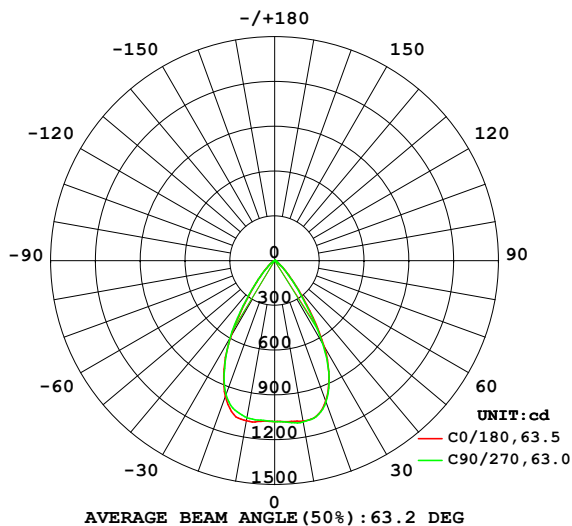


LUMINAIRE PHOTOMETRIC TEST REPORT

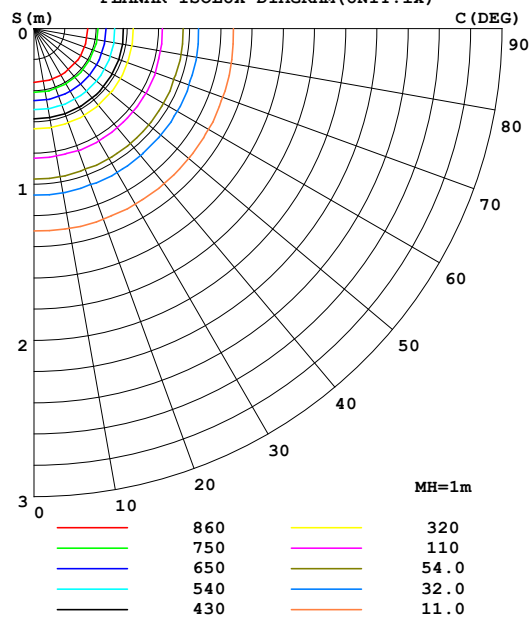
Test:U:240.5V I:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801 Lamp Flux:1145.04x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 79.49 lm/W
MODEL		I _{max} (cd)	1103	S/MH(C0/180)		0.91
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)		0.92
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1145.0	η UP,DN(C0-180)		0.0,51.7
NOMINAL FLUX(lm)	1145.04	CIE CLASS	DIRECT	η UP,DN(C180-360)		0.0,48.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM		0.75
TEST VOLTAGE(V)	240.44	η down (%)	100.0	CIBSE SHR MAX		0.95

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	1091	1103	1098	1092	1089	1081	1069	1075	0- 10	103.5	103.5	9.04,9.04
20	1002	1006	1007	987.1	967.7	947.7	953.6	970.0	10- 20	297.1	400.5	35,35
30	665.9	677.1	650.8	618.1	589.4	586.8	597.1	618.4	20- 30	374.7	775.2	67.7,67.7
40	226.7	229.5	218.4	200.6	189.0	182.1	194.8	207.3	30- 40	241.3	1017	88.8,88.8
50	65.37	64.97	59.50	54.77	52.84	50.33	50.42	55.42	40- 50	88.85	1105	96.5,96.5
60	18.61	19.19	16.86	15.28	13.89	13.53	14.59	15.70	50- 60	28.53	1134	99,99
70	5.040	5.036	4.657	4.420	4.066	4.040	4.284	4.567	60- 70	8.659	1143	99.8,99.8
80	1.023	0.9941	0.8923	0.8011	0.7727	0.7788	0.8573	0.9499	70- 80	2.117	1145	100,100
90	0.0270	0.0209	0.0289	0.0225	0.0234	0.0247	0.0244	0.0225	80- 90	0.3020	1145	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): 1073 lm

%lum = 93.7%

%lamp = 93.7%

Conical surface Flux(120deg): 1134 lm

%lum = 99.0%

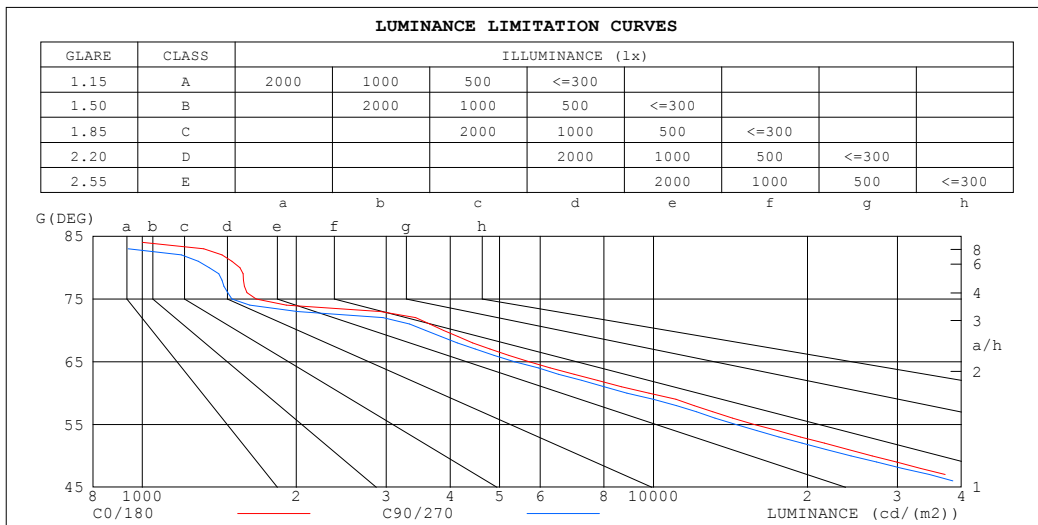
%lamp = 99.0%

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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801 Lamp Flux:1145.04x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



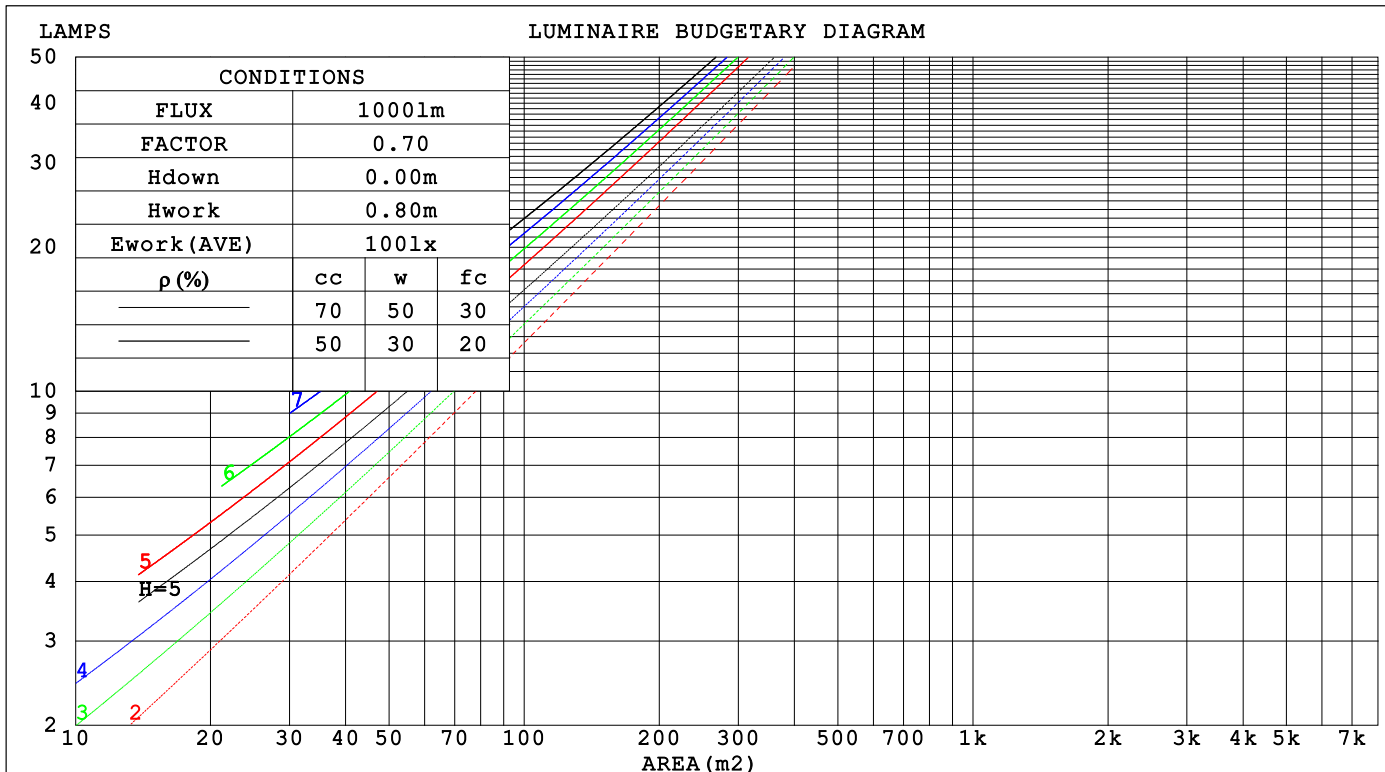
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-11-05

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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801		Lamp Flux:1145.04x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		Shielding Angle:
DIM.:		
SUR.: 70mm		

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															



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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801		Lamp Flux:1145.04x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		Shielding Angle:
DIM.:		
SUR.: 70mm		

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	.185	.105	.033	.178	.102	.032	.165	.095	.030	.154	.089	.028	.143	.083	.027		
2.0	.178	.098	.030	.172	.095	.029	.162	.090	.028	.152	.085	.027	.143	.081	.025		
3.0	.170	.090	.027	.165	.088	.027	.156	.085	.026	.148	.081	.025	.140	.077	.024		
4.0	.162	.084	.025	.158	.083	.024	.150	.080	.024	.143	.077	.023	.136	.074	.022		
5.0	.155	.079	.023	.151	.077	.023	.144	.075	.022	.137	.073	.022	.131	.070	.021		
6.0	.147	.074	.021	.144	.073	.021	.138	.071	.021	.132	.069	.020	.127	.067	.020		
7.0	.141	.070	.020	.138	.069	.020	.133	.067	.019	.127	.065	.019	.123	.064	.019		
8.0	.135	.066	.018	.132	.065	.018	.127	.064	.018	.123	.062	.018	.118	.061	.018		
9.0	.129	.062	.017	.127	.062	.017	.122	.060	.017	.118	.059	.017	.114	.058	.017		
10.0	.124	.059	.016	.121	.059	.016	.118	.058	.016	.114	.057	.016	.110	.055	.016		

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	.172	.157	.144	.147	.135	.124	.100	.093	.086	.058	.054	.050	.019	.017	.016		
2.0	.157	.132	.112	.135	.114	.097	.092	.079	.067	.053	.046	.040	.017	.015	.013		
3.0	.145	.114	.088	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.135	.099	.071	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.008		
5.0	.127	.088	.058	.109	.076	.051	.075	.053	.036	.044	.031	.021	.014	.010	.007		
6.0	.120	.078	.049	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006		
7.0	.114	.071	.041	.098	.061	.036	.067	.043	.025	.039	.025	.015	.013	.008	.005		
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.103	.060	.031	.089	.052	.027	.061	.036	.019	.036	.022	.011	.012	.007	.004		
10.0	.098	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003		

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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz UTHDi:0.16% ITHDi:6.75% KDisp:0.9801 Lamp Flux:1145.04x1 lm										
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D 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	21.9	22.9	22.1	23.1	23.2	21.7	22.7	21.9	22.9	23.0
3H	21.8	22.7	22.0	22.9	23.1	21.6	22.5	21.8	22.7	22.9
4H	21.7	22.6	22.0	22.8	23.0	21.5	22.3	21.8	22.6	22.8
6H	21.6	22.4	21.9	22.7	22.9	21.4	22.2	21.7	22.4	22.7
8H	21.6	22.3	21.9	22.6	22.9	21.3	22.1	21.7	22.4	22.6
12H	21.5	22.3	21.8	22.5	22.8	21.3	22.0	21.6	22.3	22.6
4H 2H	21.7	22.6	22.0	22.8	23.0	21.5	22.4	21.8	22.6	22.8
3H	21.6	22.3	21.9	22.6	22.9	21.4	22.1	21.7	22.4	22.7
4H	21.5	22.2	21.8	22.5	22.8	21.3	22.0	21.6	22.3	22.6
6H	21.4	22.0	21.8	22.3	22.7	21.2	21.8	21.6	22.1	22.5
8H	21.4	21.9	21.8	22.3	22.6	21.2	21.7	21.5	22.1	22.4
12H	21.3	21.8	21.7	22.2	22.6	21.1	21.6	21.5	22.0	22.4
8H 4H	21.4	21.9	21.7	22.3	22.6	21.2	21.7	21.5	22.1	22.4
6H	21.3	21.7	21.7	22.1	22.5	21.1	21.5	21.5	21.9	22.3
8H	21.2	21.6	21.7	22.0	22.5	21.0	21.4	21.5	21.8	22.3
12H	21.2	21.5	21.6	21.9	22.4	21.0	21.3	21.4	21.7	22.2
12H 4H	21.3	21.8	21.7	22.2	22.6	21.1	21.6	21.5	22.0	22.4
6H	21.2	21.6	21.7	22.0	22.5	21.0	21.4	21.5	21.8	22.3
8H	21.2	21.5	21.6	21.9	22.4	21.0	21.3	21.4	21.7	22.2
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.7 / - 6.6					+ 2.6 / - 6.8				
1.5H	+ 4.2 / - 4.9					+ 4.1 / - 4.9				
2.0H	+ 4.9 / - 5.7					+ 4.8 / - 5.5				

CIE Pub.117, 1145 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 0.5$)
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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801 Lamp Flux:1145.04x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		Shielding Angle:
DIM.:		
SUR.: 70mm		

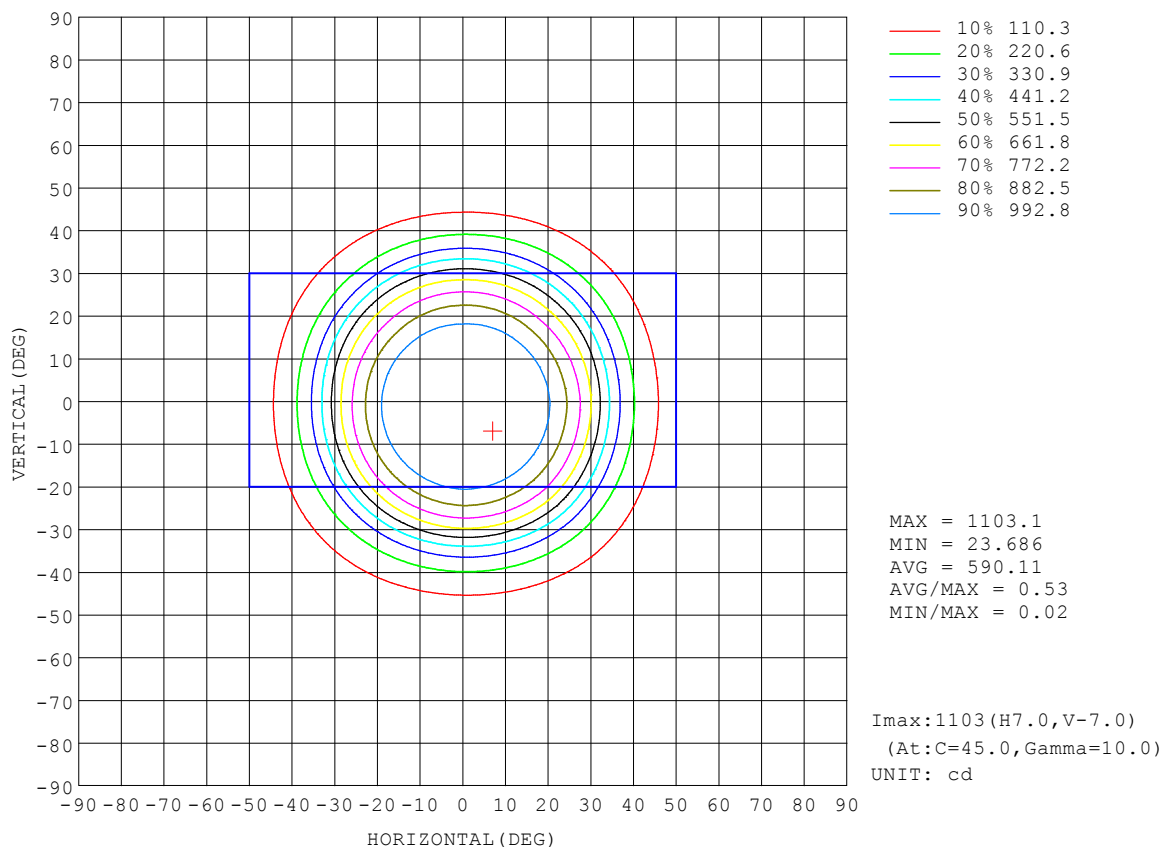
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	78	73	84	77	73	83	77	73	69
0.80	92	86	82	92	86	82	90	85	81	77
1.00	97	91	88	97	91	87	95	91	87	83
1.25	102	96	93	101	96	92	99	94	91	87
1.50	105	100	96	103	99	96	101	97	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	106	102	108	104	101	105	102	100	94
3.00	111	108	105	109	106	104	106	104	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	112	110	109	108	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: 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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801 Lamp Flux:1145.04x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

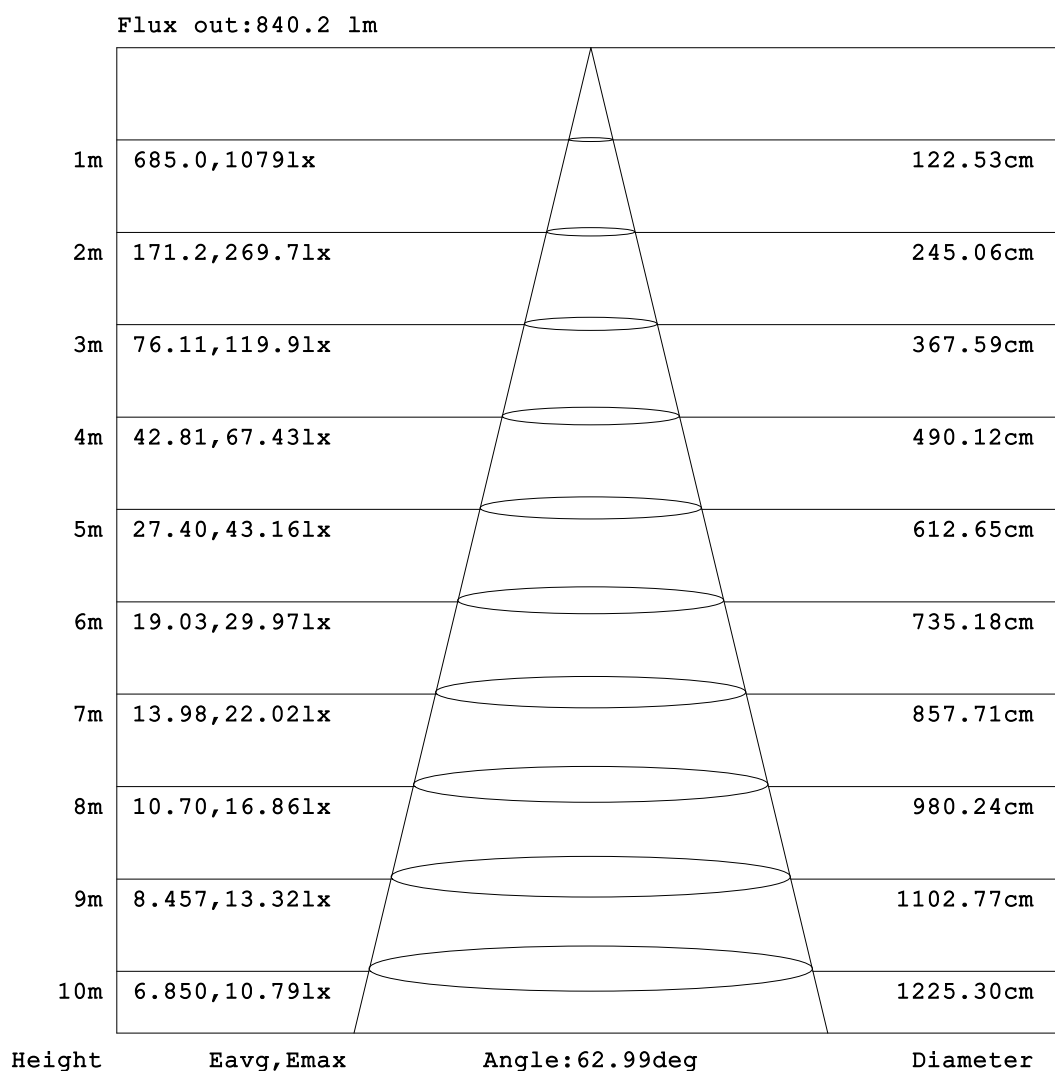


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801		Lamp Flux:1145.04x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



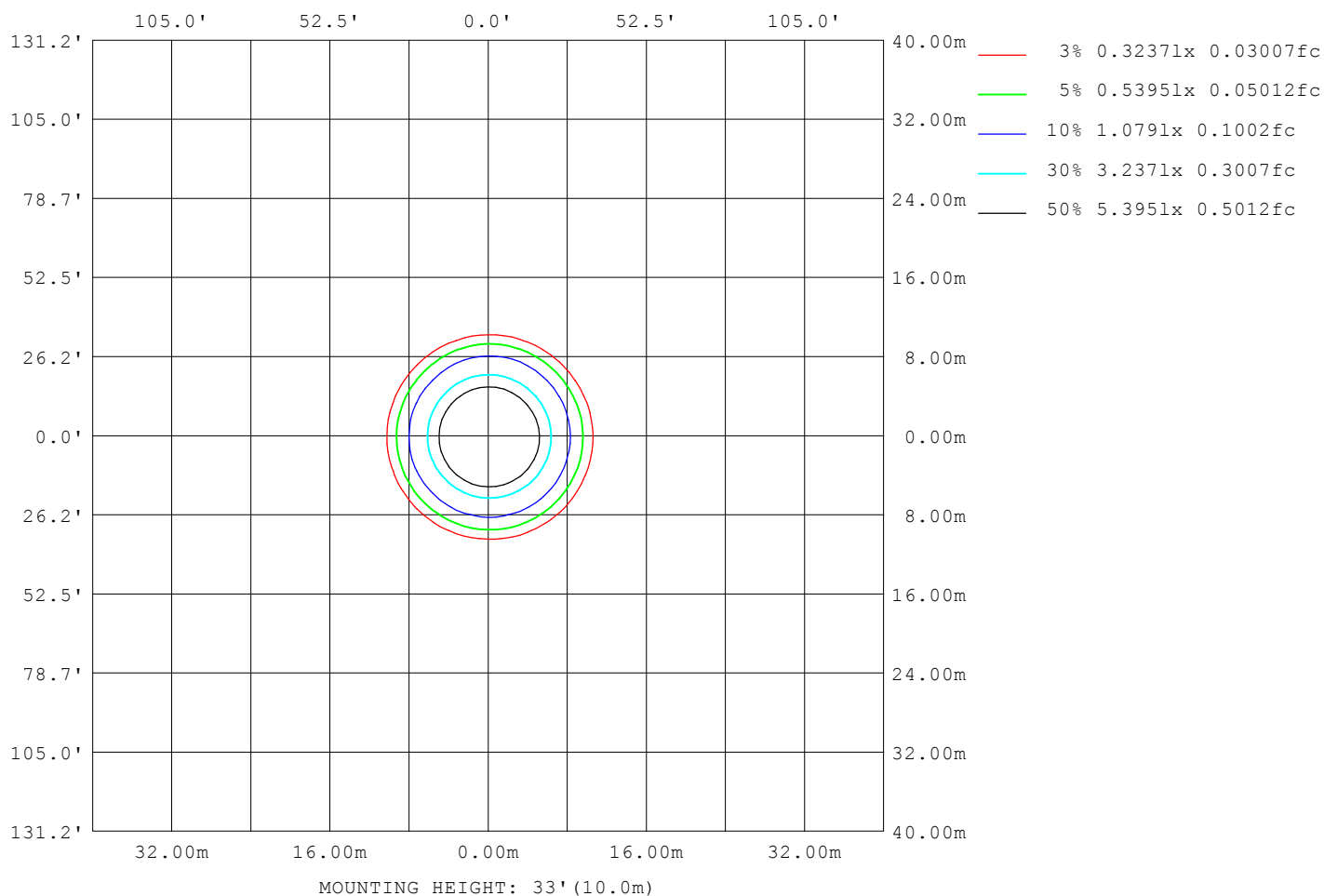
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801		Lamp Flux:1145.04x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D 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:0.0613A P:14.4W PF:0.9778 Freq:49.99Hz		
UTHDi:0.16% ITHDi:6.75% KDisp:0.9801 Lamp Flux:1145.04x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01DW 3000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

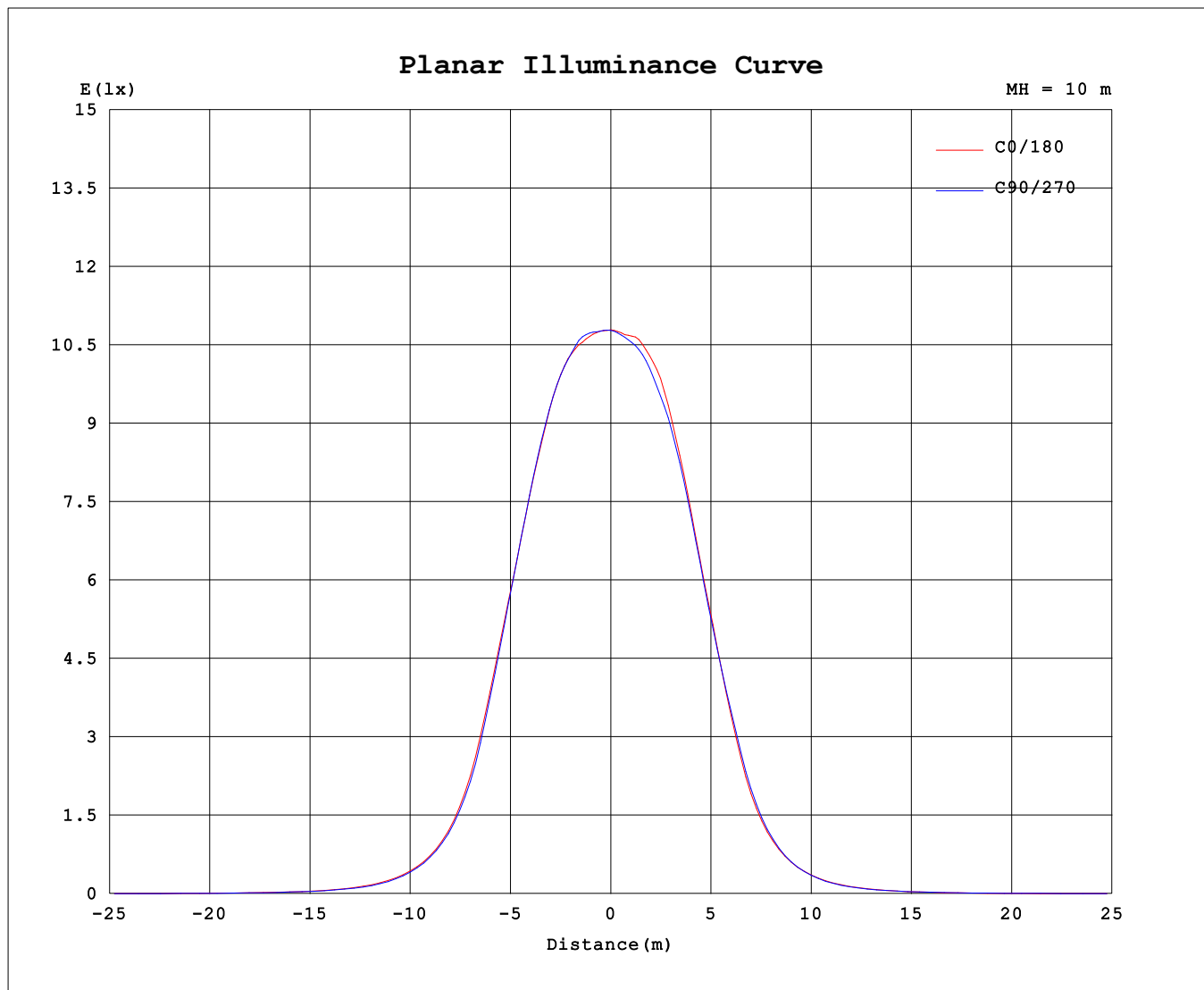
AvgL	cd/m2
L_0~180 (65) av	5090
L_0~180 (75) av	1519
L_0~180 (85) av	381
L_90~270 (65) av	4992
L_90~270 (75) av	1465
L_90~270 (85) av	288
L_45 (65) av	4997
L_45 (75) av	1481
L_45 (85) av	300

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	1078	1078	1078	1078	1078	1078	1078	1078
3.0	1080	1081	1081	1080	1077	1071	1074	1077
6.0	1083	1090	1091	1088	1084	1076	1073	1073
9.0	1089	1101	1099	1095	1090	1083	1071	1075
12.0	1093	1098	1093	1086	1085	1074	1056	1068
15.0	1080	1084	1082	1071	1066	1055	1036	1053
18.0	1040	1041	1046	1030	1014	997.1	994.9	1011
21.0	979.5	985.5	984.5	959.9	939.2	919.7	927.3	944.0
24.0	895.1	902.2	896.8	868.4	838.4	818.6	832.6	847.1
27.0	792.1	804.3	786.9	758.2	727.9	712.0	719.8	738.6
30.0	665.9	677.1	650.8	618.1	589.4	586.8	597.1	618.4
33.0	512.1	523.8	489.4	460.2	440.4	439.7	459.3	477.1
36.0	366.4	373.9	349.7	323.1	308.5	305.4	323.9	340.5
39.0	256.0	259.8	246.0	227.6	215.4	207.1	223.4	235.4
42.0	177.5	178.8	170.8	156.9	147.3	141.6	149.3	160.1
45.0	122.6	123.7	116.2	107.2	101.2	96.95	99.81	108.8
48.0	84.61	84.09	78.04	71.48	68.52	65.59	66.01	72.93
51.0	57.41	57.04	52.04	48.06	46.40	44.24	44.19	48.56
54.0	39.03	39.10	35.61	32.83	31.17	29.78	30.12	32.99
57.0	27.01	27.47	25.11	23.38	21.84	21.10	21.58	23.12
60.0	18.61	19.19	16.86	15.28	13.89	13.53	14.59	15.70
63.0	12.06	12.37	11.25	10.19	9.241	8.993	9.616	10.46
66.0	8.049	8.175	7.537	6.961	6.360	6.199	6.598	6.987
69.0	5.634	5.633	5.231	4.954	4.560	4.507	4.751	5.056
72.0	4.017	3.933	3.471	2.962	2.494	2.646	3.273	3.645
75.0	1.642	1.598	1.473	1.380	1.345	1.331	1.410	1.517
78.0	1.244	1.216	1.132	1.053	1.017	1.010	1.079	1.169
81.0	0.8890	0.8591	0.7649	0.6737	0.6451	0.6529	0.7384	0.8207
84.0	0.3974	0.3527	0.2172	0.1192	0.1087	0.1094	0.1995	0.3104
87.0	0.0750	0.0591	0.0595	0.0433	0.0455	0.0453	0.0600	0.0596
90.0	0.0270	0.0209	0.0289	0.0225	0.0234	0.0247	0.0244	0.0225

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: