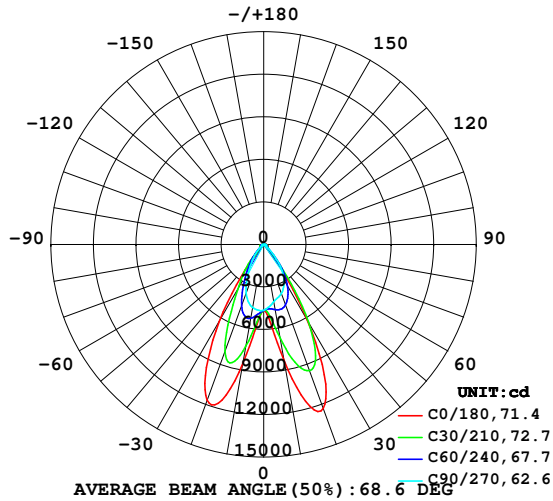


LUMINAIRE PHOTOMETRIC TEST REPORT

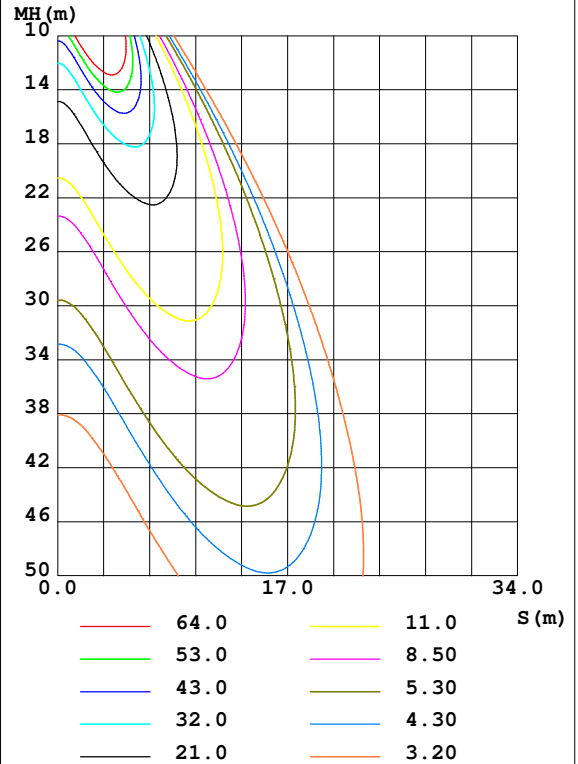
Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 126.37 lm/W			
MODEL	TCE	I _{max} (cd)	12446	S/MH (C0/180)	1.04
NOMINAL POWER(W)	65W	LOR (%)	100.0	S/MH (C90/270)	0.86
RATED VOLTAGE(V)	220.0	TOTAL FLUX (lm)	7816.5	η UP, DN (C0-180)	0.0, 53.7
NOMINAL FLUX (lm)	7816.48	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 46.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	0.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	832.9	555.3	411.6	628.9	851.7	619.8	452.7	589.4	0- 10	519.0	519.0	6.64, 6.64
20	1231	647.0	368.2	708.8	1168	602.9	363.9	564.4	10- 20	1981	2500	32, 32
30	611.7	466.6	288.3	465.0	628.3	304.6	205.5	274.0	20- 30	2581	5081	65, 65
40	83.86	152.5	153.1	141.0	95.21	131.5	99.22	121.3	30- 40	1526	6608	84.5, 84.5
50	32.49	32.01	39.37	33.13	34.99	30.48	30.01	27.49	40- 50	489.4	7097	90.8, 90.8
60	25.01	21.12	15.69	21.42	25.87	22.79	16.04	22.31	50- 60	226.8	7324	93.7, 93.7
70	28.15	18.18	10.19	18.43	28.21	24.10	12.39	24.44	60- 70	207.8	7532	96.4, 96.4
80	18.20	13.12	4.001	13.88	19.95	17.10	6.163	17.16	70- 80	189.5	7721	98.8, 98.8
90	7.774	4.456	0.3975	4.535	8.881	4.910	0.5246	4.823	80- 90	95.41	7816	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: μ A10cd									UNIT: lm		

Conical surface Flux(90deg): 6923.2 lm

%lum = 88.6%

%lamp = 88.6%

Conical surface Flux(120deg): 7323.8 lm

%lum = 93.7%

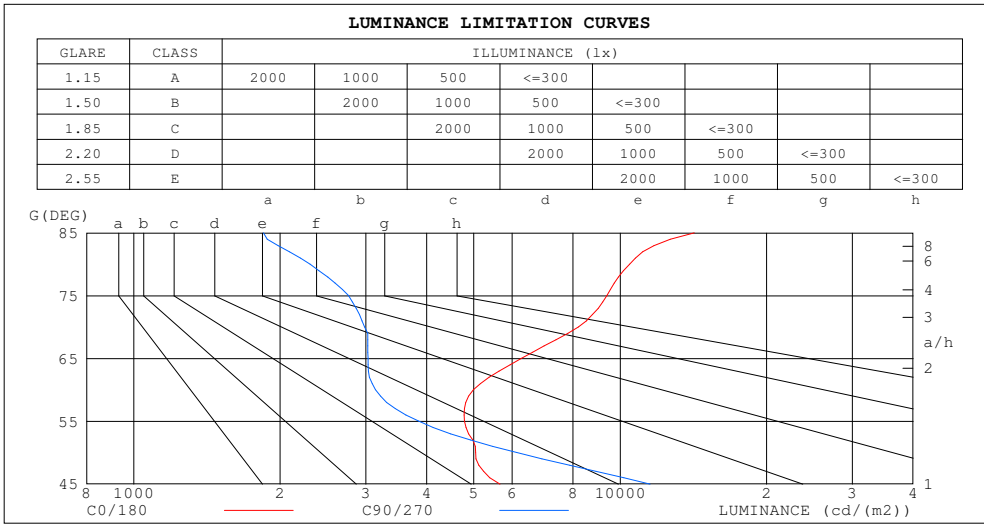
%lamp = 93.7%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 20DEG
 Operators: LITPA
 Test Date: 17 April 2019

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
 Humidity: 65.0%
 Test Distance: 5.680m [K=1.0000]
 Remarks: TCE-65W-VS
 OT-60

LUMINANCE LIMITATION CURVES

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:



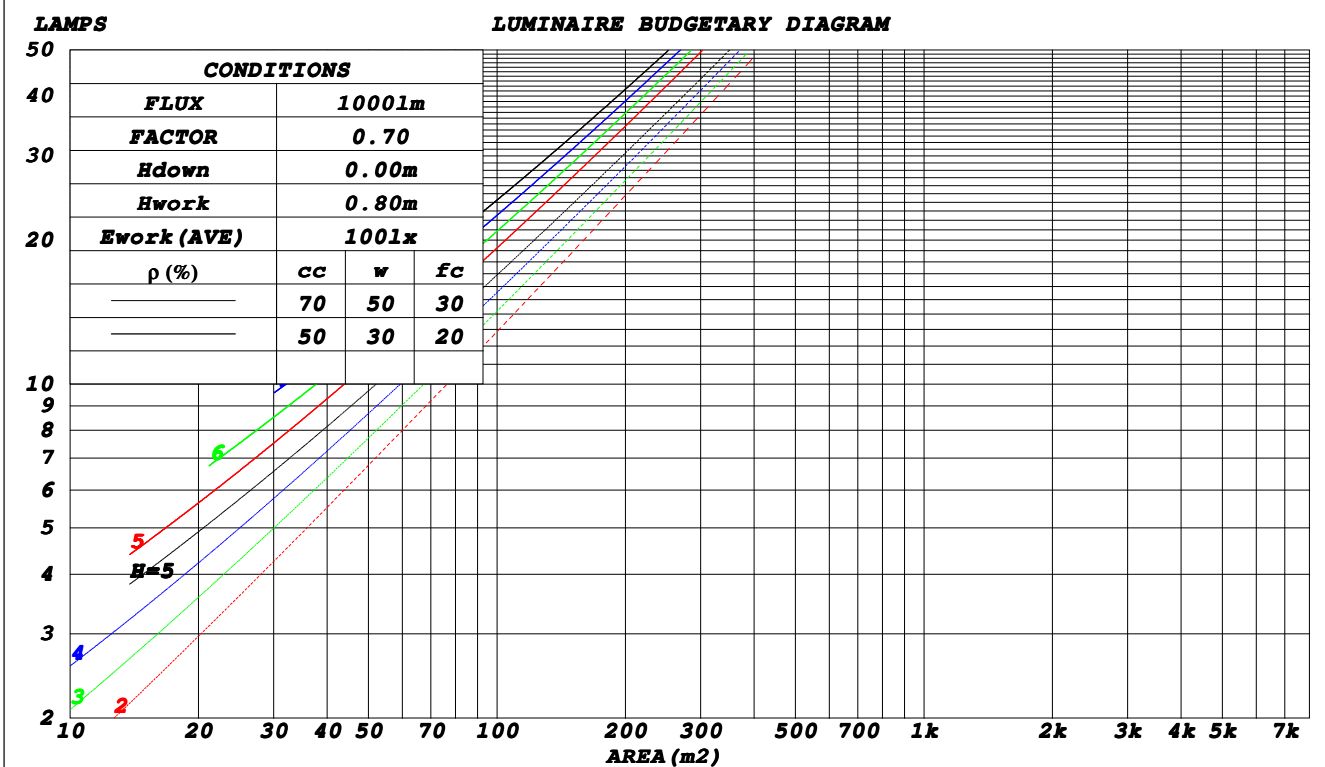
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	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						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	1.09	1.06	1.03	1.07	1.04	1.01	1.02	1.00	.98	.99	.97	.95	.95	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.87	.84	.83
3.0	.92	.86	.82	.91	.85	.81	.88	.84	.80	.85	.82	.79	.83	.80	.77	.76
4.0	.85	.79	.74	.84	.78	.74	.82	.77	.73	.80	.76	.72	.78	.74	.71	.70
5.0	.79	.73	.68	.78	.72	.68	.77	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.63	.73	.67	.62	.72	.66	.62	.70	.65	.62	.69	.64	.61	.60
7.0	.69	.63	.58	.69	.62	.58	.67	.62	.57	.66	.61	.57	.65	.60	.57	.55
8.0	.65	.58	.54	.64	.58	.54	.63	.57	.53	.62	.57	.53	.61	.56	.53	.52
9.0	.61	.55	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.58	.53	.50	.48
10.0	.57	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.54	.50	.46	.45



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

WEC AND CCEC

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	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	.216	.123	.039	.209	.119	.038	.196	.113	.036	.185	.106	.034	.174	.101	.032		
2.0	.201	.110	.034	.195	.108	.033	.185	.103	.032	.175	.098	.031	.165	.093	.029		
3.0	.188	.100	.030	.183	.098	.030	.174	.094	.029	.165	.090	.028	.157	.087	.027		
4.0	.176	.092	.027	.172	.090	.027	.164	.087	.026	.156	.084	.025	.149	.081	.025		
5.0	.166	.085	.025	.162	.083	.024	.155	.081	.024	.149	.078	.023	.143	.076	.023		
6.0	.157	.079	.023	.154	.078	.022	.148	.076	.022	.142	.074	.022	.136	.072	.021		
7.0	.149	.074	.021	.146	.073	.021	.140	.071	.020	.135	.069	.020	.130	.068	.020		
8.0	.142	.069	.019	.139	.068	.019	.134	.067	.019	.129	.066	.019	.125	.064	.019		
9.0	.135	.065	.018	.133	.065	.018	.128	.063	.018	.124	.062	.018	.120	.061	.018		
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.115	.058	.017		

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.149	.114	.086	.127	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.119	.086	.060	.082	.060	.042	.047	.035	.025	.015	.011	.008	
5.0	.130	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.123	.079	.047	.106	.068	.041	.073	.048	.029	.042	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.100	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.111	.065	.034	.095	.057	.030	.066	.040	.021	.038	.024	.013	.012	.008	.004	
9.0	.106	.060	.030	.091	.052	.026	.063	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.101	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

UGR(Unified Glare Rating) Table

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm											
NAME: TCE					TYPE:LED			WEIGHT:3.2kg			
SPEC.:65W					DIM.: 68mmX1430mmX78mm			SERIAL No.:			
MFR.: LITPA AYDINLATMA					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	17.7	18.8	17.9	18.9	19.1	16.4	17.5	16.7	17.7	17.9	
	3H	18.7	19.7	18.9	19.9	20.1	16.7	17.7	17.0	17.9	18.1
	4H	19.5	20.4	19.8	20.7	20.9	16.9	17.8	17.2	18.0	18.3
	6H	20.4	21.2	20.7	21.5	21.7	17.0	17.9	17.3	18.1	18.4
	8H	20.8	21.6	21.1	21.9	22.1	17.0	17.9	17.3	18.1	18.4
	12H	21.1	22.0	21.5	22.2	22.5	17.0	17.8	17.3	18.1	18.4
4H	2H	17.7	18.6	18.0	18.8	19.1	16.5	17.5	16.8	17.7	17.9
	3H	19.0	19.8	19.3	20.1	20.4	17.1	17.9	17.4	18.2	18.5
	4H	20.1	20.8	20.4	21.1	21.5	17.4	18.2	17.8	18.5	18.8
	6H	21.2	21.9	21.6	22.2	22.6	17.7	18.4	18.1	18.7	19.0
	8H	21.7	22.4	22.1	22.7	23.1	17.8	18.4	18.2	18.7	19.1
	12H	22.3	22.8	22.7	23.2	23.6	17.8	18.4	18.2	18.7	19.1
8H	4H	20.3	20.9	20.7	21.3	21.6	17.9	18.6	18.3	18.9	19.3
	6H	21.7	22.2	22.1	22.6	23.0	18.5	19.0	18.9	19.4	19.8
	8H	22.4	22.9	22.9	23.3	23.7	18.6	19.1	19.1	19.5	19.9
	12H	23.1	23.5	23.6	23.9	24.4	18.8	19.1	19.2	19.6	20.1
12H	4H	20.3	20.9	20.7	21.2	21.6	18.1	18.7	18.5	19.1	19.5
	6H	21.8	22.2	22.2	22.6	23.1	18.8	19.2	19.2	19.6	20.1
	8H	22.5	22.9	23.0	23.4	23.9	19.0	19.4	19.5	19.9	20.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.4 / - 0.3					+ 1.1 / - 1.3					
1.5H	+ 0.8 / - 0.3					+ 2.2 / - 1.3					
2.0H	+ 0.1 / - 0.2					+ 1.9 / - 0.7					

CIE Pub.117, 7816 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 7.1$)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:20DEG
 Operators:LITPA
 Test Date:17 April 2019

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.400
 Humidity:65.0%
 Test Distance:5.680m [K=1.0000]
 Remarks: TCE-65W-VS
 OT-60

UTILIZATION FACTORS TABLE

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:

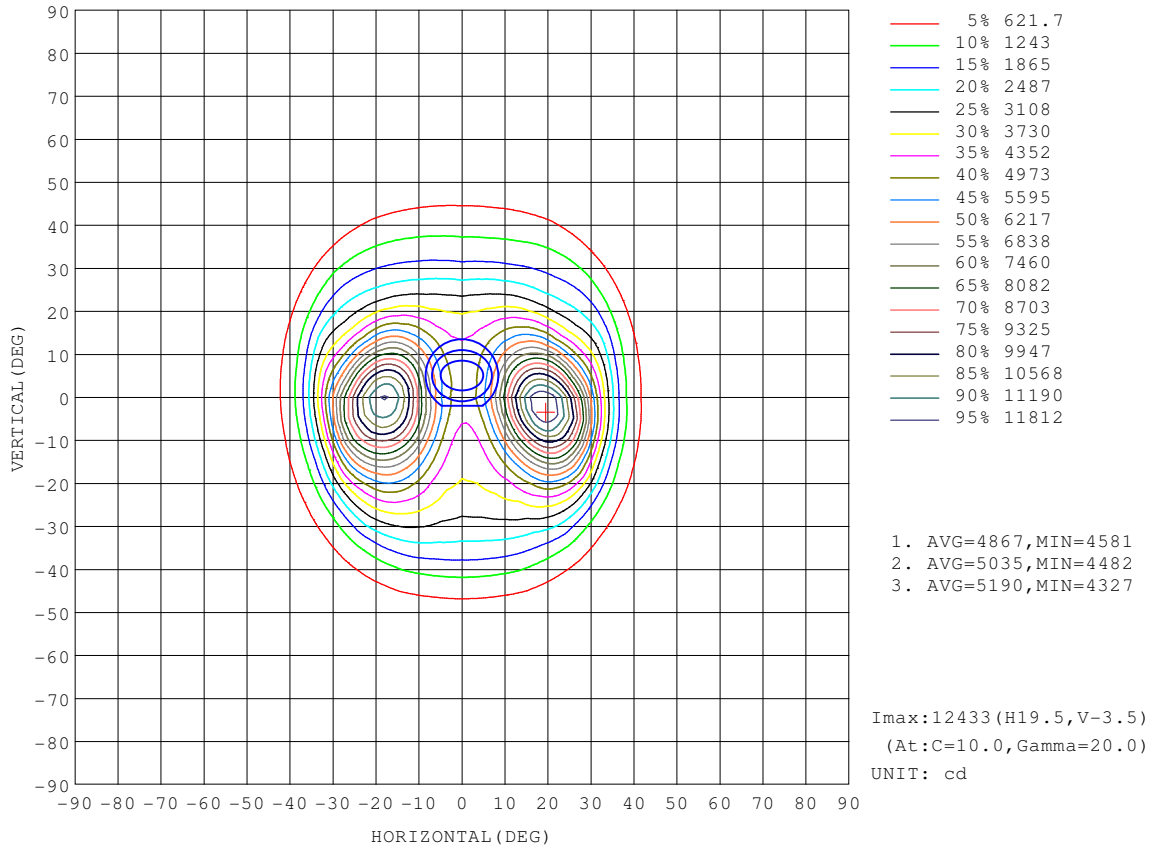
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	71	82	75	71	81	74	70	66
0.80	90	83	79	89	83	78	88	82	78	74
1.00	95	88	84	94	88	84	92	88	83	79
1.25	99	93	89	98	92	88	96	91	88	83
1.50	102	96	92	101	96	92	99	94	91	86
2.00	106	100	97	104	99	96	101	97	94	89
2.50	108	103	99	106	102	98	103	99	97	90
3.00	110	105	102	108	104	101	104	101	99	92
4.00	112	109	106	110	107	104	106	104	102	94
5.00	114	111	108	111	109	107	107	105	104	96
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

ISOCANDELA DIAGRAM

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:

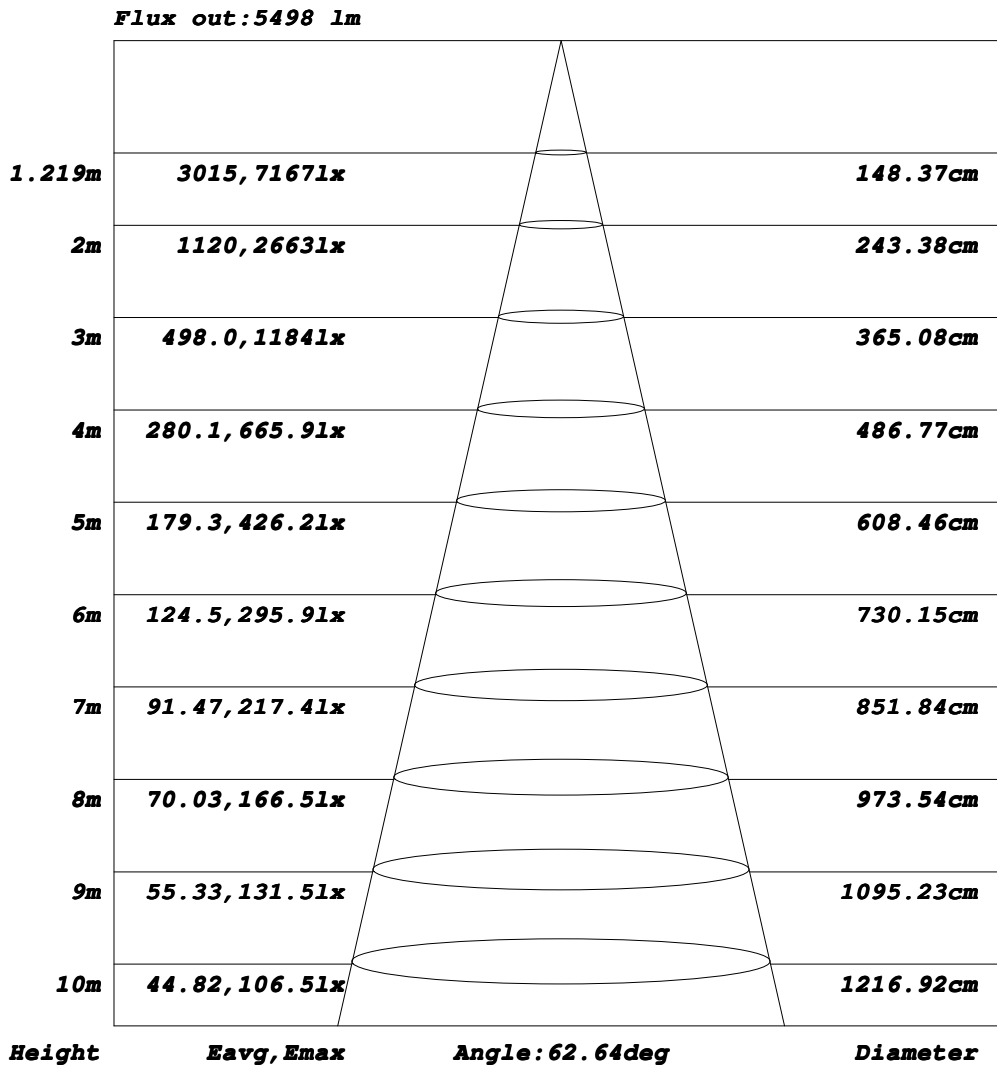


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:LITPA
Test Date:17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity:65.0%
Test Distance:5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

AAI Figure

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:



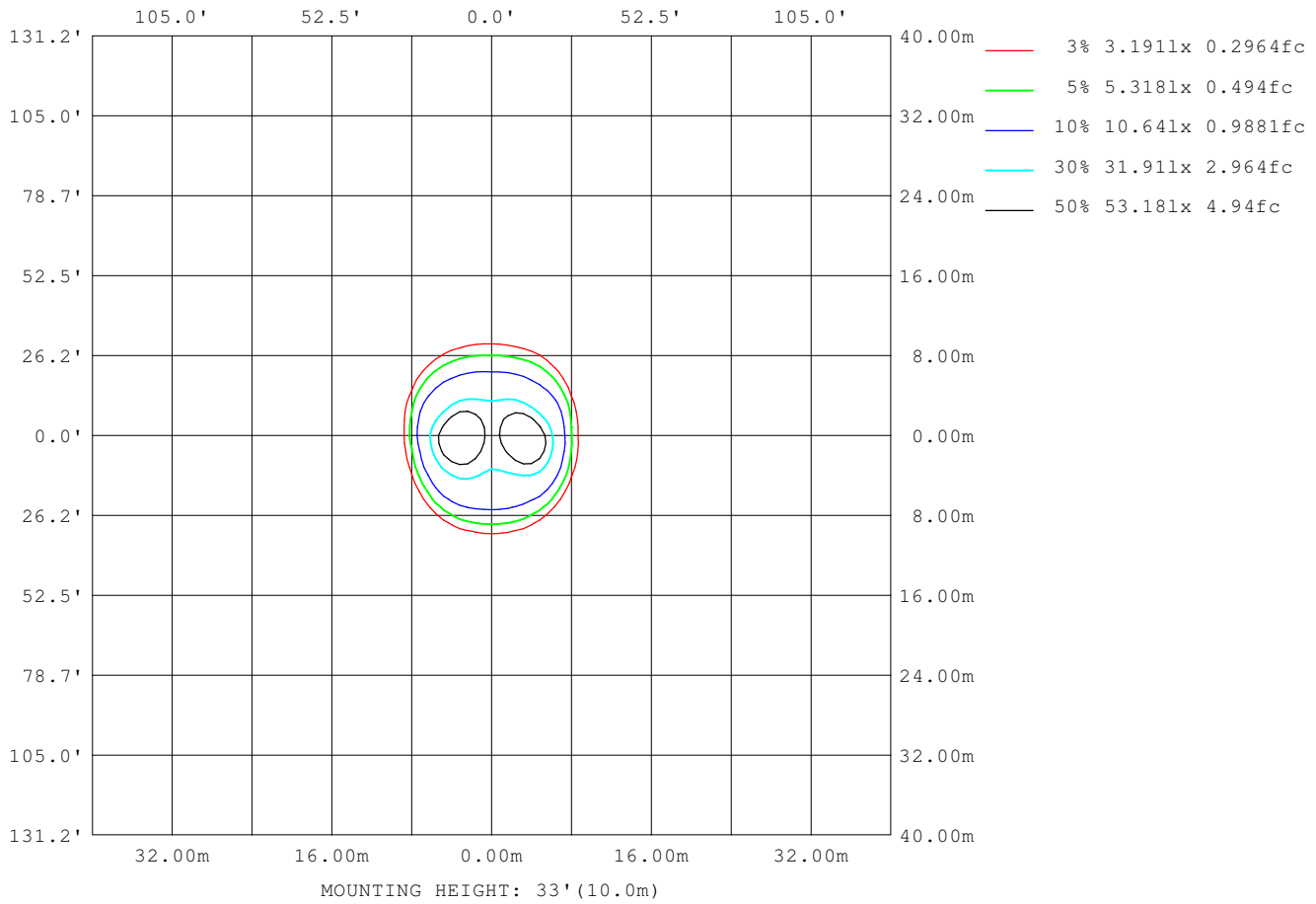
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

ISOLUX DIAGRAM

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

LED Avg.L Report

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:

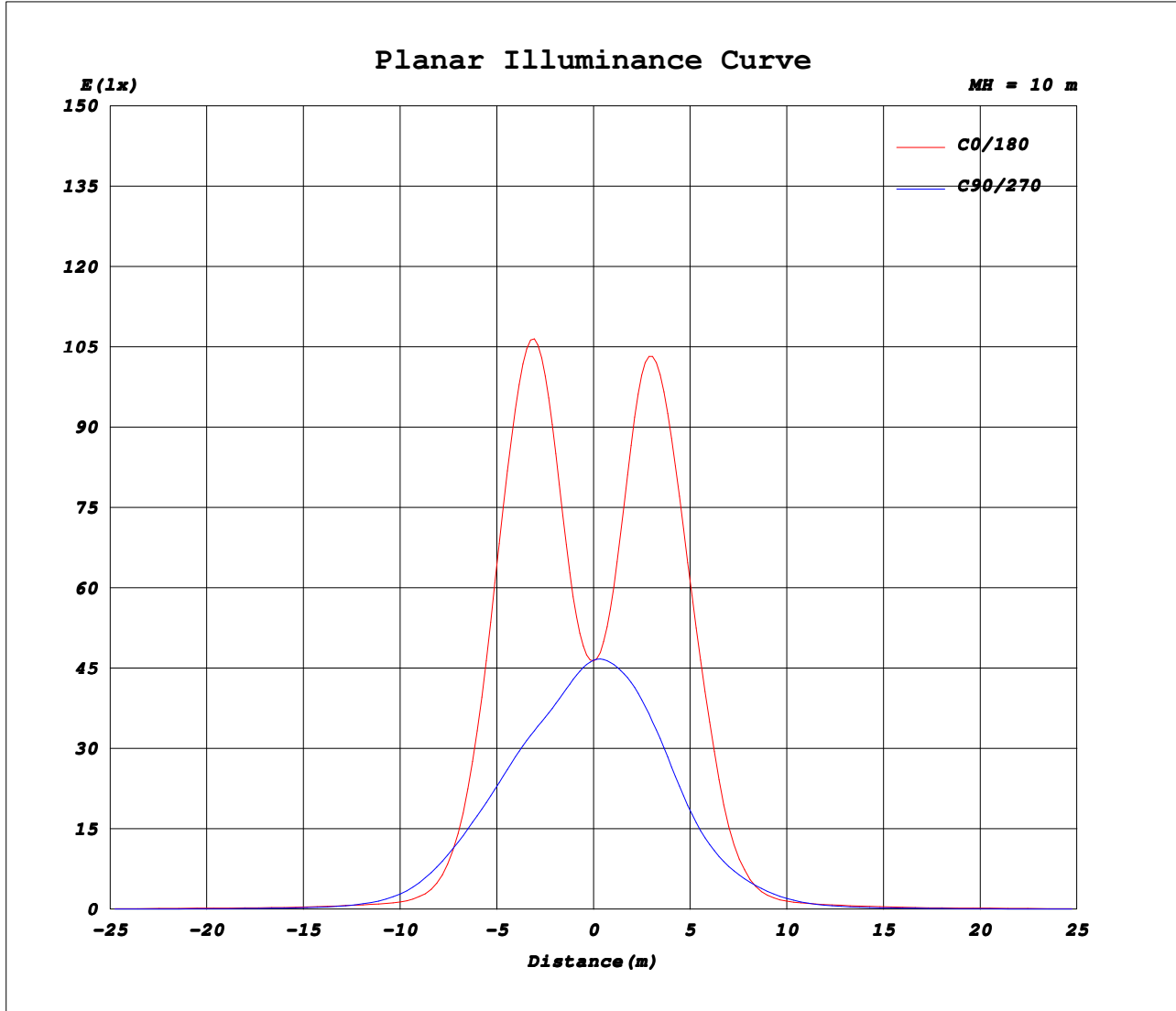
AvgL	cd/m2
L_0~180 (65) av	6267
L_0~180 (75) av	9664
L_0~180 (85) av	14634
L_90~270 (65) av	3195
L_90~270 (75) av	3233
L_90~270 (85) av	2412
L_45 (65) av	5105
L_45 (75) av	7521
L_45 (85) av	10783

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:20DEG
Operators:LITPA
Test Date:17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity:65.0%
Test Distance:5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity: 65.0%
Test Distance: 5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:

Table--1

UNIT: ;Á10cd

[illegible]

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity:65.0%
Test Distance:5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.30V I:0.2747A P:61.855W PF:0.9777 Freq:50.01Hz Lamp Flux:7816.48x1 lm		
NAME: TCE	TYPE:LED	WEIGHT:3.2kg
SPEC.:65W	DIM.: 68mmX1430mmX78mm	SERIAL No.:
MFR.: LITPA AYDINLATMA	SUR.:	Shielding Angle:

Table--2

UNIT: ;Á10cd

[illegible]

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 20DEG
Operators: LITPA
Test Date: 17 April 2019

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.400
Humidity:65.0%
Test Distance:5.680m [K=1.0000]
Remarks: TCE-65W-VS
OT-60