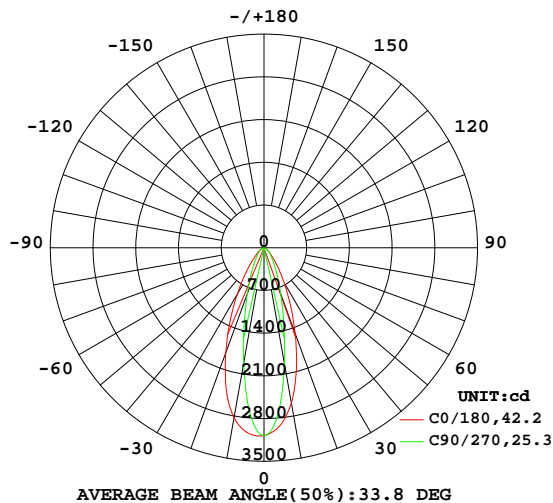


LUMINAIRE PHOTOMETRIC TEST REPORT

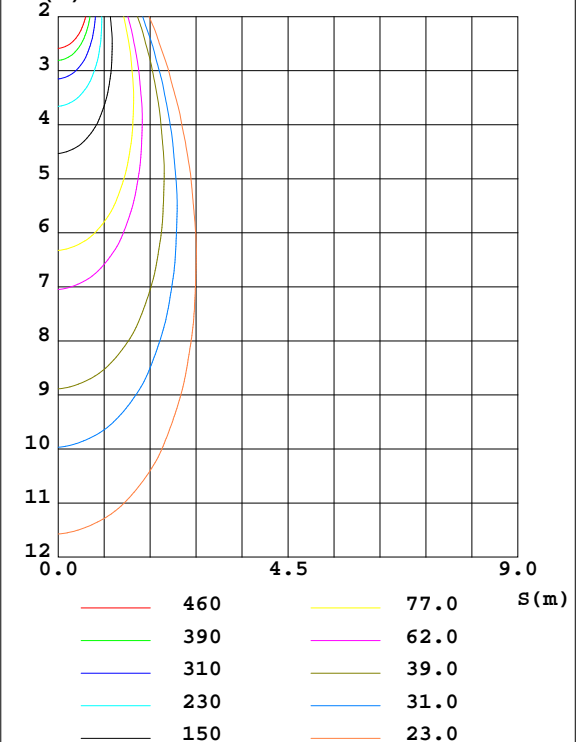
NAME: TLO020-61	TYPE: 34D	WEIGHT:
SPEC.: 3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.: 90	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 82.60 lm/W			
MODEL		Imax(cd)	3086	S/MH(C0/180)	0.72
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.43
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1545.1	η UP,DN(C0-180)	0.0,49.6
NOMINAL FLUX(lm)	1545.11	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	0.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 28DEG
Operators: LXJ
Test Date: 2024-12-07

γ Range: 0 - 0DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity: 65.0%
Test Distance: 5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	2583	2189	1938	2361	2831	2345	1922	2183	0- 10	253.5	253.5	16.4,16.4
20	1491	998.8	801.7	1147	1835	1135	801.4	1004	10- 20	461.7	715.2	46.3,46.3
30	656.5	420.5	357.6	495.4	865.1	489.4	357.2	424.8	20- 30	356.4	1072	69.4,69.4
40	261.5	197.9	183.6	231.8	347.8	227.7	183.3	199.8	30- 40	214.7	1286	83.3,83.3
50	113.4	103.9	105.7	122.1	146.1	119.4	105.1	105.5	40- 50	125.3	1412	91.4,91.4
60	57.85	54.62	59.74	66.40	72.34	64.64	59.28	55.90	50- 60	76.08	1488	96.3,96.3
70	23.62	24.14	26.38	30.80	34.03	30.17	26.85	24.01	60- 70	42.78	1530	99.1,99.1
80	0	0	0	0	0	0	0	0	70- 80	14.65	1545	100,100
90	0	0	0	0	0	0	0	0	80- 90	0	1545	100,100
100	0	0	0	0	0	0	0	0	90-100	0	1545	100,100
110	0	0	0	0	0	0	0	0	100-110	0	1545	100,100
120	0	0	0	0	0	0	0	0	110-120	0	1545	100,100
130	0	0	0	0	0	0	0	0	120-130	0	1545	100,100
140	0	0	0	0	0	0	0	0	130-140	0	1545	100,100
150	0	0	0	0	0	0	0	0	140-150	0	1545	100,100
160	0	0	0	0	0	0	0	0	150-160	0	1545	100,100
170	0	0	0	0	0	0	0	0	160-170	0	1545	100,100
180	0	0	0	0	0	0	0	0	170-180	0	1545	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

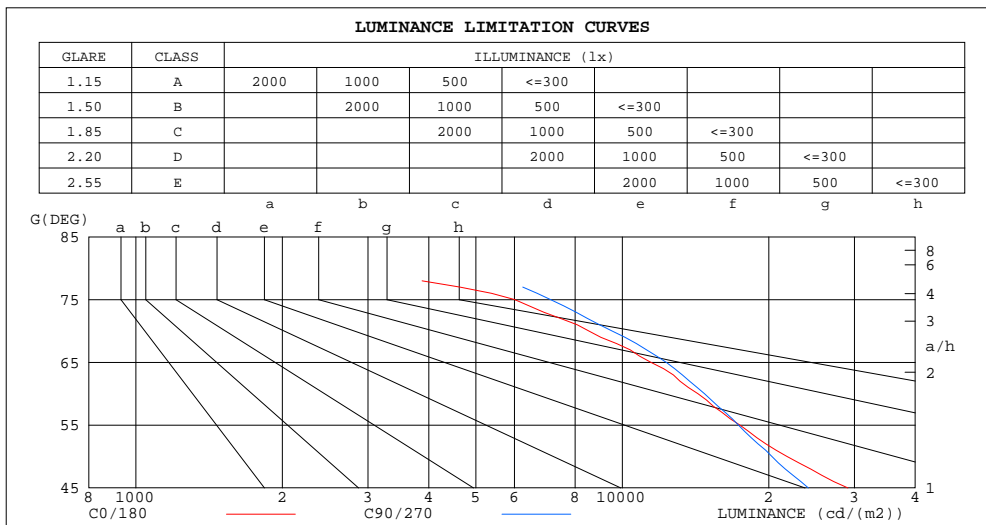
C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:28DEG
Operators:LXJ
Test Date:2024-12-07

γ Range: 0 - 0DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

LUMINANCE LIMITATION CURVES

NAME: TLO020-61	TYPE: 34D	WEIGHT:
SPEC.: 3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.: 90	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	0	0
80	0	0
75	6006	7118
70	8531	9523
65	11442	12304
60	14296	14749
55	17444	17326
50	21788	20302
45	29078	24114

C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 28DEG
Operators: LXJ
Test Date: 2024-12-07

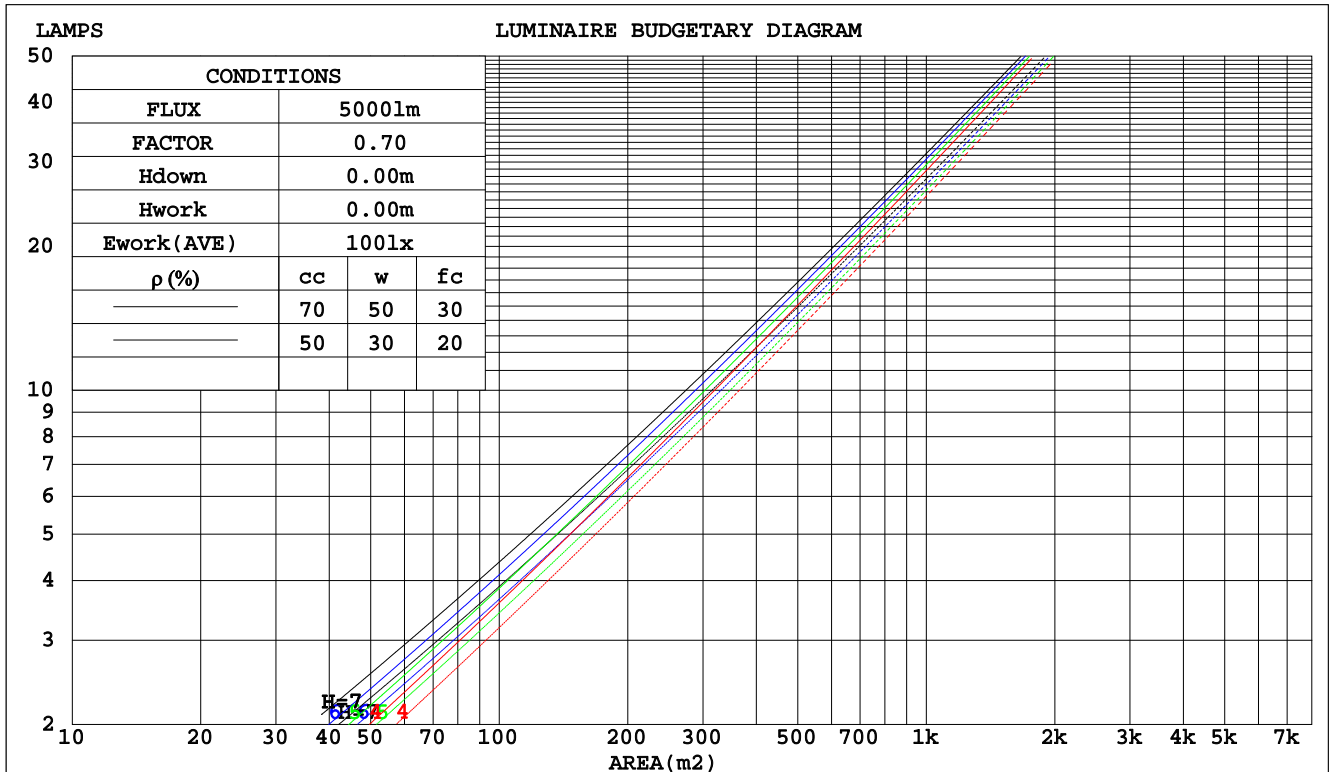
γ Range: 0 - 0DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity: 65.0%
Test Distance: 5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: TLO020-61	TYPE: 34D	WEIGHT:
SPEC.: 3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.: 90	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	1.19	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	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.87	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.88	.85	.82	.86	.83	.81	.79
4.0	.89	.83	.79	.88	.82	.78	.85	.81	.77	.83	.79	.76	.81	.78	.75	.74
5.0	.83	.77	.73	.82	.77	.73	.80	.76	.72	.79	.75	.71	.77	.74	.71	.69
6.0	.78	.72	.68	.78	.72	.68	.76	.71	.67	.75	.70	.67	.73	.69	.66	.65
7.0	.74	.68	.64	.73	.68	.64	.72	.67	.63	.71	.66	.63	.70	.66	.63	.61
8.0	.70	.64	.60	.70	.64	.60	.68	.63	.60	.67	.63	.59	.66	.62	.59	.58
9.0	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.63	.59	.56	.55
10.0	.63	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.61	.56	.53	.52



C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 28DEG
Operators: LXJ
Test Date: 2024-12-07

γ Range: 0 - 0DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity: 65.0%
Test Distance: 5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

WEC AND CCEC

NAME: TLO020-61	TYPE:34D	WEIGHT:
SPEC.:3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.:90	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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.187	.106	.034	.180	.103	.033	.168	.096	.031	.156	.090	.029	.145	.084	.027		
2.0	.179	.098	.030	.174	.096	.029	.163	.091	.028	.153	.086	.027	.144	.081	.026		
3.0	.170	.090	.027	.165	.088	.027	.156	.084	.026	.147	.081	.025	.140	.077	.024		
4.0	.160	.083	.024	.156	.082	.024	.148	.079	.023	.141	.076	.023	.134	.073	.022		
5.0	.151	.077	.022	.148	.076	.022	.141	.073	.022	.135	.071	.021	.129	.069	.021		
6.0	.143	.072	.021	.140	.071	.020	.134	.069	.020	.128	.067	.020	.123	.065	.019		
7.0	.136	.067	.019	.133	.066	.019	.128	.065	.019	.123	.063	.018	.118	.061	.018		
8.0	.129	.063	.018	.127	.062	.018	.122	.061	.017	.117	.059	.017	.113	.058	.017		
9.0	.123	.059	.017	.121	.059	.016	.116	.058	.016	.112	.056	.016	.109	.055	.016		
10.0	.117	.056	.016	.115	.056	.016	.111	.055	.015	.108	.054	.015	.104	.052	.015		

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.145	.114	.088	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.135	.099	.072	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.126	.087	.059	.108	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007	
6.0	.118	.078	.049	.102	.068	.043	.070	.047	.030	.041	.028	.018	.013	.009	.006	
7.0	.112	.071	.042	.096	.061	.036	.066	.043	.026	.039	.025	.015	.012	.008	.005	
8.0	.106	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.055	.027	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:28DEG
Operators:LXJ
Test Date:2024-12-07

γ Range: 0 - 0DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

UGR(Unified Glare Rating) Table

NAME: TLO020-61					TYPE:34D			WEIGHT:			
SPEC.:3000K CRI90					DIM.:			SERIAL No.:			
MFR.:					SUR.:90			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		18.4	19.4	18.6	19.5	19.7	17.5	18.5	17.8	18.7	18.9
3H		18.8	19.7	19.0	19.9	20.1	18.1	19.0	18.4	19.2	19.4
4H		18.8	19.7	19.1	19.9	20.1	18.3	19.1	18.6	19.3	19.6
6H		18.8	19.6	19.1	19.8	20.1	18.2	19.0	18.5	19.3	19.5
8H		18.7	19.5	19.0	19.8	20.0	18.2	19.0	18.5	19.2	19.5
12H		18.7	19.4	19.0	19.7	20.0	18.1	18.9	18.5	19.2	19.4
4H 2H		18.5	19.4	18.8	19.6	19.8	17.8	18.6	18.0	18.8	19.1
3H		19.0	19.7	19.3	20.0	20.3	18.5	19.2	18.8	19.5	19.8
4H		19.1	19.8	19.4	20.1	20.4	18.7	19.3	19.0	19.6	19.9
6H		19.1	19.7	19.4	20.0	20.3	18.6	19.2	19.0	19.6	19.9
8H		19.0	19.6	19.4	19.9	20.3	18.6	19.1	19.0	19.5	19.9
12H		19.0	19.5	19.4	19.8	20.2	18.5	19.1	19.0	19.4	19.8
8H 4H		19.1	19.6	19.4	20.0	20.3	18.6	19.2	19.0	19.6	19.9
6H		19.0	19.5	19.5	19.9	20.3	18.6	19.1	19.1	19.5	19.9
8H		19.0	19.4	19.4	19.8	20.2	18.6	19.0	19.0	19.4	19.8
12H		18.9	19.3	19.4	19.7	20.2	18.5	18.9	19.0	19.3	19.8
12H 4H		19.0	19.5	19.4	19.9	20.3	18.6	19.1	19.0	19.5	19.9
6H		19.0	19.4	19.4	19.8	20.2	18.6	19.0	19.0	19.4	19.8
8H		18.9	19.3	19.4	19.7	20.2	18.5	18.9	19.0	19.3	19.8
Variations with the observer position at spacings:											
S = 1.0H		+ 1.4 / - 1.5					+ 0.7 / - 1.0				
1.5H		+ 2.2 / - 1.1					+ 0.6 / - 0.5				
2.0H		+ 2.0 / - 1.5					+ 1.2 / - 1.2				

CIE Pub.117, 1545 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 1.5$)

C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:28DEG
Operators:LXJ
Test Date:2024-12-07

γ Range: 0 - 0DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

UTILIZATION FACTORS TABLE

NAME: TLO020-61	TYPE: 34D	WEIGHT:
SPEC.: 3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.: 90	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) x RCR = 5									
k = 0.60	81	74	69	80	73	69	80	73	69	65
0.80	89	82	78	88	82	78	87	81	77	73
1.00	95	88	84	94	88	83	92	88	83	78
1.25	99	93	89	98	93	89	96	91	88	83
1.50	103	97	93	101	96	92	99	95	91	86
2.00	106	101	98	105	100	97	102	98	95	90
2.50	108	104	100	107	103	99	103	100	97	91
3.00	110	106	103	108	105	102	105	102	100	93
4.00	113	109	107	110	108	105	107	104	103	95
5.00	114	111	109	112	109	107	108	106	104	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHR _{NOM} = 1.25										

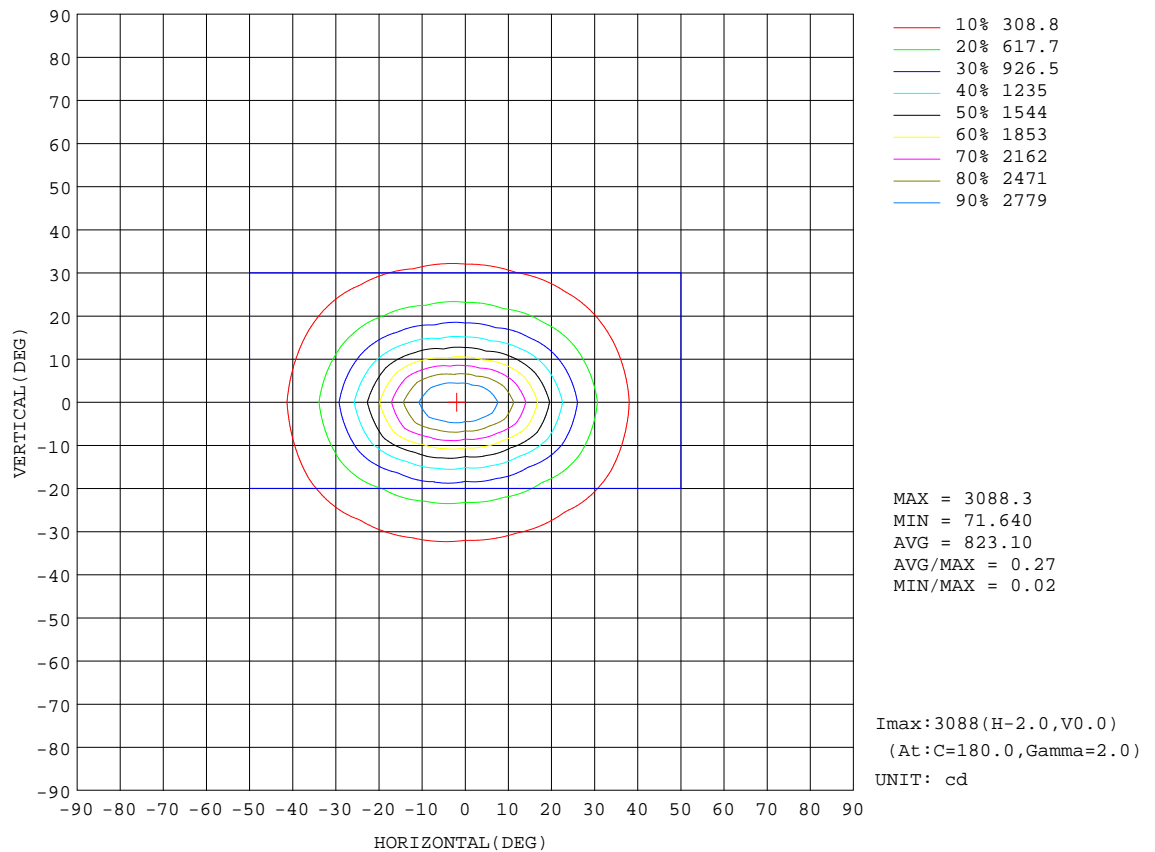
C Range: 0 - 0DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 28DEG
 Operators: LXJ
 Test Date: 2024-12-07

γ Range: 0 - 0DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

ISOCANDELA DIAGRAM

NAME: TLO020-61	TYPE: 34D	WEIGHT:
SPEC.: 3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.: 90	Shielding Angle:



C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 28DEG
Operators: LXJ
Test Date: 2024-12-07

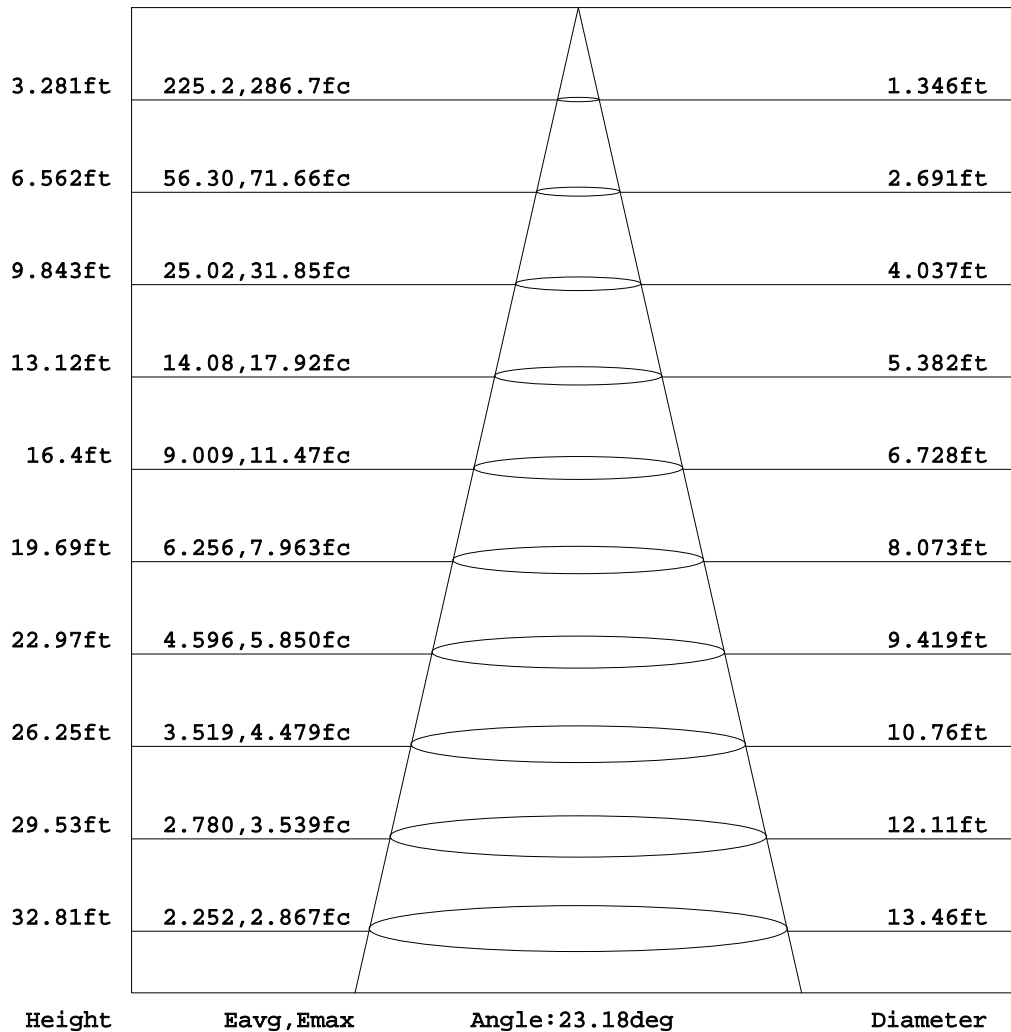
γ Range: 0 - 0DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity: 65.0%
Test Distance: 5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

AAI Figure

NAME: TLO020-61	TYPE:34D	WEIGHT:
SPEC.:3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.:90	Shielding Angle:

Flux out:344.1 lm



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

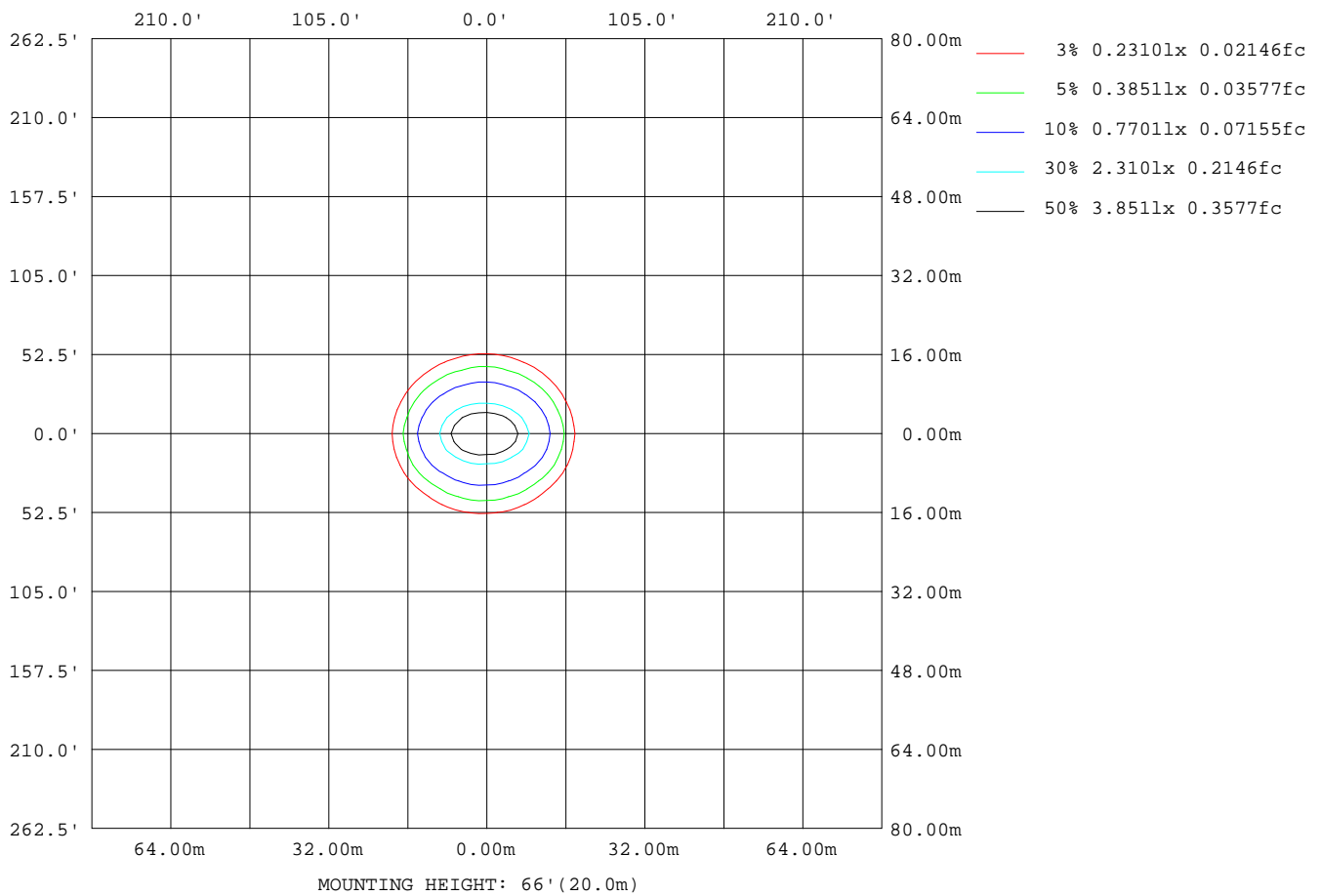
C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:28DEG
Operators:LXJ
Test Date:2024-12-07

γ Range: 0 - 0DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

ISOLUX DIAGRAM

NAME: TLO020-61	TYPE: 34D	WEIGHT:
SPEC.: 3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.: 90	Shielding Angle:



C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 28DEG
Operators: LXJ
Test Date: 2024-12-07

γ Range: 0 - 0DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity: 65.0%
Test Distance: 5.190m [K=1.0000]
Remarks:

TLO020-61 36V500mA BXEP-30G-1C5-36C-00-000 15X45D 3000K CRI90 NA

LED Avg.L Report

NAME: TLO020-61	TYPE:34D	WEIGHT:
SPEC.:3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.:90	Shielding Angle:

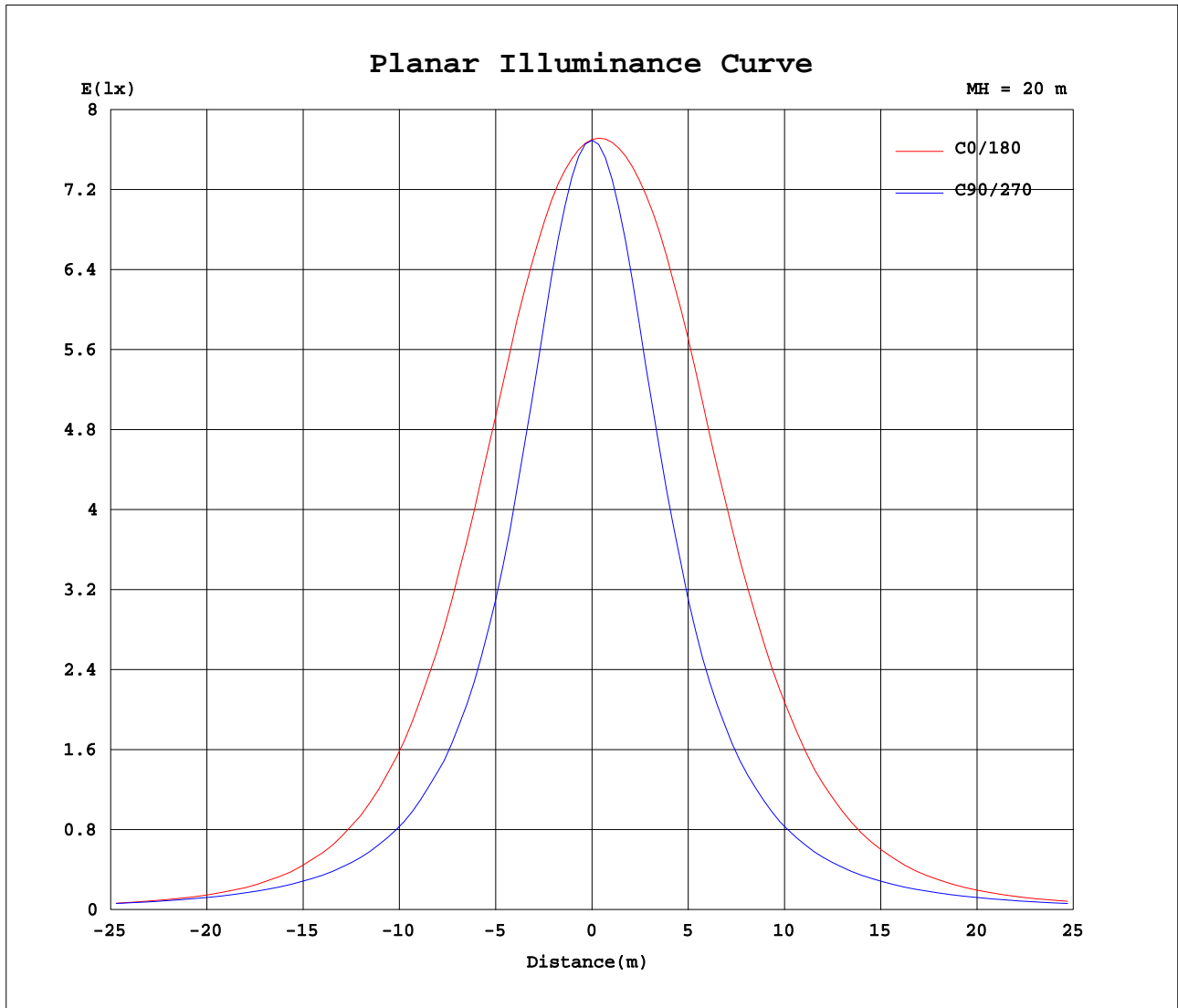
AvgL	cd/m2
L_0~180(65)av	13194
L_0~180(75)av	7683
L_0~180(85)av	0
L_90~270(65)av	12251
L_90~270(75)av	7119
L_90~270(85)av	0
L_45(65)av	12267
L_45(75)av	7185
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 0DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:28DEG
Operators:LXJ
Test Date:2024-12-07

γ Range: 0 - 0DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 0DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 28DEG
 Operators: LXJ
 Test Date: 2024-12-07

γ Range: 0 - 0DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

NAME: TLO020-61	TYPE: 34D	WEIGHT:
SPEC.: 3000K CRI90	DIM.:	SERIAL No.:
MFR.:	SUR.: 90	Shielding Angle:

UNIT: cd

[illegible]

```

Range: 0 - 0DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

```