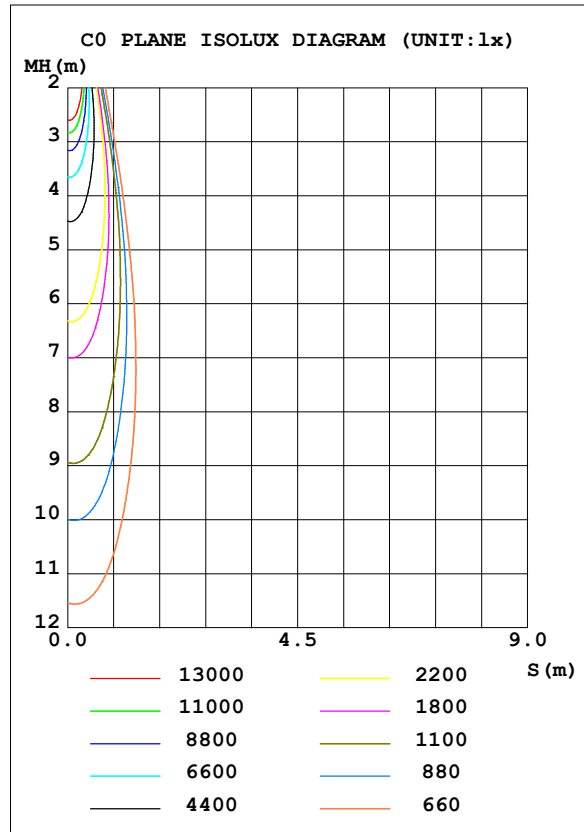
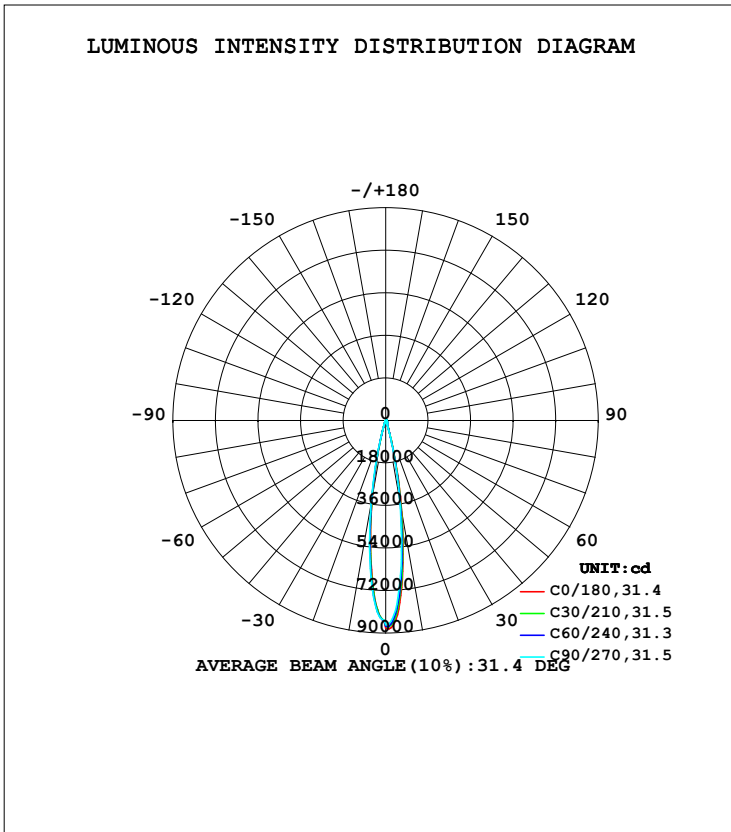




LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 43.35 lm/W			
MODEL	CLF SERA batt	I <sub>max</sub> (cd)	88224	S/MH (C0/180)	0.29
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	0.31
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	10271	η UP, DN (C0-180)	0.0, 50.6
NOMINAL FLUX (lm)	489.106	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.4
LAMPS INSIDE	21	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220.0	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Danny  
 Test Date: 2023-05-08

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity: 65.0%  
 Test Distance: 9.400m [K=1.0000]  
 Remarks:



ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	3937	3724	3471	3304	3281	3408	3597	3697	0- 10	5485	5485	53.4, 53.4
20	330.0	320.0	304.2	289.2	287.6	290.6	302.1	310.0	10- 20	3402	8887	86.5, 86.5
30	79.31	77.14	75.73	73.14	73.04	71.88	73.68	74.72	20- 30	676.5	9563	93.1, 93.1
40	30.88	30.92	30.71	29.21	29.04	29.02	29.62	29.37	30- 40	291.5	9855	95.9, 95.9
50	15.52	16.61	16.97	15.44	14.83	15.79	16.56	15.56	40- 50	169.0	10024	97.6, 97.6
60	9.197	10.16	11.15	9.533	9.062	9.976	10.98	9.293	50- 60	109.4	10133	98.7, 98.7
70	7.390	7.961	9.324	6.947	6.960	7.828	9.369	7.120	60- 70	87.38	10221	99.5, 99.5
80	1.130	1.374	1.862	1.047	0.8314	1.222	1.926	1.239	70- 80	46.90	10268	100, 100
90	0.0350	0.0370	0.0400	0.0340	0.0340	0.0355	0.0370	0.0345	80- 90	3.681	10271	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY: *10cd									UNIT: lm		

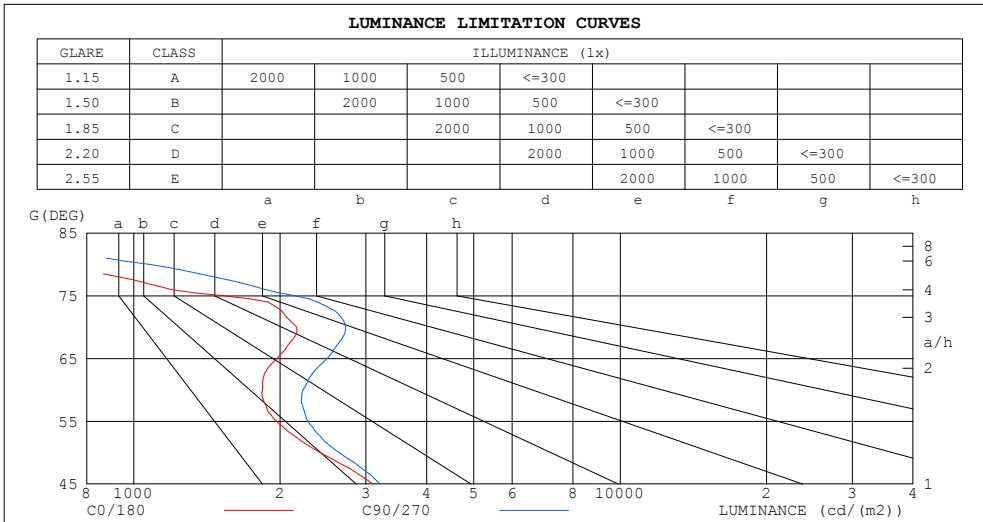
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Danny  
 Test Date: 2023-05-08

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity: 65.0%  
 Test Distance: 9.400m [K=1.0000]  
 Remarks:



LUMINANCE LIMITATION CURVES

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	169	328
80	651	1073
75	1517	2138
70	2161	2726
65	1971	2496
60	1839	2229
55	1964	2278
50	2415	2640
45	3106	3215

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-05-08

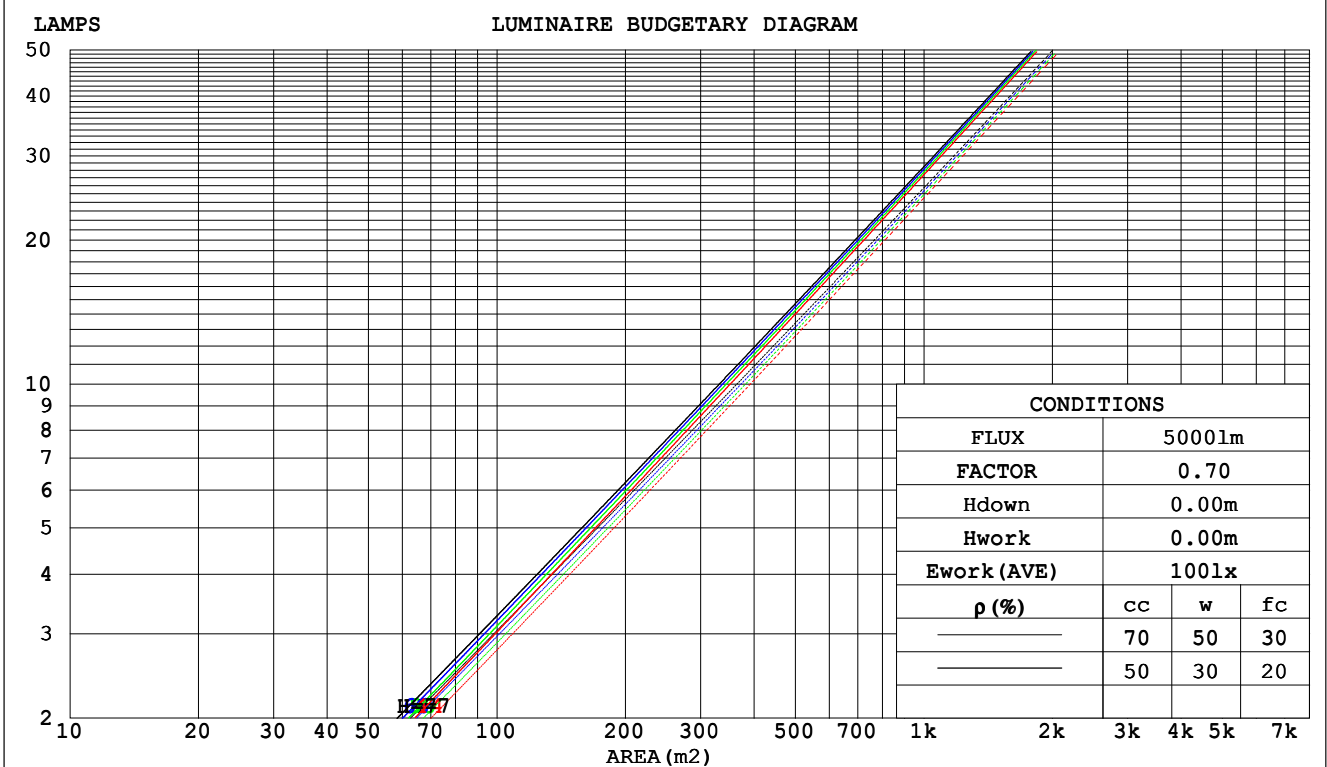
γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		

pcc	80%			70%			50%			30%			10%			0
	pw	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.13	1.11	1.10	1.11	1.10	1.08	1.07	1.06	1.05	1.03	1.03	1.02	1.00	.99	.99	.97
2.0	1.08	1.06	1.03	1.07	1.04	1.02	1.04	1.02	.00	1.01	.99	.98	.98	.97	.96	.94
3.0	1.04	1.01	.98	1.03	.00	.97	1.01	.98	.96	.98	.96	.94	.96	.95	.93	.92
4.0	1.01	.97	.94	.00	.96	.94	.98	.95	.93	.96	.94	.92	.94	.92	.91	.90
5.0	.98	.94	.91	.97	.93	.91	.95	.92	.90	.94	.91	.89	.93	.90	.89	.88
6.0	.95	.91	.89	.94	.91	.88	.93	.90	.88	.92	.89	.87	.91	.89	.87	.86
7.0	.93	.89	.86	.92	.89	.86	.91	.88	.86	.90	.87	.85	.89	.87	.85	.84
8.0	.91	.87	.85	.90	.87	.84	.89	.86	.84	.88	.86	.84	.88	.85	.83	.83
9.0	.89	.85	.83	.88	.85	.83	.88	.85	.82	.87	.84	.82	.86	.84	.82	.81
10.0	.87	.84	.81	.87	.83	.81	.86	.83	.81	.85	.83	.81	.85	.82	.81	.80



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-05-08

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



WEC AND CCEC

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm															
NAME:															
MFR.: CLF															

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	.131	.074	.024	.124	.071	.022	.112	.064	.020	.100	.058	.019	.090	.052	.017	
2.0	.120	.066	.020	.115	.063	.019	.104	.058	.018	.095	.053	.017	.086	.049	.015	
3.0	.110	.059	.018	.106	.057	.017	.098	.053	.016	.090	.049	.015	.083	.046	.014	
4.0	.102	.053	.016	.099	.052	.015	.092	.049	.014	.085	.046	.014	.079	.043	.013	
5.0	.095	.049	.014	.092	.047	.014	.086	.045	.013	.081	.043	.013	.075	.040	.012	
6.0	.089	.045	.013	.086	.044	.013	.081	.042	.012	.077	.040	.012	.072	.038	.011	
7.0	.084	.041	.012	.082	.041	.012	.077	.039	.011	.073	.037	.011	.069	.036	.011	
8.0	.079	.039	.011	.077	.038	.011	.073	.037	.010	.070	.035	.010	.066	.034	.010	
9.0	.075	.036	.010	.073	.036	.010	.070	.035	.010	.067	.033	.010	.064	.032	.009	
10.0	.071	.034	.009	.070	.034	.009	.067	.033	.009	.064	.032	.009	.061	.031	.009	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.168	.158	.149	.144	.135	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.149	.133	.119	.128	.114	.103	.088	.079	.072	.051	.046	.042	.016	.015	.014	
3.0	.134	.113	.097	.115	.098	.084	.079	.068	.059	.045	.040	.035	.015	.013	.011	
4.0	.121	.098	.080	.104	.084	.070	.071	.059	.049	.041	.034	.029	.013	.011	.010	
5.0	.110	.085	.067	.094	.074	.059	.065	.052	.041	.038	.030	.025	.012	.010	.008	
6.0	.100	.075	.057	.086	.065	.050	.059	.045	.035	.034	.027	.021	.011	.009	.007	
7.0	.092	.067	.049	.079	.058	.043	.055	.041	.030	.032	.024	.018	.010	.008	.006	
8.0	.085	.060	.042	.073	.052	.037	.051	.036	.026	.029	.021	.016	.010	.007	.005	
9.0	.079	.054	.037	.068	.047	.032	.047	.033	.023	.027	.019	.014	.009	.006	.005	
10.0	.074	.049	.032	.064	.042	.028	.044	.030	.020	.026	.018	.012	.008	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-05-08

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



UGR(Unified Glare Rating) Table

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm										
NAME:										
MFR.: CLF										
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	-0.8	-0.2	-0.6	-0.1	0.0	-0.2	0.3	-0.0	0.5	0.6
3H	0.5	1.1	0.8	1.3	1.4	1.6	2.1	1.8	2.3	2.5
4H	1.0	1.5	1.3	1.8	2.0	2.2	2.7	2.5	2.9	3.1
6H	1.1	1.6	1.4	1.8	2.1	2.4	2.9	2.6	3.1	3.3
8H	1.1	1.5	1.3	1.8	2.0	2.3	2.8	2.6	3.1	3.3
12H	1.0	1.5	1.3	1.7	2.0	2.3	2.8	2.6	3.0	3.3
4H 2H	-0.2	0.3	0.0	0.5	0.7	0.3	0.8	0.5	1.0	1.2
3H	1.3	1.8	1.6	2.0	2.3	2.3	2.8	2.6	3.1	3.3
4H	1.9	2.3	2.2	2.6	2.9	3.0	3.5	3.4	3.8	4.1
6H	1.9	2.3	2.3	2.7	3.0	3.2	3.6	3.6	3.9	4.3
8H	1.9	2.3	2.3	2.6	3.0	3.2	3.6	3.6	3.9	4.3
12H	1.9	2.2	2.3	2.6	2.9	3.1	3.5	3.5	3.8	4.2
8H 4H	2.1	2.4	2.5	2.8	3.1	3.1	3.5	3.5	3.8	4.2
6H	2.2	2.5	2.6	2.9	3.3	3.3	3.6	3.7	4.0	4.4
8H	2.1	2.4	2.6	2.8	3.3	3.3	3.6	3.7	4.0	4.4
12H	2.1	2.3	2.5	2.8	3.2	3.3	3.5	3.7	3.9	4.4
12H 4H	2.0	2.4	2.4	2.7	3.1	3.1	3.4	3.5	3.8	4.2
6H	2.1	2.4	2.6	2.8	3.3	3.3	3.5	3.7	4.0	4.4
8H	2.1	2.3	2.6	2.8	3.2	3.3	3.5	3.7	3.9	4.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.6					+ 0.3 / - 0.4				
1.5H	+ 0.6 / - 0.5					+ 0.4 / - 0.4				
2.0H	+ 1.0 / - 0.7					+ 0.8 / - 0.7				

CIE Pub.117, 10271 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 8.1)  
 Area: 0.1 m2

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-05-08

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



## UTILIZATION FACTORS TABLE

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		

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) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	89	83	79	88	83	79	76
0.80	96	91	87	96	90	87	94	90	87	83
1.00	100	95	91	99	94	91	98	94	91	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

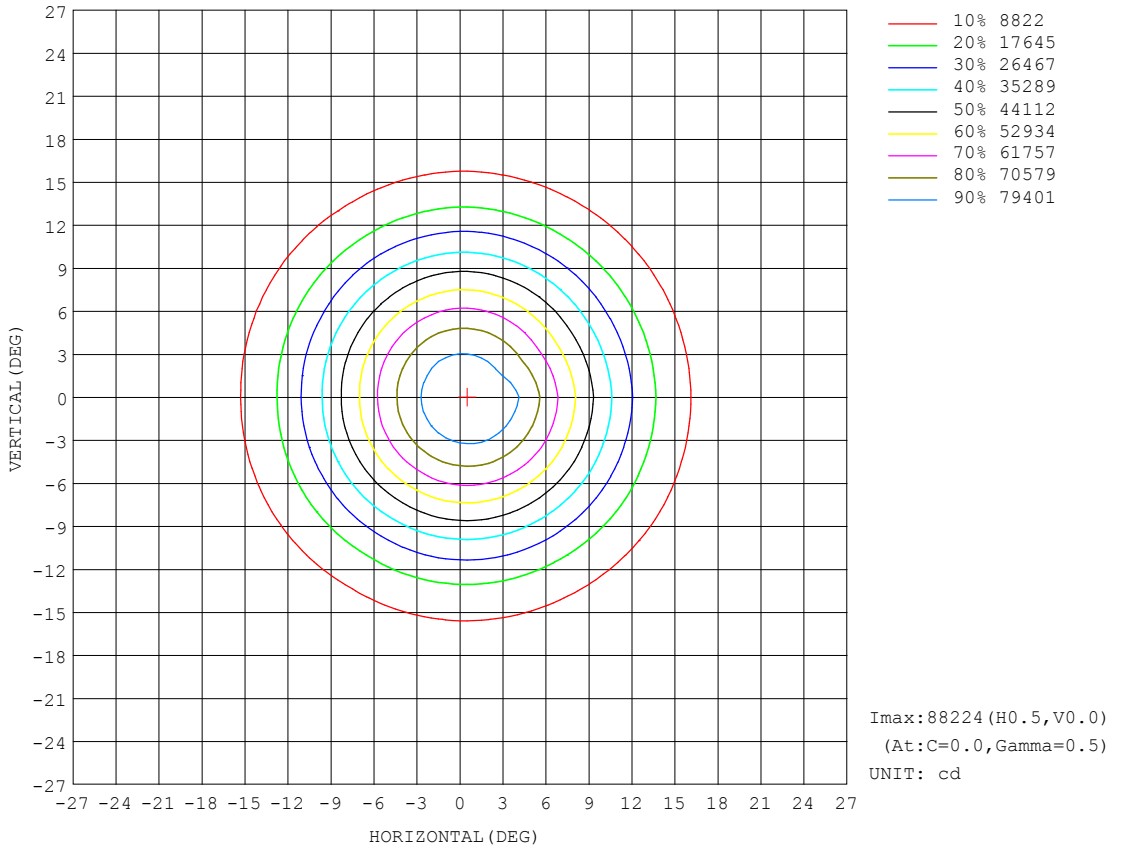
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Danny  
 Test Date: 2023-05-08

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity: 65.0%  
 Test Distance: 9.400m [K=1.0000]  
 Remarks:



ISOCANDELA DIAGRAM

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Danny  
Test Date: 2023-05-08

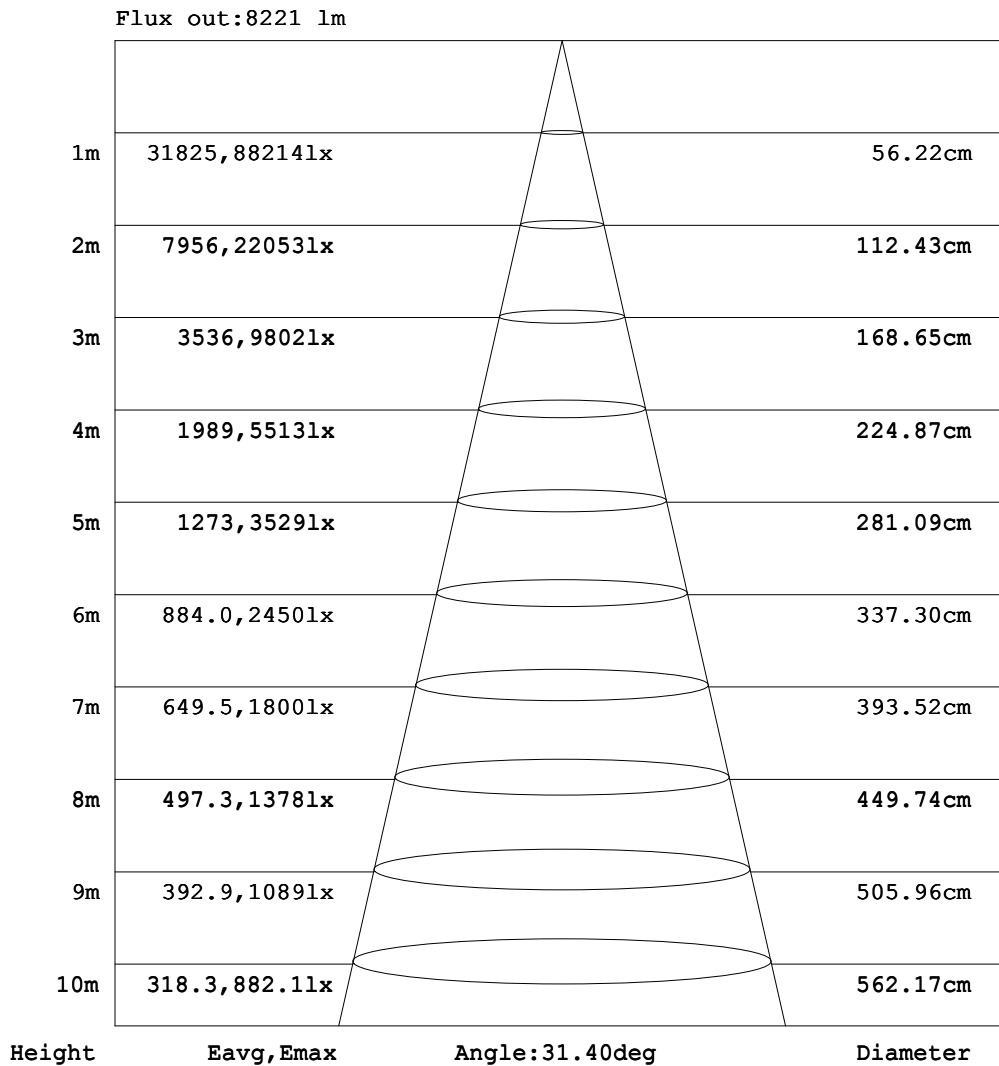
γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity: 65.0%  
Test Distance: 9.400m [K=1.0000]  
Remarks:





AAI Figure

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		



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

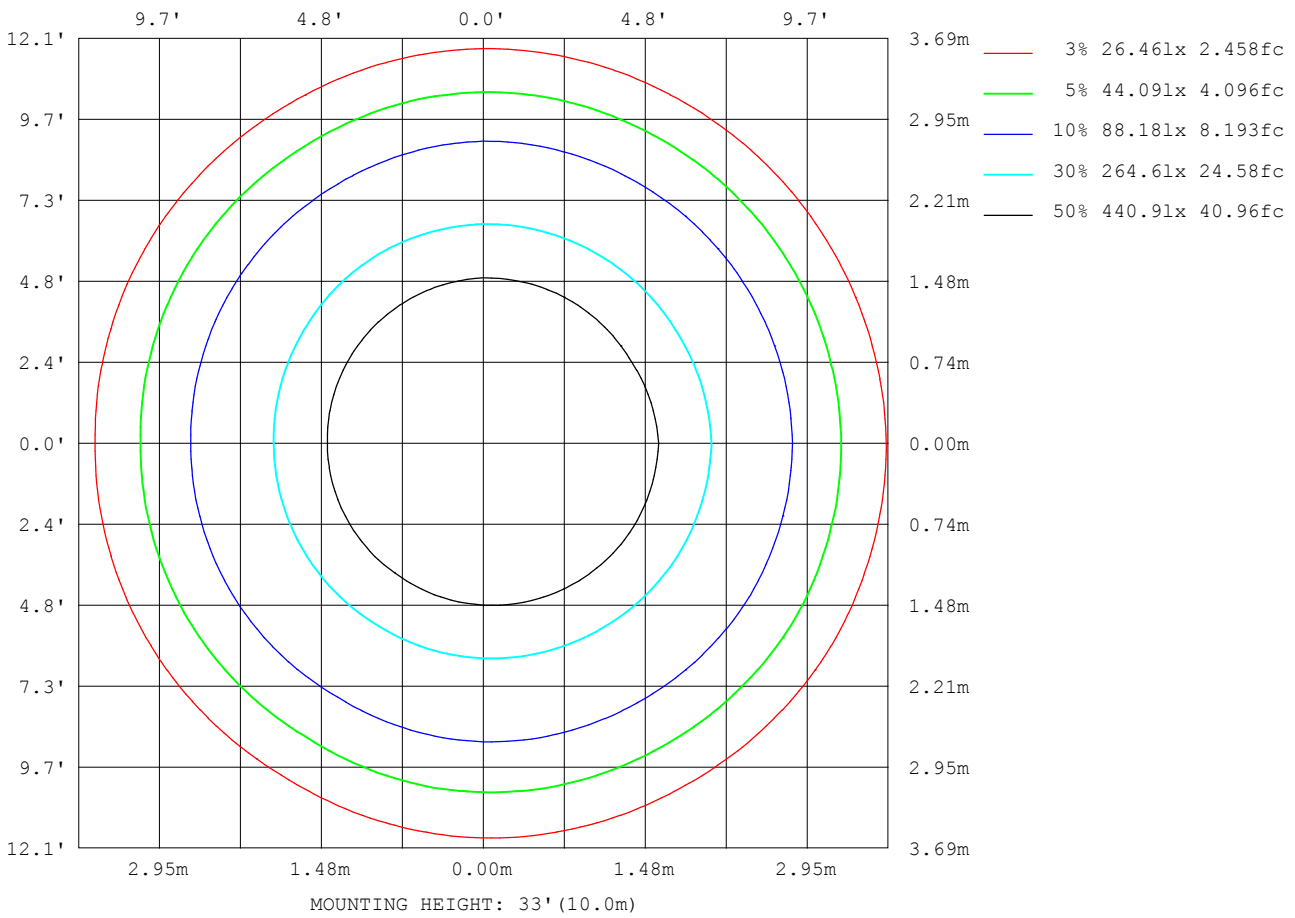
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Danny  
 Test Date:2023-05-08

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity:65.0%  
 Test Distance:9.400m [K=1.0000]  
 Remarks:



ISOLUX DIAGRAM

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Danny  
Test Date:2023-05-08

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity:65.0%  
Test Distance:9.400m [K=1.0000]  
Remarks:



## LED Avg.L Report

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		

AvgL	cd/m2
L_0~180 (65) av	1953
L_0~180 (75) av	1357
L_0~180 (85) av	162
L_90~270 (65) av	2451
L_90~270 (75) av	2170
L_90~270 (85) av	339
L_45 (65) av	1997
L_45 (75) av	1675
L_45 (85) av	202

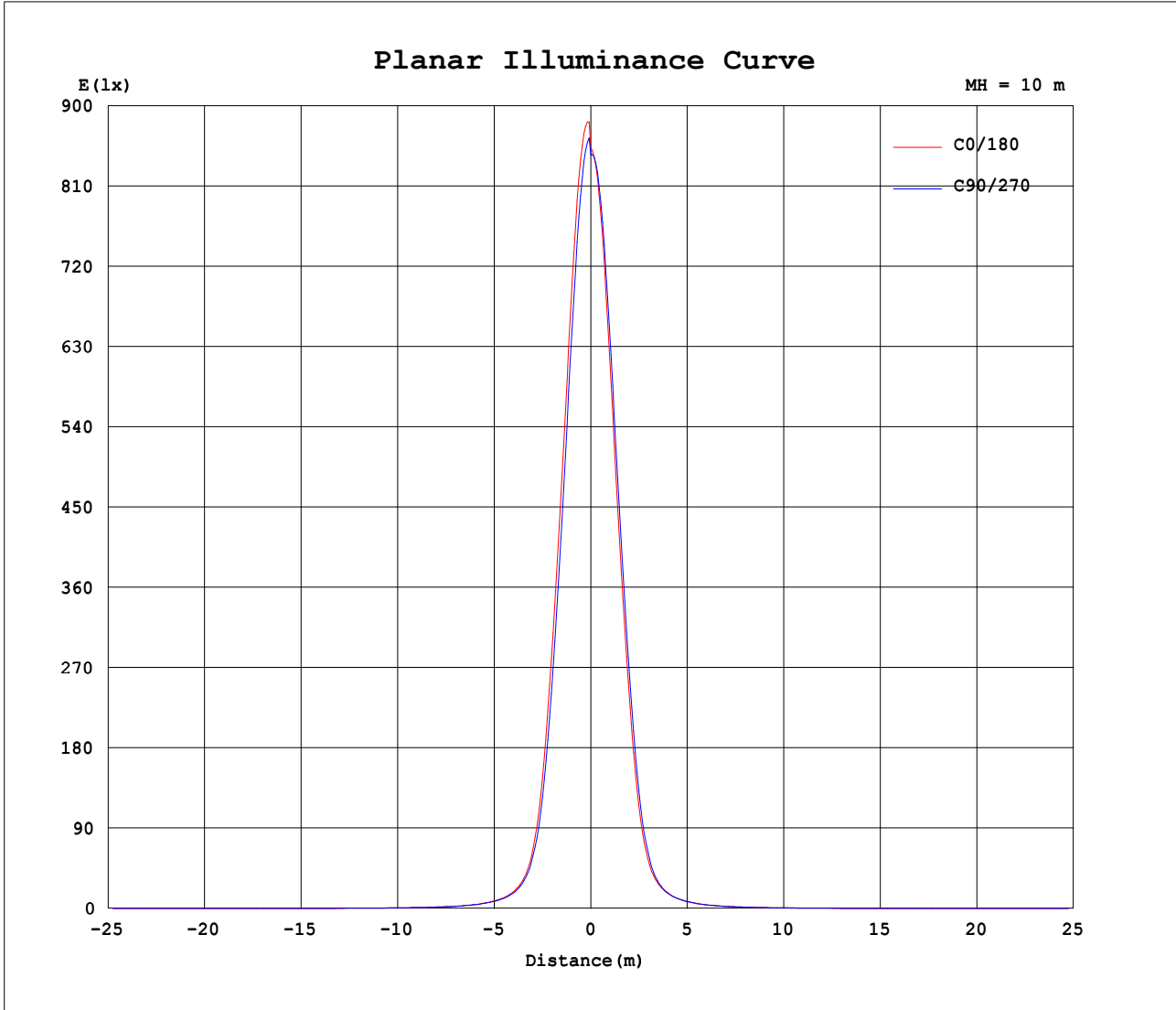
Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Danny  
Test Date:2023-05-08

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity:65.0%  
Test Distance:9.400m [K=1.0000]  
Remarks:



Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Danny  
Test Date:2023-05-08

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13  
Humidity:65.0%  
Test Distance:9.400m [K=1.0000]  
Remarks:



LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.06V I:1.1473A P:236.93W PF:0.9384 Freq:50.01Hz Lamp Flux:489.106x21 lm		
NAME:		
MFR.: CLF		

Table--1

UNIT: x10cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	8784	8700	8708	8645	8625	8553	8526	8483	8488	8446	8425	8367						
5	7436	7295	7120	6924	6778	6699	6674	6742	6845	6940	7020	7074						
10	3937	3820	3628	3471	3323	3285	3281	3357	3460	3597	3658	3735						
15	1216	1181	1090	1041	957	961	958	987	1017	1093	1104	1159						
20	330	329	311	304	290	289	288	290	291	302	304	316						
25	146	142	141	138	132	132	133	130	131	135	135	138						
30	79.3	77.4	76.9	75.7	73.3	72.9	73.0	71.5	72.2	73.7	74.1	75.3						
35	46.8	46.5	45.8	46.3	44.1	43.9	43.8	43.3	43.8	44.7	44.1	44.7						
40	30.9	30.5	31.3	30.7	29.4	29.0	29.0	28.6	29.4	29.6	29.5	29.3						
45	22.0	22.0	22.7	22.7	21.3	21.1	20.8	21.0	21.6	22.0	21.4	20.9						
50	15.5	16.1	17.1	17.0	15.9	15.0	14.8	15.2	16.4	16.6	15.9	15.3						
55	11.3	12.3	13.1	13.1	12.1	10.9	10.8	11.6	12.5	12.7	12.1	10.8						
60	9.20	9.28	11.0	11.1	9.93	9.13	9.06	9.21	10.7	11.0	9.88	8.71						
65	8.33	7.99	10.2	10.5	8.13	8.22	8.18	7.82	9.89	10.2	8.10	7.89						
70	7.39	6.79	9.13	9.32	6.82	7.08	6.96	6.58	9.08	9.37	7.05	7.19						
75	3.93	4.18	5.43	5.53	3.97	3.76	3.10	3.66	5.26	5.70	4.24	4.37						
80	1.13	1.18	1.56	1.86	1.22	0.87	0.83	0.99	1.46	1.93	1.41	1.07						
85	0.15	0.16	0.26	0.29	0.17	0.12	0.14	0.14	0.25	0.30	0.20	0.13						
90	0.04	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.04	0.04	0.04	0.03						

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators: Danny  
 Test Date:2023-05-08

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-HD5 SYSTEM V2.0.407.13  
 Humidity: 65.0%  
 Test Distance: 9.400m [K=1.0000]  
 Remarks: