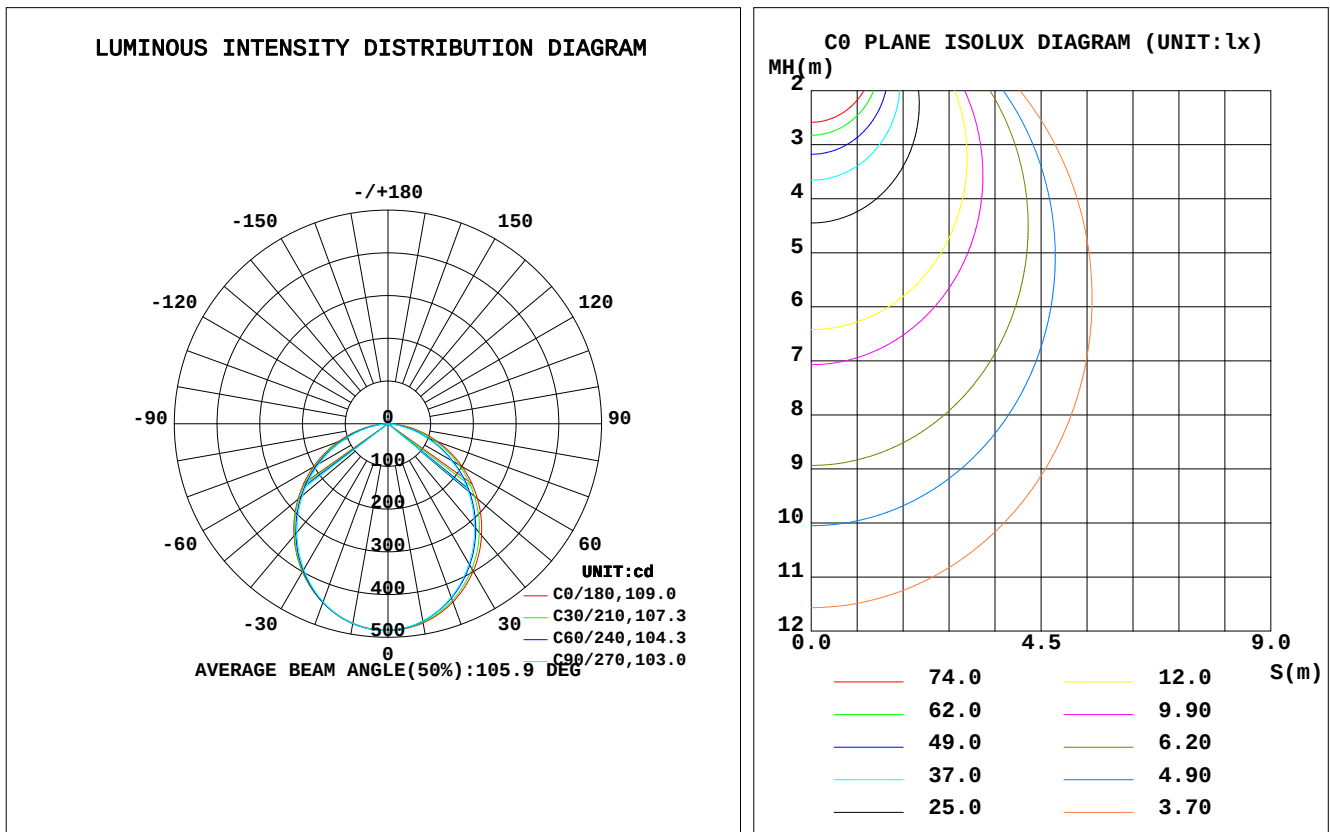


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 51.98 lm/W			
MODEL	3000KCRI90	I _{max} (cd)	484.1	S/MH(C0/180)	1.24
NOMINAL POWER(W)	24.5	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1277.8	η UP, DN(C0-180)	0.0, 48.8
NOMINAL FLUX(lm)	1277.76	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.2
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 1
Test Date: 2022-08-08

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity: 65.0%
Test Distance: 3.106m [K=1.0000]
Remarks: 12cob4-8°

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

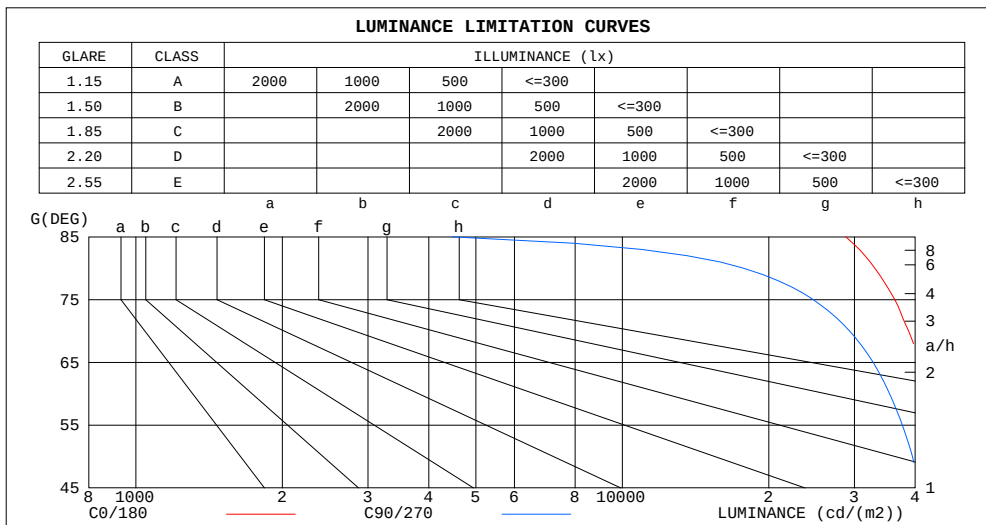
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	473.3	470.5	468.7	469.5	474.1	475.1	474.9	476.0	0- 10	45.65	45.65	3.57,3.57
20	444.0	437.3	432.4	435.4	445.4	445.5	443.7	447.6	10- 20	129.5	175.2	13.7,13.7
30	398.7	387.6	379.4	385.3	400.5	398.4	394.0	401.2	20- 30	193.0	368.2	28.8,28.8
40	340.8	326.2	315.3	323.5	342.4	338.1	331.5	341.5	30- 40	227.7	595.9	46.6,46.6
50	273.5	257.0	245.1	253.9	275.1	268.9	260.9	272.7	40- 50	230.4	826.2	64.7,64.7
60	200.2	183.4	171.0	180.1	201.9	194.4	185.6	198.3	50- 60	202.7	1029	80.5,80.5
70	124.3	108.5	96.81	105.4	125.2	115.9	108.7	121.6	60- 70	149.5	1179	92.2,92.2
80	53.82	39.35	29.76	36.30	53.19	45.56	38.88	49.11	70- 80	81.54	1260	98.6,98.6
90	0.4085	0.2936	0.2232	0.2889	0.2436	0.1691	0.1177	0.1556	80- 90	17.71	1278	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: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:1
Test Date:2022-08-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

LUMINANCE LIMITATION CURVES

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	28799	4468
80	33039	17748
75	36305	24680
70	38750	29311
65	40904	32773
60	42672	35423
55	44148	37628
50	45359	39480
45	46435	41079

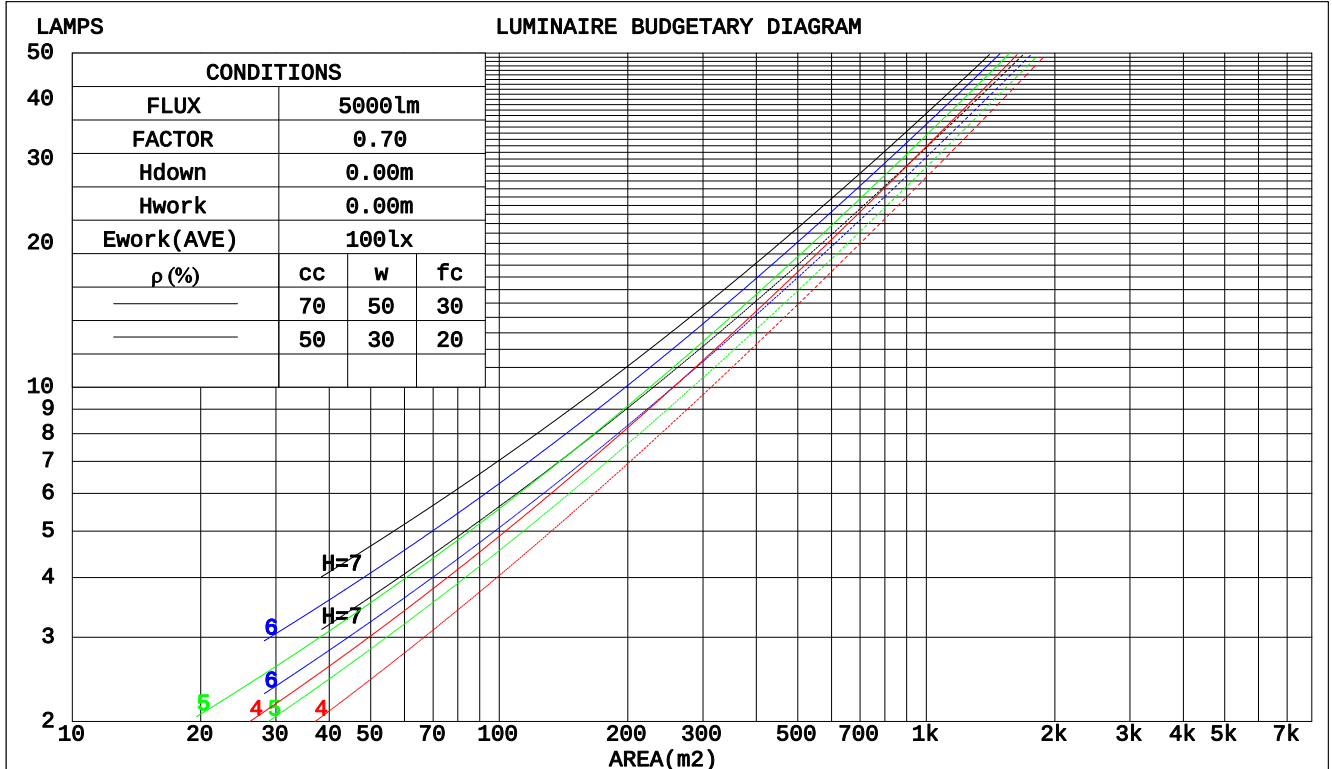
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2022-08-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
 Humidity:65.0%
 Test Distance:3.106m [K=1.0000]
 Remarks: 12cob4-8°

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	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	Coefficients of Utilization(CU)															
RCR:Room Cavity Ratio																
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	1.00	.97	1.02	.98	.95	.98	.95	.92	.94	.92	.89	.90	.88	.87	.84
2.0	.91	.85	.79	.89	.83	.78	.86	.81	.76	.83	.78	.74	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.68	.63	.70	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.56	.67	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.63	.54	.48	.61	.53	.48	.59	.52	.47	.57	.51	.47	.44
6.0	.58	.49	.42	.57	.48	.42	.55	.47	.42	.53	.46	.41	.52	.46	.41	.39
7.0	.52	.44	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.48	.39	.33	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.30	.28
10.0	.40	.33	.27	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:1
Test Date:2022-08-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

WEC AND CCEC

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm					
NAME: LITSONIC1030002			TYPE:		WEIGHT:
SPEC.:			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	.299	.170	.054	.292	.166	.053	.278	.160	.051	.266	.154	.049	.255	.148	.048		
2.0	.284	.155	.048	.277	.153	.047	.266	.148	.046	.255	.143	.045	.245	.139	.044		
3.0	.264	.140	.042	.258	.138	.042	.248	.134	.041	.238	.131	.040	.230	.127	.039		
4.0	.244	.127	.037	.239	.125	.037	.230	.122	.036	.222	.119	.036	.214	.116	.035		
5.0	.226	.115	.033	.222	.114	.033	.214	.111	.033	.206	.109	.032	.199	.107	.032		
6.0	.210	.105	.030	.206	.104	.030	.199	.102	.030	.193	.100	.029	.186	.098	.029		
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.027	.175	.091	.027		
8.0	.183	.090	.025	.180	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.025		
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.155	.079	.023		
10.0	.162	.078	.022	.159	.077	.021	.155	.076	.021	.150	.075	.021	.146	.074	.021		

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	.180	.156	.135	.154	.134	.116	.105	.092	.080	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.147	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.084	.050	.024	.049	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:1
Test Date:2022-08-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

UGR(Unified Glare Rating) Table

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm											
NAME: LITSONIC1030002						TYPE:			WEIGHT:		
SPEC.:						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	2H	25.1	26.6	25.4	26.8	27.0	24.4	25.9	24.6	26.1	26.3
	3H	26.6	28.0	26.9	28.3	28.5	25.6	27.0	25.9	27.2	27.5
	4H	27.2	28.6	27.6	28.8	29.1	26.0	27.4	26.4	27.6	27.9
	6H	27.7	28.9	28.0	29.2	29.5	26.3	27.5	26.6	27.8	28.0
	8H	27.8	29.0	28.2	29.3	29.6	26.3	27.5	26.6	27.7	28.0
	12H	27.9	29.1	28.3	29.4	29.7	26.2	27.4	26.6	27.7	28.0
4H	2H	25.6	26.9	25.9	27.2	27.4	25.0	26.3	25.3	26.6	26.8
	3H	27.3	28.4	27.7	28.7	29.0	26.4	27.6	26.8	27.9	28.2
	4H	28.0	29.1	28.4	29.4	29.7	26.9	28.0	27.3	28.3	28.6
	6H	28.6	29.5	29.0	29.9	30.2	27.2	28.2	27.6	28.5	28.9
	8H	28.8	29.7	29.2	30.0	30.4	27.3	28.2	27.7	28.5	28.9
	12H	28.9	29.7	29.4	30.1	30.5	27.3	28.1	27.7	28.4	28.9
8H	4H	28.2	29.1	28.6	29.4	29.8	27.2	28.1	27.6	28.4	28.8
	6H	28.9	29.6	29.3	30.0	30.4	27.6	28.3	28.1	28.7	29.2
	8H	29.2	29.8	29.6	30.2	30.7	27.7	28.3	28.2	28.8	29.2
	12H	29.4	29.9	29.8	30.3	30.8	27.7	28.2	28.2	28.7	29.2
12H	4H	28.2	29.0	28.6	29.4	29.8	27.2	28.0	27.7	28.4	28.8
	6H	28.9	29.5	29.4	30.0	30.4	27.7	28.3	28.1	28.7	29.2
	8H	29.2	29.7	29.7	30.2	30.7	27.8	28.3	28.2	28.8	29.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.4					
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.4					

CIE Pub.117, 1278 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.9)
Area: 0.0096 m2

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:1
Test Date:2022-08-08

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

UTILIZATION FACTORS TABLE

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

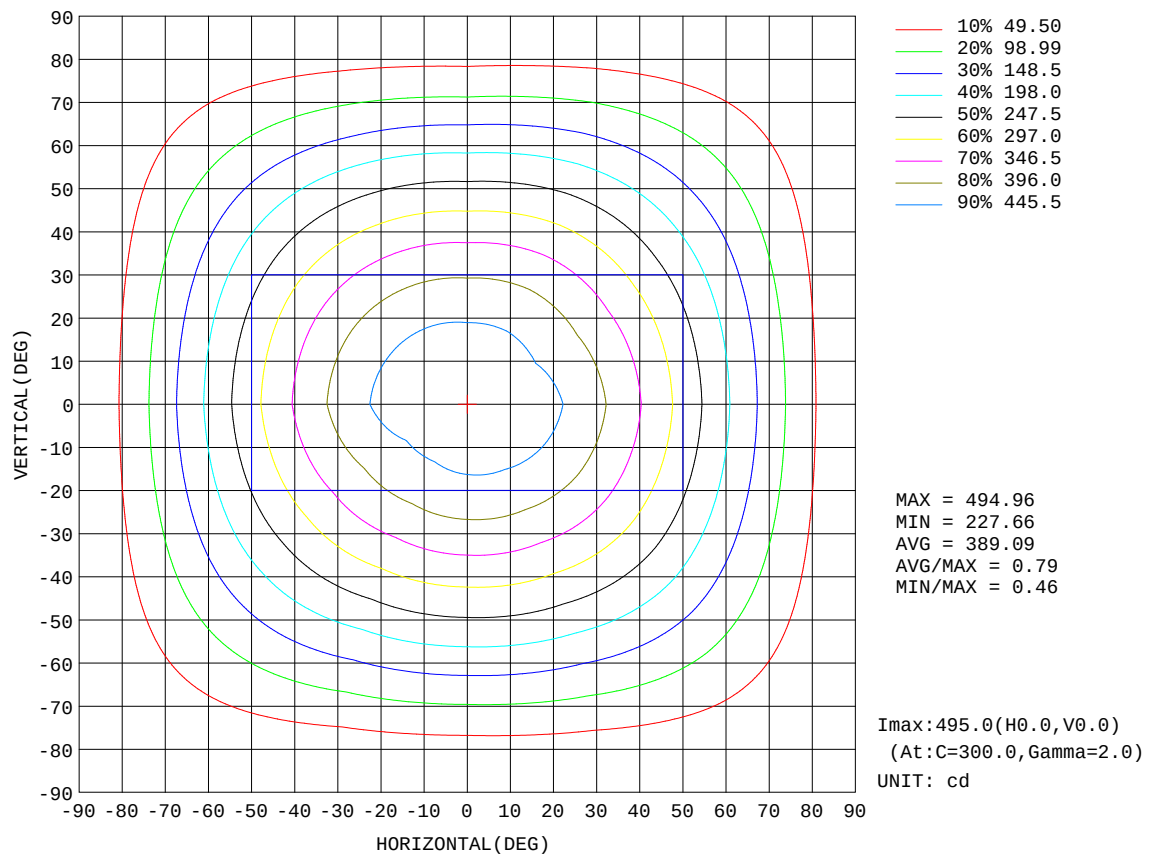
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	47	40	58	47	40	57	47	40	34
0.80	69	57	50	68	57	50	66	56	50	43
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	83	73	67	80	72	66	59
1.50	89	79	73	87	79	72	84	77	71	64
2.00	96	88	81	94	86	80	91	84	79	71
2.50	100	92	86	98	91	85	94	88	83	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	104	100	95	100	96	93	84
5.00	109	104	101	107	103	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:1
Test Date:2022-08-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

ISOCANDELA DIAGRAM

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

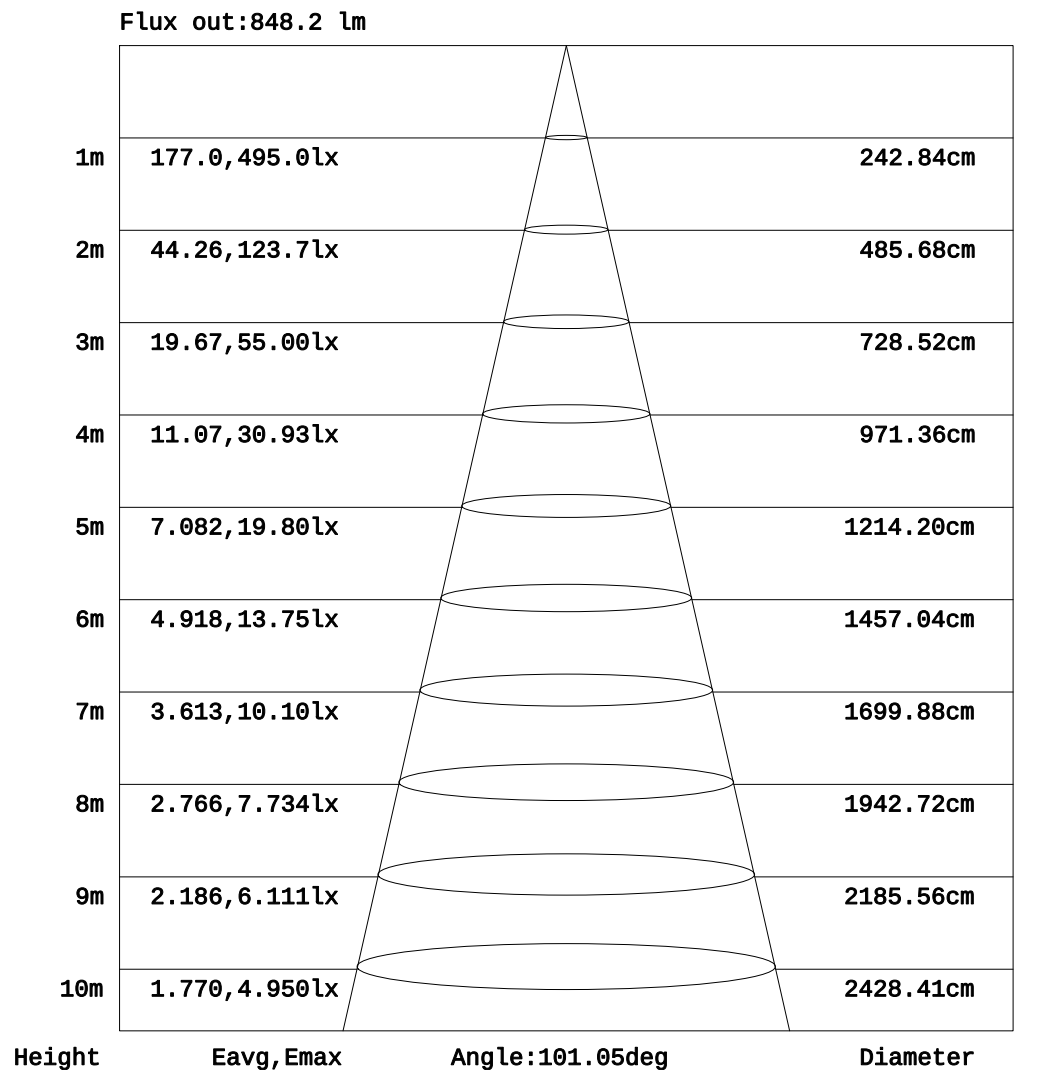


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 1
Test Date: 2022-08-08

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity: 65.0%
Test Distance: 3.106m [K=1.0000]
Remarks: 12cob4-8°

AAI Figure

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



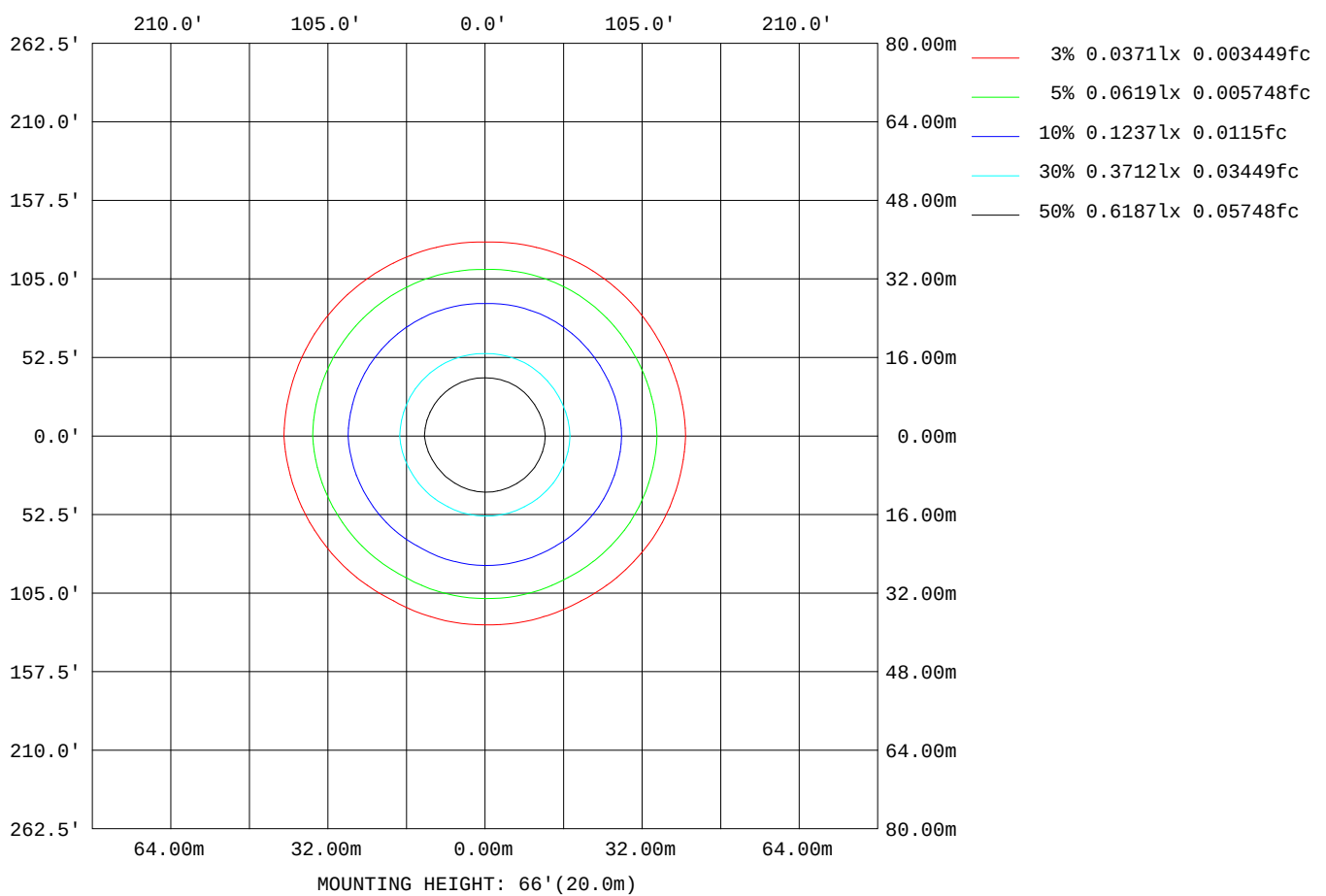
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2022-08-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
 Humidity:65.0%
 Test Distance:3.106m [K=1.0000]
 Remarks: 12cob4-8°

ISOLUX DIAGRAM

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:1
Test Date:2022-08-08

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

LED Avg.L Report

Test:U:219.70V I:0.1302A P:24.584W PF:0.8597 Freq:49.99Hz Lamp Flux:1277.76x1 lm		
NAME: LITSONIC1030002	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

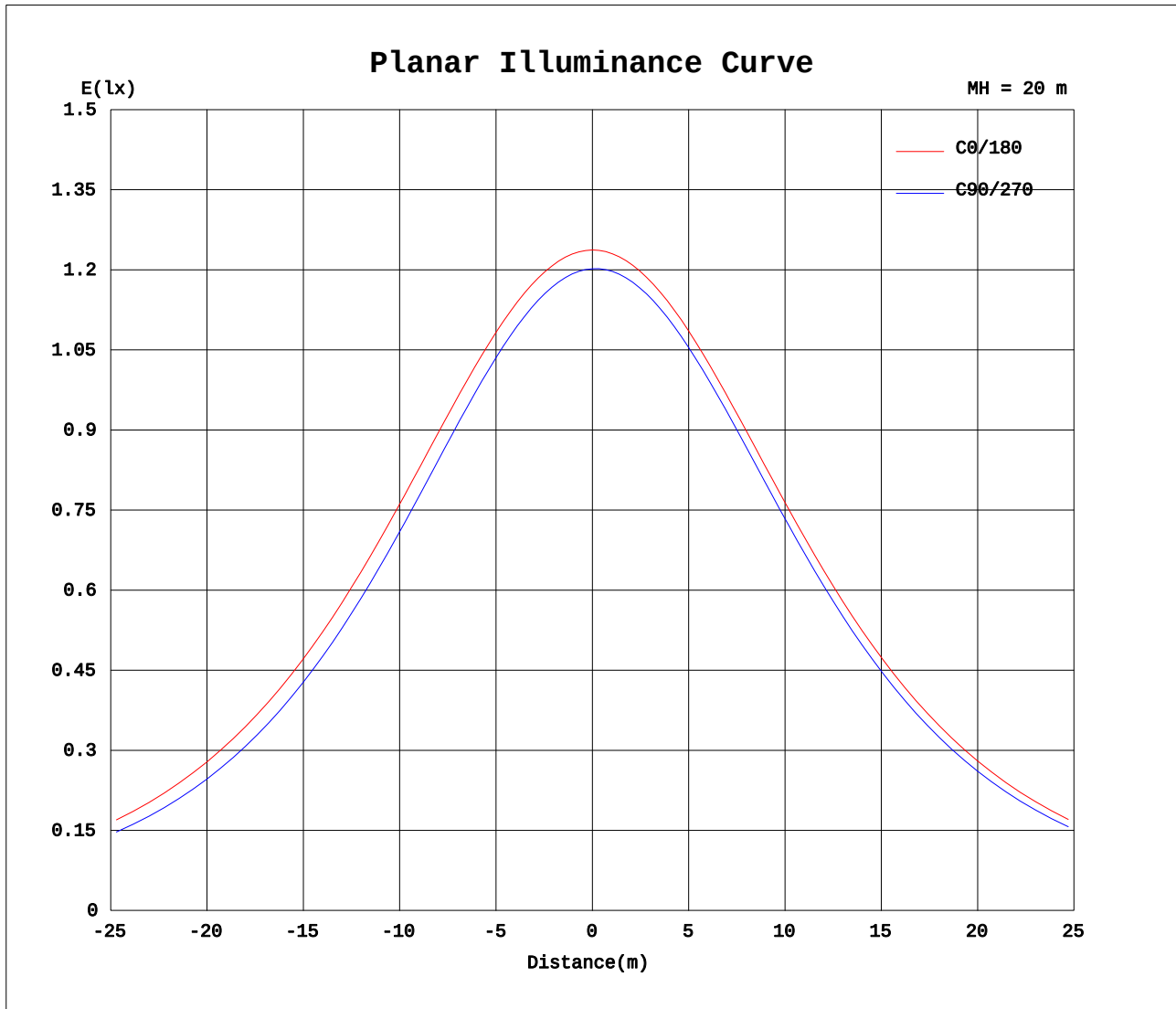
AvgL	cd/m2
L_0~180(65)av	40140
L_0~180(75)av	35440
L_0~180(85)av	27560
L_90~270(65)av	34672
L_90~270(75)av	26990
L_90~270(85)av	8349
L_45(65)av	37116
L_45(75)av	30781
L_45(85)av	15043

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
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γ Range: 0 - 90DEG
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Test System:EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 1
Test Date: 2022-08-08

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-SPEX500_V1 SYSTEM V2.00.416
Humidity: 65.0%
Test Distance: 3.106m [K=1.0000]
Remarks: 12cob4-8°

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:3.106m [K=1.0000]
Remarks: 12cob4-8°

```