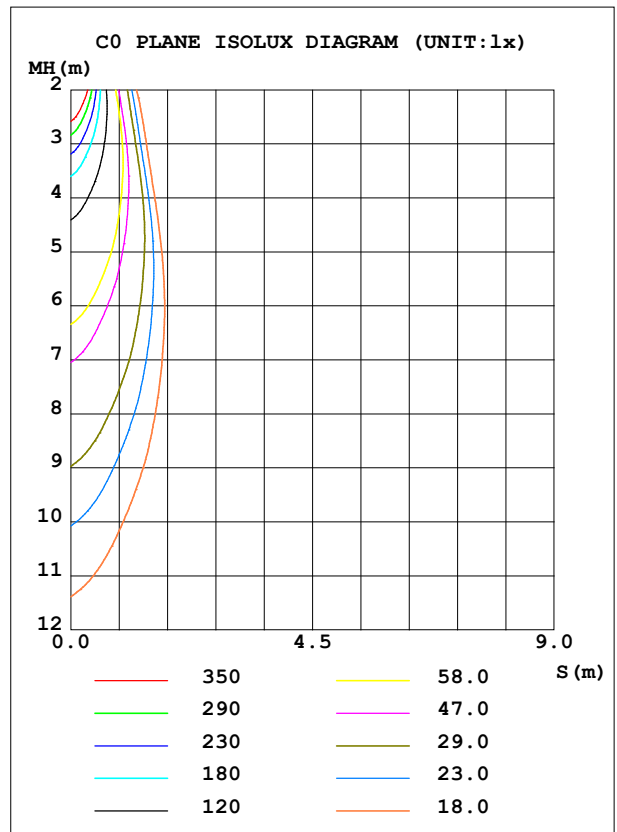
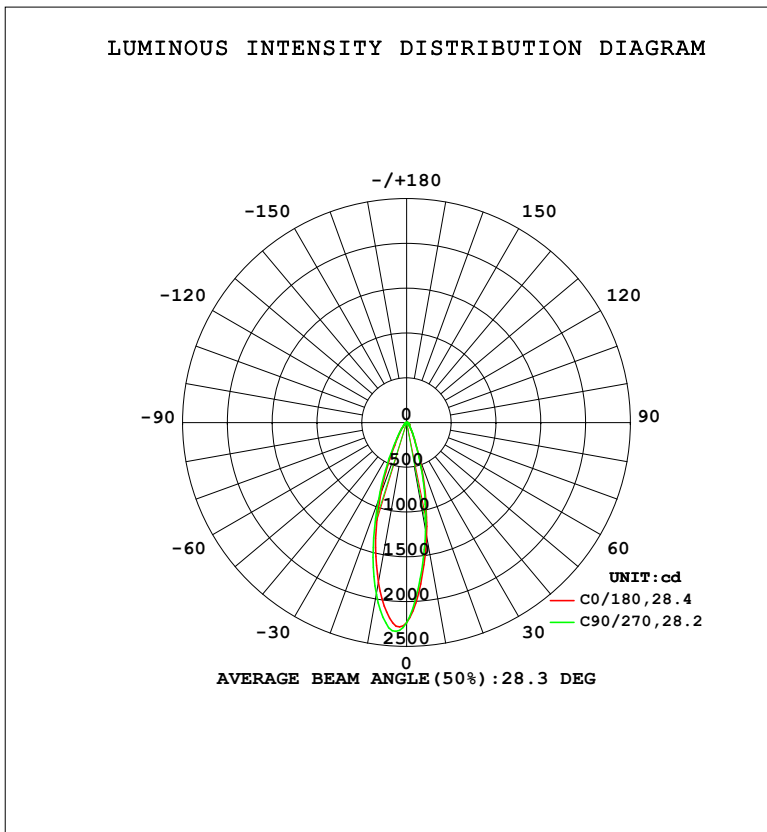


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	2383	S/MH (C0/180)	0.57
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	0.59
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	798.52	η UP, DN (C0-180)	0.0, 40.0
NOMINAL FLUX (lm)	798.523	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 60.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	0.50



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.090m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

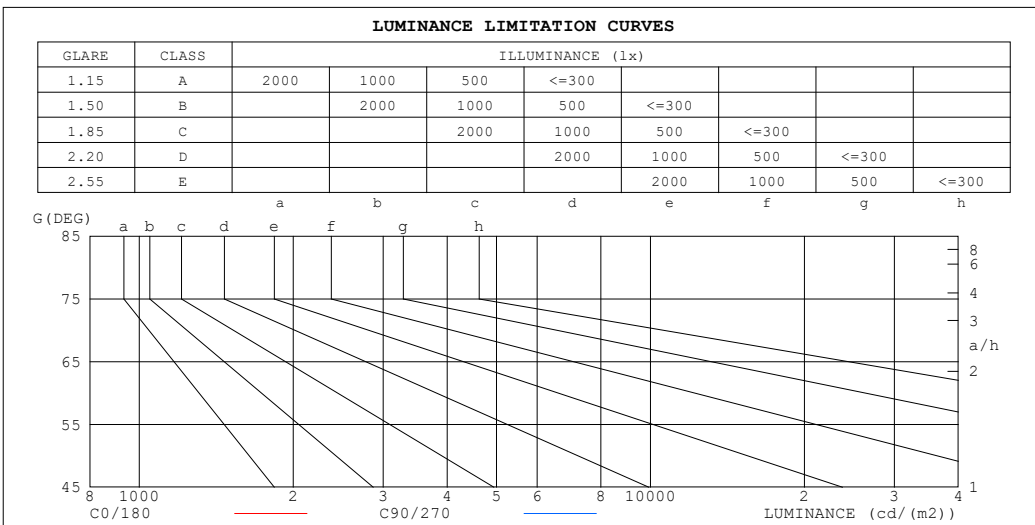
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1286	1176	1230	1447	1814	2051	1951	1603	0- 10	177.5	177.5	22.2,22.2
20	419.5	384.1	406.1	526.5	850.1	1045	928.9	669.0	10- 20	295.4	472.8	59.2,59.2
30	128.5	124.1	136.8	170.1	221.5	274.8	262.7	177.3	20- 30	165.8	638.6	80,80
40	49.10	48.73	54.10	64.69	77.22	85.40	82.05	62.54	30- 40	70.16	708.8	88.8,88.8
50	28.41	28.63	30.46	33.08	34.41	36.87	36.52	33.19	40- 50	34.72	743.5	93.1,93.1
60	20.56	21.04	21.57	22.49	22.50	24.55	24.74	23.13	50- 60	24.11	767.6	96.1,96.1
70	14.11	9.524	9.550	15.74	15.86	17.43	17.82	16.52	60- 70	18.77	786.4	98.5,98.5
80	4.675	1.261	1.305	4.957	7.325	5.575	5.821	6.982	70- 80	10.25	796.7	99.8,99.8
90	0.1069	0.0966	0.0990	0.1145	0.0709	0.0812	0.0847	0.0813	80- 90	1.868	798.5	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:25.3°C
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	121	14
80	253	67
75	343	175
70	388	247
65	394	368
60	387	382
55	392	390
50	416	420
45	475	485

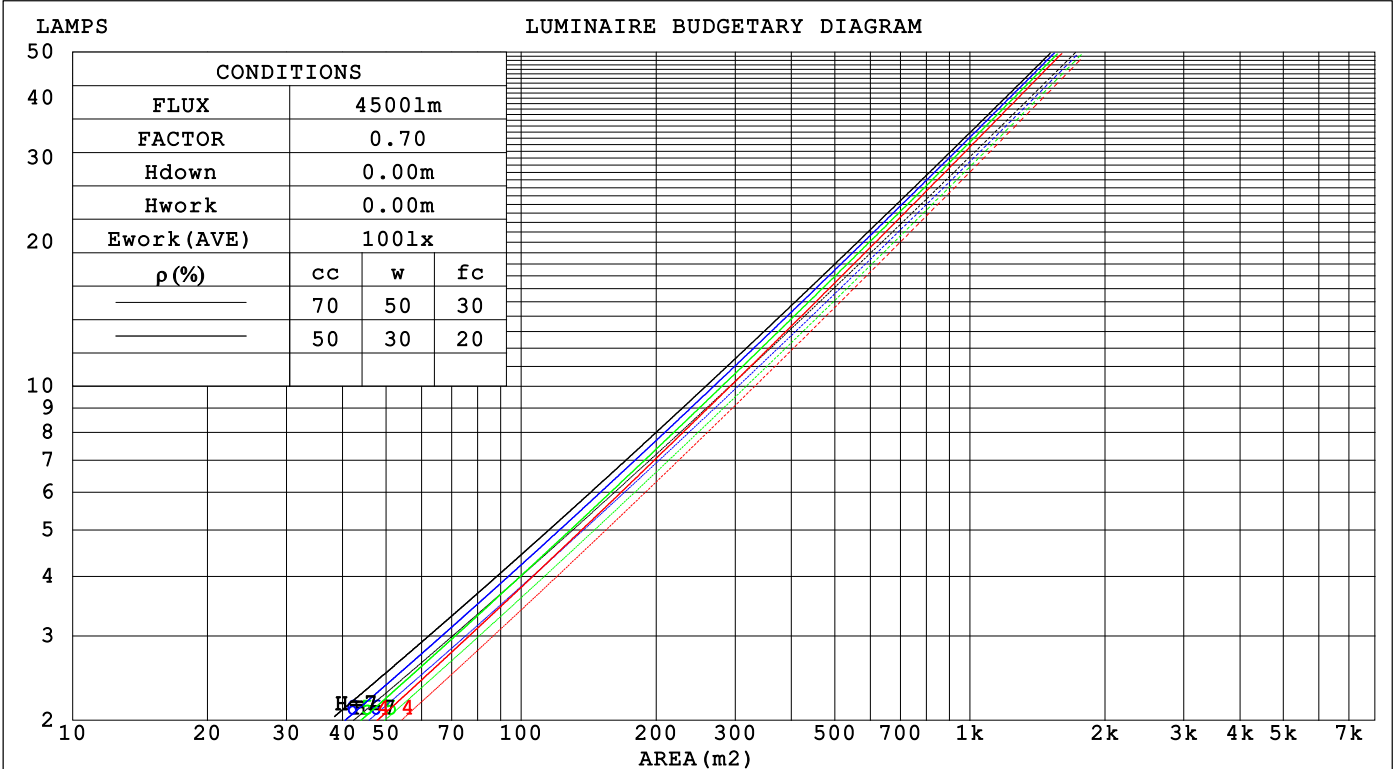
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.090m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz		
UTHdi:0.00% ITHdi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
pfc																
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	1.00
1.0	1.11	1.08	1.06	1.09	1.07	1.05	1.05	1.03	1.01	1.01	.00	.98	.98	.97	.96	.94
2.0	1.04	.00	.97	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.88	.94	.90	.87	.91	.88	.86	.89	.86	.84	.83
4.0	.92	.87	.83	.91	.86	.83	.89	.85	.82	.87	.83	.81	.85	.82	.80	.78
5.0	.87	.82	.78	.86	.81	.78	.85	.80	.77	.83	.79	.76	.82	.78	.76	.74
6.0	.83	.78	.74	.82	.77	.74	.81	.76	.73	.80	.76	.73	.78	.75	.72	.71
7.0	.79	.74	.70	.79	.74	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
8.0	.76	.71	.67	.75	.70	.67	.74	.70	.67	.73	.69	.66	.72	.69	.66	.65
9.0	.73	.68	.64	.72	.67	.64	.71	.67	.64	.71	.66	.64	.70	.66	.63	.62
10.0	.70	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.67	.64	.61	.60



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.175	.099	.031	.168	.096	.030	.156	.089	.028	.144	.083	.027	.133	.077	.025	
2.0	.164	.090	.028	.159	.087	.027	.148	.082	.026	.139	.078	.024	.130	.073	.023	
3.0	.154	.082	.025	.149	.080	.024	.140	.076	.023	.132	.072	.022	.124	.069	.021	
4.0	.144	.075	.022	.140	.073	.022	.133	.070	.021	.125	.067	.020	.119	.065	.020	
5.0	.136	.069	.020	.132	.068	.020	.126	.065	.019	.119	.063	.019	.114	.061	.018	
6.0	.128	.064	.018	.125	.063	.018	.119	.061	.018	.114	.059	.017	.109	.057	.017	
7.0	.121	.060	.017	.119	.059	.017	.113	.057	.017	.109	.056	.016	.104	.054	.016	
8.0	.115	.056	.016	.113	.055	.016	.108	.054	.015	.104	.053	.015	.100	.051	.015	
9.0	.110	.053	.015	.107	.052	.015	.103	.051	.015	.100	.050	.014	.096	.049	.014	
10.0	.105	.050	.014	.103	.050	.014	.099	.049	.014	.096	.048	.014	.093	.047	.013	

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.033	.016	.013	.011	
4.0	.131	.099	.074	.112	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.121	.087	.061	.104	.075	.053	.072	.052	.038	.042	.031	.022	.013	.010	.007	
6.0	.113	.077	.051	.097	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.106	.069	.044	.091	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.100	.063	.038	.086	.055	.033	.059	.038	.023	.035	.023	.014	.011	.007	.005	
9.0	.094	.058	.033	.081	.050	.029	.056	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.089	.053	.029	.077	.046	.025	.053	.032	.018	.031	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	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	5.2	6.1	5.4	6.2	6.4	5.2	6.1	5.5	6.3	6.4
3H	6.7	7.5	7.0	7.7	7.9	6.1	6.9	6.4	7.1	7.3
4H	7.2	8.0	7.5	8.2	8.4	6.3	7.0	6.6	7.3	7.5
6H	7.5	8.2	7.8	8.4	8.7	6.3	7.0	6.6	7.2	7.5
8H	7.5	8.2	7.8	8.5	8.7	6.2	6.9	6.5	7.2	7.4
12H	7.5	8.2	7.8	8.4	8.7	6.2	6.9	6.5	7.1	7.4
4H 2H	5.7	6.5	6.0	6.7	6.9	5.8	6.5	6.0	6.7	6.9
3H	7.3	8.0	7.7	8.3	8.5	6.7	7.4	7.0	7.6	7.9
4H	7.9	8.5	8.2	8.8	9.1	6.9	7.5	7.2	7.8	8.1
6H	8.2	8.7	8.6	9.1	9.4	6.9	7.4	7.3	7.8	8.1
8H	8.2	8.7	8.6	9.1	9.4	6.8	7.3	7.2	7.7	8.1
12H	8.2	8.7	8.6	9.0	9.4	6.8	7.3	7.2	7.6	8.0
8H 4H	7.9	8.4	8.3	8.7	9.1	6.9	7.4	7.3	7.8	8.2
6H	8.2	8.6	8.6	9.0	9.4	7.0	7.4	7.4	7.8	8.2
8H	8.2	8.6	8.7	9.0	9.5	6.9	7.3	7.3	7.7	8.1
12H	8.2	8.5	8.7	9.0	9.4	6.8	7.2	7.3	7.6	8.1
12H 4H	7.8	8.3	8.2	8.7	9.1	6.9	7.4	7.3	7.7	8.1
6H	8.1	8.5	8.6	8.9	9.4	6.9	7.3	7.4	7.7	8.1
8H	8.2	8.5	8.6	8.9	9.4	6.9	7.2	7.3	7.6	8.1

Variations with the observer position at spacings(CIE Pub.117):		
S = 1.0H	+ 0.3 / - 0.4	+ 0.5 / - 0.7
1.5H	+ 0.4 / - 0.3	+ 0.8 / - 0.4
2.0H	+ 0.3 / - 0.4	+ 0.4 / - 0.9

CIE Pub.117, 798.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.8)
 Area: 0.111111 m2

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
Temperature:25.3℃	Humidity:65.0%
Operators:	Test Distance:3.090m [K=1.0000]
Test Date:2022-12-19	Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

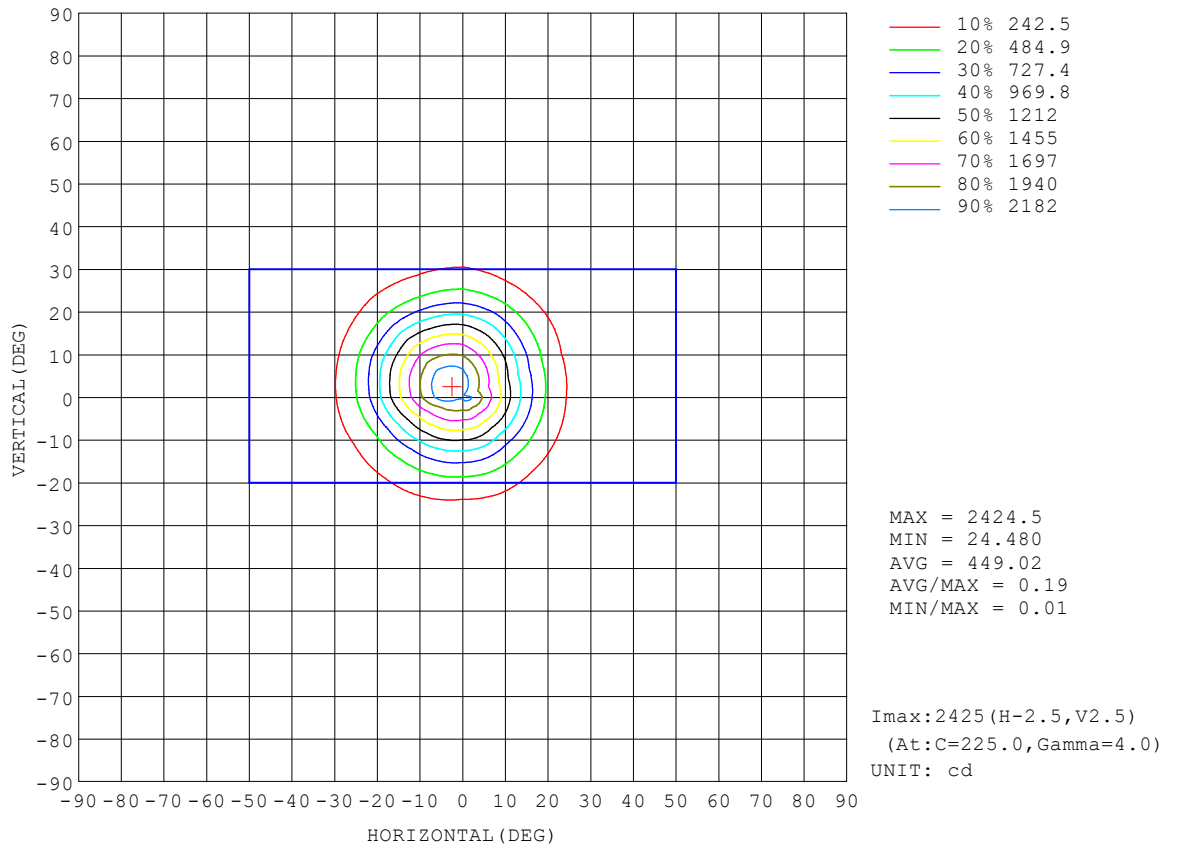
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	78	74	84	78	74	83	77	74	70
0.80	92	86	82	92	85	82	90	85	81	77
1.00	97	91	87	96	90	86	94	90	86	82
1.25	101	95	92	100	95	91	98	94	90	86
1.50	104	99	95	103	98	95	100	96	93	89
2.00	107	102	99	106	101	98	103	99	97	91
2.50	109	105	101	107	104	101	104	101	99	93
3.00	111	107	104	109	106	103	105	103	101	94
4.00	113	110	108	111	108	106	107	105	103	96
5.00	114	112	110	112	110	108	108	107	105	97
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:25.3°C
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

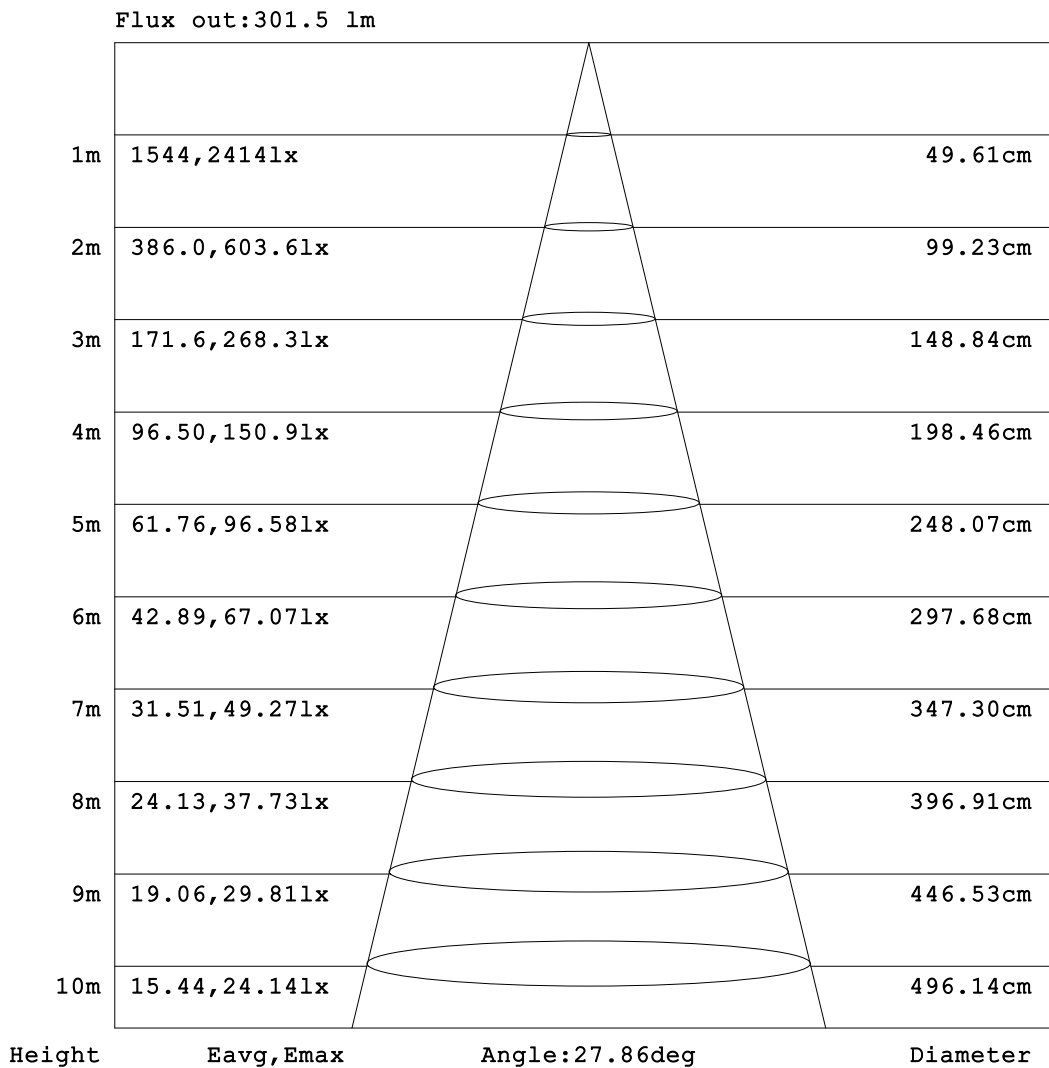


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

AAI Figure

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



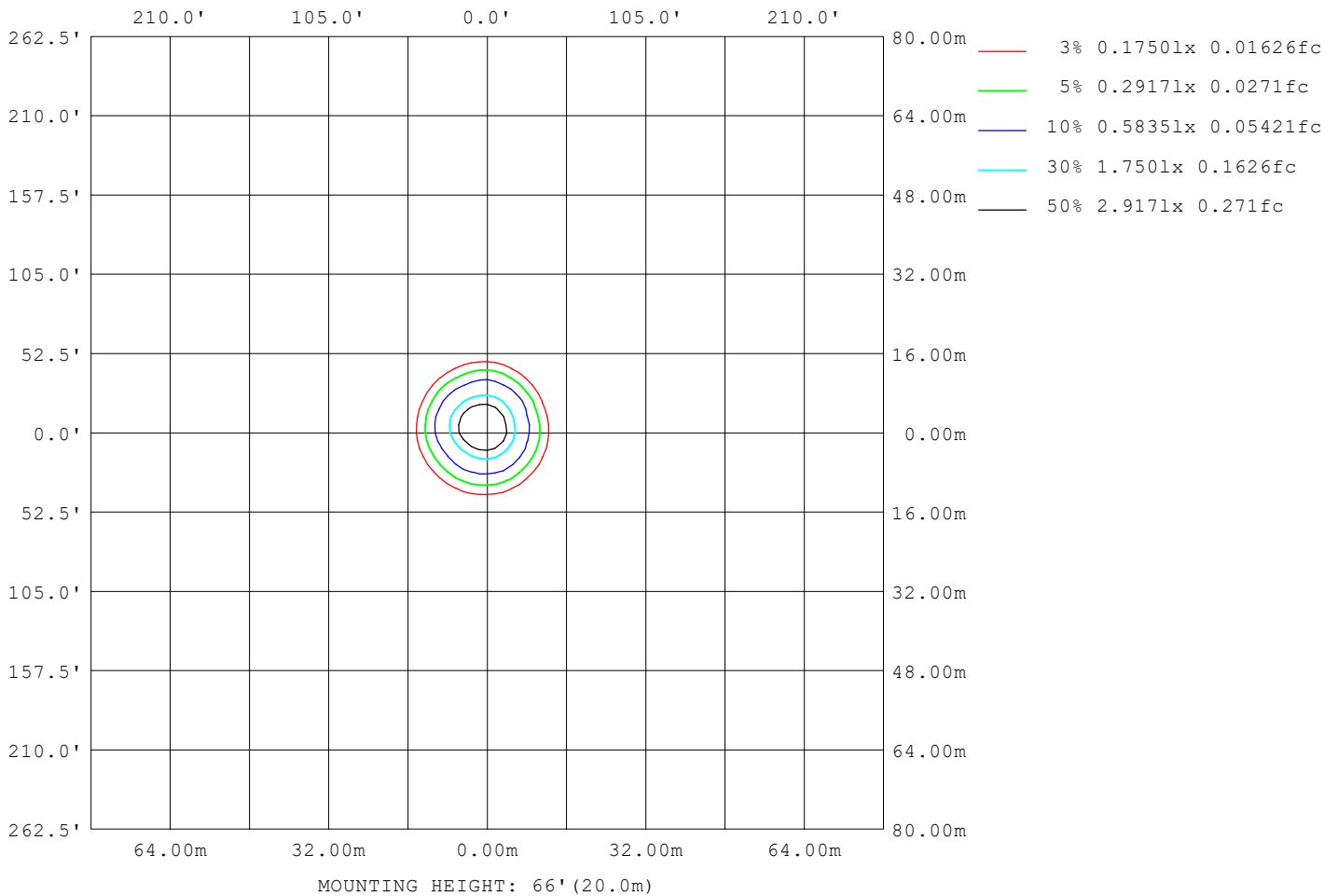
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.77V I:0.0887A P:8.9686W PF:0.8443 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:798.523x1 lm		
NAME: FR-LED-4-S9W-5CCT-FG-WH	TYPE:	WEIGHT:
SPEC.: 5000K 90	DIM.:	SERIAL No.:
MFR.: LTS	SUR.:	Shielding Angle:

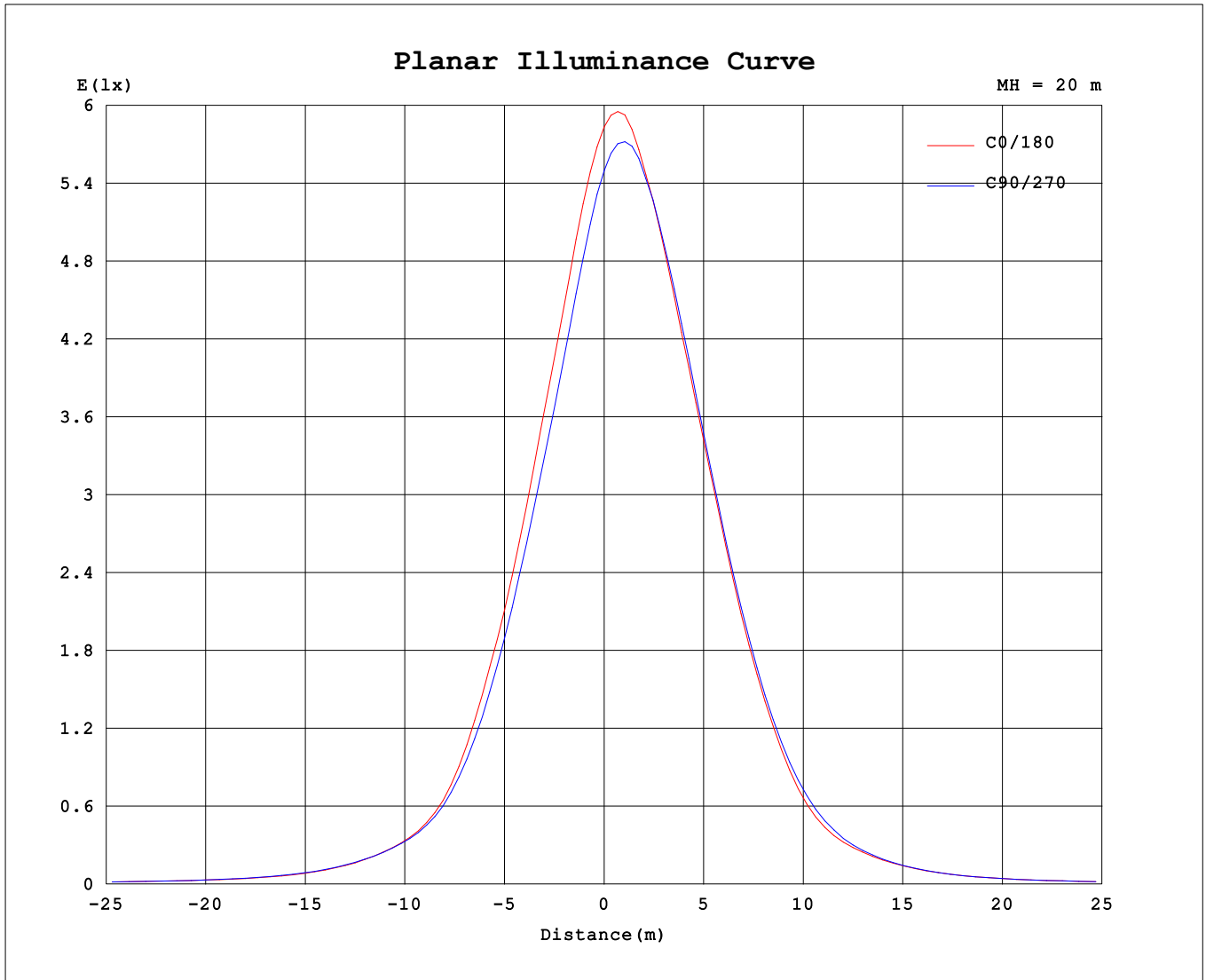
AvgL	cd/m2
L_0~180 (65) av	392
L_0~180 (75) av	369
L_0~180 (85) av	204
L_90~270 (65) av	411
L_90~270 (75) av	289
L_90~270 (85) av	110
L_45 (65) av	413
L_45 (75) av	337
L_45 (85) av	132

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:
 Test Date:2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2022-12-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.090m [K=1.0000]
 Remarks:

