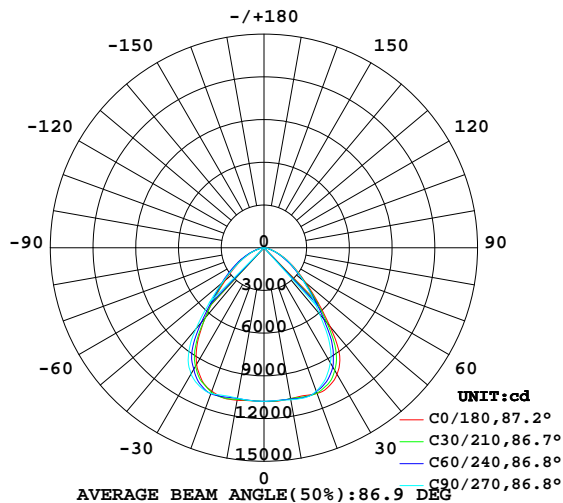


LUMINAIRE PHOTOMETRIC TEST REPORT

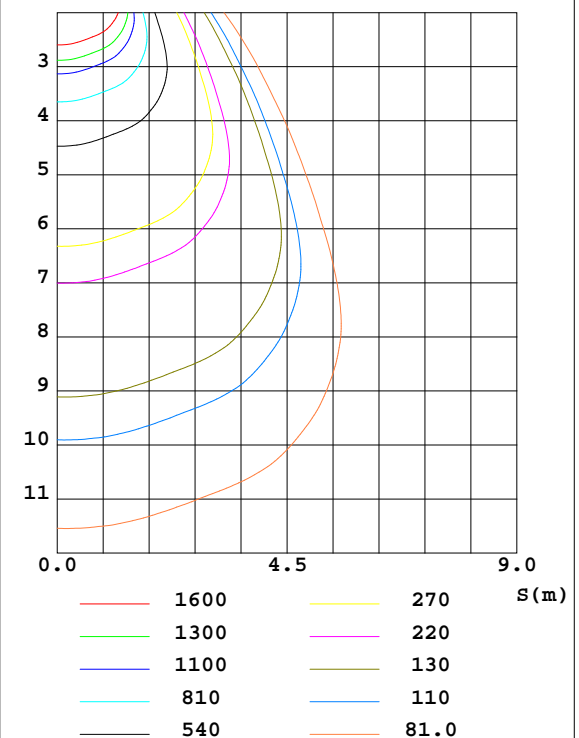
Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm		
NAME: 270824	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.15*0.15	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.23 lm/W			
MODEL	270824	I _{max} (cd)	10933	S/MH(C0/180)	1.26
NOMINAL POWER(W)	147.2	LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)	232	TOTAL FLUX(lm)	22703	η UP,DN(C0-180)	0.0,48.9
NOMINAL FLUX(lm)	22702.5	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	231.1	η down(%)	100.0	CIBSE SHR MAX	1.30

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:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:7.220m [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	1076	1077	1084	1087	1087	1078	1073	1074	0- 10	1029	1029	4.53,4.53
20	1089	1081	1072	1063	1072	1085	1088	1080	10- 20	3067	4096	18,18
30	1026	980.7	932.0	923.9	946.9	974.2	1025	1046	20- 30	4808	8904	39.2,39.2
40	724.8	672.1	606.9	615.4	642.0	663.0	746.4	778.5	30- 40	5323	14227	62.7,62.7
50	382.0	366.2	360.1	359.2	353.5	381.6	383.9	398.1	40- 50	3945	18172	80,80
60	207.3	191.6	201.9	195.2	196.3	213.1	197.1	204.9	50- 60	2497	20669	91,91
70	86.68	79.18	82.11	81.81	88.09	96.65	88.37	88.09	60- 70	1386	22055	97.1,97.1
80	23.72	22.89	23.43	23.72	25.66	27.56	26.04	25.07	70- 80	529.0	22584	99.5,99.5
90	1.950	1.866	1.988	1.927	2.919	3.252	3.073	2.941	80- 90	118.3	22703	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		

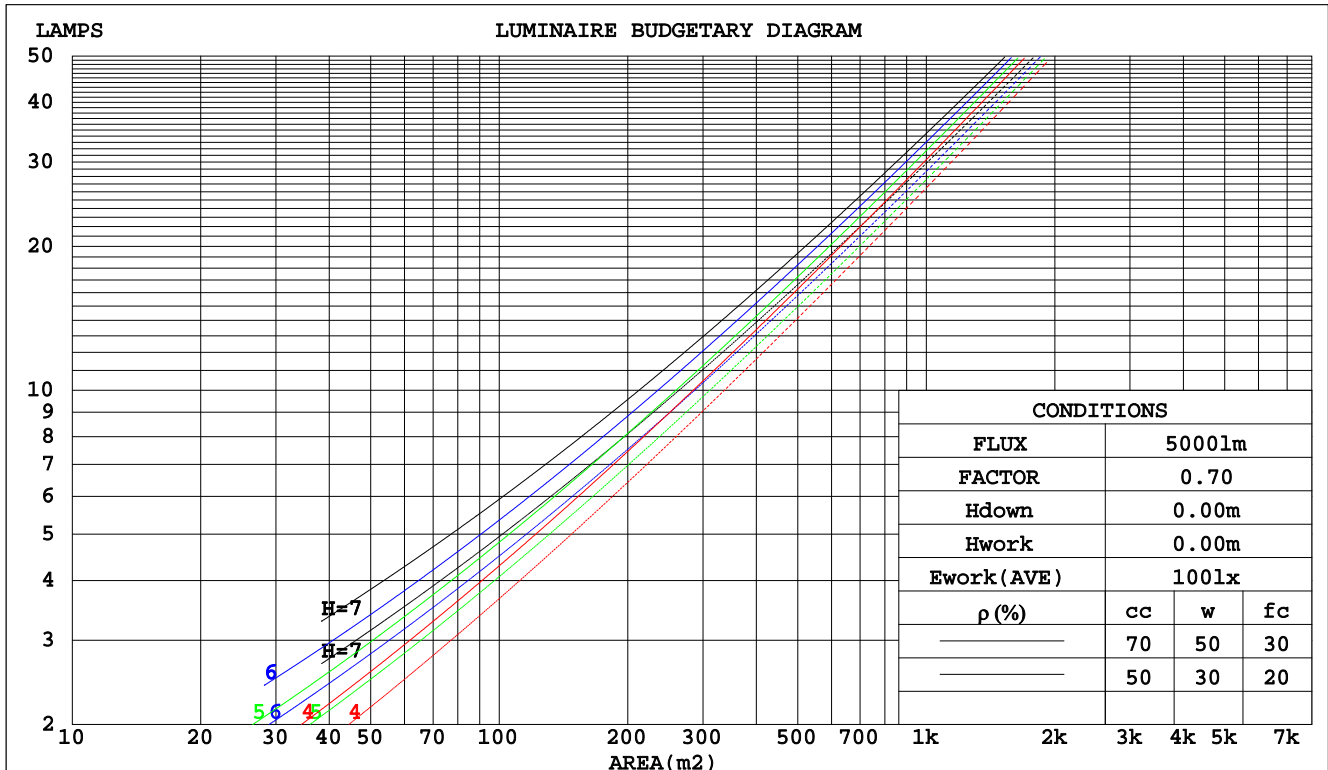
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:7.220m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm		
NAME: 270824	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.15*0.15	PROTECTION 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						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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.94	.92	.90	.88
2.0	.96	.91	.86	.94	.89	.85	.91	.87	.83	.88	.84	.81	.85	.82	.79	.77
3.0	.86	.80	.74	.85	.79	.73	.82	.77	.72	.79	.75	.71	.77	.73	.70	.68
4.0	.78	.71	.65	.77	.70	.64	.74	.68	.64	.72	.67	.63	.70	.66	.62	.60
5.0	.71	.63	.57	.70	.62	.57	.68	.61	.56	.66	.60	.56	.64	.59	.55	.53
6.0	.65	.57	.51	.64	.56	.51	.62	.55	.50	.60	.54	.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	.43	.38	.49	.42	.37	.48	.42	.37	.47	.41	.37	.35
10.0	.47	.39	.35	.46	.39	.34	.45	.39	.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:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:7.220m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm									
NAME: 270824					TYPE:			WEIGHT:	
DIM.:					SPEC.:			SERIAL No.:	
MFR.:					SUR.:0.15*0.15			PROTECTION 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	.245	.139	.044	.238	.136	.043	.225	.129	.041	.213	.123	.039	.202	.117	.038		
2.0	.237	.130	.040	.231	.127	.039	.220	.122	.038	.210	.118	.037	.200	.113	.036		
3.0	.225	.120	.036	.219	.118	.035	.210	.114	.035	.201	.110	.034	.192	.106	.033		
4.0	.212	.110	.032	.207	.108	.032	.198	.105	.031	.190	.102	.031	.183	.099	.030		
5.0	.199	.102	.029	.195	.100	.029	.187	.098	.029	.180	.095	.028	.174	.093	.028		
6.0	.188	.094	.027	.184	.093	.027	.177	.091	.026	.171	.089	.026	.165	.087	.026		
7.0	.177	.087	.025	.174	.086	.025	.168	.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	.076	.021	.155	.076	.021	.151	.074	.021	.146	.073	.021	.142	.072	.021		
10.0	.150	.072	.020	.148	.071	.020	.143	.070	.020	.139	.069	.020	.135	.068	.019		

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	.176	.157	.139	.150	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.105	.141	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.081	.134	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.064	.127	.087	.056	.087	.060	.039	.050	.035	.023	.016	.012	.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	.095	.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:2022-09-19

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm											
NAME: 270824					TYPE:			WEIGHT:			
DIM.:					SPEC.:			SERIAL No.:			
MFR.:					SUR.:0.15*0.15			PROTECTION 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	31.3	32.6	31.5	32.8	33.0	31.0	32.3	31.2	32.5	32.6	
	3H	31.8	33.0	32.0	33.2	33.4	31.4	32.6	31.7	32.9	33.1
	4H	31.9	33.0	32.2	33.2	33.5	31.5	32.7	31.8	32.9	33.1
	6H	31.9	32.9	32.2	33.2	33.5	31.6	32.6	31.9	32.9	33.1
	8H	31.9	32.9	32.2	33.2	33.4	31.5	32.6	31.9	32.8	33.1
	12H	31.8	32.8	32.2	33.1	33.4	31.5	32.5	31.9	32.8	33.1
4H	2H	31.4	32.6	31.7	32.8	33.1	31.1	32.3	31.4	32.5	32.8
	3H	32.0	33.0	32.4	33.3	33.6	31.7	32.7	32.1	33.0	33.3
	4H	32.2	33.1	32.5	33.4	33.7	31.9	32.8	32.3	33.1	33.4
	6H	32.3	33.0	32.7	33.4	33.7	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	32.7	32.4	33.0	33.4
8H	4H	32.2	32.9	32.6	33.3	33.6	31.9	32.6	32.3	33.0	33.4
	6H	32.3	32.9	32.7	33.3	33.7	32.0	32.6	32.5	33.0	33.5
	8H	32.3	32.9	32.8	33.3	33.7	32.1	32.6	32.5	33.0	33.5
	12H	32.4	32.8	32.8	33.2	33.7	32.1	32.5	32.6	33.0	33.5
12H	4H	32.1	32.8	32.6	33.2	33.6	31.9	32.5	32.3	32.9	33.3
	6H	32.3	32.8	32.7	33.2	33.7	32.0	32.5	32.5	33.0	33.4
	8H	32.3	32.8	32.8	33.2	33.7	32.1	32.5	32.5	33.0	33.4
Variations with the observer position at spacings:											
S = 1.0H	+ 0.7 / - 1.0					+ 0.7 / - 0.9					
1.5H	+ 0.9 / - 0.6					+ 0.6 / - 0.5					
2.0H	+ 1.5 / - 1.2					+ 1.3 / - 1.3					

UTILIZATION FACTORS TABLE

Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm		
NAME: 270824	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.15*0.15	PROTECTION ANGLE:

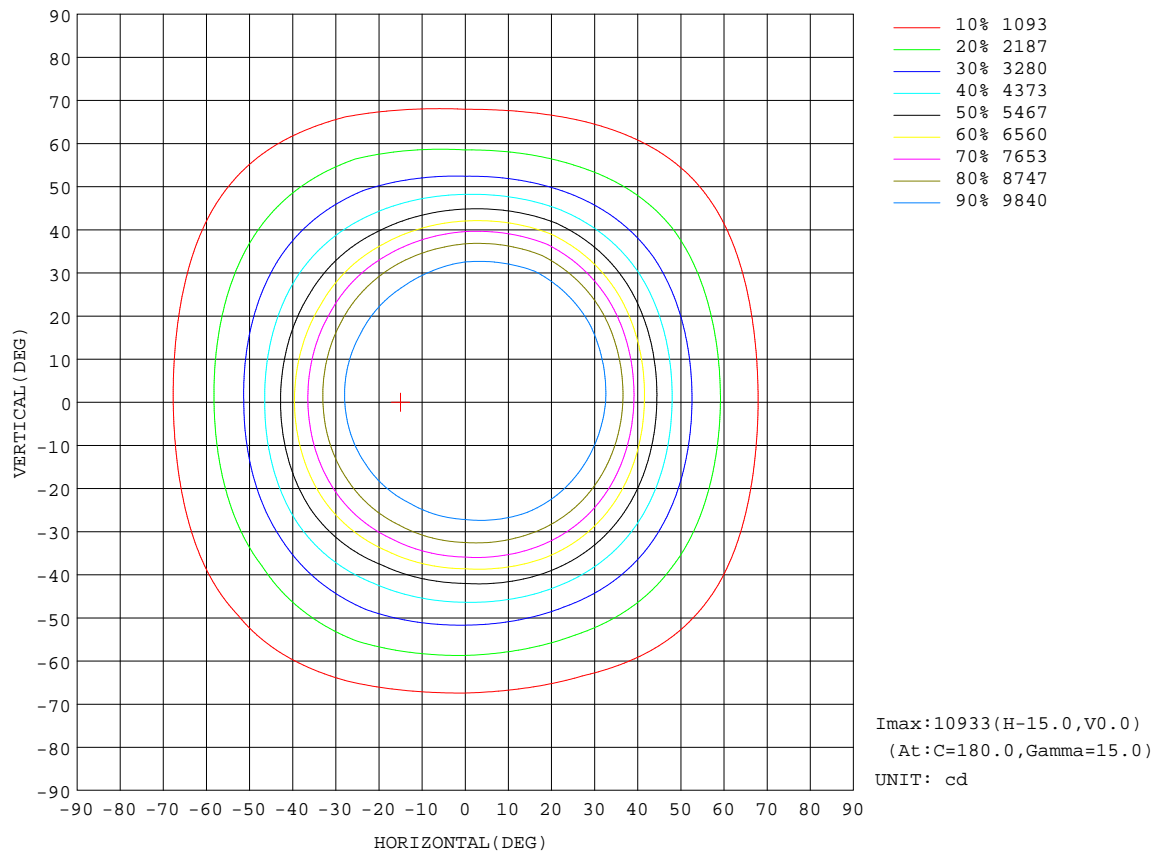
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	68	58	52	67	58	52	66	58	52	47
0.80	78	68	62	77	68	62	75	67	62	56
1.00	85	77	71	84	76	70	82	77	70	64
1.25	92	83	78	90	83	77	88	81	77	71
1.50	96	88	83	94	87	82	92	86	81	75
2.00	101	95	90	100	94	89	96	91	87	81
2.50	104	98	94	102	97	93	99	94	91	84
3.00	107	101	97	105	100	96	101	97	94	86
4.00	110	105	102	107	104	100	104	100	98	90
5.00	112	108	105	109	106	103	105	102	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:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm		
NAME: 270824	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.15*0.15	PROTECTION ANGLE:

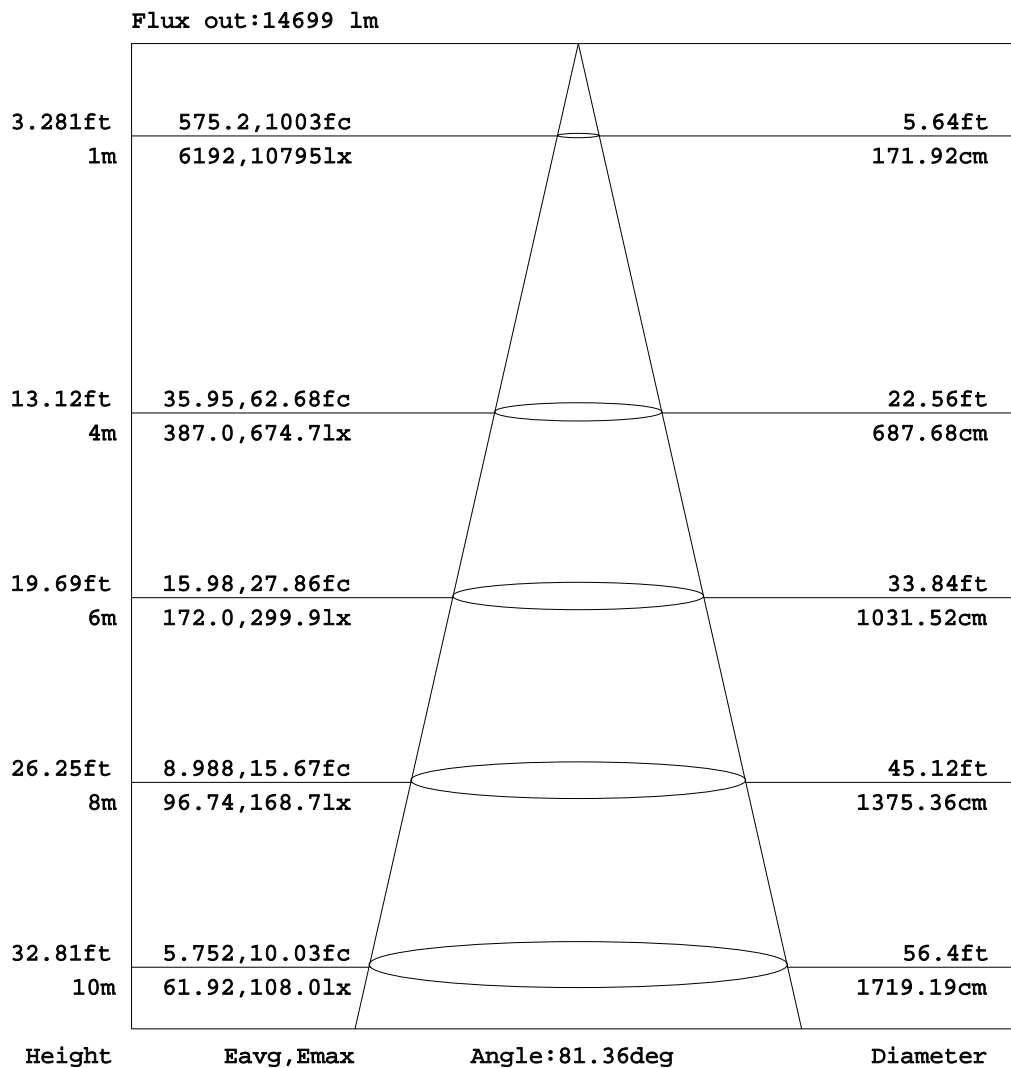


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

AAI Figure

Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm		
NAME: 270824	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.15*0.15	PROTECTION ANGLE:



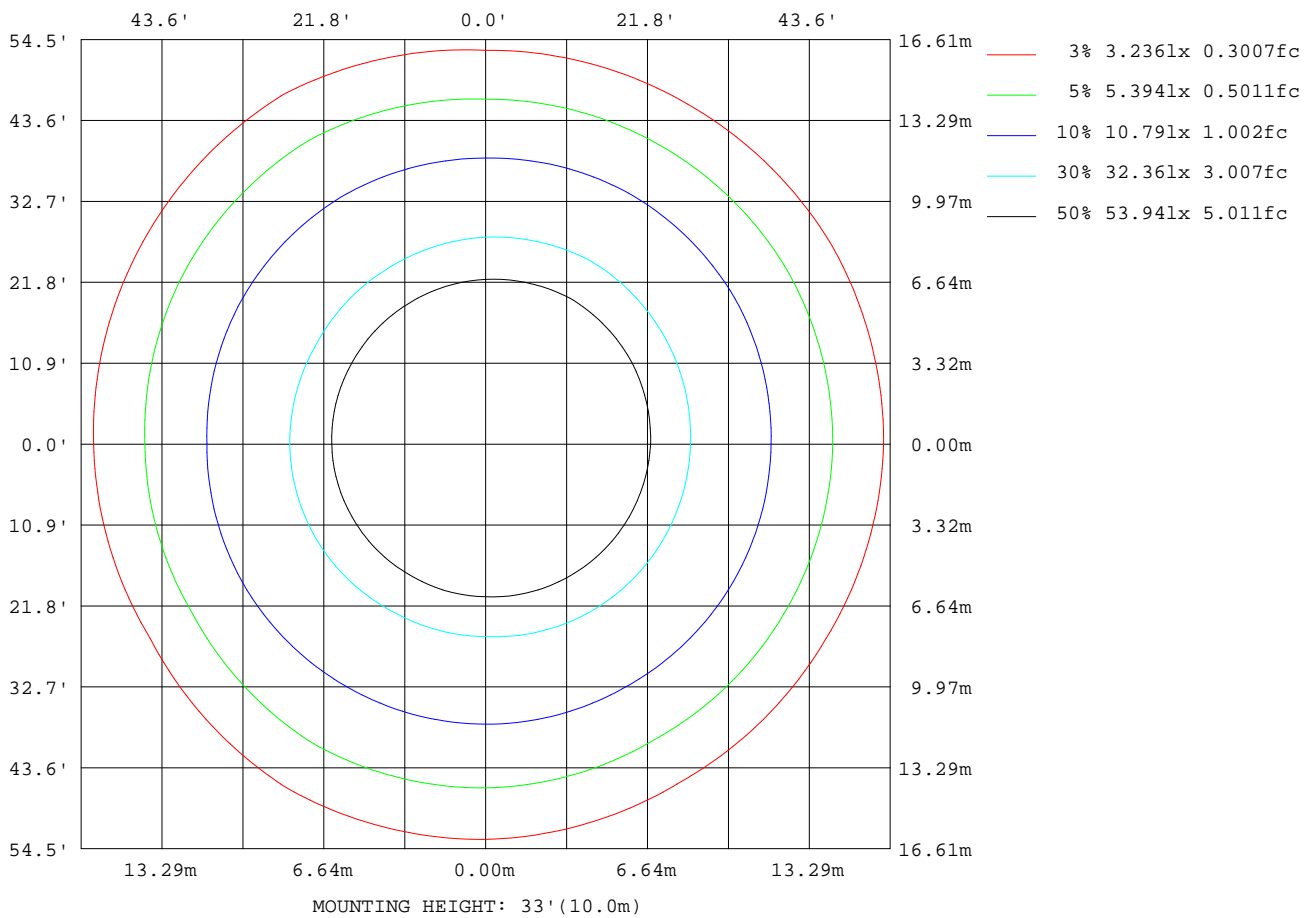
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-09-19

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 7.220m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

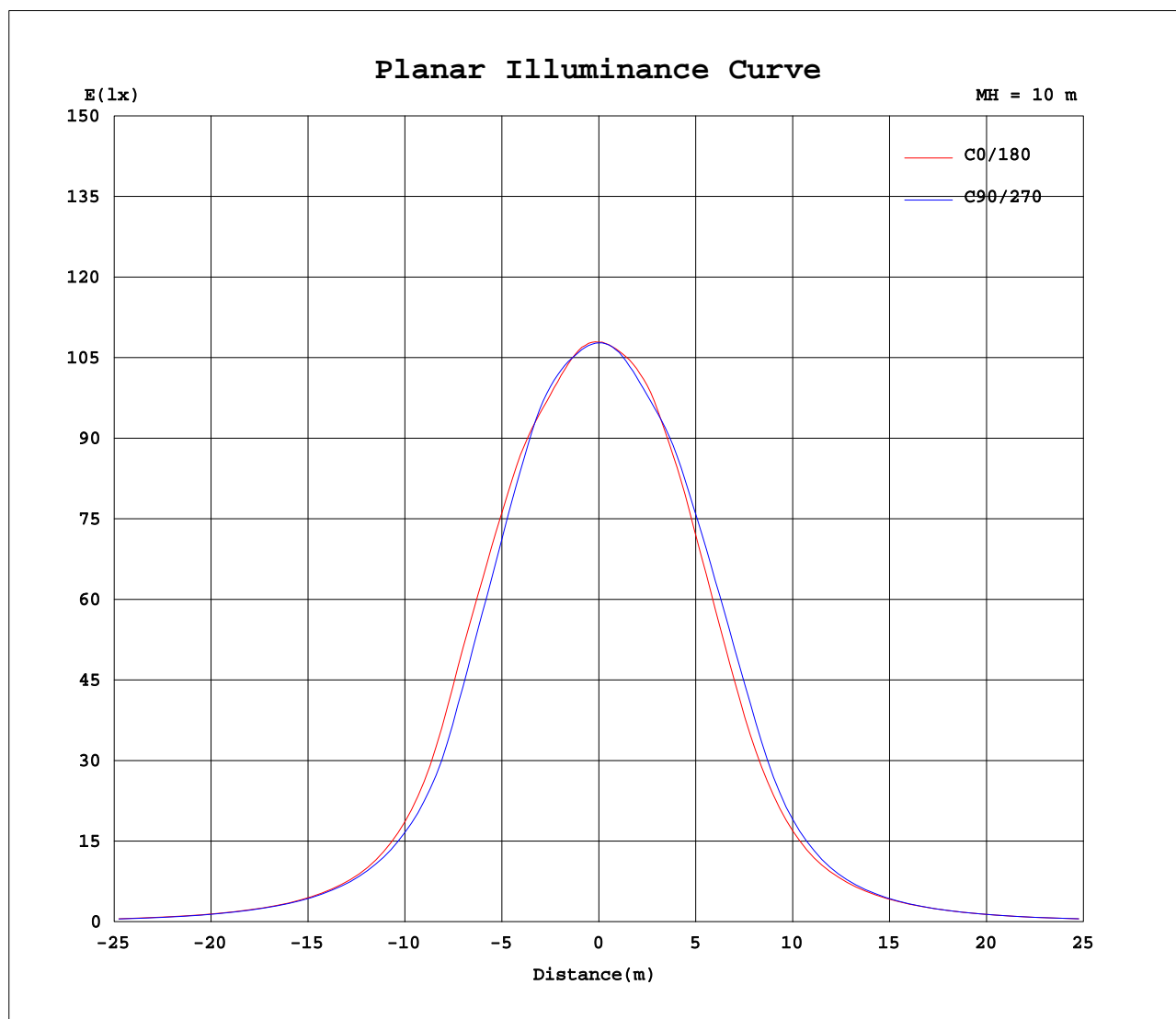
Test:U:231.1V I:0.6499A P:147.2W PF:0.9804 Lamp Flux:22702.5x1 lm		
NAME: 270824	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.15*0.15	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.220m [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: 2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 7.220m [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:7.220m [K=1.0000]
Remarks:

```