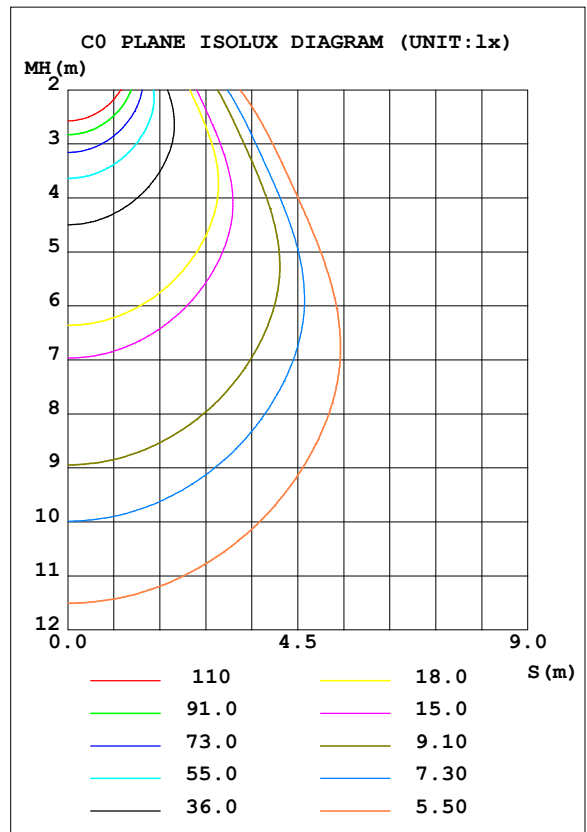
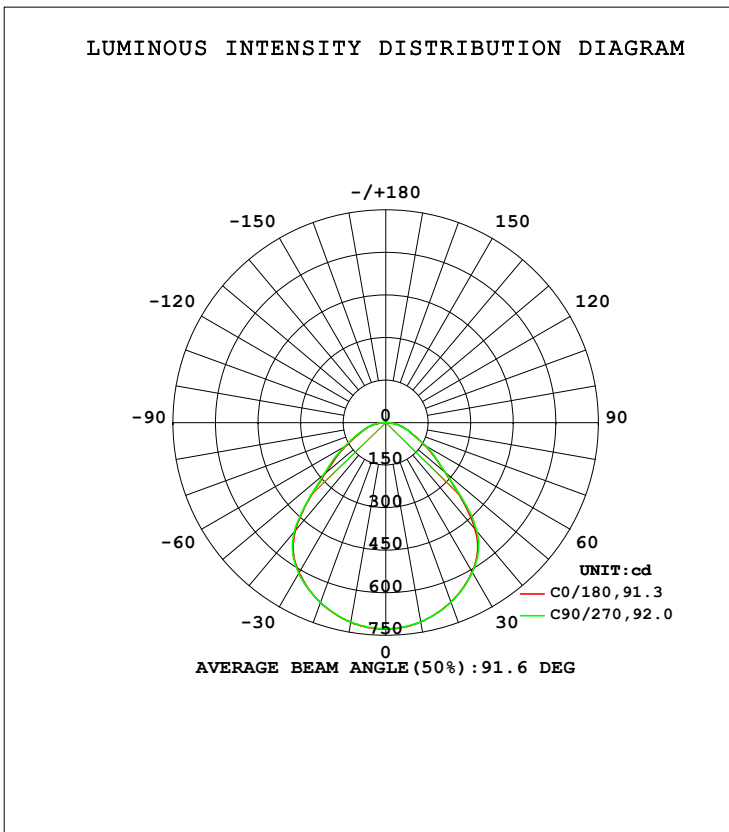


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 105.64 lm/W			
MODEL	UGR19-30/60-CC	Imax (cd)	728.0	S/MH (C0/180)	1.24
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	240	TOTAL FLUX (lm)	1652.7	<input type="checkbox"/> UP, DN (C0-180)	0.0, 49.5
NOMINAL FLUX (lm)	1652.73	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.0, 50.5
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	240	<input type="checkbox"/> down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity: 65.0%
 Test Distance: 8.570m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

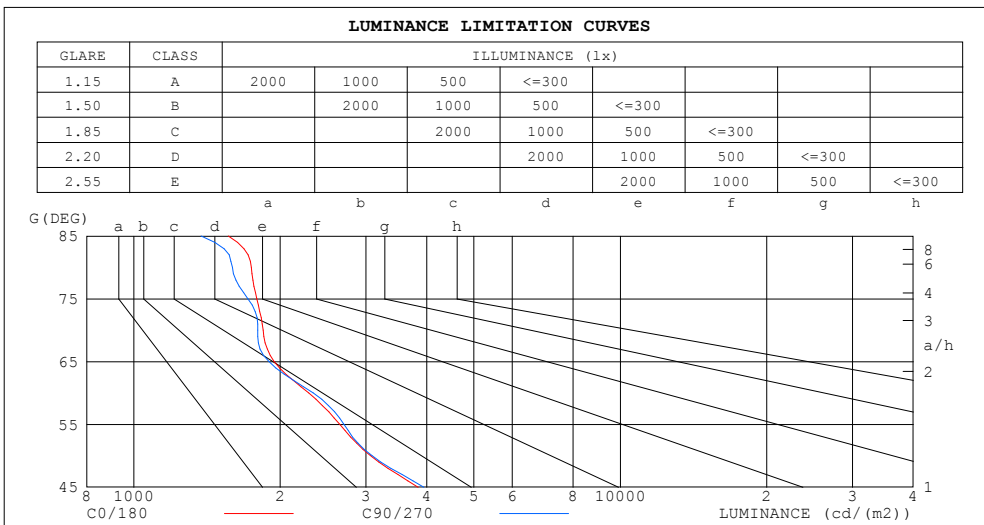
°	C0	C45	C90	C135	C180	C225	C270	C315	°	□ zone	□ total	%lum, lamp
10	713.5	712.8	712.8	711.7	714.4	713.2	713.6	713.1	0- 10	68.72	68.72	4.16,4.16
20	673.0	676.0	673.7	673.8	674.6	676.6	674.1	676.9	10- 20	196.5	265.3	16.1,16.1
30	608.9	613.4	610.1	610.1	611.3	614.1	613.8	615.6	20- 30	298.0	563.3	34.1,34.1
40	489.3	494.7	500.2	490.0	495.9	493.5	502.4	498.2	30- 40	350.7	914.0	55.3,55.3
50	272.6	325.1	274.4	320.2	278.9	329.6	287.3	334.7	40- 50	309.2	1223	74,74
60	158.2	181.6	161.7	177.9	160.7	185.1	167.4	188.7	50- 60	210.8	1434	86.8,86.8
70	87.22	89.60	85.10	88.80	88.16	92.56	93.33	93.66	60- 70	124.4	1558	94.3,94.3
80	41.91	45.17	38.31	43.32	42.78	49.55	46.69	51.05	70- 80	71.64	1630	98.6,98.6
90	0.7208	1.069	0.3299	0.7453	0.8491	1.112	0.6842	1.686	80- 90	22.75	1653	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:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

□ Range: 0 - 90DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1564	1376
80	1745	1595
75	1789	1717
70	1844	1799
65	1944	1895
60	2287	2338
55	2651	2704
50	3066	3086
45	3840	3949

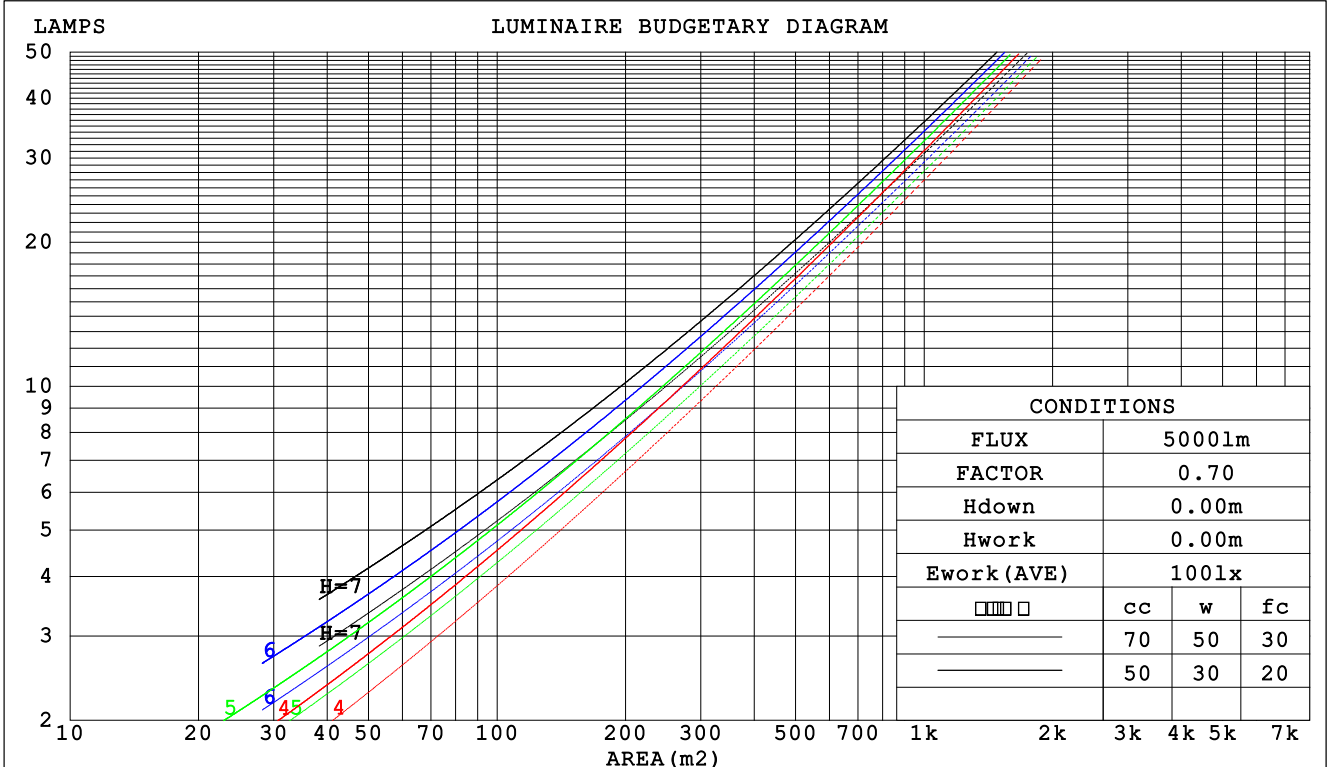
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

□cc	80%			70%			50%			30%			10%			0
□w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
□fc	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	1.06	1.02	.99	1.04	1.00	.97	.99	.97	.94	.96	.93	.91	.92	.90	.88	.86
2.0	.94	.88	.83	.92	.86	.82	.89	.84	.80	.85	.81	.78	.82	.79	.76	.74
3.0	.84	.76	.70	.82	.75	.70	.79	.73	.69	.77	.72	.67	.74	.70	.66	.64
4.0	.75	.67	.61	.74	.66	.60	.71	.65	.60	.69	.63	.59	.67	.62	.58	.56
5.0	.68	.59	.53	.67	.59	.53	.65	.58	.52	.63	.57	.52	.61	.56	.51	.49
6.0	.61	.53	.47	.61	.53	.47	.59	.52	.47	.57	.51	.46	.56	.50	.46	.44
7.0	.56	.48	.42	.55	.47	.42	.54	.47	.42	.52	.46	.41	.51	.45	.41	.39
8.0	.51	.43	.38	.51	.43	.38	.49	.43	.38	.48	.42	.37	.47	.41	.37	.35
9.0	.47	.40	.34	.47	.39	.34	.46	.39	.34	.45	.38	.34	.44	.38	.34	.32
10.0	.44	.36	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.41	.35	.31	.29



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-07-15

□ Range: 0 - 90DEG
□ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:8.570m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

<input type="checkbox"/> cc	80%			70%			50%			30%			10%			0
<input type="checkbox"/> w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
<input type="checkbox"/> fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.273	.155	.049	.266	.151	.048	.252	.145	.046	.240	.139	.045	.229	.133	.043	
2.0	.259	.142	.044	.253	.139	.043	.241	.134	.042	.231	.130	.041	.221	.125	.039	
3.0	.242	.129	.039	.237	.127	.038	.227	.123	.037	.218	.119	.037	.209	.116	.036	
4.0	.226	.118	.035	.221	.116	.034	.213	.113	.034	.204	.110	.033	.197	.107	.033	
5.0	.211	.108	.031	.207	.106	.031	.199	.104	.031	.192	.101	.030	.185	.099	.030	
6.0	.198	.099	.028	.194	.098	.028	.187	.096	.028	.180	.094	.028	.174	.092	.027	
7.0	.185	.092	.026	.182	.091	.026	.176	.089	.026	.170	.087	.025	.164	.085	.025	
8.0	.174	.085	.024	.171	.084	.024	.166	.083	.024	.160	.081	.023	.156	.080	.023	
9.0	.164	.079	.022	.162	.079	.022	.157	.077	.022	.152	.076	.022	.147	.075	.022	
10.0	.155	.074	.021	.153	.074	.021	.148	.073	.020	.144	.072	.020	.140	.070	.020	

<input type="checkbox"/> cc	80%			70%			50%			30%			10%			0
<input type="checkbox"/> w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
<input type="checkbox"/> fc	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	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.159	.114	.078	.136	.098	.068	.094	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.151	.100	.062	.130	.087	.054	.089	.061	.038	.052	.035	.022	.017	.012	.007	
5.0	.144	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.137	.081	.041	.118	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.112	.064	.031	.077	.045	.022	.045	.027	.013	.015	.009	.004	
8.0	.124	.068	.030	.107	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.119	.064	.026	.102	.055	.023	.071	.039	.016	.041	.023	.010	.013	.008	.003	
10.0	.113	.059	.023	.098	.051	.020	.068	.036	.014	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm										
NAME: UGR19-30/60-CC					TYPE:16W			WEIGHT:		
SPEC.:3000K					DIM.:			SERIAL No.:1		
MFR.:					SUR.:0.552*0.252			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	16.0	17.4	16.2	17.6	17.8	16.0	17.4	16.3	17.6	17.8
3H	16.7	18.0	17.0	18.2	18.5	16.7	18.0	17.0	18.2	18.5
4H	17.1	18.3	17.4	18.6	18.8	17.1	18.3	17.4	18.6	18.8
6H	17.4	18.6	17.8	18.9	19.1	17.4	18.5	17.7	18.8	19.1
8H	17.6	18.7	17.9	18.9	19.2	17.5	18.6	17.8	18.9	19.1
12H	17.6	18.7	18.0	19.0	19.3	17.5	18.6	17.9	18.9	19.2
4H 2H	16.3	17.5	16.6	17.8	18.0	16.4	17.6	16.7	17.8	18.1
3H	17.3	18.3	17.6	18.6	18.9	17.3	18.3	17.6	18.6	18.9
4H	17.8	18.8	18.2	19.1	19.4	17.8	18.7	18.1	19.1	19.4
6H	18.3	19.1	18.7	19.5	19.8	18.2	19.1	18.6	19.4	19.8
8H	18.5	19.3	18.9	19.6	20.0	18.4	19.2	18.8	19.5	19.9
12H	18.6	19.3	19.0	19.7	20.1	18.5	19.2	18.9	19.6	20.0
8H 4H	18.0	18.8	18.4	19.2	19.5	18.0	18.8	18.4	19.1	19.5
6H	18.6	19.3	19.1	19.7	20.1	18.6	19.2	19.0	19.6	20.1
8H	18.9	19.5	19.4	19.9	20.4	18.8	19.4	19.3	19.8	20.3
12H	19.1	19.6	19.6	20.1	20.5	19.0	19.5	19.5	19.9	20.4
12H 4H	18.0	18.7	18.4	19.1	19.5	18.0	18.7	18.4	19.1	19.5
6H	18.7	19.3	19.2	19.7	20.2	18.6	19.2	19.1	19.6	20.1
8H	19.0	19.5	19.5	20.0	20.4	18.9	19.4	19.4	19.9	20.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 0.4 / - 0.5				
1.5H	+ 0.2 / - 0.5					+ 0.2 / - 0.5				
2.0H	+ 0.7 / - 0.8					+ 0.8 / - 0.8				

CIE Pub.117, 1653 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 1.7)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

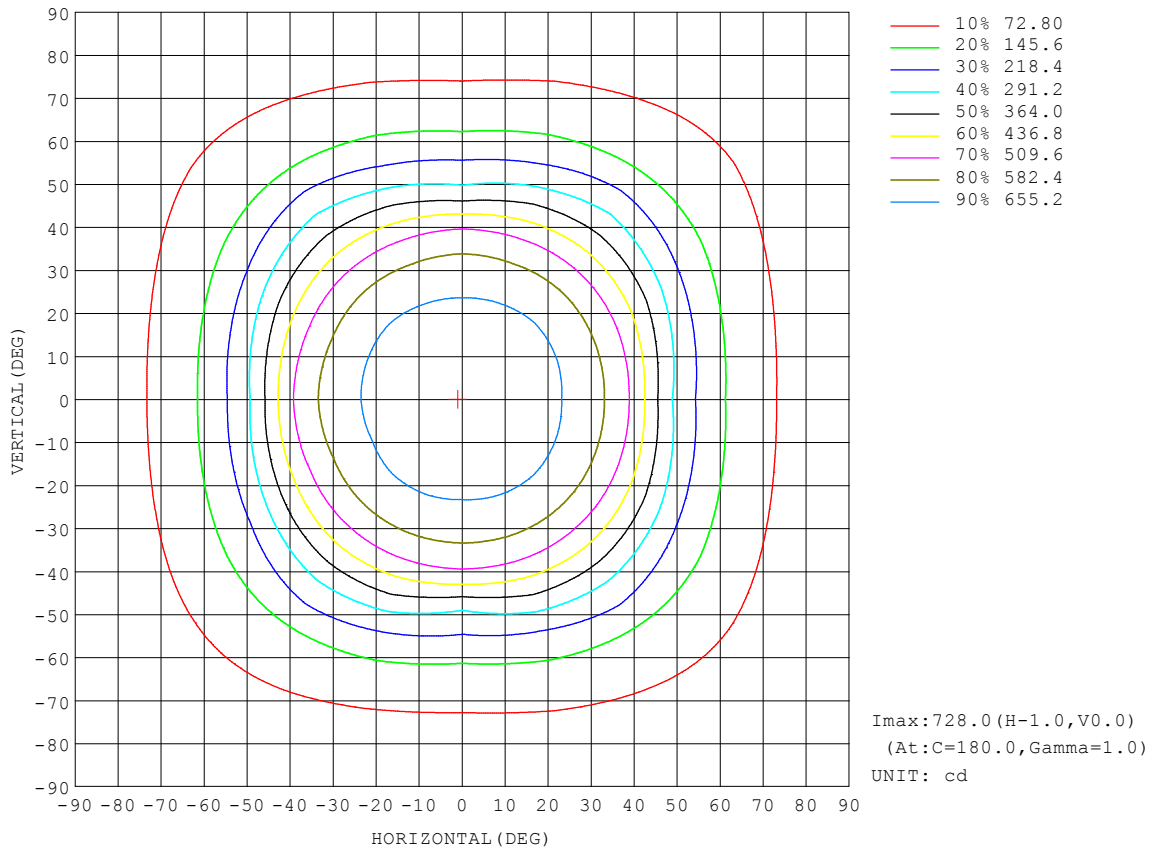
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	64	53	47	63	53	47	62	52	47	41
0.80	74	63	57	73	63	57	71	62	56	50
1.00	82	72	66	81	71	65	78	72	65	58
1.25	88	79	73	87	78	73	84	77	72	65
1.50	93	84	78	91	83	78	88	82	77	70
2.00	99	91	86	97	90	85	94	88	84	76
2.50	102	95	90	100	94	89	96	91	87	80
3.00	105	99	94	103	97	93	99	95	91	83
4.00	108	103	99	106	102	98	102	98	95	87
5.00	110	106	102	108	104	101	103	100	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

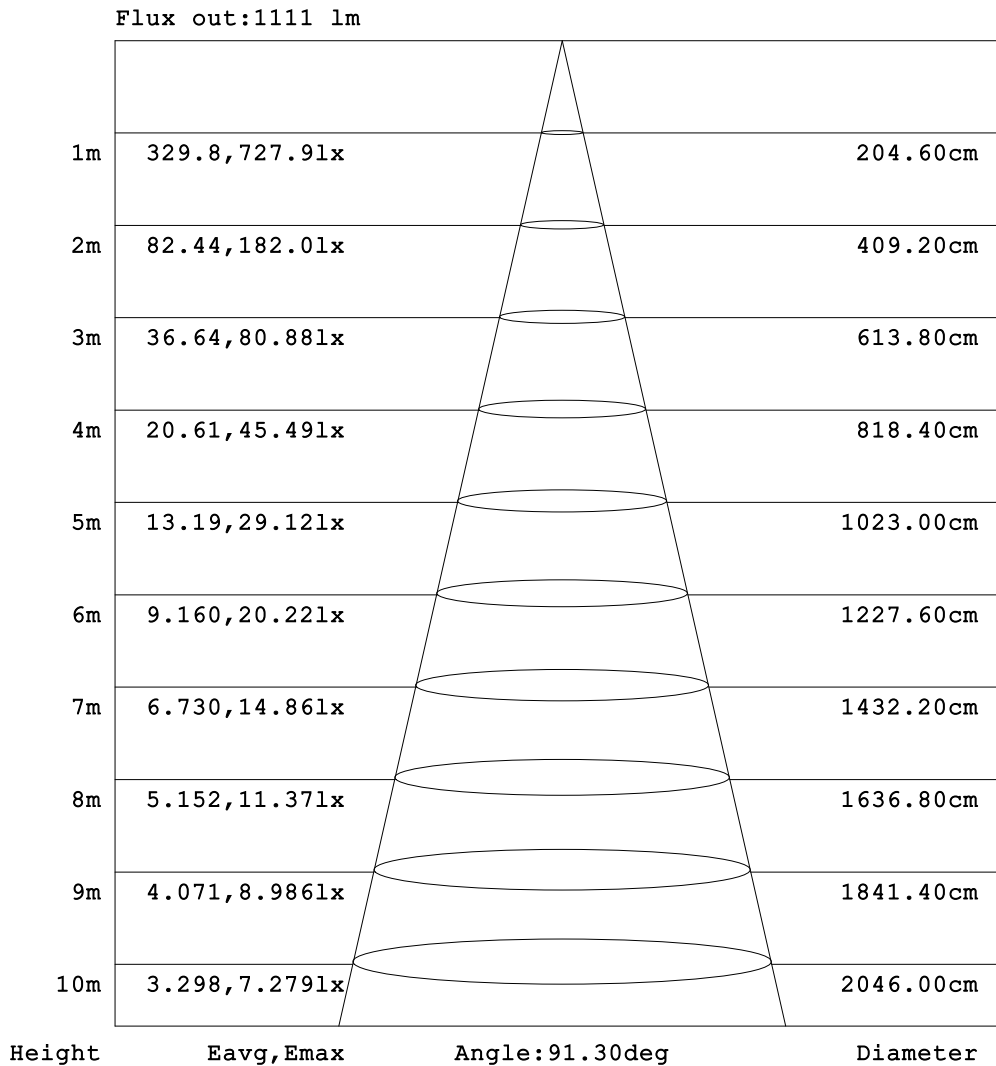


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

AAI Figure

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:



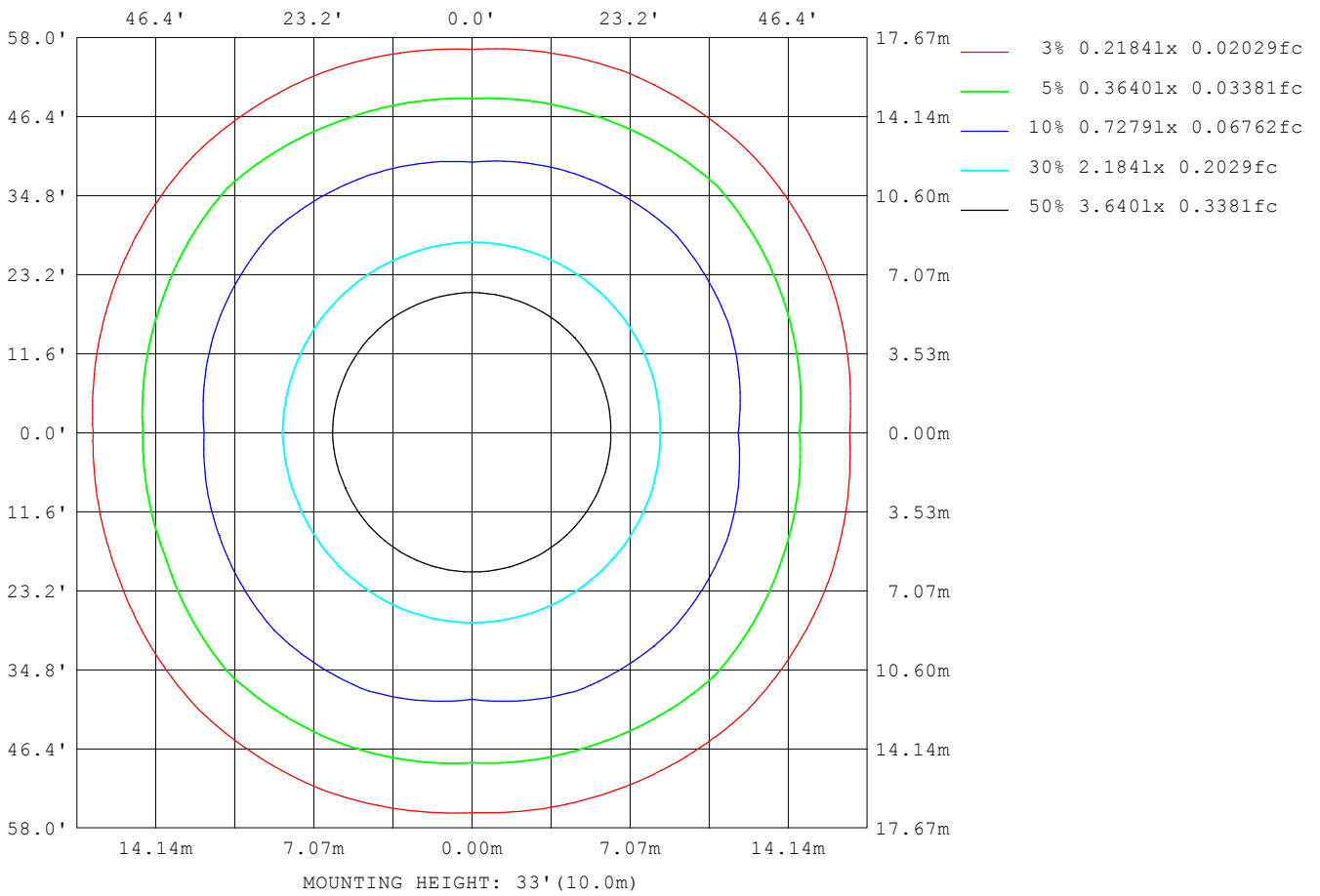
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

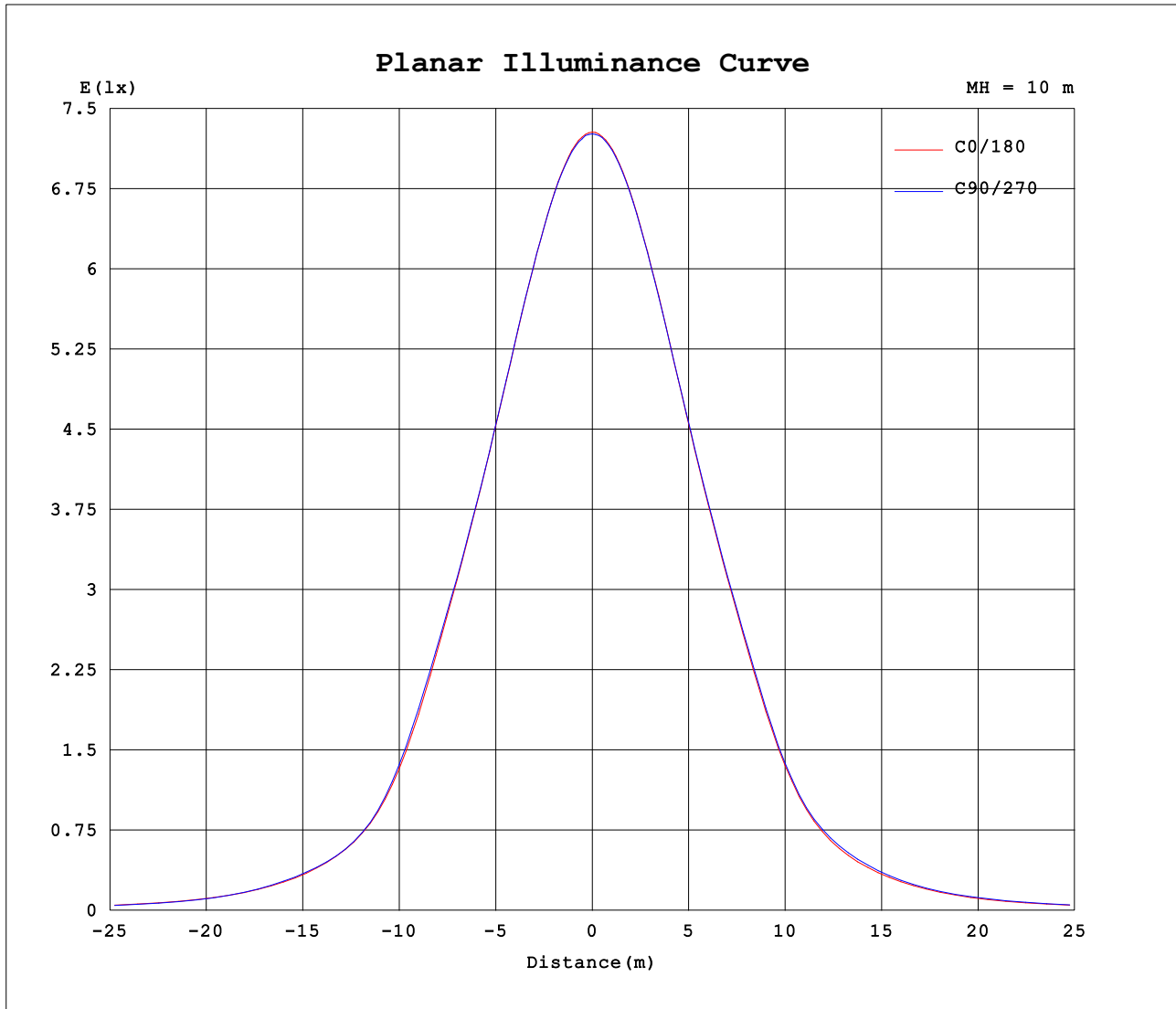
AvgL	cd/m2
L_0~180 (65) av	1962
L_0~180 (75) av	1802
L_0~180 (85) av	1599
L_90~270 (65) av	2000
L_90~270 (75) av	1806
L_90~270 (85) av	1622
L_45 (65) av	2116
L_45 (75) av	1931
L_45 (85) av	1794

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:8.570m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2022-07-15

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.0.404.7
 Humidity: 65.0%
 Test Distance: 8.570m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.37V I:0.0673A P:15.645W PF:0.9665 Freq:50.00Hz Lamp Flux:1652.73x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:3000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

Table--1

UNIT: cd

C (DEG) \ □ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	728	727	727	727	726	726	726	726	728	727	727	727	726	726	726	726			
5	724	724	723	723	723	723	722	722	725	724	724	723	724	723	723	723			
10	713	713	713	713	713	713	712	711	714	713	713	713	714	713	713	713			
15	696	697	697	697	696	696	695	694	697	697	697	696	697	696	697	696			
20	673	675	676	675	674	674	674	671	675	675	677	675	674	675	677	675			
25	644	646	649	648	645	647	647	642	646	647	650	648	647	648	651	648			
30	609	611	613	613	610	611	610	606	611	611	614	612	614	613	616	612			
35	563	563	563	566	567	564	560	557	567	562	564	565	571	566	566	565			
40	489	494	495	499	500	497	490	485	496	491	494	496	502	499	498	497			
45	375	403	412	411	386	410	407	393	384	403	411	407	390	413	416	410			
50	273	311	325	321	274	320	320	298	279	312	330	314	287	320	335	319			
55	210	229	250	232	214	234	247	219	214	233	258	235	225	240	263	237			
60	158	173	182	171	162	174	178	166	161	174	185	179	167	182	189	177			
65	114	126	121	122	111	121	120	121	116	124	126	130	123	130	128	128			
70	87.2	90.1	89.6	87.3	85.1	85.9	88.8	88.0	88.2	91.5	92.6	95.6	93.3	95.5	93.7	94.3			
75	64.1	67.2	66.9	67.1	61.4	65.8	65.8	64.5	64.9	70.7	71.3	72.0	67.9	73.2	72.4	72.8			
80	41.9	43.3	45.2	42.7	38.3	42.3	43.3	40.7	42.8	47.5	49.5	48.7	46.7	50.3	51.0	49.5			
85	18.8	19.1	20.0	17.7	16.6	16.8	18.3	16.7	19.7	21.0	23.5	22.3	22.5	23.4	24.7	22.8			
90	0.72	0.89	1.07	0.53	0.33	0.45	0.75	0.62	0.85	0.98	1.11	0.99	0.68	1.20	1.69	1.72			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

□ Range: 0 - 90DEG
 □ Interval: 1.0DEG
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 Remarks: