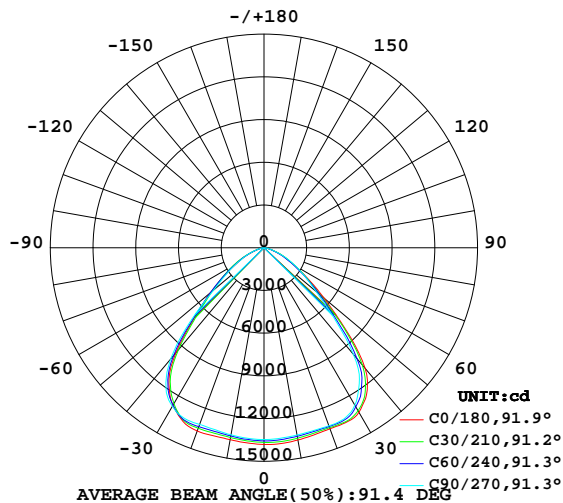


## LUMINAIRE PHOTOMETRIC TEST REPORT

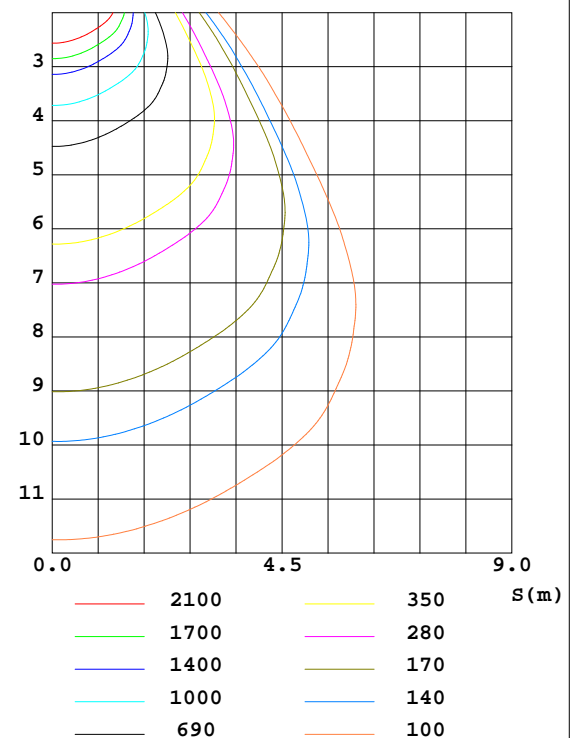
Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm		
NAME: 270848	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.88 lm/W			
MODEL	270848	I <sub>max</sub> (cd)	13823	S/MH(C0/180)	1.35
NOMINAL POWER(W)	198	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	232	TOTAL FLUX(lm)	29554	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	29554.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	231.4	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-03-21

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity:65.0%  
Test Distance:6.730m [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	1371	1352	1335	1325	1369	1348	1334	1326	0- 10	1286	1286	4.35,4.35
20	1353	1341	1331	1321	1370	1343	1321	1305	10- 20	3786	5072	17.2,17.2
30	1334	1306	1276	1249	1278	1271	1287	1285	20- 30	6102	11174	37.8,37.8
40	1106	1045	976.3	969.3	962.1	961.4	1019	1071	30- 40	7358	18532	62.7,62.7
50	551.7	511.8	477.4	483.1	489.6	483.9	463.4	538.4	40- 50	5693	24225	82,82
60	246.0	243.8	254.7	221.8	225.4	240.0	224.2	240.5	50- 60	3151	27375	92.6,92.6
70	94.85	97.39	100.5	82.28	81.42	89.71	88.78	95.64	60- 70	1571	28947	97.9,97.9
80	23.31	22.78	22.41	19.72	19.86	21.18	20.66	21.45	70- 80	519.6	29466	99.7,99.7
90	1.841	1.803	1.792	1.824	2.569	2.502	2.455	2.404	80- 90	88.09	29554	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:×10cd									UNIT:lm		

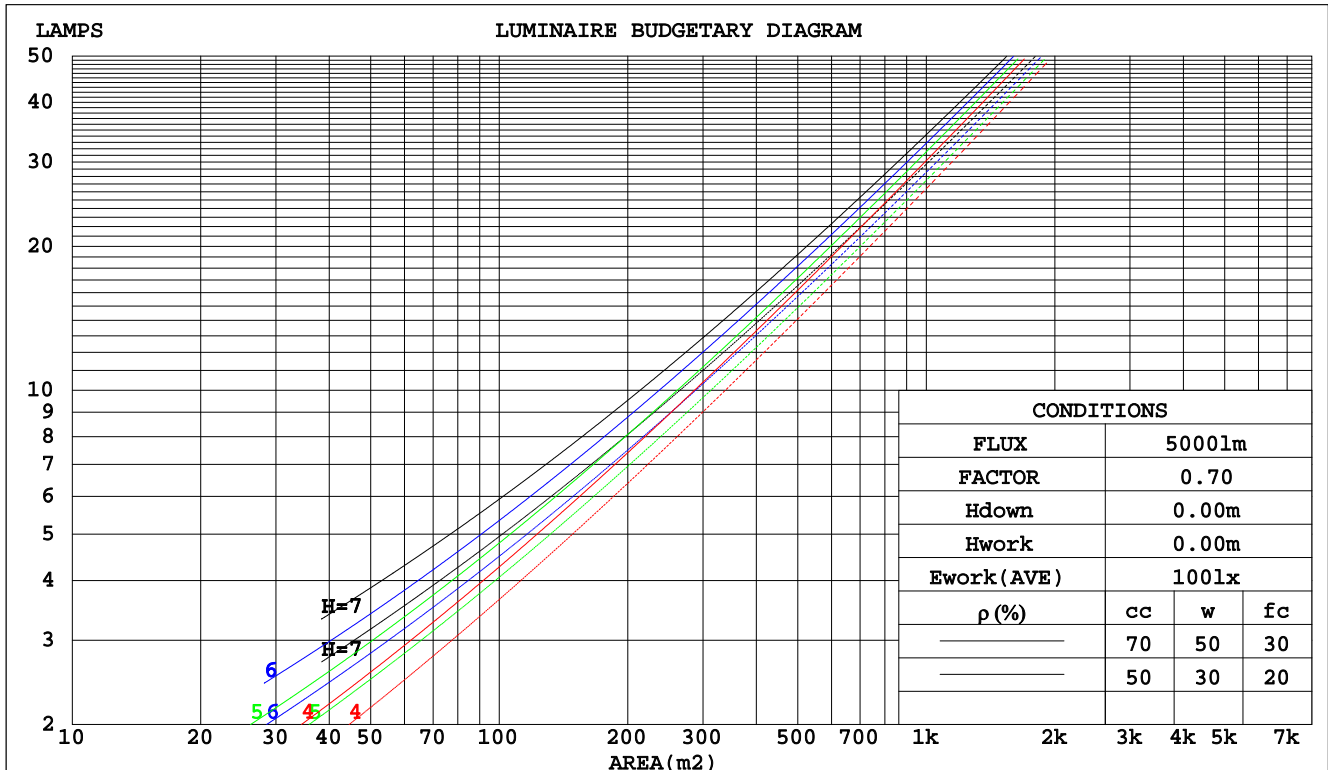
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-03-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:6.730m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm		
NAME: 270848	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14

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						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	.00
1.0	1.08	1.04	1.01	1.05	1.02	.00	1.01	.99	.96	.97	.95	.94	.94	.92	.91	.89
2.0	.97	.91	.86	.95	.90	.85	.91	.87	.83	.88	.85	.82	.85	.82	.80	.78
3.0	.87	.80	.75	.85	.79	.74	.82	.77	.73	.80	.75	.72	.77	.74	.70	.68
4.0	.78	.71	.65	.77	.70	.65	.75	.69	.64	.73	.67	.63	.71	.66	.62	.60
5.0	.71	.63	.58	.70	.63	.57	.68	.62	.57	.66	.60	.56	.64	.59	.56	.54
6.0	.65	.57	.51	.64	.56	.51	.62	.55	.51	.61	.55	.50	.59	.54	.50	.48
7.0	.59	.51	.46	.58	.51	.46	.57	.50	.45	.56	.50	.45	.54	.49	.45	.43
8.0	.54	.47	.41	.54	.46	.41	.52	.46	.41	.51	.45	.41	.50	.45	.41	.39
9.0	.50	.43	.38	.50	.42	.37	.48	.42	.37	.47	.41	.37	.46	.41	.37	.35
10.0	.46	.39	.34	.46	.39	.34	.45	.38	.34	.44	.38	.34	.43	.38	.34	.32



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2022-03-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:6.730m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm								
NAME: 270848			TYPE:			WEIGHT:		
DIM.:			SPEC.:			SERIAL No.:		
MFR.:			SUR.:0.191			PROTECTION ANGLE:0.14		

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	.239	.136	.043	.233	.133	.042	.220	.126	.040	.208	.120	.038	.197	.114	.037		
2.0	.233	.128	.039	.227	.125	.039	.216	.120	.037	.206	.115	.036	.196	.111	.035		
3.0	.222	.118	.035	.217	.116	.035	.207	.112	.034	.198	.109	.033	.190	.105	.033		
4.0	.210	.109	.032	.206	.108	.032	.197	.104	.031	.189	.101	.031	.181	.099	.030		
5.0	.198	.101	.029	.194	.100	.029	.187	.097	.029	.180	.095	.028	.173	.092	.028		
6.0	.187	.094	.027	.184	.093	.027	.177	.091	.026	.170	.089	.026	.164	.087	.026		
7.0	.177	.087	.025	.174	.086	.025	.167	.085	.024	.162	.083	.024	.156	.081	.024		
8.0	.167	.082	.023	.164	.081	.023	.159	.079	.023	.154	.078	.022	.149	.076	.022		
9.0	.158	.077	.021	.156	.076	.021	.151	.075	.021	.146	.073	.021	.142	.072	.021		
10.0	.150	.072	.020	.148	.071	.020	.144	.070	.020	.139	.069	.020	.135	.068	.020		

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	.175	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.155	.114	.081	.133	.098	.070	.091	.068	.049	.053	.040	.029	.017	.013	.010	
4.0	.147	.100	.064	.126	.087	.056	.087	.060	.039	.050	.035	.023	.016	.011	.008	
5.0	.140	.089	.052	.120	.077	.045	.083	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.133	.081	.043	.115	.070	.037	.079	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.127	.074	.036	.109	.064	.032	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.121	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.116	.063	.027	.100	.055	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.111	.059	.024	.096	.051	.021	.066	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-03-21

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity:65.0%  
Test Distance:6.730m [K=1.0000]  
Remarks:

### Uncorrected UGR Table

Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm											
NAME: 270848					TYPE:			WEIGHT:			
DIM.:					SPEC.:			SERIAL No.:			
MFR.:					SUR.:0.191			PROTECTION ANGLE:0.14			
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		31.7	33.0	32.0	33.2	33.4	31.4	32.7	31.6	32.9	33.0
3H		32.0	33.2	32.3	33.4	33.7	31.7	32.9	32.0	33.1	33.4
4H		32.0	33.2	32.3	33.4	33.7	31.8	32.9	32.1	33.1	33.4
6H		32.0	33.1	32.3	33.3	33.6	31.7	32.8	32.0	33.0	33.3
8H		32.0	33.0	32.3	33.3	33.5	31.7	32.7	32.0	33.0	33.3
12H		31.9	32.9	32.3	33.2	33.5	31.6	32.6	32.0	32.9	33.2
4H	2H	31.8	32.9	32.1	33.2	33.4	31.5	32.6	31.8	32.9	33.1
	3H	32.2	33.2	32.6	33.5	33.8	31.9	32.9	32.3	33.2	33.5
	4H	32.3	33.2	32.7	33.5	33.8	32.0	32.9	32.4	33.2	33.5
	6H	32.3	33.1	32.7	33.4	33.8	32.0	32.8	32.4	33.1	33.5
	8H	32.3	33.0	32.7	33.4	33.7	32.0	32.7	32.4	33.1	33.5
	12H	32.3	32.9	32.7	33.3	33.7	32.0	32.6	32.4	33.0	33.4
8H	4H	32.3	33.0	32.7	33.3	33.7	32.0	32.7	32.4	33.1	33.4
	6H	32.3	32.9	32.7	33.3	33.7	32.0	32.6	32.5	33.0	33.4
	8H	32.3	32.8	32.7	33.2	33.7	32.0	32.5	32.5	32.9	33.4
	12H	32.3	32.7	32.7	33.2	33.6	32.0	32.4	32.5	32.9	33.3
12H	4H	32.2	32.9	32.6	33.2	33.6	31.9	32.6	32.4	33.0	33.4
	6H	32.3	32.8	32.7	33.2	33.6	32.0	32.5	32.4	32.9	33.4
	8H	32.3	32.7	32.7	33.2	33.6	32.0	32.4	32.5	32.9	33.3
Variations with the observer position at spacings:											
S = 1.0H		+ 1.1 / - 1.4					+ 1.1 / - 1.4				
1.5H		+ 1.0 / - 1.1					+ 1.1 / - 0.9				
2.0H		+ 2.3 / - 1.6					+ 1.9 / - 1.9				

CIE Pub.117 Corrected 29554 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.8)

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-03-21

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity:65.0%  
Test Distance:6.730m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm		
NAME: 270848	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14

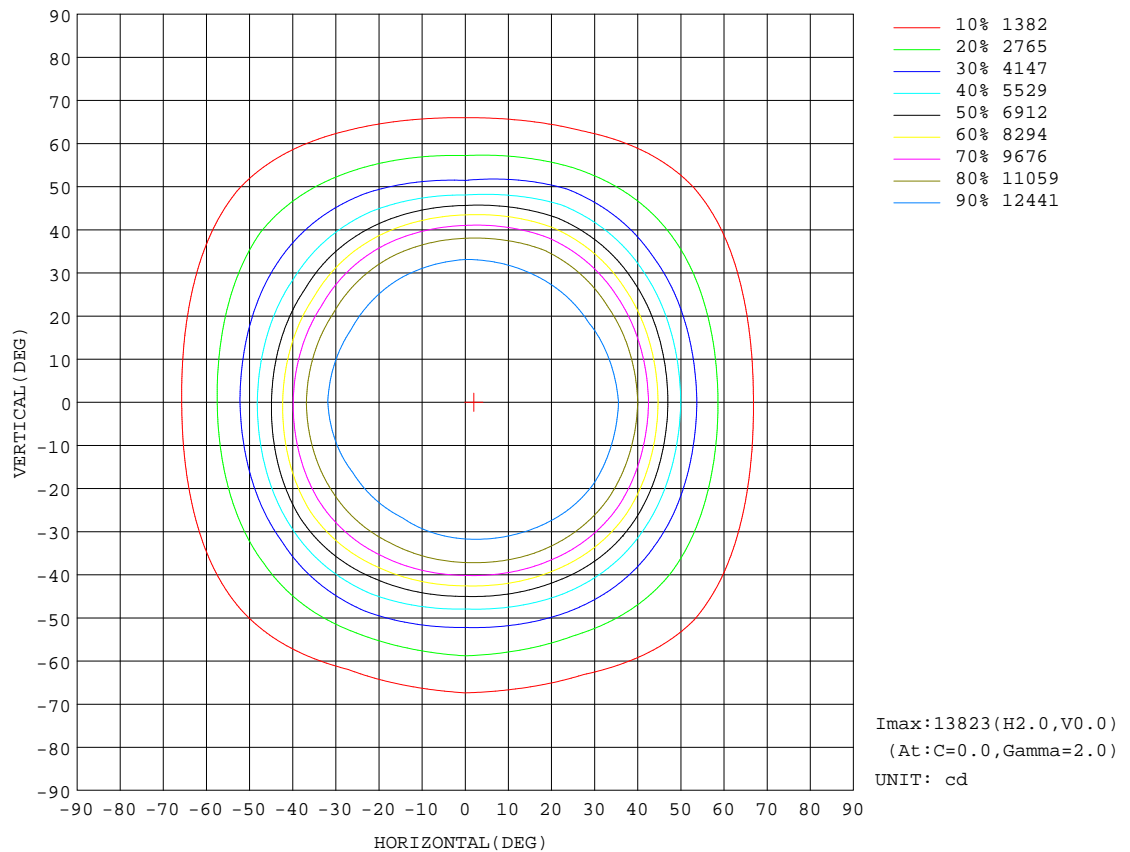
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	68	58	52	67	58	52	66	57	52	47
0.80	78	68	62	77	68	62	75	67	62	56
1.00	86	77	71	85	76	71	83	77	70	65
1.25	92	84	78	91	83	78	88	82	77	71
1.50	96	89	83	95	88	83	92	86	82	76
2.00	102	95	90	100	94	90	97	92	88	82
2.50	104	99	94	103	97	93	99	95	91	84
3.00	107	102	98	105	100	97	101	98	94	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	109	106	103	105	103	100	92
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:DAMIN  
Test Date:2022-03-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity:65.0%  
Test Distance:6.730m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm		
NAME: 270848	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14



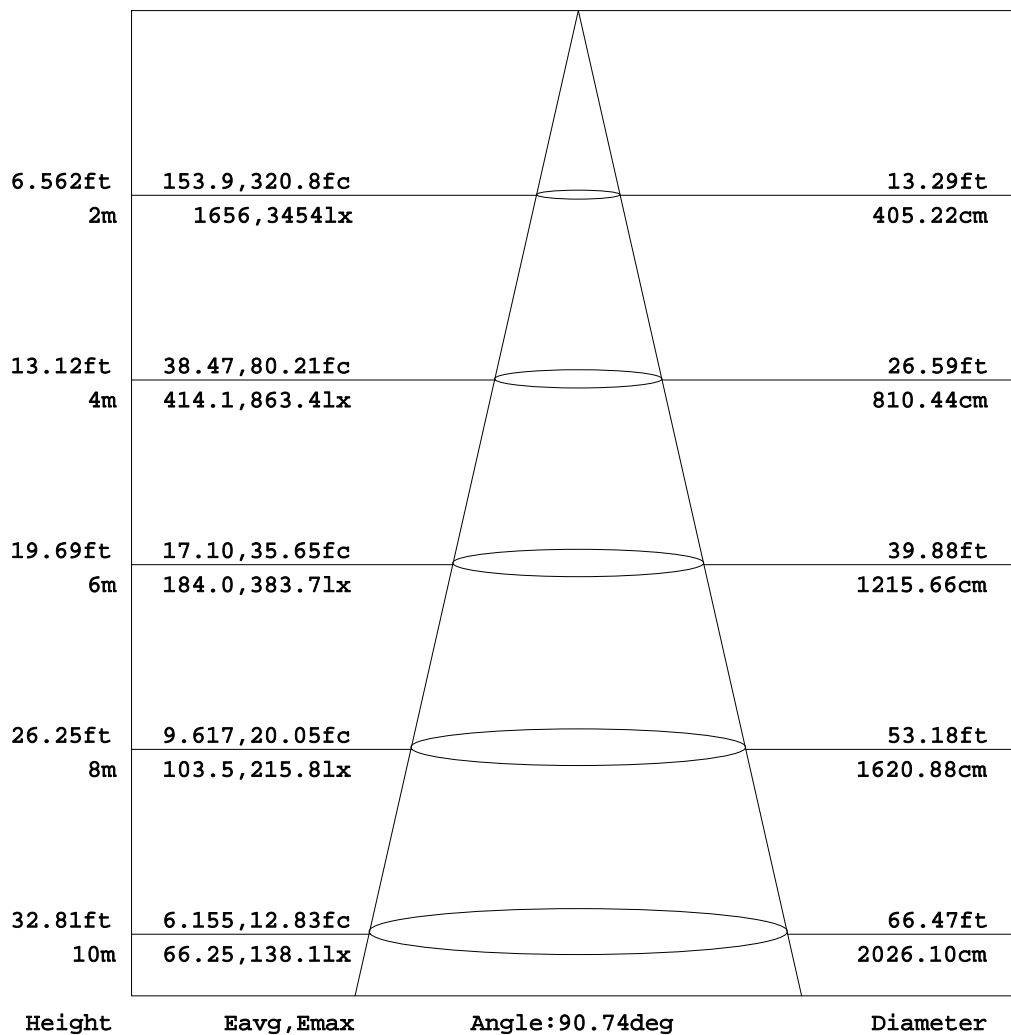
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-03-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity:65.0%  
Test Distance:6.730m [K=1.0000]  
Remarks:

### AAI Figure

Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm		
NAME: 270848	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14

Flux out:22319 lm



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

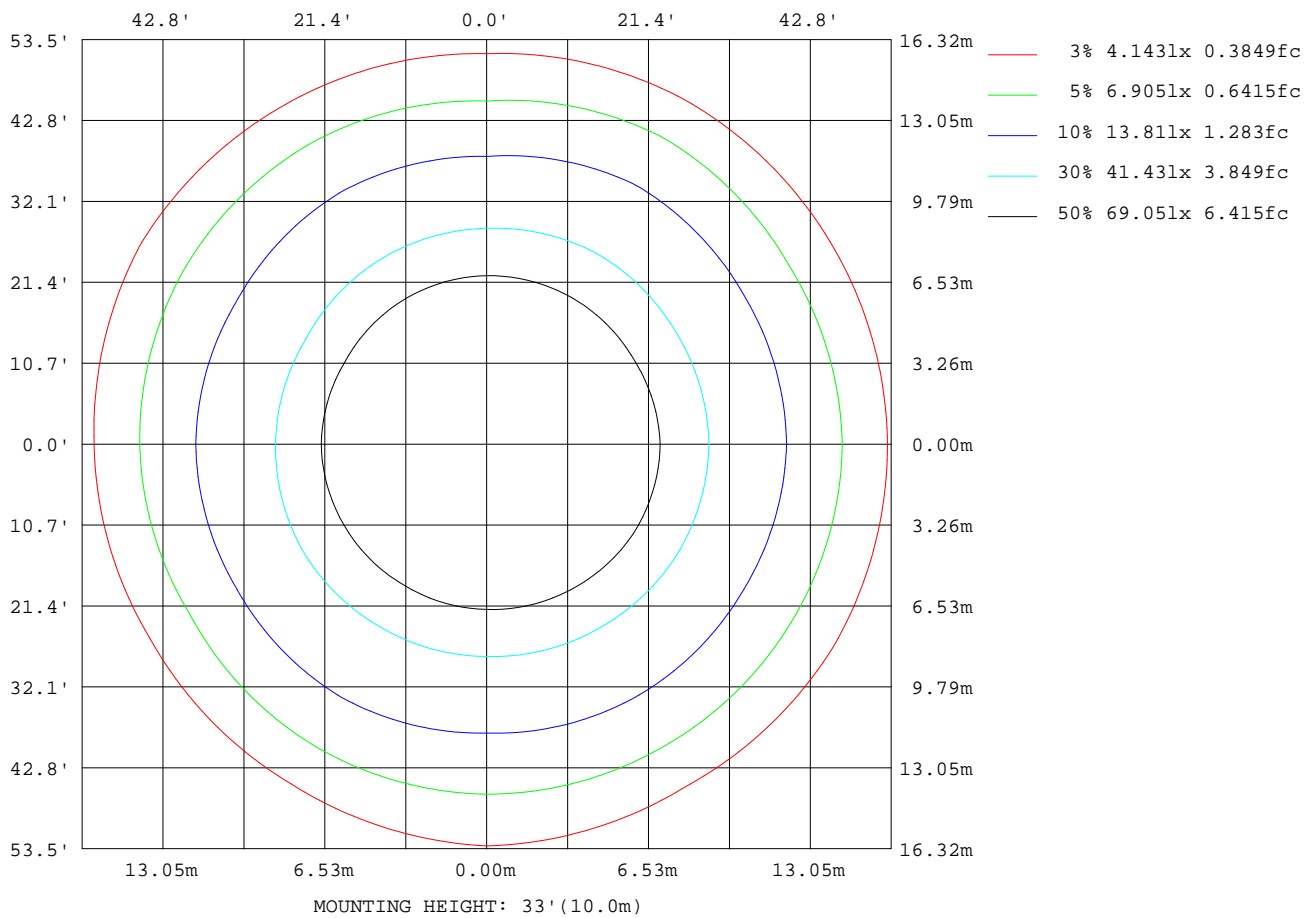
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2022-03-21

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity:65.0%  
Test Distance:6.730m [K=1.0000]  
Remarks:



### ISOLUX DIAGRAM

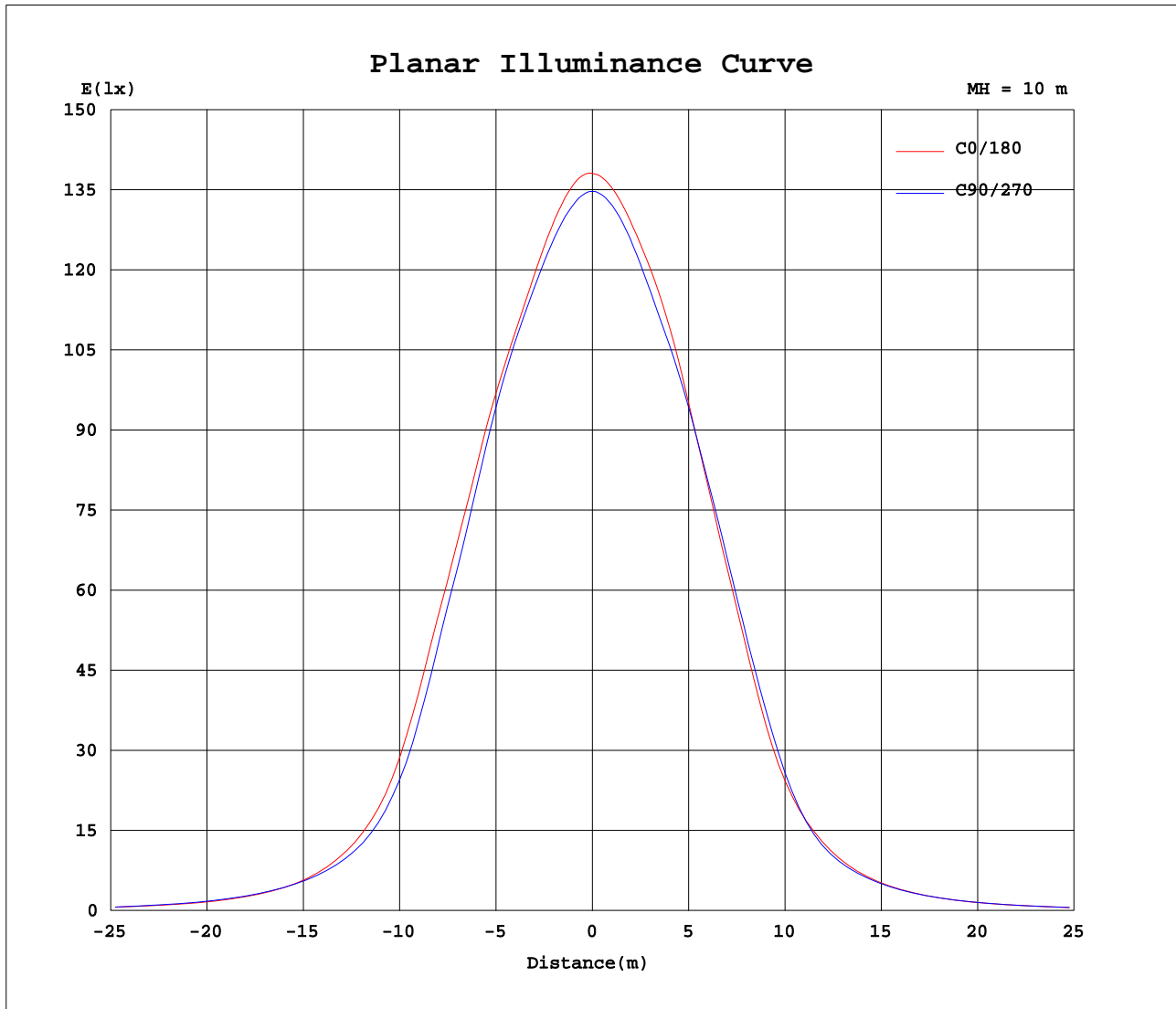
Test:U:231.5V I:0.8457A P:194.6W PF:0.9939 Lamp Flux:29554.2x1 lm		
NAME: 270848	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2022-03-21

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity: 65.0%  
Test Distance: 6.730m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2022-03-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
Humidity: 65.0%  
Test Distance: 6.730m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:6.730m [K=1.0000]
Remarks:

```