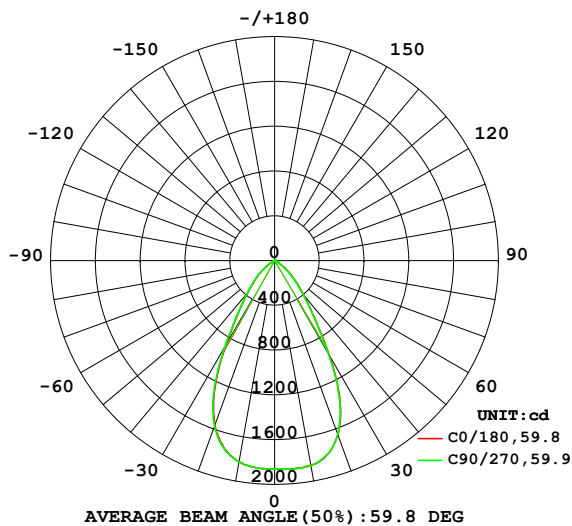


LUMINAIRE PHOTOMETRIC TEST REPORT

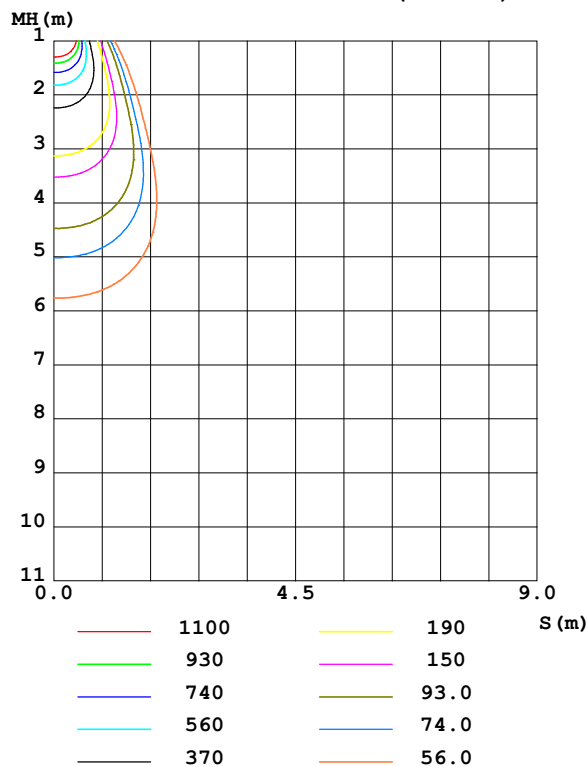
Test:U:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 137.97 lm/W			
MODEL	136-133_5700K_15W	I _{max} (cd)	1873	S/MH(C0/180)	0.87
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.90
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1954.0	η UP,DN(C0-180)	0.0,49.0
NOMINAL FLUX(lm)	1953.95	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.0
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 °C
Operators: DAMIN
Test Date: 2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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	1825	1820	1828	1841	1855	1861	1859	1842	0- 10	177.2	177.2	9.07,9.07
20	1563	1552	1572	1614	1654	1667	1650	1600	10- 20	493.8	671.0	34.3,34.3
30	870.9	867.9	896.4	945.3	981.0	981.6	967.2	914.1	20- 30	594.7	1266	64.8,64.8
40	377.1	379.2	383.8	401.5	407.9	407.8	397.8	387.8	30- 40	378.3	1644	84.1,84.1
50	165.2	170.5	170.4	177.4	177.0	177.8	171.0	169.6	40- 50	208.3	1852	94.8,94.8
60	32.58	31.89	29.30	31.84	33.18	31.14	28.92	31.10	50- 60	81.81	1934	99,99
70	5.595	5.637	5.782	5.975	5.847	5.525	5.473	5.527	60- 70	12.59	1947	99.6,99.6
80	3.711	3.603	3.593	3.649	3.641	3.430	3.415	3.582	70- 80	4.797	1952	99.9,99.9
90	0.0564	0.0504	0.0445	0.0444	0.0564	0.0534	0.0504	0.0563	80- 90	2.387	1954	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): 1764.4 lm

%lum = 90.3%

%lamp = 90.3%

Conical surface Flux(120deg): 1934.2 lm

%lum = 99.0%

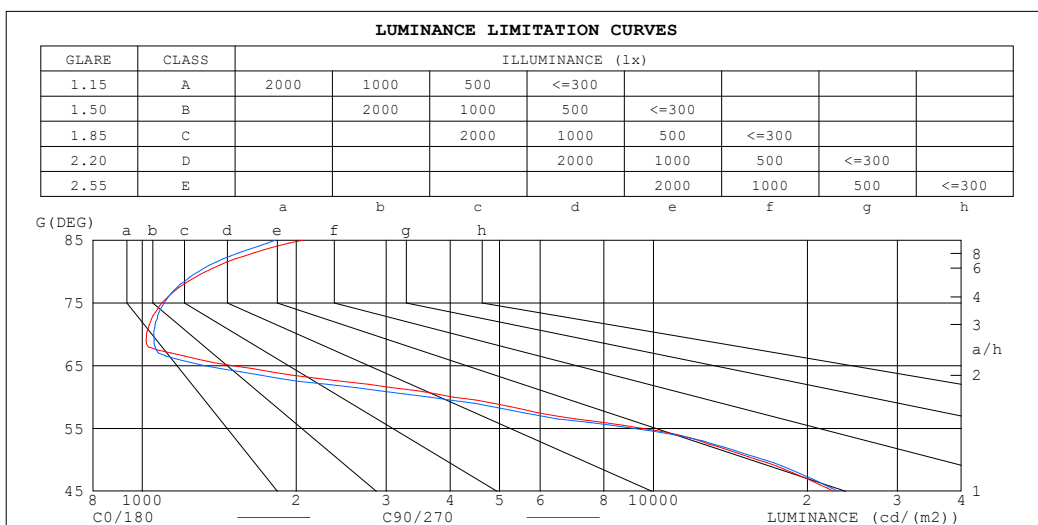
%lamp = 99.0%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2023-07-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2060	1818
80	1330	1288
75	1092	1102
70	1018	1052
65	1504	1325
60	4056	3647
55	9554	9185
50	16000	16498
45	22486	22947

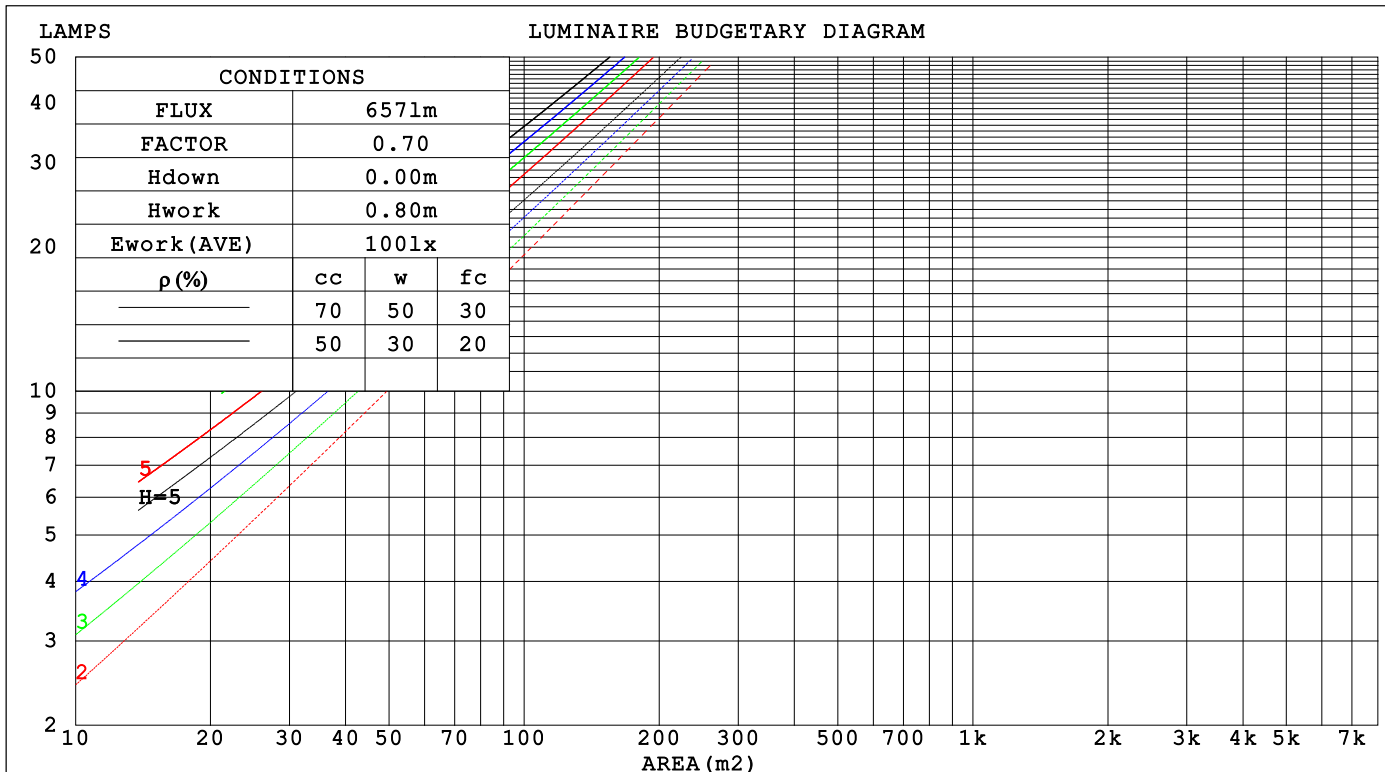
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: DAMIN
Test Date: 2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	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:2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	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	.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	.141	.070	.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	.099	.056	.027	.086	.048	.023	.059	.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:2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm										
NAME: 136-133_5700K_15W						TYPE: 15W			WEIGHT:	
SPEC.: 5700K						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	18.8	19.8	19.0	20.0	20.2	18.8	19.9	19.1	20.0	20.2
3H	18.6	19.6	18.9	19.8	20.0	18.7	19.6	18.9	19.8	20.0
4H	18.6	19.5	18.8	19.7	19.9	18.6	19.5	18.9	19.7	19.9
6H	18.5	19.3	18.8	19.6	19.8	18.5	19.4	18.8	19.6	19.9
8H	18.4	19.3	18.8	19.5	19.8	18.5	19.3	18.8	19.5	19.8
12H	18.4	19.2	18.7	19.5	19.7	18.4	19.2	18.8	19.5	19.8
4H 2H	18.6	19.5	18.9	19.7	20.0	18.7	19.5	18.9	19.8	20.0
3H	18.5	19.2	18.8	19.5	19.8	18.5	19.3	18.8	19.5	19.8
4H	18.4	19.1	18.7	19.4	19.7	18.4	19.1	18.8	19.4	19.7
6H	18.3	18.9	18.7	19.3	19.6	18.3	19.0	18.7	19.3	19.6
8H	18.3	18.8	18.7	19.2	19.6	18.3	18.9	18.7	19.2	19.6
12H	18.3	18.8	18.7	19.1	19.5	18.3	18.8	18.7	19.2	19.6
8H 4H	18.2	18.8	18.6	19.2	19.5	18.3	18.8	18.7	19.2	19.6
6H	18.2	18.6	18.6	19.0	19.5	18.2	18.7	18.6	19.1	19.5
8H	18.2	18.6	18.6	19.0	19.4	18.2	18.6	18.6	19.0	19.5
12H	18.2	18.5	18.6	18.9	19.4	18.2	18.5	18.6	19.0	19.4
12H 4H	18.2	18.7	18.6	19.1	19.5	18.2	18.8	18.6	19.1	19.5
6H	18.1	18.5	18.6	19.0	19.4	18.2	18.6	18.6	19.0	19.4
8H	18.1	18.5	18.6	18.9	19.4	18.2	18.5	18.6	18.9	19.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.1 / - 5.3					+ 2.1 / - 5.7				
1.5H	+ 2.2 / - 3.1					+ 2.3 / - 3.2				
2.0H	+ 4.2 / - 8.4					+ 4.3 / - 8.7				

CIE Pub.117, 1954 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.3)
Area: 0.01606 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

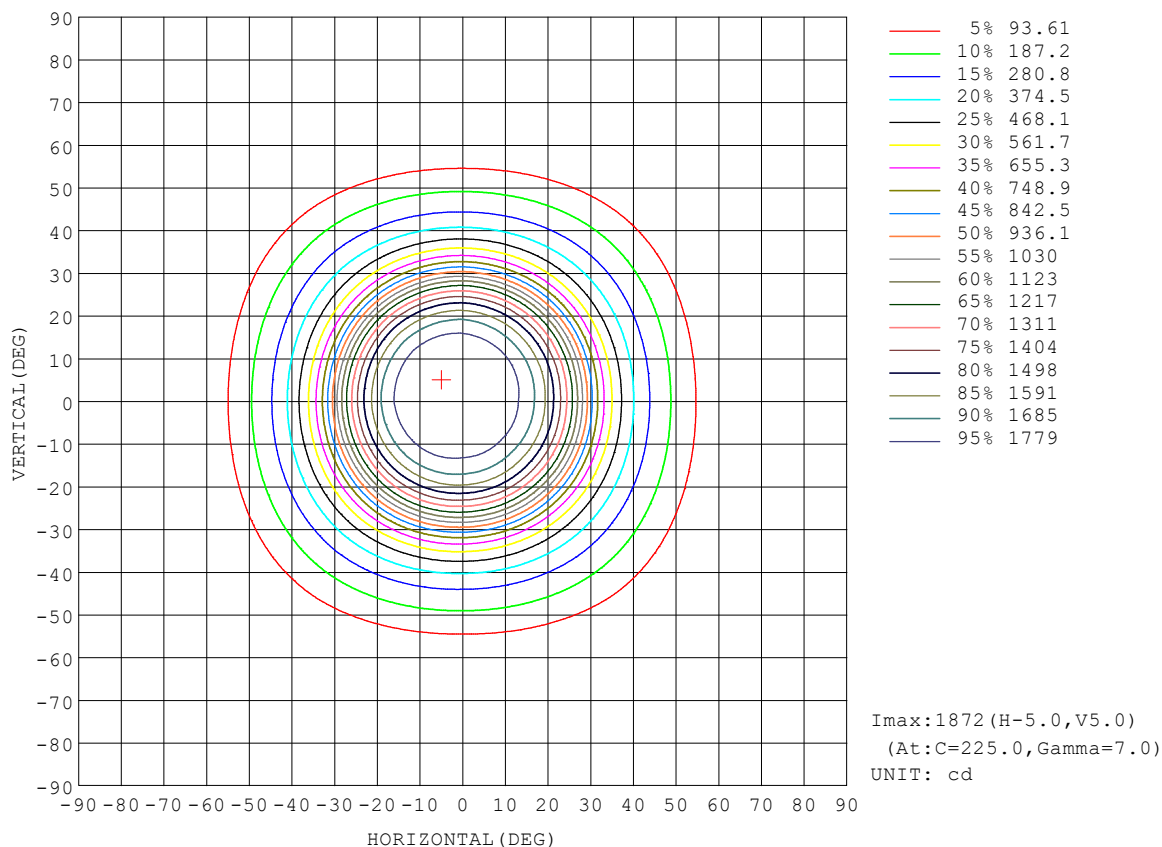
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	81	74	69	81	74	69	80	73	69	65
0.80	90	83	78	89	82	78	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: 2023-07-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

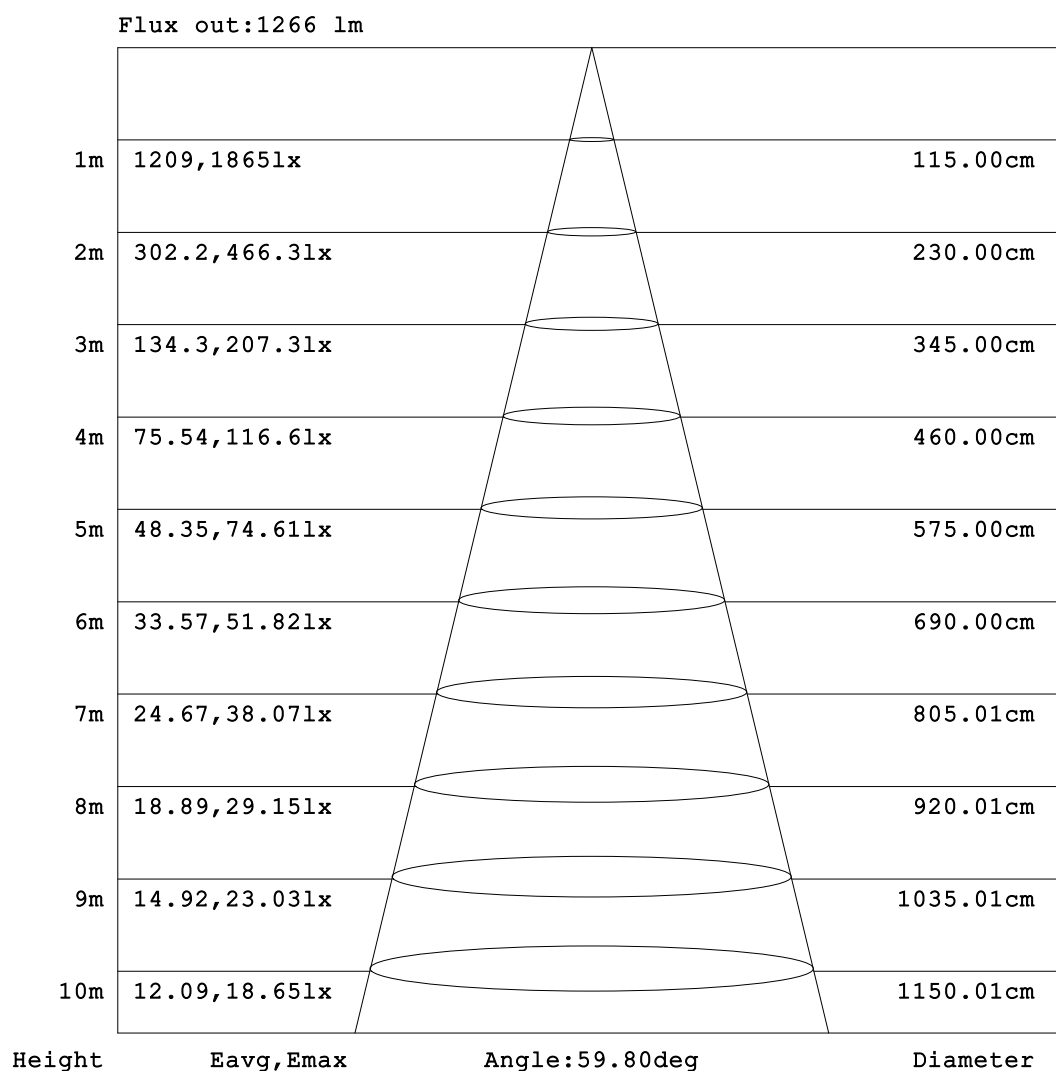


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:



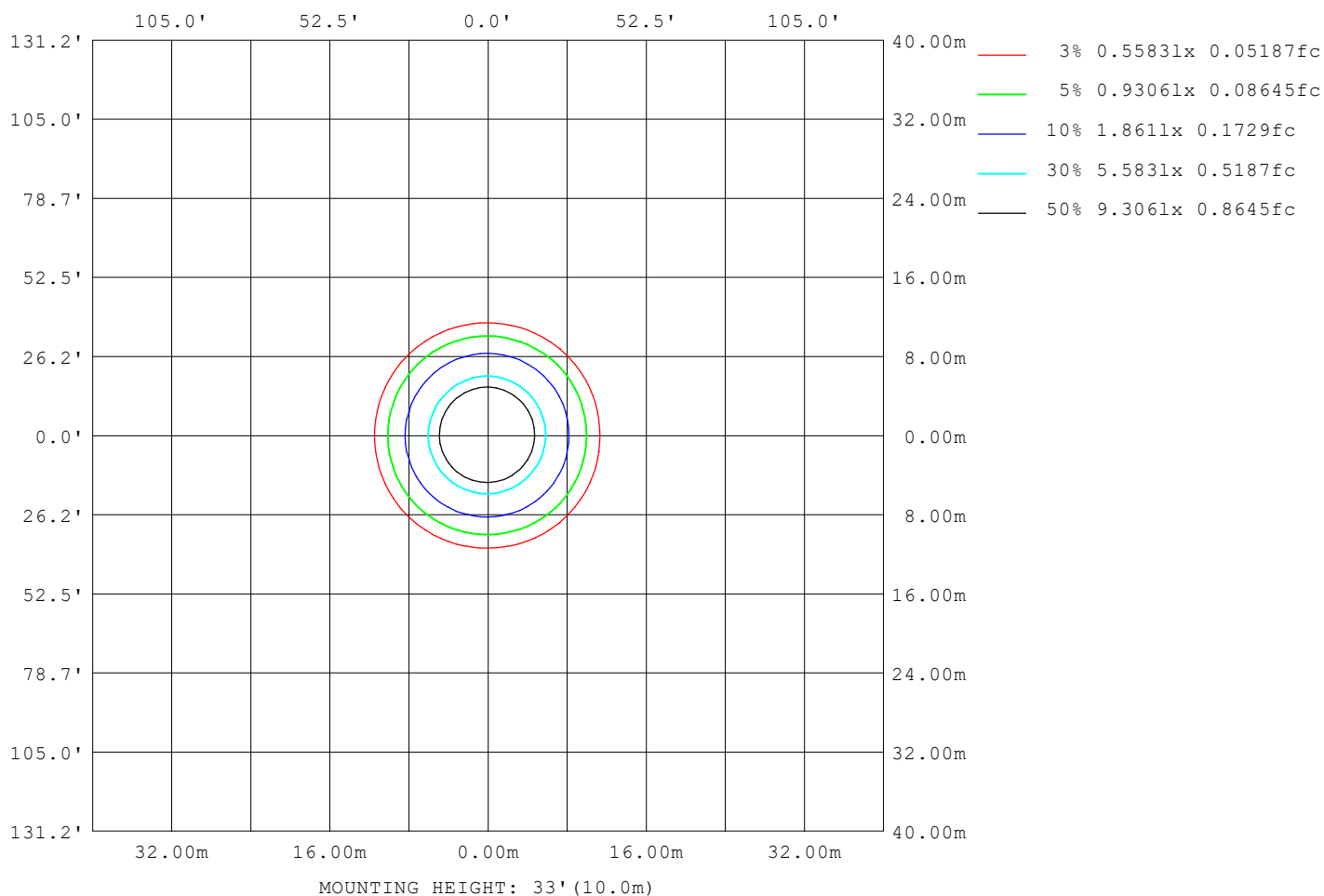
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	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:2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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:230.37V I:0.0676A P:14.163W PF:0.9089 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1953.95x1 lm		
NAME: 136-133_5700K_15W	TYPE: 15W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.: Tronix Lighting	SUR.: 0.0715	Shielding Angle:

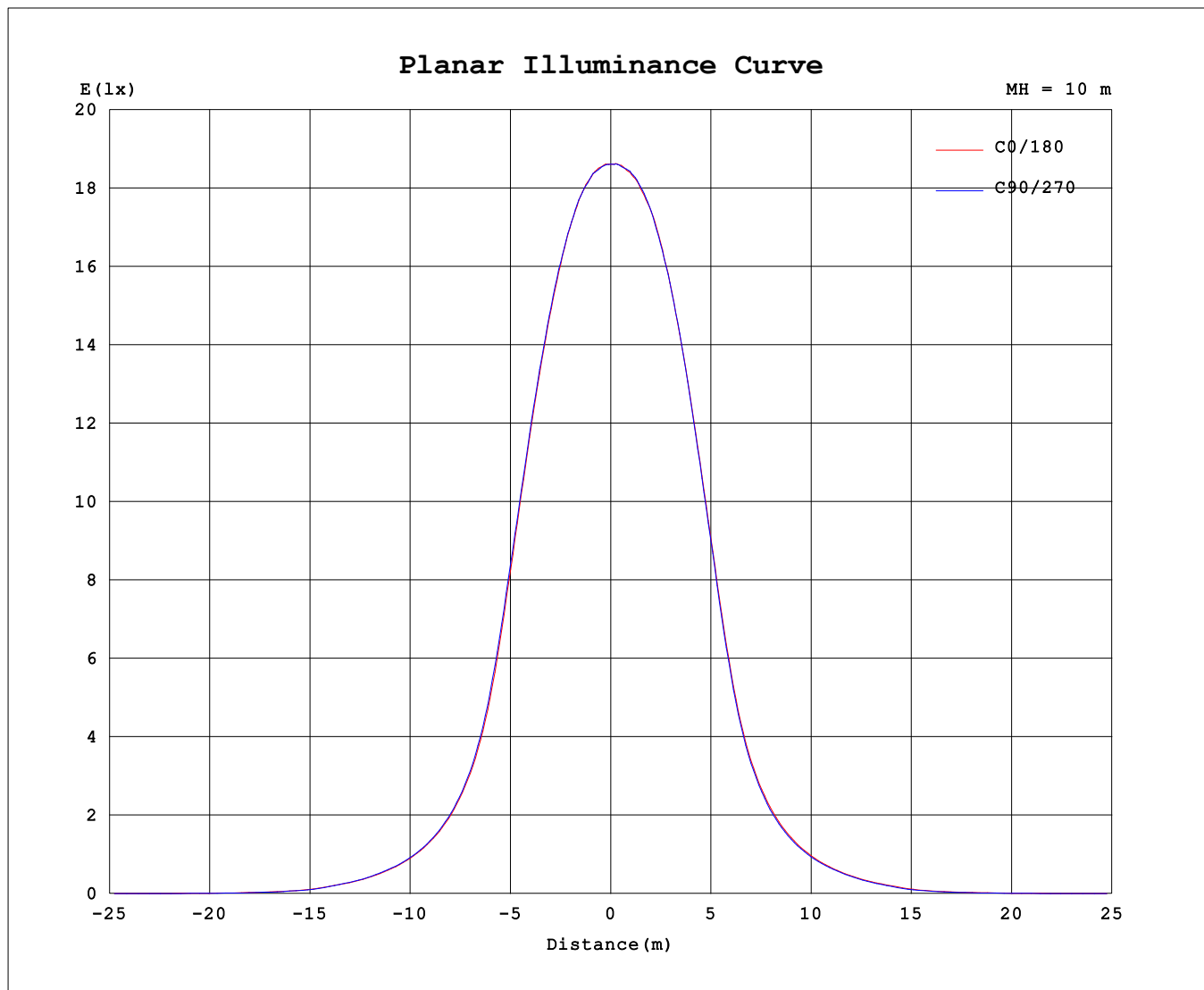
AvgL	cd/m2
L_0~180 (65) av	1553
L_0~180 (75) av	1100
L_0~180 (85) av	1998
L_90~270 (65) av	1311
L_90~270 (75) av	1070
L_90~270 (85) av	1840
L_45 (65) av	1519
L_45 (75) av	1081
L_45 (85) av	1891

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2023-07-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
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: 2023-07-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 9.640m [K=1.0000]
 Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:9.640m [K=1.0000]
Remarks:

```