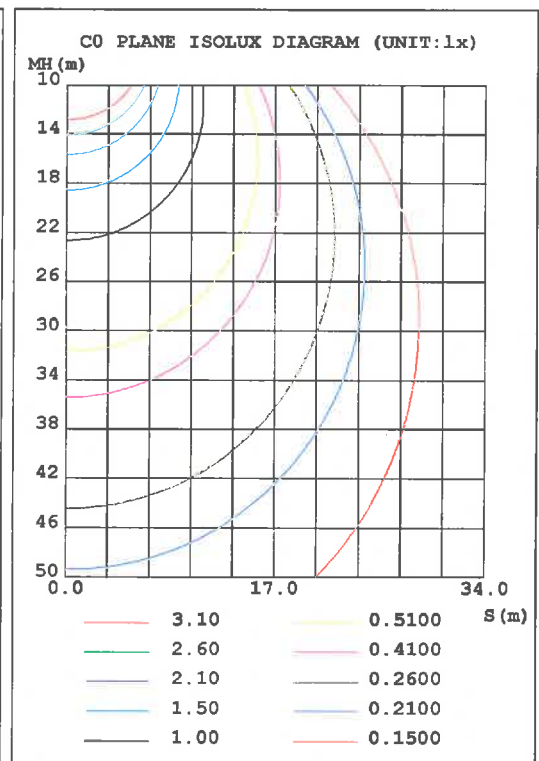
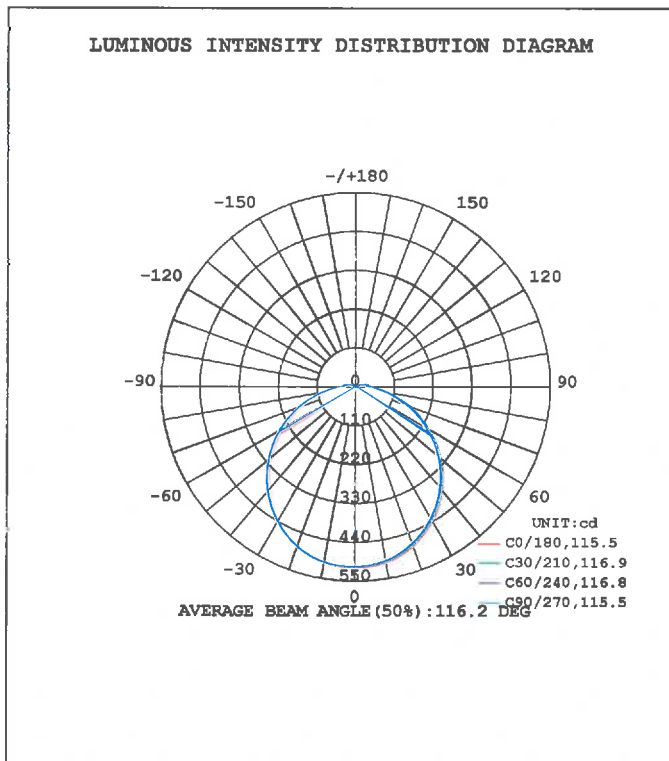


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.10V I:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 114.49 lm/W
MODEL	YYS15WCCT	I _{max} (cd)	513.3	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)	1607.1	η UP, DN(C0-180)	1.6, 47.3	
NOMINAL FLUX(lm)	1607.13	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	505.9	500.9	496.6	495.6	506.3	504.2	501.4	498.9	0- 10	48.15	48.15	3,3
20	479.7	474.7	468.8	469.4	460.4	461.6	478.6	476.6	10- 20	198.5	186.6	11.6,11.6
30	437.3	432.0	425.3	427.4	438.4	441.8	438.8	437.4	20- 30	210.8	397.4	24.7,24.7
40	380.8	376.1	368.0	372.1	382.9	388.5	385.3	385.1	30- 40	255.8	653.2	40.6,40.6
50	314.0	309.8	300.7	306.2	315.5	323.8	320.4	321.2	40- 50	268.8	922.0	57.4,57.4
60	238.8	235.2	225.0	231.9	239.7	250.2	247.3	248.6	50- 60	248.7	1171	72.8,72.8
70	158.3	155.6	145.0	152.7	159.0	171.0	168.1	170.5	60- 70	198.8	1370	85.2,85.2
80	80.55	79.75	69.68	77.94	81.65	93.09	89.39	93.36	70- 80	128.3	1498	93.2,93.2
90	29.47	35.54	29.65	36.03	30.95	37.77	32.31	37.00	80- 90	60.12	1558	96.9,96.9
100	22.54	20.12	27.88	21.41	27.36	16.84	21.74	13.20	90-100	33.11	1591	99,99
110	1.230	1.256	1.281	1.265	1.258	1.163	1.135	1.154	100-110	7.495	1599	99.5,99.5
120	1.597	1.622	1.656	1.627	1.629	1.529	1.502	1.520	110-120	1.388	1600	99.6,99.6
130	1.968	1.998	2.028	1.991	2.000	1.903	1.878	1.894	120-130	1.583	1602	99.7,99.7
140	2.330	2.348	2.358	2.328	2.340	2.265	2.231	2.247	130-140	1.647	1603	99.8,99.8
150	2.651	2.667	2.670	2.643	2.652	2.591	2.565	2.570	140-150	1.544	1605	99.8,99.8
160	2.945	2.937	2.946	2.910	2.951	2.885	2.864	2.871	150-160	1.279	1606	99.9,99.9
170	3.118	3.120	3.095	3.088	3.118	3.093	3.054	3.066	160-170	0.8498	1607	100,100
180	3.199	3.197	3.167	3.156	3.217	3.195	3.154	3.165	170-180	0.2989	1607	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 788.09 lm

%lum = 49.0%
%lamp = 49.0%

Conical surface Flux(120deg): 1170.7 lm

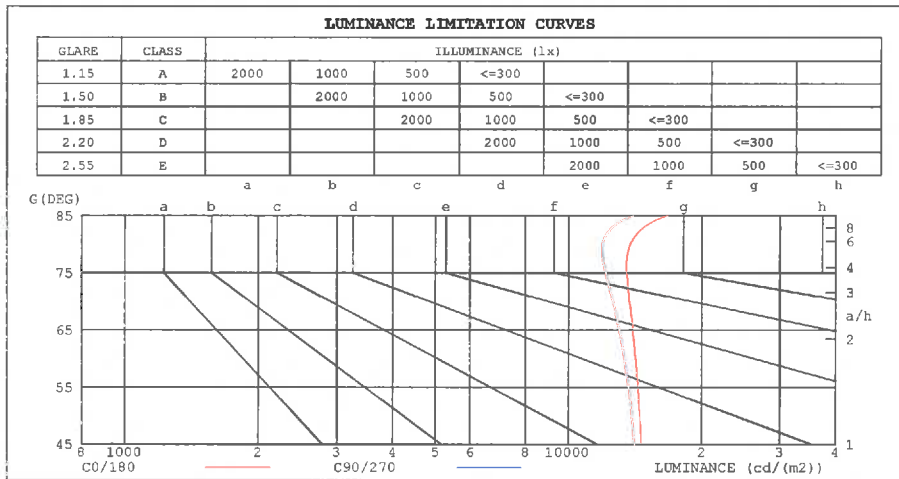
%lum = 72.8%
%lamp = 72.8%

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:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 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	16817	14071
80	13806	11943
75	13532	12137
70	13772	12620
65	14022	13054
60	14216	13396
55	14386	13688
50	14539	13923
45	14661	14131

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:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 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	.312	.179	.057	.298	.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	.123	.037	.221	.120	.037	
5.0	.235	.120	.035	.230	.118	.034	.221	.115	.034	.212	.112	.033	.204	.109	.033	
6.0	.217	.109	.031	.213	.108	.031	.204	.105	.030	.196	.102	.030	.189	.099	.030	
7.0	.202	.100	.028	.198	.099	.028	.190	.096	.028	.183	.094	.027	.176	.091	.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	.179	.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	.021	.017	.014	
3.0	.190	.138	.097	.163	.119	.084	.112	.083	.059	.065	.048	.035	.021	.016	.011	
4.0	.182	.125	.081	.157	.108	.071	.108	.075	.050	.062	.044	.029	.020	.014	.010	
5.0	.175	.115	.070	.150	.099	.061	.103	.069	.043	.060	.041	.026	.019	.013	.008	
6.0	.168	.106	.063	.144	.092	.055	.099	.065	.039	.058	.038	.023	.019	.012	.008	
7.0	.161	.100	.057	.138	.086	.050	.095	.061	.035	.055	.036	.021	.018	.012	.007	
8.0	.154	.094	.053	.133	.081	.046	.092	.057	.033	.053	.034	.019	.017	.011	.006	
9.0	.148	.089	.049	.127	.077	.043	.088	.054	.030	.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:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 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	21.9	23.3	22.3	23.6	23.9	21.6	23.0	22.0	23.3	23.6
4H	22.7	24.0	23.0	24.3	24.6	22.3	23.6	22.7	24.0	24.3
6H	23.3	24.6	23.7	24.9	25.2	22.8	24.1	23.2	24.4	24.8
8H	23.6	24.8	24.0	25.1	25.5	23.1	24.3	23.5	24.6	25.0
12H	23.8	25.0	24.2	25.3	25.7	23.3	24.4	23.7	24.8	25.2
4H 2H	20.9	22.2	21.2	22.5	22.9	20.7	22.0	21.1	22.4	22.7
3H	22.8	23.9	23.2	24.3	24.7	22.5	23.7	22.9	24.0	24.4
4H	23.6	24.7	24.1	25.1	25.5	23.3	24.4	23.7	24.8	25.2
6H	24.4	25.4	24.9	25.8	26.2	24.0	25.0	24.5	25.4	25.8
8H	24.8	25.7	25.2	26.1	26.5	24.3	25.2	24.8	25.6	26.1
12H	25.1	25.9	25.6	26.4	26.8	24.6	25.4	25.1	25.8	26.3
8H 4H	24.0	24.9	24.4	25.3	25.7	23.7	24.6	24.1	25.0	25.5
6H	24.9	25.7	25.4	26.1	26.6	24.6	25.3	25.1	25.8	26.3
8H	25.4	26.1	25.9	26.6	27.1	25.0	25.7	25.5	26.1	26.7
12H	25.9	26.5	26.4	27.0	27.5	25.4	26.0	25.9	26.5	27.0
12H 4H	24.0	24.8	24.5	25.3	25.7	23.7	24.5	24.2	25.0	25.5
6H	25.0	25.7	25.5	26.2	26.7	24.7	25.4	25.2	25.8	26.4
8H	25.6	26.2	26.1	26.7	27.2	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 / - 0.4				

CIE Pub.117, 1607 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.6)

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:

UTILIZATION FACTORS TABLE

Test:U:230.10V I:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

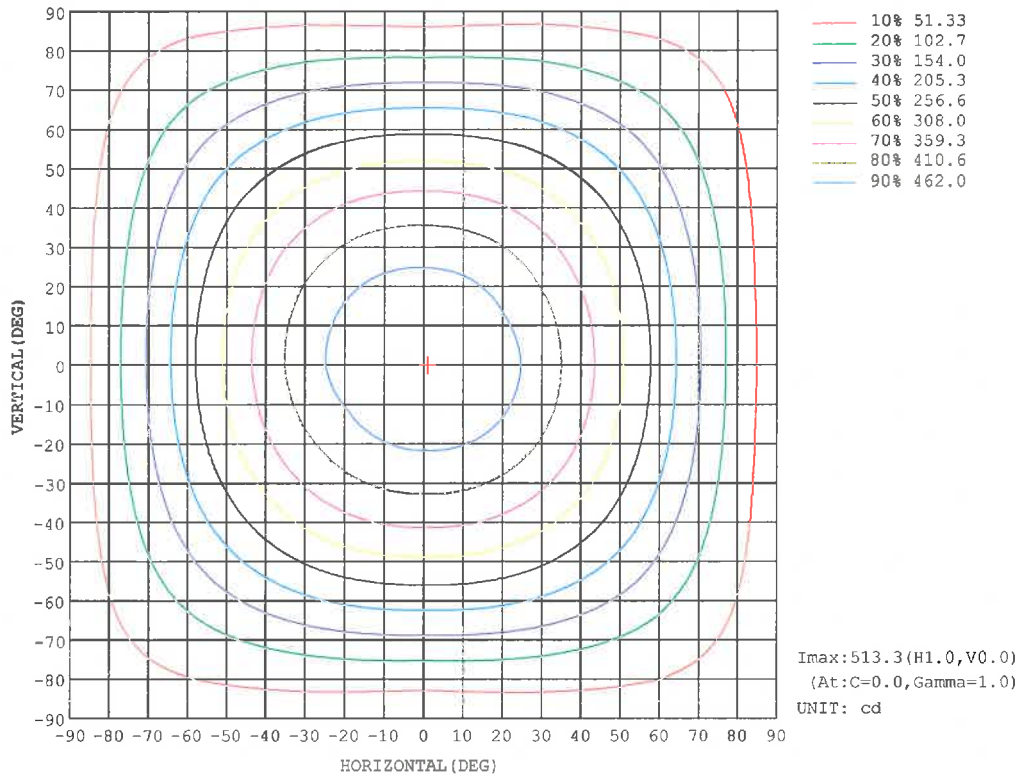
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	36	54	43	36	53	42	36	29
0.80	65	53	45	64	52	45	62	52	45	38
1.00	73	62	54	72	61	54	69	62	53	46
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				SHRNCM = 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:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

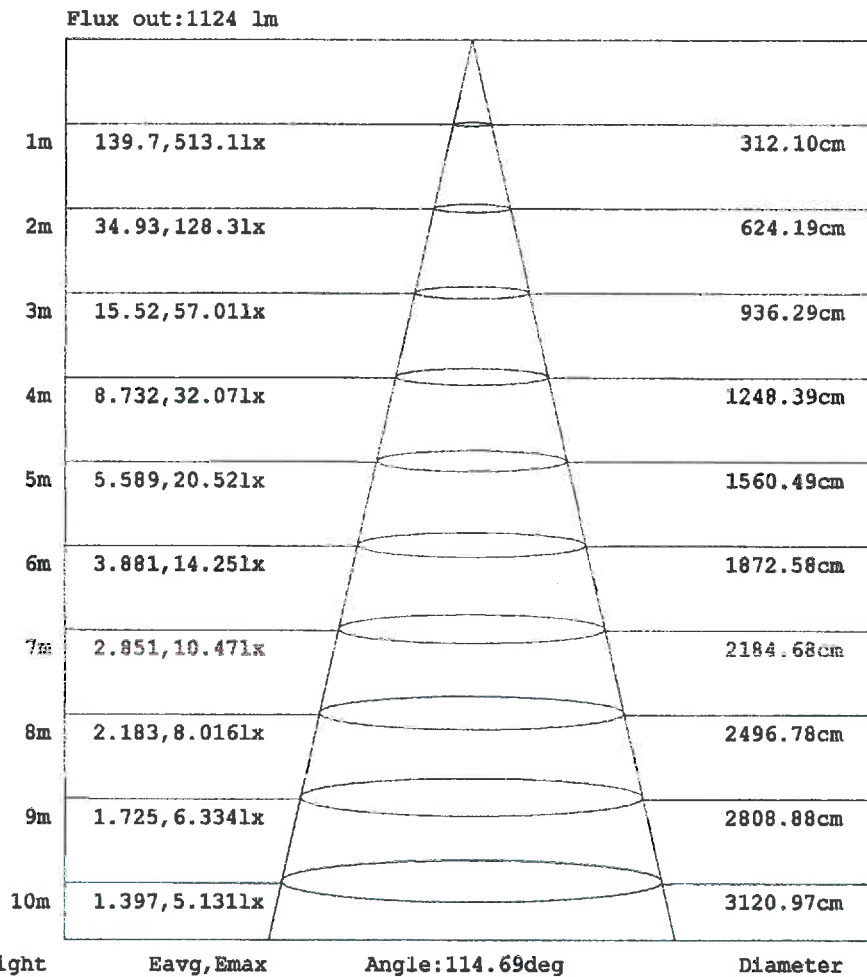


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:14 July 2021

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:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

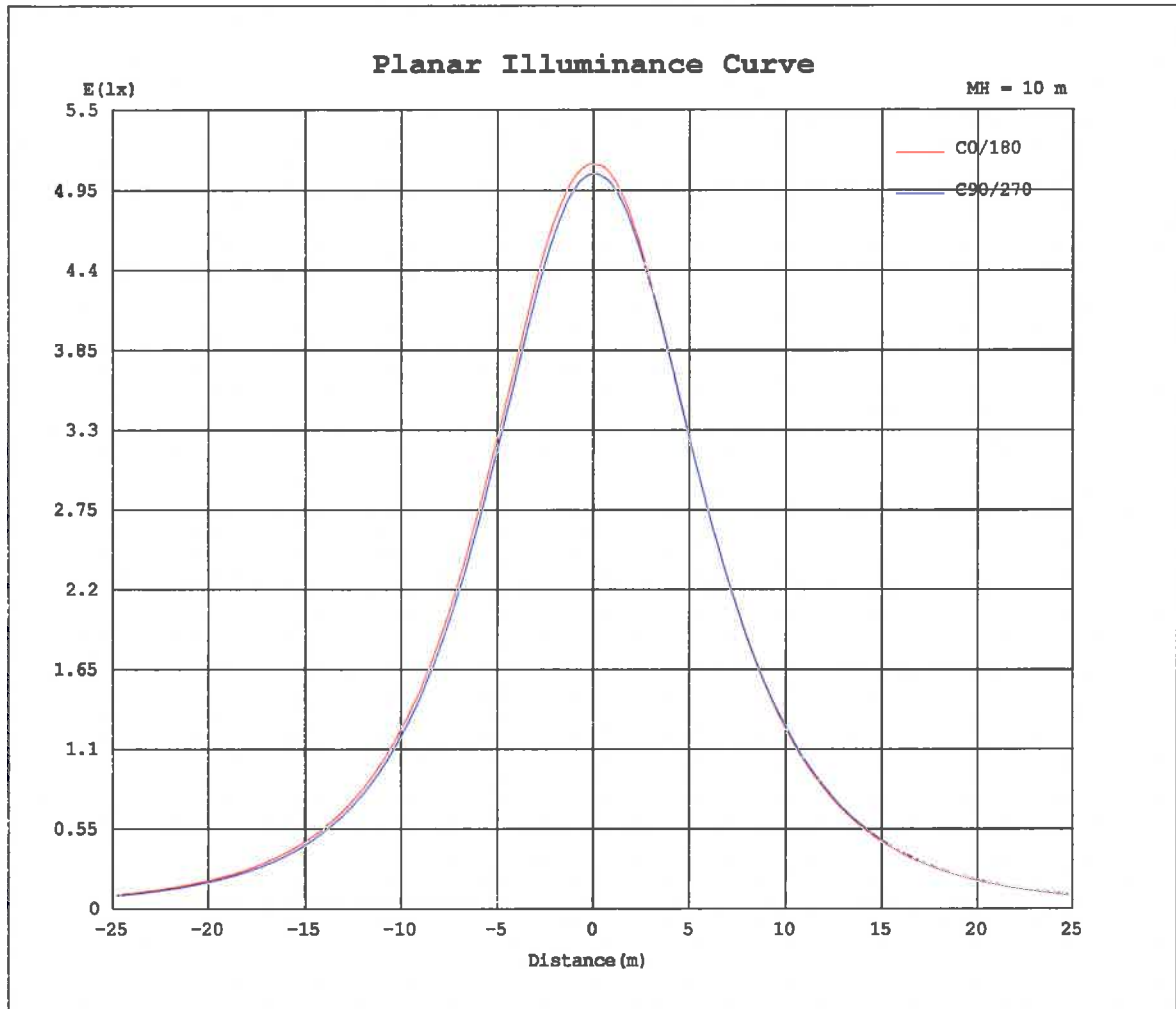


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0652A P:14.037W PF:0.9352 Freq:49.99Hz Lamp Flux:1607.13x1 Lm		
NAME: LED Ceiling light	TYPE:	WEIGHT:
SPEC.:220S	DIM.: 220MM	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	513	511	508	506	504	504	513	511	508	506	504	504						
5	512	509	506	504	502	502	512	510	508	506	504	503						
10	506	503	499	497	496	496	506	505	503	501	500	498						
15	495	492	488	485	484	485	496	496	495	492	492	489						
20	480	477	472	469	469	470	480	482	481	479	478	475						
25	461	458	453	449	449	451	462	464	464	461	461	457						
30	437	434	430	425	426	428	438	441	442	439	439	435						
35	411	408	403	398	400	402	412	416	417	414	415	410						
40	381	379	373	368	371	374	383	388	389	385	387	383						
45	348	347	342	336	339	342	350	356	358	354	357	352						
50	314	313	307	301	305	308	315	323	325	320	324	318						
55	277	277	270	264	268	272	279	287	289	285	289	283						
60	239	238	233	225	230	234	240	249	251	247	251	246						
65	199	198	193	185	191	194	200	210	212	208	213	207						
70	158	158	153	145	151	155	159	170	172	168	173	168						
75	118	119	113	106	111	115	119	130	132	128	133	129						
80	80.6	82.1	77.4	69.7	76.2	79.7	81.7	91.7	94.5	89.4	95.7	91.0						
85	49.2	51.9	48.4	41.2	47.8	50.4	50.3	59.8	61.8	56.4	62.9	59.2						
90	29.5	35.8	35.3	29.6	36.1	35.9	31.0	37.6	38.0	32.3	38.5	35.5						
95	28.7	34.9	33.3	28.8	34.7	34.8	30.1	33.9	35.1	29.2	33.8	30.4						
100	22.5	17.6	22.6	27.9	21.4	21.4	27.4	18.5	15.2	21.7	14.8	11.6						
105	6.08	1.58	4.90	13.2	4.09	4.00	11.1	2.69	0.96	5.10	0.96	0.99						
110	1.23	1.24	1.27	1.28	1.27	1.26	1.26	1.19	1.14	1.14	1.14	1.17						
115	1.41	1.43	1.46	1.47	1.45	1.44	1.45	1.37	1.33	1.32	1.33	1.35						
120	1.60	1.62	1.63	1.66	1.63	1.62	1.63	1.55	1.51	1.50	1.51	1.53						
125	1.73	1.81	1.83	1.84	1.82	1.81	1.81	1.73	1.70	1.69	1.69	1.71						
130	1.97	1.99	2.00	2.03	2.00	1.98	2.00	1.92	1.89	1.88	1.89	1.90						
135	2.15	2.17	2.18	2.20	2.18	2.16	2.17	2.10	2.06	2.06	2.07	2.08						
140	2.33	2.34	2.36	2.36	2.33	2.32	2.34	2.28	2.24	2.23	2.24	2.25						
145	2.50	2.50	2.52	2.52	2.49	2.48	2.50	2.44	2.41	2.40	2.41	2.42						
150	2.65	2.67	2.67	2.67	2.65	2.63	2.65	2.61	2.58	2.57	2.57	2.57						
155	2.81	2.81	2.81	2.81	2.80	2.77	2.80	2.76	2.74	2.72	2.73	2.74						
160	2.95	2.93	2.94	2.95	2.91	2.91	2.95	2.90	2.87	2.86	2.88	2.86						
165	3.04	3.04	3.04	3.03	3.00	3.01	3.05	3.02	2.98	2.96	3.00	2.96						
170	3.12	3.12	3.12	3.10	3.08	3.10	3.12	3.11	3.07	3.05	3.09	3.05						
175	3.17	3.18	3.16	3.14	3.14	3.14	3.18	3.16	3.14	3.12	3.14	3.12						
180	3.20	3.21	3.18	3.17	3.16	3.15	3.22	3.19	3.19	3.15	3.18	3.15						

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: