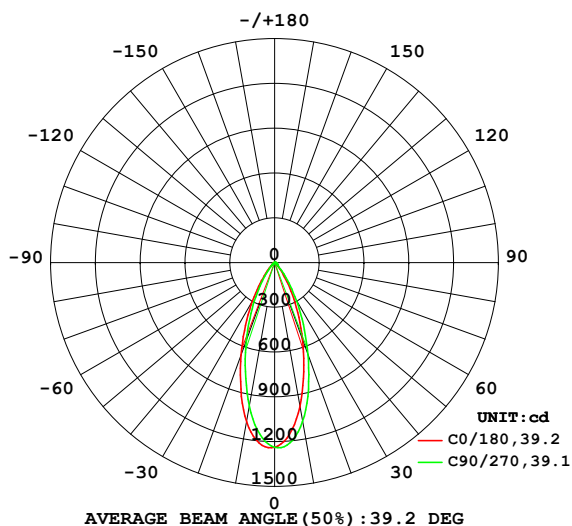


## LUMINAIRE PHOTOMETRIC TEST REPORT

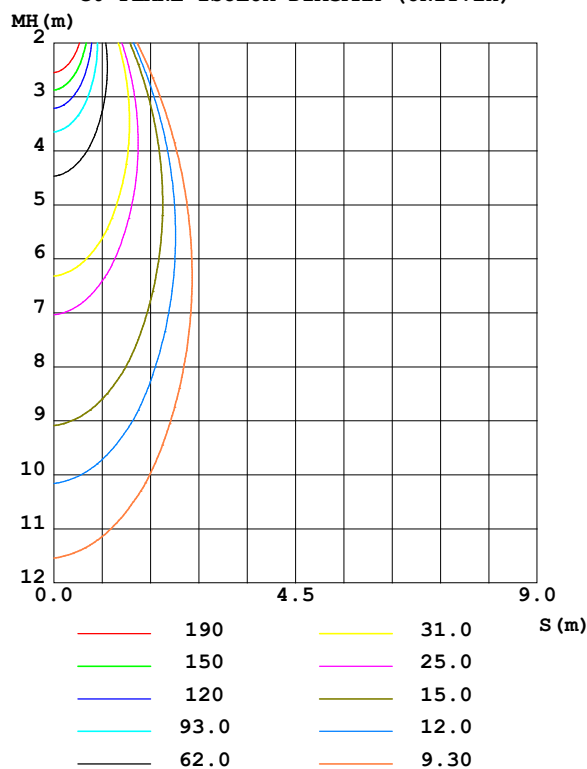
Test:U:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.72lx1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 91.65 lm/W
MODEL	VO-GSP3W8-120-D-5WAY	I <sub>max</sub> (cd)	1242	S/MH (C0/180)	0.67	
NOMINAL POWER (W)	8	LOR (%)	100.0	S/MH (C90/270)	0.59	
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	676.72	η UP, DN (C0-180)	0.0, 51.9	
NOMINAL FLUX (lm)	676.721	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 48.1	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	0.65	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 24.3 °C  
Operators:  
Test Date: 2024-04-01

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:

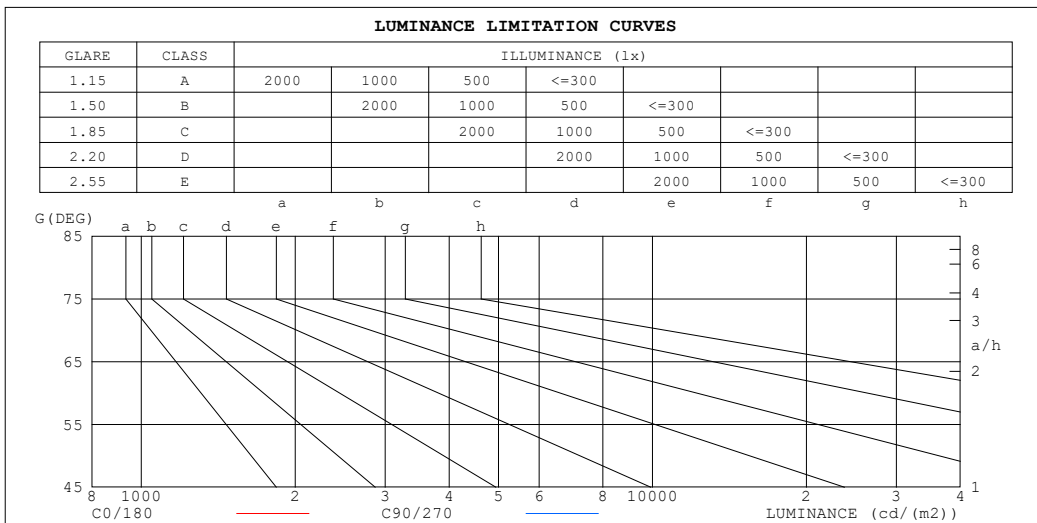
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	980.0	1029	1081	1086	1084	1023	976.9	978.4	0- 10	107.9	107.9	16,16
20	550.3	591.5	654.6	664.8	660.1	595.1	556.7	549.6	10- 20	224.6	332.6	49.1,49.1
30	221.4	248.6	293.4	299.7	296.8	252.1	235.6	223.1	20- 30	188.6	521.2	77,77
40	53.89	71.11	84.74	90.25	87.76	71.92	62.36	53.42	30- 40	92.60	613.8	90.7,90.7
50	20.37	23.20	24.26	27.00	26.22	23.74	20.82	20.06	40- 50	30.62	644.4	95.2,95.2
60	11.42	12.23	12.92	14.03	13.87	12.95	12.05	11.50	50- 60	14.94	659.3	97.4,97.4
70	6.653	7.523	7.896	8.517	8.406	8.201	6.936	6.732	60- 70	9.904	669.2	98.9,98.9
80	2.740	3.246	4.001	4.265	3.766	3.660	2.784	2.660	70- 80	5.787	675.0	99.7,99.7
90	0.0643	0.0511	0.0441	0.0536	0.0573	0.0381	0.0410	0.0481	80- 90	1.706	676.7	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℃  
Operators:  
Test Date:2024-04-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.72lx1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	SUR.:	Shielding Angle:



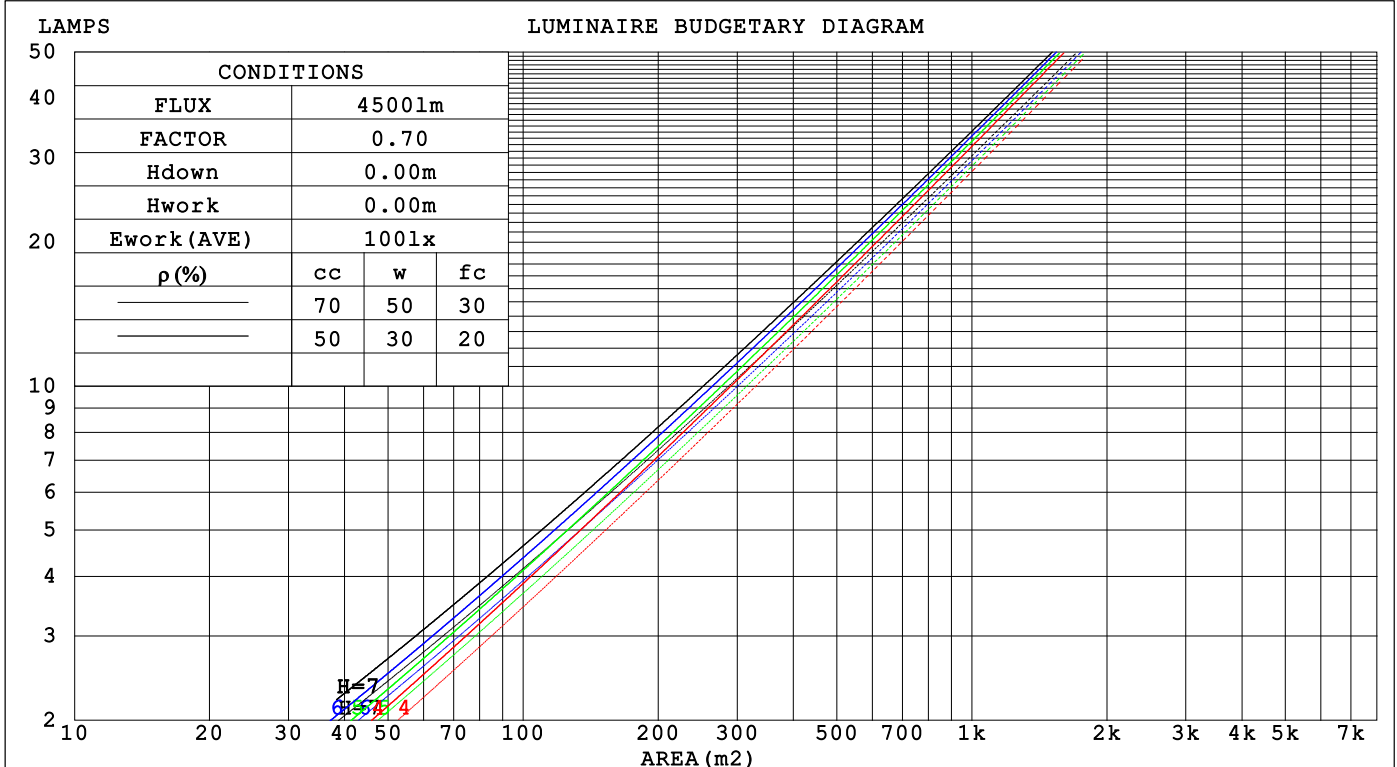
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 24.3°C  
Operators:  
Test Date: 2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.72lx1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	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	1.11	1.08	1.06	1.09	1.06	1.04	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.94
2.0	1.03	.99	.96	1.02	.98	.95	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.85	.88	.85	.83	.82
4.0	.91	.86	.81	.90	.85	.81	.88	.83	.80	.86	.82	.79	.84	.81	.78	.77
5.0	.86	.80	.76	.85	.80	.76	.83	.78	.75	.81	.77	.74	.80	.76	.74	.72
6.0	.81	.75	.71	.80	.75	.71	.79	.74	.71	.77	.73	.70	.76	.72	.70	.68
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.67	.74	.69	.66	.73	.69	.66	.65
8.0	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.66	.63	.69	.65	.63	.61
9.0	.69	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.59	.58
10.0	.66	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.57	.64	.60	.57	.55



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.3℃  
Operators:  
Test Date:2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:676.721x1 lm		
NAME: VO-GSP3W8-120-D-5WAY			TYPE:			WEIGHT:		
SPEC.: 4000K 90			DIM.:			SERIAL No.:		
MFR.: VOTATEC			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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.178	.101	.032	.171	.098	.031	.159	.091	.029	.147	.085	.027	.137	.079	.026		
2.0	.168	.092	.028	.163	.090	.028	.152	.085	.026	.142	.080	.025	.133	.075	.024		
3.0	.159	.085	.025	.154	.082	.025	.145	.079	.024	.137	.075	.023	.129	.071	.022		
4.0	.150	.078	.023	.146	.076	.023	.138	.073	.022	.131	.070	.021	.124	.067	.021		
5.0	.142	.072	.021	.138	.071	.021	.132	.069	.020	.125	.066	.020	.119	.064	.019		
6.0	.135	.067	.019	.132	.066	.019	.126	.064	.019	.120	.062	.018	.115	.061	.018		
7.0	.128	.063	.018	.125	.062	.018	.120	.061	.017	.115	.059	.017	.111	.058	.017		
8.0	.122	.060	.017	.120	.059	.017	.115	.057	.016	.111	.056	.016	.107	.055	.016		
9.0	.117	.056	.016	.115	.056	.016	.110	.055	.015	.106	.053	.015	.103	.052	.015		
10.0	.112	.054	.015	.110	.053	.015	.106	.052	.015	.103	.051	.014	.099	.050	.014		

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						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	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011		
4.0	.132	.099	.073	.114	.085	.064	.078	.059	.045	.045	.035	.026	.015	.011	.009		
5.0	.123	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007		
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.040	.028	.018	.013	.009	.006		
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005		
8.0	.103	.064	.037	.088	.055	.032	.061	.039	.023	.036	.023	.014	.012	.007	.004		
9.0	.097	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004		
10.0	.093	.054	.028	.080	.047	.024	.055	.033	.017	.032	.019	.010	.010	.006	.003		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.3℃  
Operators:  
Test Date:2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.72lx1 lm										
NAME: VO-GSP3W8-120-D-5WAY					TYPE:			WEIGHT:		
SPEC.: 4000K 90					DIM.:			SERIAL No.:		
MFR.: VOTATEC					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	5.4	6.4	5.7	6.5	6.7	7.0	7.9	7.2	8.1	8.2
3H	5.8	6.7	6.1	6.9	7.1	7.3	8.2	7.6	8.4	8.6
4H	6.0	6.8	6.3	7.1	7.3	7.6	8.4	7.8	8.6	8.8
6H	6.2	6.9	6.5	7.2	7.4	7.8	8.5	8.0	8.7	9.0
8H	6.2	6.9	6.5	7.2	7.5	7.8	8.6	8.1	8.8	9.1
12H	6.2	6.9	6.5	7.2	7.5	7.9	8.6	8.2	8.9	9.1
4H 2H	5.5	6.3	5.8	6.5	6.8	7.0	7.8	7.2	8.0	8.2
3H	6.1	6.8	6.4	7.1	7.4	7.5	8.2	7.8	8.5	8.7
4H	6.4	7.1	6.8	7.4	7.7	7.9	8.5	8.2	8.8	9.1
6H	6.7	7.2	7.1	7.6	7.9	8.2	8.7	8.6	9.1	9.4
8H	6.8	7.3	7.2	7.6	8.0	8.3	8.8	8.7	9.2	9.6
12H	6.8	7.2	7.2	7.6	8.0	8.5	8.9	8.9	9.3	9.7
8H 4H	6.6	7.1	7.0	7.4	7.8	7.9	8.4	8.3	8.8	9.1
6H	6.9	7.3	7.3	7.7	8.1	8.3	8.8	8.8	9.1	9.6
8H	7.0	7.4	7.5	7.8	8.3	8.5	8.9	9.0	9.3	9.8
12H	7.1	7.4	7.6	7.9	8.3	8.8	9.1	9.2	9.5	10.0
12H 4H	6.6	7.0	7.0	7.4	7.8	7.9	8.3	8.3	8.7	9.1
6H	6.9	7.3	7.4	7.7	8.2	8.3	8.7	8.8	9.1	9.6
8H	7.1	7.4	7.6	7.9	8.3	8.6	8.9	9.0	9.3	9.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.1 / - 1.3					+ 1.6 / - 1.6				
1.5H	+ 2.2 / - 1.1					+ 3.1 / - 1.4				
2.0H	+ 1.0 / - 0.6					+ 1.3 / - 0.6				

CIE Pub.117, 676.7 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:24.3℃  
Operators:  
Test Date:2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.721x1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	SUR.:	Shielding Angle:

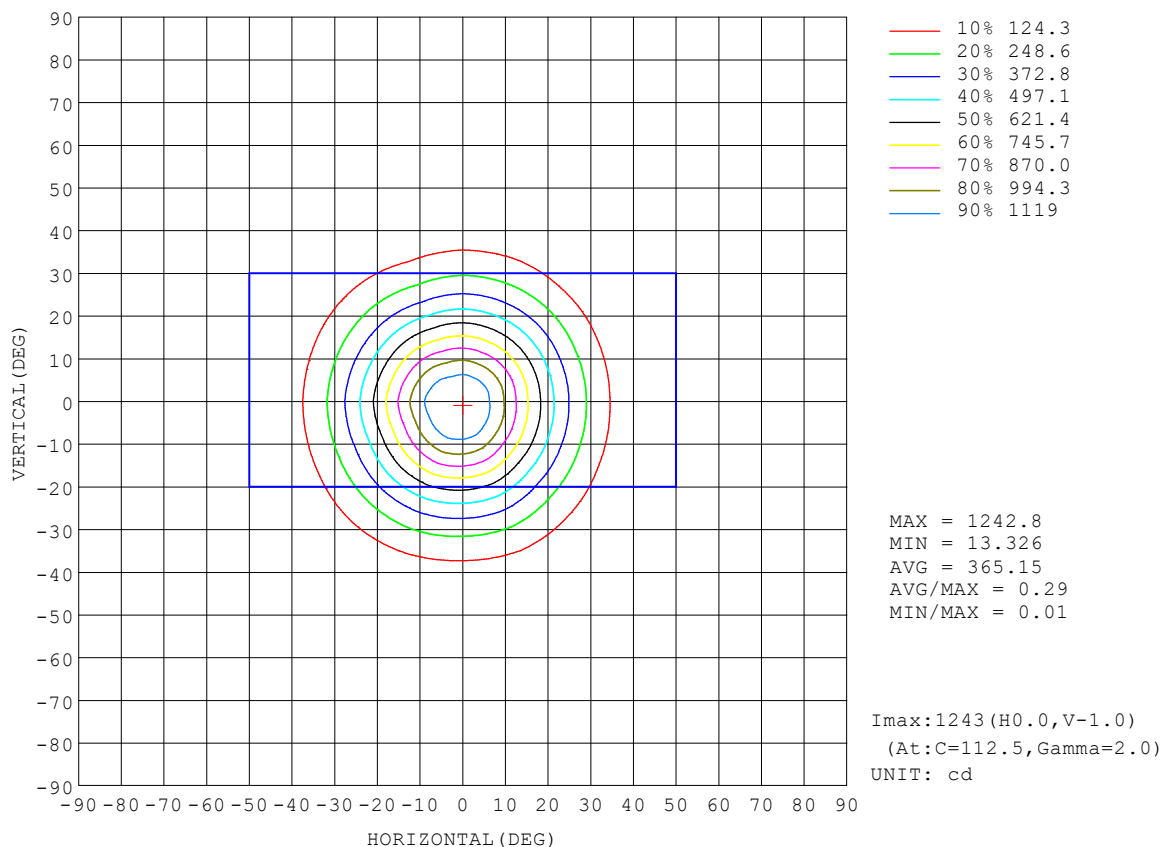
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	84	79	75	71
0.80	93	87	83	93	87	83	91	86	83	79
1.00	98	92	88	97	92	88	95	91	87	83
1.25	102	97	93	101	96	92	99	95	92	87
1.50	105	100	96	104	99	96	101	98	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	105	102	108	104	101	105	102	100	93
3.00	111	108	105	109	106	104	106	103	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	110	109	109	107	106	98
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: 2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.72lx1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	SUR.:	Shielding Angle:



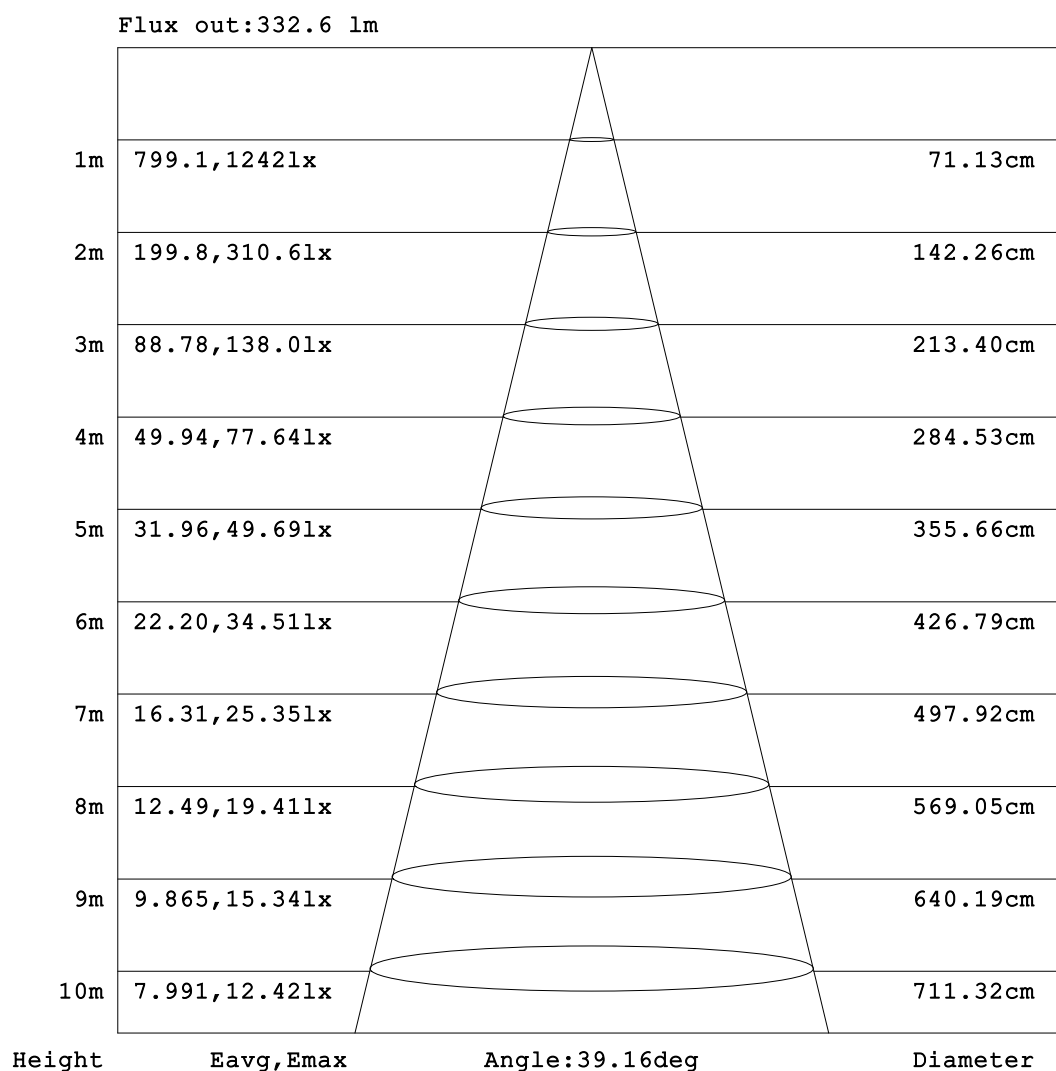
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.3℃  
Operators:  
Test Date:2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.72lx1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	SUR.:	Shielding Angle:



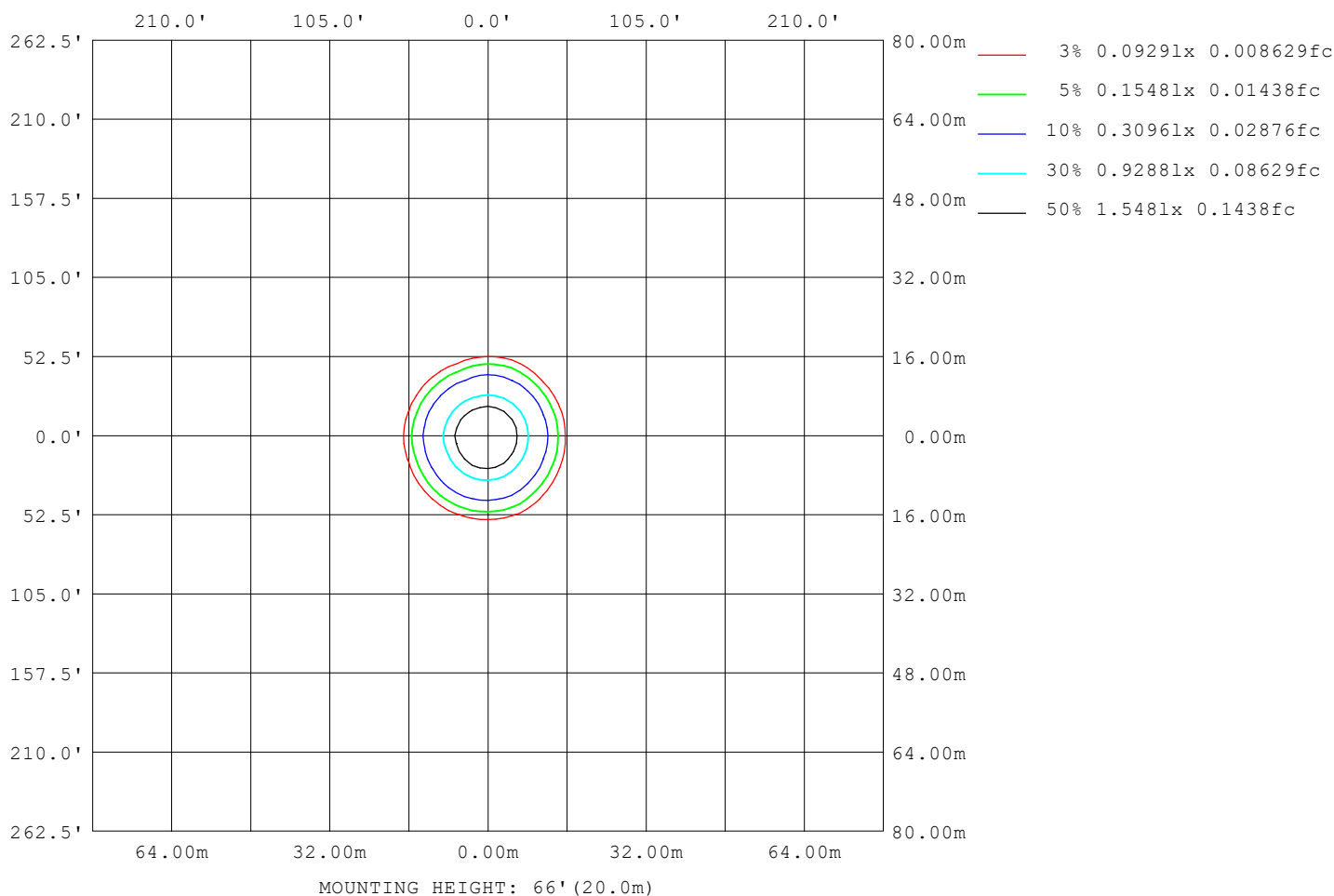
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.3℃  
Operators:  
Test Date:2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.72lx1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.3℃  
Operators:  
Test Date:2024-04-01

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:119.86V I:0.0640A P:7.3834W PF:0.9627 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:676.721x1 lm		
NAME: VO-GSP3W8-120-D-5WAY	TYPE:	WEIGHT:
SPEC.: 4000K 90	DIM.:	SERIAL No.:
MFR.: VOTATEC	SUR.:	Shielding Angle:

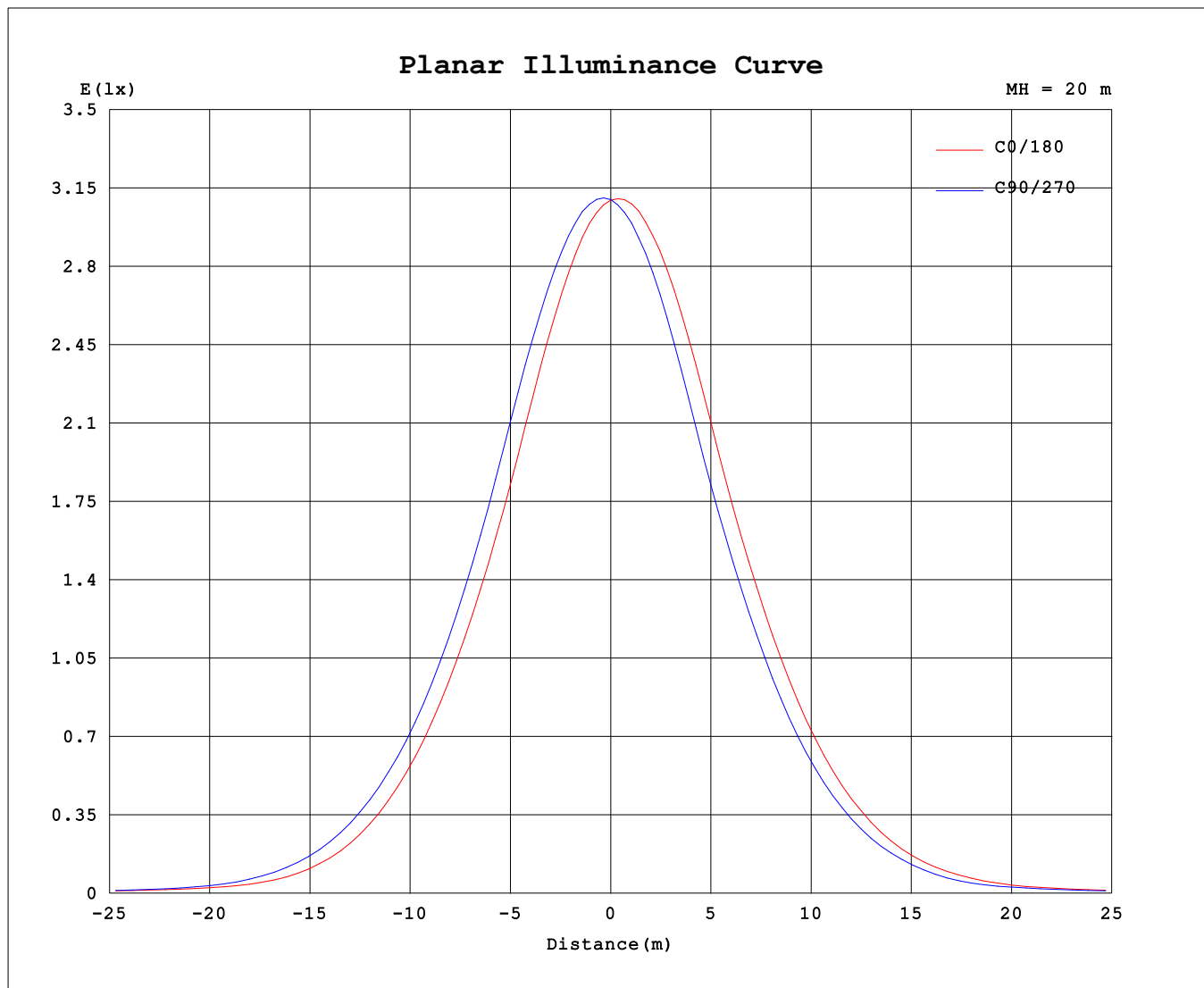
AvgL	cd/m2
L_0~180 (65) av	212
L_0~180 (75) av	187
L_0~180 (85) av	127
L_90~270 (65) av	210
L_90~270 (75) av	183
L_90~270 (85) av	193
L_45 (65) av	213
L_45 (75) av	192
L_45 (85) av	169

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.3℃  
Operators:  
Test Date:2024-04-01

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: 2024-04-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.460  
 Humidity: 65.0%  
 Test Distance: 3.080m [K=1.0000]  
 Remarks:

```

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:

```