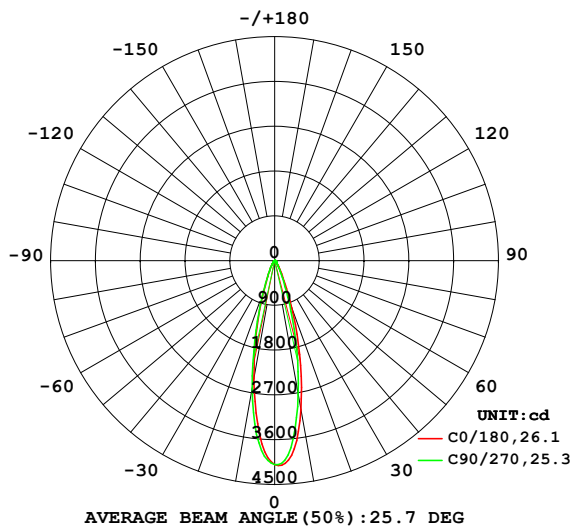


LUMINAIRE PHOTOMETRIC TEST REPORT

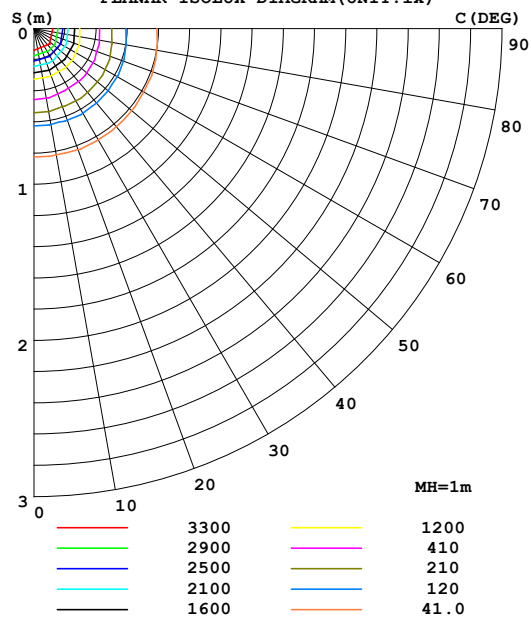
Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 75.14 lm/W
MODEL		I _{max} (cd)	4119	S/MH(C0/180)		0.39
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)		0.42
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1081.9	η UP,DN(C0-180)		0.0,53.3
NOMINAL FLUX(lm)	1081.9	CIE CLASS	DIRECT	η UP,DN(C180-360)		0.0,46.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM		0.00
TEST VOLTAGE(V)	240.43	η down(%)	100.0	CIBSE SHR MAX		0.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
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	3043	2994	2736	2518	2407	2428	2610	2863	0- 10	321.4	321.4	29.7,29.7
20	1011	988.1	785.4	673.8	634.0	643.1	679.2	814.0	10- 20	438.7	760.1	70.3,70.3
30	239.7	238.1	194.4	173.1	171.9	167.1	170.1	192.1	20- 30	176.6	936.7	86.6,86.6
40	83.14	82.49	70.71	63.66	63.26	61.54	63.93	70.62	30- 40	73.54	1010	93.4,93.4
50	36.94	36.47	33.29	31.10	31.73	29.82	31.89	32.73	40- 50	36.62	1047	96.8,96.8
60	19.51	19.34	17.81	16.12	15.66	15.60	16.36	17.50	50- 60	21.58	1068	98.8,98.8
70	7.015	6.662	5.530	4.398	3.839	4.244	5.227	6.099	60- 70	11.07	1080	99.8,99.8
80	0.9024	0.8301	0.7420	0.6576	0.6571	0.6900	0.7771	0.8459	70- 80	2.092	1082	100,100
90	0.0467	0.0270	0.0389	0.0221	0.0280	0.0244	0.0273	0.0244	80- 90	0.2831	1082	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		

Conical surface Flux(90deg): 1031.2 lm

%lum = 95.3%

%lamp = 95.3%

Conical surface Flux(120deg): 1068.5 lm

%lum = 98.8%

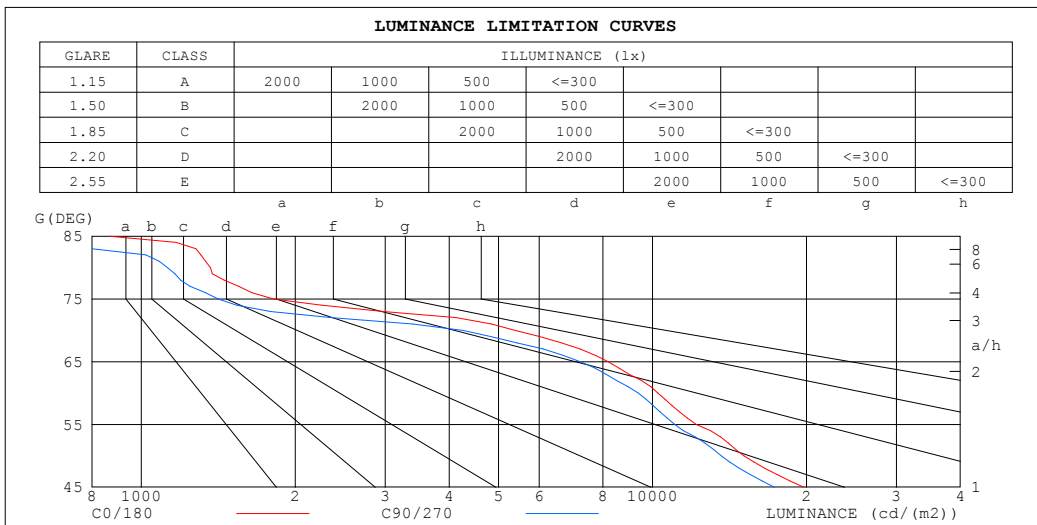
%lamp = 98.8%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-11-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



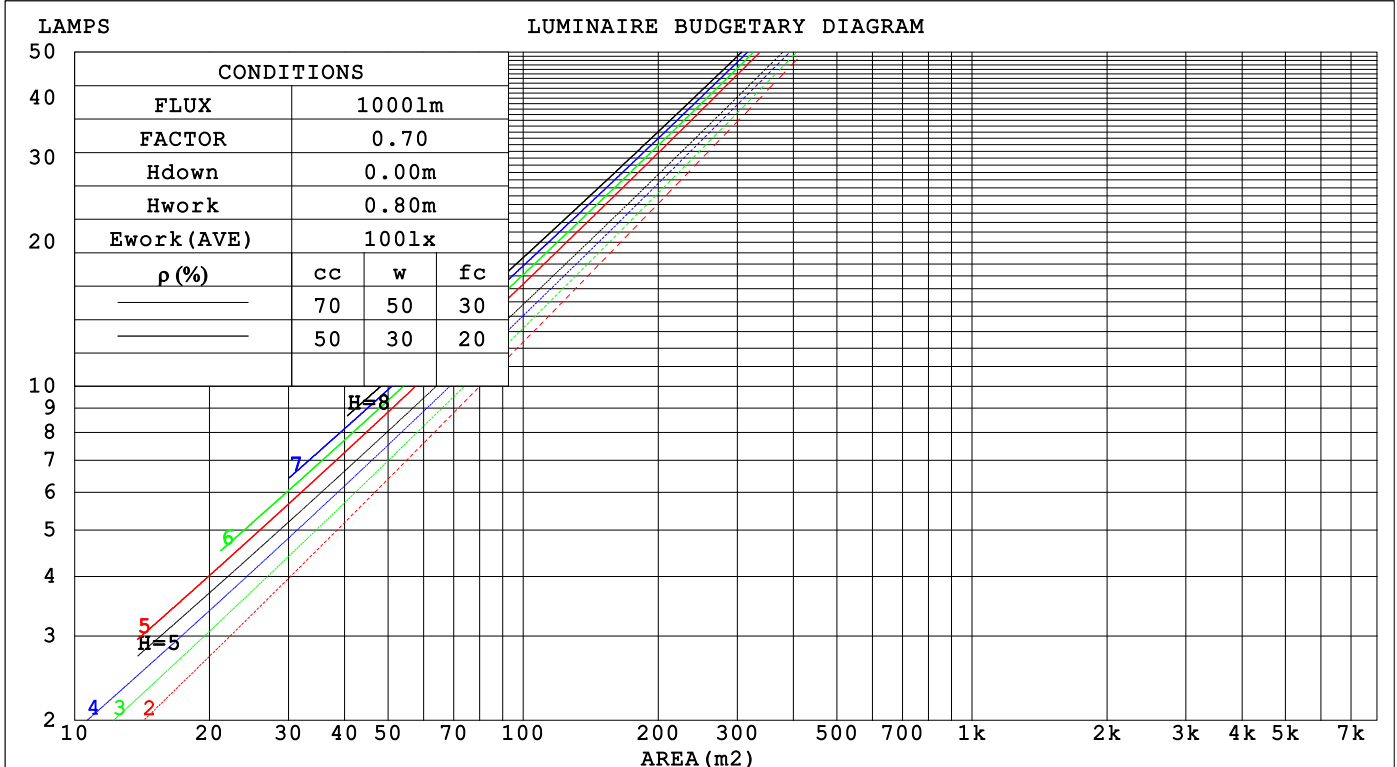
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	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	.152	.087	.027	.146	.083	.026	.133	.076	.024	.122	.070	.023	.111	.064	.021		
2.0	.143	.078	.024	.137	.076	.023	.127	.071	.022	.118	.066	.021	.109	.062	.019		
3.0	.134	.071	.021	.130	.069	.021	.121	.065	.020	.113	.062	.019	.105	.058	.018		
4.0	.126	.066	.019	.122	.064	.019	.115	.061	.018	.108	.058	.017	.102	.055	.017		
5.0	.119	.061	.018	.116	.059	.017	.109	.057	.017	.103	.055	.016	.098	.052	.016		
6.0	.113	.056	.016	.110	.055	.016	.104	.053	.016	.099	.051	.015	.094	.050	.015		
7.0	.107	.053	.015	.104	.052	.015	.099	.050	.014	.095	.049	.014	.091	.047	.014		
8.0	.102	.050	.014	.099	.049	.014	.095	.048	.014	.091	.046	.013	.087	.045	.013		
9.0	.097	.047	.013	.095	.046	.013	.091	.045	.013	.088	.044	.013	.084	.043	.012		
10.0	.093	.044	.012	.091	.044	.012	.088	.043	.012	.084	.042	.012	.081	.041	.012		

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	.169	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.131	.114	.100	.089	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.138	.113	.094	.119	.098	.081	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.127	.098	.077	.109	.085	.067	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.064	.100	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.108	.076	.054	.093	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.101	.068	.046	.087	.059	.040	.060	.042	.028	.035	.024	.017	.011	.008	.006	
8.0	.094	.062	.039	.081	.054	.034	.056	.038	.024	.033	.022	.015	.011	.007	.005	
9.0	.089	.056	.034	.076	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.084	.052	.030	.072	.045	.026	.050	.032	.019	.029	.019	.011	.009	.006	.004	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz											
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm											
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D TYPE:						WEIGHT:					
SPEC.:						DIM.:			SERIAL No.:		
MFR.: Norming lighting						SUR.: 70mm			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	17.3	16.7	17.4	17.6	16.0	16.7	16.2	16.9	17.0
	3H	16.8	17.5	17.0	17.7	17.9	16.2	16.9	16.5	17.1	17.3
	4H	16.8	17.4	17.0	17.6	17.8	16.2	16.8	16.4	17.0	17.2
	6H	16.7	17.3	17.0	17.5	17.8	16.1	16.7	16.4	16.9	17.2
	8H	16.6	17.2	16.9	17.5	17.7	16.0	16.6	16.3	16.9	17.1
	12H	16.6	17.2	16.9	17.4	17.7	16.0	16.6	16.3	16.8	17.1
4H	2H	16.6	17.3	16.9	17.5	17.7	16.2	16.8	16.4	17.0	17.2
	3H	17.0	17.5	17.3	17.8	18.1	16.4	17.0	16.7	17.3	17.5
	4H	16.9	17.4	17.2	17.7	18.0	16.4	16.9	16.7	17.2	17.5
	6H	16.8	17.3	17.2	17.6	18.0	16.3	16.8	16.7	17.1	17.4
	8H	16.8	17.2	17.2	17.6	17.9	16.2	16.7	16.6	17.0	17.4
	12H	16.7	17.1	17.1	17.5	17.9	16.2	16.6	16.6	17.0	17.3
8H	4H	16.8	17.2	17.2	17.6	17.9	16.3	16.7	16.6	17.0	17.4
	6H	16.7	17.1	17.1	17.5	17.9	16.2	16.5	16.6	16.9	17.3
	8H	16.7	17.0	17.1	17.4	17.8	16.1	16.4	16.6	16.9	17.3
	12H	16.6	16.9	17.1	17.3	17.8	16.1	16.3	16.5	16.8	17.2
12H	4H	16.7	17.1	17.1	17.5	17.9	16.2	16.6	16.6	17.0	17.4
	6H	16.7	17.0	17.1	17.4	17.8	16.1	16.4	16.6	16.9	17.3
	8H	16.6	16.9	17.1	17.3	17.8	16.1	16.3	16.5	16.8	17.3
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 1.3 / - 1.9					+ 1.2 / - 1.9				
1.5H		+ 2.1 / - 1.2					+ 1.7 / - 1.2				
2.0H		+ 1.9 / - 1.4					+ 1.7 / - 1.3				

CIE Pub.117, 1082 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 0.3)
Area: 0.0038 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

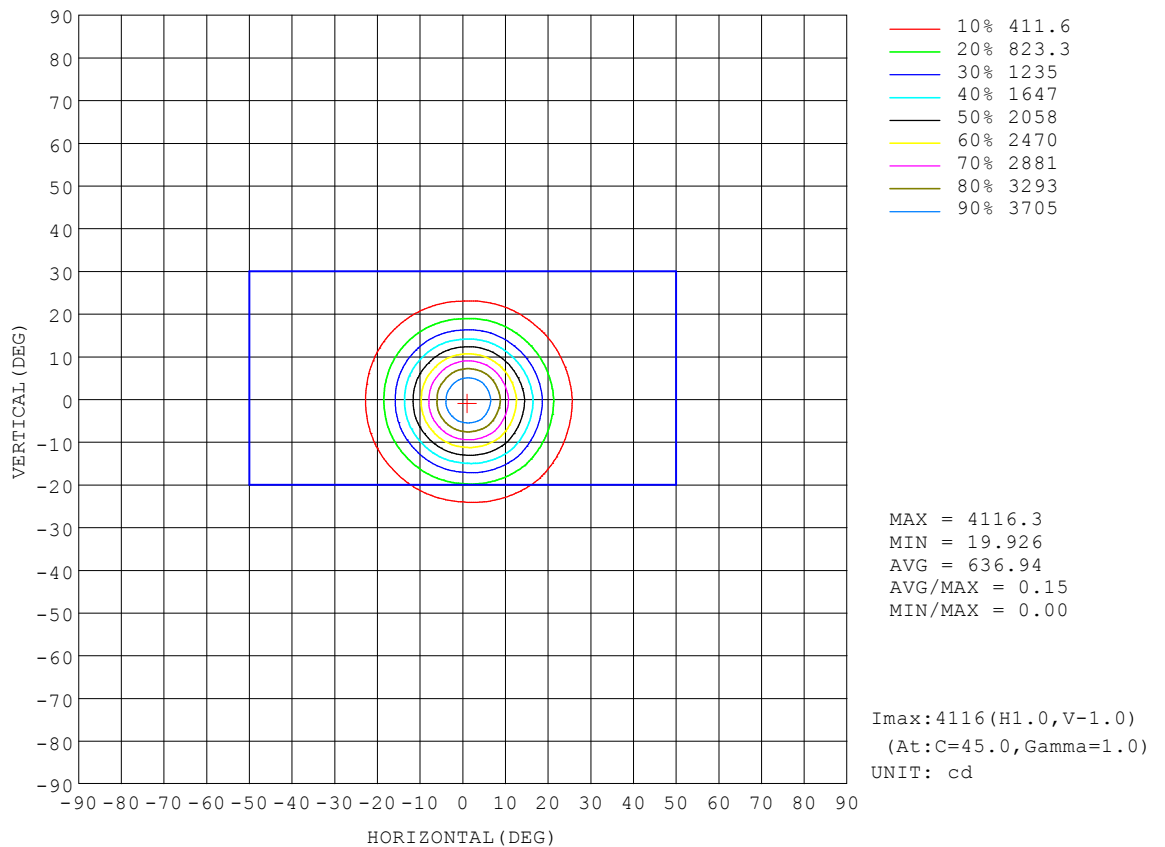
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	98	93	90	97	93	89	85
1.25	103	98	95	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	109	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	103	106	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	108	108	106	105	98
5.00	115	113	111	113	111	109	109	108	106	99
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

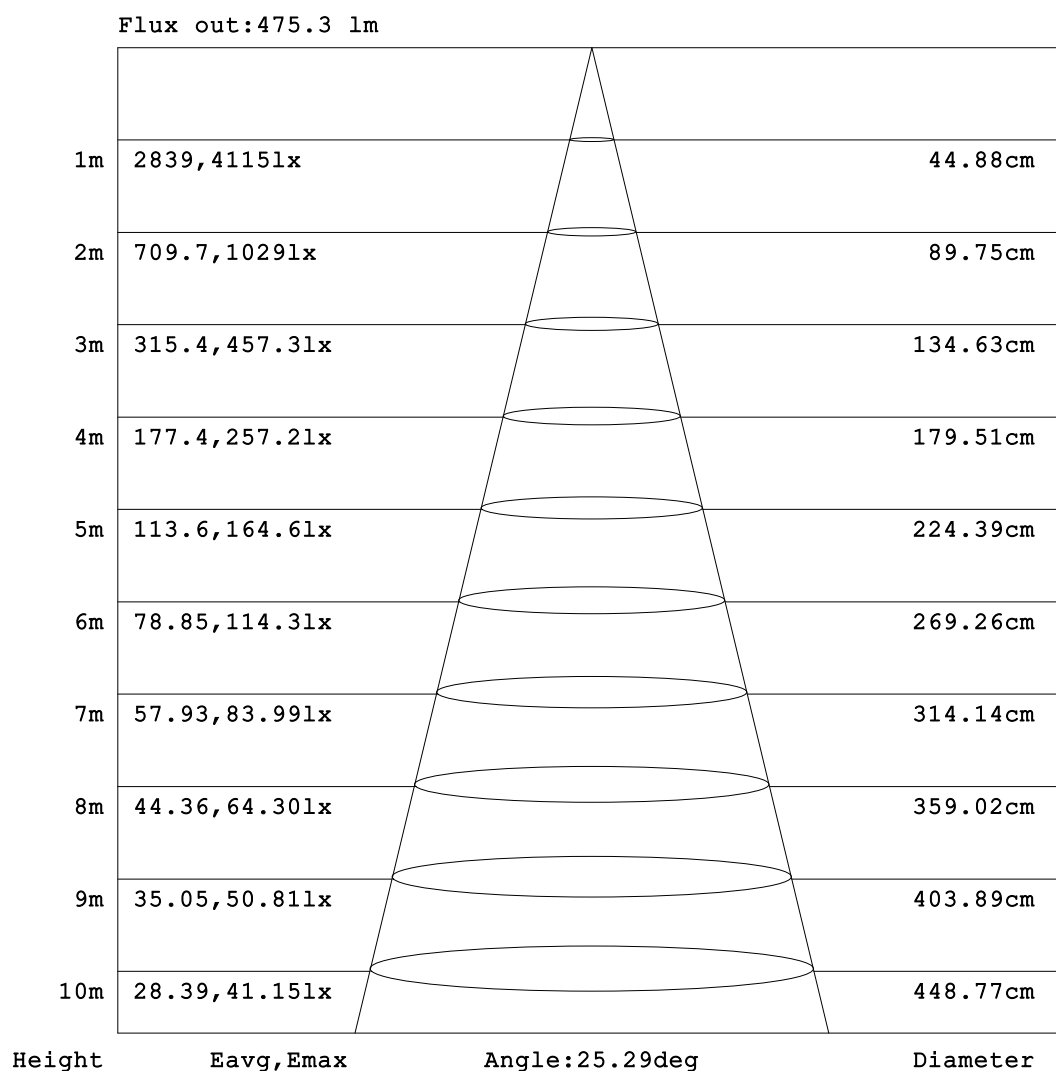


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802		Lamp Flux:1081.9x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



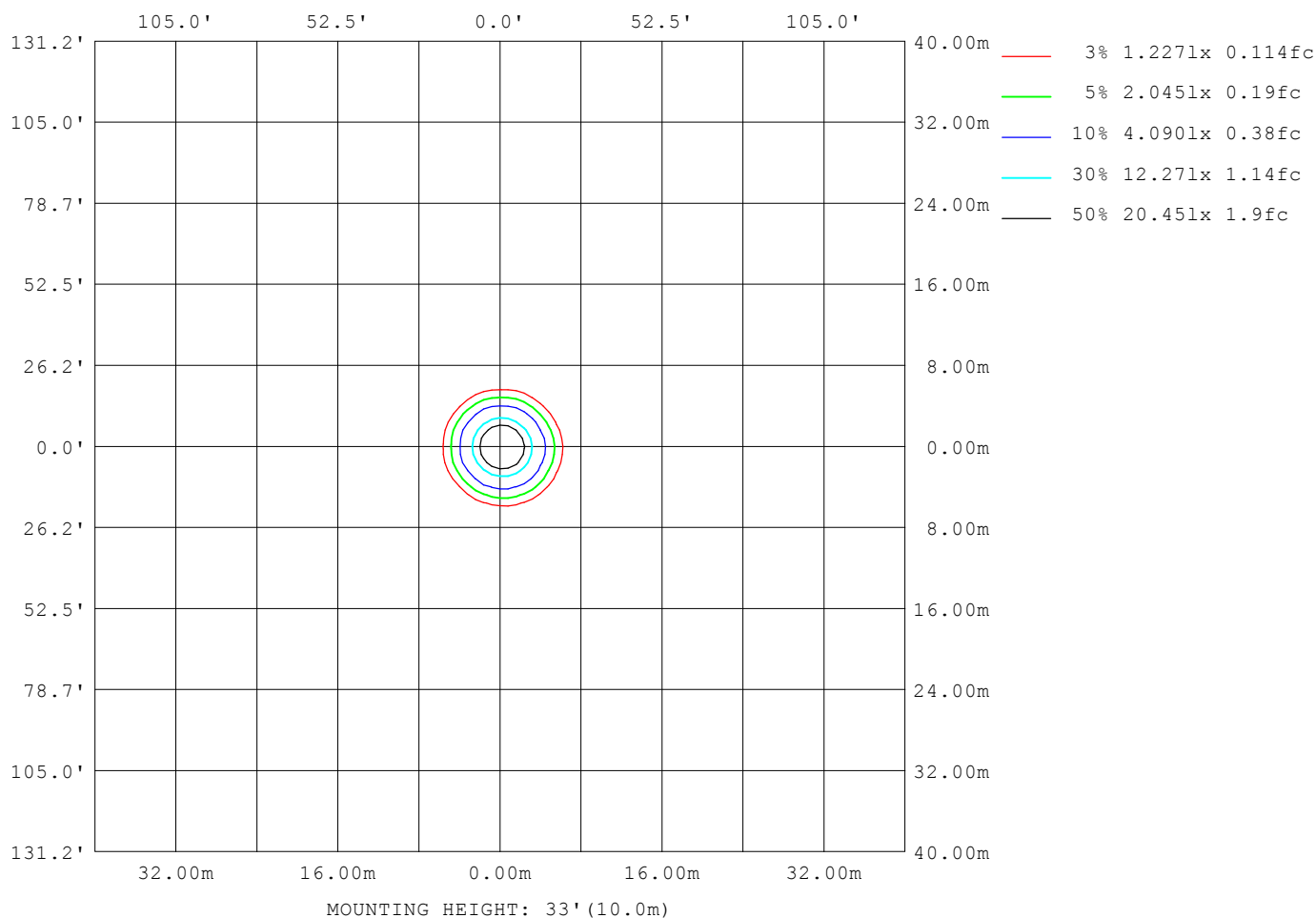
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802		Lamp Flux:1081.9x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-11-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:240.5V I:0.0612A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.79% KDisp:0.9802 Lamp Flux:1081.9x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 24D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

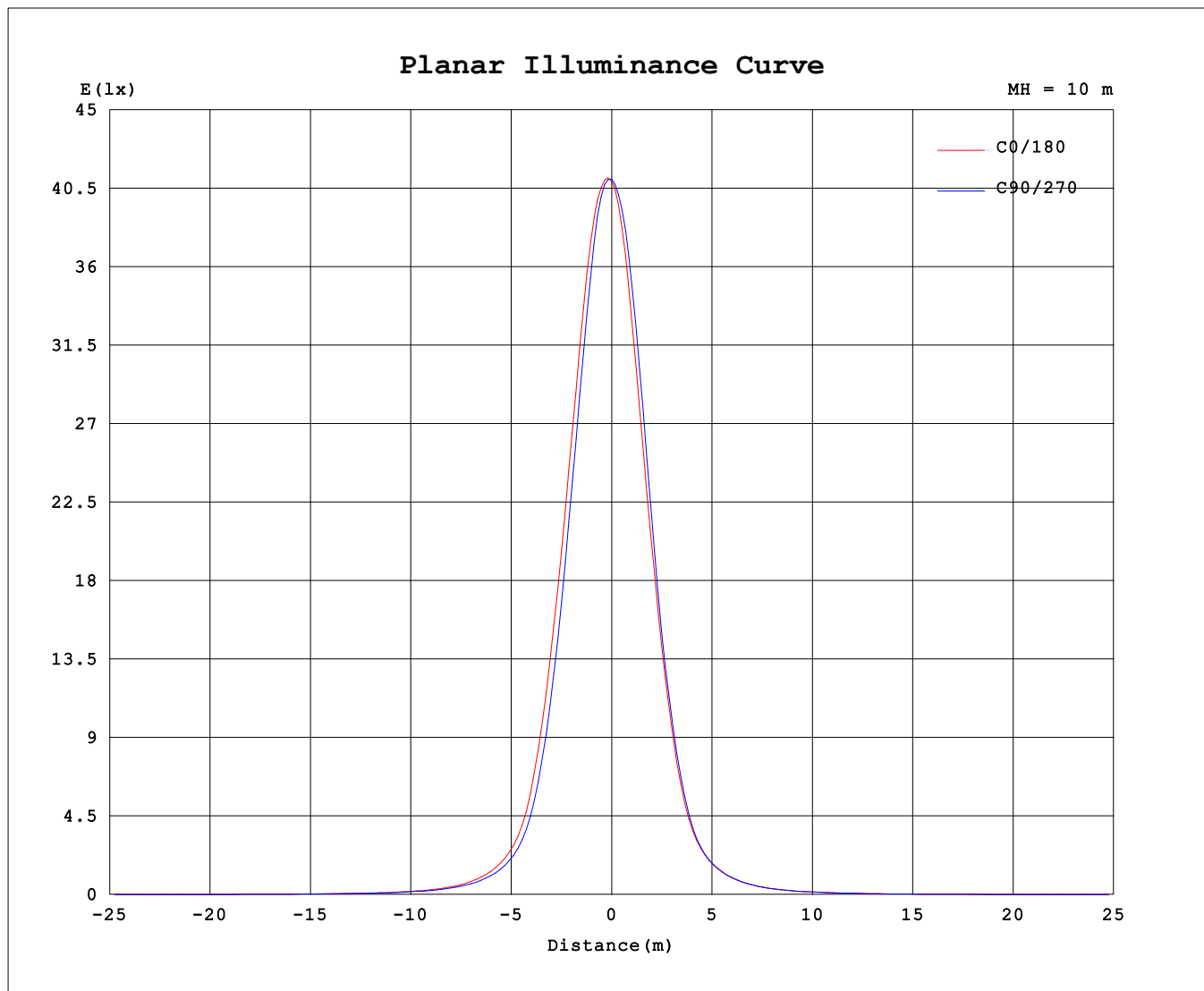
AvgL	cd/m2
L_0~180 (65) av	7163
L_0~180 (75) av	1536
L_0~180 (85) av	577
L_90~270 (65) av	6927
L_90~270 (75) av	1424
L_90~270 (85) av	391
L_45 (65) av	6972
L_45 (75) av	1469
L_45 (85) av	426

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-11-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

```

Photometric Data Table [cd]

G/C	0.0	45.0	90.0	135.0	180.0	225.0	270.0	315.0
0.0	4097	4097	4097	4097	4097	4097	4097	4097
3.0	4079	4084	4015	3916	3843	3854	3938	4017
6.0	3802	3776	3593	3411	3296	3331	3506	3691
9.0	3261	3205	2968	2752	2634	2662	2855	3100
12.0	2607	2565	2283	2067	1981	1979	2111	2369
15.0	1954	1930	1625	1438	1380	1380	1449	1671
18.0	1358	1331	1077	933.8	886.1	902.4	943.3	1114
21.0	869.5	840.2	665.6	568.2	536.4	543.2	569.5	687.3
24.0	523.4	517.3	412.3	356.2	347.1	343.1	352.5	413.7
27.0	344.1	341.5	276.1	243.0	240.4	235.1	237.7	272.7
30.0	239.7	238.1	194.4	173.1	171.9	167.1	170.1	192.1
33.0	171.0	170.5	140.3	125.5	124.8	121.2	124.7	139.3
36.0	123.7	123.4	102.8	92.52	92.10	90.01	92.69	102.6
39.0	91.79	90.93	77.49	69.63	69.25	67.41	69.95	77.42
42.0	68.98	68.38	59.27	53.60	53.32	51.80	53.97	59.29
45.0	53.20	52.75	46.50	42.34	42.28	40.77	42.68	46.37
48.0	42.22	41.85	37.60	34.84	35.77	33.74	35.53	37.25
51.0	34.84	34.35	31.44	29.10	29.43	28.18	29.94	30.82
54.0	29.06	28.43	25.62	23.41	22.98	22.59	24.18	25.89
57.0	23.41	23.21	21.38	19.57	19.15	18.84	19.62	20.95
60.0	19.51	19.34	17.81	16.12	15.66	15.60	16.36	17.50
63.0	15.55	15.34	13.99	12.56	12.19	12.17	12.74	13.83
66.0	11.97	11.73	10.33	8.995	8.562	8.746	9.575	10.57
69.0	8.198	7.797	6.562	5.591	5.194	5.411	6.196	7.130
72.0	4.860	4.317	2.763	2.075	1.906	2.080	2.753	3.933
75.0	1.790	1.620	1.390	1.262	1.231	1.290	1.411	1.605
78.0	1.150	1.046	0.9427	0.8695	0.8736	0.9067	0.9799	1.051
81.0	0.7955	0.7254	0.6435	0.5465	0.5244	0.5759	0.6738	0.7380
84.0	0.4657	0.3627	0.1997	0.1089	0.1164	0.1167	0.2260	0.3734
87.0	0.1156	0.0818	0.0761	0.0410	0.0469	0.0434	0.0826	0.0855
90.0	0.0467	0.0270	0.0389	0.0221	0.0280	0.0244	0.0273	0.0244

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks: