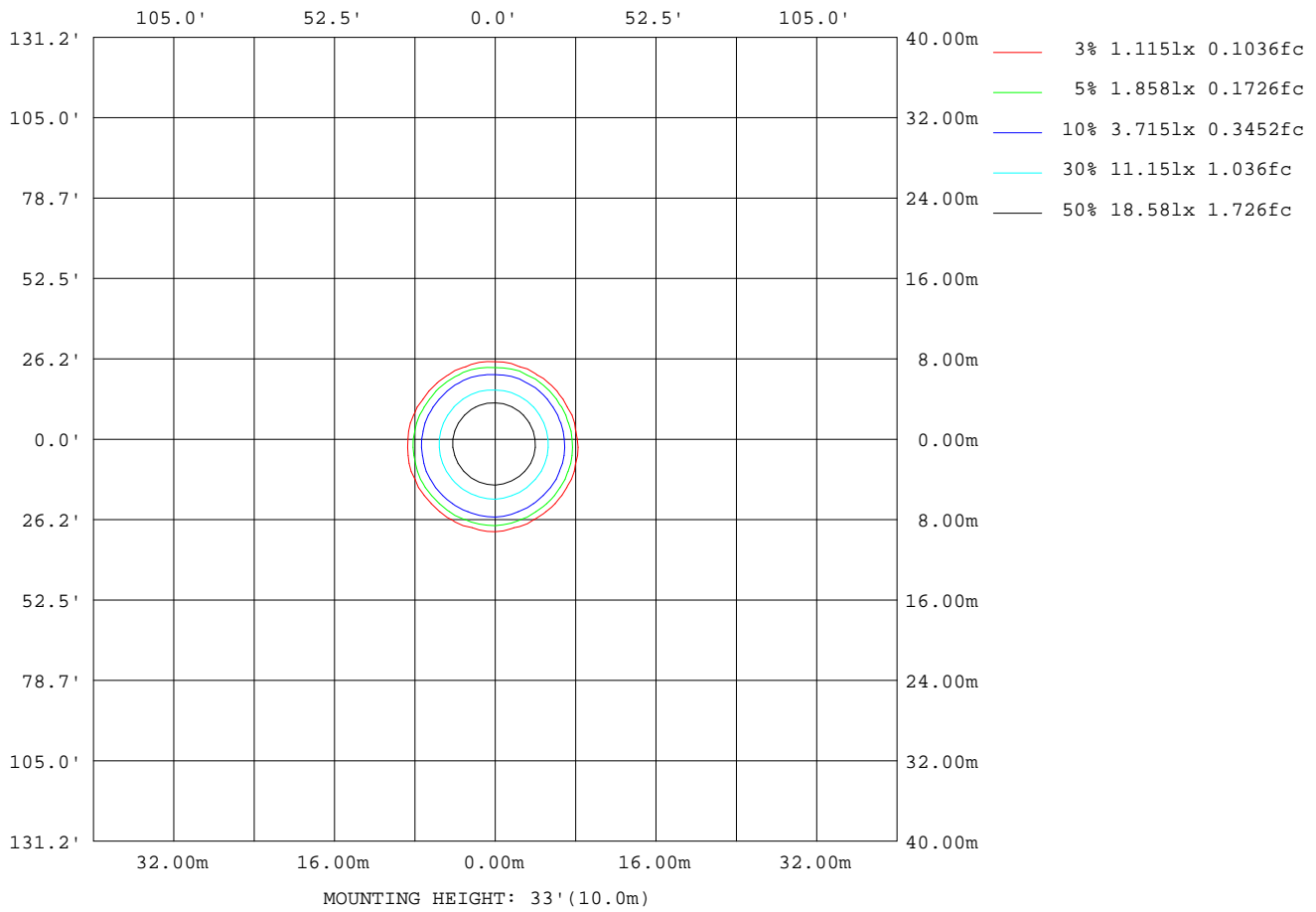
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:10.237m [K=1.0000]  
 Remarks:



**ISOLUX DIAGRAM**

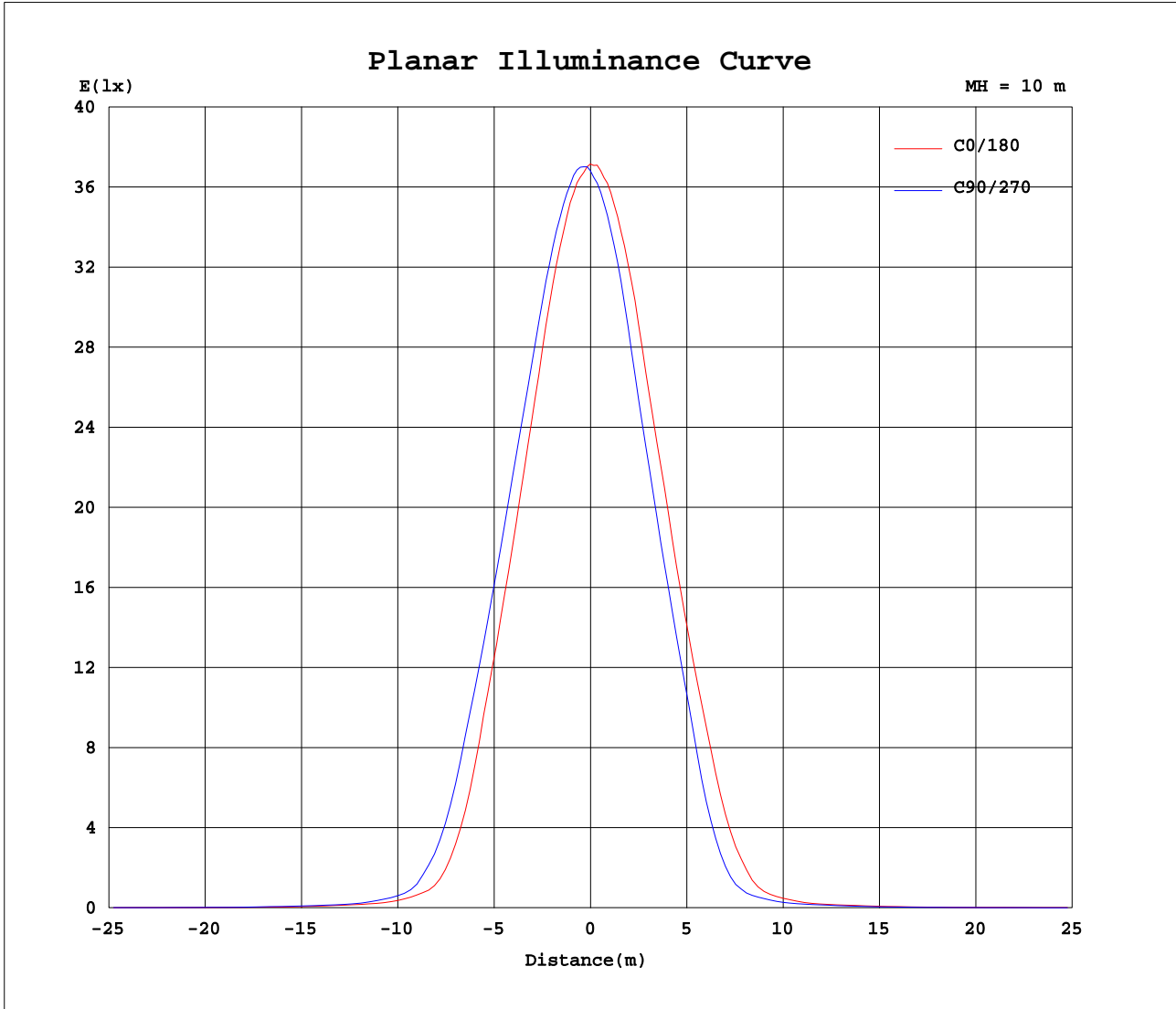
Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-07-30

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:10.237m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: 65.0%  
 Test Distance: 10.237m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.7V I:0.1280A P:30.10W PF:0.9720 Lamp Flux:2729.29x1 lm		
NAME: TL30W-NW-B	TYPE:30W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0305	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	3689	3689	3689	3689	3689	3689	3689	3689	3689	3689	3689	3689							
5	3584	3652	3667	3708	3699	3685	3635	3571	3525	3506	3512	3543							
10	3342	3446	3491	3549	3542	3530	3436	3315	3224	3166	3173	3242							
15	2938	3104	3175	3258	3247	3219	3087	2905	2780	2696	2720	2798							
20	2470	2677	2792	2879	2866	2796	2647	2448	2313	2209	2233	2319							
25	1926	2148	2294	2415	2408	2303	2125	1930	1785	1677	1686	1770							
30	1265	1525	1706	1863	1849	1747	1554	1326	1138	990	989	1078							
35	576	779	955	1131	1125	1033	844	618	487	378	395	438							
40	197	272	360	479	465	428	306	215	159	140	142	158							
45	104	133	152	172	180	160	135	105	85.7	77.6	78.8	86.0							
50	65.5	73.3	80.9	90.7	89.5	83.3	72.5	63.8	58.9	56.4	57.0	60.4							
55	43.8	52.7	57.7	61.4	60.9	59.0	53.8	46.5	40.1	35.1	35.0	37.5							
60	25.1	28.0	31.9	37.3	37.5	34.8	29.3	26.0	23.6	22.0	21.9	22.9							
65	16.6	19.3	21.0	22.6	22.6	21.8	19.8	17.2	15.2	13.8	13.7	14.7							
70	8.06	11.1	13.1	14.6	14.6	13.7	11.8	8.92	6.48	4.49	4.30	5.57							
75	0.21	0.61	3.11	5.37	5.64	4.52	1.93	0.22	0.41	0.20	0.17	0.15							
80	0.15	0.13	0.18	0.12	0.18	0.14	0.20	0.18	0.17	0.16	0.14	0.14							
85	0.12	0.09	0.13	0.10	0.13	0.11	0.14	0.13	0.12	0.13	0.13	0.14							
90	0.10	0.09	0.12	0.10	0.10	0.09	0.13	0.11	0.15	0.14	0.13	0.12							

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-07-30

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:10.237m [K=1.0000]  
 Remarks: