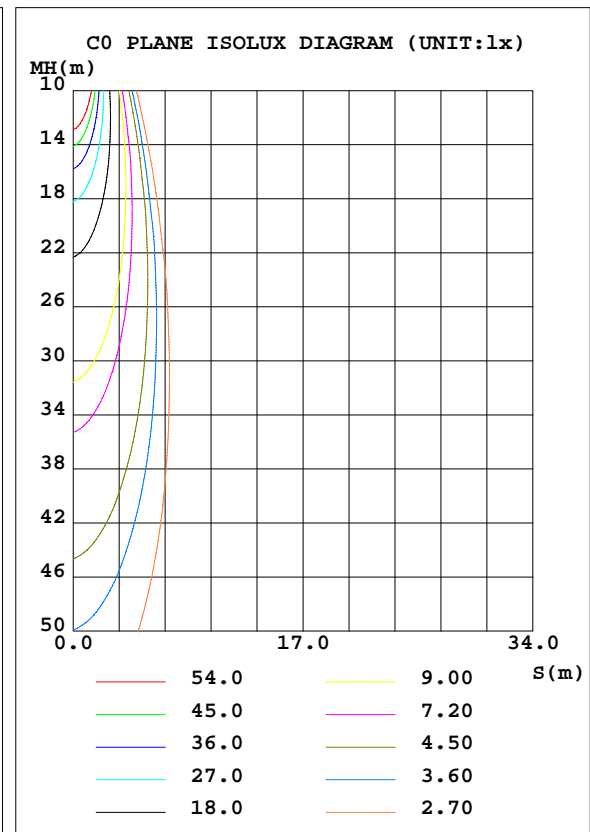
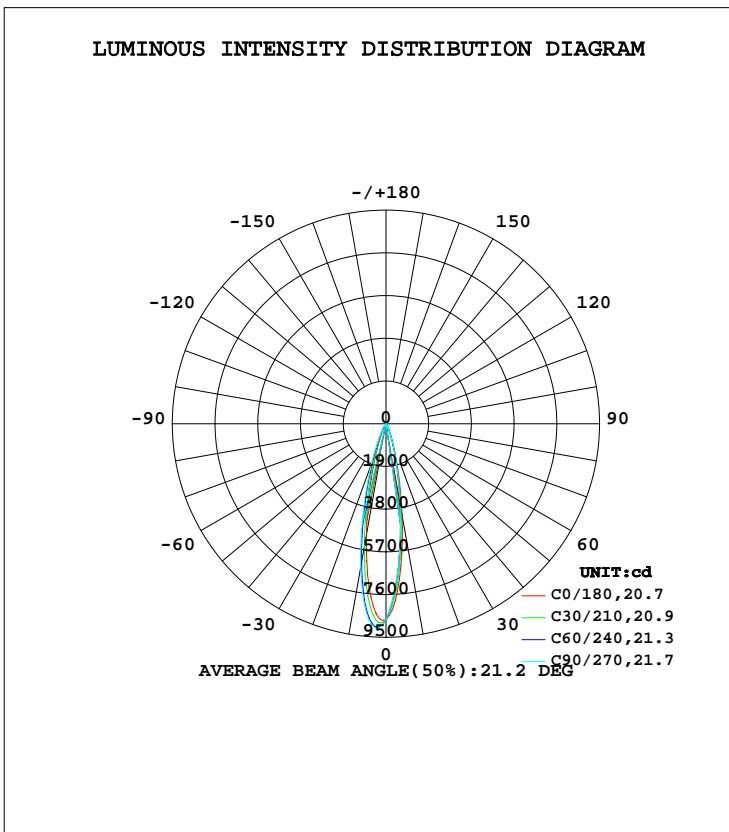


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:3950K-Ra92	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 97.77 lm/W
MODEL	G22Y-16T-4000K-18W	I _{max} (cd)	9094	S/MH(C0/180)	0.39	
NOMINAL POWER(W)	18	LOR(%)	100.0	S/MH(C90/270)	0.46	
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	1682.0	η UP, DN(C0-180)	0.2,37.8	
NOMINAL FLUX(lm)	1682.02	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.1,61.9	
LAMPS INSIDE	1	η up(%)	0.3	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	48	η down(%)	99.7	CIBSE SHR MAX	1.00	



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	4107	3709	3608	3631	5039	5913	6481	6162	0- 10	625.6	625.6	37.2,37.2
20	836.2	771.7	760.4	696.1	1087	1479	1869	1640	10- 20	707.7	1333	79.3,79.3
30	160.0	149.3	146.0	131.5	178.7	252.7	344.4	302.2	20- 30	240.0	1573	93.5,93.5
40	48.44	46.62	45.15	40.97	48.83	62.63	81.01	73.46	30- 40	67.65	1641	97.6,97.6
50	18.50	16.97	15.49	15.09	18.00	22.26	28.82	26.60	40- 50	26.92	1668	99.2,99.2
60	2.621	0.5714	0	0.8638	3.774	3.860	3.855	3.509	50- 60	8.677	1677	99.7,99.7
70	0	0	0	0	0	0	0	0	60- 70	0.4382	1677	99.7,99.7
80	0	0	0	0	0	0	0	0	70- 80	0	1677	99.7,99.7
90	0	0	0	0	0	0	0	0	80- 90	0	1677	99.7,99.7
100	0	0	0	0	0	0	0	0	90-100	0	1677	99.7,99.7
110	0	0	0	0	0	0	0	0	100-110	0	1677	99.7,99.7
120	0	0	0	0	0	0	0	0	110-120	0	1677	99.7,99.7
130	0	0	0	0	0	0	0	0	120-130	0	1677	99.7,99.7
140	0	0	0	0	0	0	0	0	130-140	0	1677	99.7,99.7
150	0.7670	1.839	2.506	2.421	0	0	0	0	140-150	0.1056	1677	99.7,99.7
160	6.533	7.804	8.752	8.410	5.592	4.985	4.368	4.391	150-160	1.470	1679	99.8,99.8
170	9.956	10.53	11.45	11.10	10.26	10.40	10.48	10.24	160-170	2.432	1681	99.9,99.9
180	10.93	11.25	12.14	11.73	10.86	11.36	12.12	11.69	170-180	1.050	1682	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1657.1 lm

%lum = 98.5%
%lamp = 98.5%

Conical surface Flux(120deg): 1676.5 lm

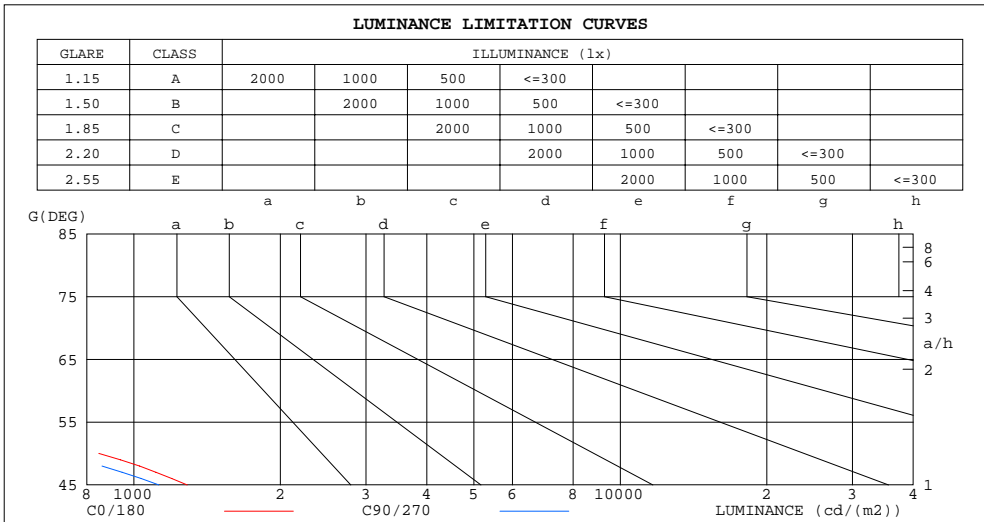
%lum = 99.7%
%lamp = 99.7%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:sunny
Test Date:2023-04-09

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:8.500m [K=1.0000]
Remarks: SDCM2.0

LUMINANCE LIMITATION CURVES

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:3950K-Ra92	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	0	0
70	0	0
65	0	0
60	154	0
55	408	228
50	847	682
45	1287	1126

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0

WEC AND CCEC

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:3950K-Ra92	DIM.:	SERIAL No.:
MFR.:	SUR.:	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	.137	.078	.025	.130	.074	.024	.117	.067	.021	.106	.061	.020	.095	.055	.018	
2.0	.127	.069	.021	.121	.067	.021	.111	.062	.019	.101	.057	.018	.093	.052	.016	
3.0	.118	.063	.019	.114	.061	.018	.105	.057	.017	.097	.053	.016	.090	.050	.015	
4.0	.111	.058	.017	.107	.056	.017	.100	.053	.016	.093	.050	.015	.087	.047	.014	
5.0	.104	.053	.015	.101	.052	.015	.095	.049	.015	.089	.047	.014	.084	.045	.013	
6.0	.099	.050	.014	.096	.048	.014	.091	.046	.014	.086	.044	.013	.081	.043	.013	
7.0	.094	.046	.013	.091	.046	.013	.087	.044	.013	.082	.042	.012	.078	.041	.012	
8.0	.089	.044	.012	.087	.043	.012	.083	.041	.012	.079	.040	.012	.076	.039	.011	
9.0	.085	.041	.012	.083	.041	.011	.080	.039	.011	.076	.038	.011	.073	.037	.011	
10.0	.082	.039	.011	.080	.039	.011	.077	.038	.011	.074	.037	.010	.071	.036	.010	

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	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.171	.160	.150	.146	.137	.129	.100	.094	.090	.057	.055	.052	.018	.018	.017	
2.0	.153	.135	.120	.131	.116	.104	.090	.080	.073	.052	.047	.043	.017	.015	.014	
3.0	.138	.116	.098	.118	.100	.085	.081	.069	.060	.047	.040	.035	.015	.013	.012	
4.0	.125	.100	.081	.107	.087	.071	.074	.060	.050	.043	.035	.029	.014	.012	.010	
5.0	.115	.088	.068	.098	.076	.059	.068	.053	.042	.039	.031	.025	.013	.010	.008	
6.0	.106	.078	.058	.091	.068	.051	.063	.047	.036	.036	.028	.021	.012	.009	.007	
7.0	.098	.070	.050	.084	.060	.043	.058	.042	.031	.034	.025	.018	.011	.008	.006	
8.0	.092	.063	.043	.079	.055	.038	.055	.038	.027	.032	.023	.016	.010	.007	.005	
9.0	.086	.057	.038	.074	.050	.033	.051	.035	.024	.030	.021	.014	.010	.007	.005	
10.0	.081	.053	.034	.070	.046	.029	.048	.032	.021	.028	.019	.012	.009	.006	.004	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0

UGR(Unified Glare Rating) Table

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm										
NAME:					TYPE:			WEIGHT:		
SPEC.:3950K-Ra92					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	0.3	1.0	0.5	1.1	1.3	-0.0	0.6	0.2	0.8	0.9
3H	0.2	0.8	0.4	1.0	1.2	-0.2	0.4	0.0	0.6	0.8
4H	0.1	0.7	0.3	0.9	1.1	-0.3	0.3	-0.0	0.5	0.7
6H	0.0	0.5	0.3	0.8	1.0	-0.4	0.2	-0.1	0.4	0.7
8H	-0.0	0.5	0.3	0.7	1.0	-0.4	0.1	-0.1	0.4	0.6
12H	-0.1	0.4	0.2	0.7	1.0	-0.5	0.1	-0.1	0.3	0.6
4H 2H	0.1	0.7	0.4	0.9	1.1	-0.3	0.3	0.0	0.5	0.7
3H	-0.1	0.4	0.2	0.7	1.0	-0.4	0.1	-0.1	0.3	0.6
4H	-0.2	0.3	0.2	0.6	0.9	-0.5	-0.1	-0.2	0.2	0.5
6H	-0.3	0.1	0.1	0.5	0.8	-0.6	-0.2	-0.3	0.1	0.5
8H	-0.3	0.1	0.1	0.4	0.8	-0.7	-0.3	-0.3	0.0	0.4
12H	-0.4	-0.0	0.0	0.3	0.7	-0.7	-0.4	-0.3	-0.0	0.4
8H 4H	-0.3	0.1	0.1	0.4	0.8	-0.7	-0.3	-0.3	0.0	0.4
6H	-0.4	-0.1	-0.0	0.3	0.7	-0.8	-0.5	-0.4	-0.1	0.3
8H	-0.5	-0.2	-0.1	0.2	0.6	-0.9	-0.6	-0.4	-0.2	0.3
12H	-0.6	-0.3	-0.1	0.1	0.6	-0.9	-0.7	-0.5	-0.2	0.2
12H 4H	-0.4	-0.0	0.0	0.3	0.7	-0.7	-0.4	-0.3	-0.0	0.4
6H	-0.5	-0.2	-0.1	0.2	0.6	-0.9	-0.6	-0.4	-0.2	0.3
8H	-0.6	-0.3	-0.1	0.1	0.6	-0.9	-0.7	-0.5	-0.2	0.2
Variations with the observer position at spacings:										
S = 1.0H	+ 2.9 / -10.0					+ 2.5 / -14.0				
1.5H	+ 3.7 / - 7.8					+ 3.2 / - 6.8				
2.0H	+ 5.8 / -79.9					+ 5.6 / - 1.5				

CIE Pub.117, 1682 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.8)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0

UTILIZATION FACTORS TABLE

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:3950K-Ra92	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

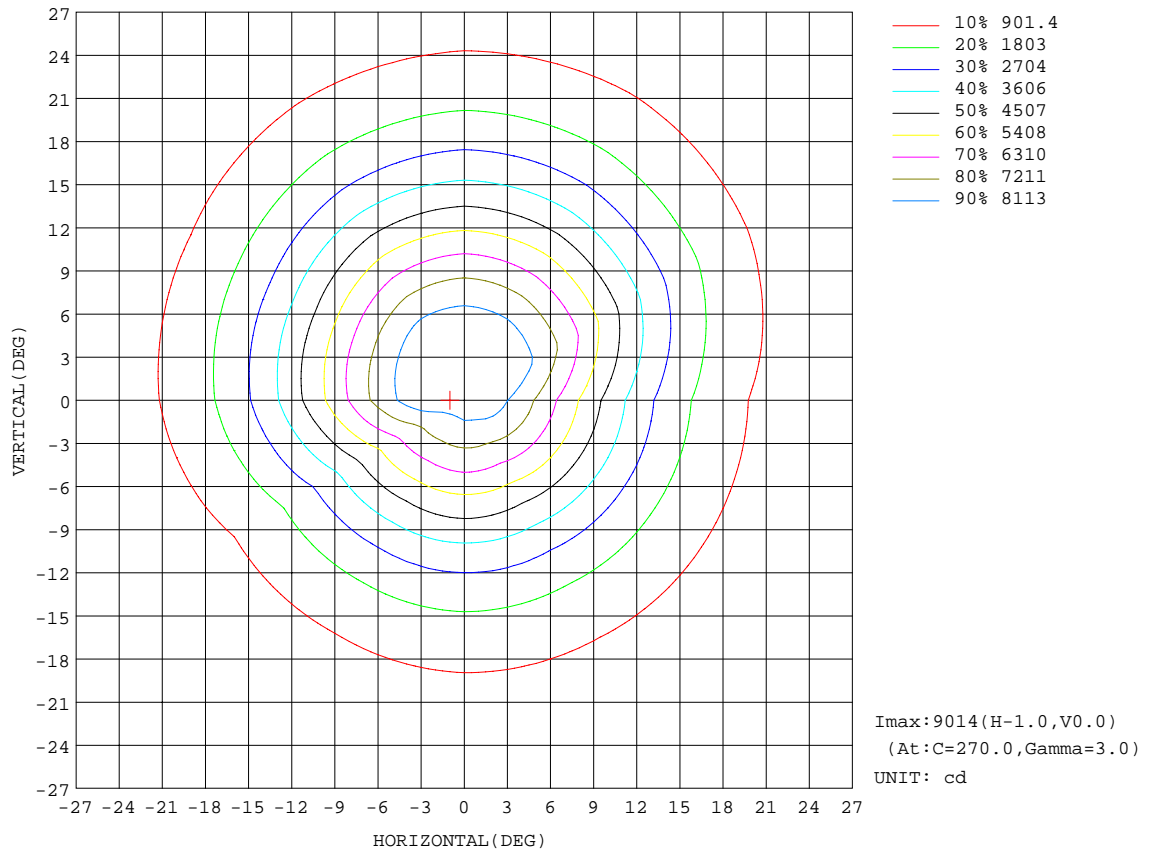
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	90	84	81	90	84	81	89	84	80	77
0.80	97	92	88	96	91	88	95	91	88	84
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	108	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0

ISOCANDELA DIAGRAM

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:3950K-Ra92	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

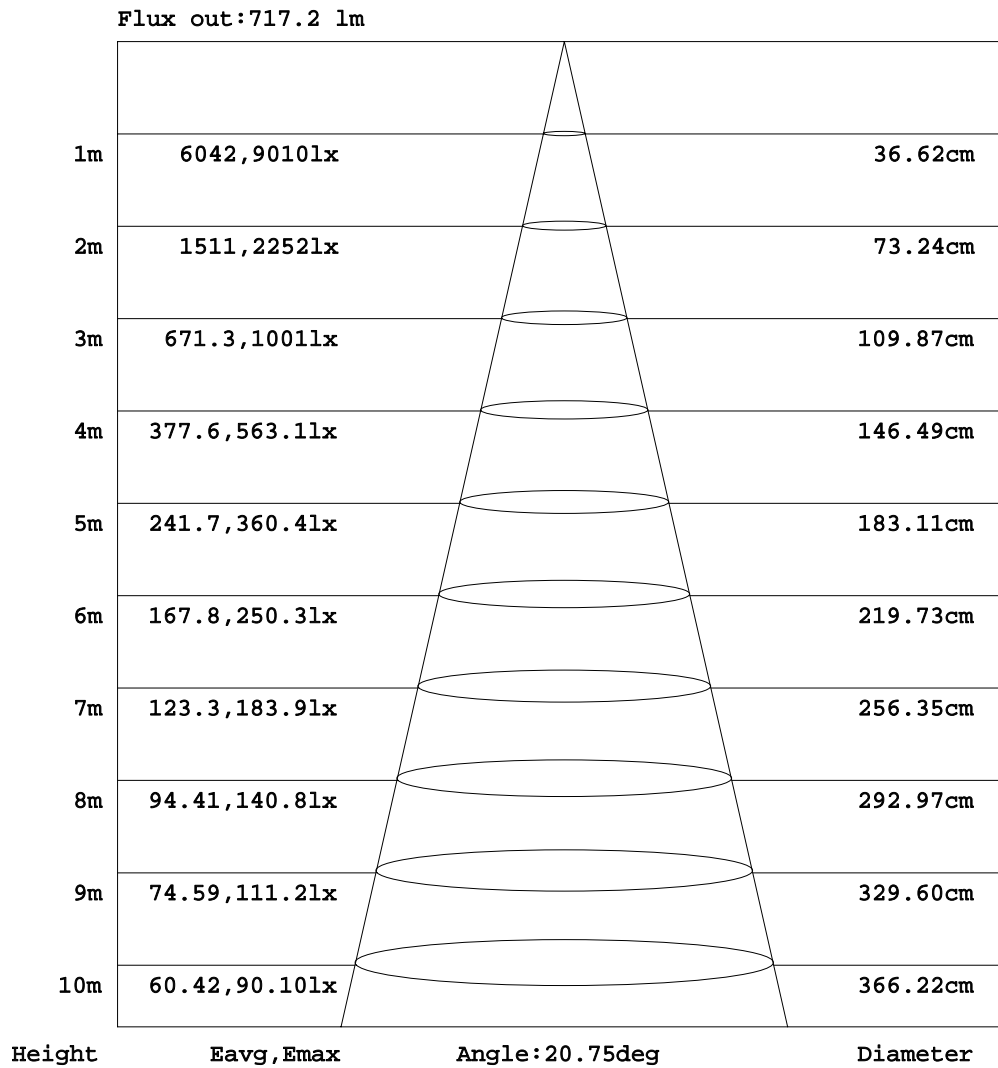


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0

AAI Figure

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:3950K-Ra92	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

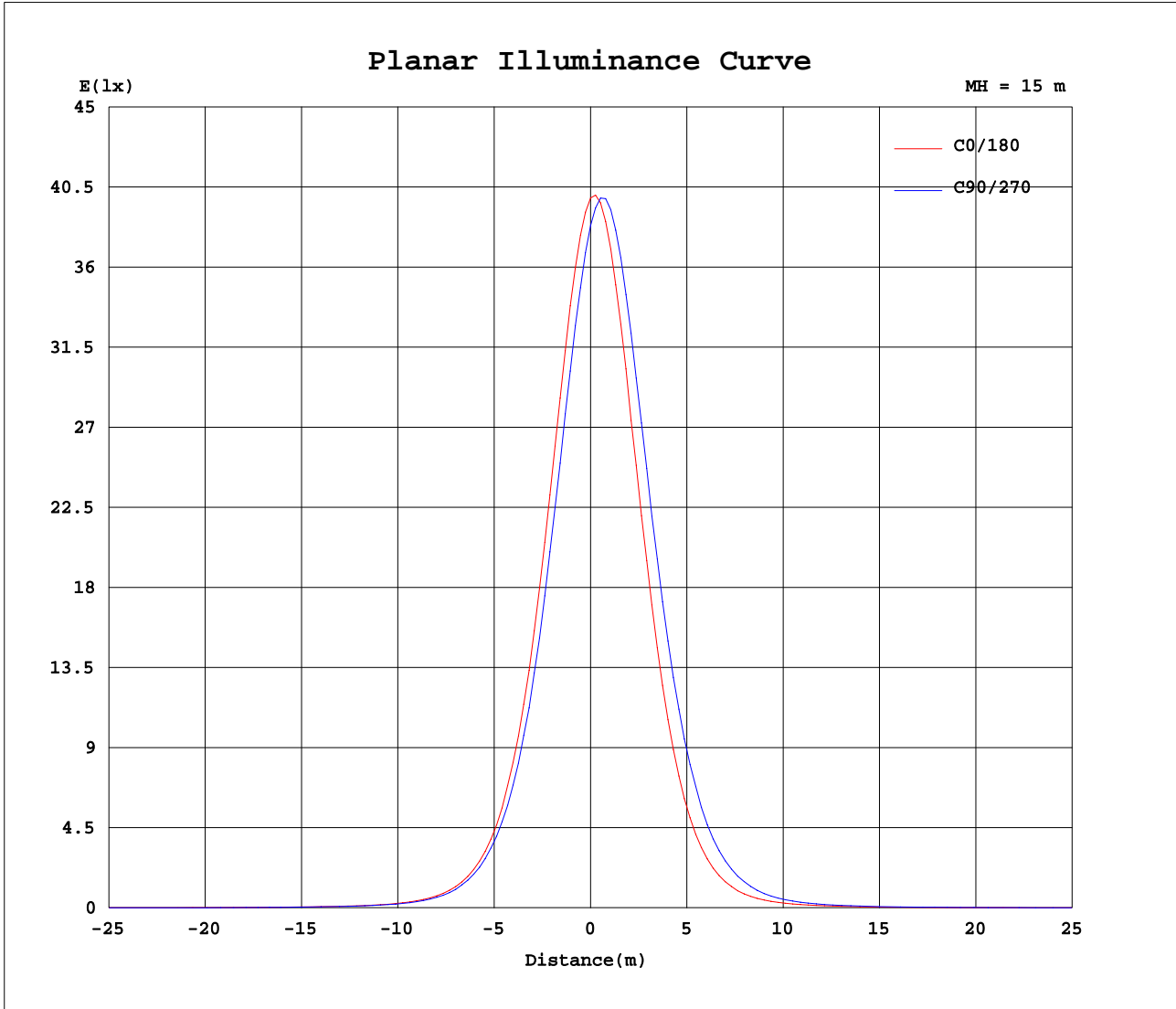


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: sunny
 Test Date: 2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 8.500m [K=1.0000]
 Remarks: SDCM2.0

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:48.23V I:0.3567A P:17.20W PF:1.000 Freq:60.00Hz Lamp Flux:1682.02x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:3950K-Ra92	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	8713	8713	8713	8713	8713	8713	8713	8713	8713	8713	8713	8713							
5	6917	6667	6369	6381	6364	6506	7733	8150	8662	8752	8745	8420							
10	4107	3814	3603	3608	3583	3679	5039	5566	6268	6481	6396	5930							
15	1979	1828	1718	1738	1666	1700	2565	2974	3560	3783	3690	3256							
20	836	789	754	760	699	693	1087	1296	1665	1869	1796	1485							
25	352	327	324	318	296	275	430	517	695	807	792	633							
30	160	150	149	146	137	126	179	220	287	344	331	273							
35	81.3	76.5	77.8	75.4	72.0	65.3	86.8	106	130	157	148	130							
40	48.4	45.5	47.8	45.1	43.4	38.6	48.8	57.9	67.5	81.0	76.6	70.3							
45	30.9	28.5	30.9	28.1	27.2	23.6	29.4	34.4	39.3	47.3	44.7	42.2							
50	18.5	16.2	17.7	15.5	16.1	14.1	18.0	21.1	23.4	28.8	27.1	26.1							
55	7.96	5.53	6.37	4.63	6.16	5.81	9.91	11.8	11.9	13.9	12.3	12.7							
60	2.62	0.33	0.81	0.00	0.88	0.85	3.77	4.49	3.21	3.86	2.78	4.23							
65	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.45	0.00	0.00	0.00	0.01							
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
150	0.77	1.45	2.23	2.51	2.44	2.40	0.00	0.00	0.00	0.00	0.00	0.00							
155	3.64	4.40	5.36	5.82	5.63	5.56	2.26	1.73	1.30	0.80	0.94	0.95							
160	6.53	7.36	8.26	8.75	8.45	8.37	5.59	5.15	4.81	4.37	4.43	4.35							
165	8.74	9.40	10.1	10.6	10.3	10.3	8.55	8.23	8.22	7.83	7.93	7.60							
170	9.96	10.3	10.8	11.4	11.1	11.1	10.3	10.2	10.6	10.5	10.5	10.02							
175	10.5	10.7	11.2	11.8	11.4	11.4	10.7	10.9	11.4	11.7	11.4	11.1							
180	10.9	11.0	11.5	12.1	11.8	11.6	10.9	11.1	11.6	12.1	11.8	11.6							

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:sunny
 Test Date:2023-04-09

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:8.500m [K=1.0000]
 Remarks: SDCM2.0