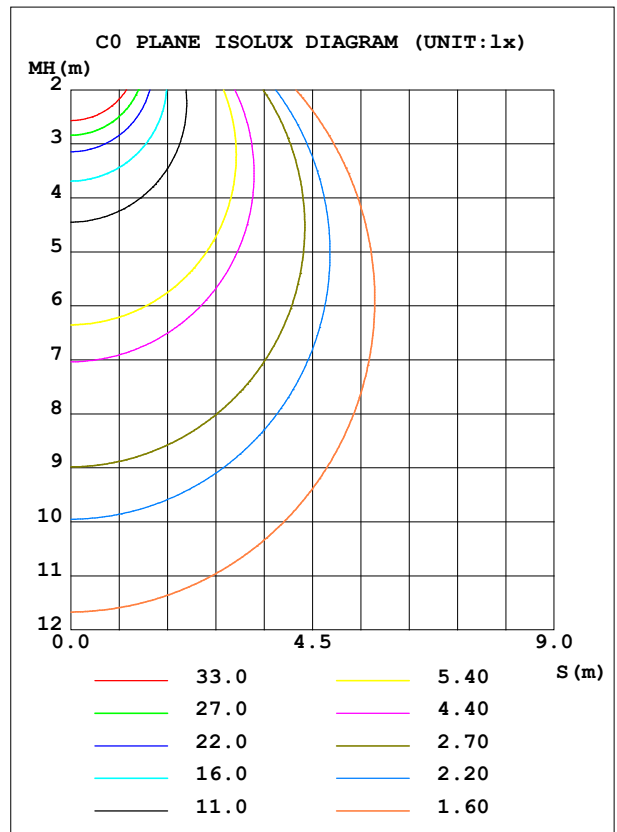
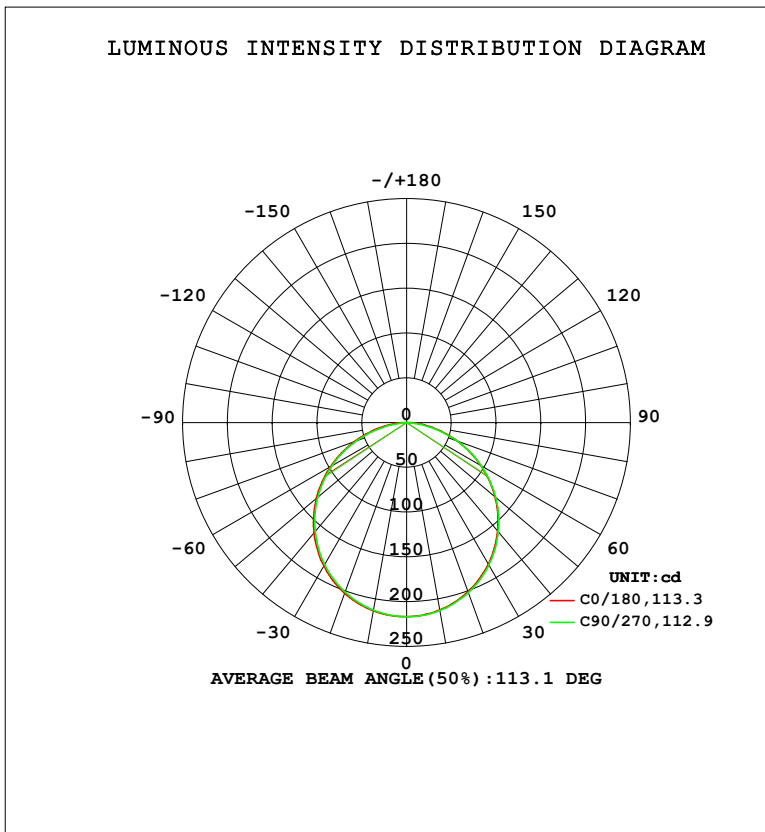


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	216.8	S/MH (C0/180)	1.27
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	620.96	$\eta$ UP, DN (C0-180)	0.0, 50.2
NOMINAL FLUX (lm)	620.96	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 49.8
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2022-06-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:

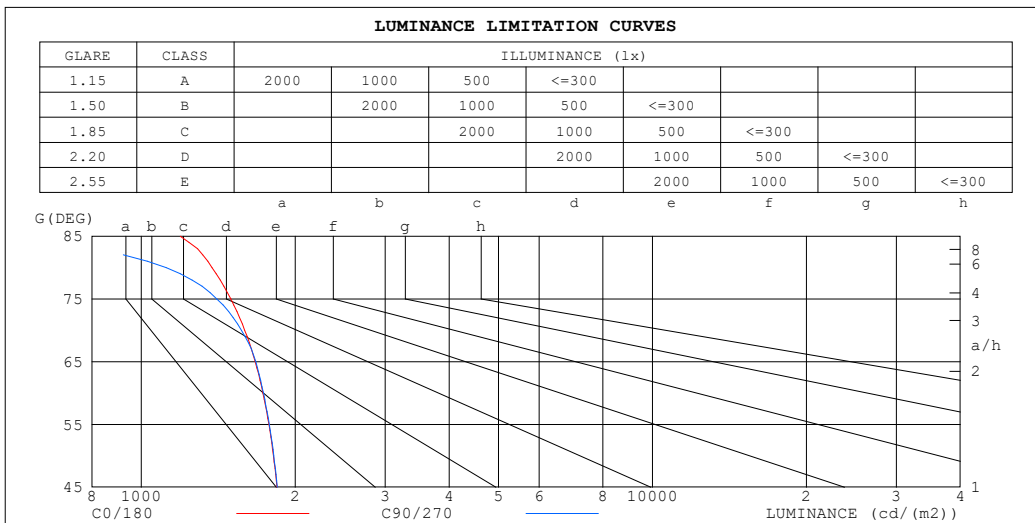
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	212.5	212.9	213.1	213.4	213.5	213.0	212.7	212.4	0- 10	20.51	20.51	3.3,3.3
20	200.8	201.7	202.0	202.5	202.8	201.9	201.3	200.8	10- 20	58.77	79.28	12.8,12.8
30	182.5	183.5	183.7	184.5	185.0	184.0	183.1	182.3	20- 30	89.17	168.5	27.1,27.1
40	158.2	159.3	159.4	160.3	161.0	159.9	158.8	157.9	30- 40	107.7	276.1	44.5,44.5
50	128.8	130.0	129.8	130.8	131.6	130.5	129.5	128.5	40- 50	112.0	388.1	62.5,62.5
60	95.62	96.70	96.37	97.21	97.97	96.88	96.06	95.23	50- 60	101.5	489.7	78.9,78.9
70	60.25	60.99	59.73	61.25	62.06	60.66	59.08	59.51	60- 70	77.86	567.5	91.4,91.4
80	26.40	24.28	21.60	24.33	27.55	23.26	20.45	22.55	70- 80	44.28	611.8	98.5,98.5
90	0.2588	0.2300	0.2228	0.2228	0.1459	0.1252	0.1136	0.1250	80- 90	9.161	621.0	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:2022-06-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1192	435
80	1375	1118
75	1496	1406
70	1593	1570
65	1669	1674
60	1730	1733
55	1776	1779
50	1813	1816
45	1843	1846

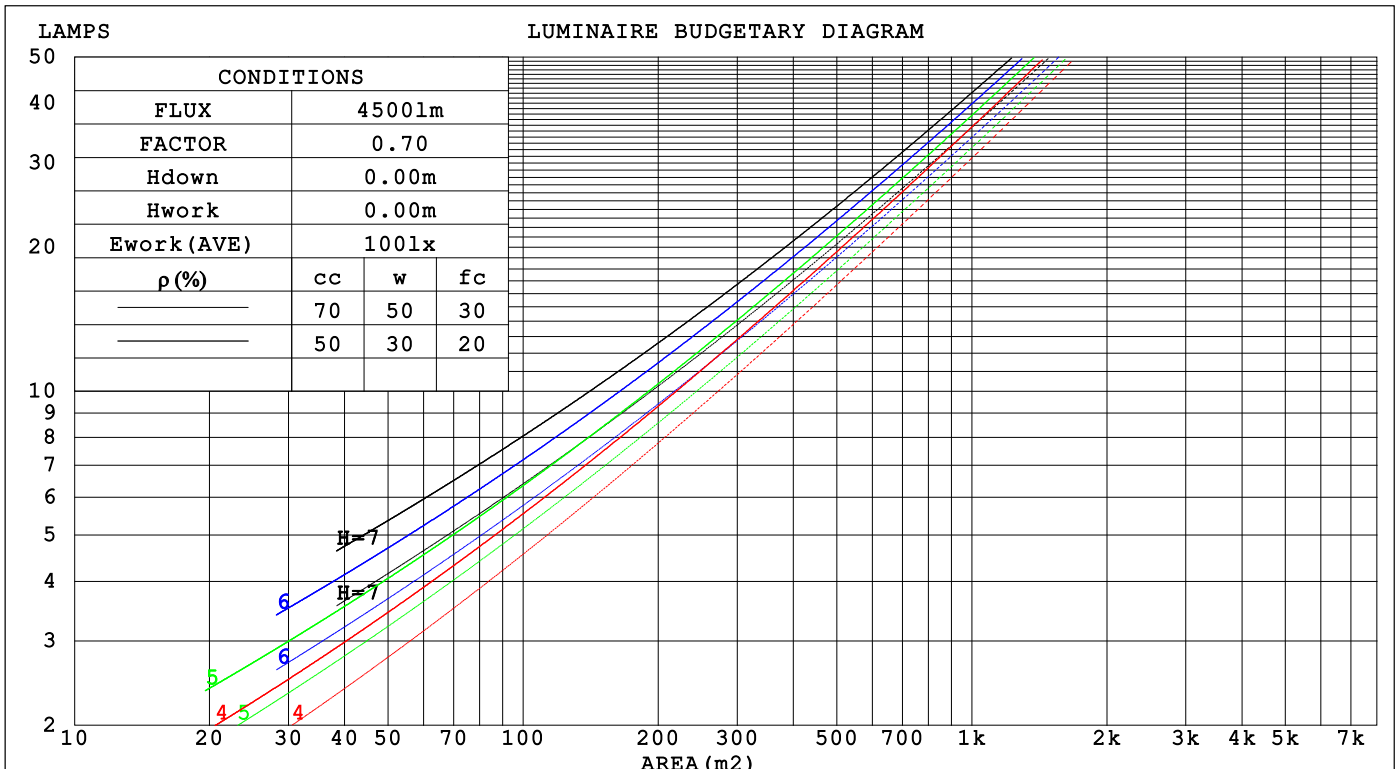
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2022-06-17

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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz		
UTHdi:0.00% ITHdi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	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	50%	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	1.00
1.0	1.04	.00	.96	1.02	.98	.94	.97	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.73	.79	.75	.72	.70
3.0	.79	.71	.65	.78	.70	.64	.75	.68	.63	.72	.66	.62	.69	.65	.61	.59
4.0	.70	.61	.55	.69	.61	.54	.66	.59	.54	.64	.58	.53	.62	.56	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.59	.52	.46	.57	.51	.46	.56	.50	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.54	.46	.40	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.31	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.39	.32	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2022-06-17

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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:

$\rho_{CC}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.307	.175	.055	.300	.171	.054	.287	.164	.053	.274	.158	.051	.263	.153	.049	
2.0	.291	.159	.049	.285	.157	.048	.273	.152	.047	.262	.147	.046	.252	.143	.045	
3.0	.270	.144	.043	.264	.142	.043	.254	.138	.042	.244	.134	.041	.235	.130	.040	
4.0	.249	.130	.038	.244	.128	.038	.235	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.230	.117	.034	.226	.116	.034	.218	.114	.033	.210	.111	.033	.203	.109	.033	
6.0	.214	.107	.031	.210	.106	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030	
7.0	.199	.098	.028	.196	.097	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.172	.087	.025	.166	.085	.025	
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.081	.023	.157	.080	.023	
10.0	.164	.079	.022	.161	.078	.022	.157	.077	.022	.152	.076	.021	.148	.074	.021	

$\rho_{CC}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0																
1.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
2.0	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
3.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
4.0	.164	.114	.074	.141	.099	.064	.097	.068	.045	.056	.040	.027	.018	.013	.009	
5.0	.157	.101	.058	.135	.087	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
6.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.017	.010	.006	
7.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
8.0	.135	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
9.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
10.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2022-06-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	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	16.6	18.1	16.9	18.3	18.5	16.6	18.1	16.9	18.3	18.5
3H	18.1	19.5	18.4	19.8	20.0	18.1	19.5	18.4	19.8	20.0
4H	18.8	20.1	19.1	20.4	20.6	18.7	20.0	19.0	20.3	20.5
6H	19.2	20.5	19.6	20.8	21.0	19.0	20.3	19.4	20.6	20.8
8H	19.4	20.6	19.7	20.9	21.2	19.1	20.3	19.4	20.6	20.9
12H	19.5	20.6	19.8	20.9	21.2	19.1	20.3	19.4	20.5	20.9
4H 2H	17.2	18.5	17.5	18.8	19.1	17.2	18.6	17.5	18.8	19.1
3H	18.9	20.1	19.3	20.4	20.7	18.9	20.1	19.3	20.4	20.7
4H	19.7	20.8	20.1	21.1	21.4	19.6	20.7	20.0	21.0	21.3
6H	20.3	21.2	20.7	21.6	22.0	20.1	21.0	20.5	21.4	21.7
8H	20.5	21.4	20.9	21.7	22.1	20.2	21.1	20.6	21.4	21.8
12H	20.6	21.4	21.1	21.8	22.2	20.2	21.0	20.6	21.4	21.8
8H 4H	20.0	20.9	20.4	21.2	21.6	19.9	20.8	20.3	21.1	21.5
6H	20.7	21.4	21.1	21.8	22.3	20.5	21.2	20.9	21.6	22.0
8H	21.0	21.6	21.4	22.1	22.5	20.6	21.3	21.1	21.7	22.2
12H	21.2	21.7	21.7	22.2	22.7	20.7	21.2	21.1	21.7	22.2
12H 4H	20.0	20.8	20.4	21.2	21.6	19.9	20.7	20.3	21.1	21.5
6H	20.7	21.4	21.2	21.8	22.3	20.5	21.2	21.0	21.6	22.1
8H	21.1	21.6	21.5	22.1	22.5	20.7	21.3	21.2	21.7	22.2

Variations with the observer position at spacings(CIE Pub.117):		
S = 1.0H	+ 0.1 / - 0.2	+ 0.2 / - 0.2
1.5H	+ 0.2 / - 0.3	+ 0.2 / - 0.3
2.0H	+ 0.2 / - 0.3	+ 0.2 / - 0.3

CIE Pub.117, 621.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.7)  
 Area: 0.111111 m2

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2022-06-17

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:

**UTILIZATION FACTORS TABLE**

Test:U:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:

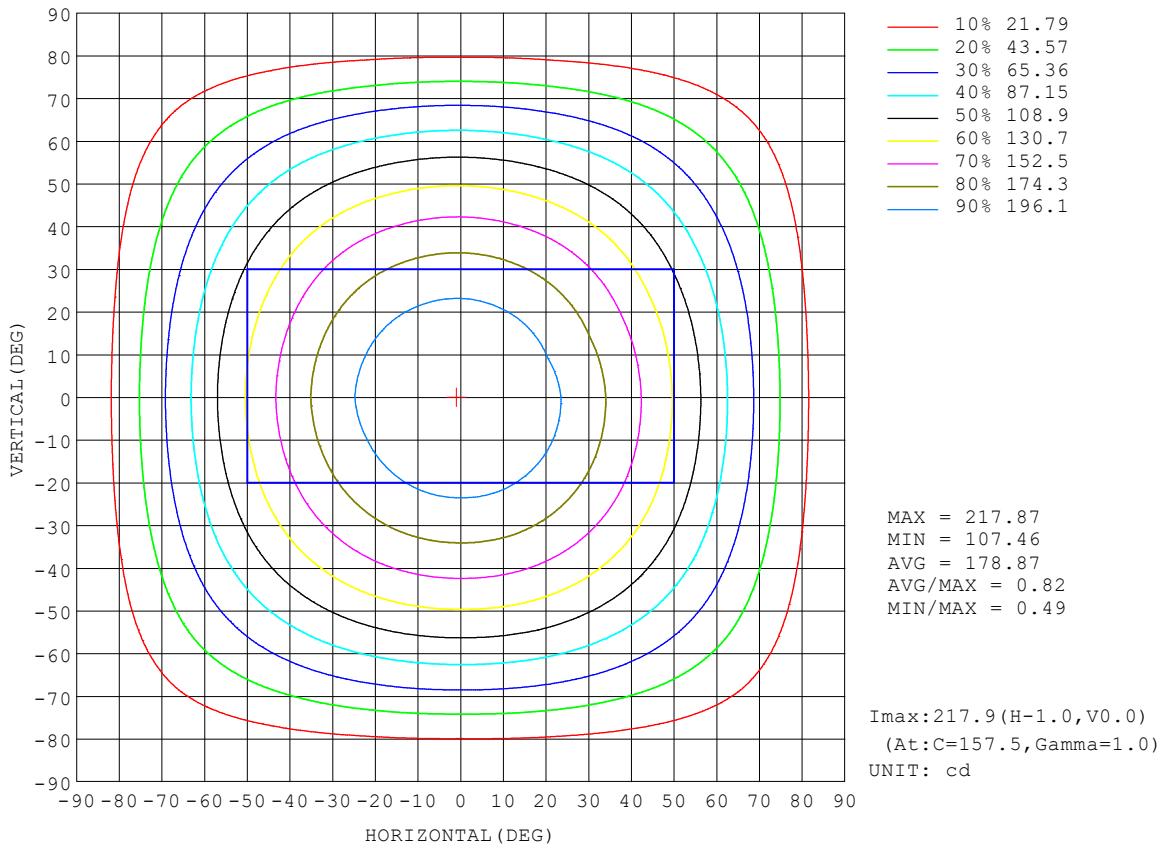
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	46	39	56	45	39	32
0.80	67	56	48	66	55	48	65	55	48	41
1.00	76	65	57	75	64	57	72	66	57	50
1.25	83	73	65	82	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	76	70	62
2.00	95	86	80	93	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	98	102	98	95	86
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:2022-06-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:



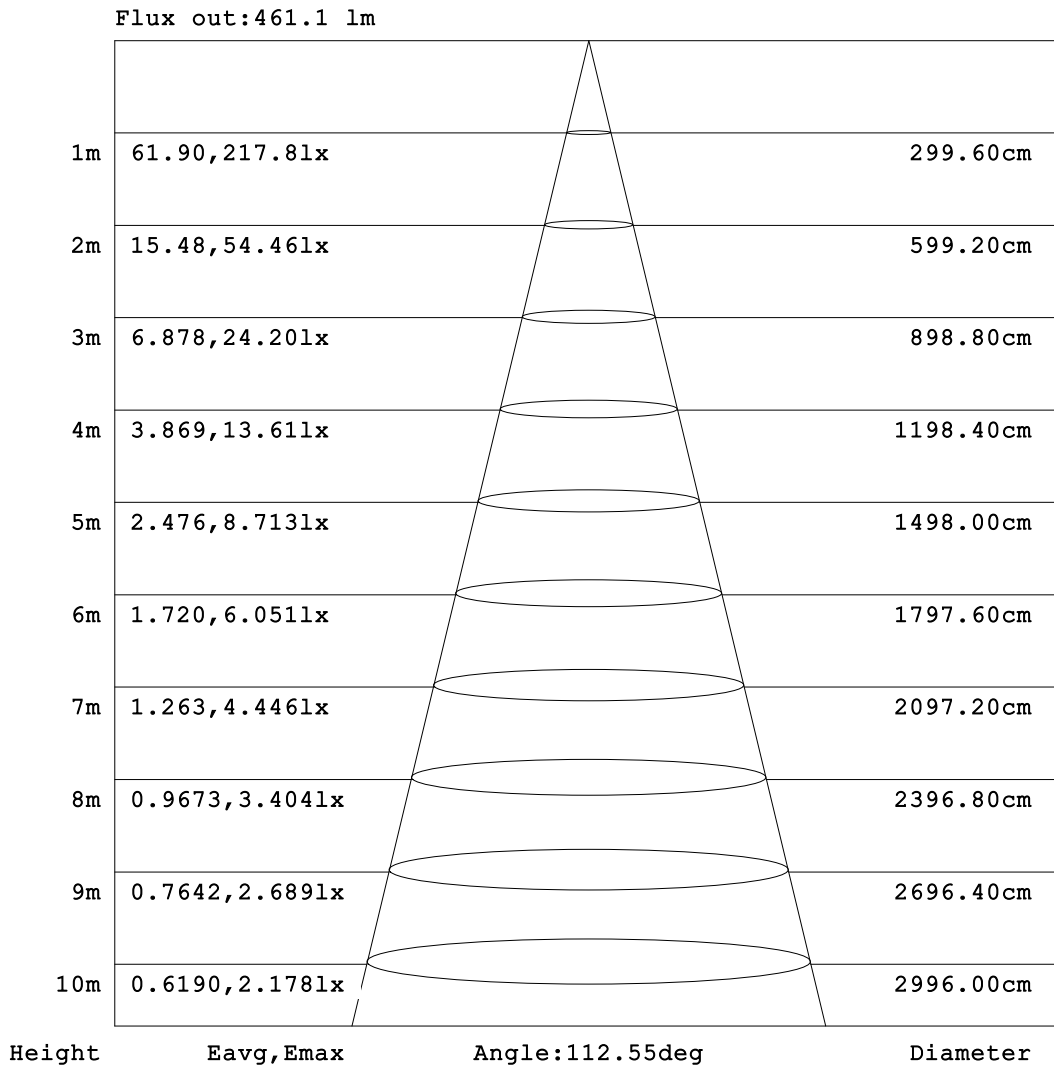
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2022-06-17

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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:



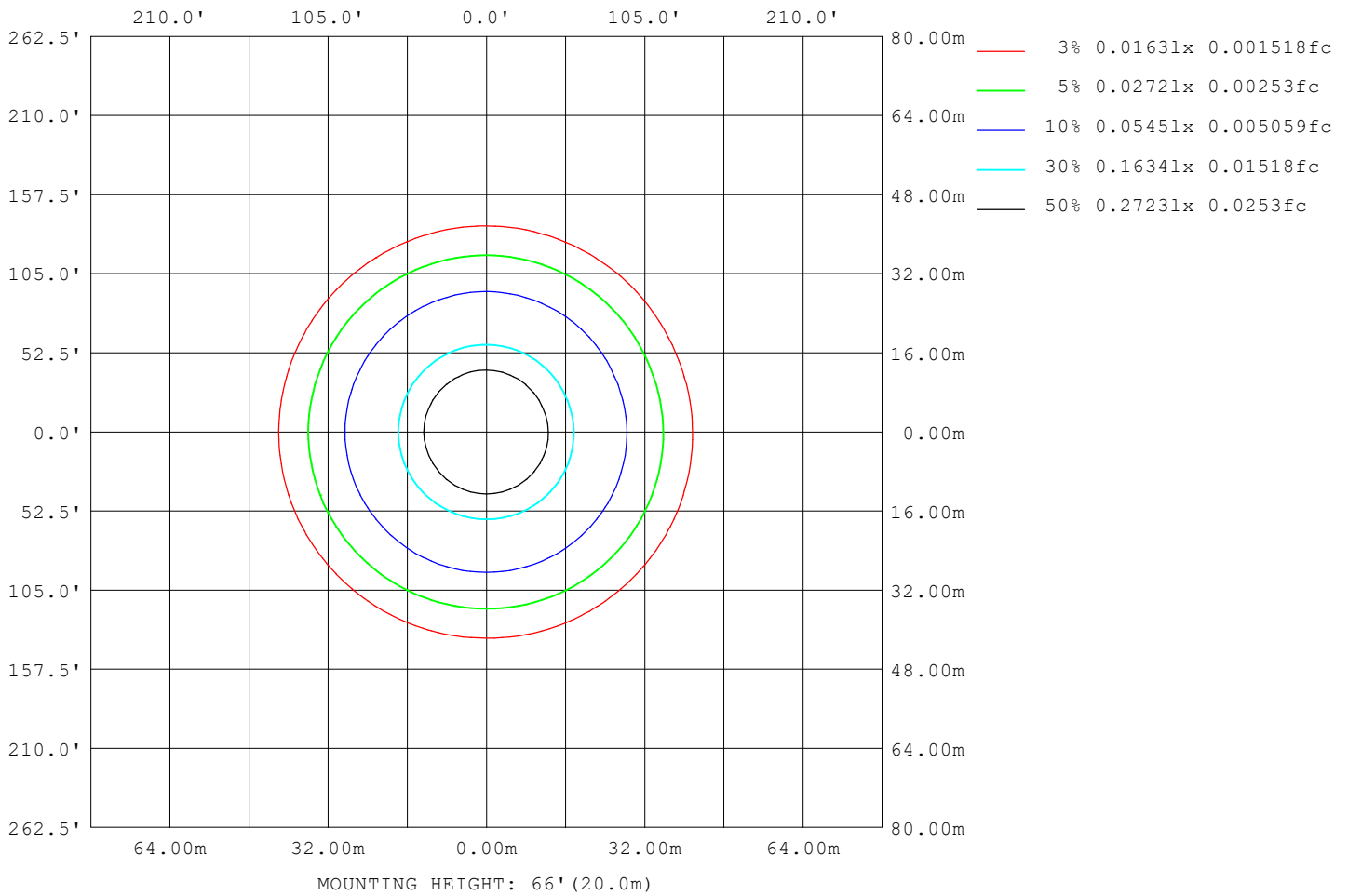
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3 °C  
 Operators:  
 Test Date: 2022-06-17

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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:2022-06-17

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:119.76V I:0.0937A P:8.1742W PF:0.7285 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:620.96x1 lm		
NAME: LED-S9W-5CCT-WH	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.: Light by Lotus	SUR.:	Shielding Angle:

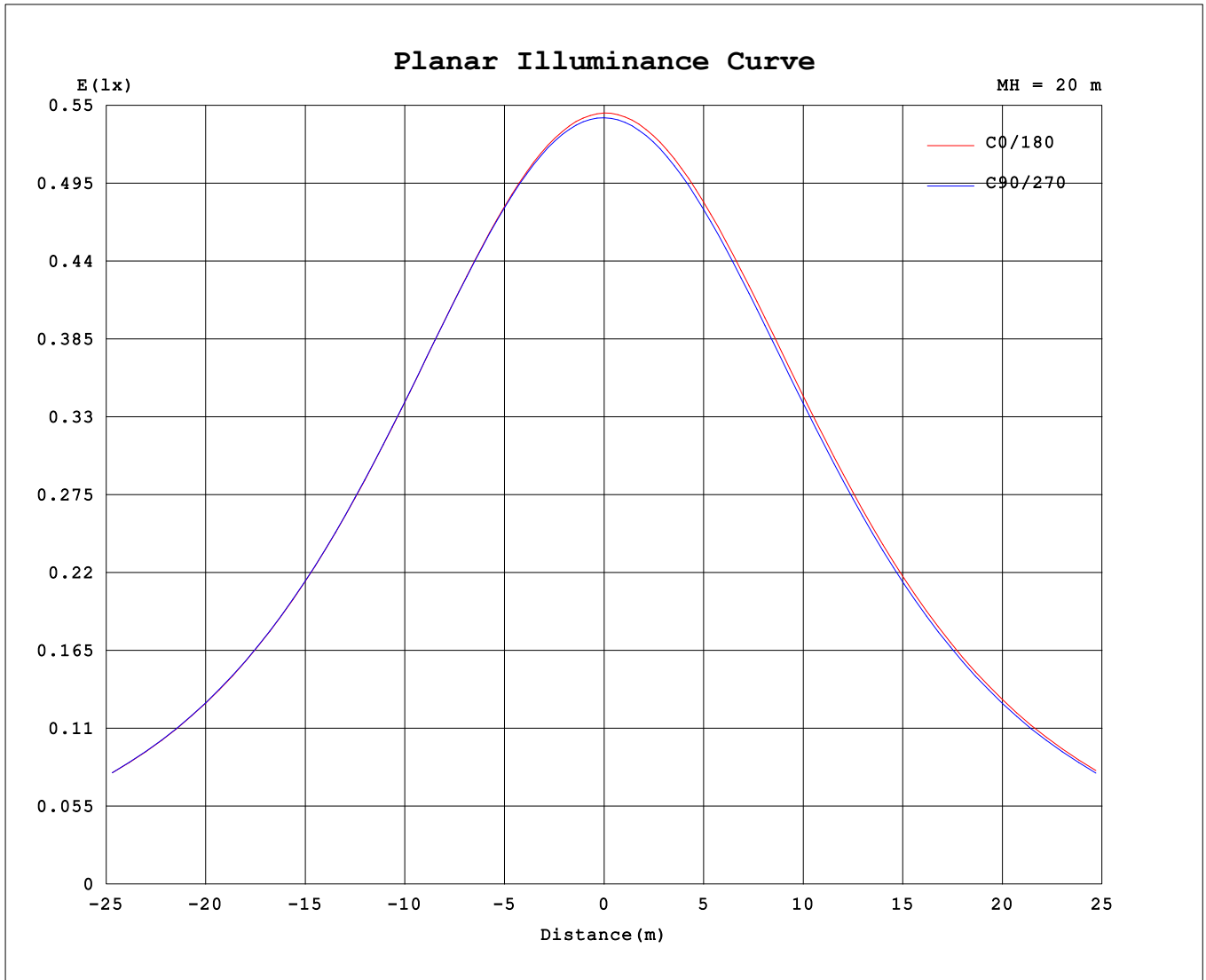
AvgL	cd/m2
L_0~180 (65) av	1684
L_0~180 (75) av	1514
L_0~180 (85) av	1207
L_90~270 (65) av	1672
L_90~270 (75) av	1392
L_90~270 (85) av	356
L_45 (65) av	1678
L_45 (75) av	1460
L_45 (85) av	593

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3℃  
 Operators:  
 Test Date:2022-06-17

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: 2022-06-17

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:

