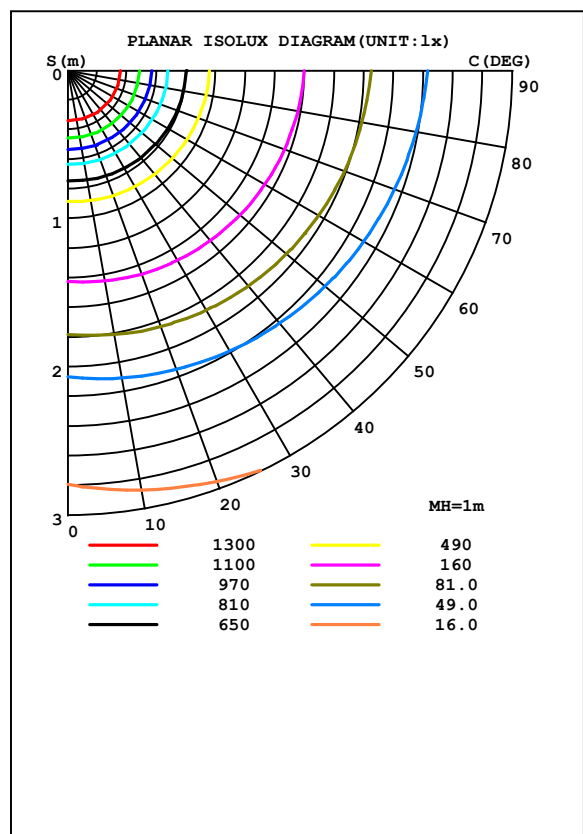
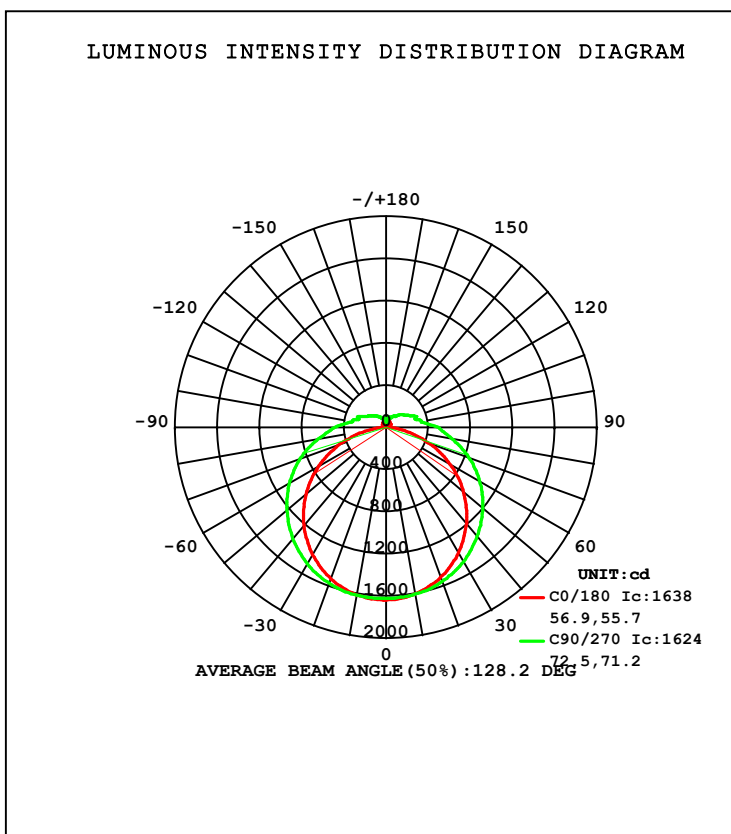


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 113.69 lm/W			
MODEL	TP2	I _{max} (cd)	1638	S/MH (C0/180)	1.27
NOMINAL POWER (W)	60	LOR (%)	100.0	S/MH (C90/270)	1.37
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	6479.8	η UP, DN (C0-180)	6.9, 42.7
NOMINAL FLUX (lm)	6479.8	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	6.6, 43.9
LAMPS INSIDE	1	η up (%)	13.4	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	230	η down (%)	86.6	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1603	1606	1613	1618					0- 10	154.6	154.6	2.39,2.39
20	1515	1558	1532	1577					10- 20	447.3	601.9	9.29,9.29
30	1373	1470	1396	1494					20- 30	689.3	1291	19.9,19.9
40	1189	1348	1214	1377					30- 40	852.7	2144	33.1,33.1
50	962.2	1199	992.5	1228					40- 50	920.1	3064	47.3,47.3
60	705.3	1028	737.5	1059					50- 60	887.3	3951	61,61
70	425.4	835.8	458.6	864.9					60- 70	758.4	4710	72.7,72.7
80	154.9	635.9	180.9	657.4					70- 80	554.7	5264	81.2,81.2
90	12.20	497.3	13.10	488.9					80- 90	344.6	5609	86.6,86.6
100	16.70	339.9	12.96	325.4					90-100	228.6	5838	90.1,90.1
110	31.32	309.6	27.76	291.6					100-110	173.7	6011	92.8,92.8
120	39.29	233.9	36.65	216.5					110-120	146.9	6158	95,95
130	49.25	191.9	47.45	177.9					120-130	110.9	6269	96.7,96.7
140	52.24	138.2	51.22	143.6					130-140	82.97	6352	98,98
150	58.05	122.3	56.71	114.3					140-150	57.98	6410	98.9,98.9
160	69.85	106.1	69.80	95.00					150-160	38.52	6449	99.5,99.5
170	79.06	81.17	79.91	85.21					160-170	23.97	6472	99.9,99.9
180	84.25	57.41	84.79	57.00					170-180	7.323	6480	100,100
DEG	LUMINOUS INTENSITY:cd Less than 35% Percent = 19.8 %									UNIT:lm		

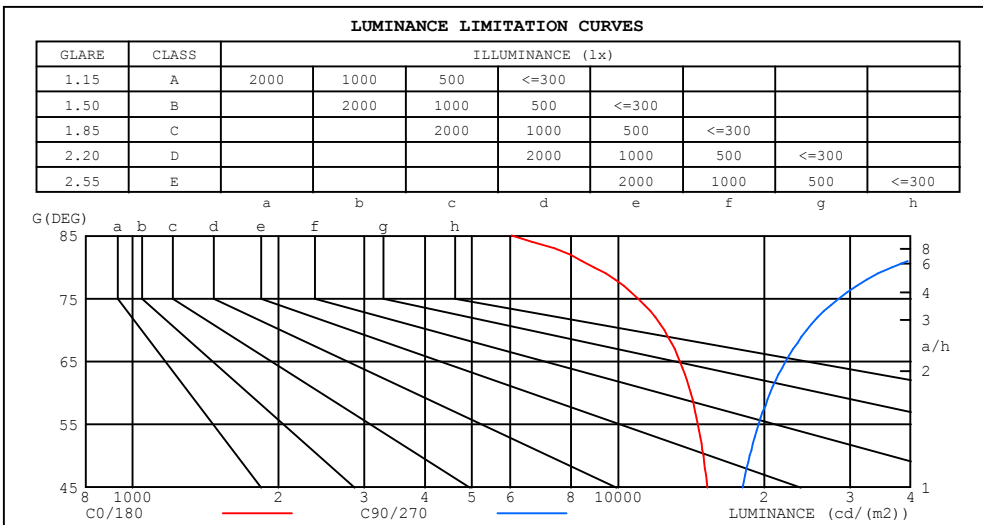
0 - 60 DEG Zonal Flux:3951.3 %lum: 61.0%
0 - 45 DEG Zonal Flux:2601.9 %lum: 40.2%
@35% Iavg: 11.0%
@50% Iavg: 16.7%

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:SEE
Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:60%
Test Distance:7.630m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	6037	63202
80	8918	36622
75	11006	28416
70	12439	24437
65	13391	22107
60	14105	20553
55	14587	19450
50	14970	18650
45	15266	18041

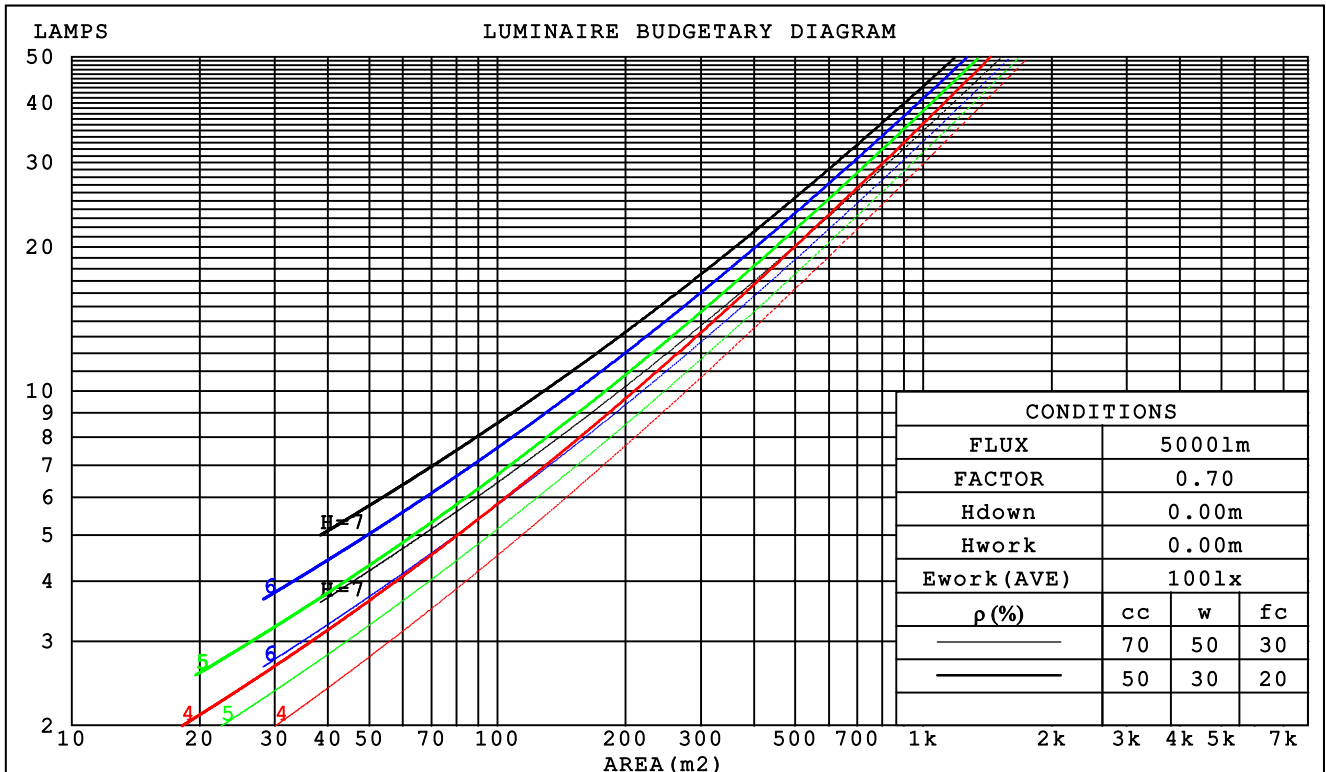
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	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						Coefficients of Utilization(CU)									
0.0	1.16	1.16	1.16	1.12	1.12	1.12	1.04	1.04	1.04	.96	.96	.96	.90	.90	.90	.87
1.0	.98	.93	.89	.95	.90	.86	.88	.84	.81	.82	.79	.76	.76	.73	.71	.68
2.0	.84	.77	.71	.81	.75	.69	.76	.70	.65	.70	.66	.62	.65	.62	.58	.55
3.0	.73	.65	.58	.71	.63	.56	.66	.59	.54	.61	.56	.51	.57	.52	.49	.46
4.0	.65	.55	.48	.62	.54	.47	.58	.51	.45	.54	.48	.43	.51	.45	.41	.38
5.0	.57	.48	.41	.56	.47	.40	.52	.44	.39	.48	.42	.37	.45	.40	.35	.33
6.0	.52	.42	.36	.50	.41	.35	.47	.39	.34	.44	.37	.32	.41	.35	.31	.29
7.0	.47	.38	.31	.45	.37	.31	.42	.35	.30	.40	.33	.28	.37	.32	.27	.25
8.0	.42	.34	.28	.41	.33	.27	.39	.31	.26	.36	.30	.25	.34	.29	.24	.22
9.0	.39	.30	.25	.38	.30	.24	.35	.28	.23	.33	.27	.23	.31	.26	.22	.20
10.0	.36	.28	.22	.35	.27	.22	.33	.26	.21	.31	.25	.20	.29	.24	.20	.18



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.357	.203	.064	.346	.197	.063	.325	.186	.060	.306	.176	.057	.288	.167	.054	
2.0	.318	.174	.053	.308	.170	.052	.289	.161	.050	.272	.152	.048	.255	.144	.046	
3.0	.287	.153	.046	.278	.149	.045	.260	.141	.043	.245	.134	.041	.230	.127	.039	
4.0	.260	.135	.040	.252	.132	.039	.237	.125	.037	.222	.119	.036	.209	.113	.035	
5.0	.238	.121	.035	.231	.118	.034	.217	.113	.033	.204	.107	.032	.191	.102	.031	
6.0	.219	.110	.031	.212	.107	.031	.200	.102	.030	.188	.097	.029	.176	.093	.028	
7.0	.203	.100	.028	.196	.098	.028	.185	.093	.027	.174	.089	.026	.164	.085	.025	
8.0	.188	.092	.026	.183	.090	.025	.172	.086	.025	.162	.082	.024	.153	.078	.023	
9.0	.176	.085	.024	.171	.083	.023	.161	.080	.023	.152	.076	.022	.143	.073	.021	
10.0	.165	.079	.022	.160	.077	.022	.151	.074	.021	.143	.071	.020	.135	.068	.019	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.293	.293	.293	.250	.250	.250	.171	.171	.171	.098	.098	.098	.031	.031	.031	
1.0	.287	.259	.234	.245	.222	.201	.168	.153	.139	.097	.088	.081	.031	.028	.026	
2.0	.280	.236	.199	.240	.203	.172	.164	.140	.120	.095	.082	.070	.030	.026	.023	
3.0	.272	.219	.176	.233	.189	.153	.160	.131	.107	.093	.077	.063	.030	.025	.021	
4.0	.265	.206	.162	.227	.178	.140	.156	.124	.099	.090	.073	.058	.029	.024	.019	
5.0	.257	.196	.151	.221	.170	.132	.152	.119	.093	.088	.070	.055	.028	.023	.018	
6.0	.250	.188	.144	.215	.163	.125	.148	.114	.089	.086	.067	.053	.028	.022	.017	
7.0	.243	.181	.139	.209	.157	.121	.144	.110	.086	.084	.065	.051	.027	.021	.017	
8.0	.236	.176	.134	.203	.153	.117	.141	.107	.083	.082	.063	.050	.026	.021	.016	
9.0	.230	.171	.131	.198	.148	.115	.137	.104	.081	.080	.062	.048	.026	.020	.016	
10.0	.224	.167	.129	.193	.145	.112	.134	.102	.080	.078	.060	.048	.025	.020	.016	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:SEE
Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:60%
Test Distance:7.630m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm										
NAME: TP2 60W 6000K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: SEE					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	21.2	22.6	21.7	23.1	23.5	22.5	23.9	23.0	24.4	24.8
3H	22.7	24.0	23.2	24.5	25.0	24.9	26.2	25.4	26.6	27.1
4H	23.3	24.5	23.8	25.0	25.5	26.1	27.4	26.6	27.8	28.4
6H	23.6	24.8	24.1	25.3	25.8	27.5	28.6	28.0	29.1	29.7
8H	23.7	24.8	24.2	25.3	25.9	28.2	29.3	28.7	29.8	30.4
12H	23.7	24.8	24.3	25.3	25.9	29.0	30.1	29.6	30.6	31.2
4H 2H	22.1	23.3	22.6	23.8	24.3	23.1	24.3	23.6	24.8	25.3
3H	23.8	24.9	24.4	25.4	26.0	25.6	26.7	26.1	27.2	27.8
4H	24.5	25.5	25.1	26.1	26.7	27.0	28.0	27.6	28.5	29.1
6H	25.0	25.9	25.6	26.5	27.1	28.5	29.4	29.1	30.0	30.6
8H	25.2	26.0	25.8	26.6	27.3	29.4	30.2	30.0	30.8	31.4
12H	25.3	26.0	25.9	26.6	27.3	30.4	31.1	31.0	31.7	32.4
8H 4H	25.2	26.0	25.8	26.6	27.3	27.2	28.1	27.9	28.7	29.3
6H	26.0	26.7	26.6	27.3	28.0	29.0	29.7	29.6	30.3	31.0
8H	26.3	26.9	26.9	27.5	28.3	30.0	30.6	30.7	31.3	32.0
12H	26.5	27.0	27.2	27.7	28.5	31.3	31.8	31.9	32.5	33.2
12H 4H	25.3	26.1	26.0	26.7	27.4	27.3	28.0	27.9	28.6	29.3
6H	26.3	26.9	26.9	27.5	28.3	29.1	29.7	29.7	30.3	31.1
8H	26.7	27.2	27.4	27.9	28.7	30.2	30.7	30.8	31.4	32.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				

CIE Pub.117, 6480 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 6.5)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:SEE
Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:60%
Test Distance:7.630m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:

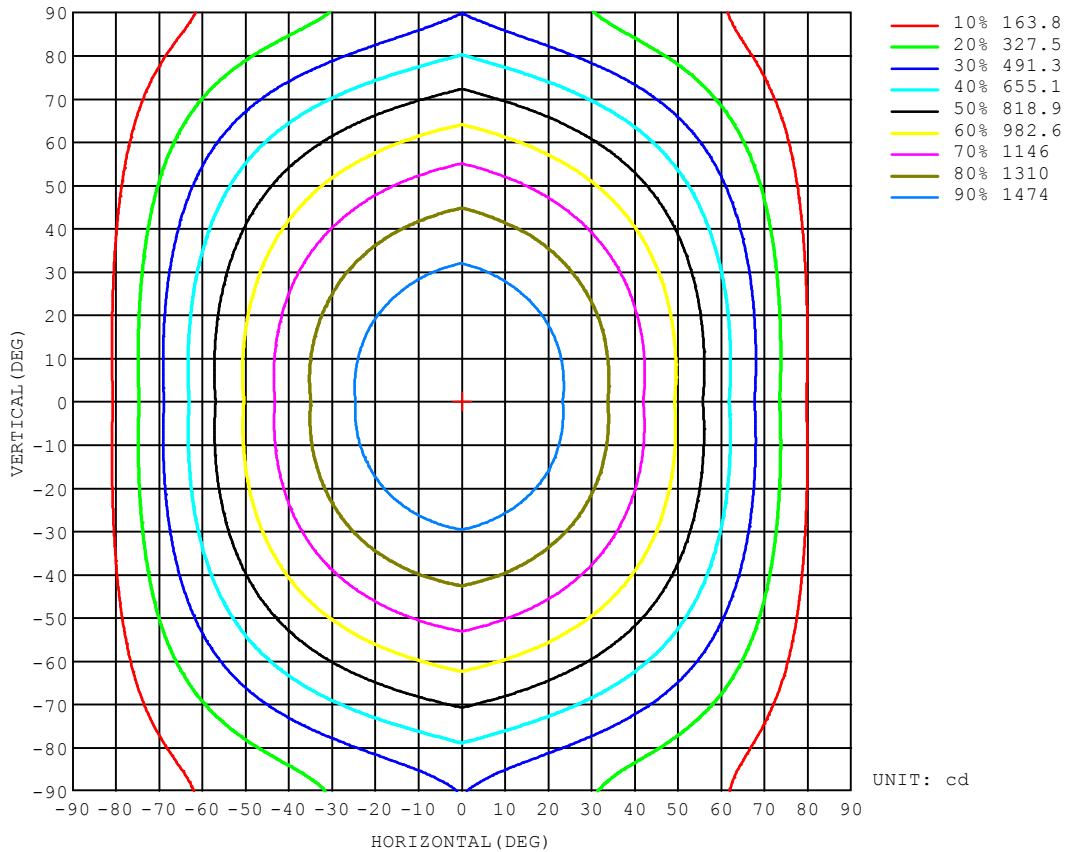
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	50	38	31	49	38	31	48	37	31	24
0.80	60	47	40	58	47	39	56	45	38	31
1.00	68	56	48	66	55	47	63	55	46	38
1.25	75	63	55	73	62	54	69	59	53	44
1.50	80	69	61	78	67	60	73	64	58	48
2.00	87	77	69	84	75	68	79	72	65	55
2.50	92	82	75	89	80	73	83	76	70	59
3.00	95	87	80	92	84	78	86	80	75	62
4.00	100	93	87	96	90	84	90	85	80	67
5.00	103	96	91	99	93	89	92	88	84	70
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:SEE
Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:60%
Test Distance:7.630m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:

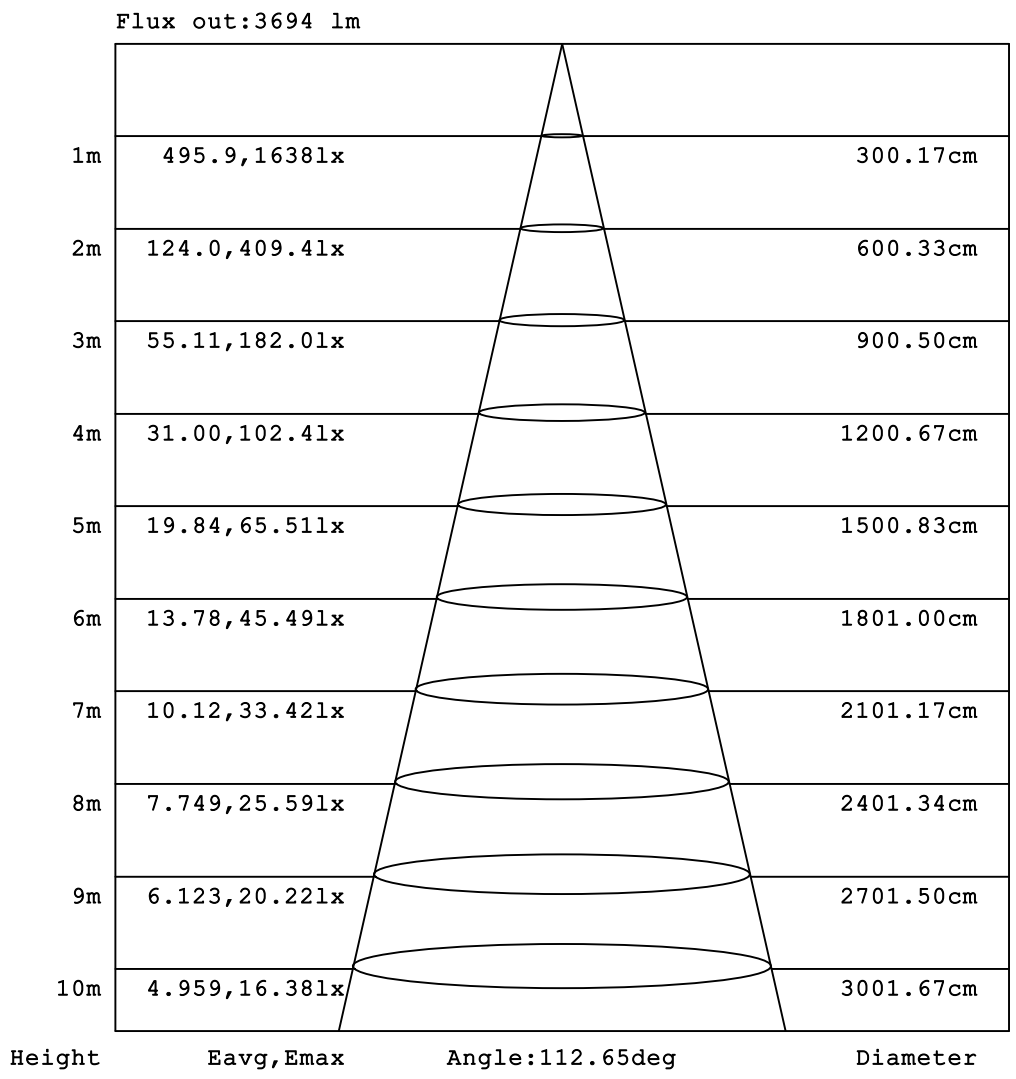


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [K=1.0000]
 Remarks:

AAI Figure

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:



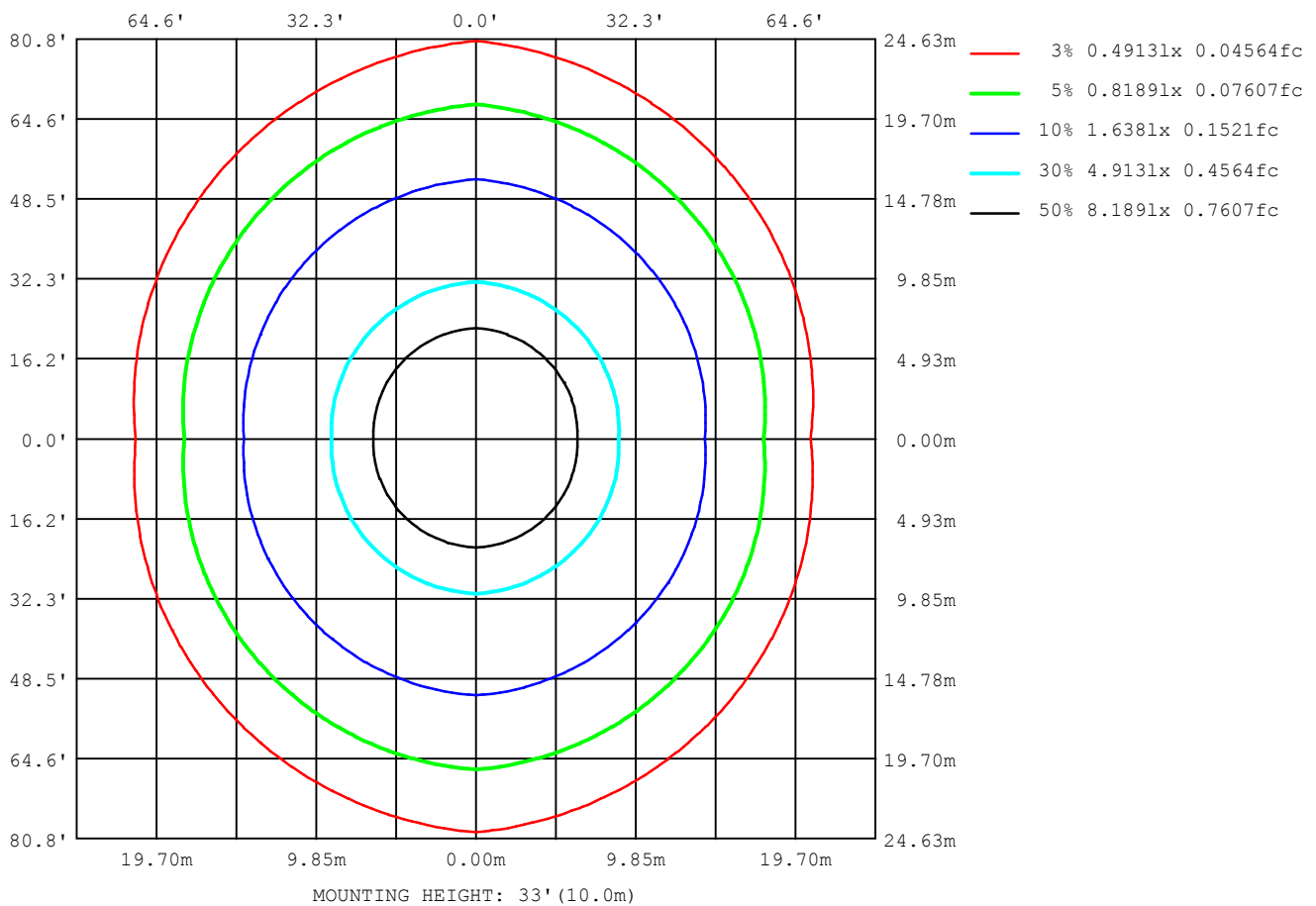
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:230.22V I:0.264A P:56.99W PF:0.9369 Freq:49.99Hz Lamp Flux:6479.8x1 lm		
NAME: TP2 60W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:

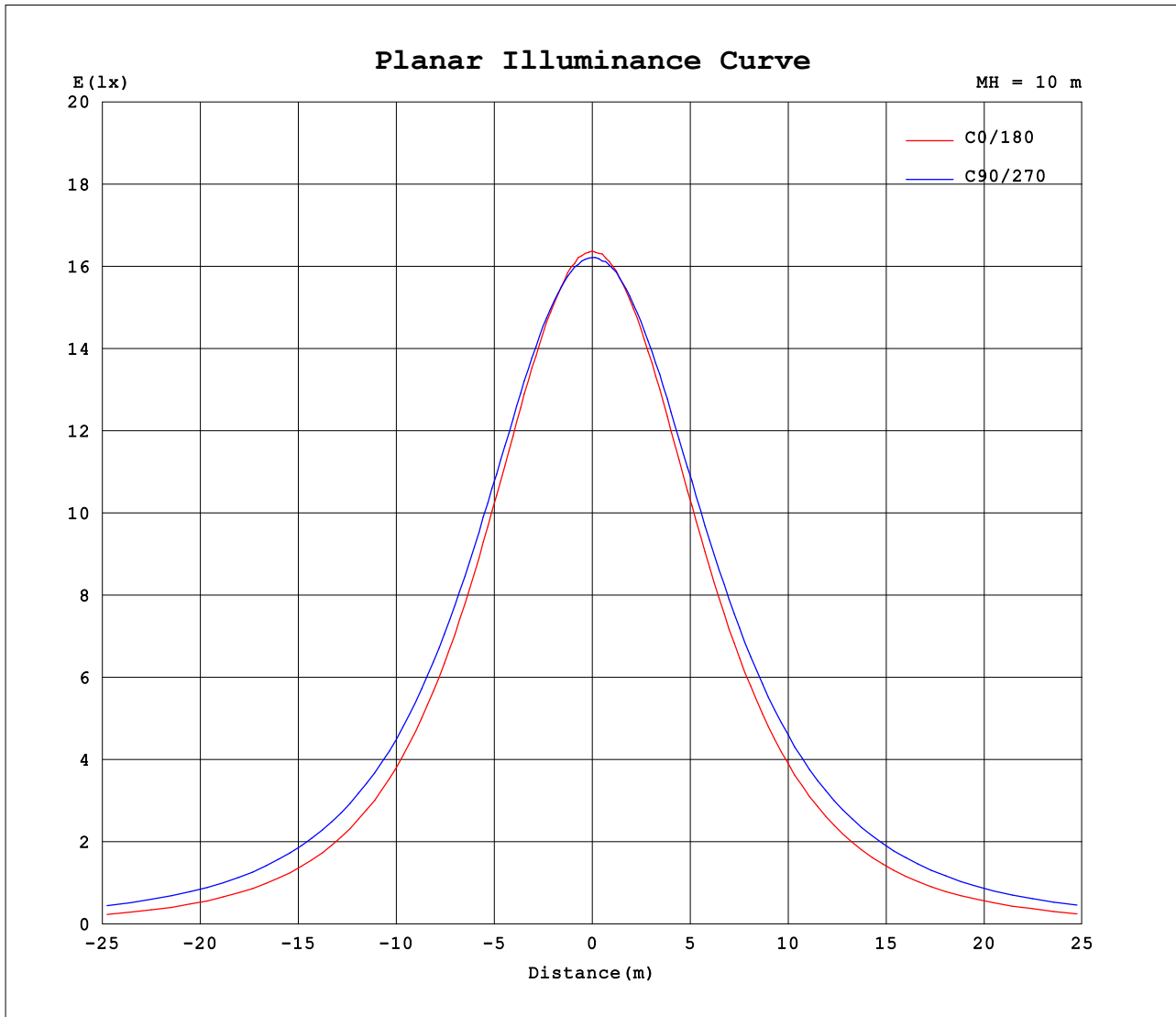
AvgL	cd/m2
L_0~180 (65) av	13806
L_0~180 (75) av	11623
L_0~180 (85) av	7045
L_90~270 (65) av	22456
L_90~270 (75) av	28918
L_90~270 (85) av	63769
L_45 (65) av	19238
L_45 (75) av	22471
L_45 (85) av	42560

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:SEE
Test Date:2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:60%
Test Distance:7.630m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 2021-06-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks: