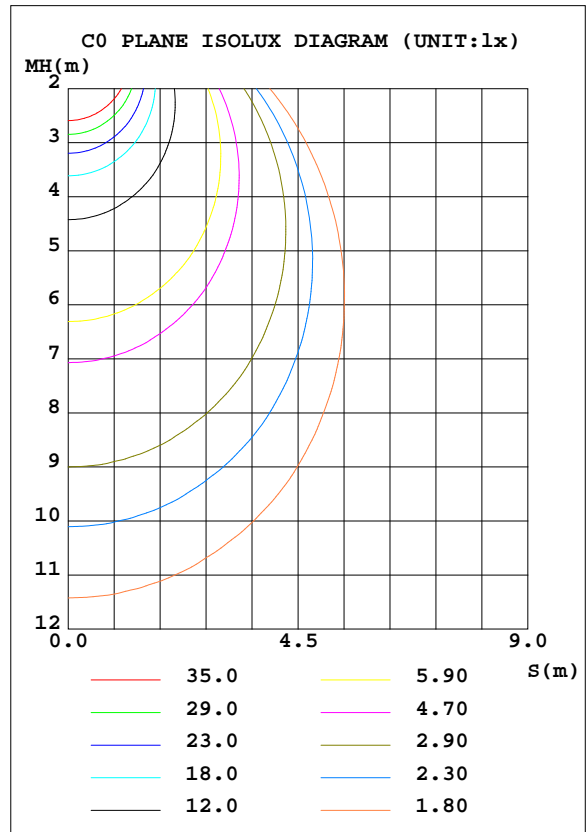
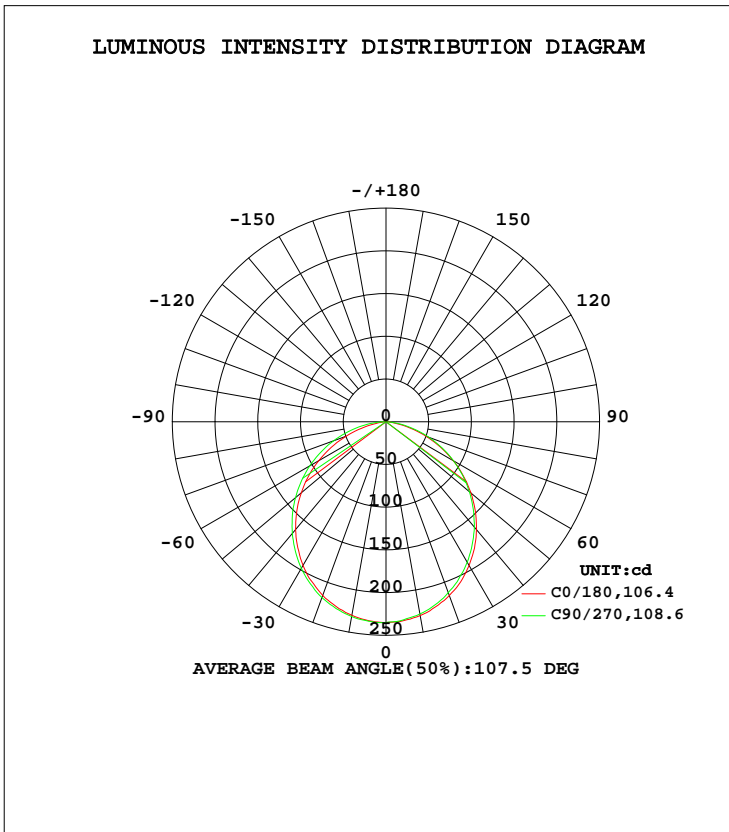


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 67.02 lm/W
MODEL	136-182_5700K	I <sub>max</sub> (cd)	235.2	S/MH(C0/180)	1.23	
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.25	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	632.03	η UP, DN(C0-180)	0.0,48.7	
NOMINAL FLUX(lm)	632.027	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,51.3	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	1.35	



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

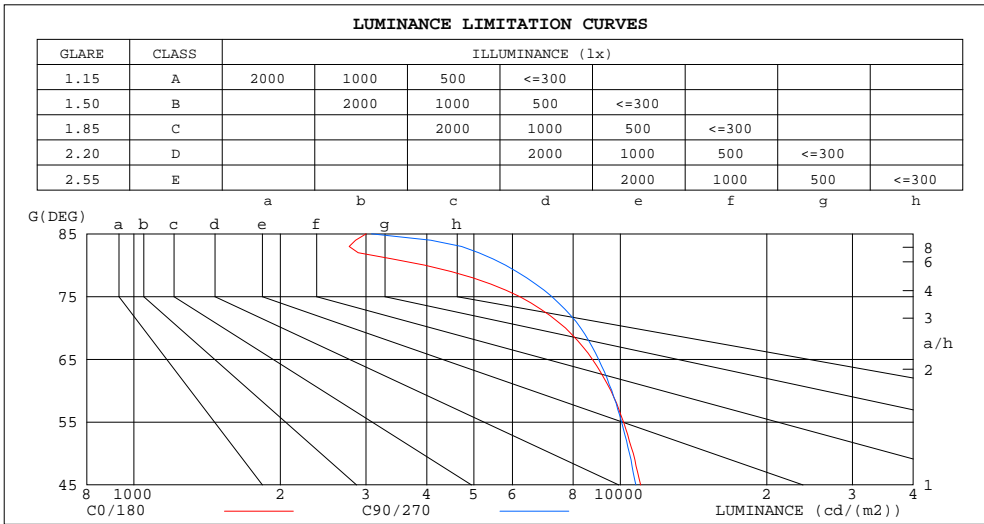
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	230.4	229.5	228.6	229.5	230.0	231.7	231.5	231.4	0- 10	22.20	22.20	3.51,3.51
20	216.6	214.6	212.9	214.3	216.3	218.3	219.2	218.3	10- 20	63.28	85.48	13.5,13.5
30	194.5	192.4	190.0	191.5	194.2	197.1	198.1	197.4	20- 30	95.04	180.5	28.6,28.6
40	164.8	162.7	160.8	162.1	164.7	169.3	170.4	169.3	30- 40	113.0	293.5	46.4,46.4
50	129.9	128.6	127.4	127.7	129.5	135.7	138.3	135.7	40- 50	114.9	408.4	64.6,64.6
60	90.82	91.27	91.15	90.49	90.68	98.90	102.8	98.62	50- 60	101.2	509.6	80.6,80.6
70	50.11	52.48	53.79	51.58	49.84	59.87	65.29	59.61	60- 70	74.04	583.6	92.3,92.3
80	13.08	18.15	19.15	17.88	12.07	22.90	28.82	23.21	70- 80	38.64	622.3	98.5,98.5
90	1.941	2.614	2.238	2.820	1.812	3.142	2.231	3.084	80- 90	9.746	632.0	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		

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3003	3080
80	3965	5811
75	6207	7229
70	7712	8286
65	8759	9025
60	9561	9605
55	10151	10065
50	10637	10441
45	11014	10761

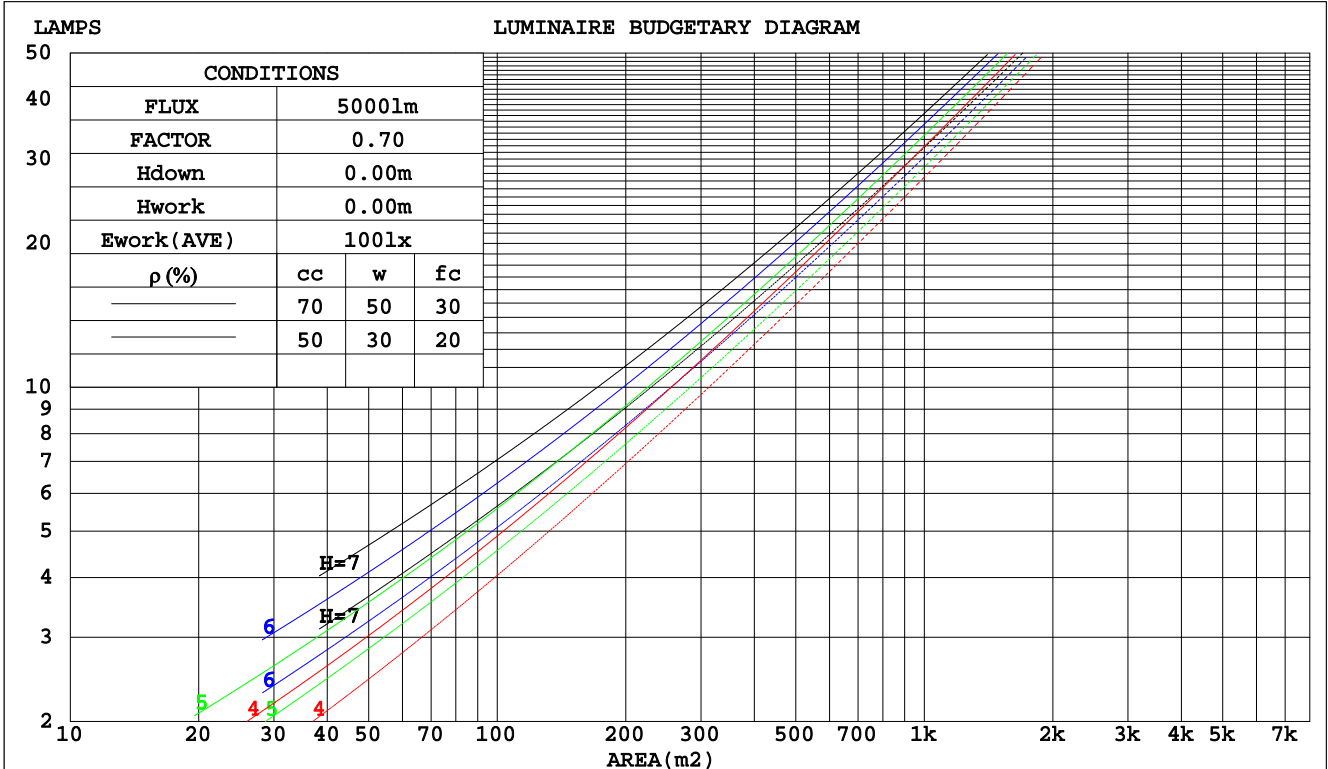
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
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	1.04	1.00	.97	1.02	.98	.95	.98	.95	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.85	.79	.89	.83	.78	.86	.81	.76	.83	.78	.74	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.68	.63	.70	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.56	.67	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.63	.54	.48	.60	.53	.47	.59	.52	.47	.57	.51	.46	.44
6.0	.57	.49	.42	.56	.48	.42	.55	.47	.42	.53	.46	.41	.51	.46	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.48	.39	.33	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.29	.28
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	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	.299	.170	.054	.292	.167	.053	.279	.160	.051	.267	.154	.049	.256	.148	.048	
2.0	.284	.156	.048	.278	.153	.047	.266	.148	.046	.255	.143	.045	.245	.139	.044	
3.0	.264	.140	.042	.258	.138	.042	.248	.134	.041	.239	.131	.040	.230	.127	.039	
4.0	.244	.127	.037	.240	.125	.037	.230	.122	.037	.222	.119	.036	.214	.116	.035	
5.0	.227	.115	.033	.222	.114	.033	.214	.112	.033	.207	.109	.032	.200	.107	.032	
6.0	.211	.106	.030	.207	.104	.030	.200	.102	.030	.193	.100	.029	.186	.098	.029	
7.0	.196	.097	.028	.193	.096	.027	.186	.094	.027	.180	.092	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.025	
9.0	.172	.083	.023	.169	.083	.023	.164	.081	.023	.159	.080	.023	.155	.079	.023	
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.146	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.180	.156	.135	.154	.134	.116	.105	.092	.080	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.147	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.134	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm										
NAME: 136-182_5700K					TYPE:10W			WEIGHT:		
SPEC.:5700K					DIM.:			SERIAL No.:		
MFR.: Tronix Lighting					SUR.:0.0775			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	20.8	22.3	21.0	22.5	22.7	20.7	22.2	21.0	22.4	22.6
3H	22.0	23.4	22.3	23.6	23.9	22.1	23.5	22.4	23.7	23.9
4H	22.4	23.7	22.7	24.0	24.2	22.6	23.9	22.9	24.1	24.4
6H	22.6	23.8	22.9	24.1	24.3	22.9	24.1	23.2	24.4	24.7
8H	22.5	23.7	22.9	24.0	24.3	22.9	24.1	23.3	24.4	24.7
12H	22.5	23.7	22.9	24.0	24.3	22.9	24.1	23.3	24.4	24.7
4H 2H	21.3	22.6	21.6	22.9	23.1	21.3	22.6	21.6	22.9	23.1
3H	22.7	23.9	23.1	24.2	24.5	22.8	24.0	23.2	24.3	24.6
4H	23.2	24.3	23.6	24.6	24.9	23.4	24.5	23.8	24.8	25.1
6H	23.5	24.4	23.9	24.7	25.1	23.8	24.7	24.2	25.1	25.4
8H	23.5	24.3	23.9	24.7	25.1	23.9	24.8	24.3	25.1	25.5
12H	23.5	24.3	23.9	24.7	25.1	23.9	24.7	24.4	25.1	25.5
8H 4H	23.4	24.3	23.8	24.6	25.0	23.6	24.4	24.0	24.8	25.2
6H	23.8	24.5	24.2	24.9	25.3	24.1	24.8	24.5	25.2	25.6
8H	23.8	24.5	24.3	24.9	25.3	24.2	24.9	24.7	25.3	25.8
12H	23.9	24.4	24.4	24.9	25.3	24.3	24.9	24.8	25.3	25.8
12H 4H	23.4	24.2	23.8	24.6	25.0	23.6	24.4	24.0	24.7	25.1
6H	23.8	24.4	24.2	24.8	25.3	24.1	24.7	24.6	25.2	25.6
8H	23.9	24.4	24.4	24.9	25.4	24.3	24.8	24.8	25.3	25.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.3				

CIE Pub.117, 632.0 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -1.6)

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:

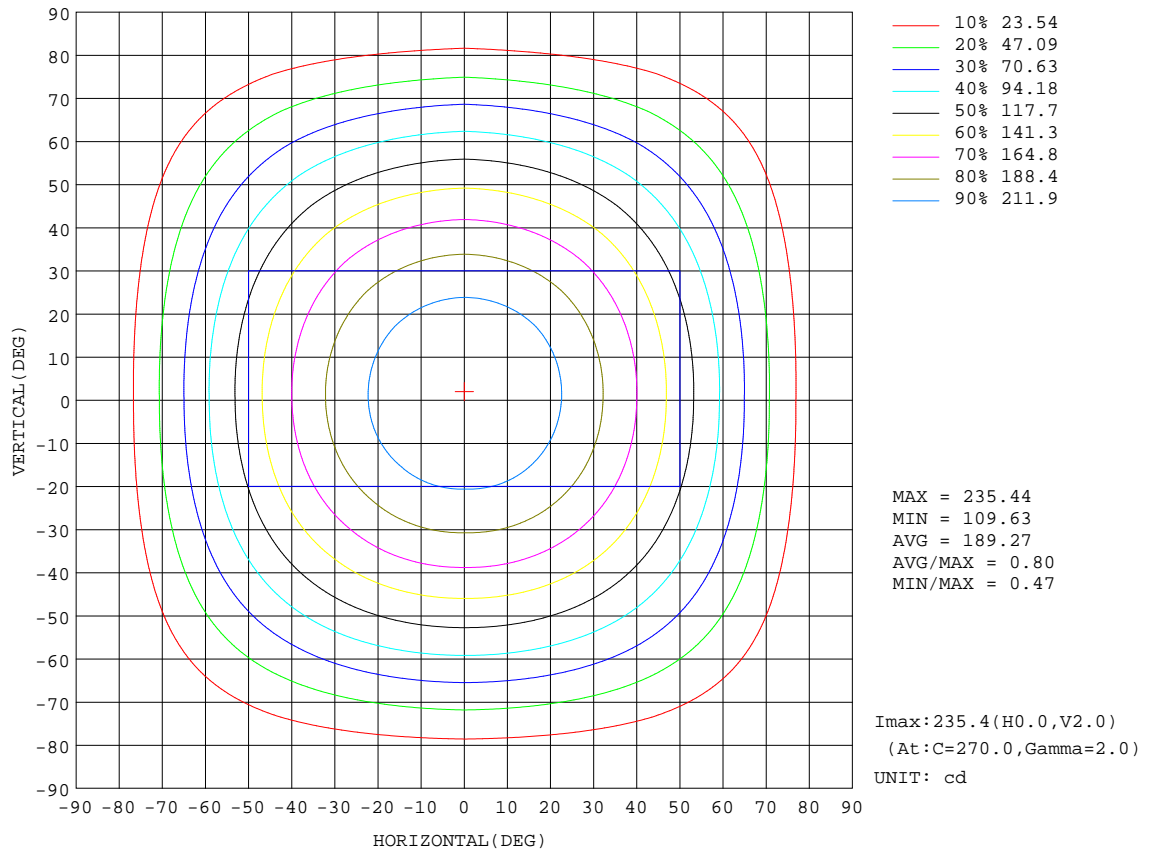
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	47	40	58	47	40	57	46	40	34
0.80	69	57	50	68	57	50	66	56	49	43
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	83	73	66	80	72	66	59
1.50	89	79	73	87	79	72	84	77	71	64
2.00	96	87	81	94	86	80	90	84	79	71
2.50	100	92	86	98	91	85	94	88	83	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	104	99	95	100	96	93	84
5.00	109	104	100	107	102	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:

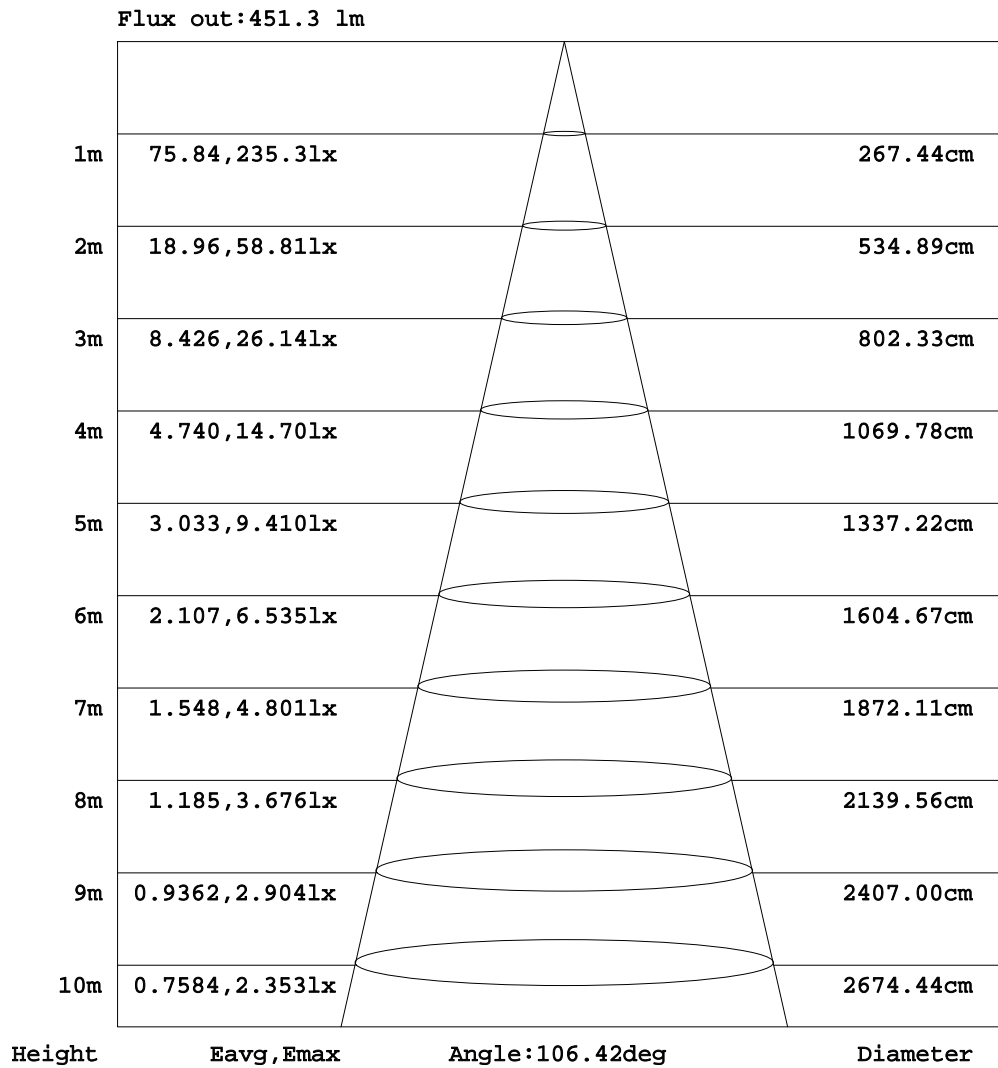


C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

AAI Figure

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:



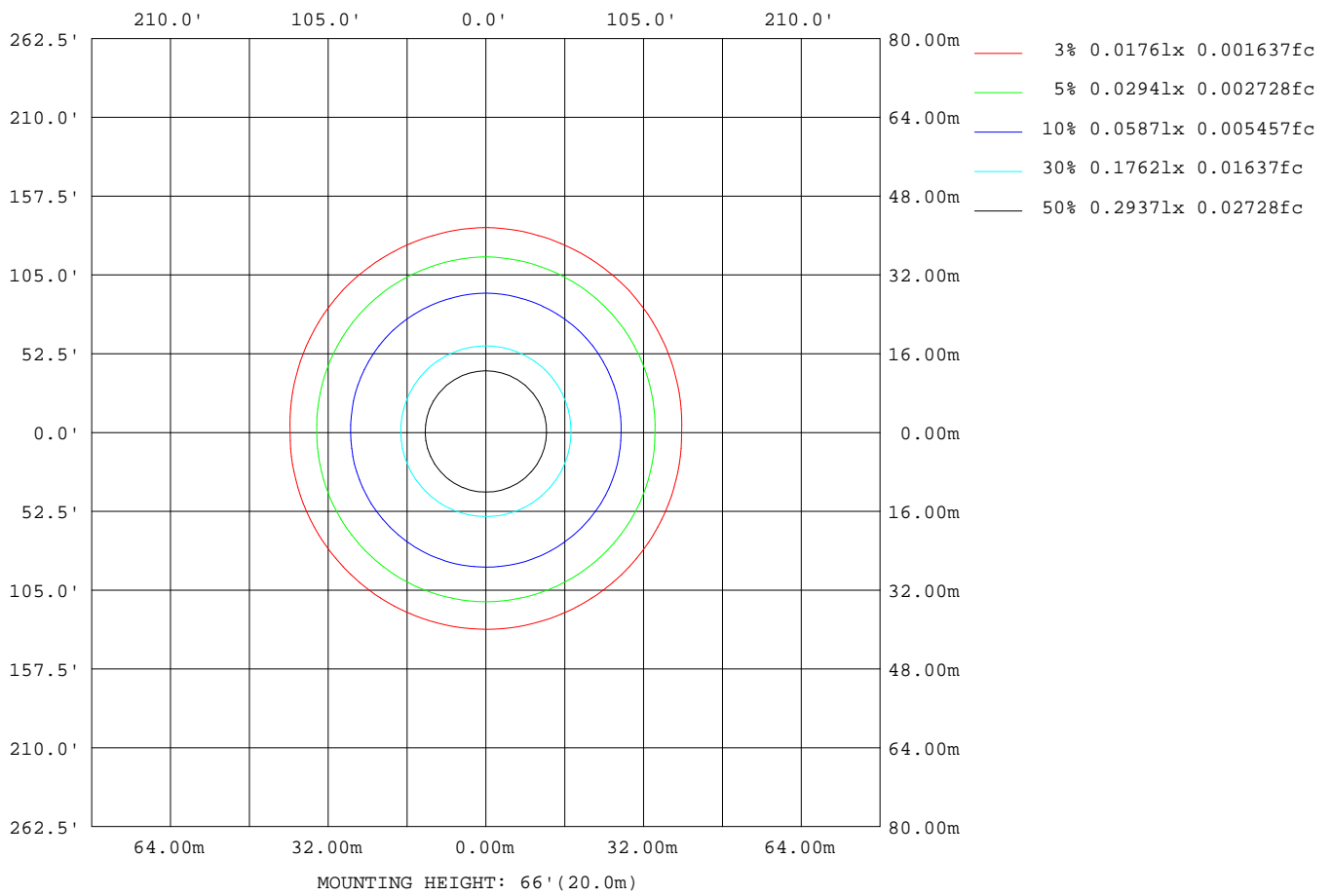
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

ISOLUX DIAGRAM

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

Test:U:230.71V I:0.0434A P:9.4299W PF:0.9414 Freq:50.00Hz Lamp Flux:632.027x1 lm		
NAME: 136-182_5700K	TYPE:10W	WEIGHT:
SPEC.:5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.:0.0775	Shielding Angle:

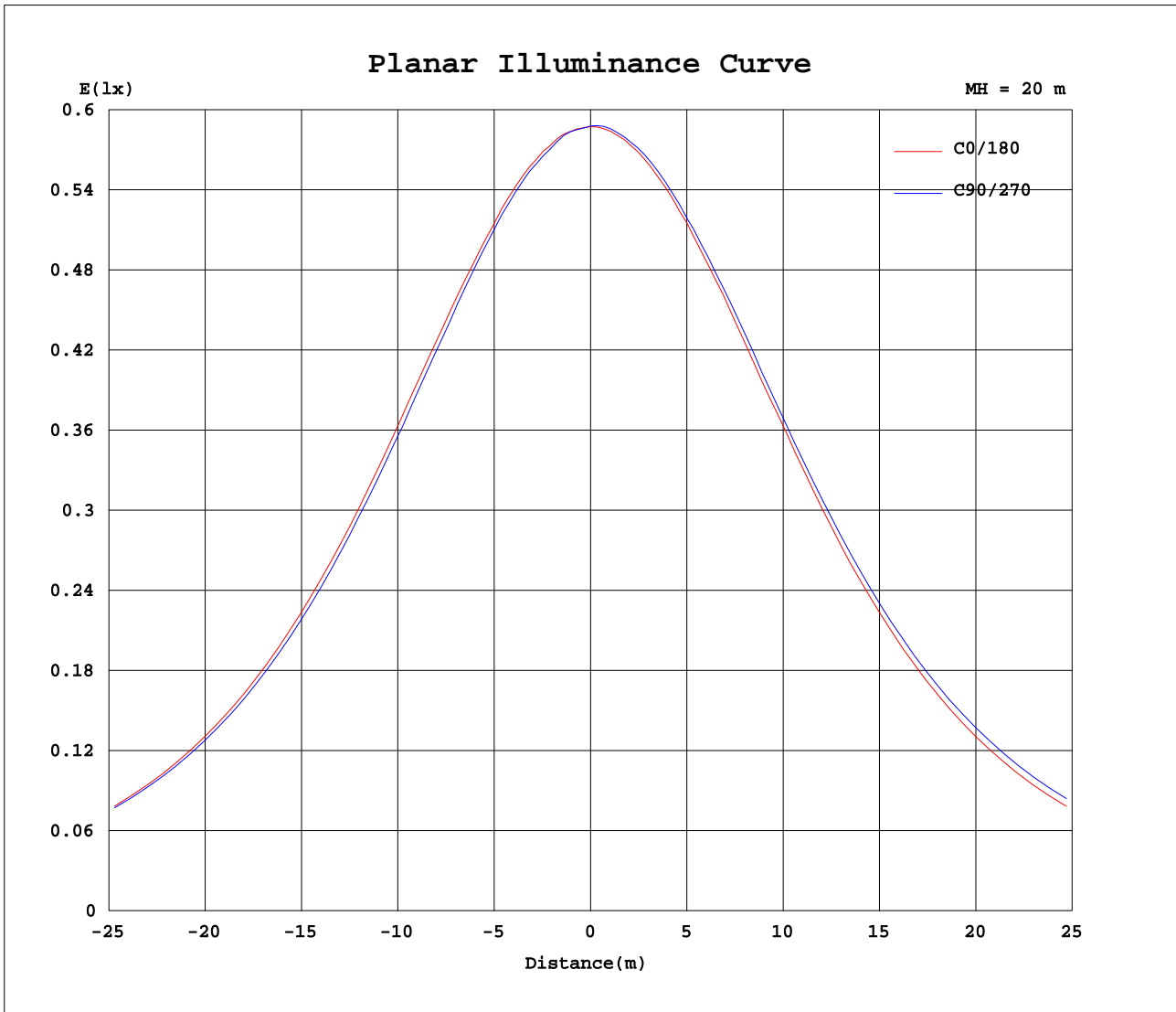
AvgL	cd/m2
L_0~180(65)av	8769
L_0~180(75)av	6139
L_0~180(85)av	2937
L_90~270(65)av	9754
L_90~270(75)av	8357
L_90~270(85)av	5550
L_45(65)av	9390
L_45(75)av	7528
L_45(85)av	5601

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2020-01-13

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2020-01-13

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.404.7  
 Humidity: 65.0%  
 Test Distance: 9.900m [K=1.0000]  
 Remarks:

