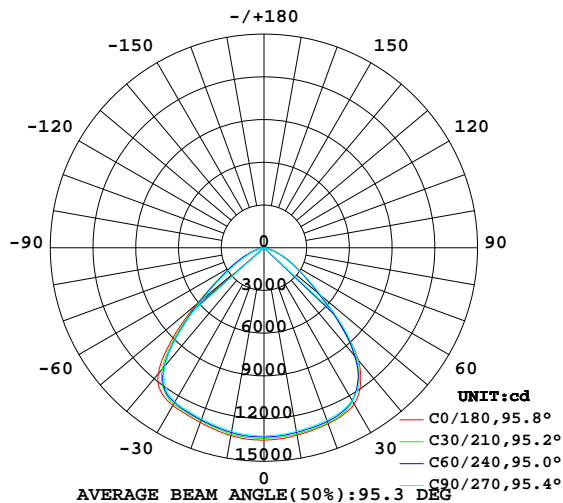


LUMINAIRE PHOTOMETRIC TEST REPORT

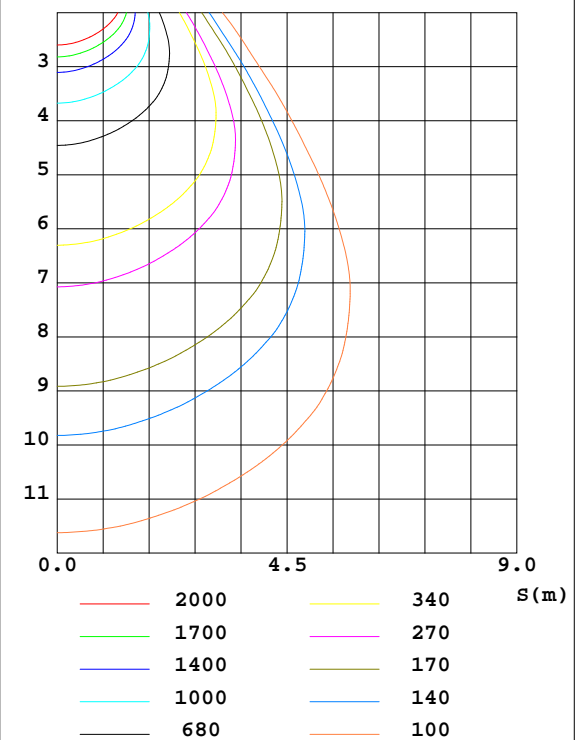
Test:U:231.5V I:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm		
NAME: 270831	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14

DATA OF LAMP		PHOTOMETRIC DATA Eff: 153.03 lm/W			
MODEL	270831	I _{max} (cd)	13515	S/MH(C0/180)	1.33
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH(C90/270)	1.34
RATED VOLTAGE(V)	232	TOTAL FLUX(lm)	29915	η UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	29914.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	231.5	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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	1336	1322	1309	1298	1339	1322	1308	1297	0- 10	1261	1261	4.21,4.21
20	1316	1305	1289	1269	1306	1291	1277	1270	10- 20	3685	4946	16.5,16.5
30	1266	1241	1237	1236	1279	1261	1250	1236	20- 30	5880	10826	36.2,36.2
40	1032	998.1	1023	1077	1155	1101	1083	1068	30- 40	7385	18210	60.9,60.9
50	520.7	509.4	529.3	570.9	619.7	592.4	564.0	549.7	40- 50	6289	24500	81.9,81.9
60	242.0	230.4	230.9	239.2	238.4	256.8	233.3	221.7	50- 60	3325	27825	93,93
70	91.75	84.61	87.82	90.88	93.43	93.35	80.48	79.87	60- 70	1529	29354	98.1,98.1
80	18.42	18.24	18.40	18.53	19.95	19.69	17.42	16.83	70- 80	483.8	29838	99.7,99.7
90	2.006	1.983	1.929	1.891	2.587	2.512	2.485	2.530	80- 90	76.97	29915	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		

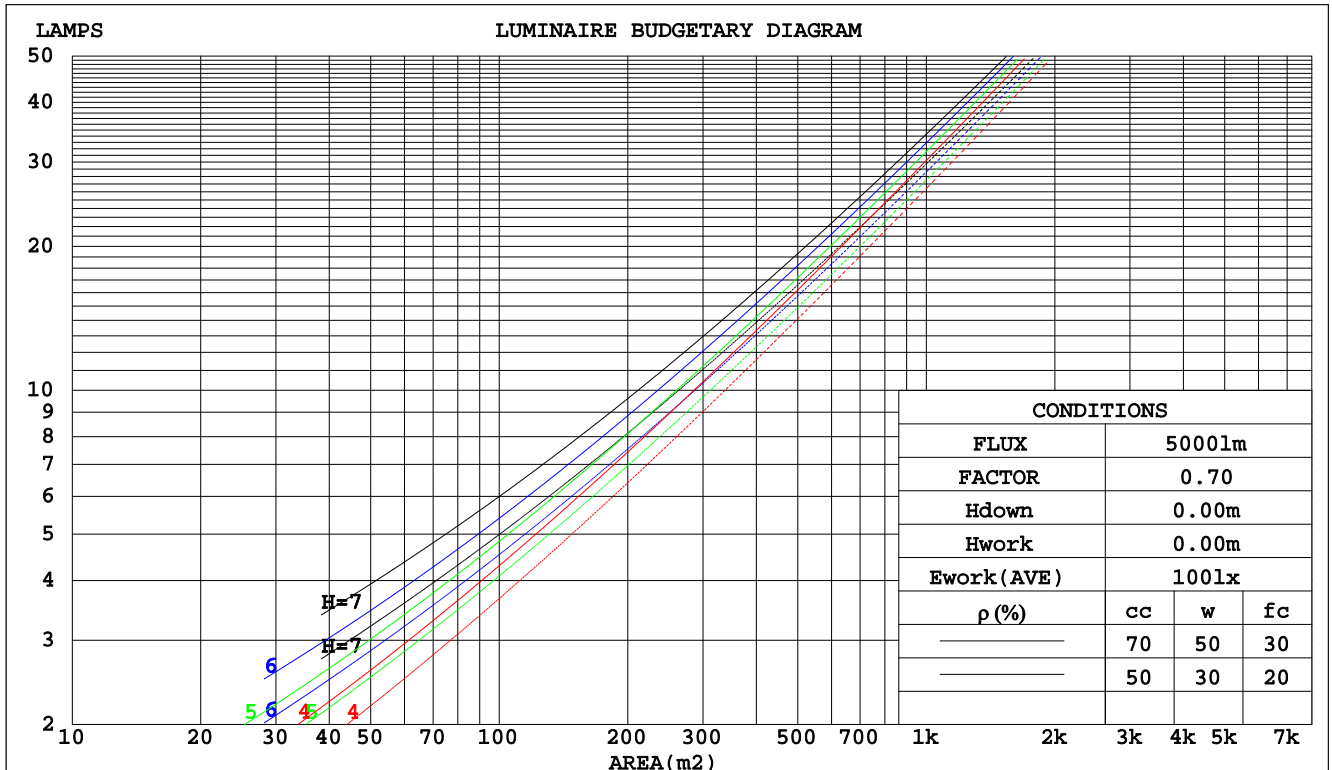
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-03-21

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.5V I:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm		
NAME: 270831	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	1.00
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	.96	.91	.86	.95	.90	.85	.91	.87	.83	.88	.85	.81	.85	.82	.80	.78
3.0	.87	.80	.74	.85	.79	.74	.82	.77	.72	.80	.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	.64	.56	.51	.63	.56	.50	.62	.55	.50	.60	.54	.50	.59	.53	.49	.47
7.0	.59	.51	.45	.58	.50	.45	.56	.50	.45	.55	.49	.44	.54	.48	.44	.42
8.0	.54	.46	.41	.53	.46	.41	.52	.45	.40	.51	.45	.40	.50	.44	.40	.38
9.0	.50	.42	.37	.49	.42	.37	.48	.41	.37	.47	.41	.36	.46	.40	.36	.35
10.0	.46	.38	.34	.45	.38	.33	.44	.38	.33	.43	.37	.33	.43	.37	.33	.31



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:

WEC AND CCEC

Test:U:231.5V I:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm								
NAME: 270831				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	.240	.136	.043	.233	.133	.042	.220	.126	.040	.208	.120	.039	.197	.114	.037	
2.0	.234	.128	.039	.228	.126	.039	.217	.121	.038	.207	.116	.036	.197	.112	.035	
3.0	.224	.119	.036	.218	.117	.035	.209	.113	.034	.199	.109	.034	.191	.106	.033	
4.0	.212	.110	.032	.207	.108	.032	.198	.105	.031	.190	.102	.031	.183	.099	.030	
5.0	.200	.102	.030	.196	.101	.029	.188	.098	.029	.181	.096	.028	.174	.093	.028	
6.0	.189	.095	.027	.185	.093	.027	.178	.091	.027	.172	.089	.026	.166	.087	.026	
7.0	.178	.088	.025	.175	.087	.025	.169	.085	.025	.163	.084	.024	.158	.082	.024	
8.0	.169	.082	.023	.166	.082	.023	.160	.080	.023	.155	.079	.023	.150	.077	.022	
9.0	.160	.077	.022	.157	.077	.021	.152	.075	.021	.147	.074	.021	.143	.073	.021	
10.0	.151	.073	.020	.149	.072	.020	.145	.071	.020	.140	.070	.020	.136	.069	.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	.165	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.081	.133	.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	.121	.077	.045	.083	.054	.032	.048	.032	.019	.016	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.079	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.117	.063	.027	.100	.055	.023	.070	.038	.017	.041	.023	.010	.013	.007	.003	
10.0	.111	.059	.024	.096	.051	.021	.067	.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:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm											
NAME: 270831					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		31.3	32.7	31.6	32.8	33.0	31.3	32.6	31.5	32.8	33.0
3H		31.6	32.8	31.9	33.0	33.3	31.5	32.7	31.8	33.0	33.2
4H		31.6	32.8	31.9	33.0	33.2	31.5	32.7	31.8	32.9	33.2
6H		31.6	32.6	31.9	32.9	33.2	31.5	32.6	31.8	32.8	33.1
8H		31.5	32.6	31.9	32.8	33.1	31.5	32.5	31.8	32.8	33.0
12H		31.5	32.5	31.8	32.8	33.0	31.4	32.4	31.8	32.7	33.0
4H 2H		31.4	32.5	31.7	32.8	33.0	31.4	32.5	31.7	32.7	33.0
3H		31.7	32.7	32.1	33.0	33.3	31.7	32.7	32.1	33.0	33.3
4H		31.8	32.7	32.2	33.0	33.3	31.8	32.6	32.1	33.0	33.3
6H		31.8	32.6	32.2	32.9	33.3	31.7	32.5	32.1	32.9	33.2
8H		31.8	32.5	32.2	32.8	33.2	31.7	32.4	32.1	32.8	33.2
12H		31.7	32.4	32.1	32.8	33.2	31.7	32.3	32.1	32.7	33.1
8H 4H		31.7	32.5	32.1	32.8	33.2	31.7	32.4	32.1	32.8	33.1
6H		31.7	32.3	32.2	32.7	33.2	31.7	32.3	32.1	32.7	33.1
8H		31.7	32.2	32.2	32.7	33.1	31.7	32.2	32.1	32.6	33.1
12H		31.7	32.1	32.2	32.6	33.1	31.7	32.1	32.1	32.5	33.0
12H 4H		31.7	32.4	32.1	32.7	33.1	31.7	32.3	32.1	32.7	33.1
6H		31.7	32.2	32.2	32.7	33.1	31.7	32.2	32.1	32.6	33.1
8H		31.7	32.1	32.2	32.6	33.1	31.7	32.1	32.1	32.5	33.0
Variations with the observer position at spacings:											
S = 1.0H		+ 1.1 / - 1.5					+ 1.2 / - 1.5				
1.5H		+ 0.9 / - 1.0					+ 0.9 / - 1.1				
2.0H		+ 2.4 / - 2.2					+ 2.5 / - 2.0				

CIE Pub.117 Corrected 29915 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:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm		
NAME: 270831	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14

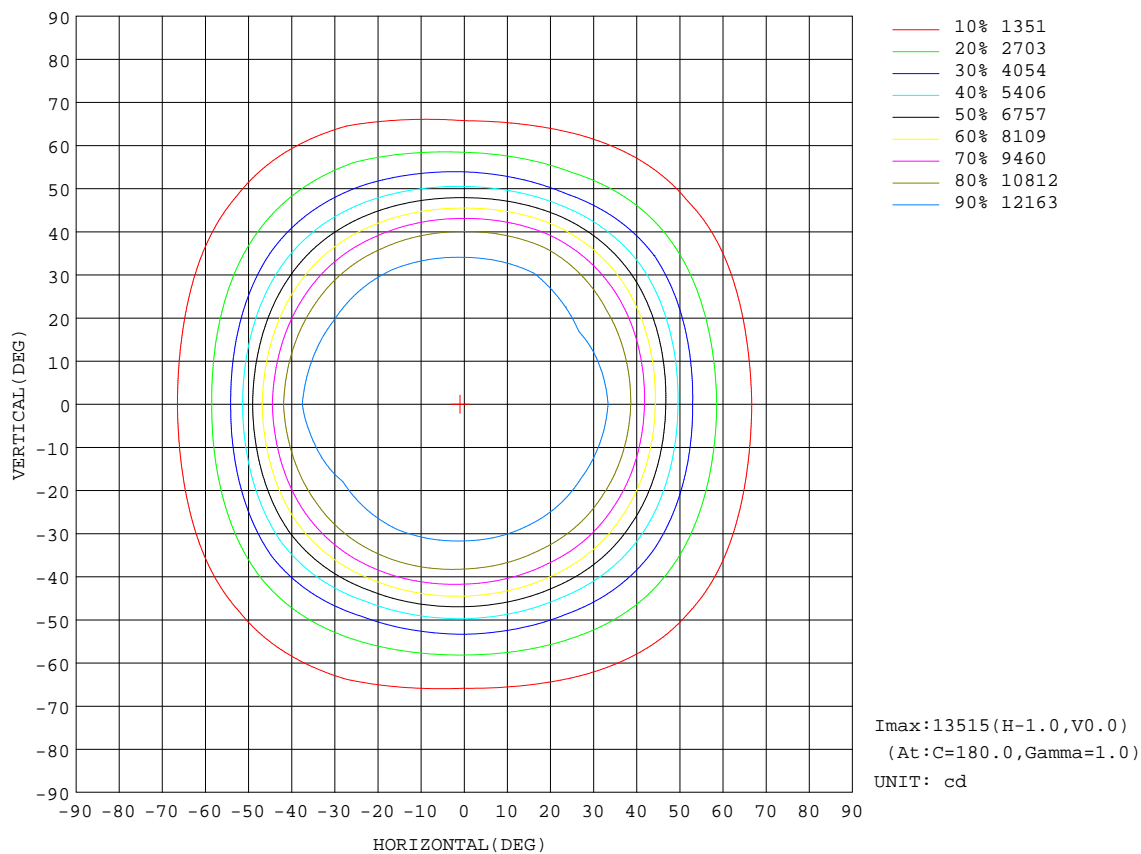
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	67	57	51	66	56	51	65	56	50	45
0.80	77	67	61	76	67	61	74	66	61	55
1.00	85	76	70	84	76	70	82	76	69	64
1.25	92	83	78	90	83	77	88	81	76	71
1.50	96	88	83	94	87	82	92	86	81	75
2.00	101	95	90	100	94	89	97	92	88	81
2.50	104	98	94	102	97	93	99	94	91	84
3.00	107	102	97	105	100	96	101	97	94	87
4.00	110	105	102	108	104	101	104	100	98	90
5.00	111	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:2022-03-21

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:

ISOCANDELA DIAGRAM

Test:U:231.5V I:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm		
NAME: 270831	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14



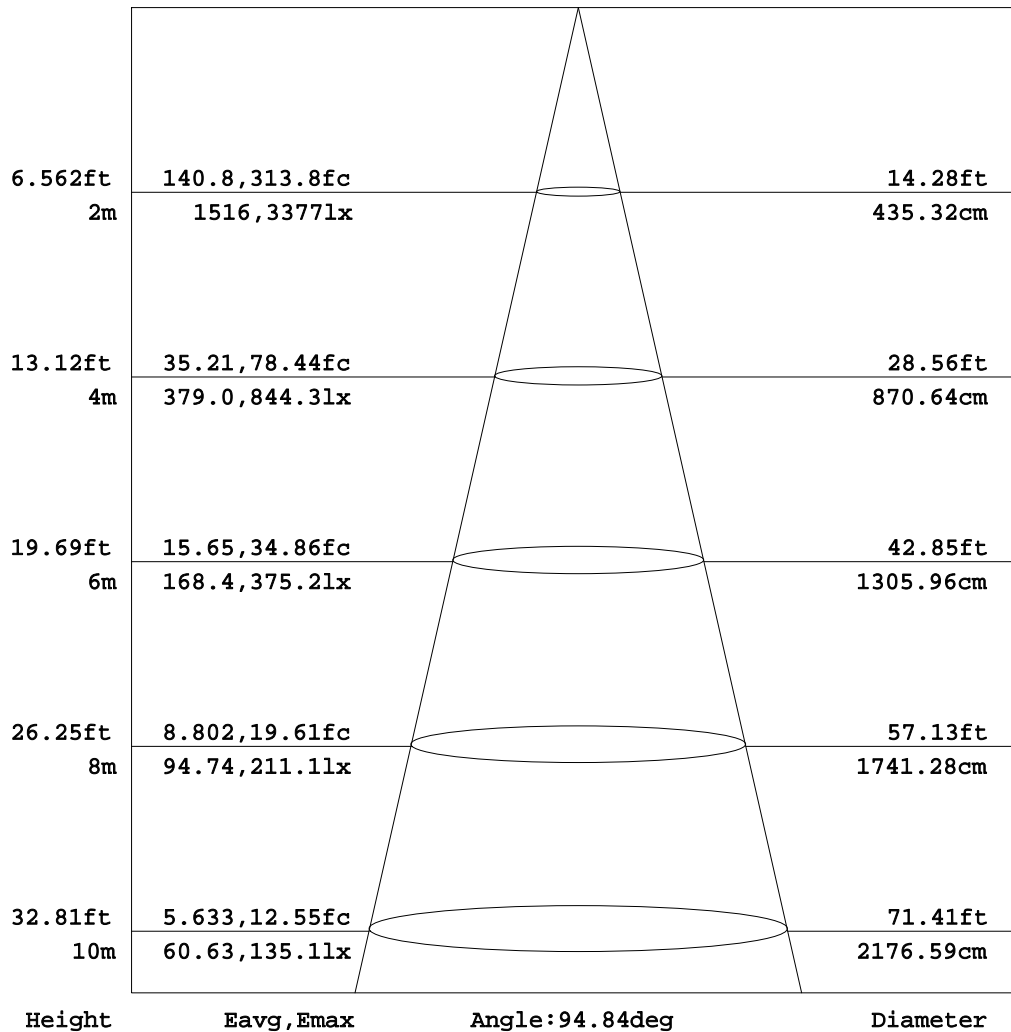
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-03-21

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:

AAI Figure

Test:U:231.5V I:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm		
NAME: 270831	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14

Flux out:23495 lm



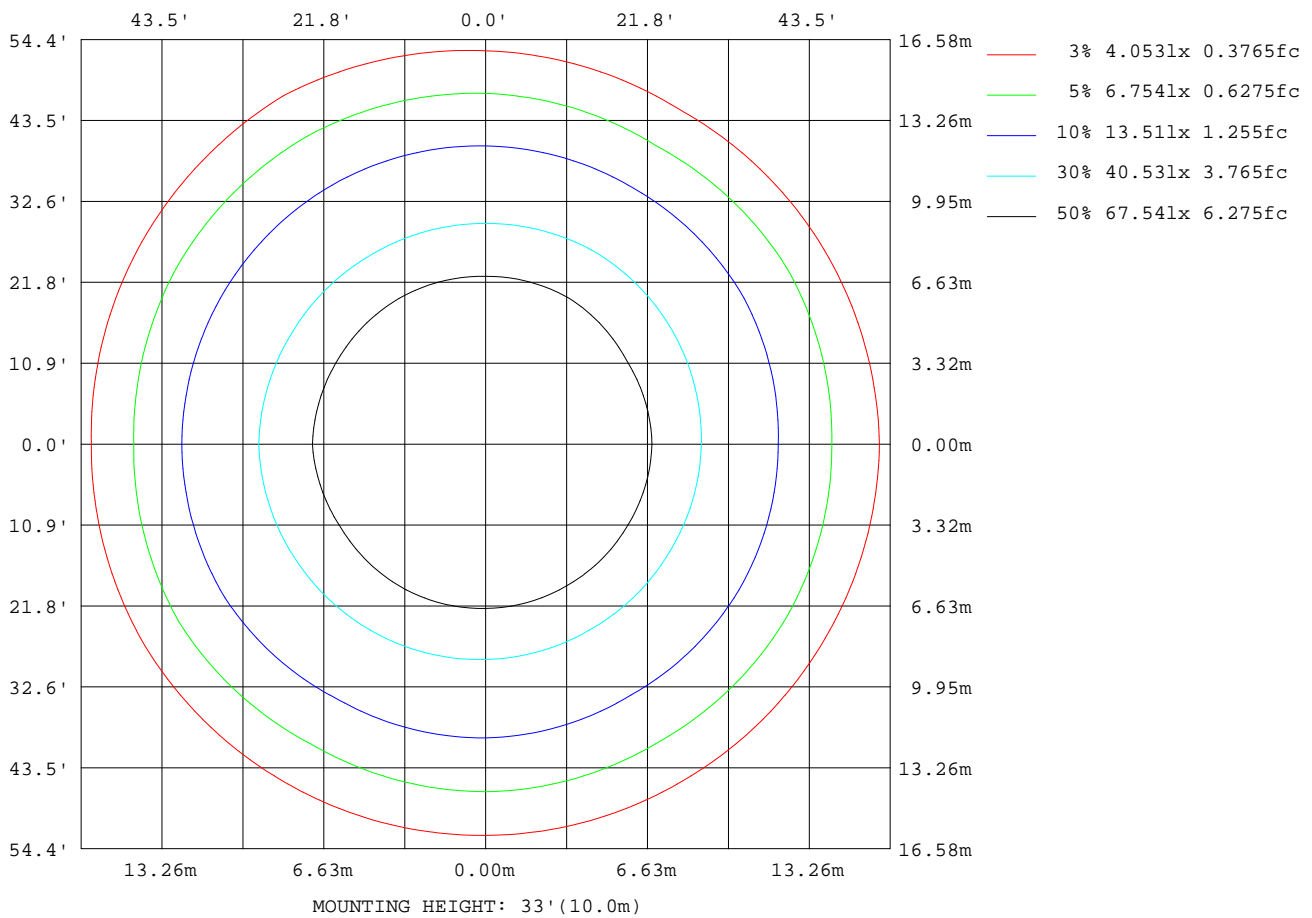
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

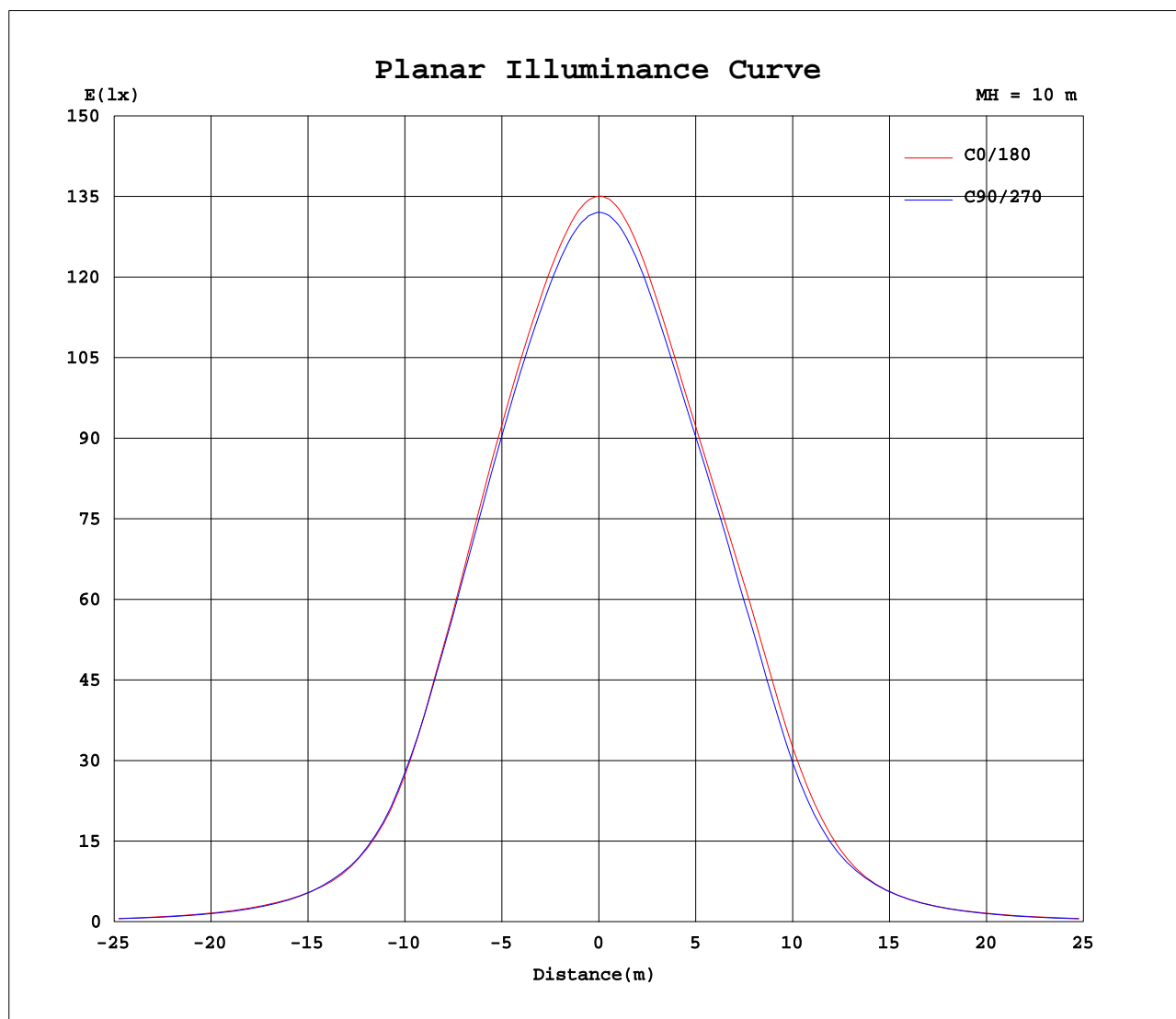
Test:U:231.5V I:0.8495A P:195.5W PF:0.9939 Lamp Flux:29914.8x1 lm		
NAME: 270831	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.191	PROTECTION ANGLE:0.14



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

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:

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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:

```