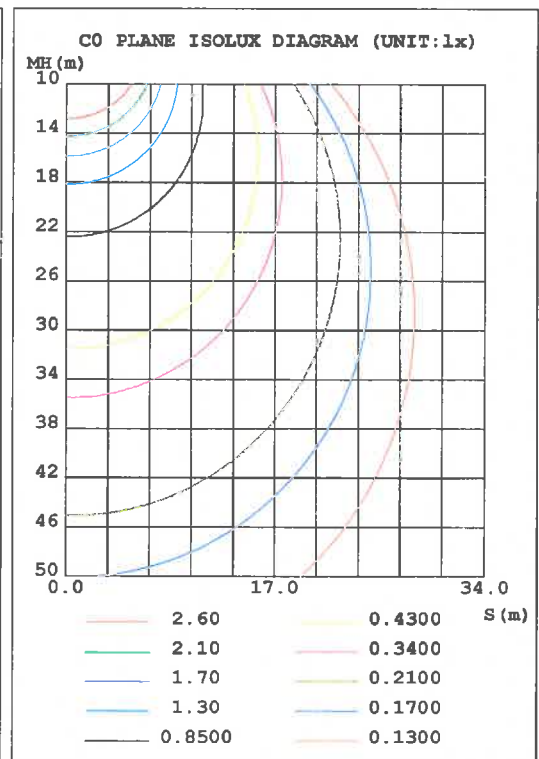
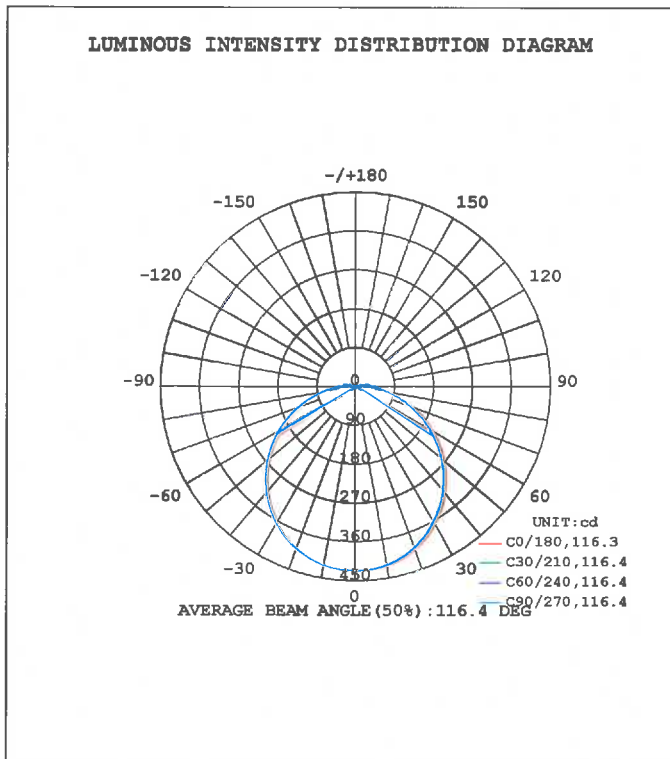


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 92.81 lm/W
MODEL	YYR15WCCT	I _{max} (cd)	427.0	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)	1349.1	η UP, DN(C0-180)	1.6, 47.5	
NOMINAL FLUX(lm)	1349.15	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.5, 49.4	
LAMPS INSIDE	1	η up(%)	3.2	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	230	η down(%)	96.8	CIBSE SHR MAX	1.35	



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 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	421.8	418.6	416.6	415.9	420.5	420.2	420.2	419.5	0- 10	40.29	40.29	2.99,2.99
20	401.2	397.0	393.8	392.8	398.5	400.1	401.3	400.6	10- 20	115.8	156.1	11.6,11.6
30	366.8	361.4	356.9	356.1	362.9	366.1	368.1	367.6	20- 30	176.1	332.2	24.6,24.6
40	320.8	314.7	309.6	308.8	316.1	320.4	323.7	323.1	30- 40	213.5	545.8	40.5,40.5
50	266.3	259.1	253.4	252.9	260.0	265.8	269.8	269.8	40- 50	224.2	769.9	57.1,57.1
60	205.4	197.8	191.8	191.1	198.4	204.7	209.5	209.2	50- 60	207.5	977.4	72.4,72.4
70	139.7	132.3	126.5	125.4	132.6	139.4	144.5	144.5	60- 70	166.8	1144	84.8,84.8
80	75.63	70.07	65.50	64.03	69.55	75.96	80.56	80.55	70- 80	109.0	1253	92.8,92.8
90	32.29	31.45	30.66	29.96	30.55	32.12	34.18	34.09	80- 90	53.43	1307	96.8,96.8
100	19.56	15.70	25.22	16.49	23.55	12.74	19.04	9.481	90-100	30.13	1337	98.1,98.1
110	1.009	1.045	1.091	1.093	1.086	1.011	0.9726	0.9639	100-110	5.243	1342	99.5,99.5
120	1.321	1.353	1.398	1.398	1.385	1.306	1.276	1.269	110-120	1.174	1343	99.5,99.6
130	1.615	1.647	1.684	1.681	1.675	1.604	1.570	1.568	120-130	1.329	1345	99.7,99.7
140	1.900	1.925	1.955	1.948	1.946	1.882	1.855	1.853	130-140	1.367	1346	99.8,99.8
150	2.154	2.181	2.195	2.192	2.186	2.143	2.118	2.120	140-150	1.274	1347	99.9,99.9
160	2.398	2.398	2.417	2.401	2.412	2.371	2.357	2.355	150-160	1.051	1348	99.9,99.9
170	2.534	2.550	2.539	2.545	2.543	2.534	2.498	2.518	160-170	0.6965	1349	100,100
180	2.611	2.606	2.588	2.600	2.611	2.609	2.584	2.597	170-180	5.2447	1349	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 658.25 lm

%lum = 48.8%
%lamp = 48.8%

Conical surface Flux(120deg): 977.42 lm

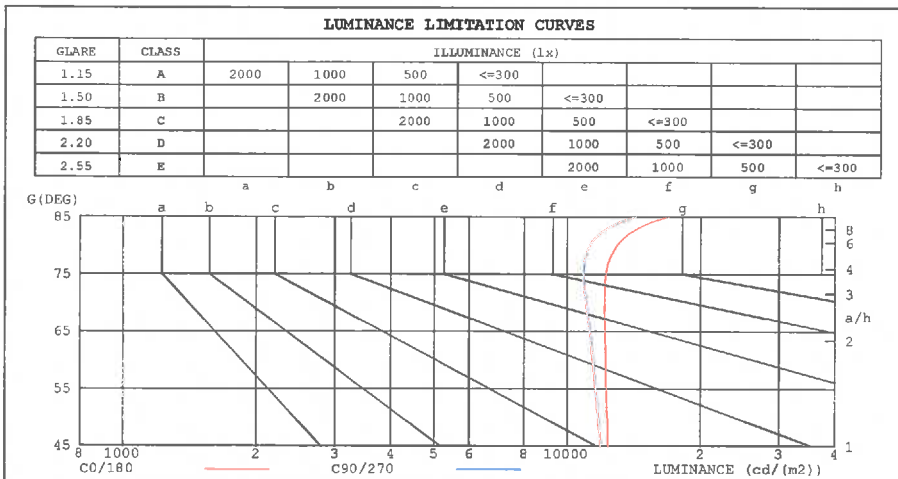
%lum = 72.4%
%lamp = 72.4%

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:

LUMINANCE LIMITATION CURVES

Test:U:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 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	16986	14292
90	12962	11226
75	12241	10871
70	12161	11011
65	12180	11226
60	12227	11418
55	12271	11586
50	12332	11733
45	12394	11912

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 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:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	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	.338	.192	.061	.330	.188	.060	.315	.181	.058	.301	.174	.056	.288	.167	.054	
2.0	.308	.169	.052	.301	.166	.051	.288	.160	.050	.275	.154	.048	.264	.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	.119	.035	.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	.185	.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	

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	.177	.155	.135	.121	.106	.093	.070	.062	.054	.022	.020	.017	
2.0	.199	.156	.120	.170	.134	.104	.117	.093	.073	.067	.054	.043	.022	.018	.014	
3.0	.191	.139	.097	.164	.120	.084	.112	.083	.059	.065	.049	.035	.021	.016	.011	
4.0	.183	.126	.082	.157	.109	.071	.108	.076	.050	.063	.044	.030	.020	.014	.010	
5.0	.176	.115	.071	.151	.100	.062	.104	.070	.044	.060	.041	.026	.019	.013	.009	
6.0	.168	.107	.063	.145	.093	.055	.100	.065	.039	.058	.038	.023	.019	.012	.008	
7.0	.161	.100	.058	.139	.087	.050	.096	.061	.036	.056	.036	.021	.018	.012	.007	
8.0	.155	.095	.053	.133	.082	.046	.092	.058	.033	.054	.034	.020	.017	.011	.006	
9.0	.149	.090	.050	.128	.078	.044	.089	.055	.031	.052	.032	.018	.017	.011	.006	
10.0	.143	.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:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 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	21.8	20.6	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	24.0	25.2	25.5	23.1	24.3	23.4	24.6	25.0
8H	23.9	25.1	24.3	25.5	25.8	23.3	24.5	23.7	24.9	25.3
12H	24.2	25.4	24.6	25.7	26.1	23.6	24.8	24.0	25.1	25.5
4H 2H	20.9	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	26.1	26.5	24.2	25.2	24.7	25.6	26.0
8H	25.1	26.0	25.5	26.4	26.9	24.6	25.5	25.0	25.9	26.3
12H	25.5	26.3	26.0	26.8	27.2	24.9	25.7	25.4	26.2	26.7
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	26.0	25.7	26.4	26.9	24.8	25.5	25.3	26.0	26.5
8H	25.7	26.4	26.3	26.9	27.4	25.3	25.9	25.8	26.4	26.9
12H	26.3	26.9	26.8	27.4	28.0	25.8	26.4	26.3	26.9	27.4
12H 4H	24.2	25.0	24.6	25.4	25.9	23.9	24.7	24.3	25.1	25.6
6H	25.3	26.0	25.8	26.5	27.0	24.9	25.6	25.4	26.1	26.6
8H	25.9	26.5	26.4	27.0	27.5	25.5	26.0	26.0	26.6	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, 1349 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.0)

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:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

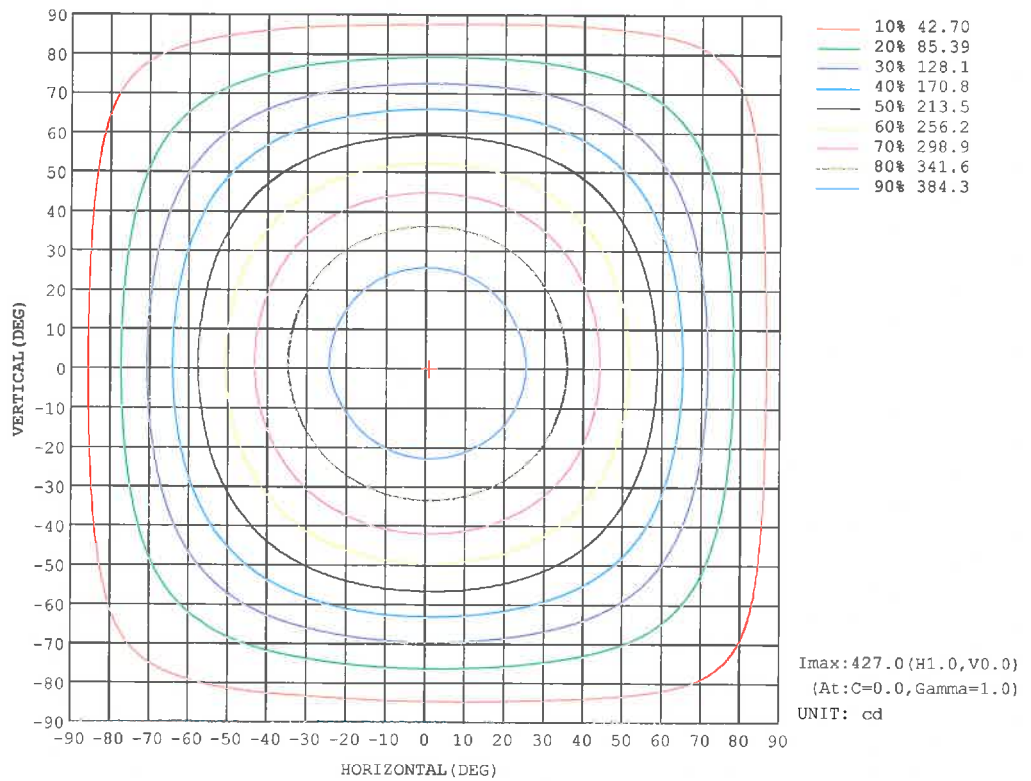
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	36	54	43	36	53	42	36	29
0.80	65	53	45	64	52	45	62	51	44	37
1.00	73	61	54	72	61	53	69	62	53	45
1.25	80	69	61	78	68	61	76	66	60	52
1.50	85	74	67	83	73	66	80	71	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	96	92	88	78
5.00	106	101	96	104	99	94	99	95	91	81
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: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:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



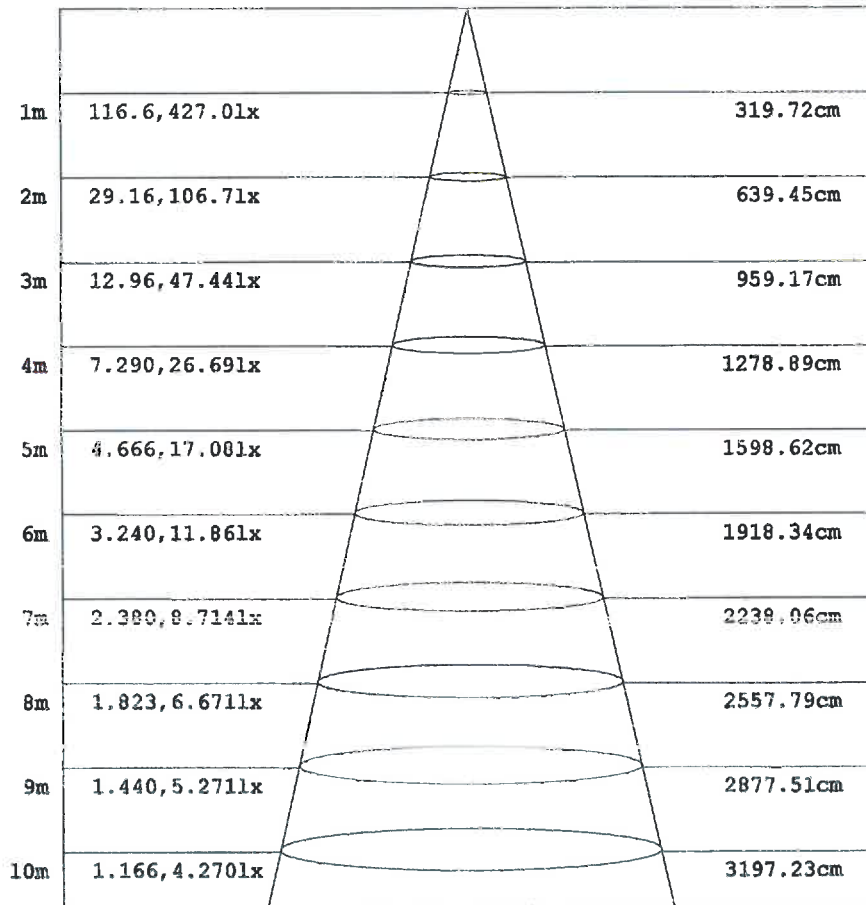
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 14 July 2021

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:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220C	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:938.5 lm



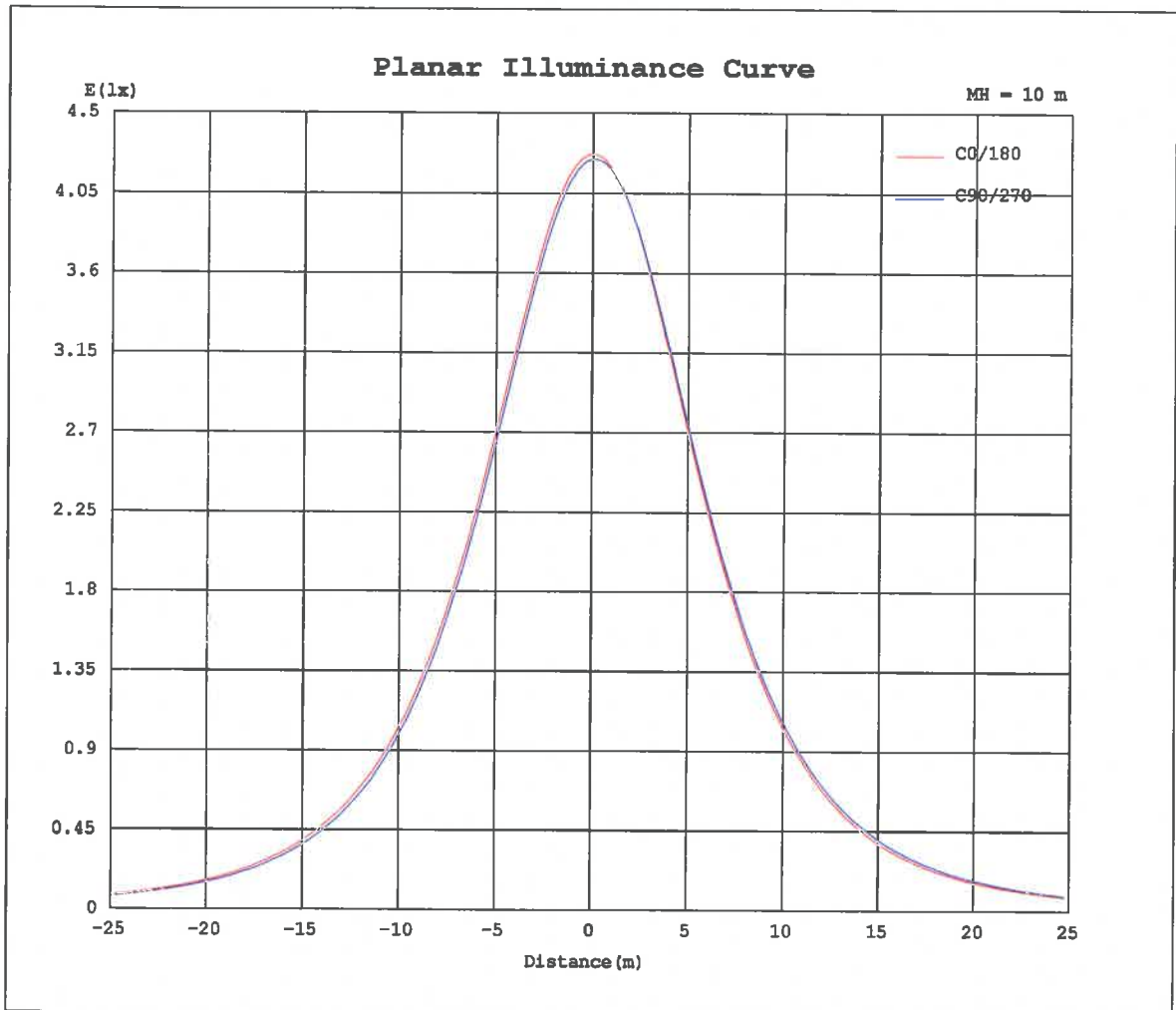
Height Eavg, Emax Angle:115.94deg Diameter

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
 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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.09V I:0.0670A P:14.536W PF:0.9436 Freq:49.99Hz Lamp Flux:1349.15x1 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	427	426	425	424	424	423	427	426	425	424	424	423						
5	426	425	423	422	422	422	425	424	424	424	424	423						
10	422	420	418	417	416	416	421	420	420	420	420	419						
15	413	411	409	407	406	406	411	411	412	413	413	411						
20	401	398	396	394	392	393	398	399	401	401	401	400						
25	386	382	379	377	375	376	382	384	386	386	387	385						
30	367	363	360	357	356	357	363	365	368	368	369	367						
35	345	341	337	334	333	334	341	343	346	347	348	346						
40	321	317	312	310	308	310	316	319	322	324	324	322						
45	294	290	285	283	281	283	289	292	296	298	298	296						
50	266	261	257	253	252	253	260	264	268	270	271	269						
55	236	232	227	223	222	223	230	234	238	240	241	239						
60	205	200	195	192	190	192	198	202	207	209	210	208						
65	173	168	163	159	158	159	166	170	175	177	178	176						
70	140	135	130	127	124	127	133	137	142	144	146	143						
75	106	102	97.2	94.5	92.3	94.2	99.7	104	109	111	113	110						
80	75.6	72.2	67.9	65.5	63.3	64.7	69.6	73.3	78.6	80.6	81.8	79.3						
85	49.7	47.2	43.9	41.9	40.1	41.1	44.7	47.8	52.2	54.0	54.9	52.8						
90	32.3	31.7	31.3	30.7	30.0	29.9	30.5	31.1	33.2	34.2	34.8	33.4						
95	30.8	30.7	30.1	29.7	29.0	29.0	29.7	29.1	30.6	31.0	30.5	27.8						
100	19.6	14.0	17.4	25.2	16.4	16.6	23.6	13.9	11.6	19.0	10.8	8.14						
105	3.31	0.87	2.32	7.80	1.94	1.99	6.84	1.58	0.84	2.58	0.80	0.82						
110	1.01	1.03	1.06	1.09	1.09	1.10	1.09	1.04	0.98	0.97	0.96	0.97						
115	1.17	1.18	1.21	1.24	1.24	1.25	1.24	1.18	1.14	1.12	1.11	1.13						
120	1.32	1.34	1.37	1.40	1.40	1.40	1.38	1.33	1.29	1.28	1.26	1.28						
125	1.47	1.49	1.52	1.54	1.54	1.54	1.53	1.47	1.43	1.43	1.41	1.43						
130	1.62	1.63	1.66	1.68	1.69	1.67	1.67	1.62	1.58	1.57	1.56	1.57						
135	1.76	1.77	1.81	1.82	1.82	1.81	1.81	1.76	1.72	1.71	1.71	1.72						
140	1.90	1.91	1.94	1.96	1.95	1.94	1.95	1.90	1.86	1.85	1.85	1.86						
145	2.02	2.04	2.06	2.08	2.07	2.06	2.06	2.04	2.00	1.99	1.99	1.99						
150	2.15	2.17	2.19	2.19	2.19	2.19	2.19	2.16	2.13	2.12	2.12	2.12						
155	2.28	2.29	2.30	2.31	2.32	2.30	2.30	2.28	2.25	2.24	2.24	2.25						
160	2.40	2.38	2.41	2.42	2.40	2.40	2.41	2.39	2.35	2.36	2.36	2.35						
165	2.47	2.47	2.50	2.49	2.47	2.49	2.48	2.48	2.44	2.44	2.46	2.43						
170	2.53	2.54	2.56	2.54	2.54	2.55	2.54	2.55	2.52	2.50	2.53	2.51						
175	2.57	2.59	2.59	2.57	2.57	2.59	2.59	2.60	2.57	2.55	2.58	2.57						
180	2.61	2.61	2.60	2.59	2.60	2.60	2.61	2.61	2.61	2.58	2.60	2.59						

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: