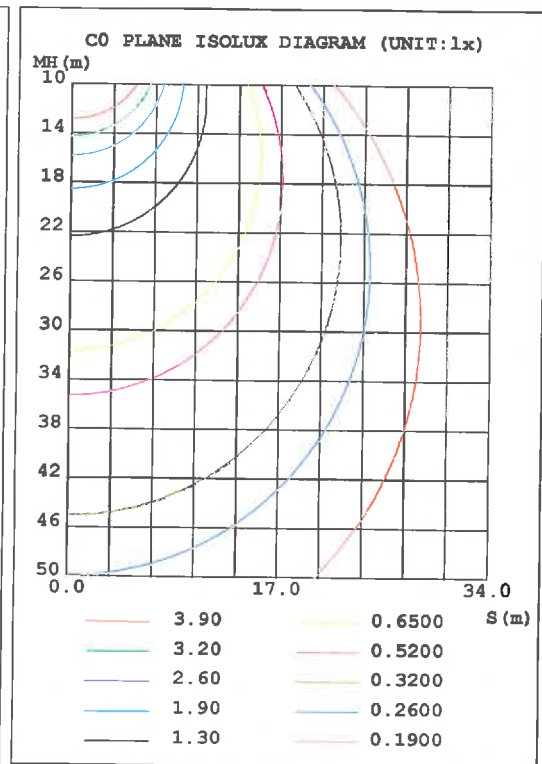
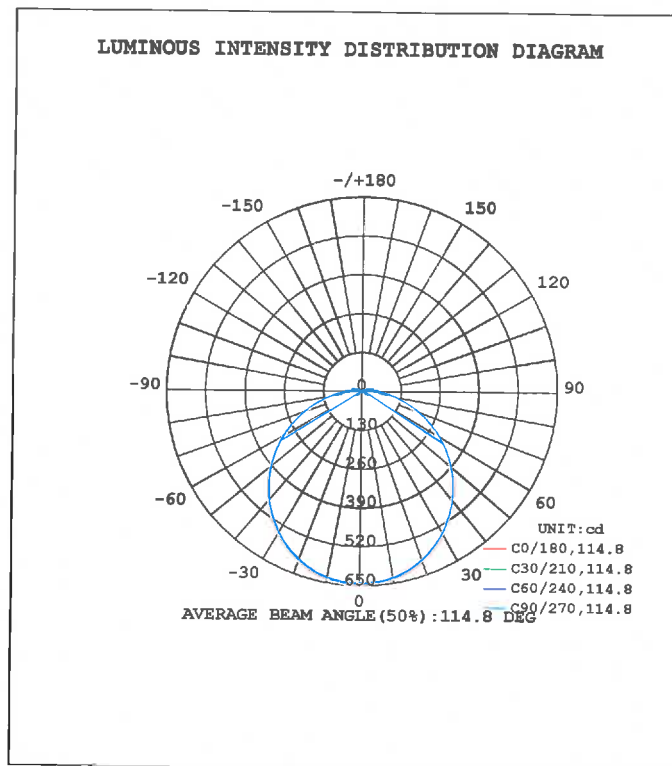


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.12V I:0.0788A P:17.257W PF:0.9522 Freq:49.99Hz Lamp Flux:1989.09x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:280C	DIM.: 280MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	YXR18WCCT	Imax (cd)	649.3	S/MH(C0/180)	1.27
NOMINAL POWER(W)	18	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE (V)	230	TOTAL FLUX(lm)	1989.1	η UP, DN(C0-180)	1.5,48.0
NOMINAL FLUX(lm)	1989.09	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.5,49.0
LAMPS INSIDE	1	η up (%)	3.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	97.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 14 July 2021

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	⊙ zone	⊙ total	%lum, lamp
10	637.9	633.6	630.0	628.3	640.4	636.1	631.7	628.7	0- 10	60.90	60.90	3.05, 3.06
20	603.5	599.1	596.3	595.7	608.6	604.7	600.0	596.0	10- 20	174.7	235.6	11.8, 11.8
30	547.9	543.4	541.6	541.8	554.9	551.6	546.6	542.4	20- 30	265.1	500.7	25.2, 25.2
40	475.0	471.1	470.1	470.3	483.9	481.3	476.2	472.2	30- 40	320.3	821.1	41.3, 41.3
50	389.6	386.1	385.6	386.2	398.9	397.0	392.4	388.5	40- 50	334.6	1155	58.1, 58.1
60	294.4	291.4	291.5	292.8	303.9	302.9	298.8	294.9	50- 60	307.6	1463	73.6, 73.6
70	192.8	190.2	190.6	192.6	202.0	201.8	198.8	195.4	60- 70	243.4	1707	85.8, 85.8
80	96.99	94.68	95.82	97.91	104.8	104.4	102.4	100.7	70- 80	154.4	1561	83.6, 83.6
90	36.64	35.86	35.53	35.73	37.29	37.54	37.04	36.64	80- 90	68.85	1630	97, 97
100	27.69	23.94	30.93	25.17	31.92	22.99	29.50	18.85	90-100	36.83	1967	98.9, 98.9
110	1.644	1.542	4.663	1.615	5.464	1.556	1.960	1.473	100-110	11.62	1978	99.5, 99.5
120	2.013	2.002	1.991	1.950	1.955	1.912	1.923	1.937	110-120	1.793	1980	99.5, 99.5
130	2.497	2.482	2.467	2.428	2.426	2.387	2.402	2.414	120-130	1.968	1982	99.5, 99.6
140	2.941	2.934	2.919	2.869	2.874	2.844	2.855	2.862	130-140	2.056	1984	99.7, 99.7
150	3.353	3.348	3.317	3.272	3.304	3.274	3.271	3.278	140-150	1.938	1986	99.9, 99.8
160	3.733	3.697	3.688	3.634	3.688	3.647	3.647	3.634	150-160	1.809	1988	99.9, 99.9
170	3.928	3.925	3.887	3.882	3.919	3.907	3.860	3.880	160-170	1.671	1989	100, 100
180	4.023	4.023	3.987	3.989	4.041	4.023	3.982	3.987	170-180	0.3789	1989	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 989.21 lm

%lum = 49.7%
%lamp = 49.7%

Conical surface Flux(120deg): 1463.3 lm

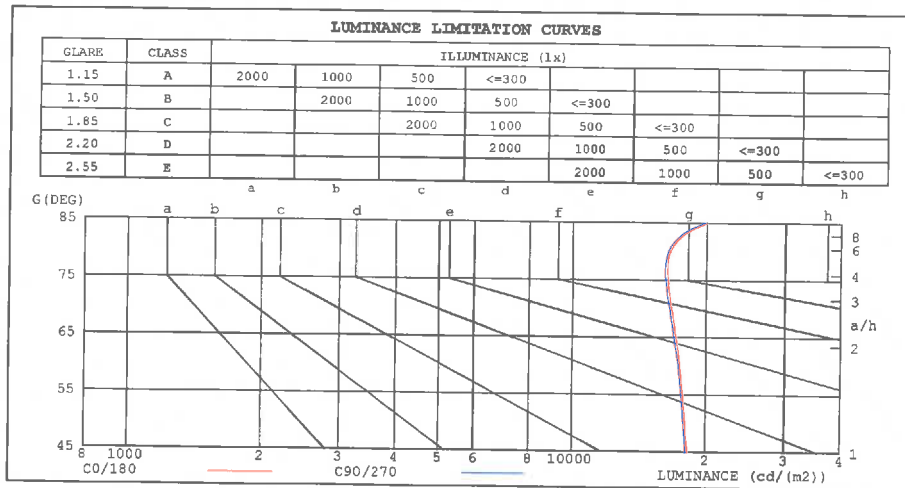
%lum = 73.6%
%lamp = 73.6%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:14 July 2021

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:230.12V I:0.0788A P:17.257W PF:0.9522 Freq:49.99Hz Lamp Flux:1989.09x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:280C	DIM.: 280MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20084	19797
80	16623	16423
75	16467	16246
70	16777	16584
65	17182	16963
60	17524	17353
55	17793	17624
50	18041	17854
45	18258	18062

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:14 July 2021

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:230.12V I:0.0788A P:17.257W PF:0.9522 Freq:49.99Hz Lamp Flux:1989.09x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:280C	DIM.: 280MM	SERIAL No.:
MFR.:	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						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.331	.188	.060	.323	.184	.059	.308	.177	.056	.294	.170	.054	.281	.163	.053	
2.0	.304	.166	.051	.297	.163	.050	.283	.157	.049	.271	.152	.048	.259	.147	.046	
3.0	.278	.148	.044	.271	.145	.044	.260	.141	.043	.249	.136	.042	.238	.132	.041	
4.0	.255	.132	.039	.249	.130	.038	.238	.126	.038	.228	.123	.037	.219	.119	.036	
5.0	.234	.119	.035	.229	.118	.034	.220	.114	.034	.211	.111	.033	.203	.108	.033	
6.0	.216	.109	.031	.212	.107	.031	.203	.104	.030	.196	.102	.030	.188	.099	.029	
7.0	.201	.099	.028	.197	.098	.028	.189	.096	.028	.182	.093	.027	.175	.091	.027	
8.0	.187	.092	.026	.184	.090	.026	.177	.088	.025	.170	.086	.025	.164	.084	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.160	.080	.023	.154	.078	.023	
10.0	.165	.079	.022	.162	.078	.022	.156	.076	.022	.151	.075	.021	.146	.073	.021	

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	.213	.213	.213	.182	.182	.182	.124	.124	.124	.071	.071	.071	.023	.023	.023	
1.0	.205	.179	.156	.175	.153	.134	.120	.106	.093	.069	.061	.054	.022	.020	.017	
2.0	.197	.155	.120	.169	.133	.103	.116	.092	.072	.067	.054	.042	.021	.017	.014	
3.0	.189	.138	.096	.162	.119	.084	.111	.082	.059	.064	.046	.035	.021	.016	.011	
4.0	.181	.124	.081	.156	.107	.070	.107	.075	.049	.062	.044	.029	.020	.014	.010	
5.0	.174	.114	.070	.149	.099	.061	.103	.069	.043	.060	.040	.025	.019	.013	.008	
6.0	.167	.106	.062	.143	.092	.054	.099	.064	.038	.057	.038	.023	.018	.012	.008	
7.0	.160	.099	.056	.137	.086	.049	.095	.060	.035	.055	.035	.021	.018	.012	.007	
8.0	.153	.093	.052	.132	.081	.045	.091	.057	.032	.053	.033	.019	.017	.011	.006	
9.0	.147	.088	.049	.127	.077	.042	.088	.054	.030	.051	.032	.018	.017	.010	.006	
10.0	.141	.084	.046	.122	.073	.040	.084	.051	.028	.049	.030	.017	.016	.010	.006	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:14 July 2021

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:230.12V I:0.0788A P:17.257W PF:0.9522 Freq:49.99Hz Lamp Flux:1989.09x1 lm										
NAME: LED Ceiling light					TYPE:			WEIGHT:		
SPEC.:280C					DIM.: 280MM			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	20.3	21.8	20.6	22.0	22.3	20.2	21.7	20.5	22.0	22.2
3H	21.9	23.3	22.2	23.6	23.9	21.8	23.2	22.2	23.5	23.8
4H	22.6	23.9	23.0	24.2	24.6	22.5	23.9	22.9	24.2	24.5
6H	23.2	24.5	23.6	24.8	25.1	23.1	24.4	23.5	24.7	25.1
8H	23.5	24.7	23.8	25.0	25.4	23.4	24.6	23.8	24.9	25.3
12H	23.7	24.9	24.1	25.2	25.6	23.6	24.8	24.0	25.1	25.5
4H 2H	20.9	22.2	21.2	22.5	22.8	20.8	22.2	21.2	22.5	22.8
3H	22.7	23.9	23.1	24.2	24.6	22.7	23.8	23.1	24.2	24.5
4H	23.6	24.6	24.0	25.0	25.4	23.5	24.6	23.9	24.9	25.3
6H	24.3	25.3	24.7	25.7	26.1	24.2	25.2	24.7	25.6	26.0
8H	24.6	25.5	25.1	25.9	26.4	24.6	25.4	25.0	25.9	26.3
12H	24.9	25.8	25.4	26.2	26.7	24.9	25.7	25.3	26.1	26.6
8H 4H	23.9	24.8	24.3	25.2	25.6	23.8	24.7	24.3	25.1	25.6
6H	24.8	25.5	25.3	26.0	26.5	24.7	25.5	25.2	25.9	26.4
8H	25.2	25.9	25.8	26.4	26.9	25.2	25.8	25.7	26.3	26.8
12H	25.7	26.3	26.2	26.8	27.3	25.6	26.2	26.1	26.7	27.2
12H 4H	23.9	24.7	24.4	25.1	25.6	23.8	24.7	24.3	25.1	25.6
6H	24.9	25.5	25.4	26.0	26.5	24.8	25.5	25.3	26.0	26.5
8H	25.4	26.0	25.9	26.5	27.0	25.3	25.9	25.9	26.4	26.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 1989 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.4$)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:14 July 2021

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:230.12V I:0.0788A P:17.257W PF:0.9522 Freq:49.99Hz Lamp Flux:1989.09x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:280C	DIM.: 280MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

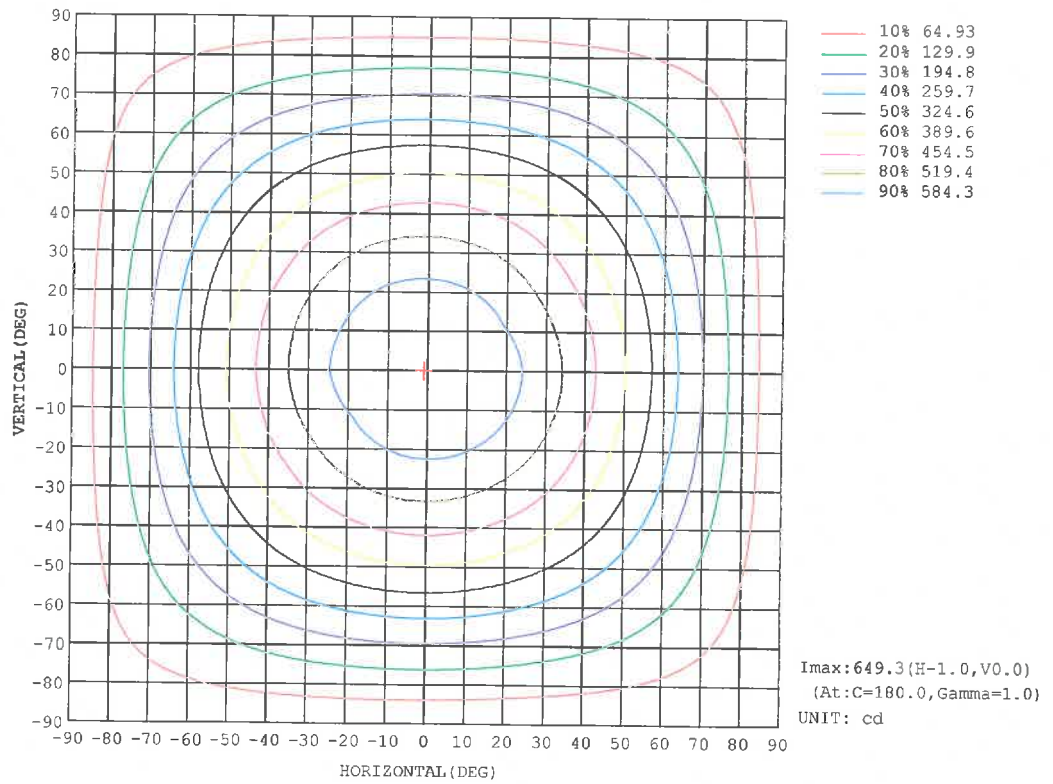
REFLECTANCE												
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0		
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0		
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0		
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$											
k = 0.60	55	44	37	55	43	36	53	43	36	30		
0.80	65	53	46	64	53	46	62	52	45	38		
1.00	74	62	54	72	61	54	70	63	53	46		
1.25	81	70	62	79	69	62	76	67	61	53		
1.50	86	75	68	84	74	67	81	72	66	58		
2.00	93	83	76	91	82	76	87	80	74	65		
2.50	97	88	82	94	87	81	90	84	79	70		
3.00	100	93	86	98	91	85	93	88	83	74		
4.00	104	98	93	102	96	91	97	92	88	79		
5.00	107	101	97	104	99	95	99	95	92	82		
ROOM INDEX	UF(total)										Direct	
According to DIN EN 13032-2:2004											Suspended	SHRMM = 1.25

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:14 July 2021

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:230.12V I:0.0788A P:17.257W PF:0.9522 Freq:49.99Hz Lamp Flux:1989.09x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:280C	DIM.: 280MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



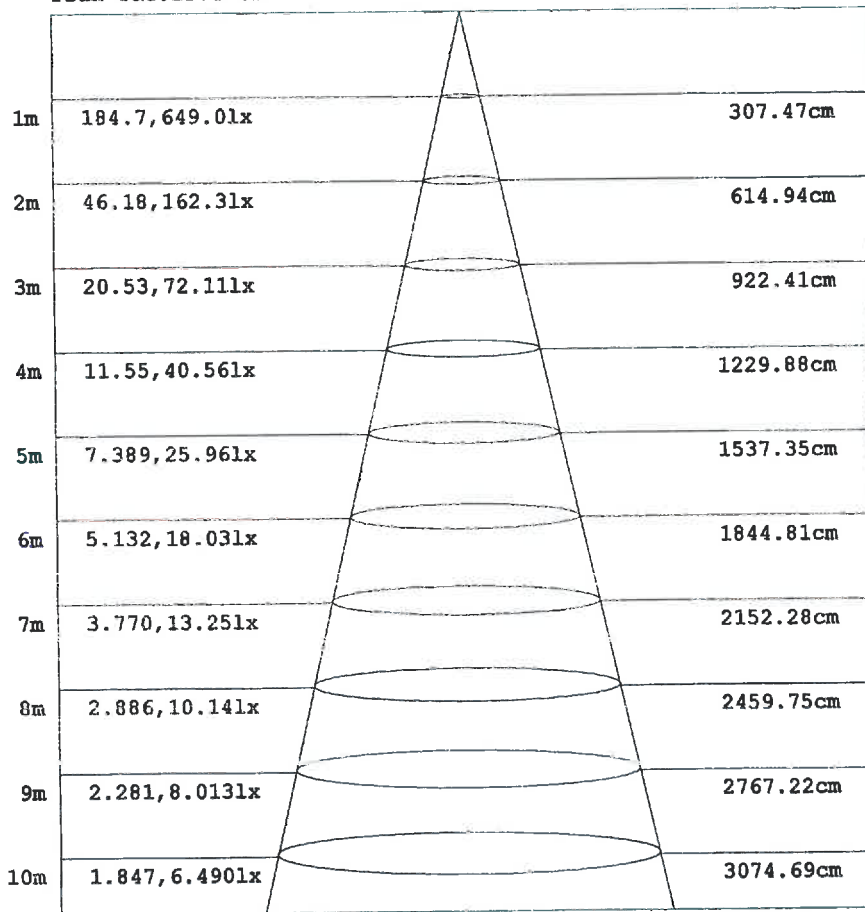
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:14 July 2021

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:230.12V I:0.0788A P:17.257W PF:0.9522 Freq:49.99Hz Lamp Flux:1989.09x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:280C	DIM.: 280MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:1376 lm



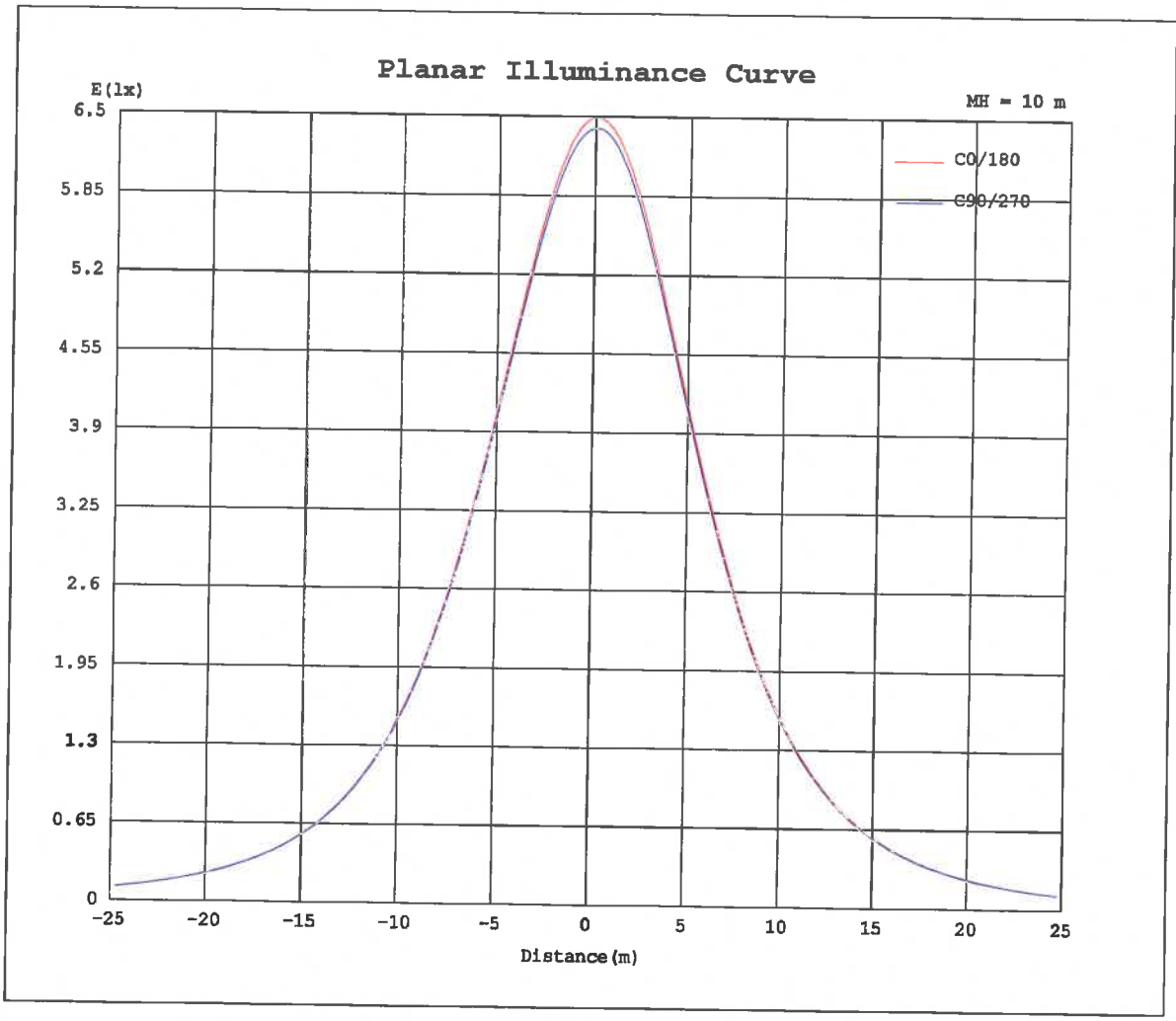
Height Eavg, Emax Angle:113.91deg Diameter

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:14 July 2021

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: [unclear]
 Test Date: 14 July 2021

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:

