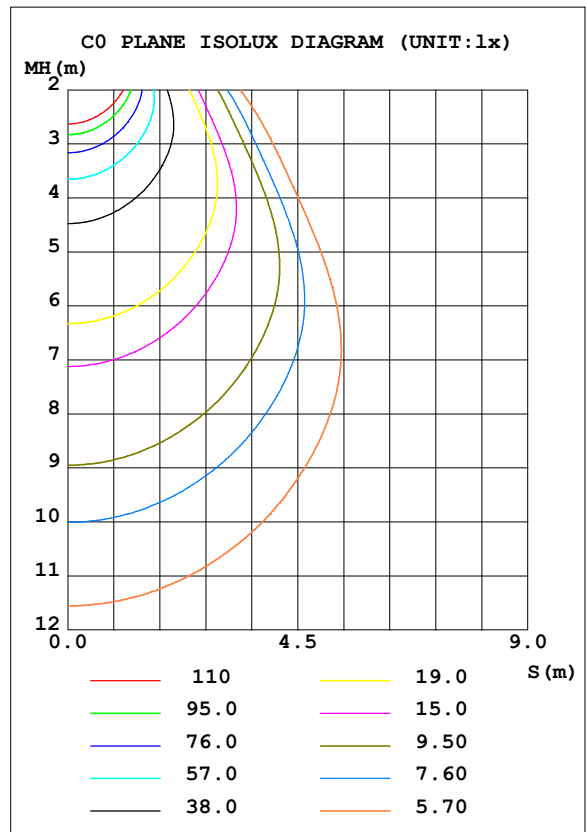
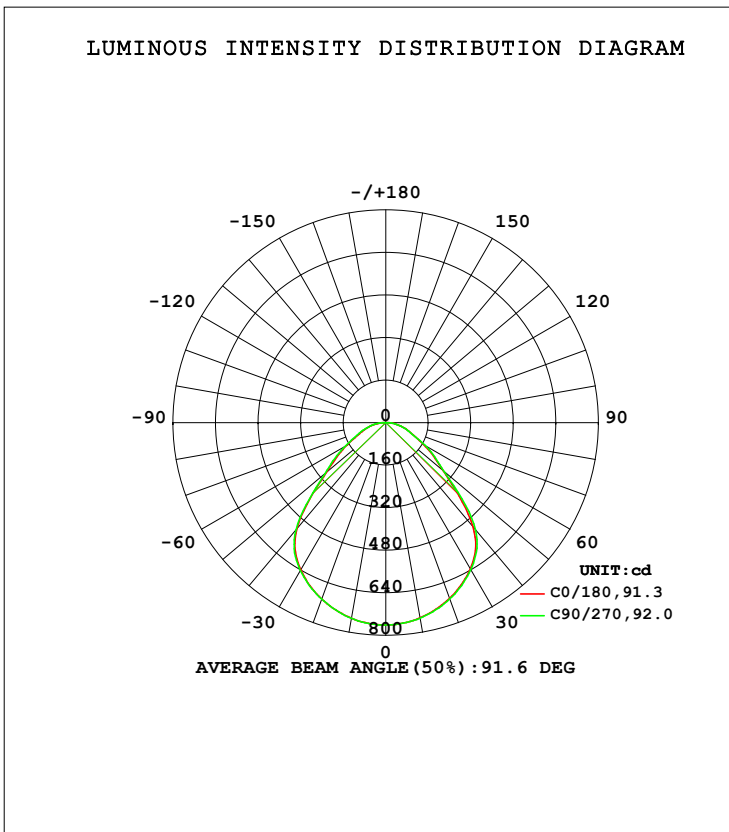


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 113.77 lm/W			
MODEL	UGR19-30/60-CC	Imax (cd)	761.2	S/MH (C0/180)	1.24
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	240	TOTAL FLUX (lm)	1730.3	<input type="checkbox"/> UP, DN (C0-180)	0.0,49.5
NOMINAL FLUX (lm)	1730.34	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:

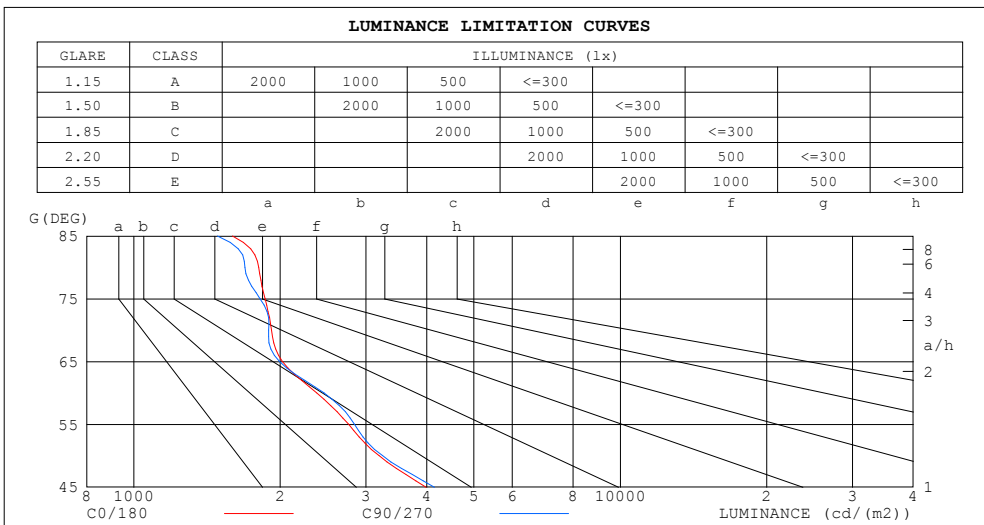
mm	C0	C45	C90	C135	C180	C225	C270	C315	mm	□ zone	□ total	%lum,lamp
10	745.1	746.3	746.6	745.5	747.0	746.7	747.4	747.4	0- 10	71.96	71.96	4.16,4.16
20	703.0	707.3	705.1	705.4	705.9	708.1	705.9	709.8	10- 20	205.8	277.8	16.1,16.1
30	635.8	641.8	639.0	638.9	639.6	643.0	642.5	645.7	20- 30	312.1	589.8	34.1,34.1
40	509.6	517.6	524.8	512.5	519.5	516.6	525.5	522.3	30- 40	367.1	956.9	55.3,55.3
50	283.6	340.4	288.4	334.9	292.6	344.4	299.8	351.6	40- 50	323.5	1280	74,74
60	164.4	189.7	170.2	186.1	168.8	193.3	174.8	198.1	50- 60	220.7	1501	86.8,86.8
70	90.82	93.96	89.60	93.02	92.42	96.74	97.38	98.28	60- 70	130.3	1631	94.3,94.3
80	43.41	47.59	40.63	45.53	45.00	51.69	48.59	53.56	70- 80	75.07	1706	98.6,98.6
90	0.6960	1.188	0.4020	0.7860	1.026	1.170	0.6112	1.770	80- 90	23.87	1730	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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1596	1486
80	1807	1692
75	1860	1818
70	1920	1894
65	2022	1994
60	2378	2462
55	2763	2843
50	3190	3244
45	3991	4147

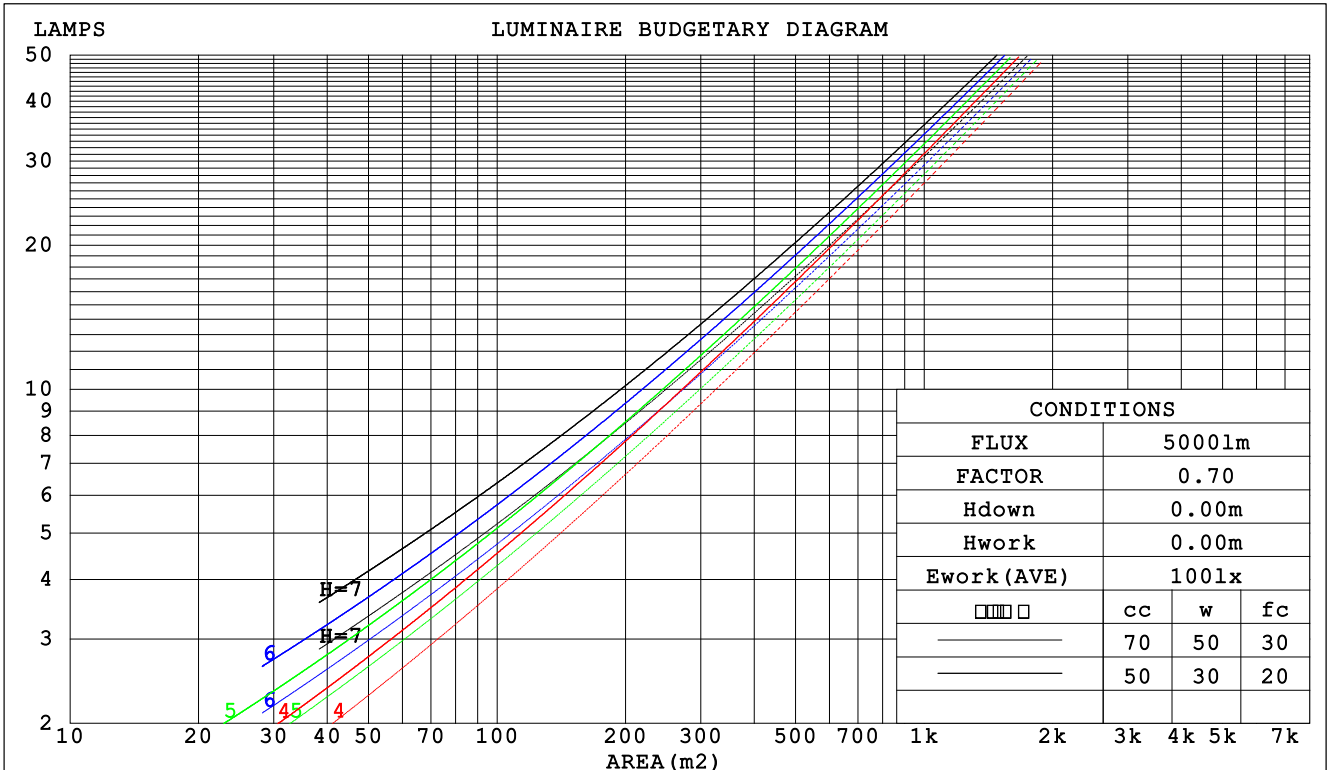
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	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 .152 .048	.253 .145 .046	.241 .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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm										
NAME: UGR19-30/60-CC					TYPE:16W			WEIGHT:		
SPEC.:4000K					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	16.1	17.5	16.4	17.7	17.9	16.2	17.6	16.5	17.8	18.0
3H	16.9	18.2	17.2	18.4	18.6	16.9	18.2	17.2	18.4	18.7
4H	17.3	18.5	17.6	18.7	19.0	17.3	18.5	17.6	18.7	19.0
6H	17.6	18.7	17.9	19.0	19.3	17.6	18.7	17.9	19.0	19.2
8H	17.7	18.8	18.0	19.1	19.4	17.7	18.8	18.0	19.1	19.3
12H	17.8	18.8	18.1	19.1	19.4	17.7	18.8	18.1	19.1	19.4
4H 2H	16.4	17.7	16.8	17.9	18.2	16.5	17.7	16.8	18.0	18.2
3H	17.4	18.5	17.8	18.8	19.1	17.4	18.5	17.8	18.8	19.1
4H	17.9	18.9	18.3	19.2	19.5	18.0	18.9	18.3	19.2	19.6
6H	18.4	19.3	18.8	19.6	20.0	18.4	19.3	18.8	19.6	20.0
8H	18.6	19.4	19.0	19.8	20.1	18.6	19.4	19.0	19.7	20.1
12H	18.7	19.4	19.1	19.8	20.2	18.7	19.4	19.1	19.8	20.2
8H 4H	18.1	18.9	18.6	19.3	19.7	18.2	19.0	18.6	19.3	19.7
6H	18.8	19.4	19.2	19.8	20.3	18.8	19.4	19.2	19.8	20.3
8H	19.1	19.6	19.5	20.1	20.5	19.0	19.6	19.5	20.0	20.5
12H	19.3	19.8	19.7	20.2	20.7	19.2	19.7	19.7	20.2	20.6
12H 4H	18.2	18.9	18.6	19.3	19.7	18.2	18.9	18.6	19.3	19.7
6H	18.8	19.4	19.3	19.8	20.3	18.8	19.4	19.3	19.8	20.3
8H	19.2	19.7	19.6	20.1	20.6	19.1	19.6	19.6	20.1	20.6
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, 1730 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 1.9)

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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

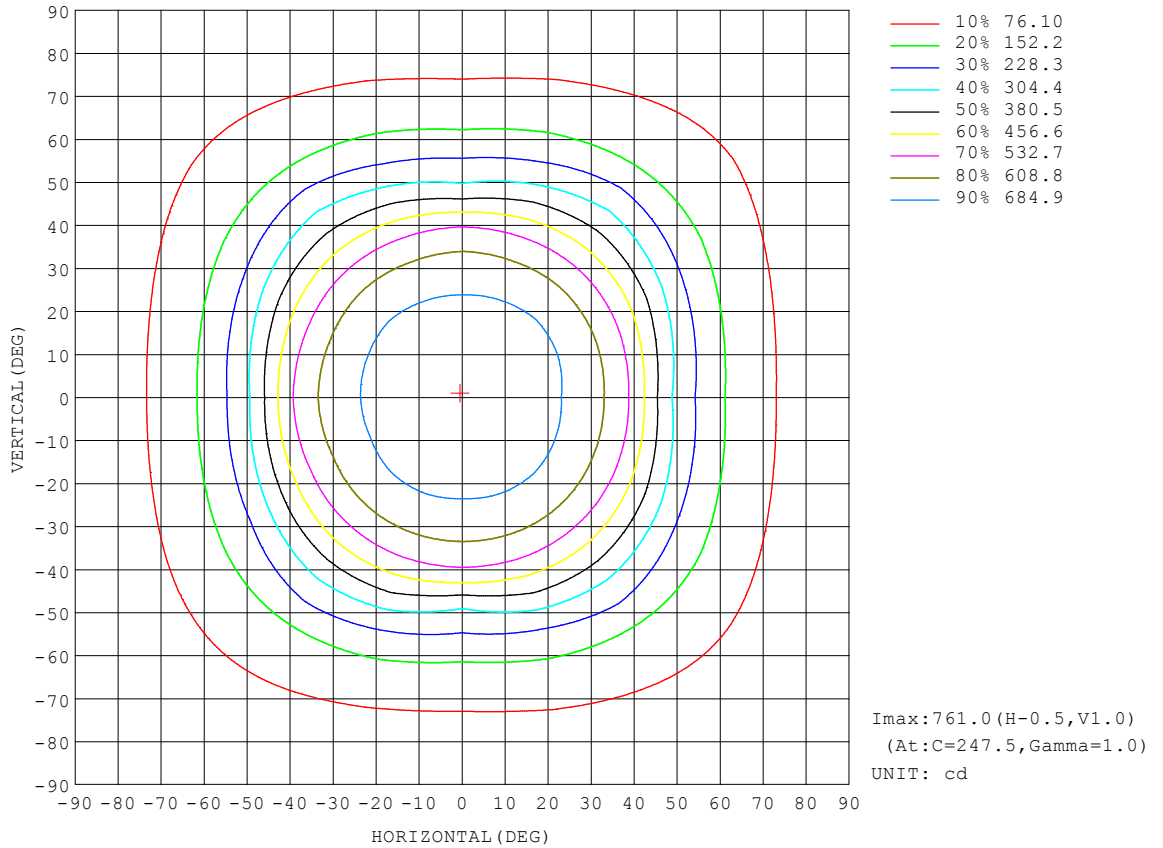
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	64	53	47	63	53	47	62	52	47	41
0.80	74	63	57	73	63	57	71	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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

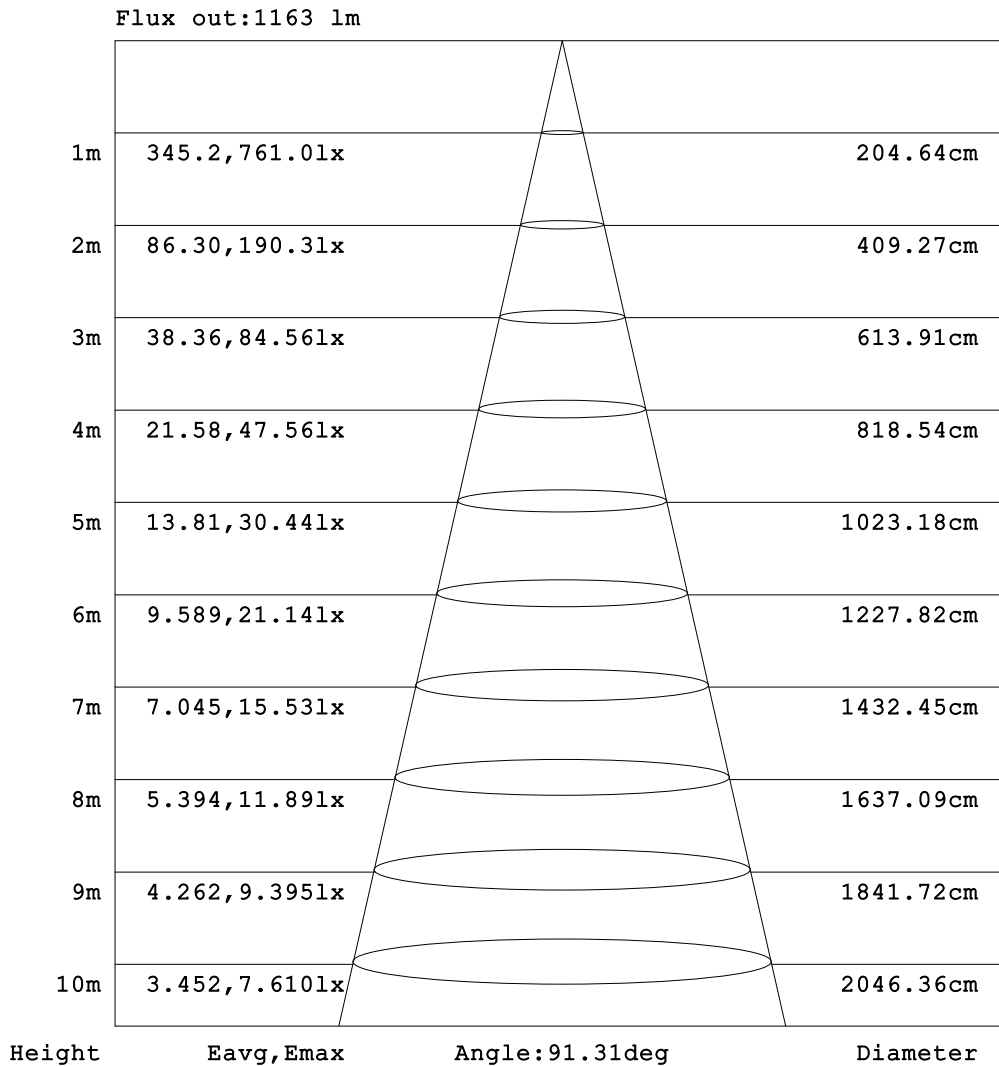


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-07-15

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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:



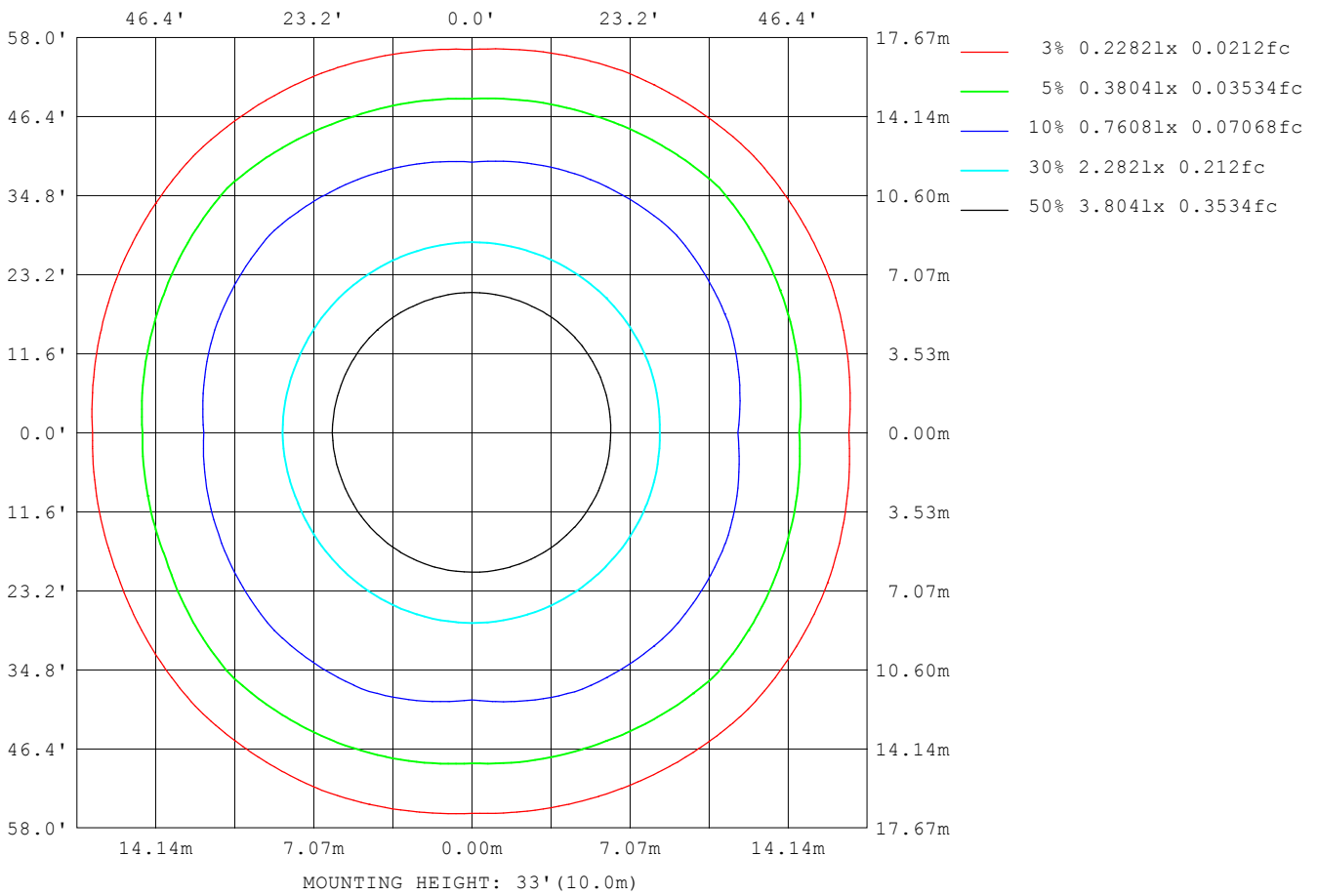
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:1
MFR.:	SUR.:0.552*0.252	Shielding Angle:

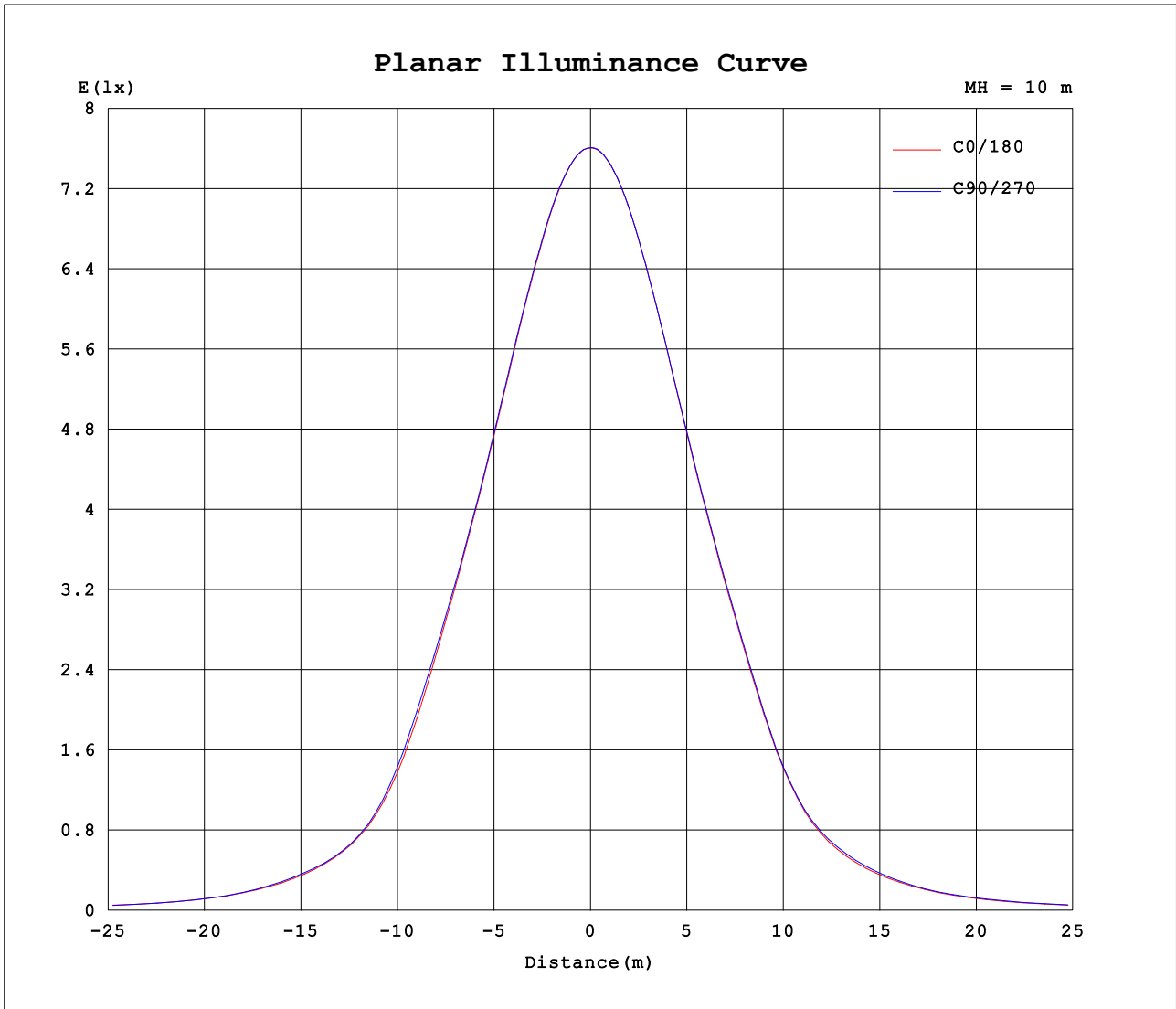
AvgL	cd/m2
L_0~180 (65) av	2050
L_0~180 (75) av	1884
L_0~180 (85) av	1663
L_90~270 (65) av	2095
L_90~270 (75) av	1897
L_90~270 (85) av	1703
L_45 (65) av	2216
L_45 (75) av	2023
L_45 (85) av	1885

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:240.34V I:0.0654A P:15.210W PF:0.9676 Freq:50.00Hz Lamp Flux:1730.34x1 lm		
NAME: UGR19-30/60-CC	TYPE:16W	WEIGHT:
SPEC.:4000K	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	761	761	761	761	761	761	761	761	761	761	761	761	761	761	761	761			
5	757	757	757	758	757	757	757	757	758	757	758	758	758	758	758	758			
10	745	746	746	747	747	746	745	745	747	746	747	747	747	747	747	747			
15	727	729	729	730	729	729	728	728	729	729	729	729	729	730	730	730			
20	703	705	707	707	705	707	705	703	706	707	708	707	706	708	710	708			
25	672	676	680	679	676	678	677	673	676	677	681	678	678	679	683	680			
30	636	638	642	642	639	640	639	635	640	639	643	640	642	642	646	642			
35	588	588	590	593	595	590	586	584	593	589	590	591	598	593	594	592			
40	510	515	518	523	525	520	512	508	519	514	517	519	526	522	522	521			
45	390	420	431	431	406	430	426	410	402	423	430	426	406	432	436	430			
50	284	325	340	337	288	336	335	312	293	327	344	328	300	334	352	334			
55	219	239	262	243	226	246	258	229	224	245	270	246	235	251	276	249			
60	164	180	190	180	170	183	186	174	169	182	193	186	175	191	198	186			
65	118	131	127	129	117	127	125	127	121	130	132	135	128	136	134	134			
70	90.8	94.1	94.0	91.8	89.6	90.4	93.0	92.1	92.4	95.8	96.7	99.8	97.4	99.7	98.3	98.9			
75	66.6	70.3	70.3	70.9	65.1	69.4	68.9	67.5	68.3	74.0	74.5	75.2	70.7	76.4	76.0	76.4			
80	43.4	45.2	47.6	45.3	40.6	44.8	45.5	42.7	45.0	49.9	51.7	50.7	48.6	52.4	53.6	51.9			
85	19.2	19.8	21.1	19.0	17.9	18.2	19.3	17.4	20.9	22.3	24.5	23.0	23.1	24.2	26.0	24.1			
90	0.70	0.91	1.19	0.64	0.40	0.56	0.79	0.65	1.03	1.07	1.17	0.95	0.61	1.15	1.77	1.81			

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: