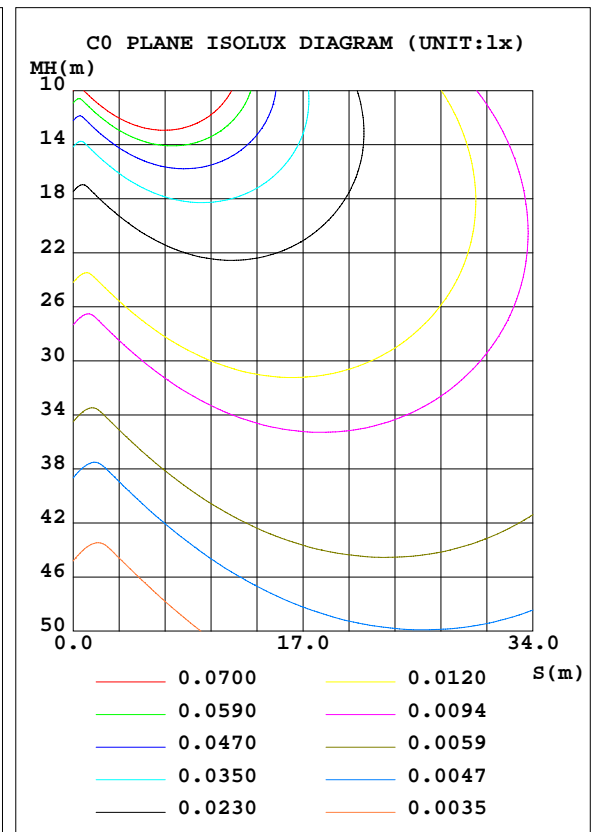
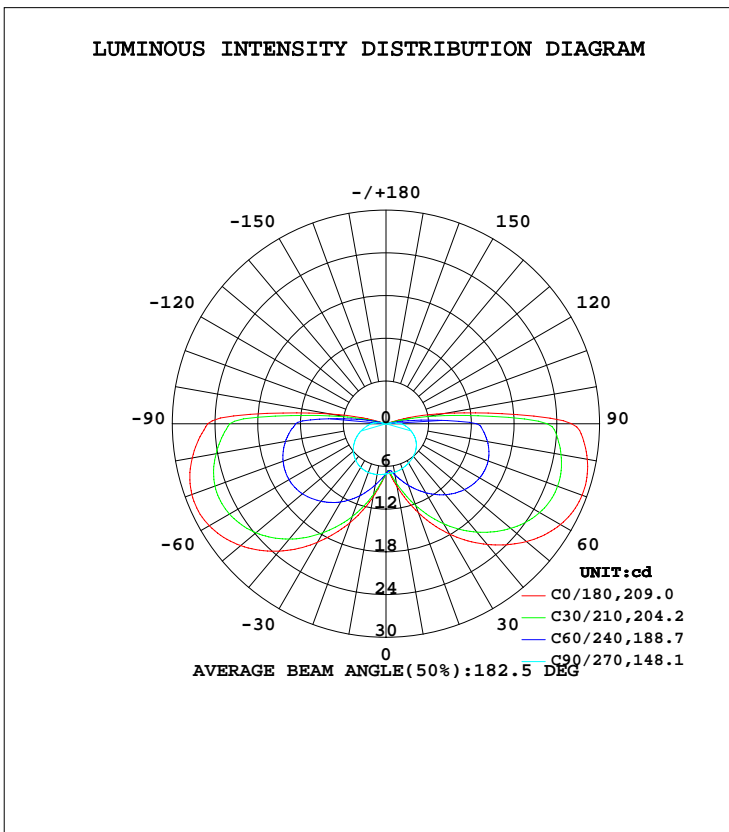


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:100	DIM.: 100MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	YBU5W3K	Imax(cd)	29.32	S/MH(C0/180)	3.33
NOMINAL POWER(W)	5	LOR(%)	100.0	S/MH(C90/270)	1.49
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	113.48	η UP, DN(C0-180)	5.2,44.9
NOMINAL FLUX(lm)	113.482	CIE CLASS	SEMI-D.	η UP, DN(C180-360)	5.4,44.5
LAMPS INSIDE	1	η up(%)	10.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	89.4	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [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	8.951	7.892	6.928	9.069	10.41	9.384	7.240	7.669	0- 10	0.7437	0.7437	0.66,0.66
20	13.29	10.70	6.697	11.46	14.77	12.32	7.281	9.918	10- 20	2.777	3.521	3.1,3.1
30	17.90	13.71	6.371	13.75	19.20	15.16	7.086	12.28	20- 30	5.657	9.177	8.09,8.09
40	22.14	16.44	5.982	15.77	23.35	17.68	6.648	14.37	30- 40	9.134	18.31	16.1,16.1
50	25.75	18.63	5.511	17.21	26.63	19.57	5.987	15.95	40- 50	12.75	31.06	27.4,27.4
60	28.30	20.07	4.868	17.95	28.65	20.55	5.109	16.85	50- 60	15.94	47.00	41.4,41.4
70	29.31	20.46	4.031	17.74	29.01	20.47	4.069	16.85	60- 70	18.09	65.08	57.3,57.3
80	28.70	19.72	3.085	16.50	27.63	19.28	2.996	15.67	70- 80	18.70	83.78	73.8,73.8
90	26.08	17.69	2.130	14.57	25.04	17.33	2.086	12.89	80- 90	17.63	101.4	89.4,89.4
100	8.453	3.771	0.6236	3.094	8.018	4.423	0.8744	4.015	90-100	10.36	111.8	98.5,98.5
110	0.1435	0.0882	0.0182	0.0589	0.1267	0.0792	0.0592	0.0792	100-110	1.468	113.2	99.8,99.8
120	0.1223	0.0882	0.0271	0.0475	0.1131	0.0702	0.0226	0.0769	110-120	0.0743	113.3	99.8,99.8
130	0.1086	0.0814	0.0362	0.0475	0.1040	0.0611	0.0227	0.0679	120-130	0.0617	113.4	99.9,99.9
140	0.0905	0.0611	0.0316	0.0362	0.0678	0.0543	0.0272	0.0588	130-140	0.0466	113.4	99.9,99.9
150	0.0724	0.0498	0.0362	0.0407	0.0452	0.0408	0.0362	0.0543	140-150	0.0313	113.4	100,100
160	0.0498	0.0452	0.0406	0.0384	0.0452	0.0385	0.0362	0.0475	150-160	0.0204	113.5	100,100
170	0.0362	0.0474	0.0317	0.0407	0.0452	0.0384	0.0362	0.0385	160-170	0.0115	113.5	100,100
180	0.0407	0.0407	0.0452	0.0362	0.0407	0.0385	0.0362	0.0385	170-180	0.0036	113.5	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 24.245 lm

%lum = 21.4%
%lamp = 21.4%

Conical surface Flux(120deg): 46.996 lm

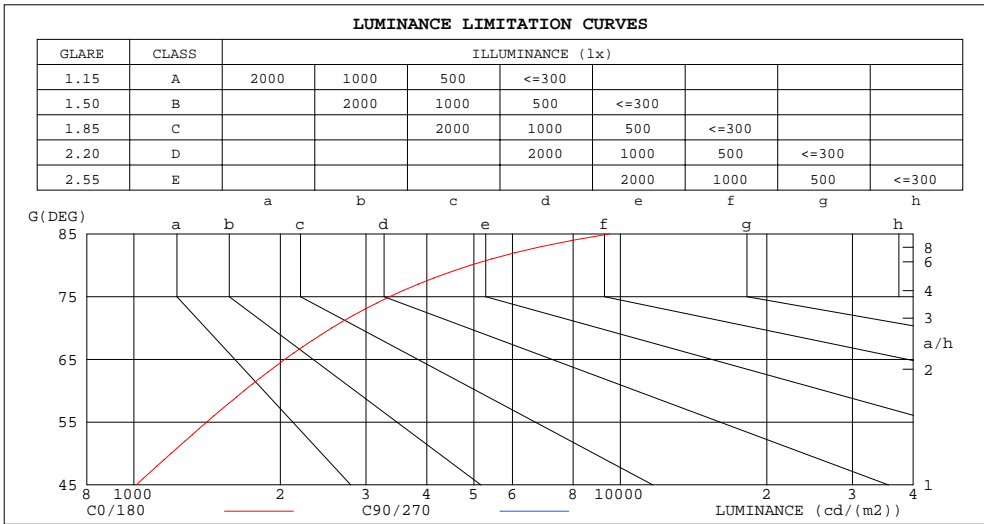
%lum = 41.4%
%lamp = 41.4%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:16 November 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:100	DIM.: 100MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	9516	899
80	4920	529
75	3358	410
70	2550	351
65	2043	315
60	1685	290
55	1411	271
50	1192	255
45	1012	243

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:100	DIM.: 100MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.519	.295	.093	.508	.290	.092	.488	.280	.089	.469	.271	.087	.452	.262	.084	
2.0	.422	.231	.071	.412	.227	.070	.394	.219	.068	.377	.211	.066	.361	.204	.064	
3.0	.361	.192	.058	.352	.188	.057	.335	.182	.055	.320	.175	.054	.306	.169	.052	
4.0	.316	.164	.048	.308	.161	.048	.293	.155	.046	.279	.150	.045	.266	.145	.044	
5.0	.281	.143	.042	.274	.141	.041	.261	.136	.040	.248	.131	.039	.236	.126	.038	
6.0	.254	.127	.036	.247	.125	.036	.235	.120	.035	.224	.116	.034	.213	.112	.033	
7.0	.231	.114	.032	.225	.112	.032	.214	.108	.031	.204	.104	.030	.194	.101	.030	
8.0	.212	.103	.029	.207	.102	.029	.196	.098	.028	.187	.095	.027	.178	.091	.027	
9.0	.196	.095	.026	.191	.093	.026	.182	.090	.025	.173	.087	.025	.165	.084	.024	
10.0	.182	.087	.024	.177	.086	.024	.169	.083	.023	.161	.080	.023	.153	.077	.022	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.272	.272	.272	.232	.232	.232	.158	.158	.158	.091	.091	.091	.029	.029	.029	
1.0	.277	.236	.200	.237	.203	.172	.162	.139	.119	.093	.081	.069	.030	.026	.022	
2.0	.272	.214	.165	.233	.184	.142	.160	.127	.099	.092	.074	.058	.030	.024	.019	
3.0	.265	.198	.144	.227	.170	.125	.156	.118	.088	.090	.069	.052	.029	.022	.017	
4.0	.256	.186	.131	.220	.160	.114	.151	.112	.080	.088	.065	.048	.028	.021	.016	
5.0	.248	.176	.123	.213	.152	.107	.147	.106	.076	.085	.062	.045	.027	.020	.015	
6.0	.239	.168	.117	.206	.146	.102	.142	.102	.072	.082	.060	.043	.027	.020	.014	
7.0	.231	.162	.113	.199	.140	.098	.138	.098	.070	.080	.058	.041	.026	.019	.014	
8.0	.224	.156	.109	.193	.135	.095	.133	.095	.068	.078	.056	.040	.025	.018	.013	
9.0	.217	.151	.107	.187	.131	.093	.129	.092	.066	.075	.054	.039	.024	.018	.013	
10.0	.210	.147	.105	.181	.127	.091	.126	.090	.065	.073	.053	.039	.024	.017	.013	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm										
NAME: LED Ceiling light					TYPE:			WEIGHT:		
SPEC.:100					DIM.: 100MM			SERIAL No.:		
MFR.:					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	22.4	24.1	22.8	24.5	24.9	16.8	18.5	17.2	18.9	19.4
3H	26.0	27.6	26.4	28.0	28.5	18.9	20.5	19.3	20.9	21.4
4H	27.9	29.5	28.4	29.9	30.5	19.9	21.4	20.3	21.9	22.4
6H	30.1	31.5	30.6	32.0	32.5	20.8	22.3	21.3	22.7	23.3
8H	31.2	32.6	31.7	33.1	33.7	21.3	22.7	21.8	23.2	23.7
12H	32.5	33.9	33.0	34.4	35.0	21.7	23.1	22.2	23.6	24.2
4H 2H	23.0	24.5	23.5	25.0	25.5	19.7	21.2	20.2	21.7	22.2
3H	26.9	28.3	27.4	28.8	29.3	22.0	23.4	22.5	23.9	24.5
4H	29.0	30.3	29.6	30.9	31.4	23.2	24.5	23.7	25.0	25.6
6H	31.4	32.5	31.9	33.1	33.7	24.3	25.5	24.9	26.0	26.7
8H	32.6	33.7	33.2	34.3	35.0	24.8	25.9	25.4	26.5	27.1
12H	34.1	35.1	34.7	35.7	36.4	25.3	26.3	25.9	26.9	27.6
8H 4H	29.5	30.6	30.0	31.1	31.8	25.4	26.5	26.0	27.1	27.7
6H	32.1	33.1	32.7	33.7	34.4	27.0	27.9	27.6	28.5	29.2
8H	33.6	34.5	34.3	35.1	35.8	27.7	28.6	28.4	29.2	29.9
12H	35.4	36.1	36.0	36.8	37.5	28.5	29.2	29.1	29.9	30.6
12H 4H	29.5	30.5	30.1	31.1	31.8	26.1	27.1	26.7	27.7	28.4
6H	32.3	33.2	32.9	33.8	34.5	28.0	28.8	28.6	29.4	30.1
8H	33.9	34.7	34.6	35.3	36.1	29.0	29.7	29.6	30.4	31.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117, 113.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -7.6)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:100	DIM.: 100MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

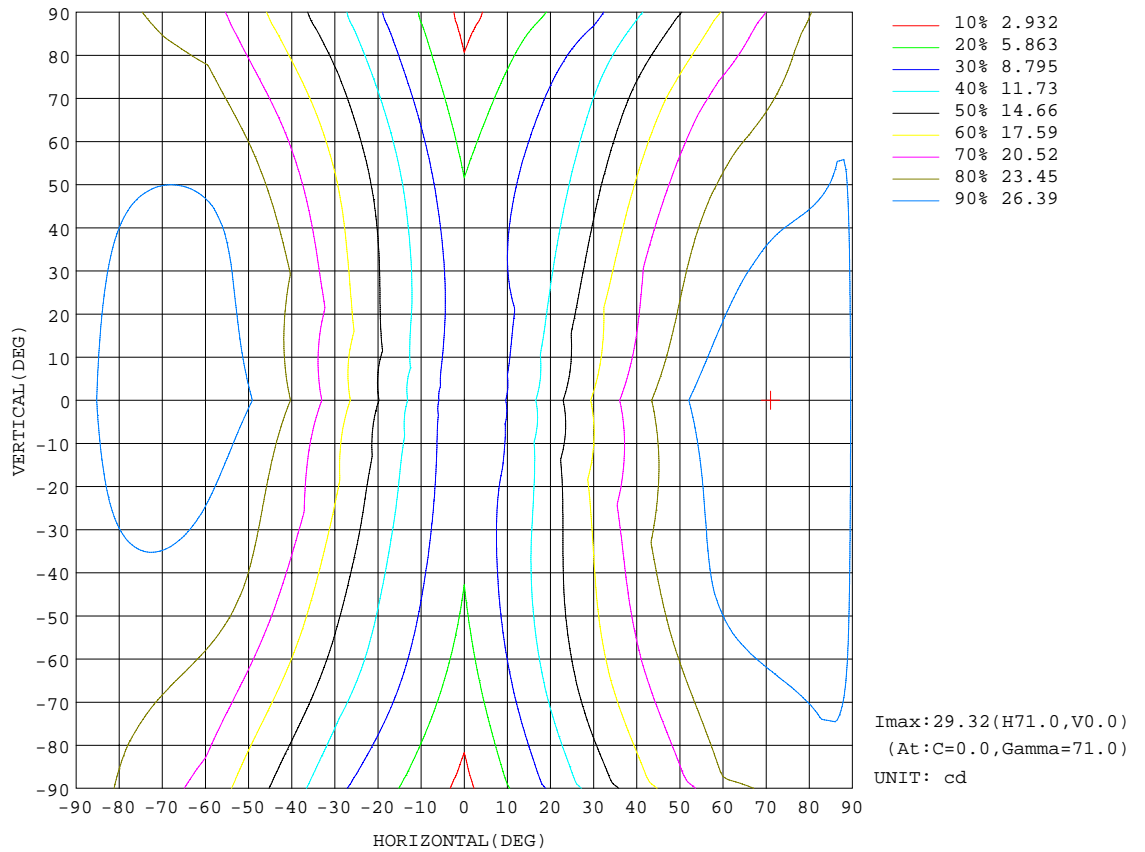
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	41	27	19	40	27	19	39	26	19	11
0.80	50	35	25	48	34	25	46	33	25	16
1.00	57	42	32	56	41	32	53	43	31	22
1.25	64	49	39	62	48	38	59	46	37	27
1.50	70	55	44	67	53	44	63	51	42	32
2.00	78	64	53	75	62	52	70	59	51	39
2.50	83	70	60	80	68	59	74	64	56	44
3.00	87	75	66	84	73	64	78	69	61	49
4.00	93	82	74	89	80	72	83	75	69	55
5.00	96	87	79	93	84	77	86	80	73	60
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:
 Test Date:16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:100	DIM.: 100MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

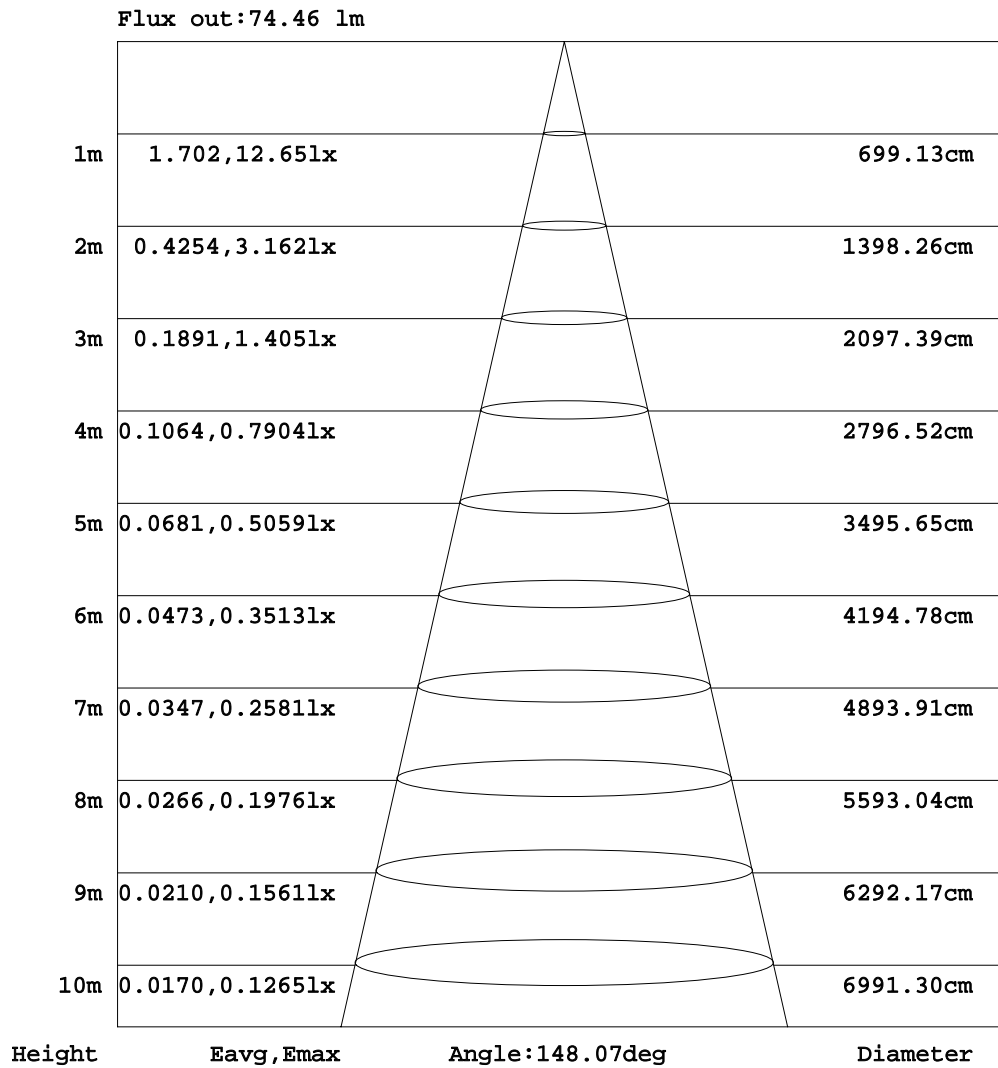


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 8.791m [K=1.0000]
 Remarks:

AAI Figure

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:100	DIM.: 100MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

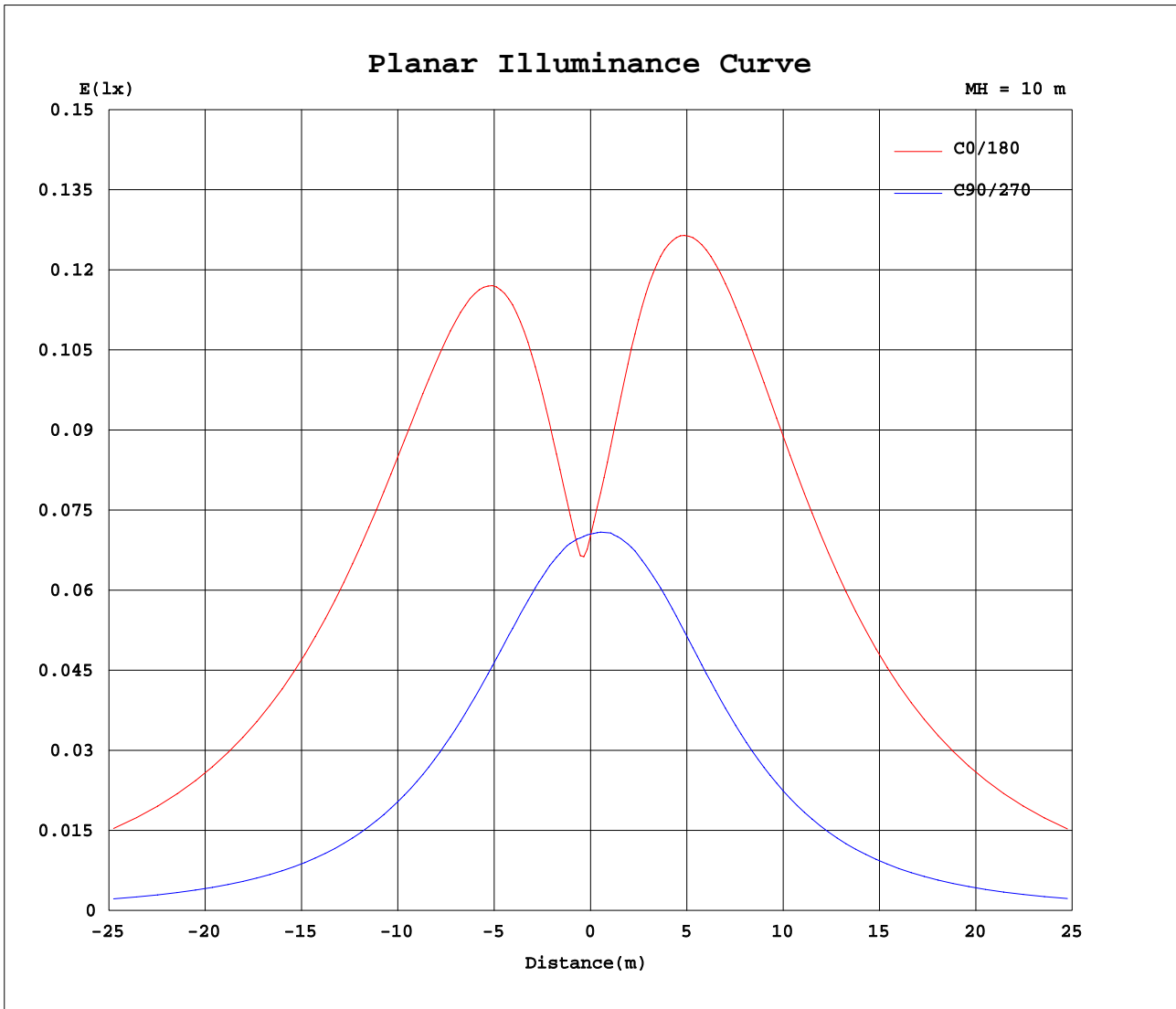


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 8.791m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.05V I:0.0430A P:5.2180W PF:0.5272 Freq:0Hz Lamp Flux:113.482x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:100	DIM.: 100MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	7.03	7.03	7.02	7.05	7.08	7.04	7.03	7.03	7.02	7.05	7.08	7.04							
5	7.21	6.97	6.60	7.00	7.70	8.25	8.49	8.36	7.82	7.16	6.67	7.01							
10	8.95	8.48	7.31	6.93	8.40	9.74	10.4	10.0	8.72	7.24	7.00	8.34							
15	11.0	10.3	8.21	6.83	9.12	11.4	12.6	11.9	9.73	7.28	7.63	9.88							
20	13.3	12.2	9.19	6.70	9.85	13.1	14.8	13.9	10.8	7.28	8.27	11.6							
25	15.6	14.2	10.2	6.54	10.5	14.7	17.0	15.8	11.7	7.21	8.92	13.3							
30	17.9	16.2	11.2	6.37	11.1	16.4	19.2	17.6	12.7	7.09	9.54	15.0							
35	20.1	18.1	12.1	6.19	11.7	18.0	21.4	19.5	13.5	6.90	10.1	16.6							
40	22.1	19.9	13.0	5.98	12.1	19.4	23.4	21.1	14.2	6.65	10.6	18.1							
45	24.0	21.5	13.8	5.77	12.4	20.7	25.1	22.6	14.8	6.34	11.1	19.4							
50	25.8	22.9	14.4	5.51	12.7	21.8	26.6	23.8	15.3	5.99	11.4	20.5							
55	27.2	24.1	14.9	5.22	12.8	22.6	27.8	24.8	15.6	5.58	11.6	21.5							
60	28.3	24.9	15.2	4.87	12.8	23.1	28.6	25.4	15.7	5.11	11.6	22.1							
65	29.0	25.5	15.3	4.47	12.7	23.3	29.1	25.7	15.6	4.60	11.6	22.4							
70	29.3	25.6	15.3	4.03	12.3	23.1	29.0	25.6	15.4	4.07	11.4	22.3							
75	29.2	25.5	15.0	3.57	11.8	22.6	28.5	25.1	14.9	3.52	11.0	22.0							
80	28.7	25.0	14.5	3.09	11.2	21.8	27.6	24.2	14.3	3.00	10.3	21.0							
85	27.9	24.2	13.8	2.63	10.4	20.8	26.4	23.2	13.6	2.53	9.35	19.6							
90	26.1	22.6	12.7	2.13	9.50	19.6	25.0	21.9	12.7	2.09	8.03	17.8							
95	16.4	13.0	6.04	1.32	4.76	11.8	16.8	13.4	8.08	1.53	5.58	12.5							
100	8.45	5.87	1.68	0.62	1.30	4.89	8.02	5.47	3.38	0.87	2.18	5.85							
105	3.42	1.38	0.08	0.13	0.03	0.68	2.70	0.69	0.64	0.38	0.31	1.66							
110	0.14	0.11	0.06	0.02	0.03	0.09	0.13	0.11	0.05	0.06	0.05	0.11							
115	0.14	0.11	0.06	0.03	0.03	0.09	0.12	0.11	0.04	0.02	0.05	0.11							
120	0.12	0.11	0.06	0.03	0.03	0.06	0.11	0.10	0.04	0.02	0.05	0.10							
125	0.12	0.11	0.06	0.03	0.04	0.06	0.11	0.09	0.04	0.02	0.05	0.10							
130	0.11	0.10	0.06	0.04	0.04	0.05	0.10	0.08	0.04	0.02	0.05	0.09							
135	0.10	0.08	0.06	0.04	0.03	0.05	0.10	0.08	0.04	0.03	0.05	0.08							
140	0.09	0.07	0.05	0.03	0.03	0.05	0.07	0.07	0.04	0.03	0.05	0.07							
145	0.08	0.06	0.05	0.04	0.03	0.05	0.06	0.05	0.04	0.03	0.04	0.07							
150	0.07	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.03	0.04	0.05	0.06							
155	0.06	0.05	0.05	0.04	0.03	0.04	0.05	0.05	0.04	0.04	0.04	0.06							
160	0.05	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.03	0.04	0.05	0.05							
165	0.05	0.05	0.04	0.04	0.03	0.04	0.05	0.04	0.04	0.03	0.04	0.05							
170	0.04	0.05	0.05	0.03	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04							
175	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.04							
180	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04							

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:16 November 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks: