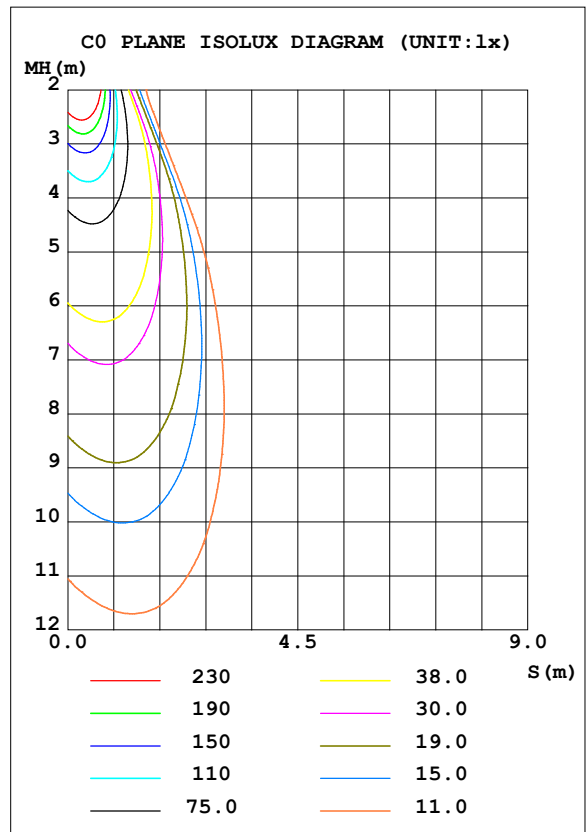
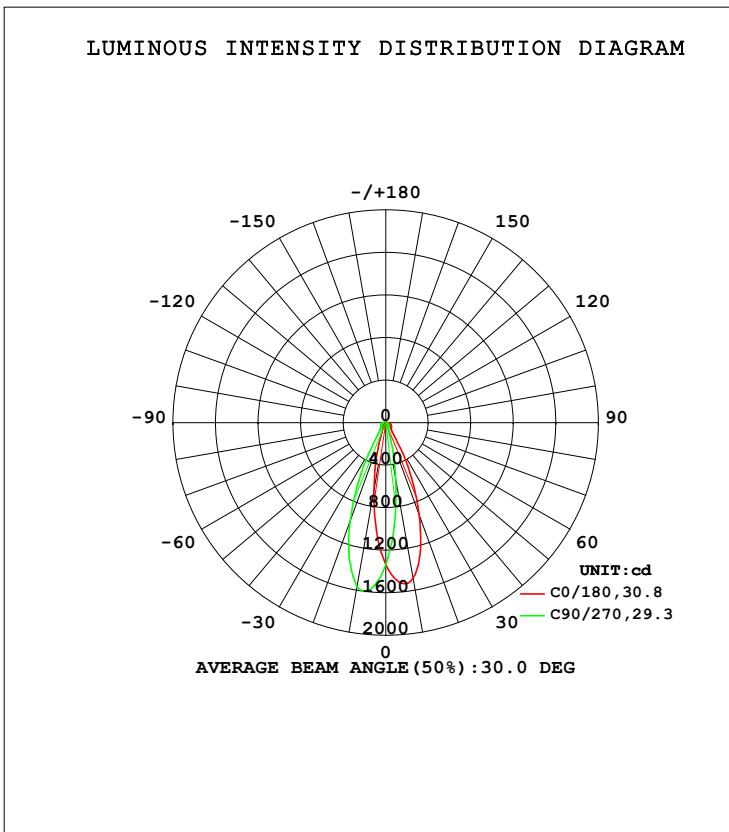


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 49.92 lm/W			
MODEL		Imax (cd)	1688	S/MH (C0/180)	0.33
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.72
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	670.51	<input type="checkbox"/> UP, DN (C0-180)	0.0, 33.9
NOMINAL FLUX (lm)	670.509	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.0, 66.1
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120	<input type="checkbox"/> down (%)	100.0	CIBSE SHR MAX	0.55



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity: 65.0%  
 Test Distance: 3.080m [K=1.0000]  
 Remarks:

**ZONAL FLUX DIAGRAM**

ZONAL FLUX DIAGRAM:

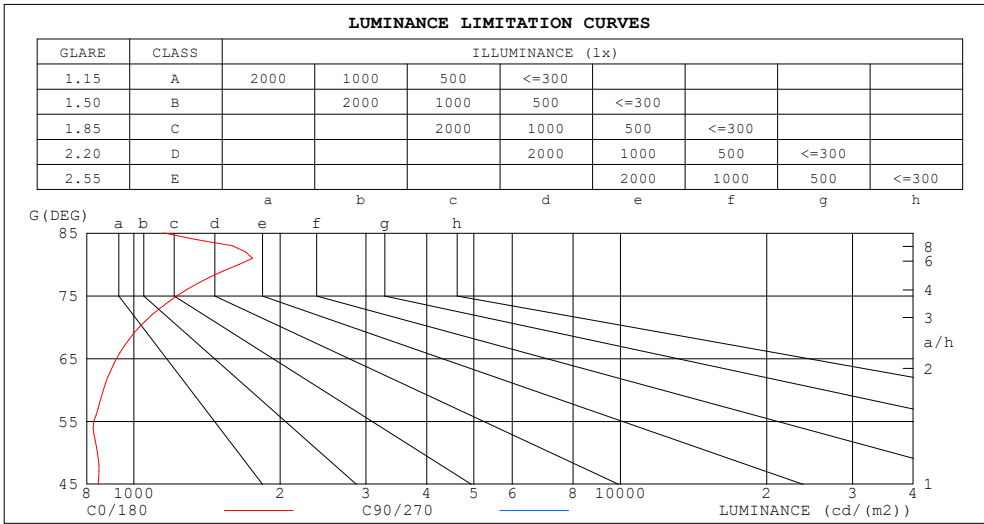
mm	C0	C45	C90	C135	C180	C225	C270	C315	mm	□ zone	□ total	%lum,lamp
10	1485	962.5	553.1	478.6	650.8	1168	1564	1636	0- 10	114.2	114.2	17,17
20	921.4	394.1	84.60	56.47	146.4	671.5	984.4	997.5	10- 20	216.5	330.7	49.3,49.3
30	271.0	117.4	45.42	41.10	51.98	201.3	282.2	264.0	20- 30	147.1	477.7	71.2,71.2
40	75.17	51.53	33.43	28.90	39.27	63.93	81.40	86.00	30- 40	53.97	531.7	79.3,79.3
50	59.69	39.34	22.53	18.04	27.91	48.69	65.39	71.40	40- 50	38.67	570.4	85.1,85.1
60	47.81	27.76	12.54	8.622	17.34	35.35	53.69	60.62	50- 60	34.12	604.5	90.2,90.2
70	38.73	16.78	5.011	1.895	8.661	24.15	45.03	51.79	60- 70	27.98	632.5	94.3,94.3
80	31.56	7.112	1.572	0.4271	3.043	13.94	38.90	46.89	70- 80	21.93	654.4	97.6,97.6
90	10.65	0.1269	0.1876	0.2300	0.1847	3.215	21.97	25.85	80- 90	16.09	670.5	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:  
 Test Date:2021-06-22

□ Range: 0 - 90DEG  
 □ Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1153	81
80	1647	81
75	1227	100
70	1026	132
65	921	175
60	866	226
55	828	273
50	842	315
45	845	355

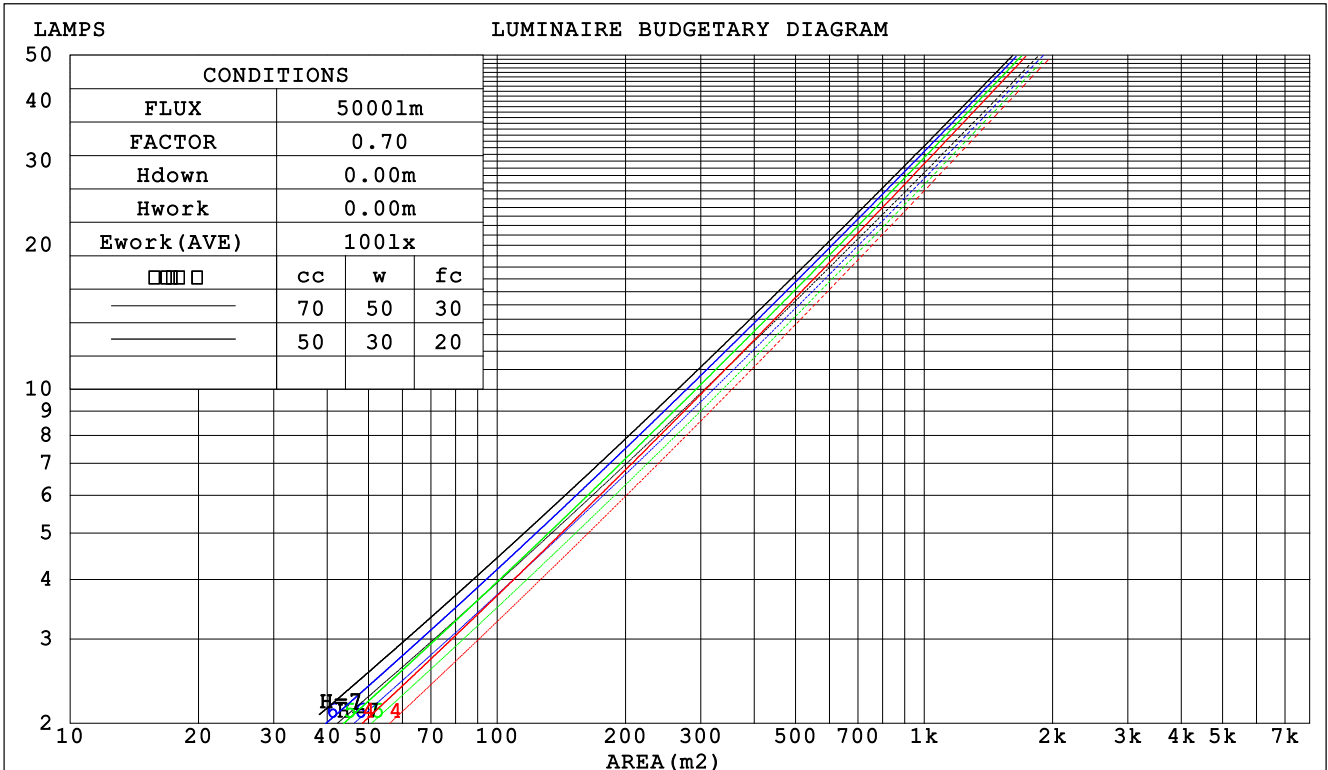
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	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	1.08	1.05	1.02	1.06	1.03	1.01	1.02	.00	.98	.98	.96	.95	.95	.93	.92	.90
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.86	.84	.83
3.0	.93	.87	.83	.91	.86	.82	.89	.84	.81	.86	.82	.79	.84	.81	.78	.76
4.0	.87	.81	.76	.86	.80	.76	.83	.78	.75	.81	.77	.74	.79	.76	.73	.71
5.0	.82	.75	.71	.81	.75	.70	.79	.74	.70	.77	.73	.69	.75	.72	.69	.67
6.0	.77	.71	.66	.76	.70	.66	.75	.69	.66	.73	.69	.65	.72	.68	.65	.63
7.0	.73	.67	.63	.72	.66	.62	.71	.66	.62	.70	.65	.62	.69	.65	.61	.60
8.0	.69	.63	.59	.69	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.58	.57
9.0	.66	.60	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.54
10.0	.63	.58	.54	.63	.57	.54	.62	.57	.54	.61	.57	.53	.61	.56	.53	.52



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

□ Range: 0 - 90DEG  
 □ Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	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	.224 .127 .040	.217 .124 .039	.204 .117 .037	.192 .111 .036	.182 .105 .034	
2.0	.202 .111 .034	.196 .108 .033	.185 .103 .032	.175 .098 .031	.166 .094 .030	
3.0	.184 .098 .029	.180 .096 .029	.170 .092 .028	.162 .089 .027	.154 .085 .026	
4.0	.170 .088 .026	.166 .087 .026	.158 .084 .025	.150 .081 .024	.143 .078 .024	
5.0	.158 .081 .023	.154 .079 .023	.147 .077 .023	.141 .074 .022	.135 .072 .022	
6.0	.148 .074 .021	.144 .073 .021	.138 .071 .021	.133 .069 .020	.127 .067 .020	
7.0	.139 .069 .019	.136 .068 .019	.130 .066 .019	.125 .064 .019	.121 .063 .018	
8.0	.131 .064 .018	.128 .063 .018	.123 .062 .018	.119 .060 .017	.115 .059 .017	
9.0	.124 .060 .017	.121 .059 .017	.117 .058 .016	.113 .057 .016	.109 .056 .016	
10.0	.117 .056 .016	.115 .056 .016	.112 .055 .015	.108 .054 .015	.105 .053 .015	

<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	.174 .157 .141	.149 .135 .121	.102 .093 .084	.059 .054 .049	.019 .017 .016	
2.0	.160 .132 .109	.137 .114 .094	.094 .079 .066	.054 .046 .038	.017 .015 .013	
3.0	.148 .114 .086	.127 .098 .075	.087 .068 .053	.050 .040 .031	.016 .013 .010	
4.0	.137 .099 .070	.118 .086 .061	.081 .060 .043	.047 .035 .025	.015 .011 .008	
5.0	.128 .088 .058	.110 .076 .050	.076 .053 .036	.044 .031 .021	.014 .010 .007	
6.0	.120 .078 .049	.103 .068 .042	.071 .048 .030	.041 .028 .018	.013 .009 .006	
7.0	.113 .071 .041	.097 .061 .036	.067 .043 .026	.039 .025 .015	.013 .008 .005	
8.0	.106 .064 .036	.091 .056 .031	.063 .039 .022	.037 .023 .013	.012 .008 .004	
9.0	.101 .059 .031	.087 .051 .027	.060 .036 .019	.035 .021 .012	.011 .007 .004	
10.0	.095 .055 .027	.082 .047 .024	.057 .033 .017	.033 .020 .010	.011 .006 .003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm										
NAME: 2RWWWH					TYPE:			WEIGHT:		
SPEC.:3000K 90					DIM.:			SERIAL No.:2		
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	10.1	11.1	10.4	11.3	11.5	5.4	6.4	5.6	6.5	6.7
3H	12.4	13.4	12.7	13.6	13.8	6.0	6.9	6.2	7.1	7.3
4H	13.7	14.6	14.0	14.9	15.1	6.1	7.0	6.4	7.3	7.5
6H	15.3	16.1	15.6	16.4	16.6	6.2	7.0	6.5	7.3	7.5
8H	16.0	16.8	16.3	17.1	17.4	6.2	7.0	6.5	7.3	7.5
12H	16.3	17.1	16.7	17.4	17.7	6.2	7.0	6.5	7.2	7.5
4H 2H	10.4	11.3	10.7	11.5	11.7	6.7	7.6	7.0	7.8	8.0
3H	12.8	13.6	13.2	13.9	14.2	7.5	8.3	7.9	8.6	8.9
4H	14.3	15.0	14.7	15.3	15.6	7.8	8.5	8.1	8.8	9.1
6H	16.0	16.7	16.4	17.0	17.4	7.9	8.6	8.3	8.9	9.2
8H	16.9	17.5	17.3	17.9	18.2	7.9	8.5	8.3	8.9	9.3
12H	17.3	17.9	17.7	18.3	18.7	7.9	8.5	8.3	8.9	9.2
8H 4H	14.3	14.9	14.7	15.3	15.7	8.7	9.3	9.1	9.6	10.0
6H	16.2	16.7	16.6	17.1	17.5	8.9	9.4	9.3	9.8	10.2
8H	17.2	17.7	17.7	18.1	18.5	9.0	9.4	9.4	9.9	10.3
12H	17.9	18.3	18.3	18.7	19.2	9.0	9.4	9.5	9.9	10.3
12H 4H	14.3	14.8	14.7	15.2	15.6	9.0	9.5	9.4	9.9	10.3
6H	16.2	16.6	16.6	17.1	17.5	9.3	9.8	9.7	10.2	10.6
8H	17.2	17.6	17.7	18.1	18.5	9.4	9.8	9.9	10.3	10.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.3 / - 0.4				
1.5H	+ 0.3 / - 0.3					+ 0.3 / - 0.5				
2.0H	+ 0.4 / - 0.5					+ 0.5 / - 1.0				

CIE Pub.117, 670.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.4)  
 Area: 0.111111 m2

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	Shielding Angle:

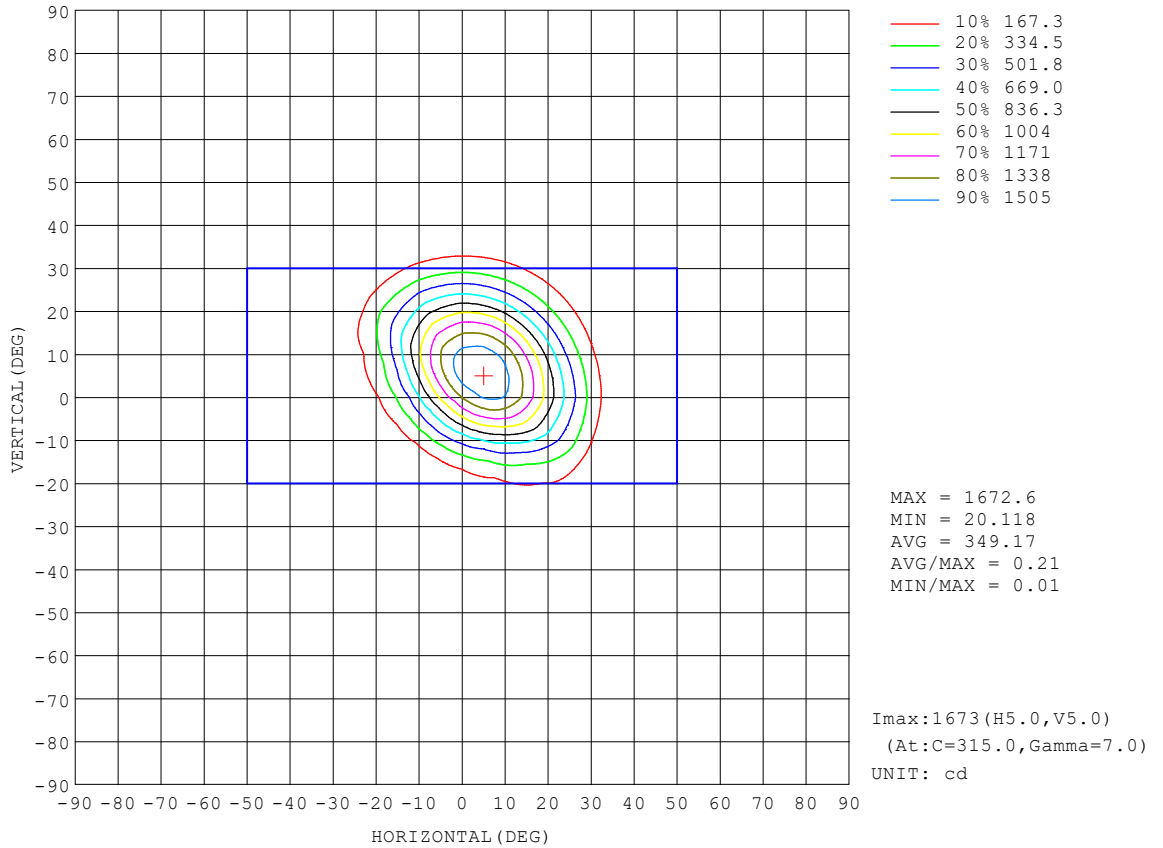
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	79	71	67	78	71	66	78	71	66	62
0.80	87	79	74	86	79	74	85	78	74	69
1.00	92	85	80	91	84	80	89	85	79	74
1.25	97	90	85	95	89	85	93	88	84	79
1.50	100	93	89	99	93	88	96	91	87	82
2.00	104	98	94	102	97	93	99	95	91	85
2.50	106	101	97	104	99	96	101	97	94	87
3.00	108	103	100	106	102	98	103	99	96	89
4.00	111	107	104	109	105	102	105	102	100	92
5.00	112	109	106	110	107	105	106	104	102	94
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:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	Shielding Angle:



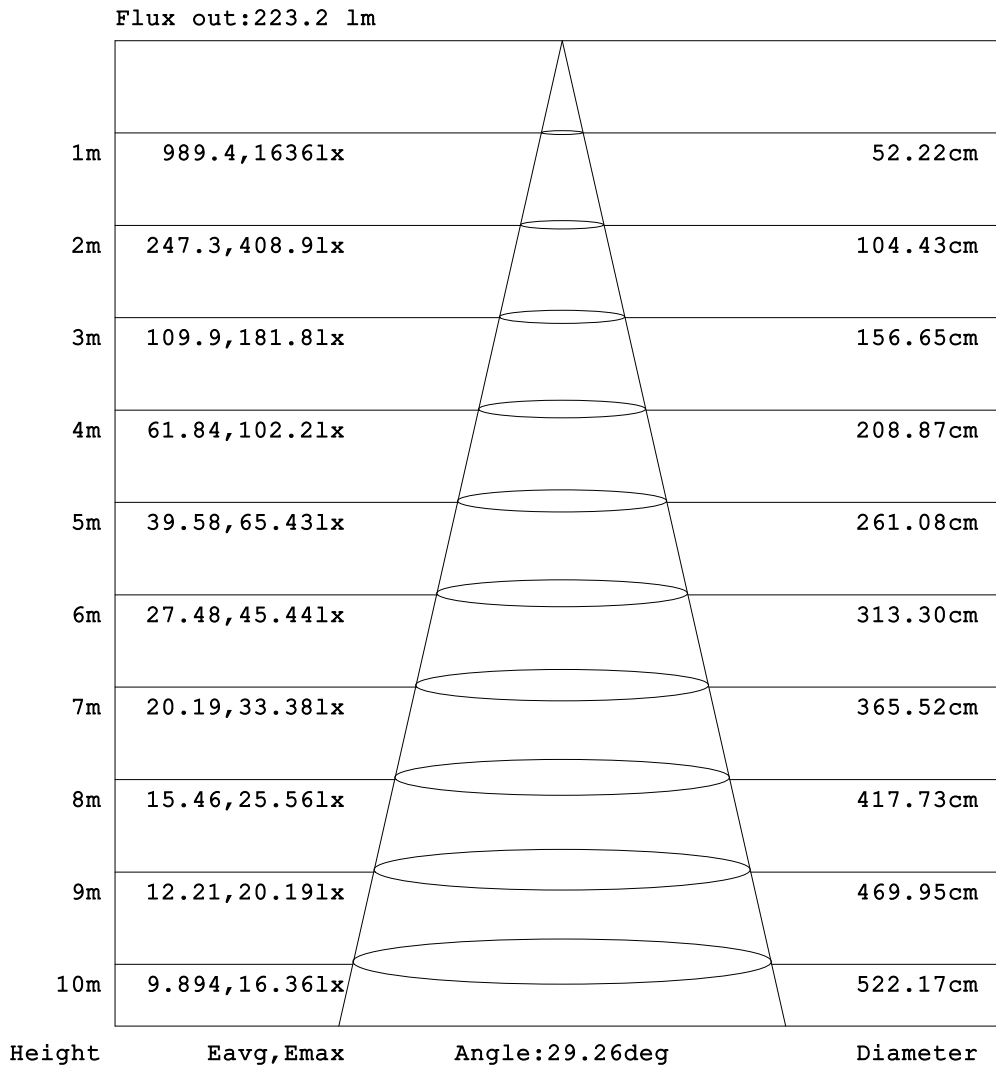
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:



**AAI Figure**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	Shielding Angle:



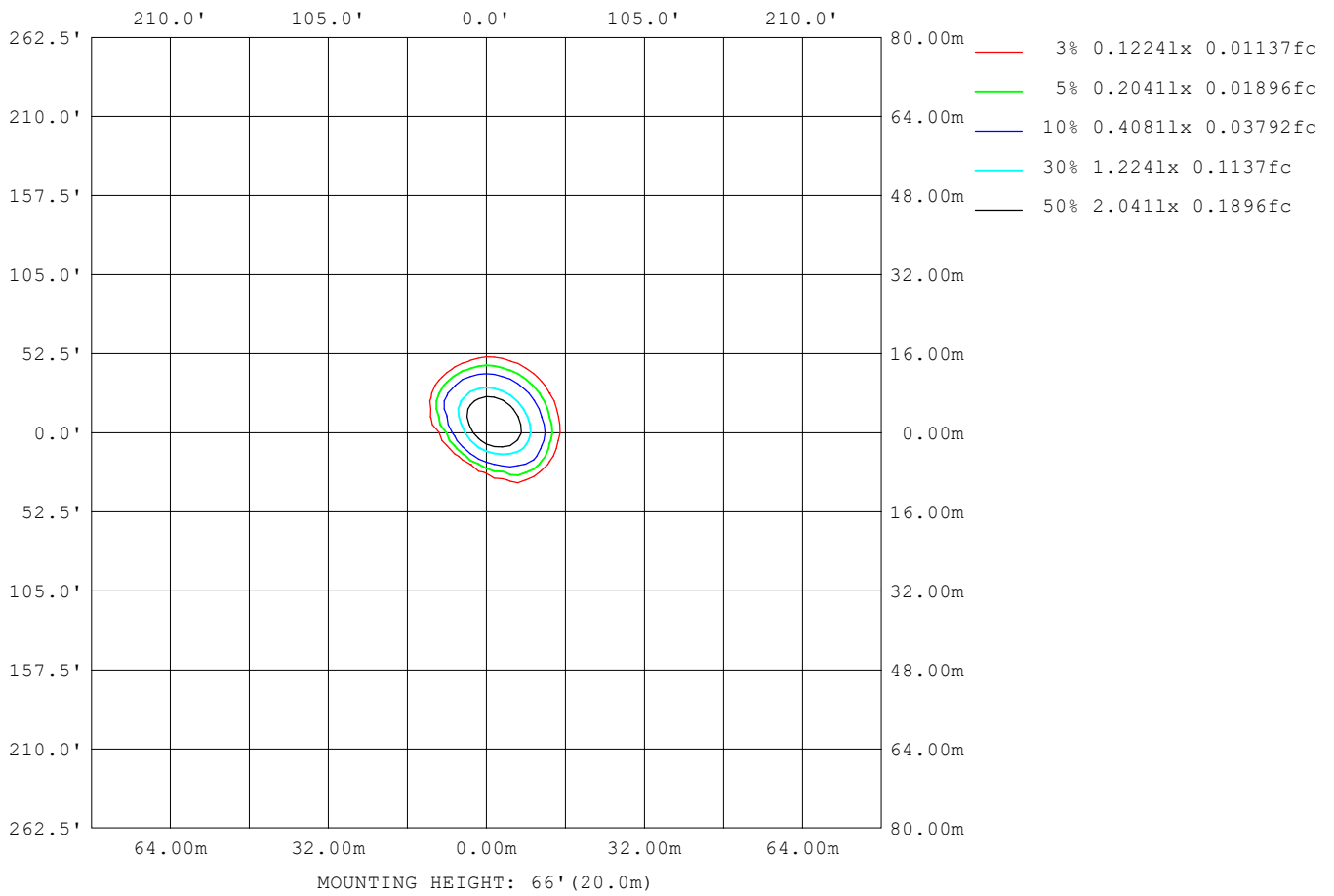
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**ISOLUX DIAGRAM**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

Test:U:120.05V I:0.1133A P:13.431W PF:0.9533 Freq:59.98Hz Lamp Flux:670.509x1 lm		
NAME: 2RWWWH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:2
MFR.:	SUR.:	Shielding Angle:

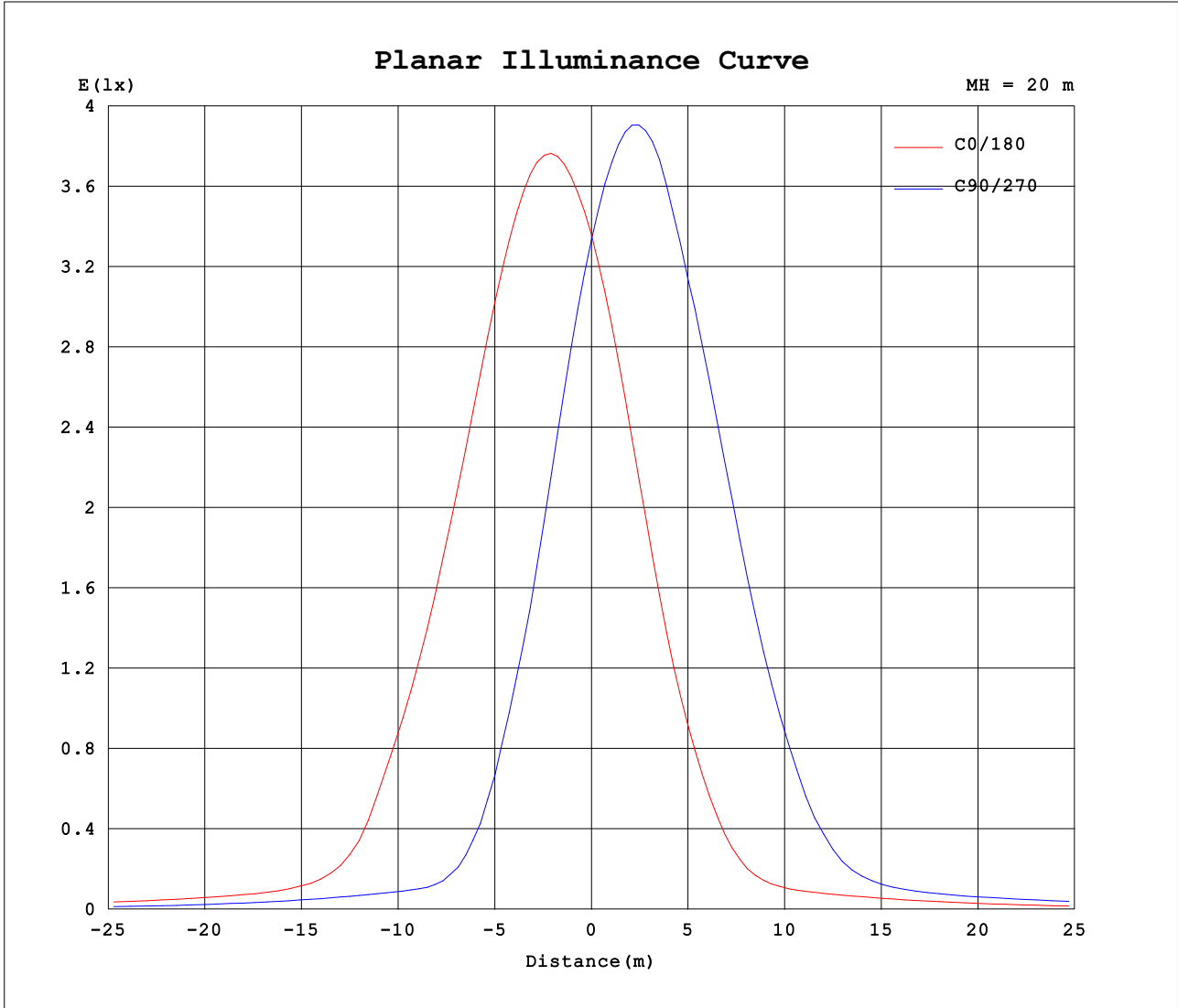
AvgL	cd/m2
L_0~180 (65) av	593
L_0~180 (75) av	704
L_0~180 (85) av	640
L_90~270 (65) av	609
L_90~270 (75) av	774
L_90~270 (85) av	1886
L_45 (65) av	602
L_45 (75) av	700
L_45 (85) av	1617

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**Planar Illuminance Curve**



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-06-22

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity: 65.0%  
 Test Distance: 3.080m [K=1.0000]  
 Remarks:

