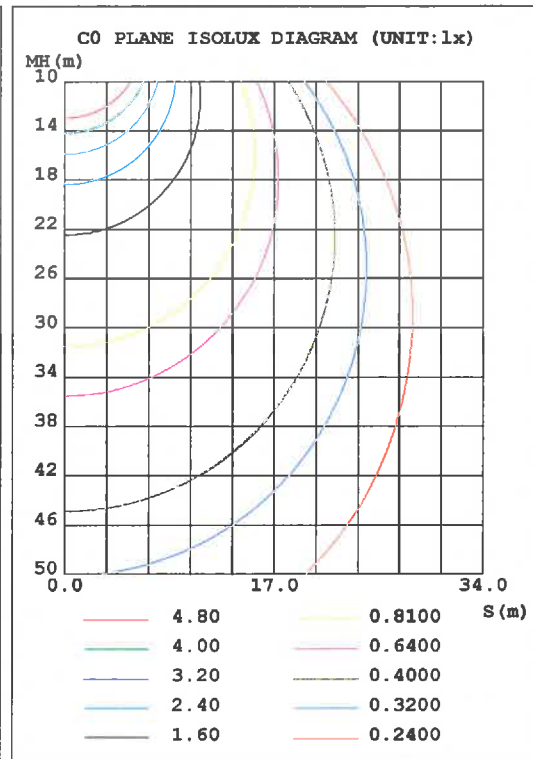
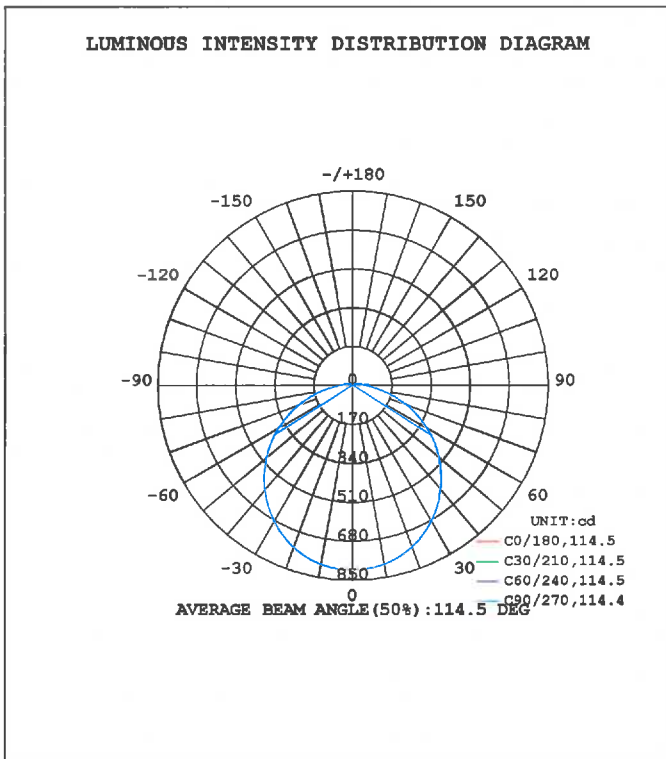


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.09V I:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:330C	DIM.: 330MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 113.29 lm/W			
MODEL	YR24WCCT	I _{max} (cd)	805.8	S/MH(C0/180)	1.26
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE (V)	230	TOTAL FLUX(lm)	2470.2	η UP, DN(C0-180)	1.5,48.4
NOMINAL FLUX(lm)	2470.19	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.5,48.6
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	792.8	792.1	791.6	790.6	792.6	792.5	792.0	791.1	0- 10	76.20	76.20	3.08,3.08
20	751.0	750.5	749.5	748.9	751.8	751.5	750.3	749.6	10- 20	218.6	294.8	11.9,11.9
30	682.6	681.6	681.5	680.7	683.8	683.5	683.0	682.0	20- 30	331.5	626.3	25.4,25.4
40	592.7	591.7	592.1	591.2	595.2	594.6	593.2	592.8	30- 40	468.3	1027	41.6,41.6
50	485.9	486.1	485.8	485.3	489.2	488.6	487.3	486.9	40- 50	417.9	1444	58.5,58.5
60	367.6	366.9	367.3	367.0	370.9	370.1	368.9	368.2	50- 60	383.4	1828	74,74
70	239.6	239.2	239.7	239.8	243.2	242.9	241.6	241.1	60- 70	392.0	2130	86.2,86.2
80	116.3	115.9	117.1	117.6	120.1	119.5	118.6	118.6	70- 80	187.8	2318	93.8,93.8
90	38.92	38.72	38.55	38.61	39.15	38.98	38.80	38.79	80- 90	77.96	2396	97,97
100	33.80	32.39	34.59	30.56	33.99	29.10	33.40	29.46	90-100	40.43	2436	98.6,98.6
110	12.73	6.664	12.08	4.838	9.049	4.411	10.52	5.596	100-110	19.48	2455	99.4,99.4
120	2.447	2.448	2.498	2.493	2.489	2.439	2.425	2.412	110-120	3.467	2459	99.5,99.5
130	3.040	3.045	3.091	3.088	3.064	3.034	3.022	3.005	120-130	2.464	2461	99.6,99.6
140	3.597	3.606	3.634	3.636	3.616	3.588	3.574	3.566	130-140	2.371	2464	99.7,99.7
150	4.099	4.111	4.127	4.124	4.127	4.109	4.081	4.079	140-150	2.416	2466	99.8,99.8
160	4.565	4.552	4.589	4.566	4.589	4.554	4.556	4.530	150-160	2.003	2468	99.9,99.9
170	4.832	4.851	4.828	4.855	4.847	4.853	4.823	4.846	160-170	1.322	2470	100,100
180	4.973	4.987	4.959	4.984	4.977	4.987	4.955	4.989	170-180	0.6681	2470	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

Conical surface Flux(90deg): 1236.7 lm

%lum = 50.1%
%lamp = 50.1%

Conical surface Flux(120deg): 1827.8 lm

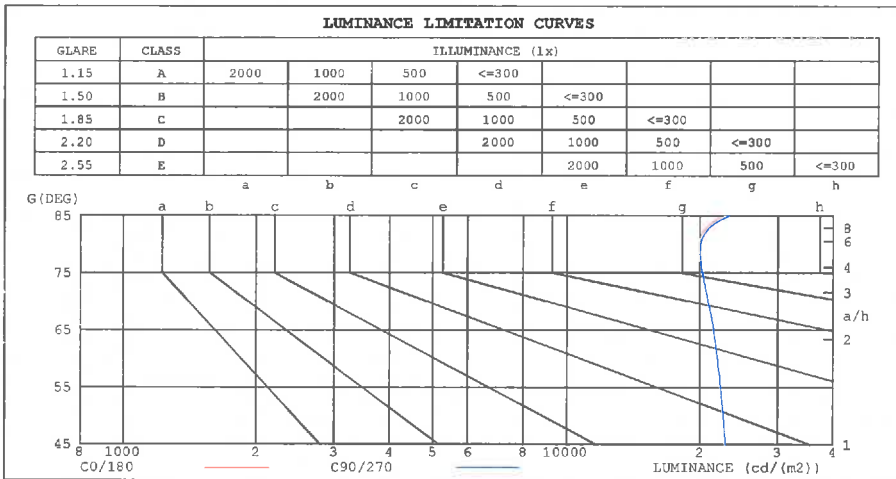
%lum = 74.0%
%lamp = 74.0%

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:

LUMINANCE LIMITATION CURVES

Test:U:230.09V I:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:330C	DIM.: 330MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	22775	23191
80	19927	20065
75	20227	20268
70	20847	20856
65	21418	21425
60	21878	21861
55	22222	22213
50	22499	22494
45	22785	22754

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:230.09V I:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:330C	DIM.: 330MM	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	.327	.186	.059	.319	.182	.058	.304	.174	.056	.290	.167	.054	.277	.161	.052	
2.0	.301	.165	.051	.294	.162	.050	.281	.156	.049	.269	.151	.047	.257	.145	.046	
3.0	.276	.147	.044	.270	.145	.044	.258	.140	.042	.247	.135	.042	.237	.131	.041	
4.0	.253	.132	.039	.248	.130	.038	.237	.126	.038	.227	.122	.037	.218	.119	.036	
5.0	.233	.119	.034	.228	.117	.034	.219	.114	.034	.210	.111	.033	.202	.108	.032	
6.0	.216	.108	.031	.211	.107	.031	.203	.104	.030	.195	.101	.030	.187	.099	.029	
7.0	.200	.099	.028	.196	.098	.028	.189	.095	.027	.182	.093	.027	.175	.091	.027	
8.0	.187	.091	.026	.183	.090	.026	.176	.088	.025	.170	.086	.025	.164	.084	.024	
9.0	.175	.085	.024	.172	.084	.023	.165	.082	.023	.160	.080	.023	.154	.078	.023	
10.0	.164	.079	.022	.161	.078	.022	.156	.076	.021	.150	.075	.021	.145	.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	.213	.213	.213	.182	.182	.182	.125	.125	.125	.072	.072	.072	.023	.023	.023	
1.0	.205	.179	.156	.175	.154	.134	.120	.106	.093	.069	.061	.054	.022	.020	.017	
2.0	.197	.155	.120	.169	.134	.104	.116	.092	.072	.067	.054	.042	.021	.017	.014	
3.0	.189	.138	.097	.162	.119	.084	.111	.083	.059	.064	.048	.035	.021	.016	.011	
4.0	.181	.125	.081	.156	.108	.071	.107	.075	.050	.062	.044	.029	.020	.014	.010	
5.0	.174	.114	.070	.149	.099	.061	.103	.069	.043	.060	.041	.026	.019	.013	.008	
6.0	.167	.106	.063	.143	.092	.054	.099	.064	.039	.057	.038	.023	.019	.012	.008	
7.0	.160	.099	.057	.137	.086	.049	.095	.060	.035	.055	.036	.021	.018	.012	.007	
8.0	.153	.093	.052	.132	.081	.046	.091	.057	.032	.053	.034	.019	.017	.011	.006	
9.0	.147	.089	.049	.127	.077	.043	.088	.054	.030	.051	.032	.018	.017	.010	.006	
10.0	.141	.084	.046	.122	.073	.040	.085	.052	.029	.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:230.09V I:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm											
NAME: LED Ceiling light					TYPE:			WEIGHT:			
SPEC.:330C					DIM.: 330MM			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	22.3	20.3	21.8	20.6	22.1	22.3	
	3H	22.0	23.3	22.3	23.6	23.9	21.9	23.3	22.3	23.6	23.9
	4H	22.6	24.0	23.0	24.3	24.6	22.6	24.0	23.0	24.3	24.6
	6H	23.2	24.5	23.6	24.8	25.1	23.2	24.4	23.6	24.8	25.1
	8H	23.4	24.6	23.8	25.0	25.3	23.4	24.6	23.8	25.0	25.3
	12H	23.6	24.8	24.0	25.1	25.5	23.6	24.8	24.0	25.1	25.5
4H	2H	21.0	22.3	21.3	22.6	22.9	20.9	22.3	21.3	22.6	22.9
	3H	22.8	23.9	23.2	24.3	24.7	22.8	23.9	23.2	24.3	24.6
	4H	23.6	24.7	24.0	25.0	25.4	23.6	24.6	24.0	25.0	25.4
	6H	24.3	25.2	24.7	25.7	26.1	24.3	25.2	24.7	25.6	26.1
	8H	24.6	25.5	25.1	25.9	26.4	24.6	25.5	25.1	25.9	26.3
	12H	24.9	25.7	25.3	26.1	26.6	24.9	25.7	25.3	26.1	26.6
8H	4H	23.9	24.8	24.4	25.2	25.7	23.9	24.8	24.4	25.2	25.6
	6H	24.8	25.5	25.3	26.0	26.5	24.8	25.5	25.3	26.0	26.5
	8H	25.2	25.9	25.7	26.3	26.8	25.2	25.8	25.7	26.3	26.8
	12H	25.6	26.2	26.1	26.7	27.2	25.6	26.2	26.1	26.7	27.2
12H	4H	23.9	24.7	24.4	25.2	25.7	23.9	24.7	24.4	25.2	25.6
	6H	24.9	25.5	25.4	26.0	26.5	24.9	25.5	25.4	26.0	26.5
	8H	25.3	25.9	25.9	26.4	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, 2470 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.1$)

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:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:330C	DIM.: 330MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

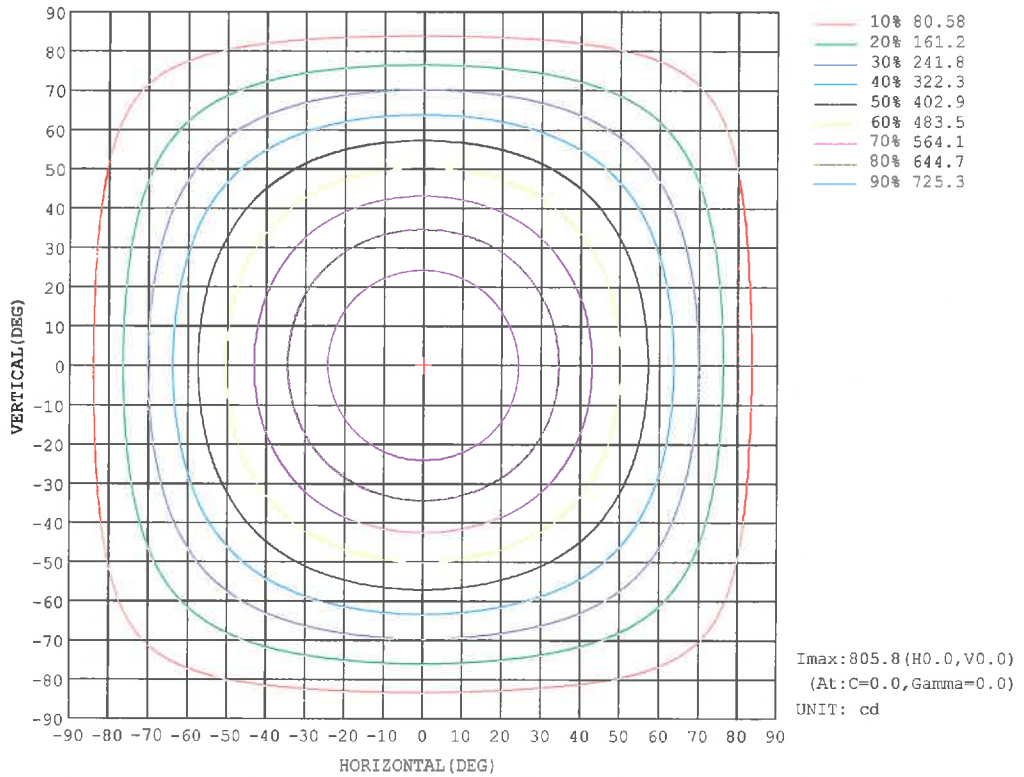
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	36	30
0.80	65	54	46	64	53	46	62	52	45	38
1.00	74	62	55	72	62	54	70	63	54	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	84	77	91	82	76	87	80	74	66
2.50	97	88	82	95	87	81	90	84	79	70
3.00	100	93	87	98	91	86	93	88	83	74
4.00	104	98	93	102	96	92	97	92	89	79
5.00	107	102	97	104	99	95	99	95	92	82
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:230.09V I:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:330C	DIM.: 330MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



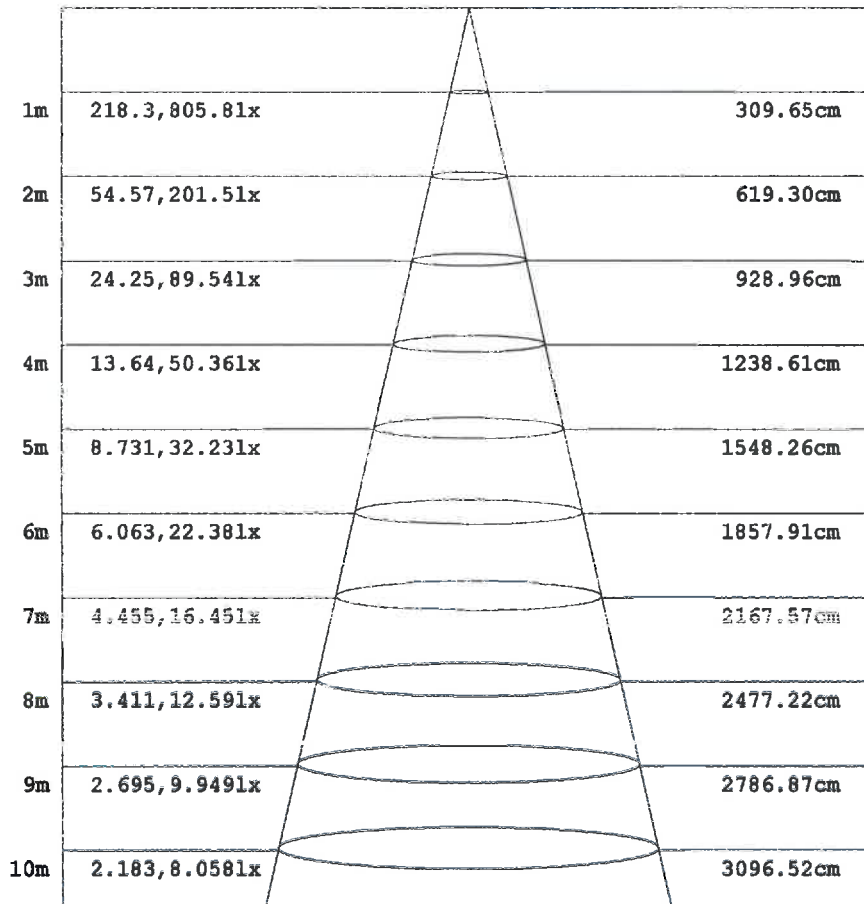
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 14 July 2021

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:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:330C	DIM.: 330MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:1756 lm



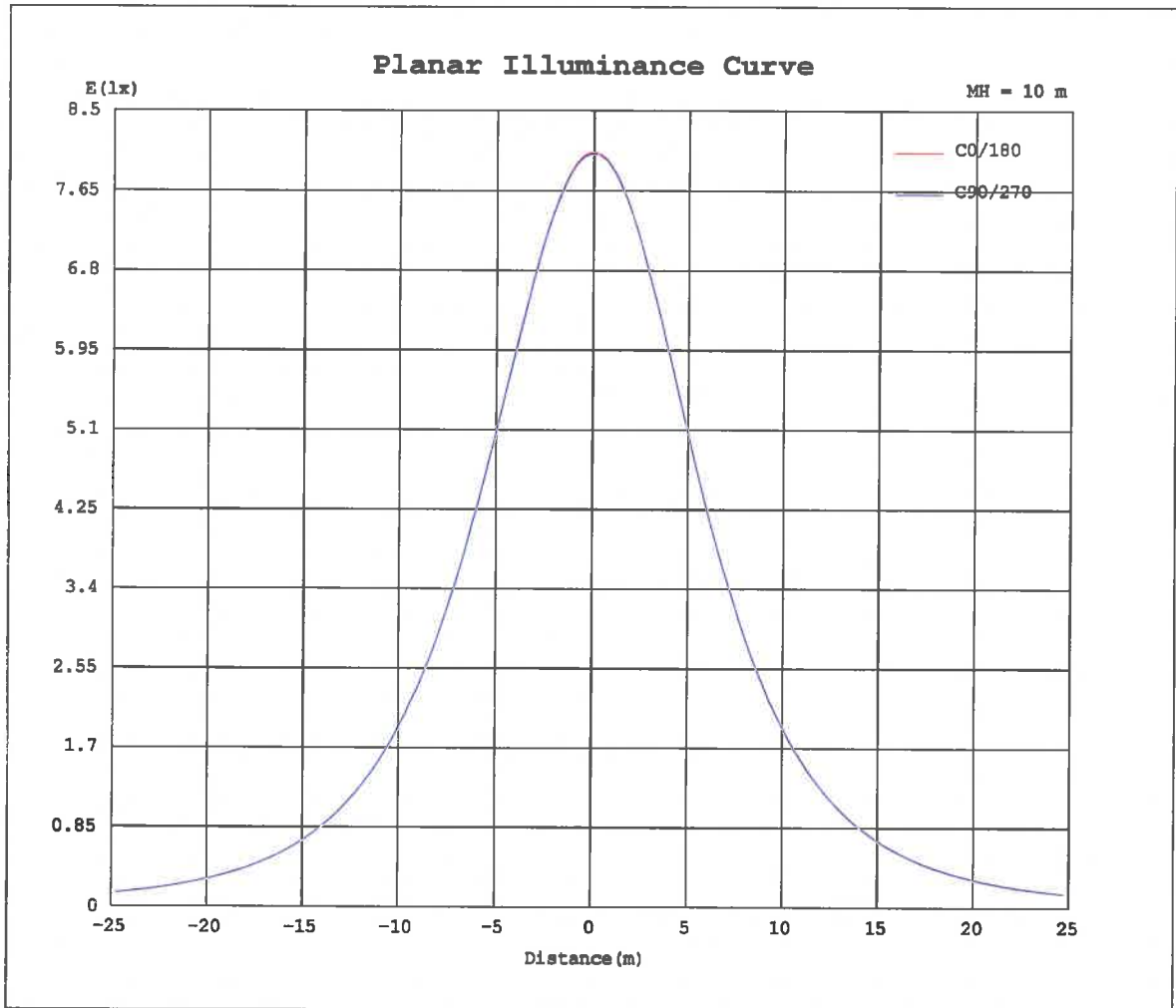
Height Eavg, Emax Angle:114.28deg Diameter

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: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:

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:230.09V I:0.0984A P:21.805W PF:0.9629 Freq:49.99Hz Lamp Flux:2470.19x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:330C	DIM.: 330MM	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	806	805	804	805	804	803	806	805	804	805	804	803						
5	803	802	801	801	800	800	803	803	802	802	801	800						
10	793	792	792	792	790	791	793	793	792	792	791	791						
15	775	776	773	774	773	773	776	776	776	775	774	773						
20	751	751	750	749	748	749	752	752	751	750	750	749						
25	719	720	719	719	717	718	721	720	720	720	720	718						
30	683	683	680	682	681	681	684	684	683	683	683	681						
35	640	640	638	639	638	639	642	642	642	641	640	639						
40	593	593	591	592	591	592	595	594	595	593	594	592						
45	541	542	540	541	539	540	544	544	543	542	543	541						
50	486	487	485	486	484	486	489	488	489	487	488	486						
55	428	429	427	428	427	428	432	431	431	430	430	428						
60	368	368	366	367	366	368	371	370	371	369	369	367						
65	304	305	303	304	303	305	308	307	308	306	306	305						
70	240	240	239	240	239	240	243	243	243	242	242	241						
75	176	176	175	176	176	177	180	179	180	178	178	177						
80	116	116	116	117	117	118	120	119	120	119	119	118						
85	66.7	67.1	66.3	67.9	68.0	68.8	70.3	69.1	69.7	68.7	69.6	68.5						
90	38.9	38.8	38.6	38.6	38.6	38.7	39.1	39.0	38.9	38.8	38.8	38.8						
95	38.0	38.0	37.7	37.7	37.6	37.7	38.1	38.0	37.9	37.9	37.9	37.9						
100	33.8	32.4	32.4	34.6	30.0	31.1	34.0	29.0	29.2	33.4	30.0	28.9						
105	24.0	17.7	16.4	24.9	15.5	13.2	21.5	12.4	14.2	22.3	14.3	14.9						
110	12.7	7.36	5.96	12.1	5.69	3.98	9.05	3.73	5.09	10.5	5.28	5.91						
115	5.00	2.36	2.17	4.04	2.20	2.19	2.59	2.16	2.13	3.48	2.11	2.22						
120	2.45	2.44	2.46	2.50	2.51	2.48	2.49	2.46	2.42	2.42	2.41	2.41						
125	2.75	2.75	2.76	2.81	2.82	2.78	2.78	2.76	2.72	2.72	2.71	2.71						
130	3.04	3.04	3.05	3.09	3.11	3.07	3.06	3.04	3.02	3.02	3.00	3.01						
135	3.33	3.31	3.35	3.37	3.38	3.34	3.35	3.33	3.31	3.31	3.29	3.29						
140	3.60	3.60	3.61	3.63	3.64	3.63	3.62	3.61	3.57	3.57	3.57	3.57						
145	3.85	3.84	3.88	3.89	3.88	3.88	3.88	3.87	3.84	3.83	3.82	3.83						
150	4.10	4.10	4.12	4.13	4.13	4.12	4.13	4.12	4.10	4.08	4.09	4.07						
155	4.35	4.34	4.36	4.36	4.36	4.36	4.37	4.38	4.33	4.33	4.33	4.32						
160	4.57	4.54	4.57	4.59	4.56	4.58	4.59	4.57	4.54	4.56	4.54	4.52						
165	4.71	4.70	4.74	4.72	4.71	4.74	4.73	4.75	4.70	4.70	4.72	4.69						
170	4.83	4.83	4.87	4.83	4.84	4.87	4.85	4.88	4.83	4.82	4.87	4.82						
175	4.92	4.93	4.95	4.91	4.93	4.95	4.93	4.96	4.92	4.91	4.95	4.92						
180	4.97	4.99	4.98	4.96	4.99	4.98	4.98	4.99	4.99	4.95	4.99	4.99						

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: