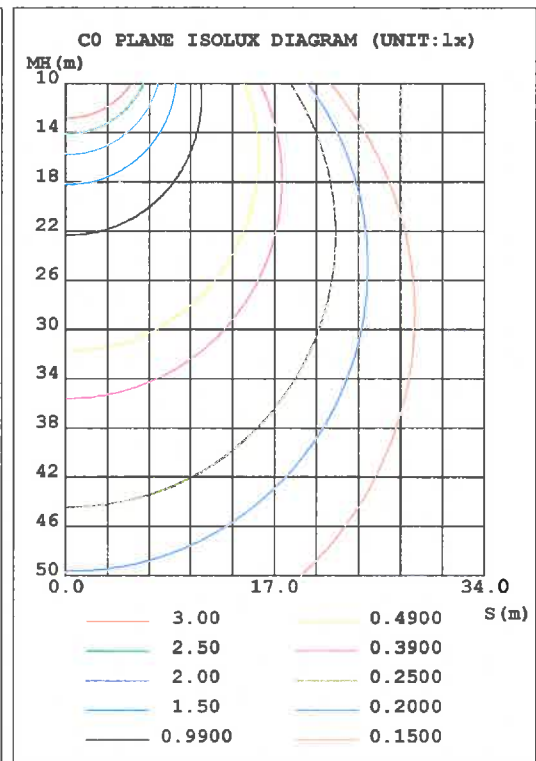
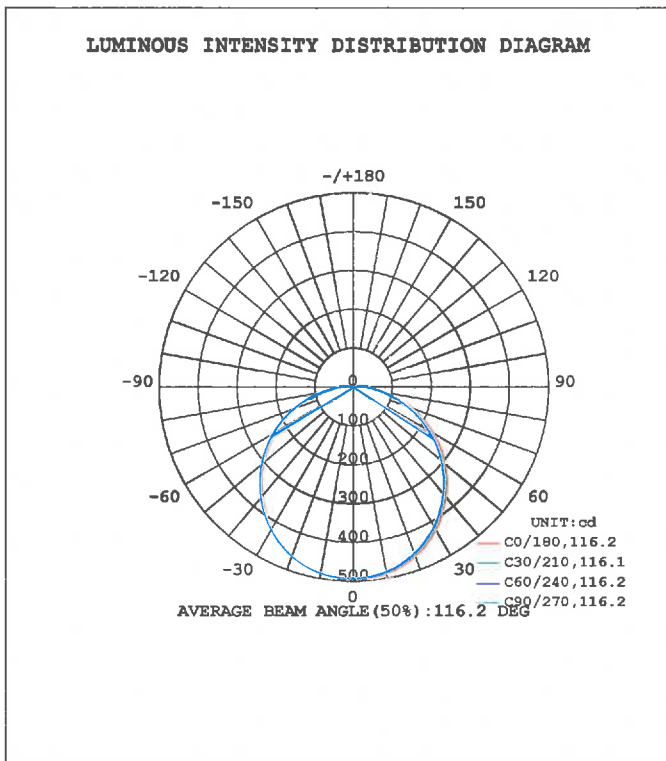


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.10V I:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 110.15 lm/W			
MODEL	YYR15WCCT	I _{max} (cd)	493.6	S/MH(C0/180)	1.26
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1549.3	η UP, DN(C0-180)	1.6,47.5
NOMINAL FLUX(lm)	1549.3	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.5,49.4
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	487.2	483.0	479.5	477.6	486.3	484.4	483.7	481.7	0- 10	46.41	46.41	3,3
20	463.4	457.5	453.3	451.1	461.1	461.4	461.1	459.8	10- 20	133.4	179.8	11.6,11.6
30	423.7	416.2	410.9	409.1	419.6	422.0	423.4	421.9	20- 30	202.8	382.6	24.7,24.7
40	370.4	362.2	356.2	354.6	365.4	369.3	372.0	370.7	30- 40	245.8	628.3	40.6,40.6
50	307.3	298.4	292.2	290.6	301.6	306.5	309.9	309.1	40- 50	257.9	886.3	57.2,57.2
60	236.6	227.2	220.3	219.2	229.2	235.8	240.7	239.6	50- 60	238.7	1125	72.6,72.6
70	160.5	151.5	144.9	143.7	152.9	160.3	165.5	164.9	60- 70	191.4	1316	88,88
80	86.01	79.55	74.40	72.66	79.75	86.79	91.69	91.27	70- 80	124.7	1441	93,93
90	35.97	35.05	34.20	33.36	34.39	36.04	38.19	37.88	80- 90	60.33	1501	96.9,96.9
100	21.98	17.58	20.18	18.40	26.49	14.37	21.43	10.64	90-100	33.67	1535	99.1,99.1
110	1.194	1.228	1.272	1.265	1.267	1.172	1.135	1.172	100-110	5.934	1541	99.5,99.5
120	1.543	1.579	1.620	1.611	1.616	1.520	1.488	1.477	110-120	1.370	1542	99.6,99.6
130	1.882	1.921	1.960	1.948	1.964	1.867	1.828	1.824	120-130	1.544	1544	99.7,99.7
140	2.221	2.249	2.281	2.256	2.272	2.192	2.158	2.149	130-140	1.591	1545	99.8,99.8
150	2.511	2.536	2.548	2.545	2.552	2.500	2.457	2.462	140-150	1.483	1547	99.9,99.9
160	2.796	2.794	2.815	2.787	2.819	2.767	2.737	2.726	150-160	1.223	1548	99.9,99.9
170	2.955	2.966	2.950	2.946	2.973	2.948	2.905	2.921	160-170	0.8106	1549	100,100
180	3.036	3.041	3.009	3.016	3.054	3.032	3.005	3.014	170-180	0.2846	1549	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 757.77 lm

%lum = 48.9%
%lamp = 48.9%

Conical surface Flux(120deg): 1125 lm

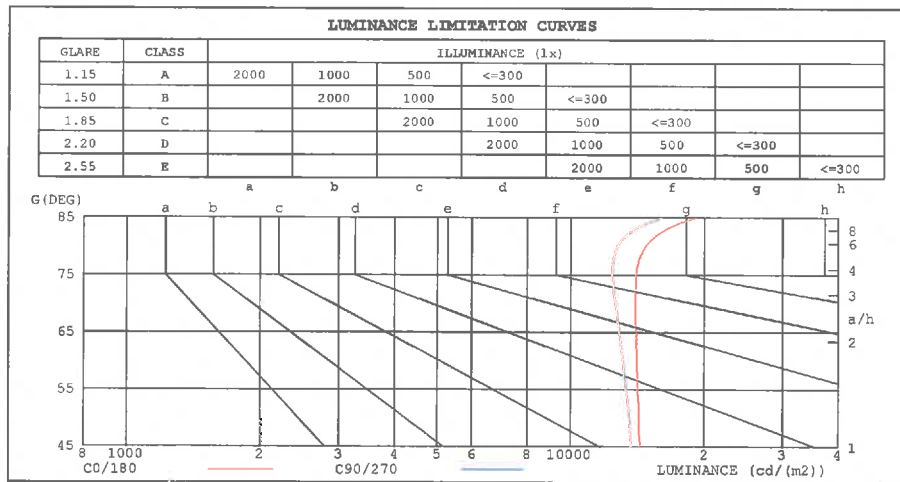
%lum = 72.6%
%lamp = 72.6%

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:230.10V I:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	19147	16094
80	14742	12751
75	14026	12411
70	13962	12608
65	14008	12870
60	14085	13113
55	14153	13306
50	14228	13529
45	14308	13682

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operator: [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:

WEC AND CCEC

Test:U:230.10V I:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	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
pf _c	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.337	.192	.061	.329	.188	.060	.314	.180	.058	.300	.173	.056	.287	.167	.054	
2.0	.308	.169	.052	.301	.166	.051	.287	.160	.050	.275	.154	.048	.263	.149	.047	
3.0	.281	.149	.045	.274	.147	.044	.262	.142	.043	.251	.138	.042	.241	.133	.041	
4.0	.257	.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	.205	.105	.031	.197	.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	.178	.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	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pf _c	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	.121	.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	.191	.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	.071	.150	.100	.061	.104	.070	.043	.060	.041	.026	.019	.013	.008	
6.0	.168	.107	.063	.144	.092	.055	.100	.065	.039	.058	.038	.023	.019	.012	.008	
7.0	.161	.100	.057	.138	.087	.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	.052	.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:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm										
NAME: LED Ceiling light					TYPE:			WEIGHT:		
SPEC.:220C					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	21.9	20.7	22.1	22.4	20.1	21.6	20.4	21.8	22.1
3H	22.1	23.5	22.4	23.8	24.1	21.7	23.1	22.1	23.4	23.7
4H	22.9	24.2	23.2	24.5	24.8	22.4	23.8	22.8	24.1	24.4
6H	23.6	24.8	23.9	25.2	25.5	23.0	24.3	23.4	24.6	25.0
8H	23.9	25.1	24.3	25.4	25.8	23.3	24.5	23.7	24.9	25.2
12H	24.2	25.4	24.6	25.7	26.1	23.6	24.7	24.0	25.1	25.5
4H 2H	21.0	22.3	21.3	22.6	22.9	20.7	22.1	21.1	22.4	22.7
3H	22.9	24.1	23.3	24.4	24.8	22.6	23.8	23.0	24.1	24.5
4H	23.8	24.9	24.2	25.3	25.7	23.4	24.5	23.9	24.9	25.3
6H	24.7	25.6	25.1	26.0	26.5	24.2	25.2	24.6	25.6	26.0
8H	25.1	26.0	25.5	26.4	26.8	24.5	25.4	25.0	25.9	26.3
12H	25.5	26.3	25.9	26.7	27.2	24.9	25.7	25.4	26.1	26.6
8H 4H	24.1	25.0	24.6	25.5	25.9	23.8	24.7	24.3	25.1	25.6
6H	25.2	25.9	25.7	26.4	26.9	24.8	25.5	25.2	26.0	26.5
8H	25.7	26.4	26.2	26.9	27.4	25.2	25.9	25.7	26.4	26.9
12H	26.3	26.9	26.8	27.4	27.9	25.7	26.3	26.2	26.8	27.3
12H 4H	24.2	25.0	24.6	25.4	25.9	23.8	24.7	24.3	25.1	25.6
6H	25.3	25.9	25.8	26.4	27.0	24.9	25.5	25.4	26.0	26.5
8H	25.9	26.5	26.4	27.0	27.5	25.4	26.0	25.9	26.5	27.1
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, 1549 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.5)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operator:.....
 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:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

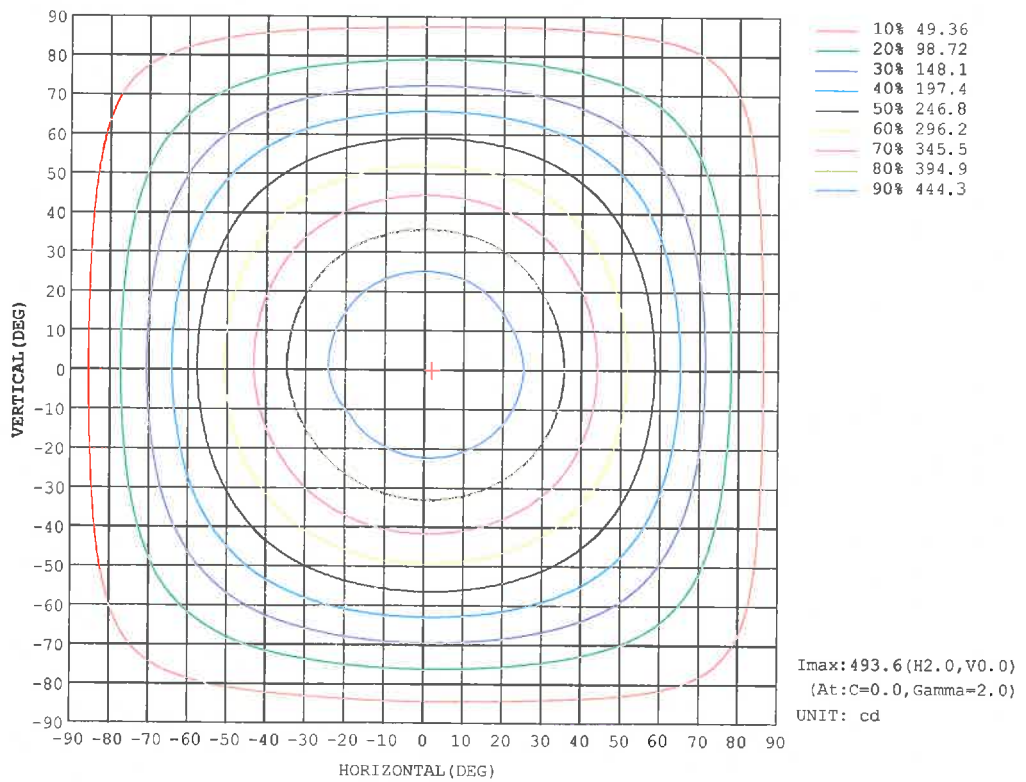
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	36	54	43	36	53	42	36	29
0.80	65	53	45	64	52	45	62	51	45	37
1.00	73	61	54	72	61	53	69	62	53	45
1.25	80	69	61	79	68	61	76	67	60	52
1.50	85	75	67	83	74	66	80	72	65	57
2.00	92	83	76	90	81	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	97	92	101	95	91	97	92	88	78
5.00	106	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:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



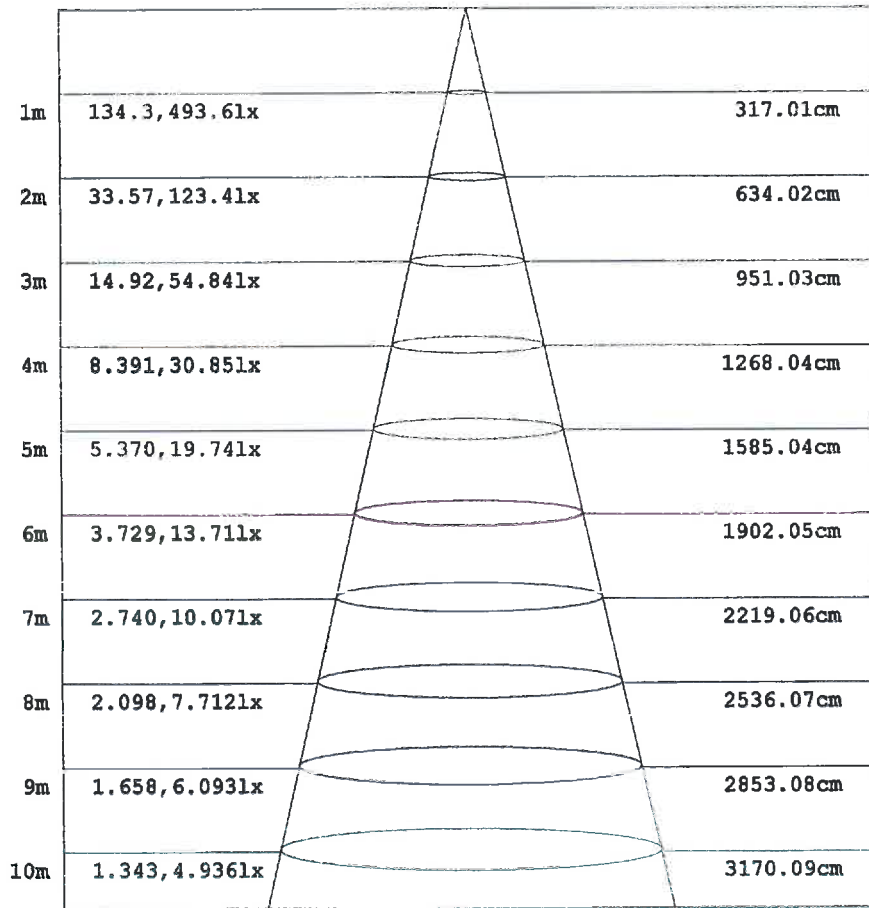
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operator: ' :
 Test Date: 14 July 2021

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:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:1080 lm



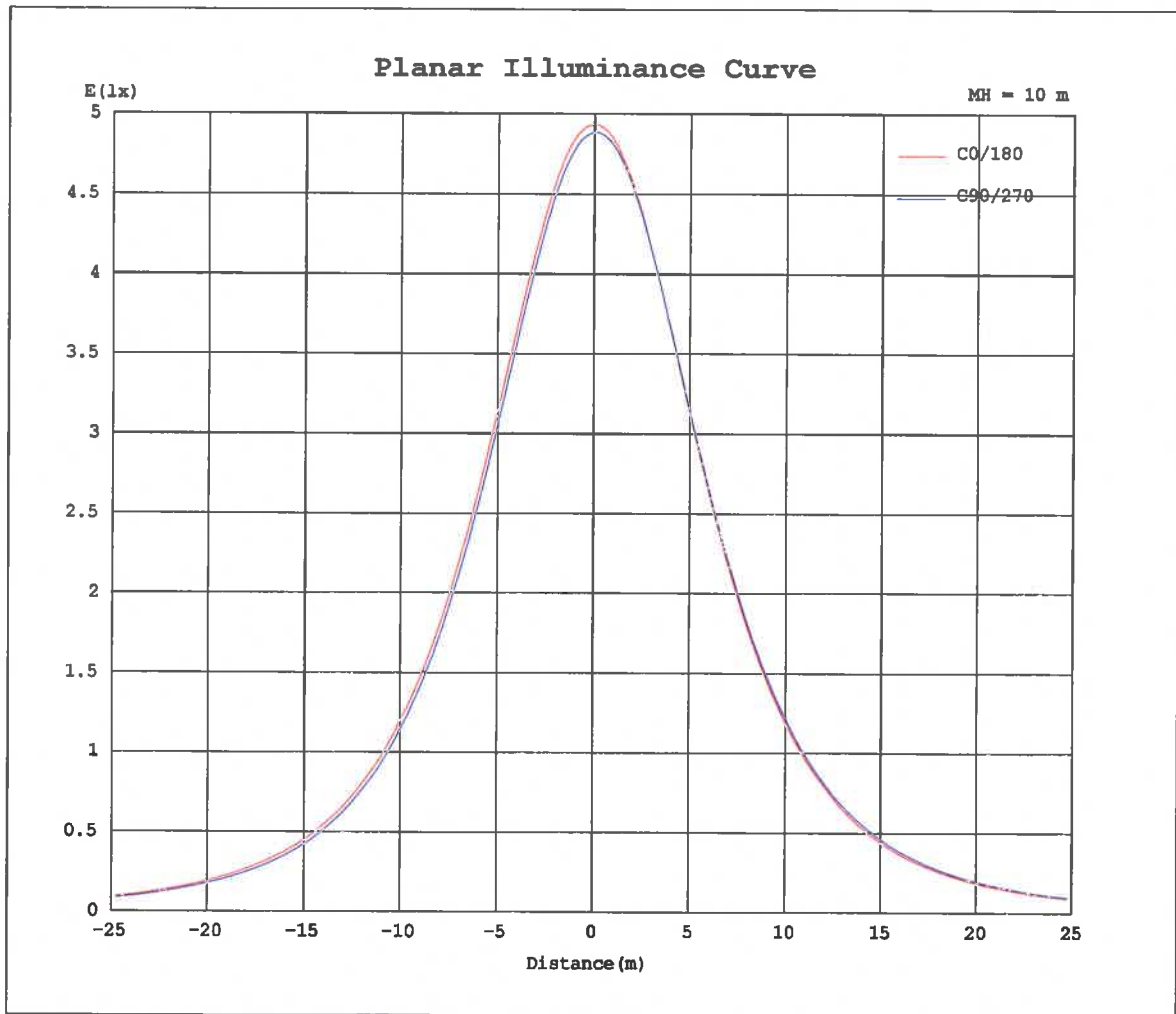
Height Eavg, Emax Angle:115.50deg Diameter

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

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:230.10V I:0.0651A P:14.066W PF:0.9385 Freq:49.99Hz Lamp Flux:1549.3x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) \ y (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	494	492	490	489	487	486	494	492	490	489	487	486						
5	492	490	488	486	485	484	492	490	489	488	487	486						
10	487	484	482	479	478	477	486	485	484	484	482	481						
15	478	474	471	469	467	467	475	475	475	475	474	472						
20	463	460	455	453	451	451	461	461	462	461	461	459						
25	445	441	436	434	431	432	442	443	445	444	444	442						
30	424	419	413	411	409	410	420	421	423	423	423	421						
35	398	394	388	385	382	384	394	396	399	399	399	396						
40	370	365	359	356	354	355	365	367	371	372	372	369						
45	340	335	328	325	323	325	334	337	341	342	343	339						
50	307	302	295	292	289	292	302	304	309	310	311	307						
55	273	267	260	256	254	256	266	270	275	276	277	274						
60	237	230	224	220	218	220	229	233	238	241	241	238						
65	199	193	187	183	181	183	191	196	201	203	204	201						
70	160	155	148	145	143	145	153	157	163	165	166	163						
75	122	117	111	108	105	107	115	119	125	128	129	126						
80	86.0	82.0	77.1	74.4	71.9	73.4	79.7	83.8	89.7	91.7	92.8	89.7						
85	56.1	53.1	49.3	47.1	45.1	46.2	50.9	54.3	59.2	61.0	61.9	59.2						
90	36.0	35.3	34.8	34.2	33.5	33.3	34.4	34.9	37.2	38.2	38.7	37.0						
95	34.4	34.3	33.5	33.2	32.4	32.4	33.4	32.7	34.3	34.7	33.9	30.9						
100	22.0	15.7	19.5	28.2	18.3	18.5	26.5	15.6	13.1	21.4	12.2	9.09						
105	3.75	1.03	2.62	8.76	2.15	2.23	7.71	1.77	0.97	2.94	0.94	1.00						
110	1.19	1.21	1.25	1.27	1.26	1.27	1.27	1.20	1.15	1.14	1.12	1.23						
115	1.37	1.39	1.42	1.44	1.44	1.44	1.44	1.38	1.32	1.31	1.30	1.31						
120	1.54	1.56	1.60	1.62	1.61	1.61	1.62	1.54	1.50	1.49	1.47	1.48						
125	1.71	1.74	1.76	1.79	1.79	1.78	1.79	1.71	1.67	1.66	1.64	1.65						
130	1.89	1.91	1.92	1.96	1.95	1.94	1.96	1.89	1.84	1.83	1.82	1.83						
135	2.06	2.08	2.10	2.12	2.11	2.10	2.11	2.05	2.01	2.00	1.99	1.99						
140	2.22	2.24	2.26	2.28	2.26	2.25	2.27	2.21	2.17	2.16	2.15	2.15						
145	2.36	2.39	2.41	2.41	2.41	2.39	2.41	2.37	2.33	2.30	2.31	2.31						
150	2.51	2.53	2.54	2.55	2.55	2.54	2.55	2.52	2.48	2.46	2.46	2.47						
155	2.66	2.67	2.68	2.69	2.67	2.67	2.69	2.66	2.62	2.60	2.60	2.61						
160	2.80	2.78	2.81	2.81	2.79	2.79	2.82	2.79	2.74	2.74	2.73	2.72						
165	2.89	2.88	2.90	2.88	2.86	2.89	2.91	2.89	2.85	2.84	2.85	2.82						
170	2.95	2.96	2.97	2.95	2.93	2.96	2.97	2.97	2.93	2.90	2.94	2.90						
175	3.01	3.01	3.02	2.99	2.99	3.00	3.02	3.02	3.00	2.96	3.00	2.97						
180	3.04	3.05	3.03	3.01	3.01	3.02	3.05	3.03	3.03	3.00	3.01	3.01						

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: