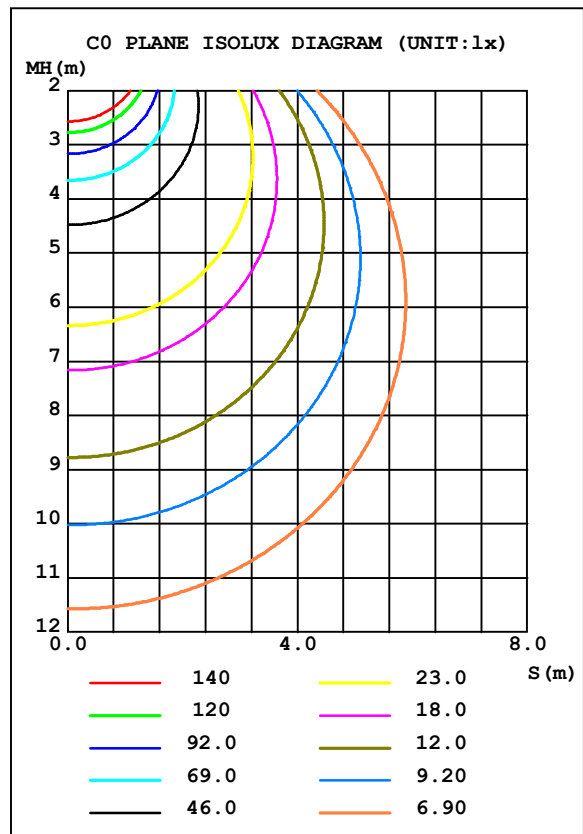
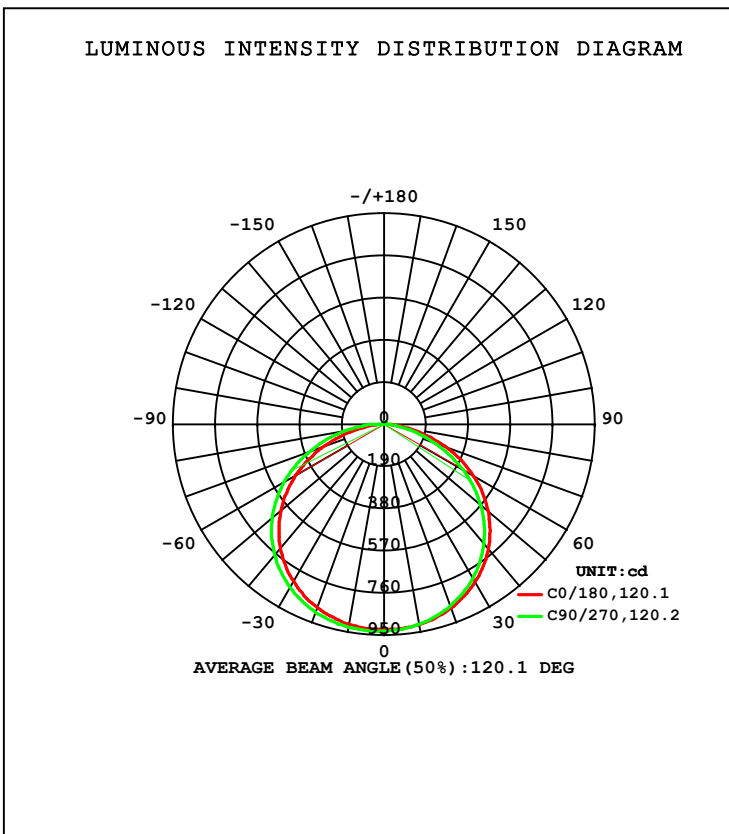


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.00 lm/W			
MODEL	TFXBF-SHP	I _{max} (cd)	932.5	S/MH (C0/180)	1.31
NOMINAL POWER (W)	20.16	LOR (%)	100.0	S/MH (C90/270)	1.35
RATED VOLTAGE (V)	24	TOTAL FLUX (lm)	2931.5	η UP, DN (C0-180)	0.7, 47.2
NOMINAL FLUX (lm)	2931.54	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.8, 51.3
LAMPS INSIDE	1	η up (%)	1.5	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	24	η down (%)	98.5	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYY
 Test Date: 2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.643m [K=1.0000]
 Remarks: 6000-6500K

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

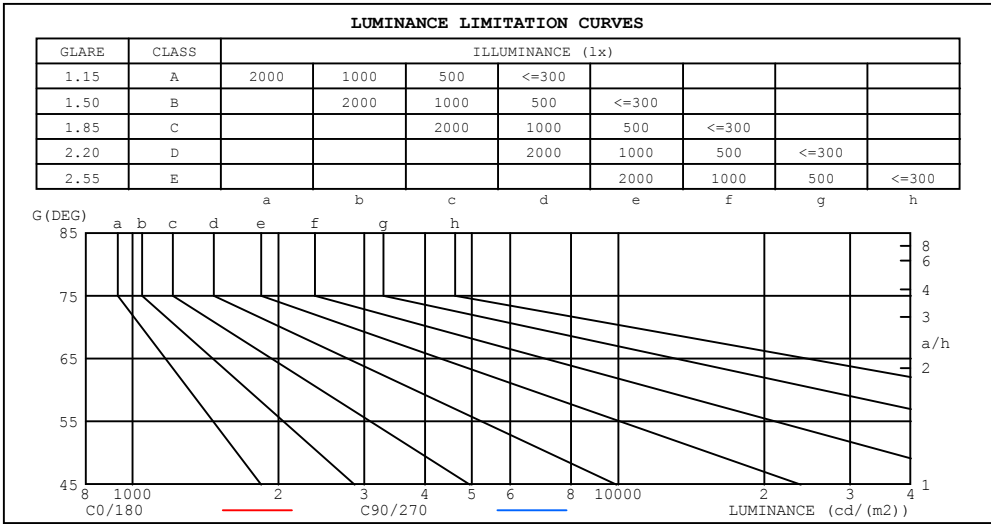
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	915.5	914.4	914.4	927.3					0- 10	88.12	88.12	3.01,3.01
20	881.1	871.4	879.1	900.7					10- 20	255.3	343.5	11.7,11.7
30	820.2	800.5	817.2	848.0					20- 30	394.7	738.1	25.2,25.2
40	731.4	700.2	727.4	767.8					30- 40	488.2	1226	41.8,41.8
50	613.1	570.1	608.3	658.6					40- 50	521.1	1747	59.6,59.6
60	465.2	412.3	459.9	519.8					50- 60	483.7	2231	76.1,76.1
70	292.3	236.1	284.2	355.1					60- 70	375.2	2606	88.9,88.9
80	113.7	85.24	108.0	178.6					70- 80	216.0	2822	96.3,96.3
90	3.123	9.217	3.349	52.46					80- 90	65.60	2888	98.5,98.5
100	2.946	3.562	3.004	6.732					90-100	9.360	2897	98.8,98.8
110	4.287	4.656	4.317	3.810					100-110	4.176	2901	99,99
120	5.617	6.019	5.633	5.117					110-120	4.889	2906	99.1,99.1
130	6.930	7.332	6.934	6.473					120-130	5.603	2912	99.3,99.3
140	8.114	8.457	8.103	7.738					130-140	5.814	2918	99.5,99.5
150	9.092	9.443	9.074	8.866					140-150	5.405	2923	99.7,99.7
160	9.919	10.19	9.904	9.787					150-160	4.410	2928	99.9,99.9
170	10.53	10.75	10.53	10.54					160-170	2.908	2931	100,100
180	10.85	11.00	10.82	11.03					170-180	1.024	2932	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
 Remarks: 6000-6500K

LUMINANCE LIMITATION CURVES

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	248276	207126
80	327392	245449
75	388433	298398
70	427286	345158
65	451090	382422
60	465249	412331
55	473237	430873
50	476892	443489
45	477971	451738

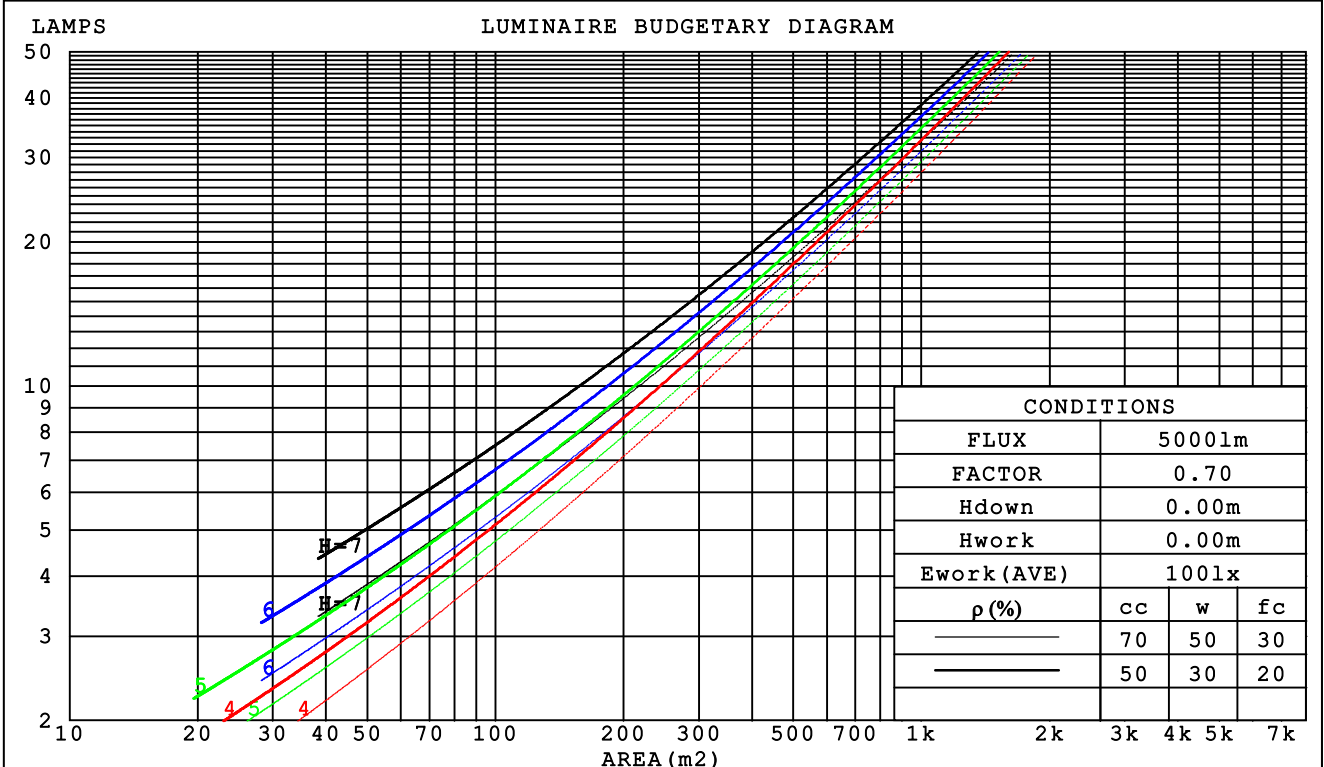
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYY
 Test Date: 2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.643m [K=1.0000]
 Remarks: 6000-6500K

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding 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	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99														
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.89	.87	.88	.86	.84	.82														
2.0	.89	.82	.76	.87	.81	.75	.84	.78	.73	.80	.76	.72	.77	.73	.70	.67														
3.0	.78	.70	.63	.76	.69	.62	.73	.67	.61	.70	.65	.60	.68	.63	.59	.56														
4.0	.69	.60	.53	.68	.59	.53	.65	.58	.52	.62	.56	.51	.60	.55	.50	.48														
5.0	.61	.52	.46	.60	.52	.45	.58	.50	.45	.56	.49	.44	.54	.48	.43	.41														
6.0	.55	.46	.40	.54	.46	.39	.52	.45	.39	.50	.44	.38	.49	.43	.38	.36														
7.0	.50	.41	.35	.49	.41	.35	.47	.40	.34	.46	.39	.34	.44	.38	.33	.31														
8.0	.45	.37	.31	.45	.36	.31	.43	.36	.30	.42	.35	.30	.41	.34	.30	.28														
9.0	.42	.33	.28	.41	.33	.28	.40	.32	.27	.39	.32	.27	.37	.31	.27	.25														
10.0	.38	.30	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.24	.23														



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
 Remarks: 6000-6500K

WEC AND CCEC

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding 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	.319	.181	.057	.311	.177	.056	.297	.170	.054	.284	.164	.053	.272	.158	.051	
2.0	.298	.163	.050	.292	.161	.049	.279	.155	.048	.267	.150	.047	.257	.145	.046	
3.0	.275	.146	.044	.269	.144	.043	.258	.140	.043	.248	.136	.042	.238	.132	.041	
4.0	.253	.132	.039	.248	.130	.038	.238	.126	.038	.229	.123	.037	.220	.120	.036	
5.0	.234	.119	.035	.229	.118	.034	.220	.115	.034	.212	.112	.033	.204	.109	.033	
6.0	.217	.109	.031	.212	.107	.031	.204	.105	.030	.197	.102	.030	.190	.100	.030	
7.0	.201	.100	.028	.198	.098	.028	.190	.096	.028	.184	.094	.027	.178	.092	.027	
8.0	.188	.092	.026	.184	.091	.026	.178	.089	.025	.172	.087	.025	.166	.085	.025	
9.0	.176	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023	
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.022	.148	.074	.021	

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	.202	.202	.202	.172	.172	.172	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.192	.167	.145	.165	.144	.125	.113	.099	.086	.065	.057	.050	.021	.018	.016	
2.0	.185	.143	.109	.158	.123	.094	.108	.085	.066	.062	.050	.038	.020	.016	.013	
3.0	.177	.126	.085	.152	.109	.074	.104	.075	.052	.060	.044	.031	.019	.014	.010	
4.0	.170	.113	.069	.145	.097	.060	.100	.068	.042	.058	.040	.025	.019	.013	.008	
5.0	.162	.102	.058	.139	.089	.051	.096	.062	.036	.056	.036	.021	.018	.012	.007	
6.0	.155	.094	.050	.133	.081	.044	.092	.057	.031	.053	.034	.018	.017	.011	.006	
7.0	.148	.087	.045	.127	.076	.039	.088	.053	.028	.051	.031	.016	.017	.010	.005	
8.0	.142	.081	.040	.122	.071	.035	.084	.050	.025	.049	.029	.015	.016	.010	.005	
9.0	.135	.077	.037	.117	.066	.032	.081	.047	.023	.047	.028	.014	.015	.009	.004	
10.0	.130	.072	.034	.112	.063	.030	.078	.044	.021	.045	.026	.013	.015	.009	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
 Remarks: 6000-6500K

UGR(Unified Glare Rating) Table

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm										
NAME: TFXBF-SHP					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	30.4	32.0	30.7	32.2	32.4	30.0	31.5	30.3	31.8	32.0
3H	32.0	33.4	32.3	33.7	33.9	31.3	32.8	31.7	33.0	33.3
4H	32.6	33.9	32.9	34.2	34.5	31.8	33.2	32.1	33.4	33.7
6H	33.0	34.2	33.3	34.5	34.9	32.1	33.4	32.4	33.7	34.0
8H	33.1	34.3	33.5	34.6	34.9	32.2	33.4	32.5	33.7	34.0
12H	33.1	34.3	33.5	34.6	35.0	32.2	33.4	32.6	33.7	34.0
4H 2H	31.0	32.3	31.3	32.6	32.9	30.7	32.0	31.0	32.3	32.6
3H	32.7	33.9	33.1	34.2	34.5	32.2	33.3	32.5	33.7	34.0
4H	33.4	34.5	33.8	34.8	35.2	32.7	33.8	33.1	34.2	34.5
6H	33.9	34.9	34.3	35.3	35.7	33.1	34.1	33.5	34.5	34.9
8H	34.1	35.0	34.5	35.4	35.8	33.2	34.1	33.7	34.5	34.9
12H	34.2	35.0	34.6	35.4	35.8	33.3	34.1	33.8	34.5	35.0
8H 4H	33.6	34.5	34.0	34.9	35.3	33.0	33.9	33.4	34.3	34.7
6H	34.2	35.0	34.7	35.4	35.9	33.5	34.3	34.0	34.7	35.1
8H	34.5	35.1	34.9	35.6	36.0	33.7	34.3	34.2	34.8	35.3
12H	34.6	35.2	35.1	35.6	36.2	33.8	34.4	34.3	34.9	35.4
12H 4H	33.6	34.4	34.1	34.8	35.3	33.0	33.8	33.5	34.2	34.7
6H	34.3	34.9	34.7	35.4	35.9	33.6	34.2	34.0	34.7	35.2
8H	34.5	35.1	35.0	35.6	36.1	33.8	34.3	34.3	34.8	35.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117, 2932 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.7)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
 Remarks: 6000-6500K

UTILIZATION FACTORS TABLE

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

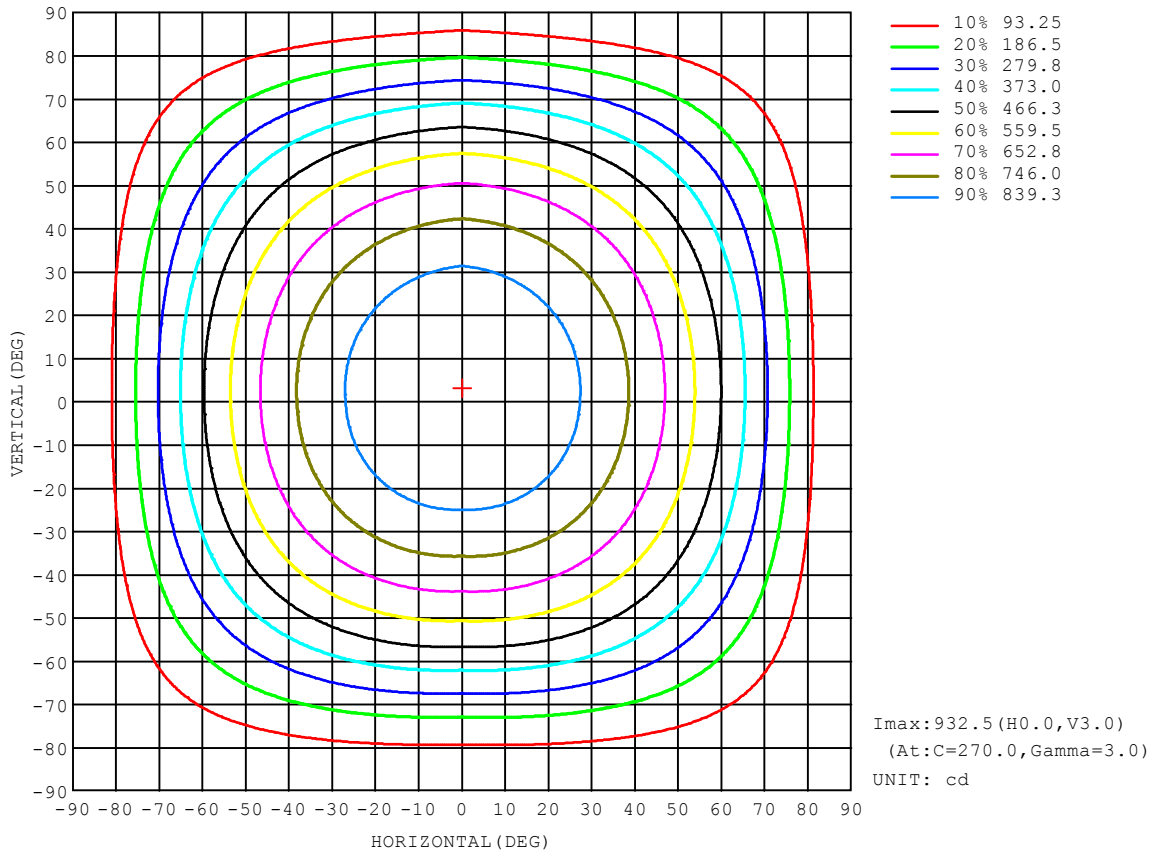
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	46	65	54	46	63	53	46	39
1.00	74	63	55	73	62	55	71	64	55	47
1.25	82	71	63	80	70	63	77	68	62	54
1.50	87	76	69	85	75	69	82	74	67	60
2.00	94	85	78	92	84	77	88	81	76	67
2.50	98	90	83	96	88	82	91	85	80	72
3.00	101	94	88	99	92	87	95	89	85	76
4.00	105	99	95	103	98	93	98	94	90	81
5.00	108	103	99	105	101	97	100	97	94	84
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
 Remarks: 6000-6500K

ISOCANDELA DIAGRAM

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

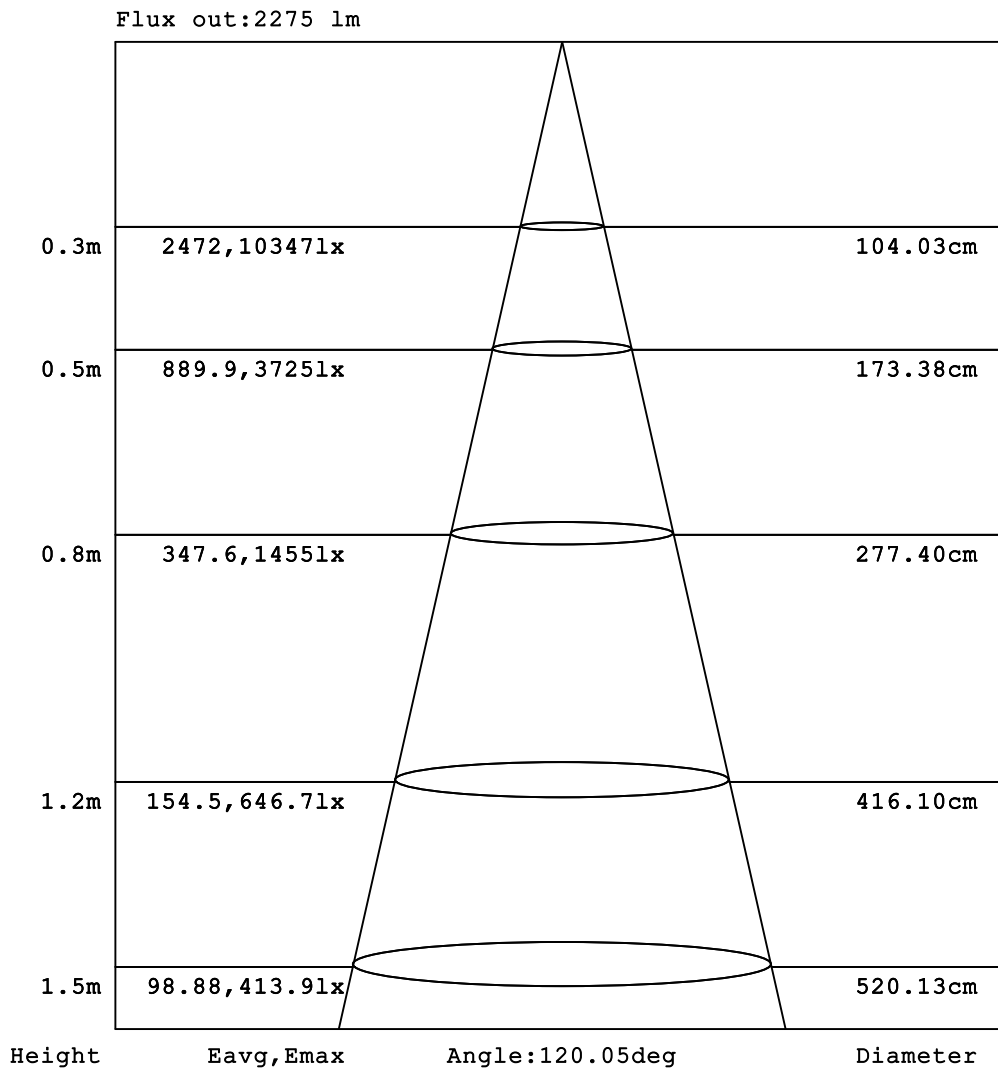


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYY
 Test Date: 2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.643m [K=1.0000]
 Remarks: 6000-6500K

AAI Figure

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



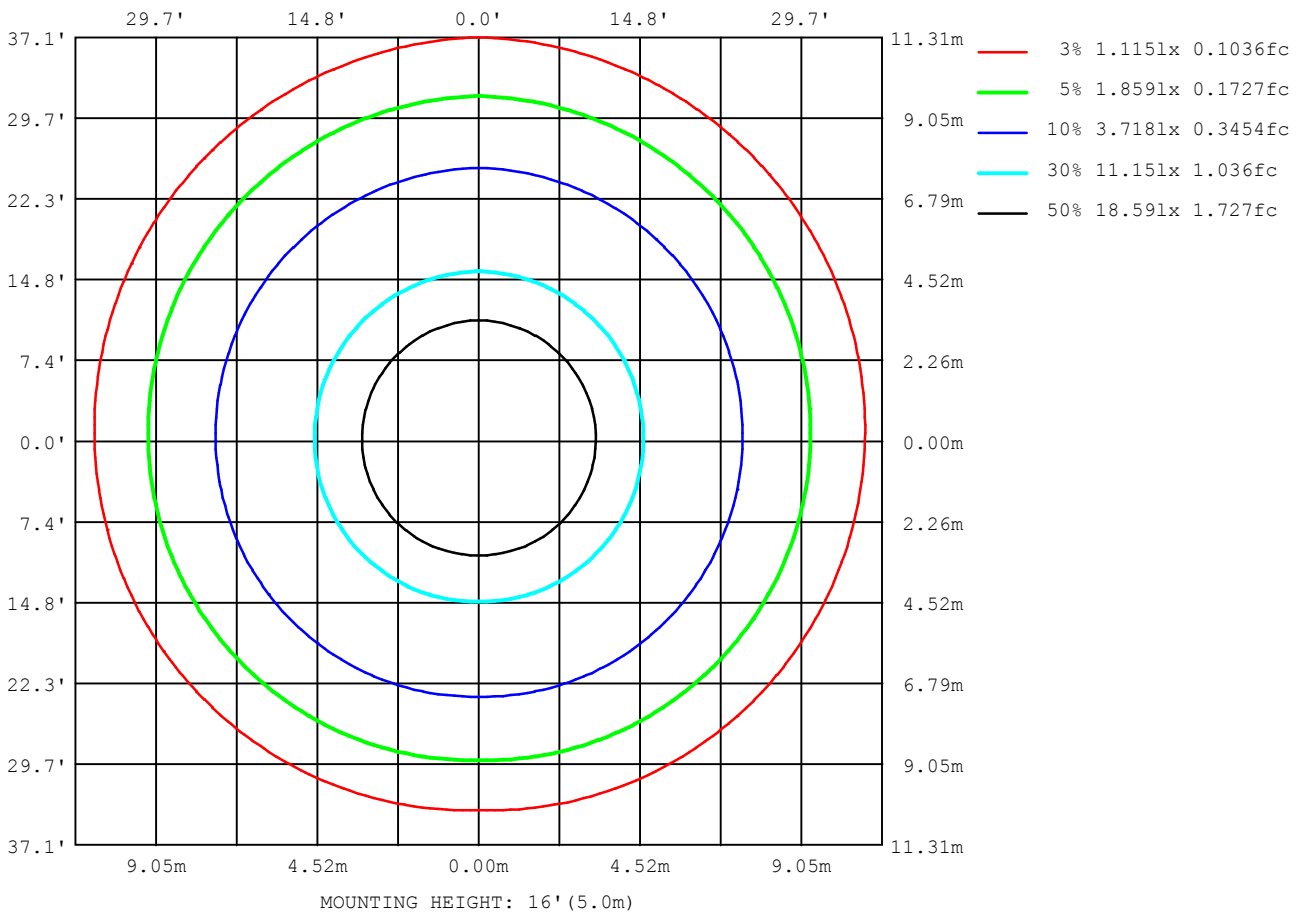
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
 Remarks: 6000-6500K

ISOLUX DIAGRAM

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYY
 Test Date: 2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.643m [K=1.0000]
 Remarks: 6000-6500K

LED Avg.L Report

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

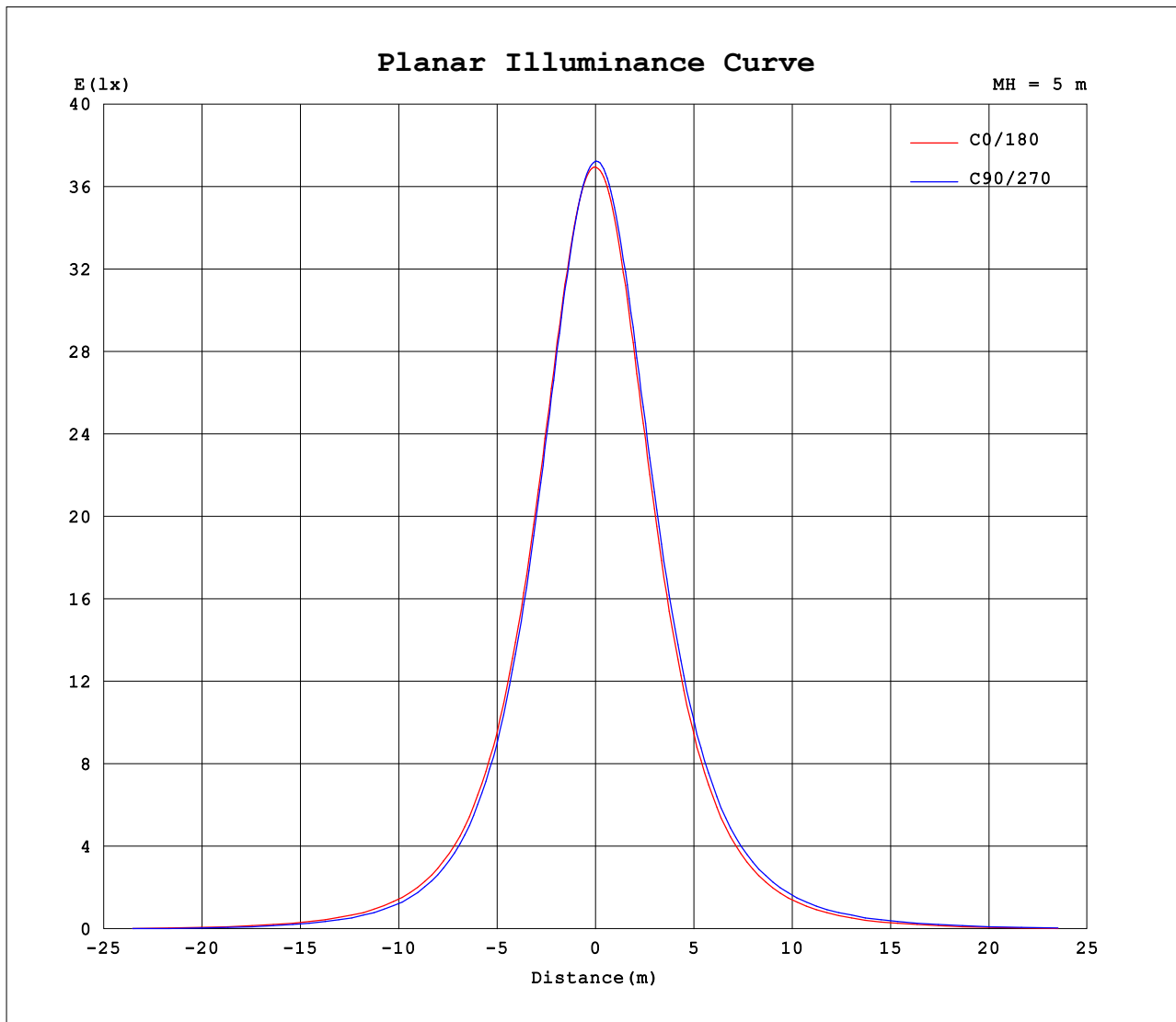
AvgL	cd/m2
L_0~180 (65) av	446802
L_0~180 (75) av	381662
L_0~180 (85) av	238600
L_90~270 (65) av	451647
L_90~270 (75) av	407003
L_90~270 (85) av	399346
L_45 (65) av	449562
L_45 (75) av	397077
L_45 (85) av	338461

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
 Remarks: 6000-6500K

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYY
 Test Date: 2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.643m [K=1.0000]
 Remarks: 6000-6500K

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:23.997V I:0.8254A P:19.807W PF:1.0000 Freq:49.99Hz Lamp Flux:2931.54x1 lm		
NAME: TFXBF-SHP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	924	931	924	931															
5	923	926	922	932															
10	916	914	914	927															
15	902	896	900	917															
20	881	871	879	901															
25	854	840	851	878															
30	820	801	817	848															
35	779	754	776	811															
40	731	700	727	768															
45	676	639	672	717															
50	613	570	608	659															
55	543	494	538	593															
60	465	412	460	520															
65	381	323	374	440															
70	292	236	284	355															
75	201	154	194	267															
80	114	85.2	108	179															
85	43.3	36.1	39.9	103															
90	3.12	9.22	3.35	52.5															
95	2.35	3.74	2.62	23.0															
100	2.95	3.56	3.00	6.73															
105	3.60	3.99	3.63	4.13															
110	4.29	4.66	4.32	3.81															
115	4.96	5.35	4.99	4.45															
120	5.62	6.02	5.63	5.12															
125	6.27	6.68	6.29	5.79															
130	6.93	7.33	6.93	6.47															
135	7.54	7.91	7.55	7.12															
140	8.11	8.46	8.10	7.74															
145	8.62	8.97	8.63	8.33															
150	9.09	9.44	9.07	8.87															
155	9.52	9.84	9.51	9.37															
160	9.92	10.2	9.90	9.79															
165	10.3	10.5	10.3	10.2															
170	10.5	10.7	10.5	10.5															
175	10.7	10.9	10.7	10.8															
180	10.9	11.0	10.8	11.0															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYY
 Test Date:2021-03-27

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.643m [K=1.0000]
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