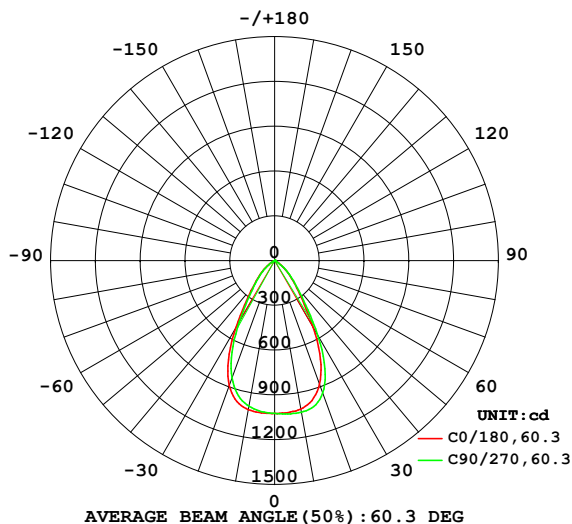


LUMINAIRE PHOTOMETRIC TEST REPORT

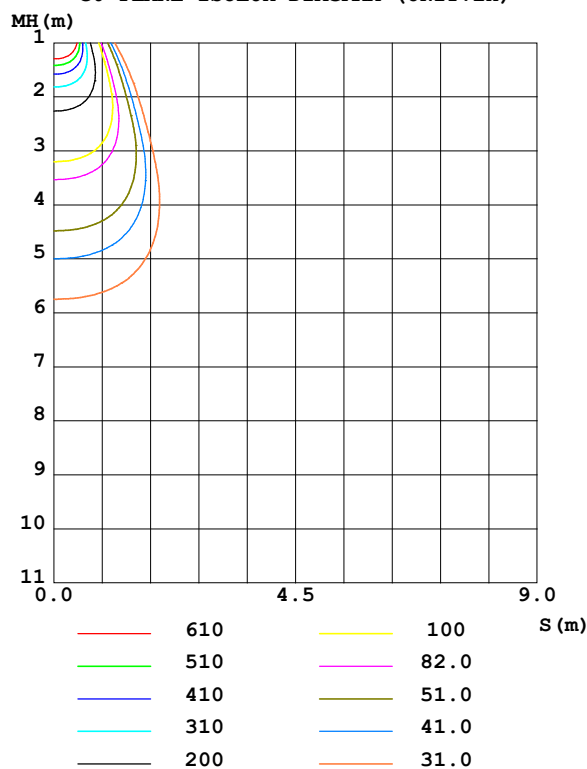
Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 138.65 lm/W			
MODEL	136-133_4000K_8W	I _{max} (cd)	1033	S/MH(C0/180)	0.89
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	0.93
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1084.3	η UP,DN(C0-180)	0.0,48.2
NOMINAL FLUX(lm)	1084.27	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down (%)	100.0	CIBSE SHR MAX	0.90

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1014	1000	991.1	996.0	1010	1023	1033	1028	0- 10	97.34	97.34	8.98,8.98
20	889.9	854.0	835.5	847.7	880.7	916.6	943.2	928.5	10- 20	271.8	369.1	34,34
30	521.1	488.7	471.9	487.2	517.0	550.1	582.5	560.9	20- 30	330.2	699.3	64.5,64.5
40	219.4	208.8	205.9	212.7	220.0	227.2	238.2	232.9	30- 40	213.6	912.8	84.2,84.2
50	93.24	90.38	90.85	94.16	97.00	96.34	99.59	96.25	40- 50	115.7	1029	94.9,94.9
60	18.01	17.61	15.01	17.41	18.12	18.08	16.22	17.98	50- 60	45.31	1074	99,99
70	2.905	2.845	2.788	2.829	2.952	2.951	2.888	2.863	60- 70	6.828	1081	99.7,99.7
80	1.864	1.759	1.718	1.719	1.841	1.847	1.781	1.807	70- 80	2.416	1083	99.9,99.9
90	0.0148	0.0119	0.0089	0.0089	0.0148	0.0119	0.0089	0.0119	80- 90	1.203	1084	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		

Conical surface Flux(90deg): 980.08 lm

%lum = 90.4%

%lamp = 90.4%

Conical surface Flux(120deg): 1073.8 lm

%lum = 99.0%

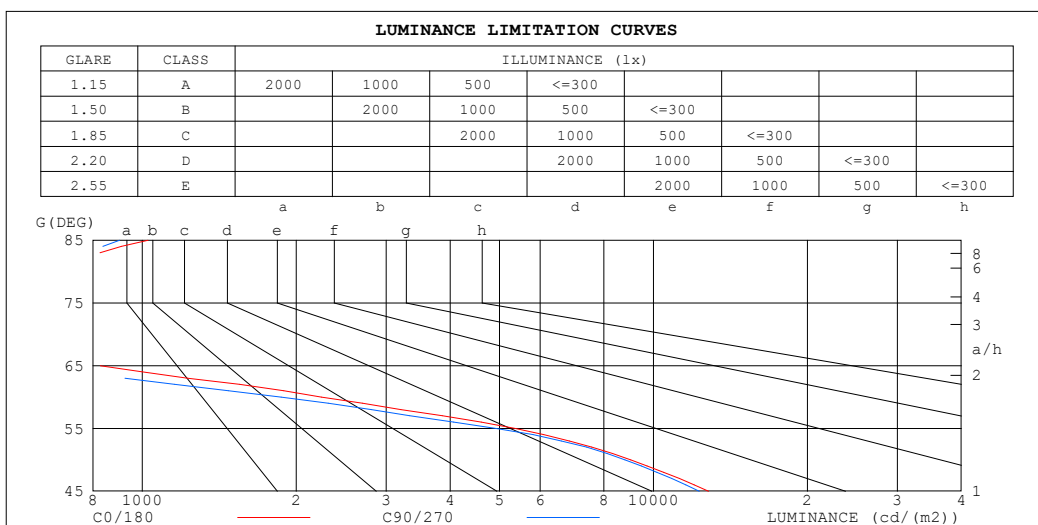
%lamp = 99.0%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2023-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
 Humidity:65.0%
 Test Distance:9.640m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1026	903
80	668	616
75	559	525
70	529	508
65	828	647
60	2241	1869
55	5371	4922
50	9027	8799
45	12822	12290

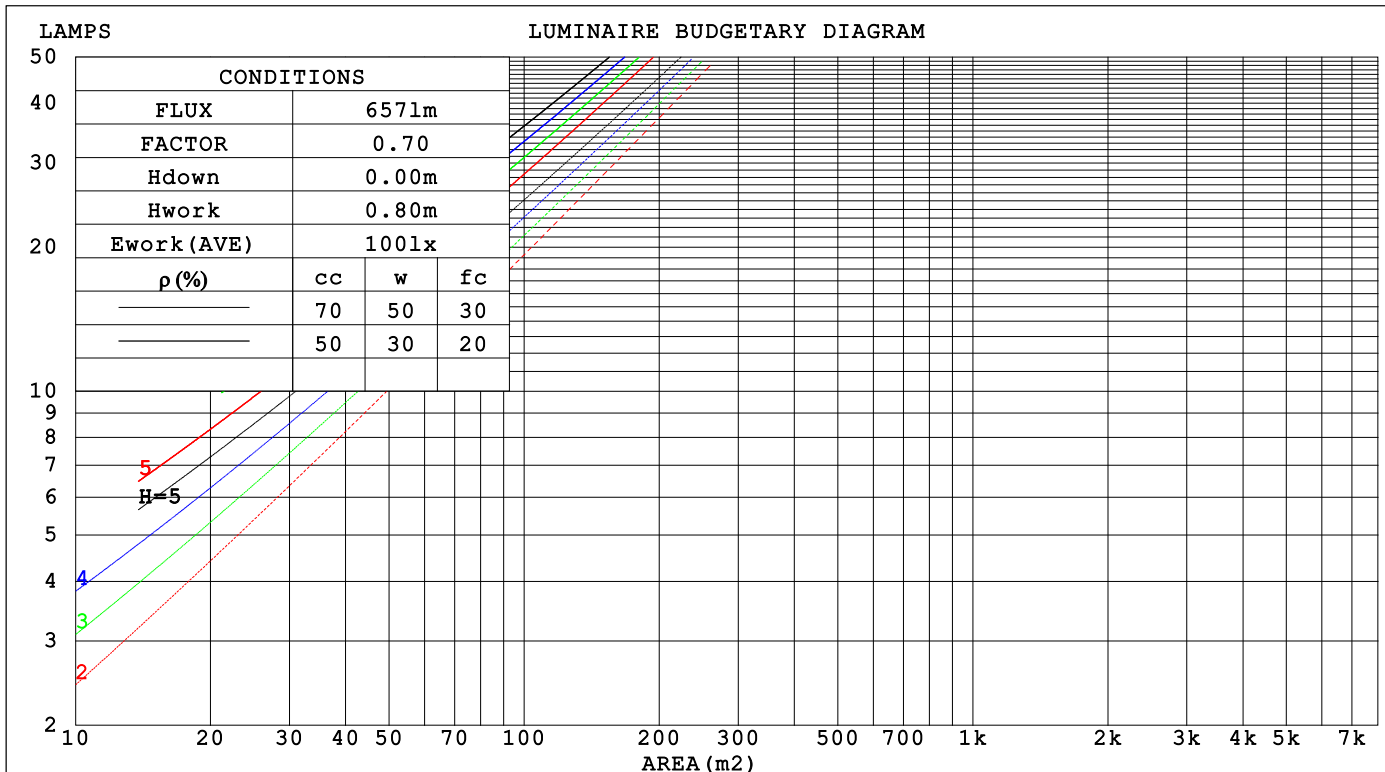
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 9.640m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0														
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
p _{fc}	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	1.10	1.07	1.05	1.08	1.06	1.03	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.94	.93														
2.0	1.02	.97	.94	.90	.96	.93	.97	.93	.91	.94	.91	.89	.91	.89	.87	.85														
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.81	.85	.82	.80	.78														
4.0	.87	.81	.77	.86	.81	.76	.84	.79	.75	.82	.78	.75	.80	.77	.74	.72														
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.77	.72	.69	.75	.71	.68	.67														
6.0	.76	.69	.65	.75	.69	.65	.73	.68	.64	.72	.67	.64	.71	.66	.63	.62														
7.0	.71	.64	.60	.70	.64	.60	.69	.63	.59	.68	.63	.59	.66	.62	.59	.57														
8.0	.66	.60	.56	.66	.60	.56	.65	.59	.55	.64	.59	.55	.63	.58	.55	.53														
9.0	.62	.56	.52	.62	.56	.52	.61	.55	.52	.60	.55	.51	.59	.55	.51	.50														
10.0	.59	.53	.49	.58	.52	.49	.57	.52	.48	.57	.52	.48	.56	.51	.48	.47														



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W			TYPE: 8W			WEIGHT:		
SPEC.: 4000K			DIM.:			SERIAL No.:		
MFR.: Tronix Lighting			SUR.: 0.0715			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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.190	.108	.034	.183	.105	.033	.171	.098	.031	.159	.092	.029	.148	.086	.028		
2.0	.183	.100	.031	.178	.098	.030	.167	.093	.029	.157	.088	.028	.148	.084	.026		
3.0	.175	.093	.028	.170	.091	.027	.161	.087	.027	.153	.084	.026	.145	.080	.025		
4.0	.167	.087	.026	.163	.085	.025	.155	.082	.025	.147	.079	.024	.140	.076	.023		
5.0	.159	.081	.023	.155	.080	.023	.148	.077	.023	.142	.075	.022	.136	.073	.022		
6.0	.152	.076	.022	.148	.075	.022	.142	.073	.021	.136	.071	.021	.131	.069	.020		
7.0	.145	.071	.020	.142	.071	.020	.136	.069	.020	.131	.067	.020	.126	.066	.019		
8.0	.138	.067	.019	.135	.067	.019	.130	.065	.019	.126	.064	.018	.122	.062	.018		
9.0	.132	.064	.018	.130	.063	.018	.125	.062	.018	.121	.061	.017	.117	.059	.017		
10.0	.126	.061	.017	.124	.060	.017	.120	.059	.017	.116	.058	.016	.113	.057	.016		

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						Ceiling Cavity Exitance Coefficients (CCEC)										
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016		
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013		
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010		
4.0	.137	.099	.071	.117	.086	.061	.081	.060	.043	.047	.035	.026	.015	.011	.008		
5.0	.128	.088	.058	.110	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007		
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006		
7.0	.115	.071	.041	.099	.062	.035	.068	.043	.025	.040	.026	.015	.013	.008	.005		
8.0	.109	.065	.035	.094	.056	.030	.065	.040	.022	.038	.023	.013	.012	.008	.004		
9.0	.104	.060	.030	.090	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004		
10.0	.100	.056	.026	.086	.048	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz											
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm											
NAME: 136-133_4000K_8W						TYPE: 8W		WEIGHT:			
SPEC.: 4000K						DIM.:		SERIAL No.:			
MFR.: Tronix Lighting						SUR.: 0.0715		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	2H	16.8	17.9	17.1	18.0	18.2	16.6	17.6	16.8	17.8	17.9
	3H	16.7	17.6	16.9	17.8	18.0	16.4	17.3	16.7	17.5	17.8
	4H	16.6	17.5	16.9	17.7	17.9	16.3	17.2	16.6	17.4	17.7
	6H	16.5	17.3	16.8	17.6	17.8	16.2	17.1	16.5	17.3	17.6
	8H	16.5	17.3	16.8	17.5	17.8	16.2	17.0	16.5	17.3	17.5
	12H	16.4	17.2	16.8	17.5	17.8	16.2	16.9	16.5	17.2	17.5
4H	2H	16.6	17.5	16.9	17.8	18.0	16.4	17.3	16.7	17.5	17.7
	3H	16.5	17.2	16.8	17.5	17.8	16.2	17.0	16.5	17.3	17.5
	4H	16.4	17.1	16.7	17.4	17.7	16.1	16.8	16.5	17.1	17.4
	6H	16.3	16.9	16.7	17.3	17.6	16.1	16.7	16.4	17.0	17.3
	8H	16.3	16.8	16.7	17.2	17.6	16.0	16.6	16.4	16.9	17.3
	12H	16.3	16.8	16.7	17.1	17.5	16.0	16.5	16.4	16.9	17.3
8H	4H	16.3	16.8	16.7	17.2	17.5	16.0	16.6	16.4	16.9	17.3
	6H	16.2	16.7	16.6	17.0	17.5	15.9	16.4	16.4	16.8	17.2
	8H	16.2	16.6	16.6	17.0	17.4	15.9	16.3	16.3	16.7	17.2
	12H	16.1	16.5	16.6	16.9	17.4	15.9	16.2	16.3	16.7	17.1
12H	4H	16.2	16.7	16.6	17.1	17.5	16.0	16.5	16.4	16.8	17.2
	6H	16.1	16.5	16.6	17.0	17.4	15.9	16.3	16.3	16.7	17.1
	8H	16.1	16.5	16.6	16.9	17.4	15.9	16.2	16.3	16.6	17.1
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 2.2 / - 5.2				+ 2.1 / - 5.7					
1.5H		+ 2.6 / - 3.4				+ 2.2 / - 3.5					
2.0H		+ 4.4 / - 8.8				+ 4.3 / - 9.0					

CIE Pub.117, 1084 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 0.3)
Area: 0.01606 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

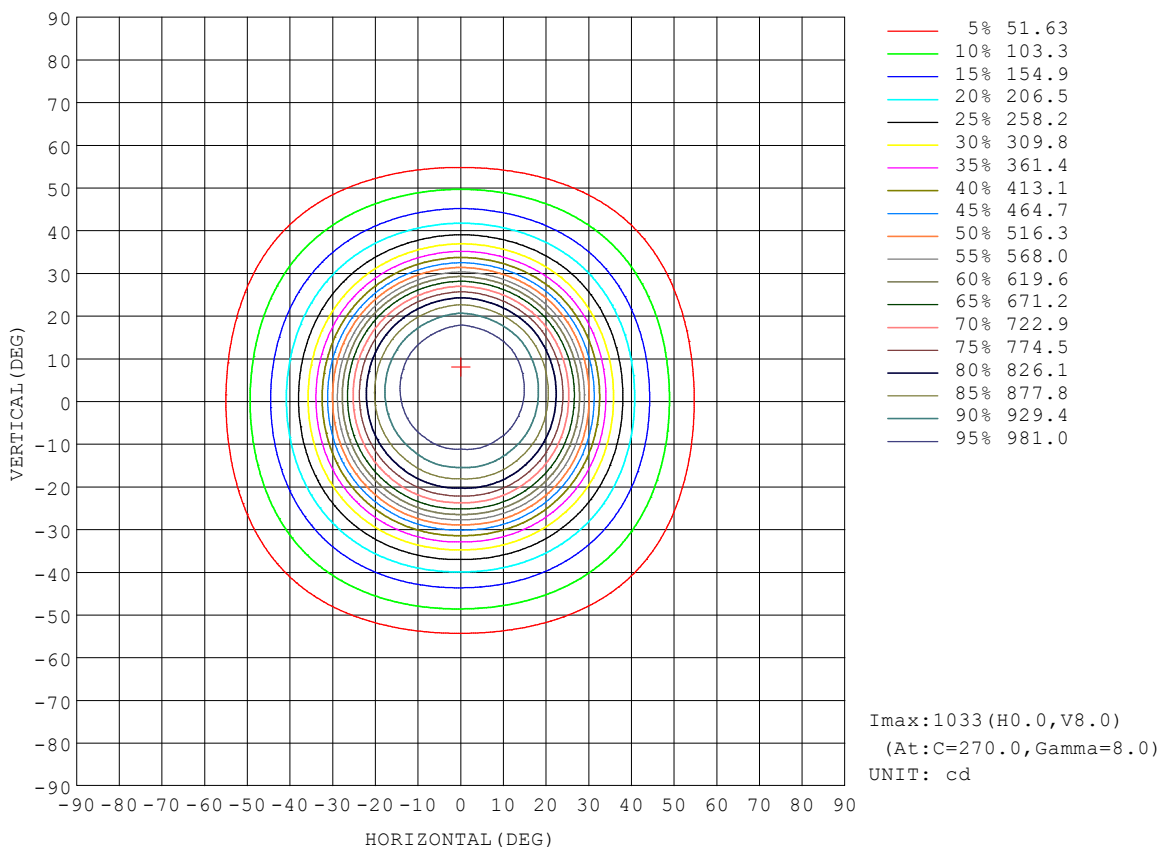
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	81	74	69	81	74	69	80	73	69	65
0.80	90	83	78	89	83	78	88	82	78	74
1.00	96	89	85	95	89	85	93	89	84	80
1.25	100	94	90	99	94	90	97	93	89	85
1.50	103	98	94	102	97	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	105	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	111	109	112	110	108	108	106	105	97
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: 25.3 °C
Operators: DAMIN
Test Date: 2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 9.640m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

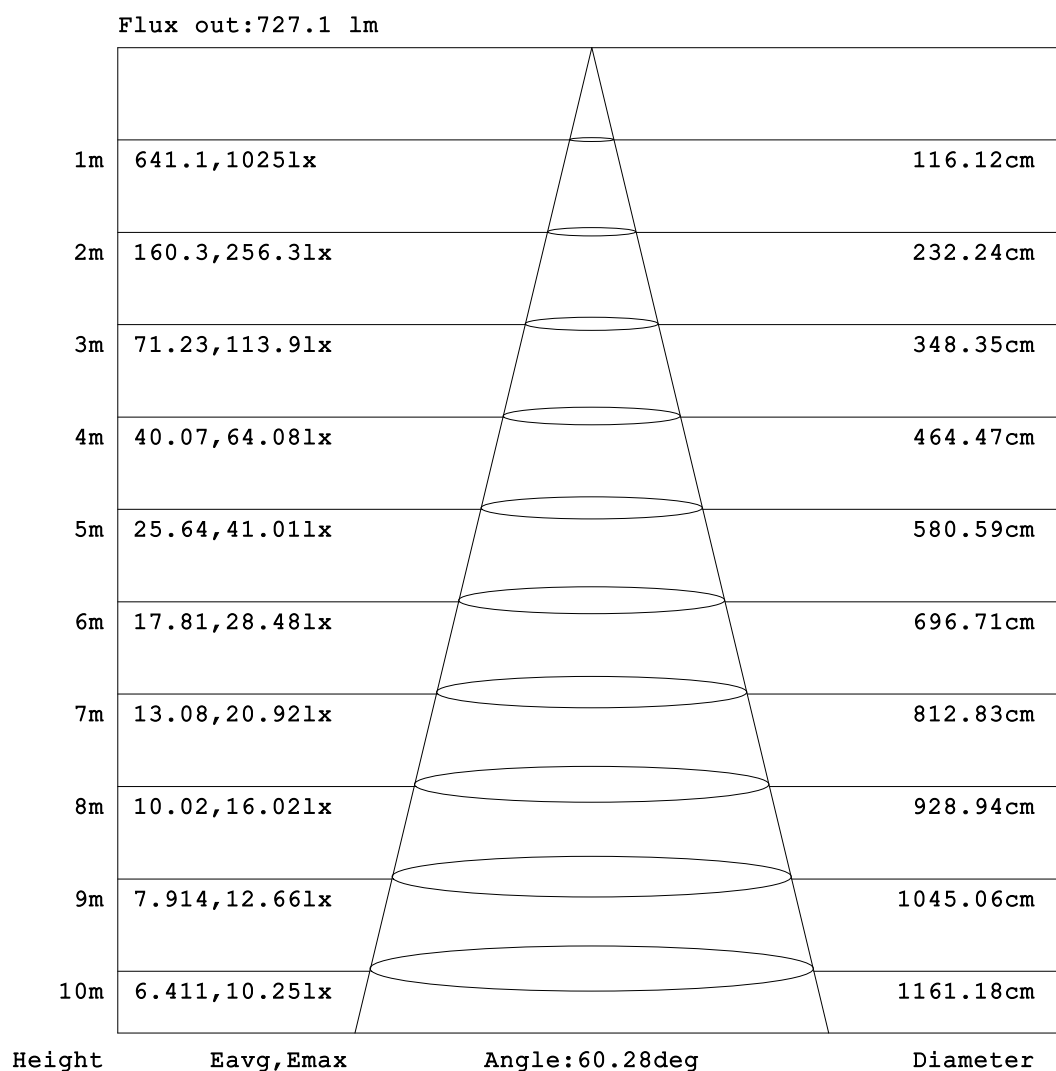


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

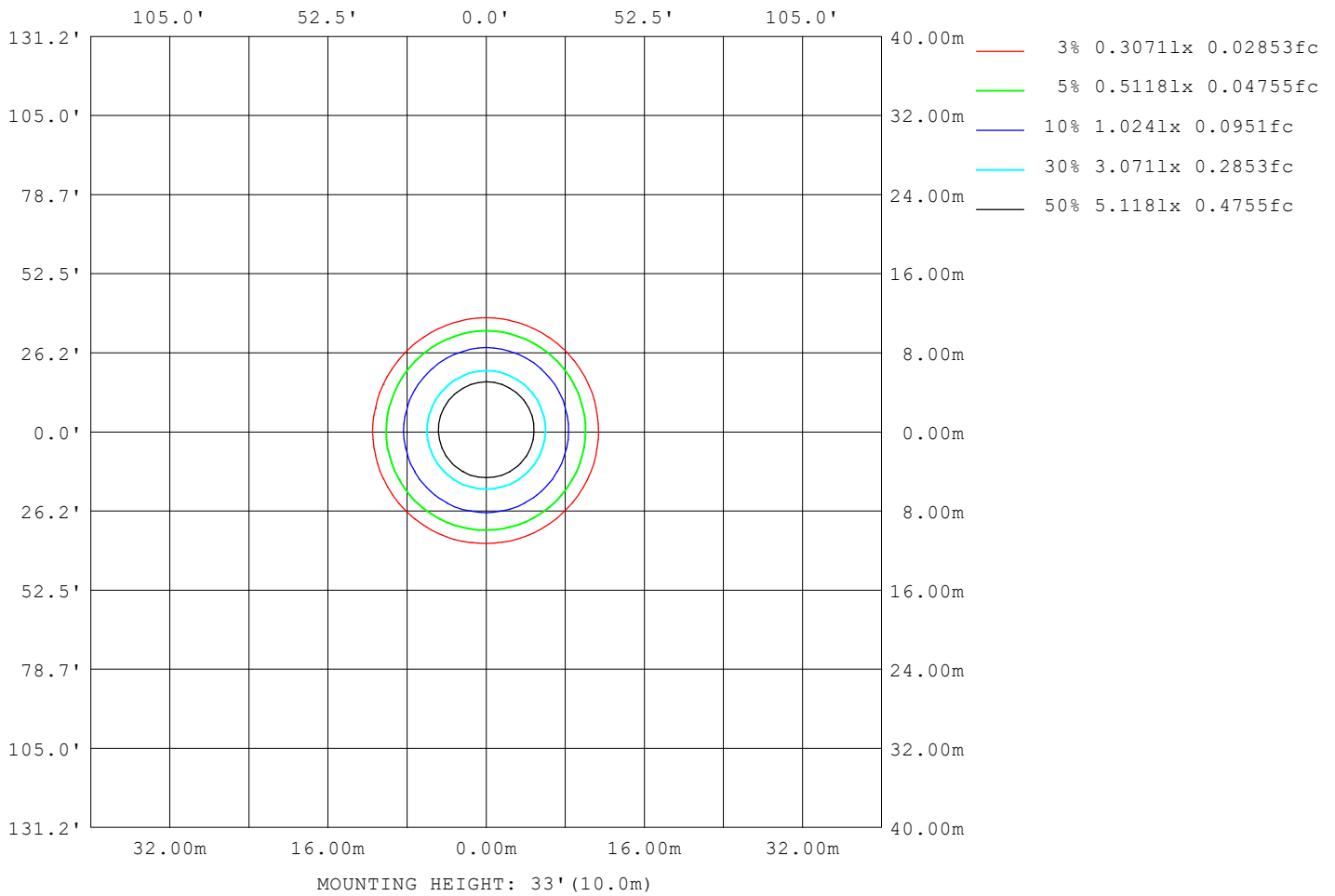


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

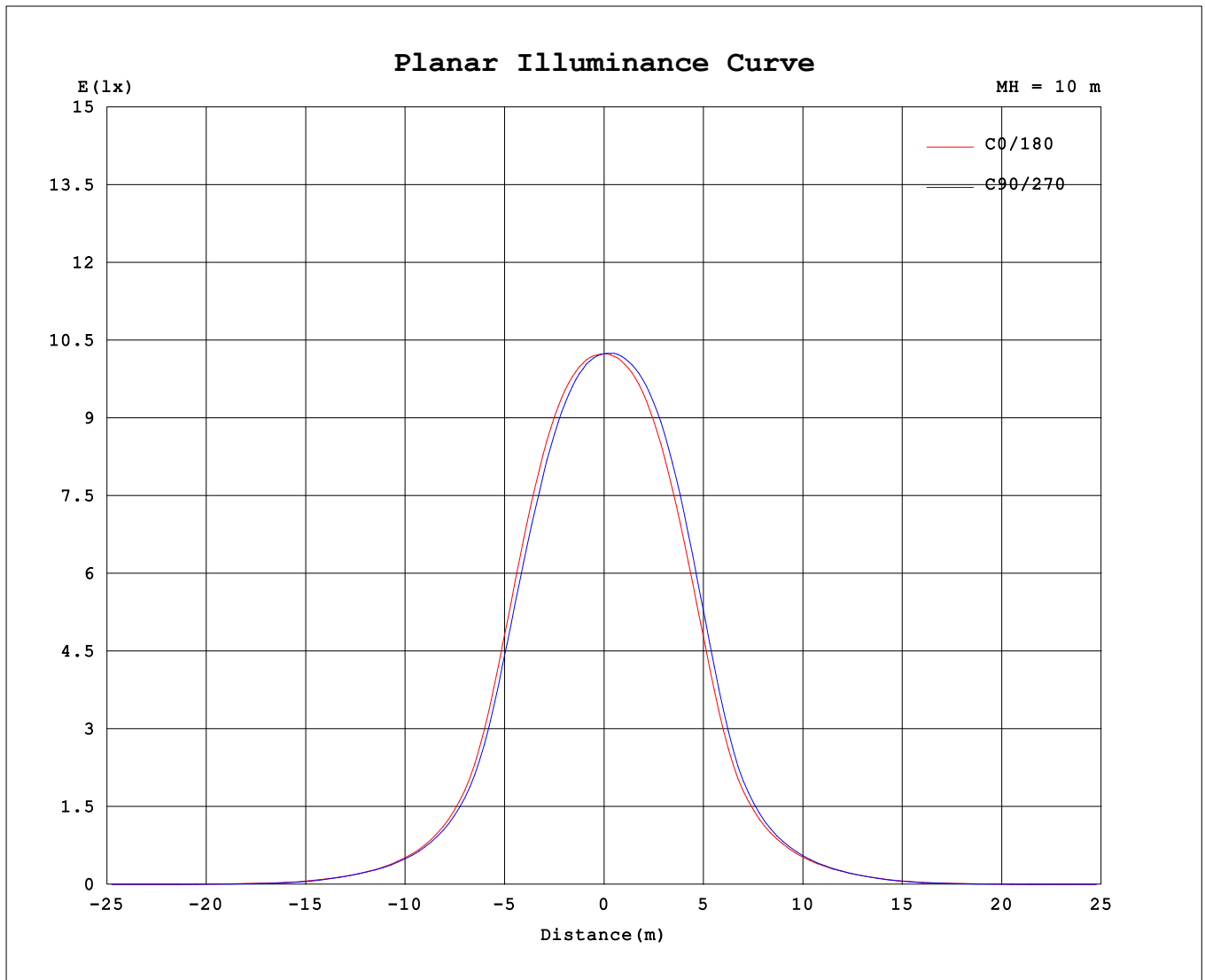
AvgL	cd/m2
L_0~180 (65) av	838
L_0~180 (75) av	560
L_0~180 (85) av	1015
L_90~270 (65) av	686
L_90~270 (75) av	534
L_90~270 (85) av	939
L_45 (65) av	815
L_45 (75) av	542
L_45 (85) av	961

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators: DAMIN
 Test Date: 2023-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 9.640m [K=1.0000]
 Remarks:

Test: U:230.36V I:0.0458A P:7.8203W PF:0.7418 Freq:49.99Hz UTHDi: 0.00% ITHDi: 0.00% KDisp: 0 Lamp Flux: 1084.27x1 lm		
NAME: 136-133_4000K_8W	TYPE: 8W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

UNIT: cd

[illegible]

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

```