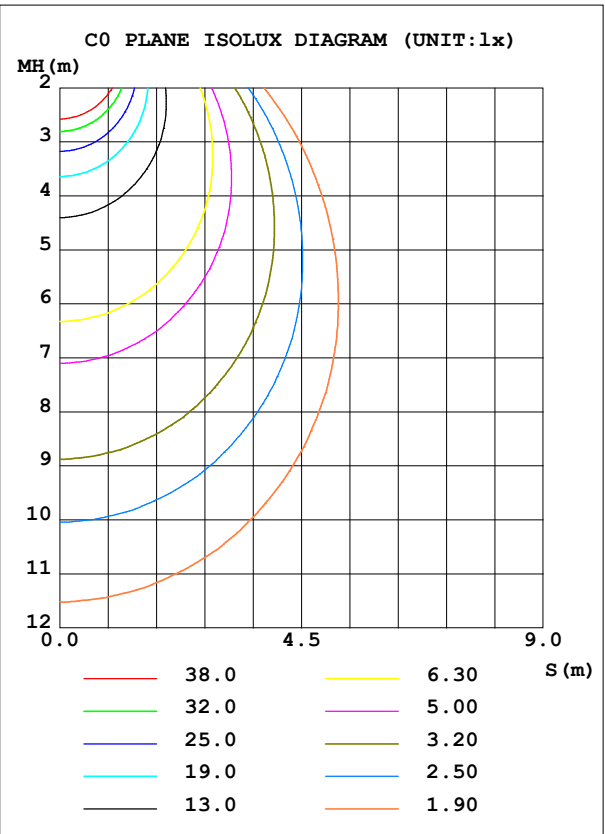
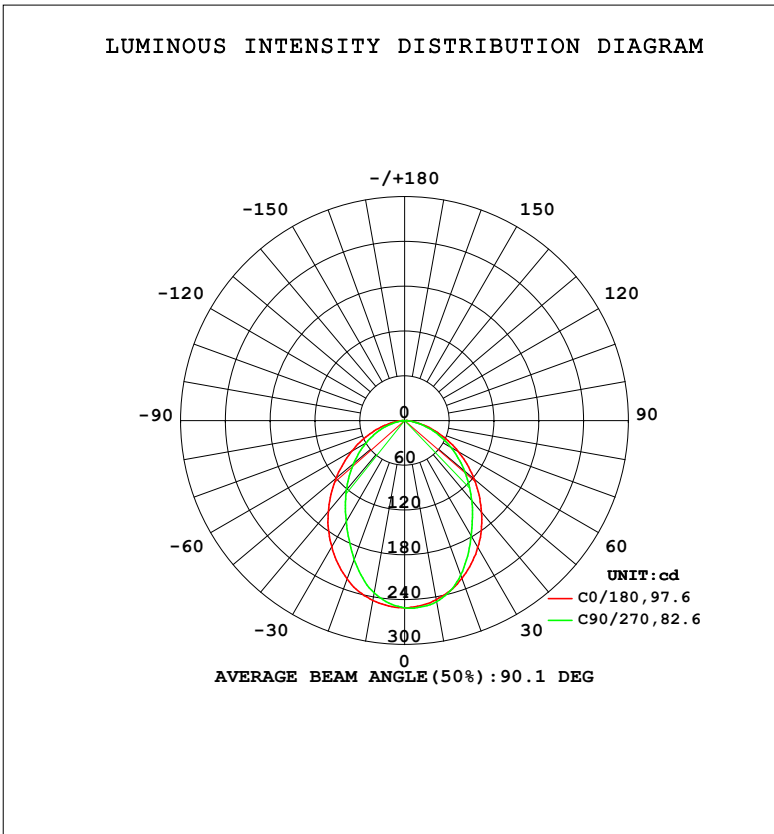


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	252.0	S/MH (C0/180)	1.17
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	0.98
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	546.48	η UP, DN (C0-180)	0.0, 52.5
NOMINAL FLUX (lm)	546.483	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 47.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	1.25



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3 °C
 Operators:
 Test Date: 2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

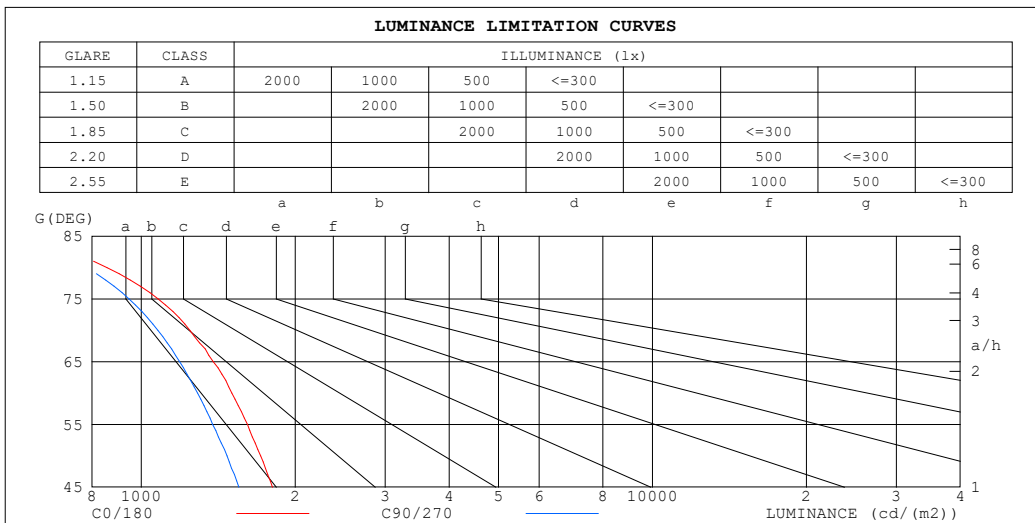
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	243.7	245.7	246.3	247.0	244.7	238.6	234.5	238.7	0- 10	23.53	23.53	4.31,4.31
20	224.9	224.0	220.2	226.8	225.6	207.1	198.0	211.9	10- 20	65.17	88.70	16.2,16.2
30	196.3	186.5	178.4	192.2	195.4	166.1	156.6	173.9	20- 30	91.83	180.5	33,33
40	160.5	144.9	140.2	150.9	159.3	127.5	121.5	134.8	30- 40	101.1	281.6	51.5,51.5
50	121.6	107.4	105.1	111.6	119.8	94.19	89.15	99.29	40- 50	95.74	377.3	69,69
60	83.06	72.91	71.60	75.83	81.41	63.46	59.23	66.51	50- 60	79.17	456.5	83.5,83.5
70	47.10	41.62	40.97	43.80	46.41	35.82	32.54	37.36	60- 70	55.17	511.7	93.6,93.6
80	16.45	14.87	15.02	16.18	16.95	11.55	9.956	11.97	70- 80	28.19	539.9	98.8,98.8
90	1.975	1.831	1.959	1.268	1.634	2.280	2.938	2.738	80- 90	6.632	546.5	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:24.3 °C
 Operators:
 Test Date:2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	616	564
80	857	778
75	1078	946
70	1245	1078
65	1384	1189
60	1502	1289
55	1612	1378
50	1711	1471
45	1806	1553

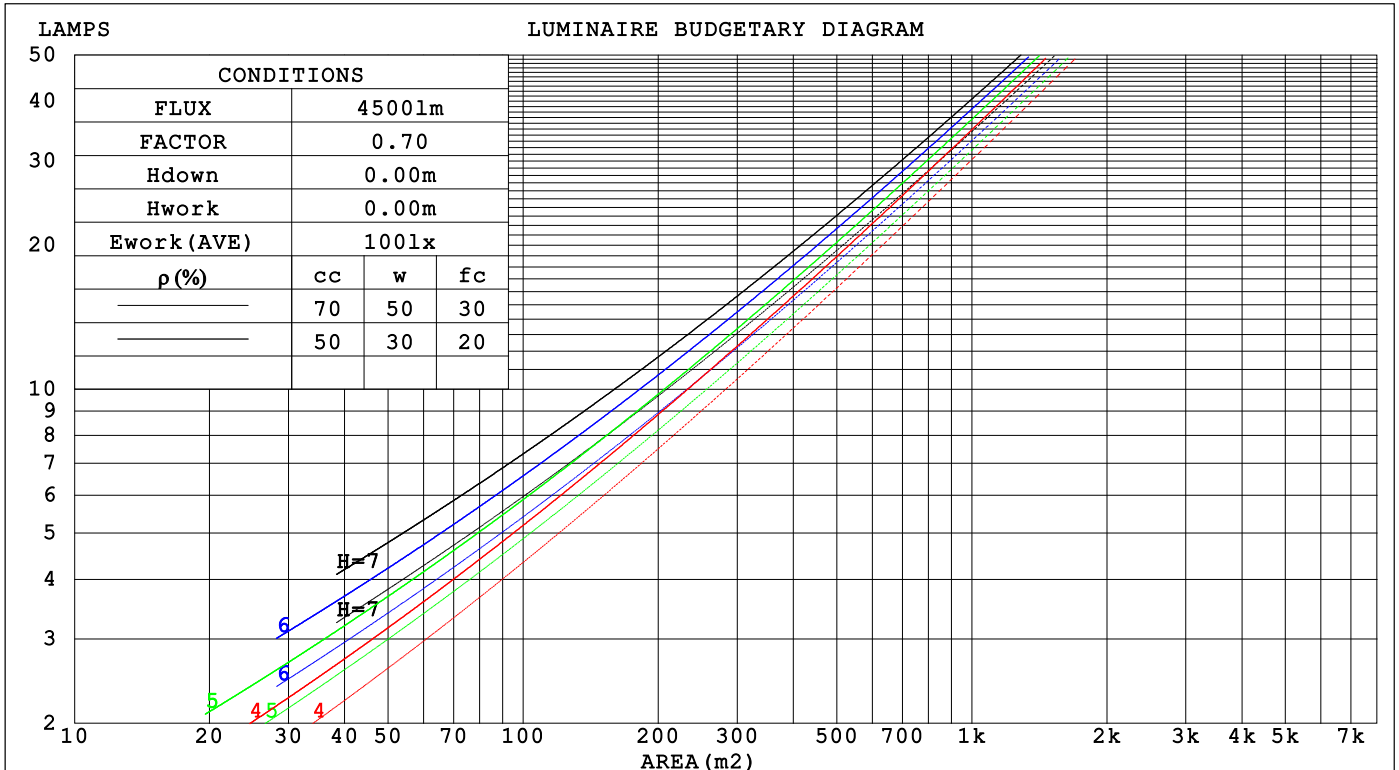
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3 °C
 Operators:
 Test Date: 2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz		
UTHdi:0.00% ITHdi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

pcc	80%			70%			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	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.90	.91	.89	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.83	.78	.84	.80	.77	.81	.78	.75	.73
3.0	.82	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.73	.68	.65	.62
4.0	.74	.65	.59	.72	.64	.59	.70	.63	.58	.67	.62	.57	.65	.60	.56	.54
5.0	.66	.58	.51	.65	.57	.51	.63	.56	.51	.61	.55	.50	.59	.54	.49	.47
6.0	.60	.51	.45	.59	.51	.45	.57	.50	.45	.56	.49	.44	.54	.48	.44	.42
7.0	.55	.46	.40	.54	.46	.40	.52	.45	.40	.51	.45	.40	.50	.44	.39	.38
8.0	.50	.42	.36	.49	.42	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.34
9.0	.46	.38	.33	.46	.38	.33	.45	.38	.33	.43	.37	.33	.42	.37	.32	.31
10.0	.43	.35	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.40	.34	.30	.28



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3°C
 Operators:
 Test Date:2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	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	.283	.161	.051	.275	.157	.050	.262	.151	.048	.250	.144	.046	.239	.139	.045	
2.0	.269	.147	.045	.263	.145	.045	.251	.140	.043	.241	.135	.042	.231	.131	.041	
3.0	.251	.134	.040	.246	.132	.040	.236	.128	.039	.226	.124	.038	.218	.120	.037	
4.0	.233	.121	.036	.229	.120	.035	.220	.117	.035	.211	.114	.034	.204	.111	.034	
5.0	.217	.111	.032	.213	.109	.032	.205	.107	.031	.198	.104	.031	.191	.102	.031	
6.0	.202	.101	.029	.199	.100	.029	.192	.098	.029	.185	.096	.028	.179	.094	.028	
7.0	.189	.094	.027	.186	.093	.026	.180	.091	.026	.174	.089	.026	.168	.087	.026	
8.0	.177	.087	.024	.174	.086	.024	.169	.084	.024	.163	.083	.024	.158	.081	.024	
9.0	.167	.081	.023	.164	.080	.022	.159	.079	.022	.154	.077	.022	.150	.076	.022	
10.0	.157	.075	.021	.155	.075	.021	.150	.074	.021	.146	.072	.021	.142	.071	.020	

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	.178	.156	.137	.153	.134	.117	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.153	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007	
5.0	.146	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.138	.082	.041	.119	.071	.035	.082	.049	.025	.048	.029	.015	.015	.010	.005	
7.0	.132	.075	.035	.113	.065	.030	.078	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.126	.069	.030	.108	.060	.026	.075	.042	.018	.043	.025	.011	.014	.008	.004	
9.0	.120	.064	.026	.103	.055	.023	.071	.039	.016	.042	.023	.010	.013	.008	.003	
10.0	.114	.059	.023	.098	.052	.020	.068	.036	.014	.040	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3°C
 Operators:
 Test Date:2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm										
NAME:			TYPE:			WEIGHT:				
SPEC.: 2700K			DIM.:			SERIAL No.:				
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	16.5	17.9	16.7	18.1	18.3	15.8	17.2	16.0	17.4	17.6
3H	17.7	19.0	18.0	19.3	19.5	17.0	18.3	17.3	18.5	18.8
4H	18.2	19.4	18.5	19.7	19.9	17.4	18.7	17.7	18.9	19.2
6H	18.5	19.6	18.8	19.9	20.2	17.7	18.9	18.0	19.1	19.4
8H	18.5	19.7	18.9	19.9	20.2	17.8	18.9	18.1	19.2	19.5
12H	18.5	19.6	18.9	19.9	20.2	17.8	18.9	18.1	19.2	19.5
4H 2H	16.9	18.1	17.2	18.4	18.6	16.3	17.6	16.6	17.8	18.1
3H	18.3	19.4	18.7	19.7	20.0	17.7	18.8	18.0	19.1	19.4
4H	18.9	19.9	19.2	20.2	20.5	18.2	19.2	18.6	19.6	19.9
6H	19.3	20.1	19.7	20.5	20.9	18.6	19.5	19.0	19.9	20.2
8H	19.4	20.2	19.8	20.5	20.9	18.7	19.5	19.1	19.9	20.3
12H	19.4	20.2	19.8	20.5	20.9	18.8	19.5	19.2	19.9	20.3
8H 4H	19.0	19.8	19.4	20.2	20.6	18.4	19.3	18.9	19.6	20.0
6H	19.5	20.2	20.0	20.6	21.0	18.9	19.6	19.4	20.0	20.4
8H	19.7	20.3	20.1	20.7	21.1	19.1	19.7	19.5	20.1	20.6
12H	19.8	20.3	20.2	20.7	21.2	19.2	19.7	19.7	20.1	20.6
12H 4H	19.0	19.8	19.4	20.1	20.5	18.4	19.2	18.9	19.6	20.0
6H	19.5	20.1	20.0	20.6	21.0	19.0	19.6	19.4	20.0	20.4
8H	19.7	20.2	20.2	20.7	21.1	19.1	19.7	19.6	20.1	20.6
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.1 / - 0.2					+ 0.1 / - 0.3				
2.0H	+ 0.4 / - 0.5					+ 0.3 / - 0.3				

CIE Pub.117, 546.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.1)
 Area: 0.111111 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3°C
 Operators:
 Test Date:2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

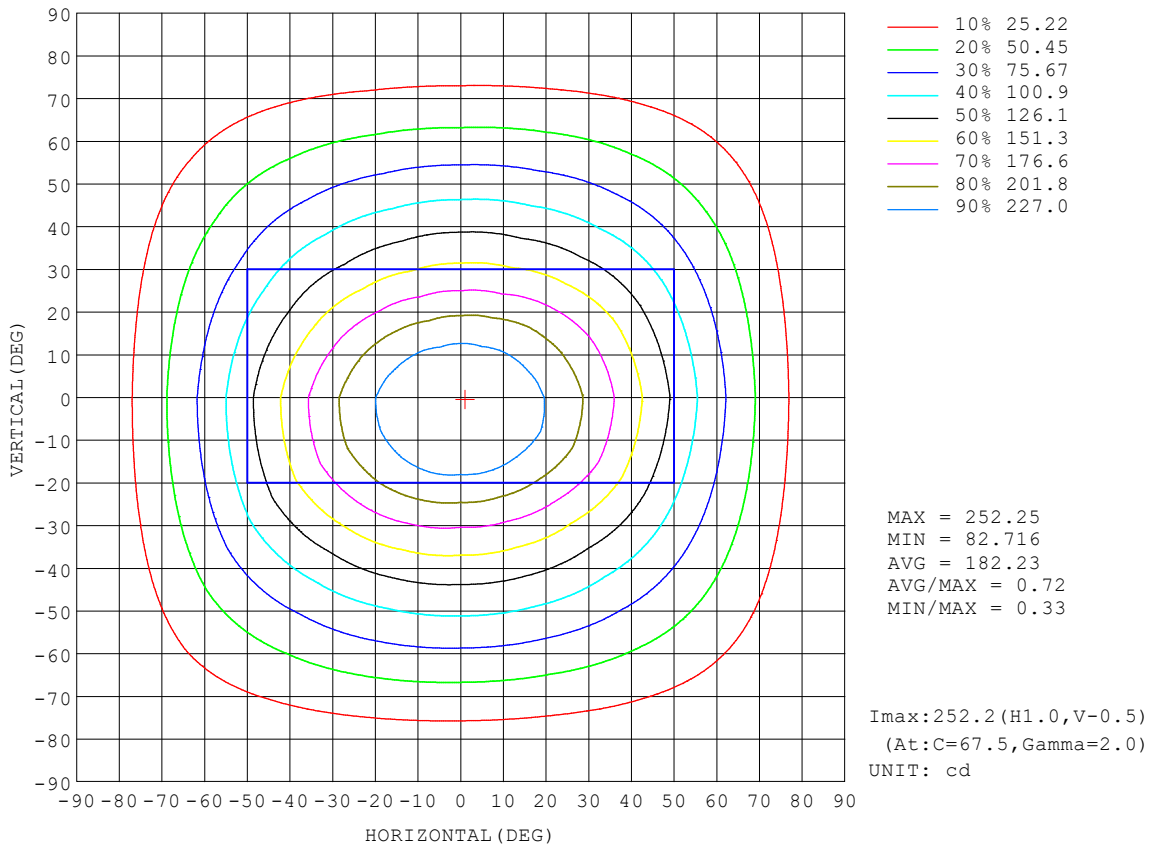
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	62	51	44	61	50	44	60	50	44	38
0.80	71	61	54	70	60	54	69	59	53	47
1.00	80	69	63	78	69	62	76	70	62	55
1.25	86	77	70	85	76	70	82	75	69	62
1.50	91	82	76	89	81	75	87	79	74	67
2.00	97	90	84	96	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	86	78
3.00	104	98	93	102	96	92	98	93	89	81
4.00	108	102	98	105	101	97	101	97	94	86
5.00	110	105	102	107	104	100	103	100	97	88
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: 24.3 °C
 Operators:
 Test Date: 2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



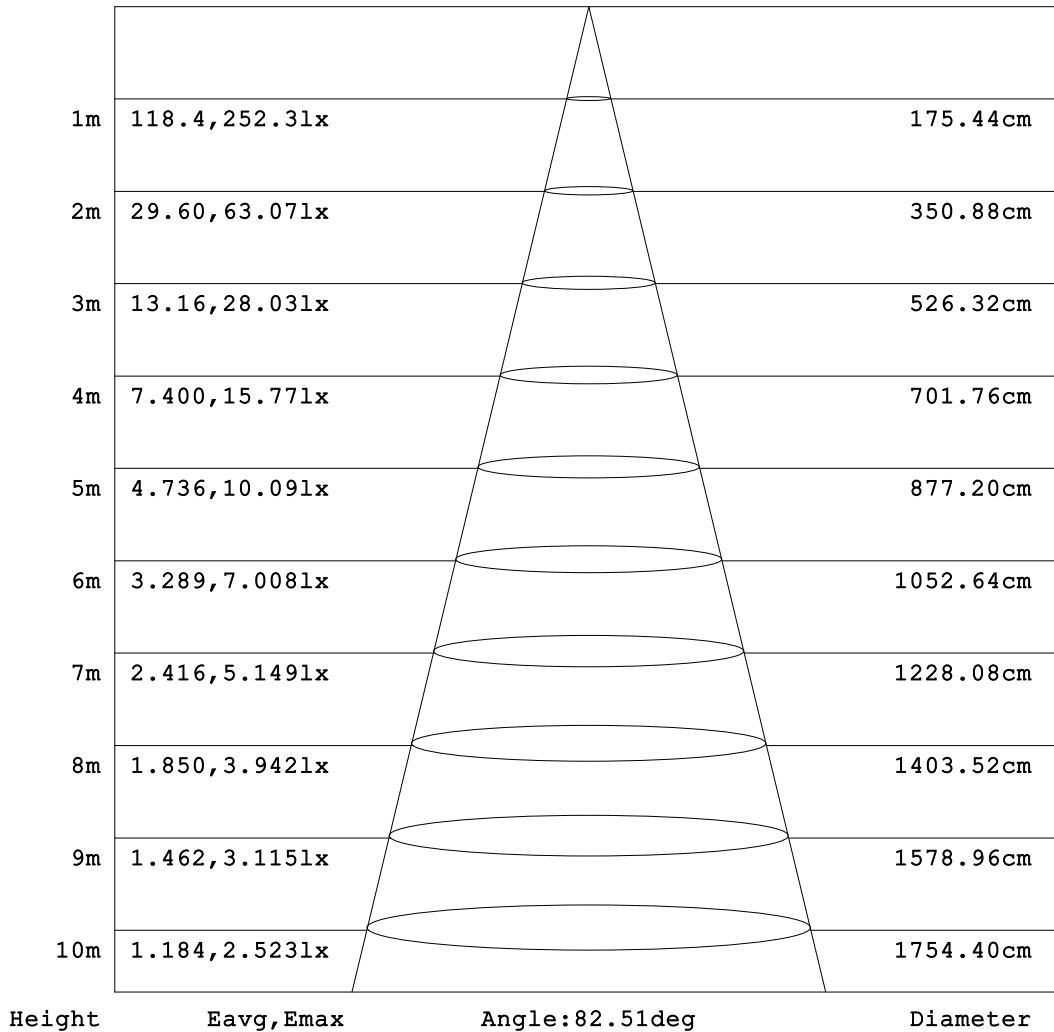
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3°C
 Operators:
 Test Date:2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

AAI Figure

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:301.6 lm



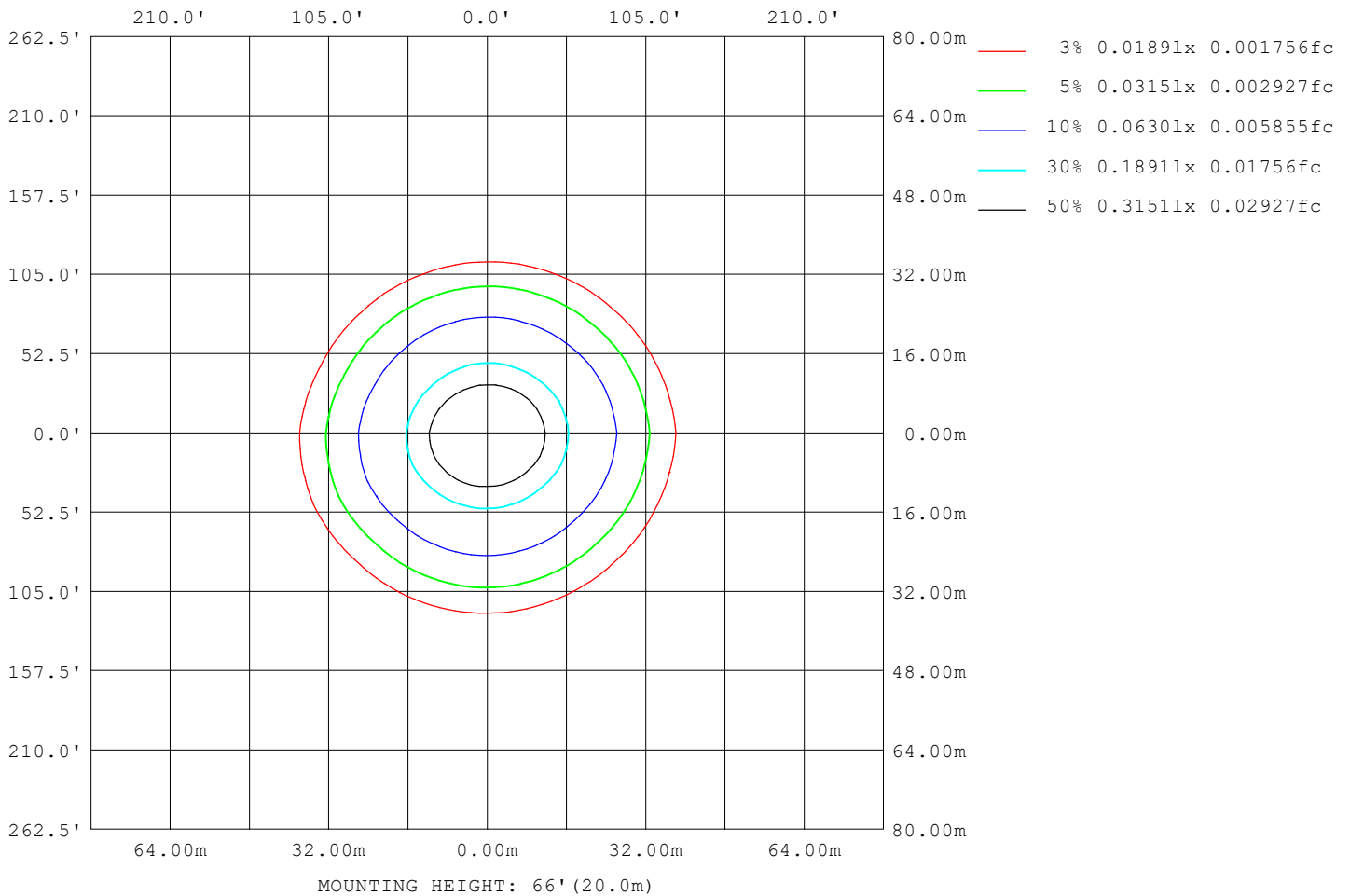
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3 °C
 Operators:
 Test Date: 2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3 °C
 Operators:
 Test Date: 2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.81V I:0.1639A P:18.001W PF:0.9169 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:546.483x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

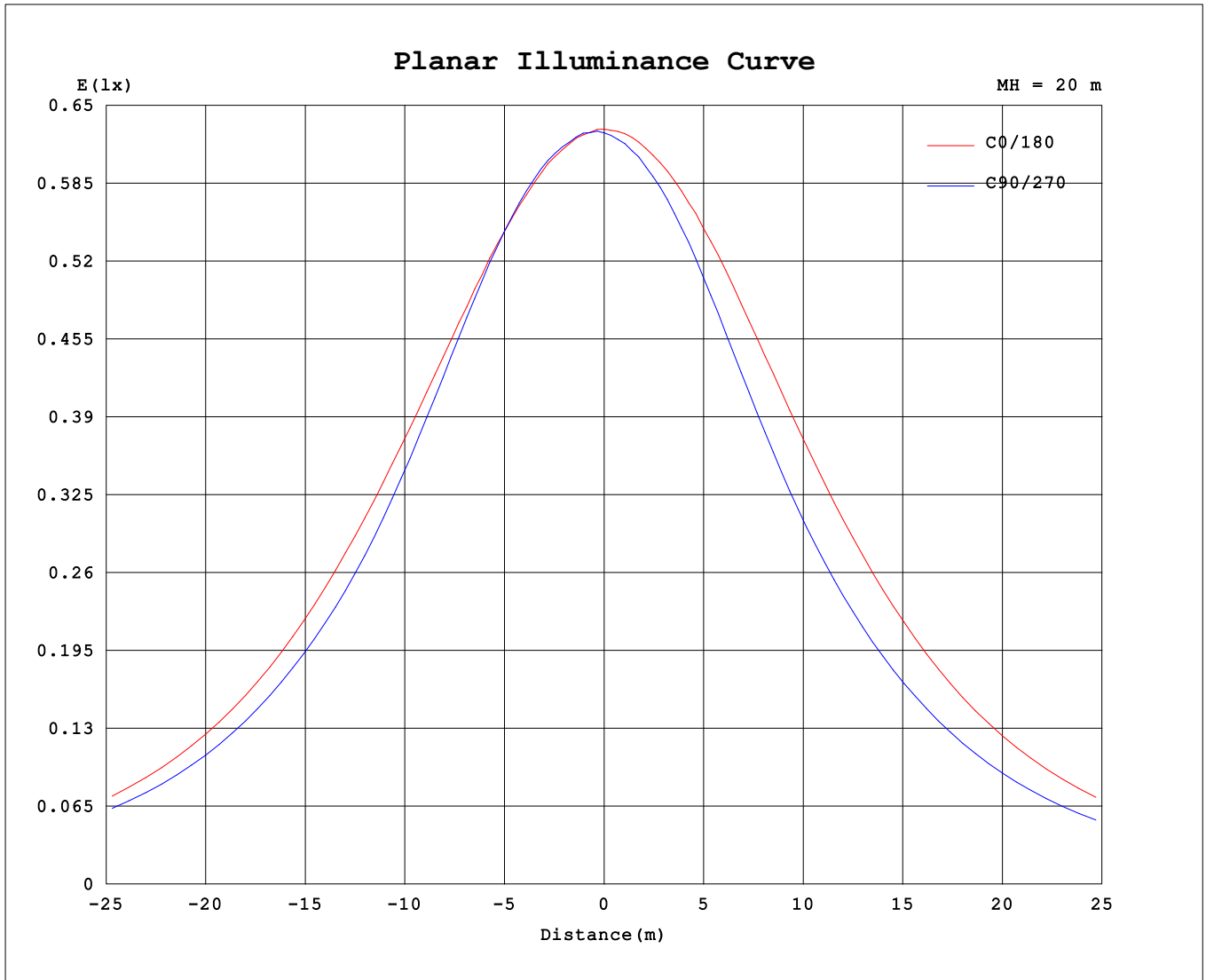
AvgL	cd/m2
L_0~180 (65) av	1364
L_0~180 (75) av	1072
L_0~180 (85) av	635
L_90~270 (65) av	1078
L_90~270 (75) av	822
L_90~270 (85) av	471
L_45 (65) av	1154
L_45 (75) av	900
L_45 (85) av	489

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.3℃
 Operators:
 Test Date:2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.3 °C
 Operators:
 Test Date: 2023-08-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

