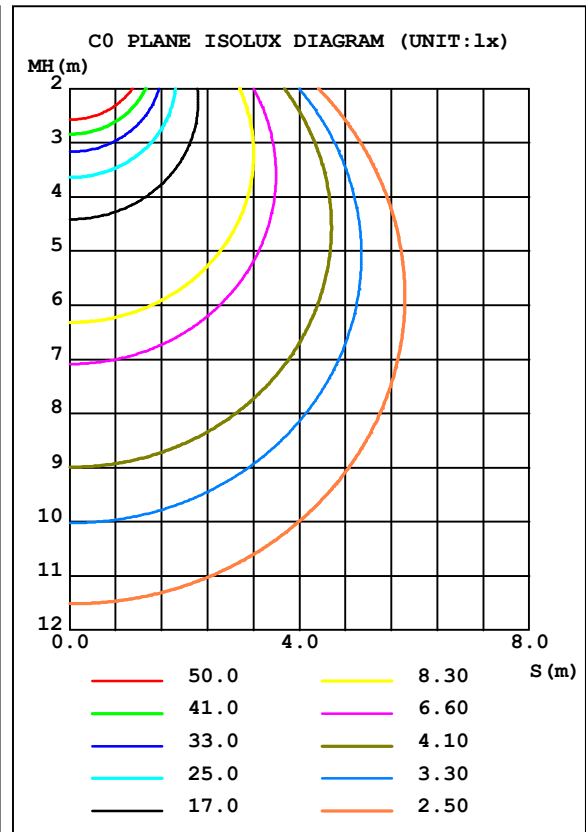
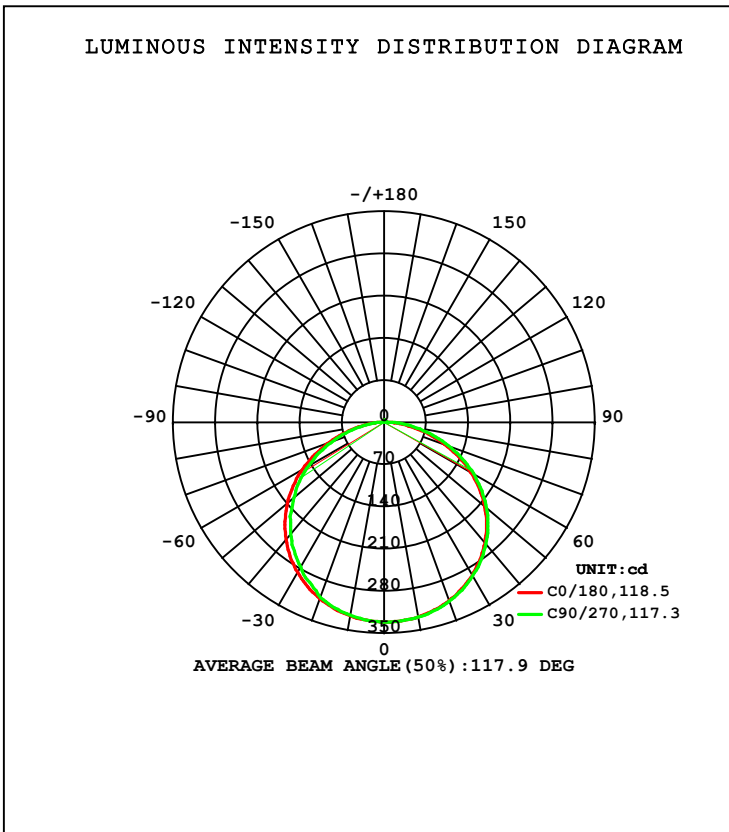


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 106.47 lm/W			
MODEL		I _{max} (cd)	331.4	S/MH (C0/180)	1.29
NOMINAL POWER (W)	9.6	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	24	TOTAL FLUX (lm)	1023.8	η UP, DN (C0-180)	0.8, 51.5
NOMINAL FLUX (lm)	1023.83	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.6, 47.1
LAMPS INSIDE	1	η up (%)	1.4	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	24	η down (%)	98.6	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: FSH
 Test Date: 2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.727m [K=1.0000]
 Remarks: 6000-6500K

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

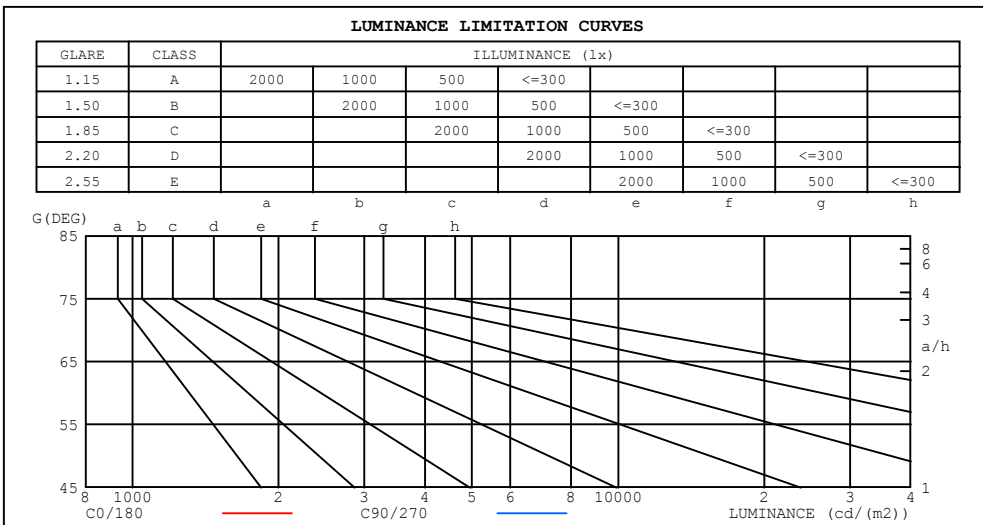
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	327.9	328.3	326.1	325.1					0- 10	31.41	31.41	3.07,3.07
20	315.1	316.2	311.6	309.3					10- 20	90.71	122.1	11.9,11.9
30	292.9	294.7	287.6	277.9					20- 30	139.1	261.2	25.5,25.5
40	260.7	263.4	253.6	241.1					30- 40	170.6	431.8	42.2,42.2
50	218.5	222.2	209.7	195.9					40- 50	180.6	612.5	59.8,59.8
60	166.4	171.6	156.4	144.2					50- 60	166.8	779.3	76.1,76.1
70	106.7	113.7	96.17	88.96					60- 70	129.7	909.0	88.8,88.8
80	47.23	55.59	38.29	35.50					70- 80	76.06	985.0	96.2,96.2
90	2.686	12.99	1.447	2.726					80- 90	24.01	1009	98.6,98.6
100	1.019	3.427	1.113	1.124					90-100	2.704	1012	98.8,98.8
110	1.488	1.519	1.593	1.573					100-110	1.611	1013	99,99
120	1.944	1.896	2.060	2.035					110-120	1.746	1015	99.1,99.1
130	2.381	2.303	2.491	2.484					120-130	1.967	1017	99.3,99.3
140	2.770	2.710	2.874	2.879					130-140	2.021	1019	99.5,99.5
150	3.092	3.050	3.178	3.220					140-150	1.865	1021	99.7,99.7
160	3.384	3.366	3.439	3.475					150-160	1.514	1022	99.9,99.9
170	3.597	3.609	3.627	3.676					160-170	0.9967	1023	100,100
180	3.712	3.749	3.706	3.779					170-180	0.3508	1024	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:FSH
 Test Date:2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.727m [K=1.0000]
 Remarks: 6000-6500K

LUMINANCE LIMITATION CURVES

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	109646	151903
80	118252	139195
75	127859	141043
70	135611	144527
65	141179	147432
60	144701	149233
55	146783	150171
50	147764	150299
45	148100	150037

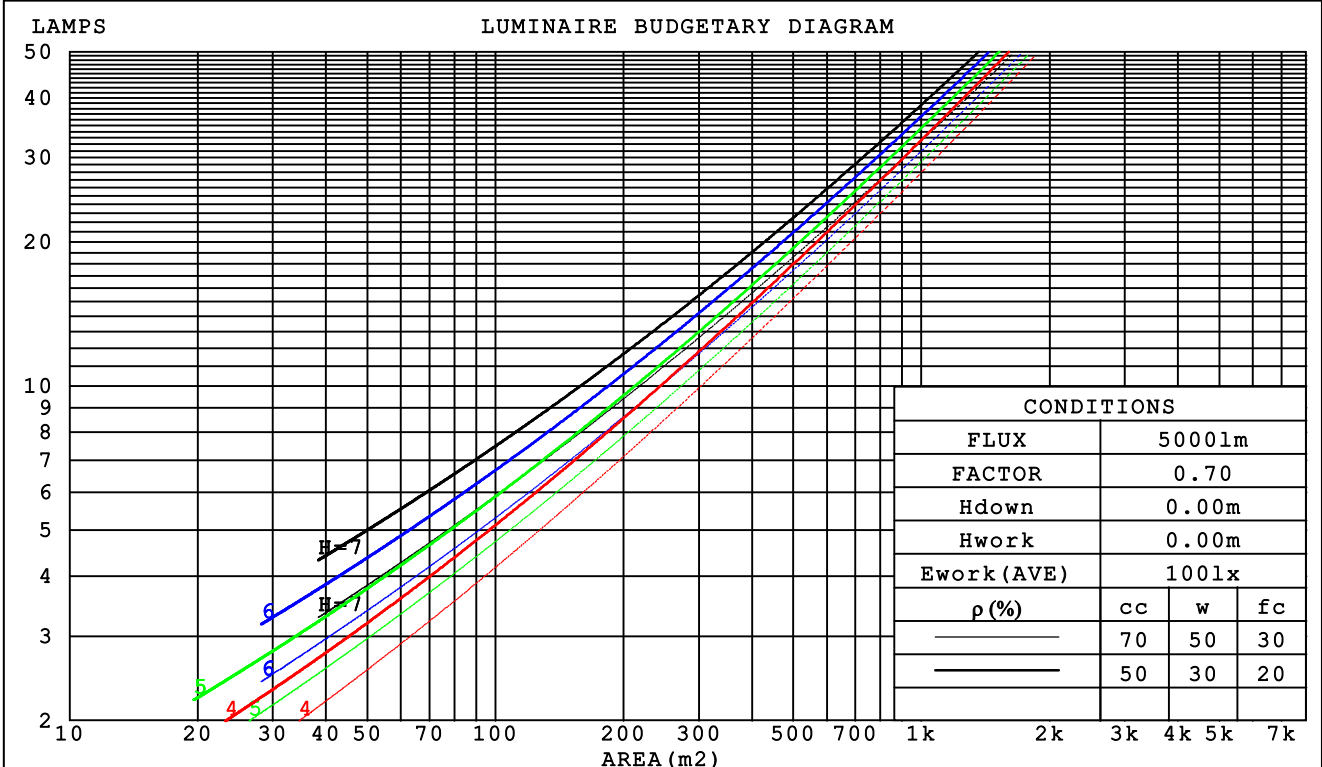
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: FSH
 Test Date: 2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.727m [K=1.0000]
 Remarks: 6000-6500K

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	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	.77	.69	.63	.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	.62	.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	.39	.49	.43	.38	.36														
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.34	.46	.39	.34	.44	.38	.34	.32														
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.31	.42	.35	.30	.41	.35	.30	.28														
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.27	.38	.32	.27	.25														
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23														



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:FSH
 Test Date:2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.727m [K=1.0000]
 Remarks: 6000-6500K

WEC AND CCEC

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	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	.319	.181	.057	.312	.178	.056	.297	.171	.055	.284	.164	.053	.273	.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	.042	.248	.136	.042	.238	.132	.041	
4.0	.253	.131	.039	.248	.130	.038	.238	.126	.038	.229	.123	.037	.220	.120	.036	
5.0	.233	.119	.034	.229	.117	.034	.220	.115	.034	.212	.112	.033	.204	.109	.033	
6.0	.216	.108	.031	.212	.107	.031	.204	.105	.030	.197	.102	.030	.190	.100	.030	
7.0	.201	.099	.028	.197	.098	.028	.190	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.187	.092	.026	.184	.091	.026	.178	.089	.025	.172	.087	.025	.166	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.021	.147	.074	.021	

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	.201	.201	.201	.172	.172	.172	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.192	.167	.145	.164	.143	.125	.112	.099	.086	.065	.057	.050	.021	.018	.016	
2.0	.184	.143	.108	.158	.123	.094	.108	.085	.065	.062	.050	.038	.020	.016	.012	
3.0	.177	.126	.085	.151	.108	.074	.104	.075	.052	.060	.044	.030	.019	.014	.010	
4.0	.169	.112	.069	.145	.097	.060	.100	.068	.042	.058	.040	.025	.019	.013	.008	
5.0	.162	.102	.058	.139	.088	.050	.096	.062	.036	.055	.036	.021	.018	.012	.007	
6.0	.154	.094	.050	.133	.081	.044	.092	.057	.031	.053	.033	.018	.017	.011	.006	
7.0	.148	.087	.044	.127	.075	.039	.088	.053	.027	.051	.031	.016	.016	.010	.005	
8.0	.141	.081	.040	.121	.070	.035	.084	.049	.025	.049	.029	.015	.016	.010	.005	
9.0	.135	.076	.036	.116	.066	.032	.081	.046	.023	.047	.027	.013	.015	.009	.004	
10.0	.129	.072	.034	.111	.062	.029	.077	.044	.021	.045	.026	.012	.015	.009	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:FSH
 Test Date:2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.727m [K=1.0000]
 Remarks: 6000-6500K

UGR(Unified Glare Rating) Table

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm										
NAME: TF5BF-600					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	30.3	31.8	30.6	32.0	32.3	30.4	31.9	30.7	32.1	32.4
3H	31.9	33.3	32.2	33.6	33.8	32.1	33.5	32.4	33.8	34.0
4H	32.6	33.9	32.9	34.2	34.5	32.8	34.2	33.1	34.4	34.7
6H	33.0	34.3	33.4	34.6	34.9	33.4	34.7	33.8	35.0	35.3
8H	33.2	34.4	33.6	34.7	35.1	33.6	34.8	34.0	35.2	35.5
12H	33.3	34.5	33.7	34.8	35.2	33.8	35.0	34.2	35.3	35.6
4H 2H	30.9	32.3	31.3	32.6	32.9	31.0	32.4	31.4	32.6	32.9
3H	32.8	33.9	33.1	34.3	34.6	32.9	34.1	33.3	34.4	34.7
4H	33.5	34.6	33.9	35.0	35.3	33.8	34.8	34.2	35.2	35.6
6H	34.2	35.1	34.6	35.5	35.9	34.5	35.4	34.9	35.8	36.2
8H	34.4	35.3	34.8	35.7	36.1	34.8	35.7	35.2	36.1	36.5
12H	34.6	35.4	35.0	35.8	36.2	35.0	35.9	35.5	36.3	36.7
8H 4H	33.9	34.8	34.3	35.1	35.6	34.1	35.0	34.5	35.3	35.8
6H	34.7	35.4	35.1	35.8	36.3	35.0	35.7	35.4	36.1	36.6
8H	35.0	35.6	35.5	36.1	36.6	35.4	36.0	35.8	36.5	37.0
12H	35.2	35.8	35.7	36.3	36.8	35.7	36.3	36.2	36.8	37.3
12H 4H	33.9	34.7	34.3	35.1	35.6	34.1	34.9	34.5	35.3	35.7
6H	34.7	35.4	35.2	35.9	36.3	35.0	35.7	35.5	36.1	36.6
8H	35.1	35.7	35.6	36.2	36.7	35.5	36.1	36.0	36.5	37.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.1 / - 0.3				

CIE Pub.117, 1024 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.1)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:FSH
 Test Date:2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.727m [K=1.0000]
 Remarks: 6000-6500K

UTILIZATION FACTORS TABLE

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

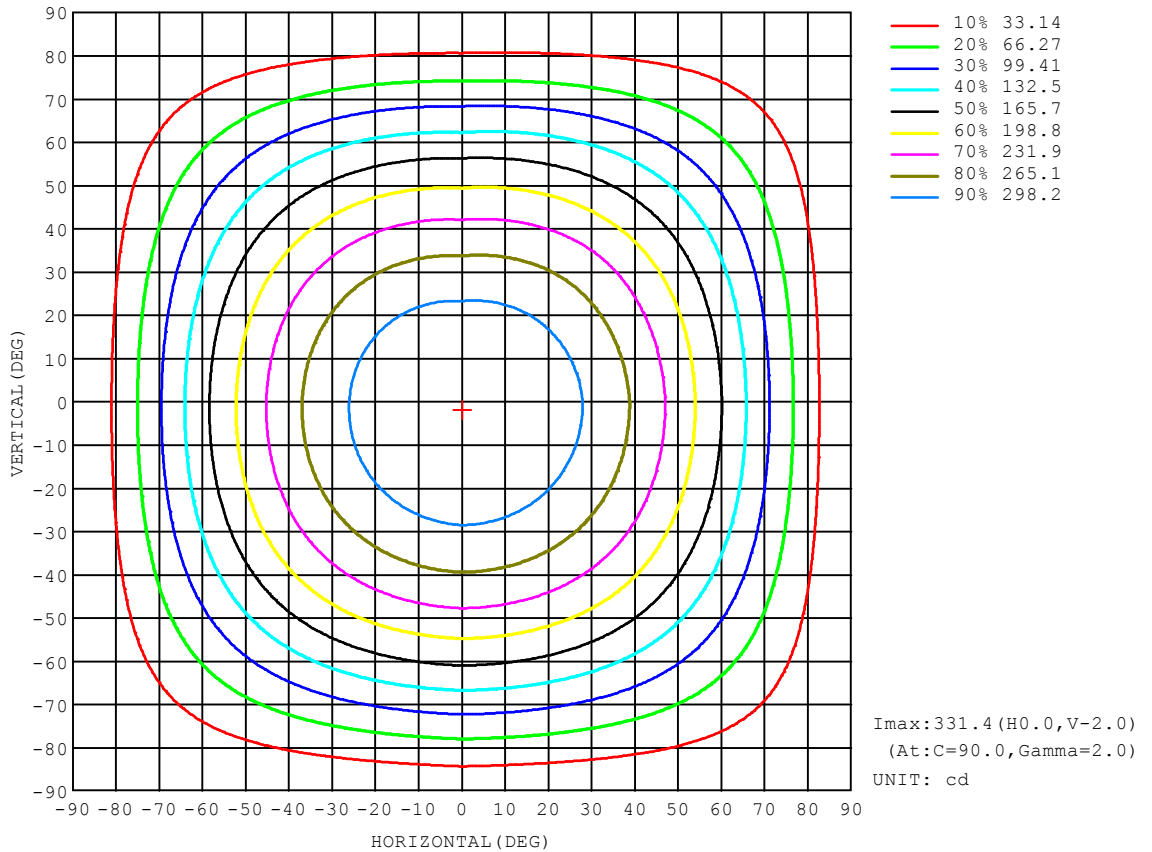
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	62	55	71	64	55	47
1.25	82	71	64	80	70	63	77	69	62	55
1.50	87	77	69	85	76	69	82	74	68	60
2.00	94	85	78	92	84	77	88	81	76	67
2.50	98	90	83	96	88	82	92	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:FSH
 Test Date:2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.727m [K=1.0000]
 Remarks: 6000-6500K

ISOCANDELA DIAGRAM

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

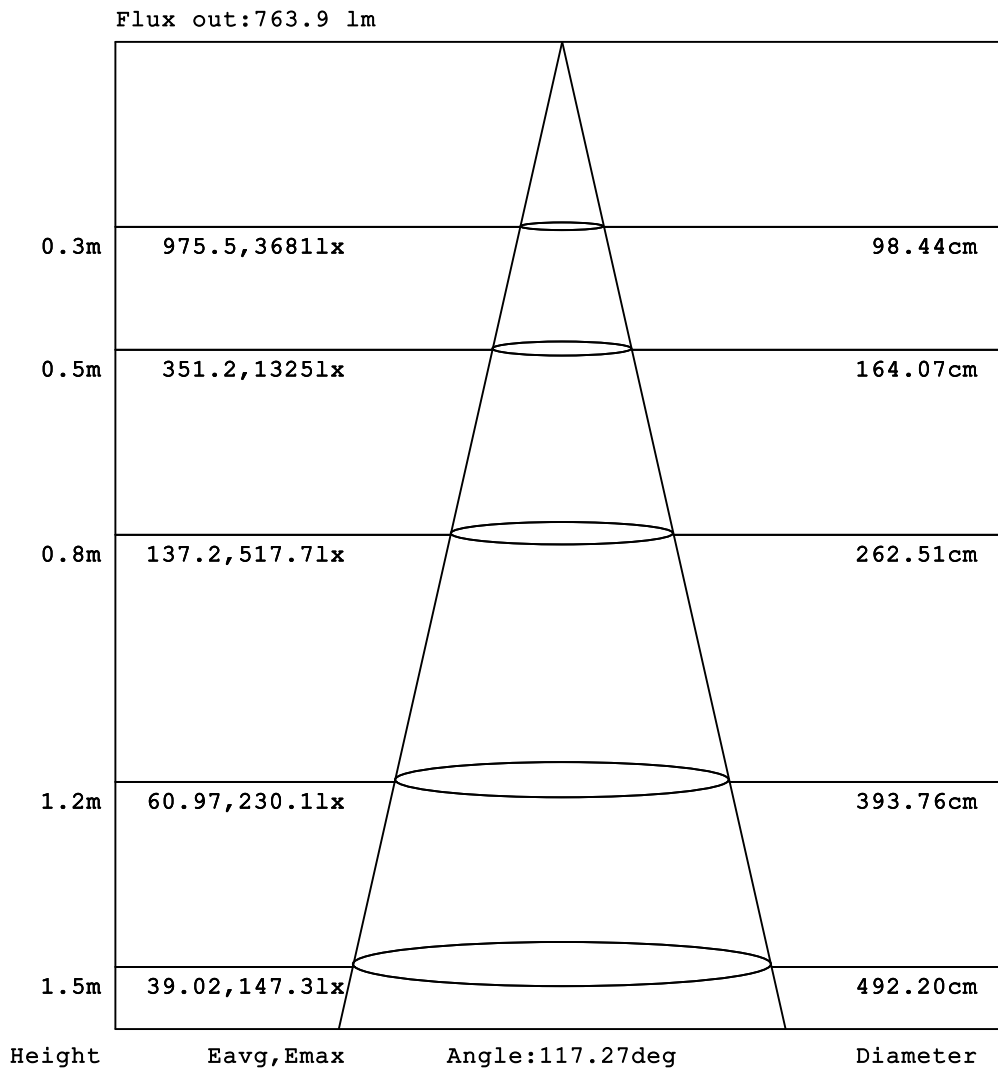


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: FSH
 Test Date: 2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.727m [K=1.0000]
 Remarks: 6000-6500K

AAI Figure

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



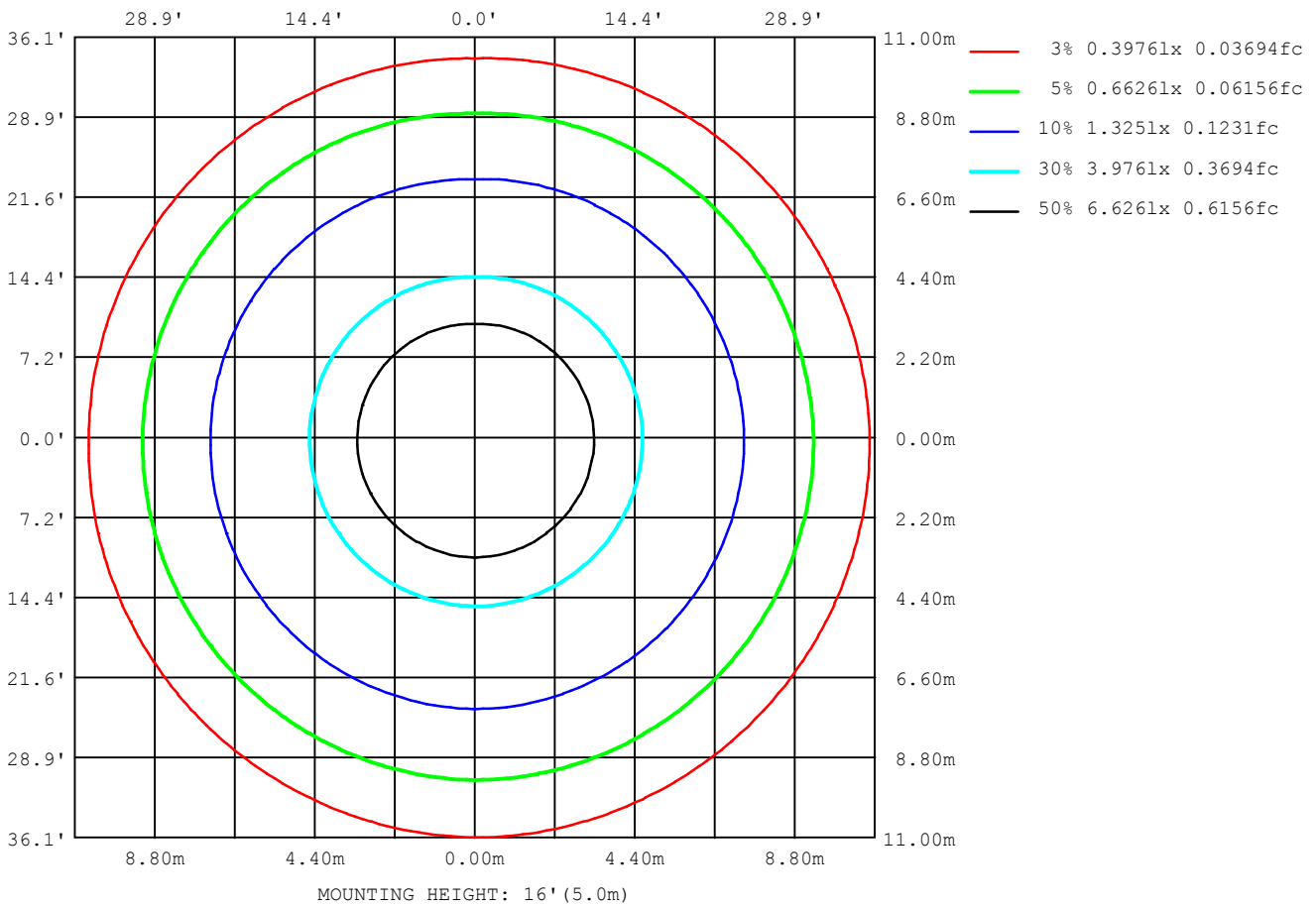
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:FSH
 Test Date:2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.727m [K=1.0000]
 Remarks: 6000-6500K

ISOLUX DIAGRAM

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	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: FSH
 Test Date: 2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.727m [K=1.0000]
 Remarks: 6000-6500K

LED Avg.L Report

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

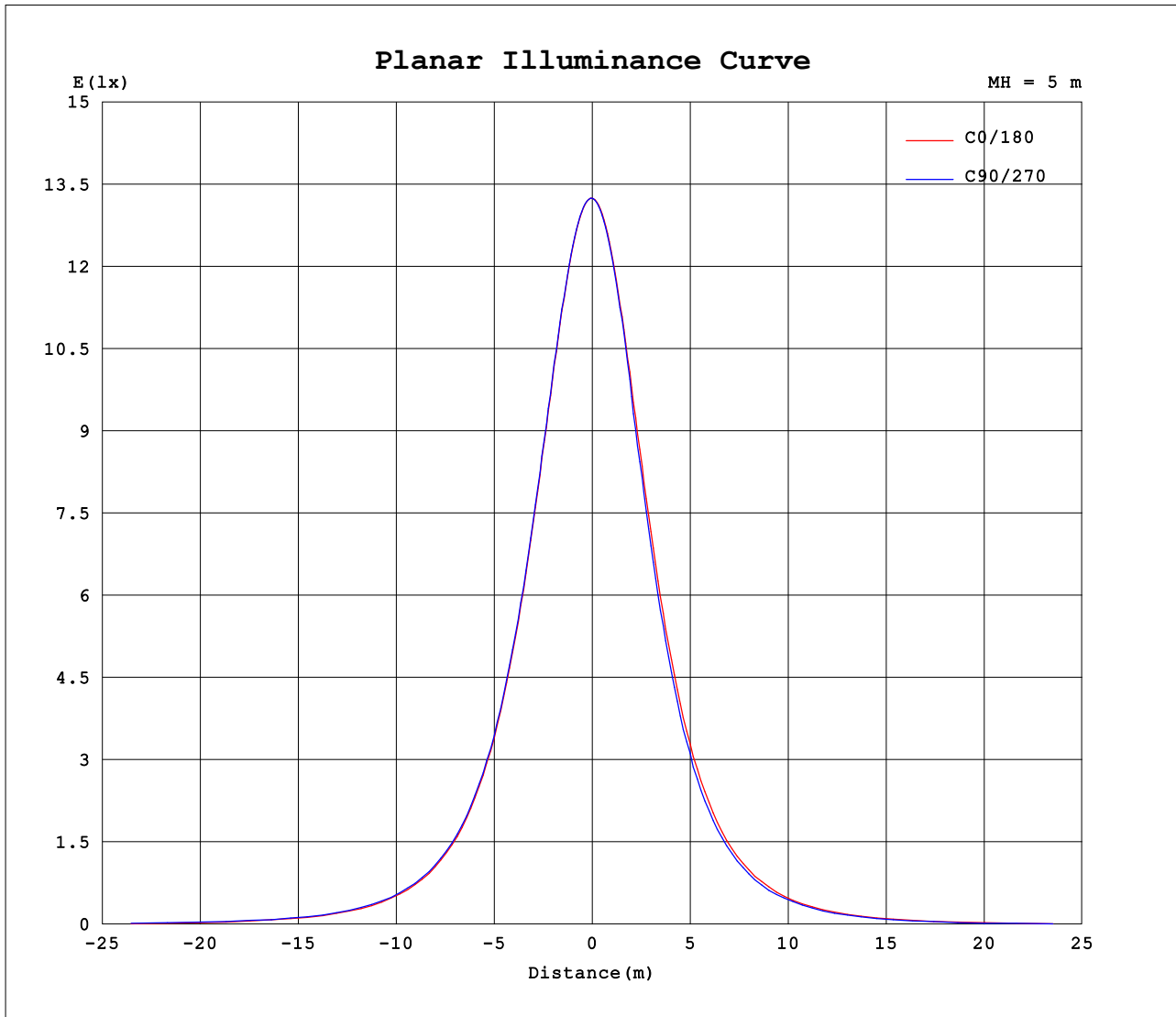
AvgL	cd/m2
L_0~180 (65) av	135800
L_0~180 (75) av	119506
L_0~180 (85) av	93212
L_90~270 (65) av	134667
L_90~270 (75) av	121677
L_90~270 (85) av	113356
L_45 (65) av	134756
L_45 (75) av	120341
L_45 (85) av	104775

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:FSH
 Test Date:2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:9.727m [K=1.0000]
 Remarks: 6000-6500K

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: FSH
 Test Date: 2022-12-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 9.727m [K=1.0000]
 Remarks: 6000-6500K

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:23.998V I:0.4007A P:9.6160W PF:1.0000 Freq:49.99Hz Lamp Flux:1023.83x1 lm		
NAME: TF5BF-600	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	331	331	331	331															
5	331	331	330	329															
10	328	328	326	325															
15	323	323	320	318															
20	315	316	312	309															
25	305	307	301	293															
30	293	295	288	278															
35	278	280	272	261															
40	261	263	254	241															
45	241	244	233	221															
50	218	222	210	196															
55	194	198	184	172															
60	166	172	156	144															
65	137	143	127	118															
70	107	114	96.2	89.0															
75	76.1	84.0	66.2	60.9															
80	47.2	55.6	38.3	35.5															
85	22.0	30.5	15.4	15.0															
90	2.69	13.0	1.45	2.73															
95	0.82	6.27	0.90	0.92															
100	1.02	3.43	1.11	1.12															
105	1.24	2.00	1.35	1.34															
110	1.49	1.52	1.59	1.57															
115	1.72	1.70	1.84	1.82															
120	1.94	1.90	2.06	2.04															
125	2.16	2.10	2.27	2.25															
130	2.38	2.30	2.49	2.48															
135	2.59	2.50	2.69	2.68															
140	2.77	2.71	2.87	2.88															
145	2.95	2.89	3.03	3.04															
150	3.09	3.05	3.18	3.22															
155	3.24	3.23	3.31	3.36															
160	3.38	3.37	3.44	3.47															
165	3.49	3.51	3.54	3.59															
170	3.60	3.61	3.63	3.68															
175	3.66	3.70	3.68	3.75															
180	3.71	3.75	3.71	3.78															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
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γ Range: 0 - 180DEG
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