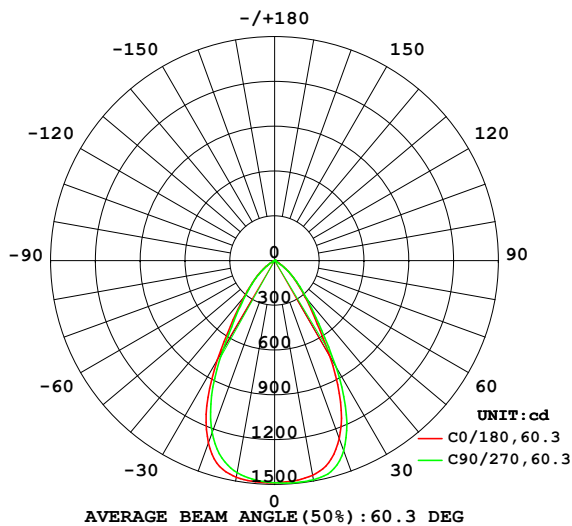


LUMINAIRE PHOTOMETRIC TEST REPORT

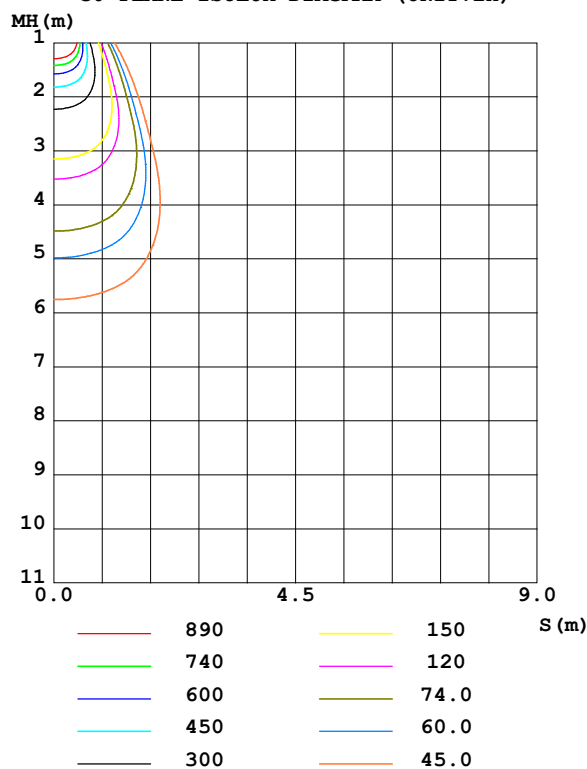
Test:U:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.24 lm/W			
MODEL	136-133_3000K_13W	I _{max} (cd)	1494	S/MH(C0/180)	0.90
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	0.91
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1569.3	η UP,DN(C0-180)	0.0,48.7
NOMINAL FLUX(lm)	1569.29	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.3
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	1473	1456	1443	1446	1460	1477	1491	1488	0- 10	141.1	141.1	8.99,8.99
20	1298	1254	1225	1232	1267	1314	1354	1345	10- 20	394.6	535.8	34.1,34.1
30	767.9	728.4	698.2	707.3	738.9	775.1	823.4	810.7	20- 30	478.1	1014	64.6,64.6
40	320.7	308.8	303.1	303.4	318.9	322.7	340.4	331.9	30- 40	308.6	1322	84.3,84.3
50	133.0	132.3	130.7	132.9	137.8	135.0	141.2	136.2	40- 50	166.2	1489	94.9,94.9
60	25.82	25.74	21.72	25.44	25.42	25.13	22.97	25.85	50- 60	65.54	1554	99,99
70	4.172	4.141	4.036	4.081	4.238	4.237	4.179	4.122	60- 70	9.799	1564	99.7,99.7
80	2.684	2.582	2.502	2.499	2.661	2.671	2.597	2.605	70- 80	3.496	1568	99.9,99.9
90	0.0445	0.0356	0.0326	0.0326	0.0415	0.0386	0.0356	0.0415	80- 90	1.763	1569	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): 1419.2 lm

%lum = 90.4%

%lamp = 90.4%

Conical surface Flux(120deg): 1554.2 lm

%lum = 99.0%

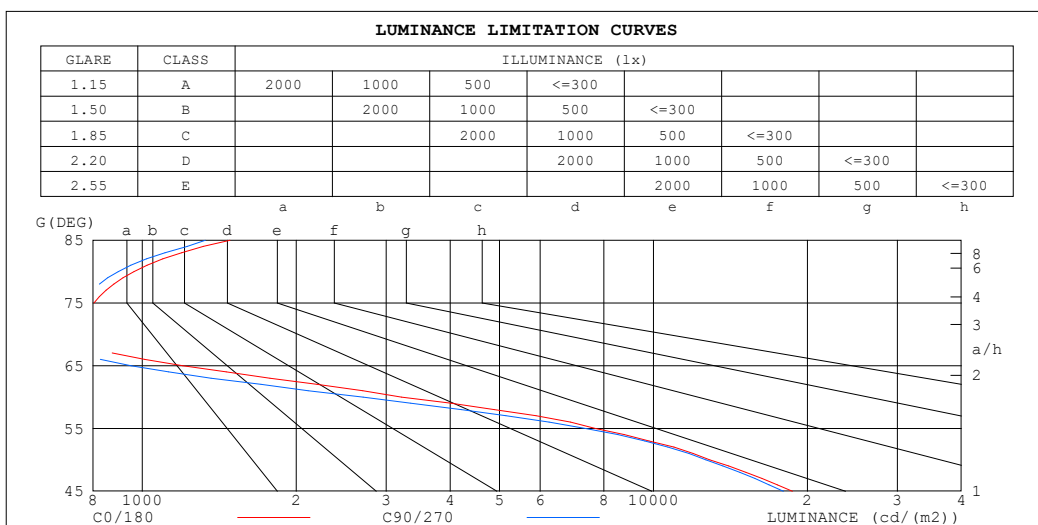
%lamp = 99.0%

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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1484	1329
80	963	897
75	804	764
70	760	734
65	1200	950
60	3216	2703
55	7702	7360
50	12890	12660
45	18690	17965

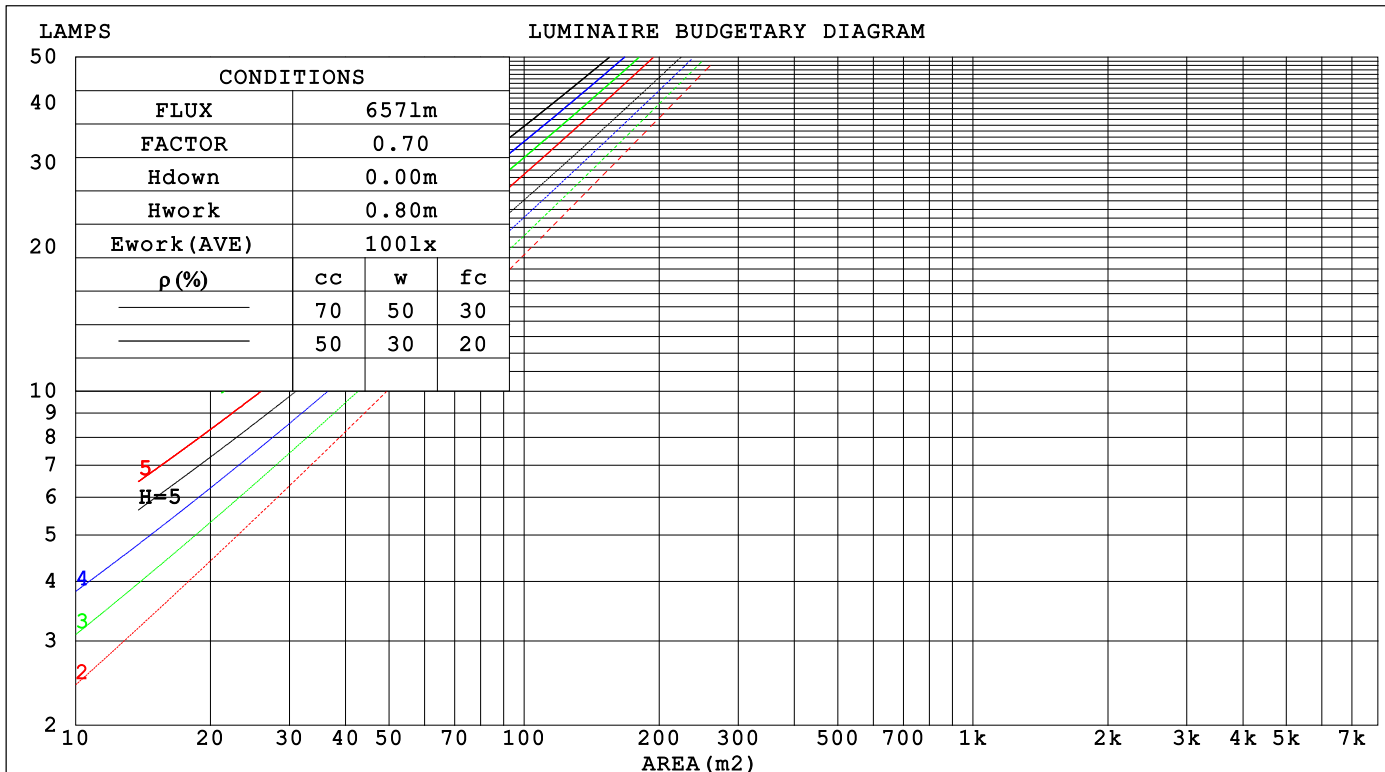
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 2023-08-23

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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	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															



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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	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	.104	.033	.171	.098	.031	.159	.092	.029	.148	.086	.028		
2.0	.183	.100	.031	.177	.098	.030	.167	.093	.029	.157	.088	.028	.148	.084	.026		
3.0	.175	.093	.028	.170	.091	.027	.161	.087	.027	.152	.084	.026	.145	.080	.025		
4.0	.167	.087	.025	.163	.085	.025	.155	.082	.024	.147	.079	.024	.140	.076	.023		
5.0	.159	.081	.023	.155	.080	.023	.148	.077	.023	.142	.075	.022	.136	.072	.022		
6.0	.151	.076	.022	.148	.075	.022	.142	.073	.021	.136	.071	.021	.131	.069	.020		
7.0	.144	.071	.020	.142	.071	.020	.136	.069	.020	.131	.067	.020	.126	.065	.019		
8.0	.138	.067	.019	.135	.067	.019	.130	.065	.019	.126	.064	.018	.121	.062	.018		
9.0	.132	.064	.018	.129	.063	.018	.125	.062	.018	.121	.061	.017	.117	.059	.017		
10.0	.126	.060	.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	.036	.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	.025	.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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm										
NAME: 136-133_3000K_13W					TYPE: 13W			WEIGHT:		
SPEC.: 3000K					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	18.2	19.2	18.4	19.4	19.6	18.0	19.0	18.2	19.2	19.3
3H	18.0	19.0	18.3	19.2	19.4	17.8	18.7	18.1	18.9	19.2
4H	18.0	18.9	18.2	19.1	19.3	17.7	18.6	18.0	18.8	19.1
6H	17.9	18.7	18.2	19.0	19.2	17.6	18.5	17.9	18.7	19.0
8H	17.8	18.6	18.2	18.9	19.2	17.6	18.4	17.9	18.7	18.9
12H	17.8	18.6	18.1	18.8	19.1	17.6	18.3	17.9	18.6	18.9
4H 2H	18.0	18.9	18.3	19.1	19.4	17.8	18.7	18.1	18.9	19.1
3H	17.8	18.6	18.2	18.9	19.2	17.6	18.4	17.9	18.7	18.9
4H	17.8	18.5	18.1	18.8	19.1	17.5	18.2	17.9	18.5	18.8
6H	17.7	18.3	18.1	18.6	19.0	17.5	18.1	17.8	18.4	18.8
8H	17.7	18.2	18.1	18.6	18.9	17.4	18.0	17.8	18.3	18.7
12H	17.6	18.1	18.0	18.5	18.9	17.4	17.9	17.8	18.3	18.7
8H 4H	17.6	18.2	18.0	18.5	18.9	17.4	18.0	17.8	18.3	18.7
6H	17.6	18.0	18.0	18.4	18.8	17.3	17.8	17.8	18.2	18.6
8H	17.5	17.9	18.0	18.4	18.8	17.3	17.7	17.7	18.1	18.6
12H	17.5	17.9	18.0	18.3	18.8	17.3	17.6	17.8	18.1	18.5
12H 4H	17.6	18.1	18.0	18.5	18.9	17.4	17.9	17.8	18.2	18.6
6H	17.5	17.9	18.0	18.3	18.8	17.3	17.7	17.7	18.1	18.5
8H	17.5	17.8	18.0	18.3	18.7	17.3	17.6	17.7	18.0	18.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.2 / - 5.1					+ 2.1 / - 5.5				
1.5H	+ 2.6 / - 3.4					+ 2.3 / - 3.4				
2.0H	+ 4.3 / - 8.8					+ 4.3 / - 9.0				

CIE Pub.117, 1569 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.6$)
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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

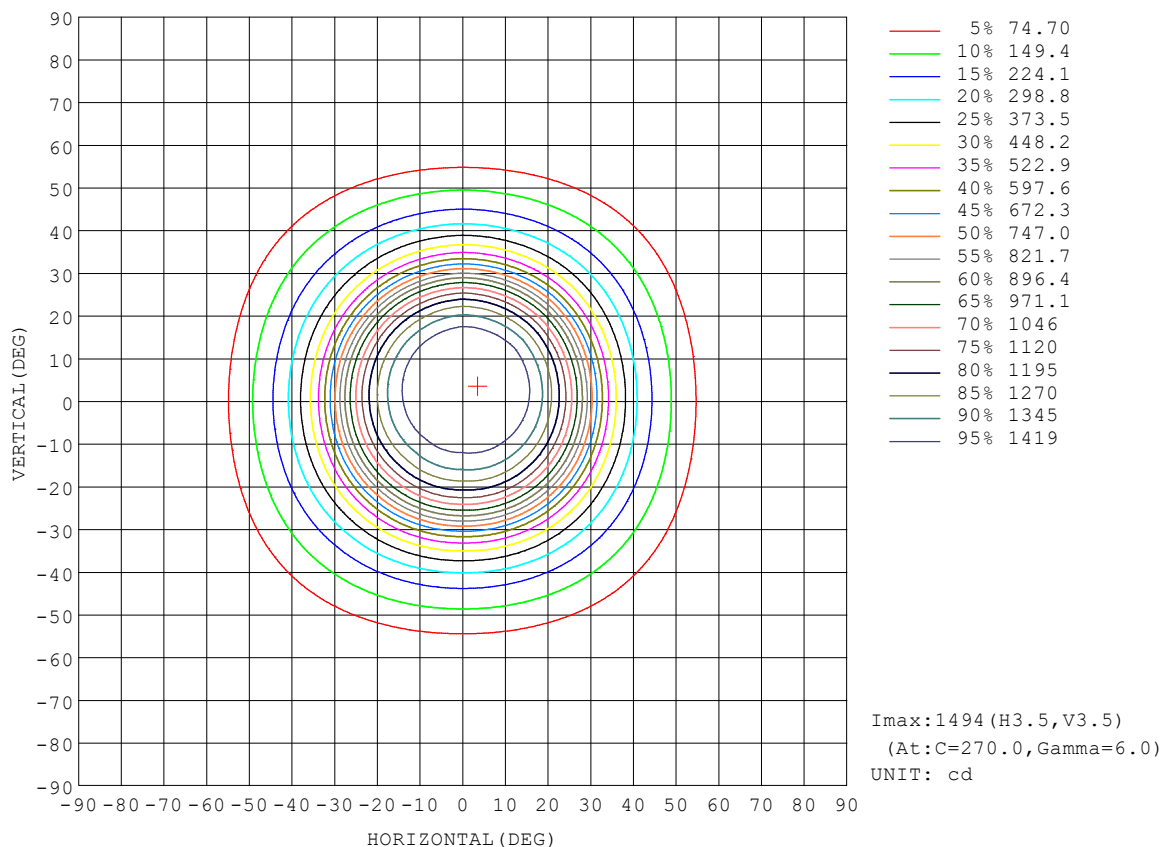
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	81	74	70	81	74	69	80	73	69	65
0.80	90	83	79	89	83	78	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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

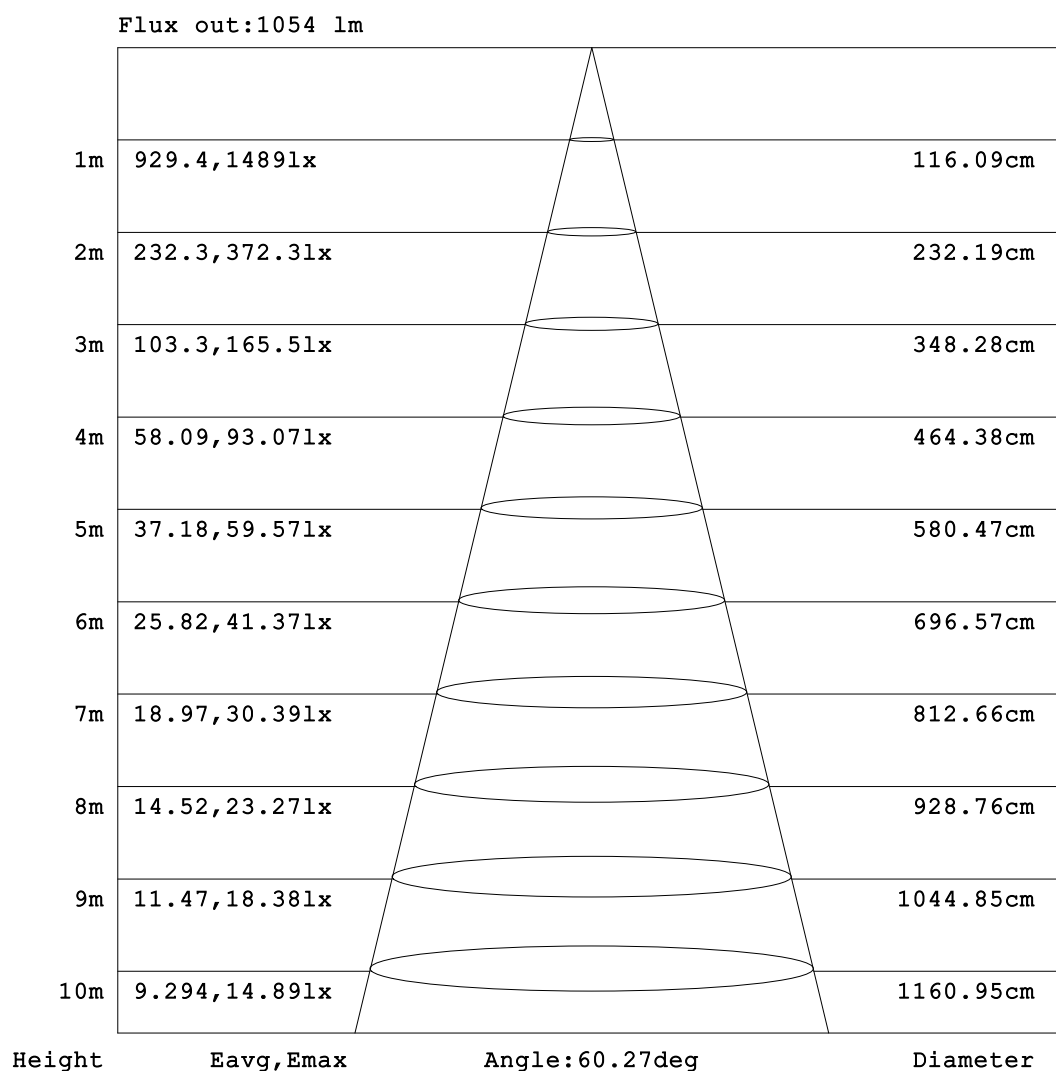


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-08-23

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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:



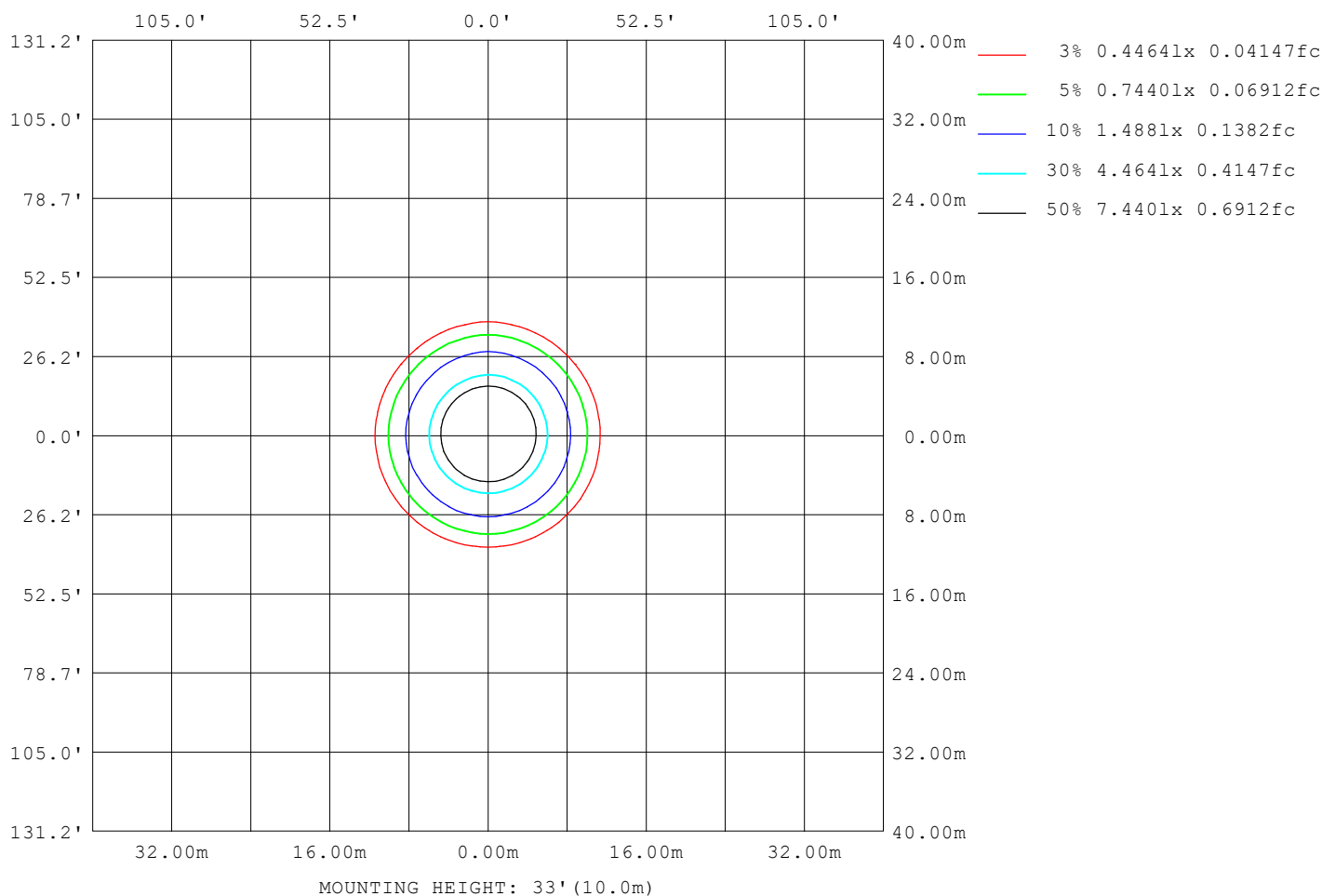
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3°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:

ISOLUX DIAGRAM

Test:U:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

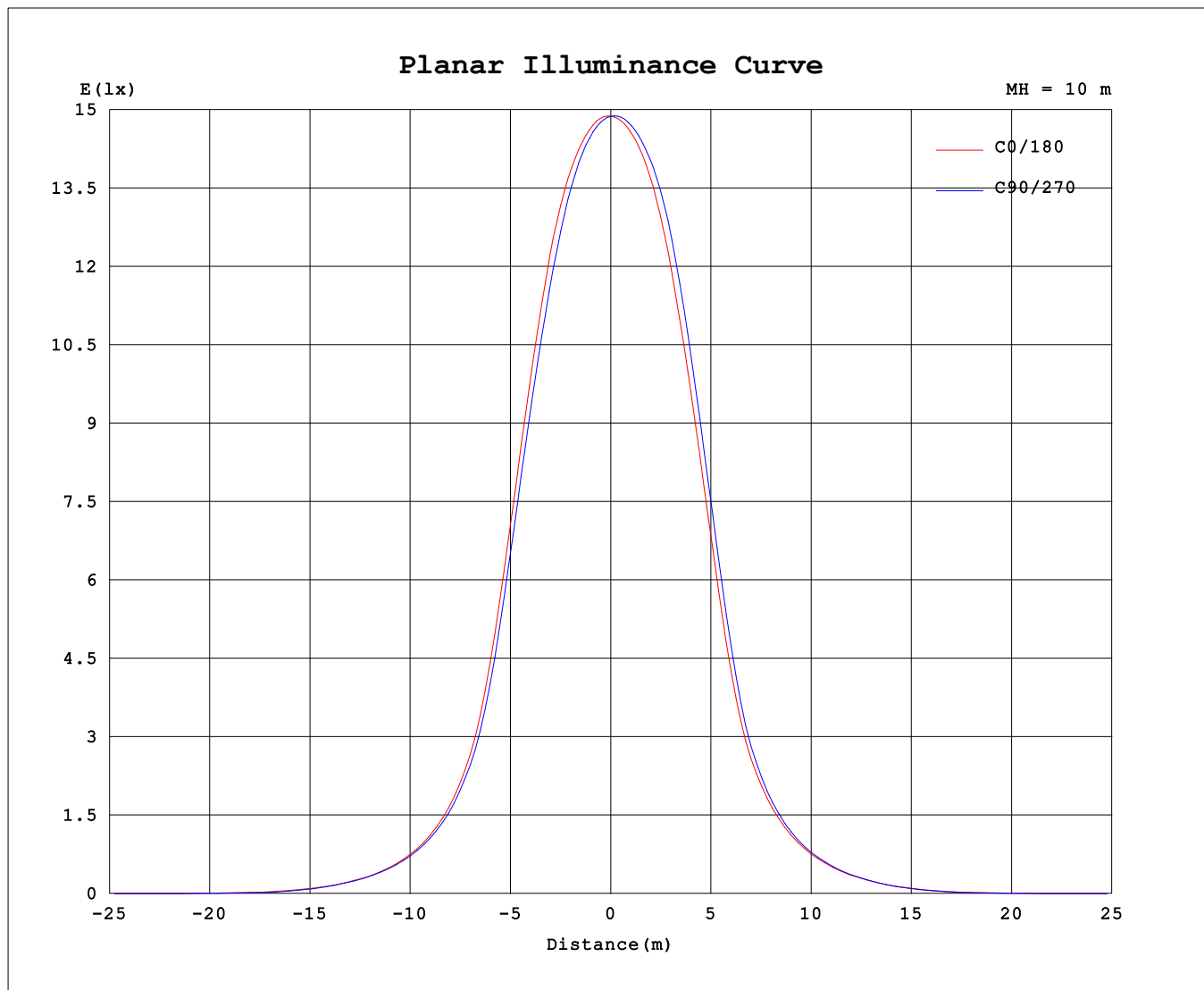
AvgL	cd/m2
L_0~180 (65) av	1203
L_0~180 (75) av	806
L_0~180 (85) av	1471
L_90~270 (65) av	994
L_90~270 (75) av	777
L_90~270 (85) av	1384
L_45 (65) av	1175
L_45 (75) av	786
L_45 (85) av	1403

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:230.33V I:0.0601A P:11.958W PF:0.8642 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1569.29x1 lm		
NAME: 136-133_3000K_13W	TYPE: 13W	WEIGHT:
SPEC.: 3000K	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:

```