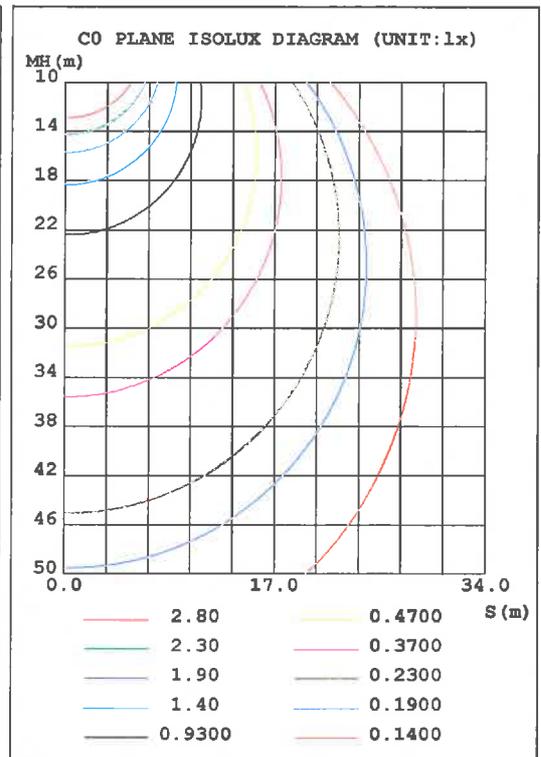
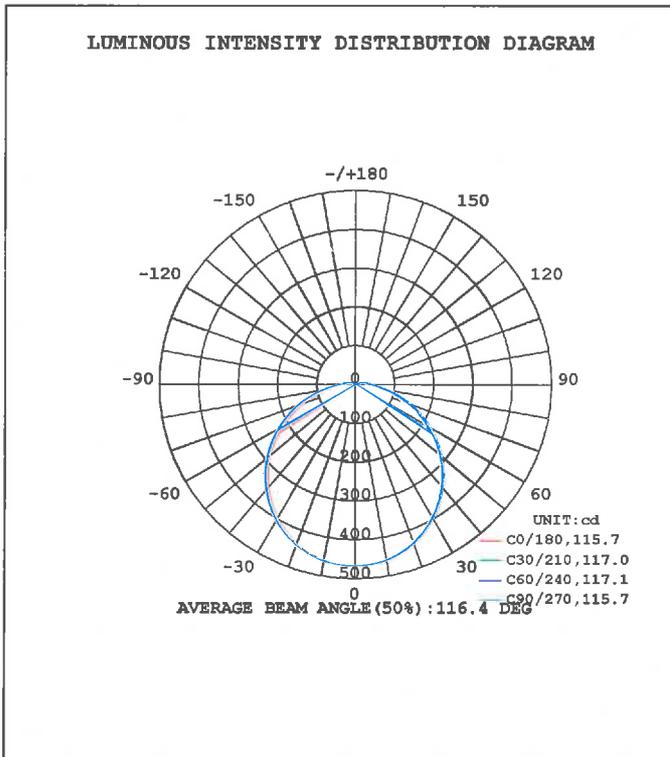


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 102.08 lm/W
MODEL	YYS15WCCT	I <sub>max</sub> (cd)	467.0	S/MH (C0/180)	1.27	
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	1.29	
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1479.3	η UP, DN (C0-180)	1.6, 47.4	
NOMINAL FLUX (lm)	1479.35	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.5, 49.6	
LAMPS INSIDE	1	η up (%)	3.1	CIBSE SHR NOM	1.25	
TEST VOLTAGE (V)	230	η down (%)	96.9	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	460.5	458.4	457.4	458.8	460.6	461.7	461.6	461.5	0- 10	44.24	44.24	2.99,2.99
20	437.4	434.8	432.0	434.5	437.0	440.8	441.2	441.2	10- 20	127.2	171.5	11.6,11.6
30	399.2	396.1	391.5	395.9	398.4	404.7	404.7	405.6	20- 30	193.8	365.3	24.7,24.7
40	348.5	345.4	339.2	344.4	347.2	355.7	355.6	357.1	30- 40	235.3	600.6	40.6,40.6
50	287.9	284.9	277.8	283.4	285.9	296.4	295.9	298.2	40- 50	247.4	848.0	57.3,57.3
60	220.1	216.7	207.6	214.4	216.4	229.0	228.6	231.4	50- 60	228.9	1077	72.8,72.8
70	146.7	143.9	133.8	141.0	142.8	156.1	155.5	159.1	60- 70	183.2	1260	85.2,85.2
80	75.81	74.40	64.34	71.48	72.26	84.48	82.67	87.58	70- 80	118.2	1378	93.2,93.2
90	28.03	33.34	27.38	33.00	27.34	34.12	29.92	35.31	80- 90	55.51	1434	96.9,96.9
100	21.14	18.79	25.79	19.80	24.64	15.58	20.10	12.36	90-100	30.52	1464	99,99
110	1.104	1.147	1.177	1.174	1.159	1.072	1.049	1.061	100-110	6.980	1471	99.5,99.5
120	1.448	1.486	1.521	1.516	1.494	1.410	1.384	1.403	110-120	1.275	1473	99.6,99.6
130	1.787	1.830	1.860	1.853	1.828	1.749	1.724	1.744	120-130	1.456	1474	99.7,99.7
140	2.117	2.149	2.177	2.161	2.132	2.075	2.063	2.077	130-140	1.514	1476	99.8,99.8
150	2.412	2.439	2.453	2.453	2.417	2.378	2.366	2.378	140-150	1.420	1477	99.8,99.8
160	2.688	2.688	2.720	2.699	2.688	2.649	2.642	2.647	150-160	1.176	1478	99.9,99.9
170	2.842	2.858	2.855	2.862	2.837	2.839	2.814	2.839	160-170	0.7818	1479	100,100
180	2.914	2.921	2.914	2.930	2.923	2.925	2.910	2.928	170-180	0.2749	1479	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

Conical surface Flux(90deg): 724.71 lm

%lum = 49.0%  
%lamp = 49.0%

Conical surface Flux(120deg): 1076.9 lm

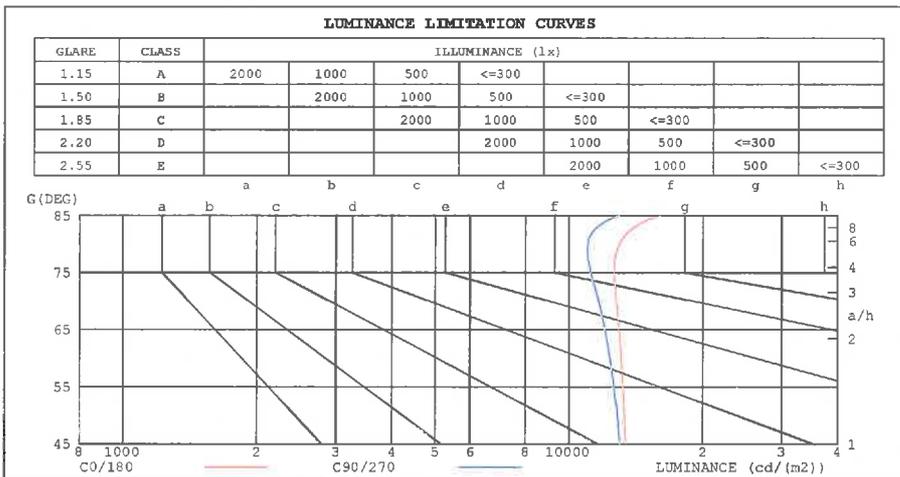
%lum = 72.8%  
%lamp = 72.8%

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:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	16050	12986
80	12993	11027
75	12632	11201
70	12767	11642
65	12949	12039
60	13100	12357
55	13216	12610
50	13331	12862
45	13441	13032

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:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	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	.336	.191	.060	.328	.187	.059	.313	.179	.057	.299	.172	.055	.286	.166	.053	
2.0	.307	.168	.052	.300	.165	.051	.286	.159	.049	.274	.154	.048	.262	.148	.047	
3.0	.280	.149	.045	.274	.147	.044	.262	.142	.043	.251	.137	.042	.240	.133	.041	
4.0	.256	.133	.039	.251	.131	.039	.240	.127	.038	.230	.124	.037	.221	.120	.037	
5.0	.236	.120	.035	.231	.118	.034	.221	.115	.034	.212	.112	.033	.204	.109	.033	
6.0	.218	.109	.031	.213	.108	.031	.204	.105	.030	.196	.102	.030	.189	.100	.030	
7.0	.202	.100	.028	.198	.099	.028	.190	.096	.028	.183	.094	.027	.176	.092	.027	
8.0	.188	.092	.026	.184	.091	.026	.177	.089	.025	.171	.087	.025	.165	.085	.025	
9.0	.176	.085	.024	.173	.084	.024	.166	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.165	.079	.022	.162	.078	.022	.156	.077	.022	.151	.075	.021	.146	.073	.021	

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	.214	.214	.214	.183	.183	.183	.125	.125	.125	.072	.072	.072	.023	.023	.023	
1.0	.206	.180	.156	.176	.154	.134	.120	.106	.093	.069	.061	.054	.022	.020	.017	
2.0	.198	.156	.120	.170	.134	.104	.116	.093	.072	.067	.054	.042	.022	.017	.014	
3.0	.190	.138	.097	.163	.119	.084	.112	.083	.059	.065	.048	.035	.021	.016	.011	
4.0	.183	.125	.081	.157	.108	.071	.108	.075	.050	.062	.044	.029	.020	.014	.010	
5.0	.175	.115	.070	.150	.099	.061	.104	.069	.043	.060	.041	.026	.019	.013	.008	
6.0	.168	.107	.063	.144	.092	.055	.099	.065	.039	.058	.038	.023	.019	.012	.008	
7.0	.161	.100	.057	.138	.086	.050	.096	.061	.035	.056	.036	.021	.018	.012	.007	
8.0	.154	.094	.053	.133	.082	.046	.092	.057	.033	.053	.034	.019	.017	.011	.006	
9.0	.148	.089	.049	.128	.077	.043	.088	.054	.031	.051	.032	.018	.017	.011	.006	
10.0	.142	.085	.047	.123	.074	.041	.085	.052	.029	.050	.031	.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:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm												
NAME: LED Ceiling light					TYPE:			WEIGHT:				
SPEC.:220S					DIM.: 220MM			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	20.0	21.6	20.4	21.8	22.1	
	3H	22.0	23.4	22.3	23.7	24.0	21.6	23.0	22.0	23.3	23.6	
	4H	22.7	24.0	23.1	24.4	24.7	22.3	23.6	22.7	24.0	24.3	
	6H	23.4	24.6	23.7	24.9	25.3	22.9	24.1	23.2	24.4	24.8	
	8H	23.6	24.8	24.0	25.2	25.5	23.1	24.3	23.5	24.6	25.0	
	12H	23.9	25.1	24.3	25.4	25.8	23.3	24.4	23.7	24.8	25.2	
	4H	2H	20.9	22.2	21.2	22.5	22.9	20.7	22.1	21.1	22.4	22.7
		3H	22.8	24.0	23.2	24.3	24.7	22.5	23.7	22.9	24.0	24.4
		4H	23.7	24.8	24.1	25.1	25.5	23.3	24.4	23.8	24.8	25.2
		6H	24.5	25.4	24.9	25.9	26.3	24.0	25.0	24.5	25.4	25.8
		8H	24.8	25.7	25.3	26.2	26.6	24.3	25.2	24.8	25.6	26.1
		12H	25.2	26.0	25.7	26.5	26.9	24.6	25.4	25.1	25.9	26.3
	8H	4H	24.0	24.9	24.5	25.3	25.8	23.7	24.6	24.2	25.0	25.5
		6H	25.0	25.8	25.5	26.2	26.7	24.6	25.3	25.1	25.8	26.3
		8H	25.5	26.2	26.0	26.6	27.2	25.0	25.7	25.5	26.2	26.7
		12H	26.0	26.6	26.5	27.1	27.6	25.4	26.0	25.9	26.5	27.0
	12H	4H	24.0	24.9	24.5	25.3	25.8	23.7	24.6	24.2	25.0	25.5
		6H	25.1	25.8	25.6	26.3	26.8	24.7	25.4	25.2	25.9	26.4
		8H	25.7	26.2	26.2	26.8	27.3	25.2	25.8	25.7	26.3	26.8
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, 1479 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.4)

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:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

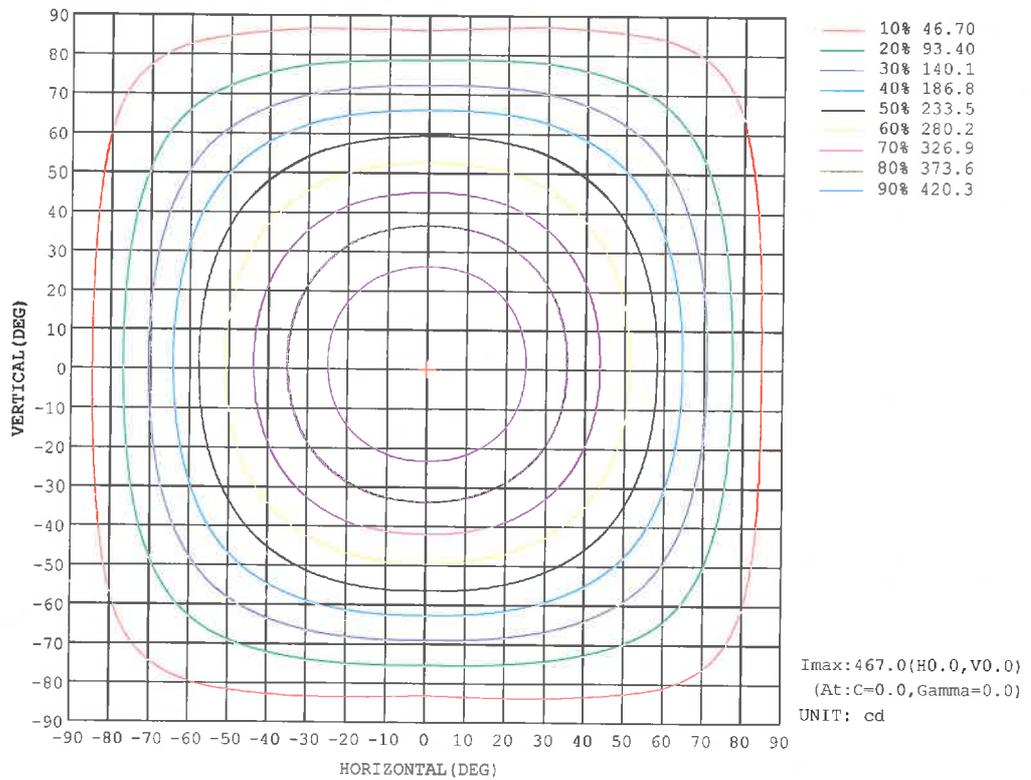
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	55	43	36	54	43	36	53	42	36	29
0.80	65	53	45	64	52	45	62	52	45	37
1.00	73	61	54	72	61	54	69	62	53	45
1.25	80	69	61	79	68	61	76	67	60	52
1.50	85	75	67	83	74	67	80	72	65	57
2.00	92	83	76	90	82	75	86	79	73	65
2.50	96	88	81	94	86	80	90	83	78	69
3.00	100	92	86	97	90	85	93	87	82	73
4.00	104	98	92	101	96	91	97	92	88	78
5.00	107	101	96	104	99	95	99	95	91	81
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004	Suspended						SHRNM = 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:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



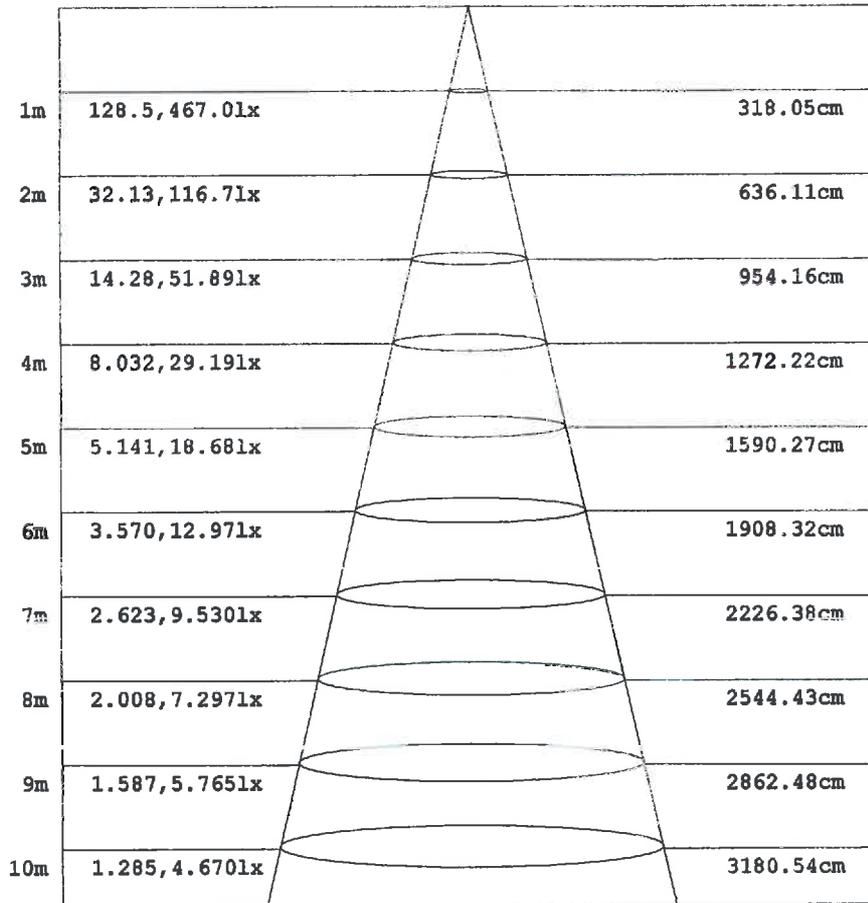
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:14 July 2021

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:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:1034 lm



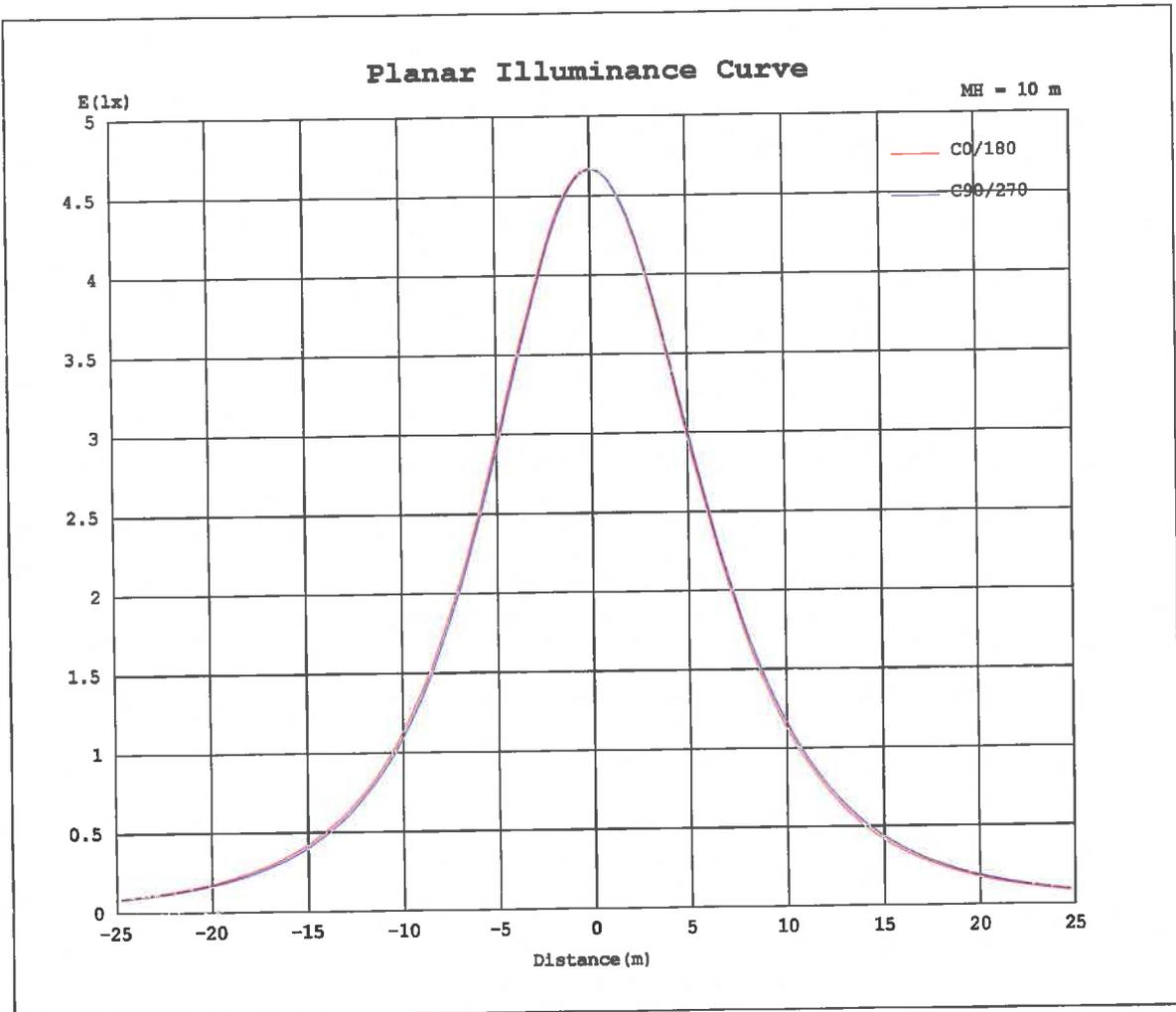
Height                      Eavg, Emax                      Angle:115.67deg                      Diameter

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:  
 Test Date: 14 July 2021

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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:230.10V I:0.0670A P:14.493W PF:0.9401 Freq:49.99Hz Lamp Flux:1479.35x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

C (DEG)		UNIT: cd																
y (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	467	466	466	466	466	467	467	466	466	466	466	467						
5	466	465	464	464	464	465	466	466	466	466	466	466						
10	461	459	458	457	458	459	461	461	462	462	462	461						
15	451	450	447	447	448	449	451	452	454	454	454	453						
20	437	436	433	432	433	436	437	440	441	441	442	440						
25	420	419	416	414	415	418	420	424	426	425	426	424						
30	399	398	394	391	394	397	398	403	406	405	407	404						
35	375	374	370	367	370	373	374	380	384	381	384	381						
40	349	348	343	339	343	346	347	354	358	356	359	355						
45	319	319	314	310	313	317	318	325	329	327	331	327						
50	288	288	282	278	281	285	286	294	299	296	300	296						
55	255	254	249	243	248	251	252	261	266	263	268	263						
60	220	219	214	208	213	216	216	227	231	229	233	229						
65	184	183	178	171	176	180	180	191	195	193	198	193						
70	147	147	141	134	139	143	143	154	159	156	161	157						
75	110	111	105	97.4	103	107	106	116	122	118	125	120						
80	75.8	77.2	71.6	64.3	69.8	73.2	72.3	82.1	86.9	82.7	89.6	85.7						
85	47.0	49.4	44.9	38.0	43.6	46.0	44.0	53.1	56.7	52.2	59.3	56.2						
90	28.0	33.7	33.0	27.4	33.2	32.8	27.3	33.5	34.8	29.9	36.5	34.2						
95	27.3	32.8	31.1	26.7	31.9	31.0	26.6	30.5	32.0	27.0	31.8	29.1						
100	21.1	16.6	21.0	25.8	20.1	19.5	24.6	17.2	13.9	20.1	13.6	11.2						
105	5.55	1.43	4.58	12.2	4.01	3.70	10.6	2.88	0.88	4.75	0.88	0.92						
110	1.10	1.13	1.17	1.18	1.18	1.17	1.16	1.10	1.04	1.05	1.05	1.08						
115	1.28	1.30	1.33	1.35	1.35	1.34	1.32	1.27	1.21	1.21	1.22	1.25						
120	1.45	1.47	1.51	1.52	1.52	1.51	1.49	1.43	1.39	1.38	1.39	1.42						
125	1.61	1.64	1.68	1.69	1.69	1.68	1.67	1.61	1.56	1.56	1.56	1.59						
130	1.79	1.81	1.85	1.86	1.86	1.84	1.83	1.77	1.73	1.72	1.73	1.76						
135	1.95	1.97	2.01	2.03	2.02	2.00	1.99	1.94	1.90	1.90	1.90	1.92						
140	2.12	2.13	2.17	2.18	2.17	2.15	2.13	2.09	2.05	2.06	2.07	2.09						
145	2.27	2.28	2.31	2.32	2.32	2.30	2.28	2.24	2.21	2.22	2.22	2.24						
150	2.41	2.43	2.45	2.45	2.46	2.45	2.42	2.39	2.36	2.37	2.37	2.39						
155	2.55	2.56	2.59	2.59	2.59	2.58	2.56	2.54	2.51	2.51	2.52	2.53						
160	2.69	2.67	2.70	2.72	2.69	2.71	2.69	2.67	2.63	2.64	2.65	2.65						
165	2.77	2.77	2.81	2.79	2.78	2.80	2.77	2.77	2.73	2.74	2.76	2.75						
170	2.84	2.84	2.87	2.86	2.85	2.87	2.84	2.86	2.82	2.81	2.85	2.83						
175	2.89	2.90	2.92	2.90	2.90	2.91	2.89	2.90	2.89	2.88	2.91	2.90						
180	2.91	2.92	2.92	2.91	2.93	2.93	2.92	2.92	2.93	2.91	2.92	2.93						

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

y Range: 0 - 180DEG  
 y Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:8.791m [K=1.0000]  
 Remarks: