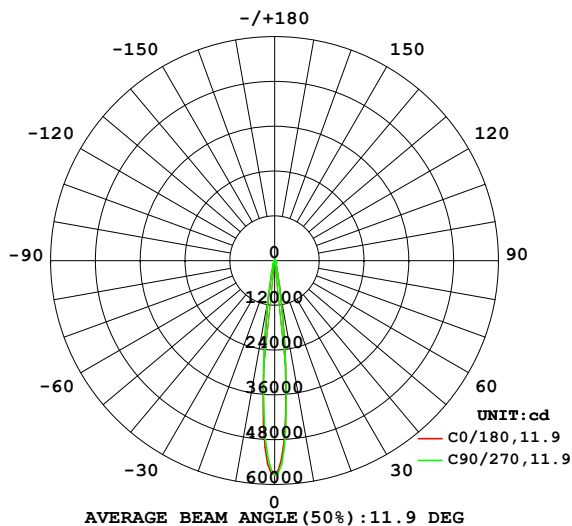


LUMINAIRE PHOTOMETRIC TEST REPORT

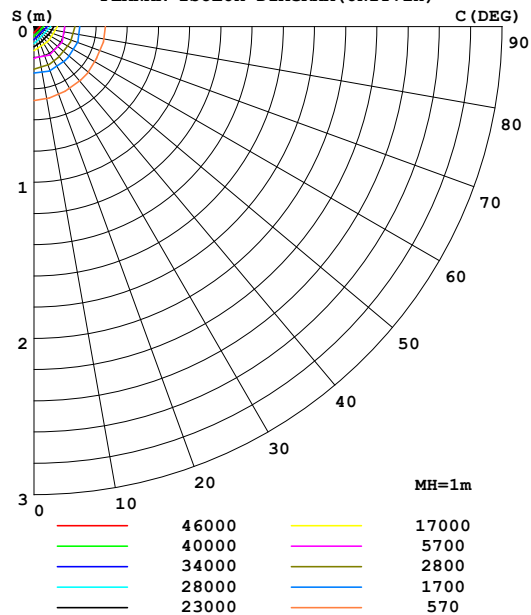
Test:U:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm		
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 40WPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 104.81 lm/W
MODEL		Imax (cd)	57589	S/MH(C0/180)	0.21	
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	0.21	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	4152.7	η UP,DN(C0-180)	0.0,46.4	
NOMINAL FLUX(lm)	4152.72	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,53.6	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	240.09	η down (%)	100.0	CIBSE SHR MAX	0.20	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM(UNIT:lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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	953.3	822.3	804.6	611.4	892.6	1000	991.9	1287	0- 10	2465	2465	59.4,59.4
20	119.9	112.6	112.4	103.8	115.9	125.2	131.5	148.5	10- 20	863.0	3328	80.1,80.1
30	49.80	46.65	46.96	43.89	47.99	50.96	52.91	57.93	20- 30	355.0	3683	88.7,88.7
40	23.62	23.21	22.92	21.95	23.32	24.60	24.91	26.65	30- 40	217.1	3900	93.9,93.9
50	11.67	11.62	11.68	10.97	11.80	12.17	12.20	13.09	40- 50	132.8	4033	97.1,97.1
60	5.328	5.091	5.113	4.730	5.179	5.463	5.465	5.923	50- 60	73.97	4107	98.9,98.9
70	1.833	1.795	1.924	1.684	1.891	1.916	1.860	2.108	60- 70	34.95	4142	99.7,99.7
80	0.3043	0.2987	0.3173	0.2785	0.3128	0.3076	0.3190	0.3545	70- 80	9.809	4151	100,100
90	0.0226	0.0138	0.0234	0.0146	0.0151	0.0139	0.0289	0.0147	80- 90	1.296	4153	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:X10cd									UNIT:lm		

Conical surface Flux(90deg): 3974.8 lm

%lum = 95.7%

%lamp = 95.7%

Conical surface Flux(120deg): 4106.7 lm

%lum = 98.9%

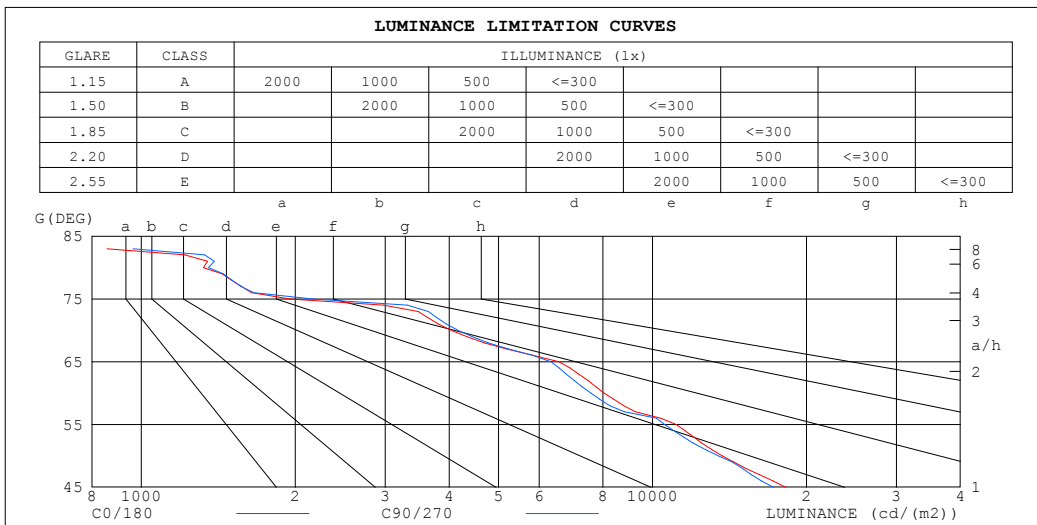
%lamp = 98.9%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm		
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 40WPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	Shielding Angle:



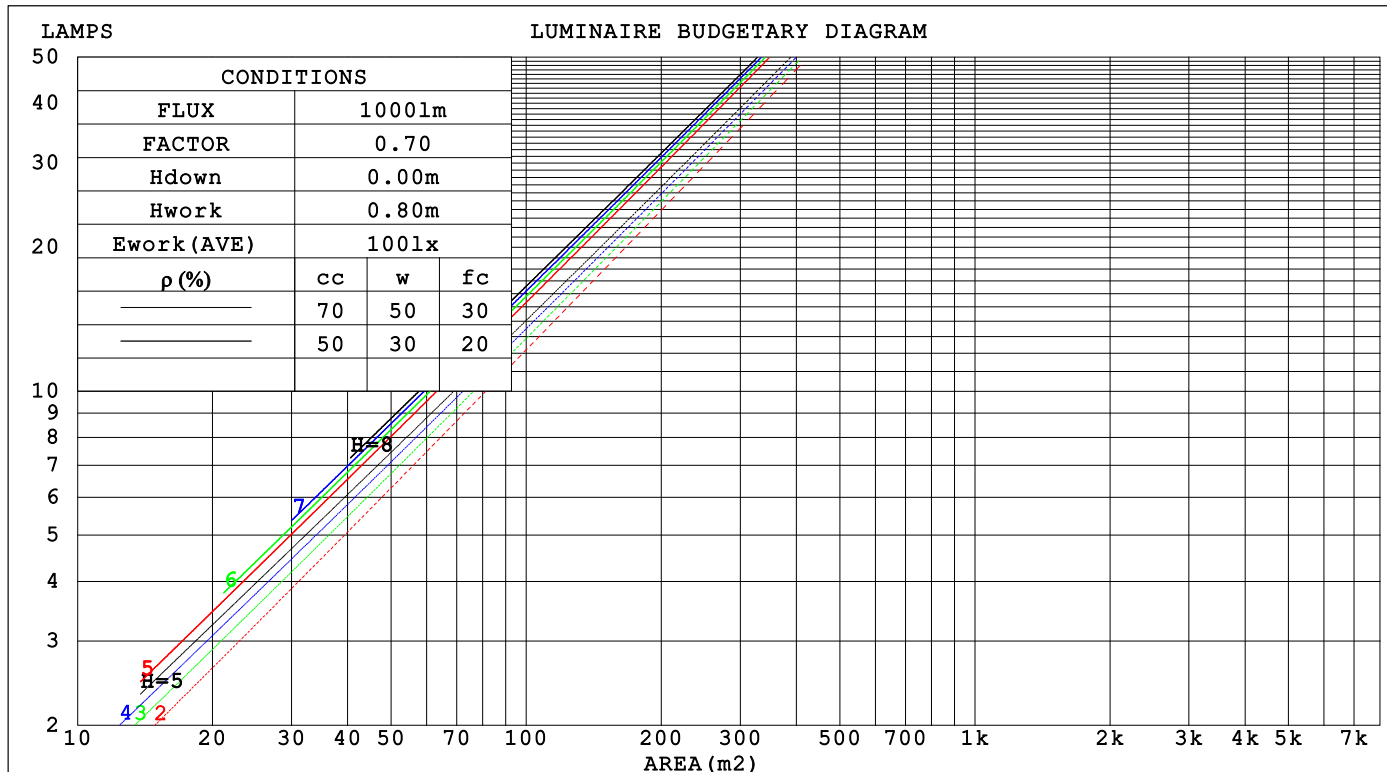
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm		
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 40WPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		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															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm		
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	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	.132	.075	.024	.125	.071	.023	.113	.065	.021	.101	.058	.019	.091	.053	.017															
2.0	.122	.067	.020	.116	.064	.020	.106	.059	.018	.097	.054	.017	.088	.050	.016															
3.0	.113	.060	.018	.108	.058	.017	.100	.054	.016	.092	.050	.015	.085	.047	.014															
4.0	.105	.054	.016	.101	.053	.016	.094	.050	.015	.087	.047	.014	.081	.044	.013															
5.0	.097	.050	.014	.094	.048	.014	.088	.046	.014	.083	.044	.013	.077	.041	.012															
6.0	.091	.046	.013	.088	.045	.013	.083	.043	.012	.078	.041	.012	.074	.039	.012															
7.0	.086	.042	.012	.083	.041	.012	.079	.040	.011	.075	.038	.011	.071	.037	.011															
8.0	.081	.039	.011	.079	.039	.011	.075	.037	.011	.071	.036	.010	.068	.035	.010															
9.0	.076	.037	.010	.075	.036	.010	.071	.035	.010	.068	.034	.010	.065	.033	.010															
10.0	.072	.035	.010	.071	.034	.010	.068	.033	.009	.065	.032	.009	.062	.031	.009															

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	.168	.158	.148	.144	.135	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.119	.128	.114	.103	.088	.079	.072	.051	.046	.042	.016	.015	.014	
3.0	.134	.113	.097	.115	.098	.084	.079	.068	.059	.046	.040	.035	.015	.013	.011	
4.0	.121	.098	.080	.104	.084	.069	.072	.059	.049	.041	.034	.029	.013	.011	.010	
5.0	.110	.085	.067	.095	.074	.058	.065	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.101	.075	.057	.087	.065	.049	.060	.046	.035	.035	.027	.021	.011	.009	.007	
7.0	.093	.067	.049	.080	.058	.042	.055	.041	.030	.032	.024	.018	.010	.008	.006	
8.0	.086	.060	.042	.074	.052	.037	.051	.036	.026	.030	.021	.016	.010	.007	.005	
9.0	.080	.054	.037	.069	.047	.032	.047	.033	.023	.028	.019	.014	.009	.006	.004	
10.0	.074	.049	.032	.064	.043	.028	.044	.030	.020	.026	.018	.012	.008	.006	.004	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm										
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 40WPE:						WEIGHT:				
SPEC.:						DIM.:		SERIAL No.:		
MFR.: Norming lighting						SUR.: 131mm		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	14.7	15.3	14.9	15.5	15.6	14.5	15.1	14.7	15.3	15.4
3H	15.0	15.5	15.2	15.7	15.9	14.8	15.4	15.0	15.6	15.7
4H	15.0	15.5	15.2	15.7	15.9	14.8	15.4	15.1	15.6	15.8
6H	14.9	15.4	15.2	15.7	15.9	14.8	15.3	15.0	15.5	15.7
8H	14.9	15.4	15.2	15.6	15.9	14.7	15.2	15.0	15.5	15.7
12H	14.8	15.3	15.1	15.6	15.8	14.7	15.2	15.0	15.4	15.7
4H 2H	14.8	15.4	15.1	15.6	15.8	14.7	15.2	14.9	15.4	15.6
3H	15.1	15.6	15.4	15.9	16.1	15.0	15.5	15.3	15.7	16.0
4H	15.1	15.6	15.5	15.9	16.2	15.0	15.5	15.3	15.7	16.0
6H	15.1	15.5	15.4	15.8	16.1	14.9	15.3	15.3	15.7	16.0
8H	15.0	15.4	15.4	15.7	16.1	14.9	15.3	15.3	15.6	16.0
12H	15.0	15.3	15.4	15.7	16.1	14.9	15.2	15.3	15.6	15.9
8H 4H	15.0	15.4	15.4	15.8	16.1	14.9	15.3	15.3	15.6	16.0
6H	15.0	15.3	15.4	15.7	16.1	14.8	15.2	15.3	15.5	16.0
8H	14.9	15.2	15.4	15.6	16.0	14.8	15.1	15.2	15.5	15.9
12H	14.9	15.1	15.3	15.5	16.0	14.7	15.0	15.2	15.4	15.9
12H 4H	15.0	15.3	15.4	15.7	16.1	14.9	15.2	15.3	15.6	15.9
6H	14.9	15.2	15.4	15.6	16.0	14.8	15.1	15.2	15.5	15.9
8H	14.9	15.1	15.3	15.5	16.0	14.7	15.0	15.2	15.4	15.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.2 / - 1.9					+ 1.2 / - 1.8				
1.5H	+ 1.4 / - 1.0					+ 1.3 / - 0.9				
2.0H	+ 2.3 / - 1.9					+ 2.2 / - 1.9				

CIE Pub.117, 4153 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 4.9)
Area: 0.0134 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm		
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 40°		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	Shielding Angle:

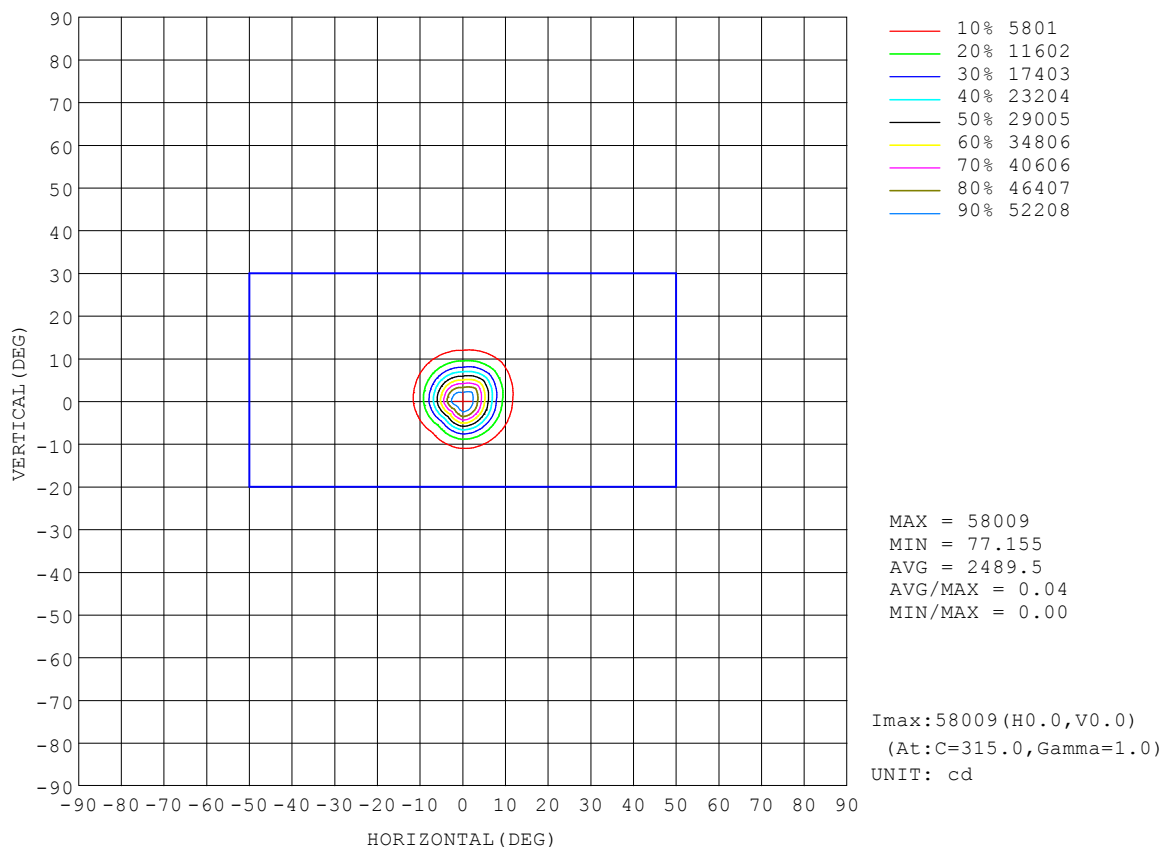
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	81	78	87	81	78	86	81	77	74
0.80	95	89	86	94	89	85	93	88	85	81
1.00	99	94	90	99	93	90	97	93	90	86
1.25	103	98	95	102	98	94	100	96	94	89
1.50	106	101	98	105	101	98	103	99	96	92
2.00	109	105	101	107	103	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	109	106	110	107	105	107	104	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	110	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: MEDIUM
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm		
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 400PE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	Shielding Angle:

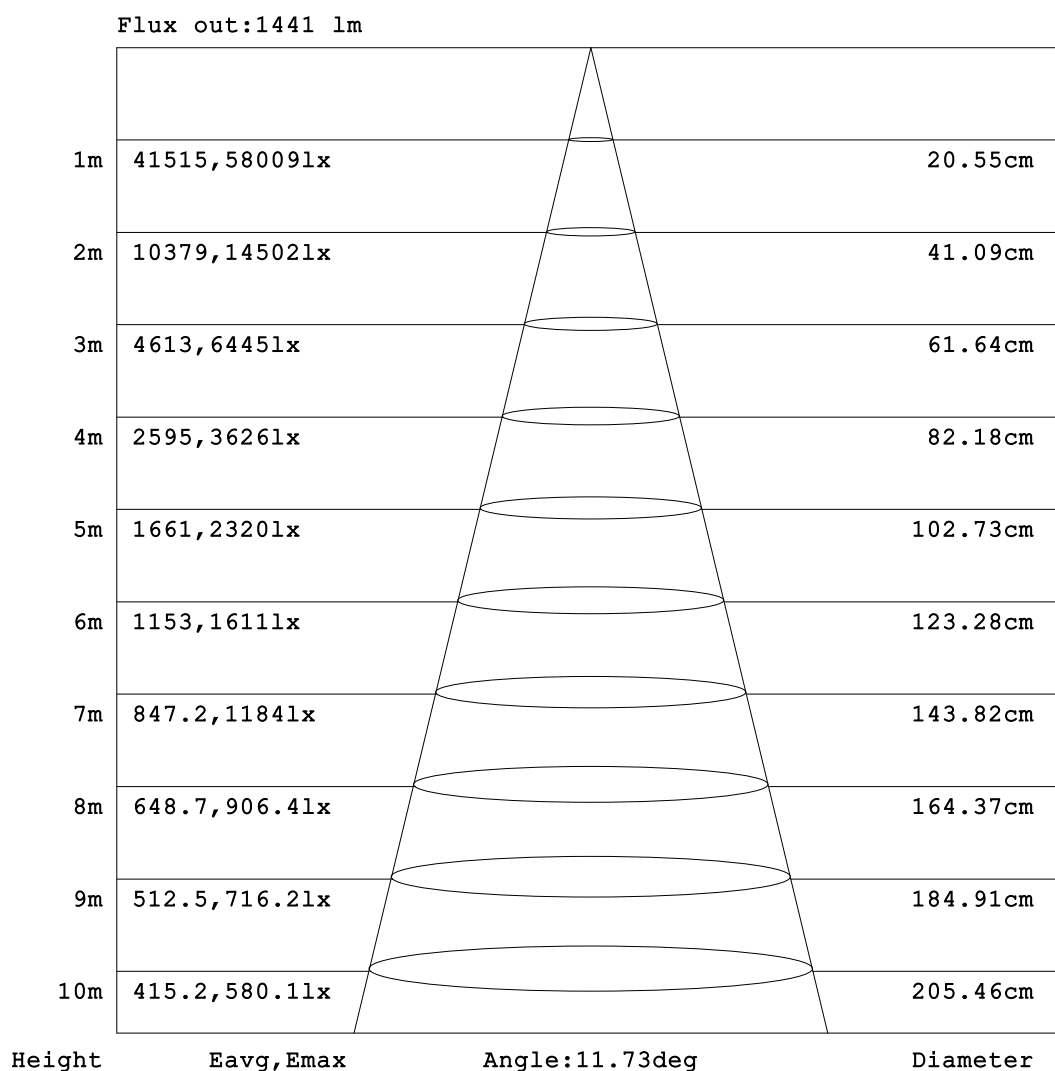


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890		Lamp Flux:4152.72x1 lm
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 40WPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	Shielding Angle:



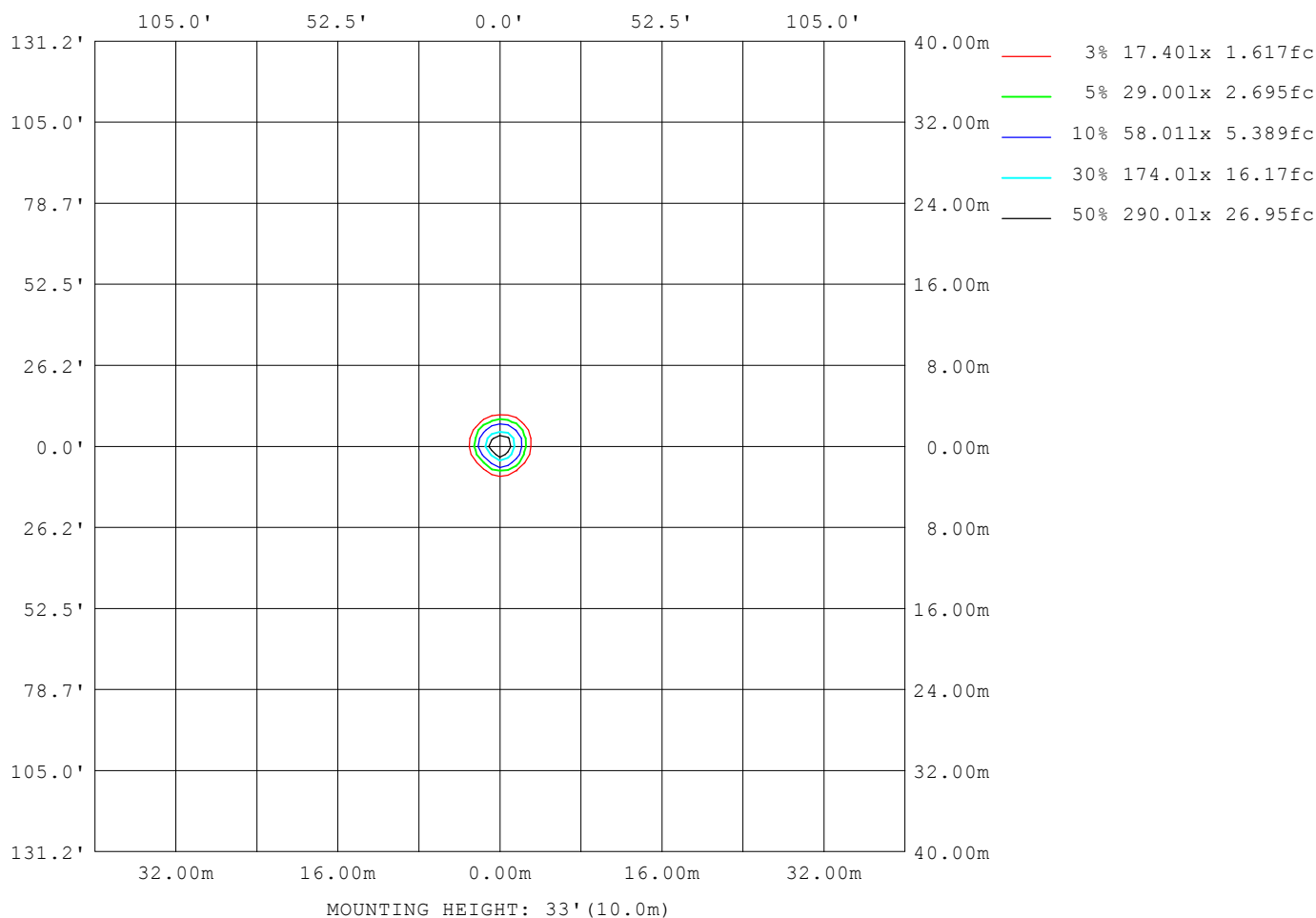
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890		Lamp Flux:4152.72x1 lm
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 40WPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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:240.2V I:0.1669A P:39.6W PF:0.9882 Freq:49.99Hz		
UTHDi:0.17% ITHDi:4.18% KDisp:0.9890 Lamp Flux:4152.72x1 lm		
NAME: FUSION GT-TR03-AHD-045-COB-01SC 4000K RA90 15D 4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 131mm	Shielding Angle:

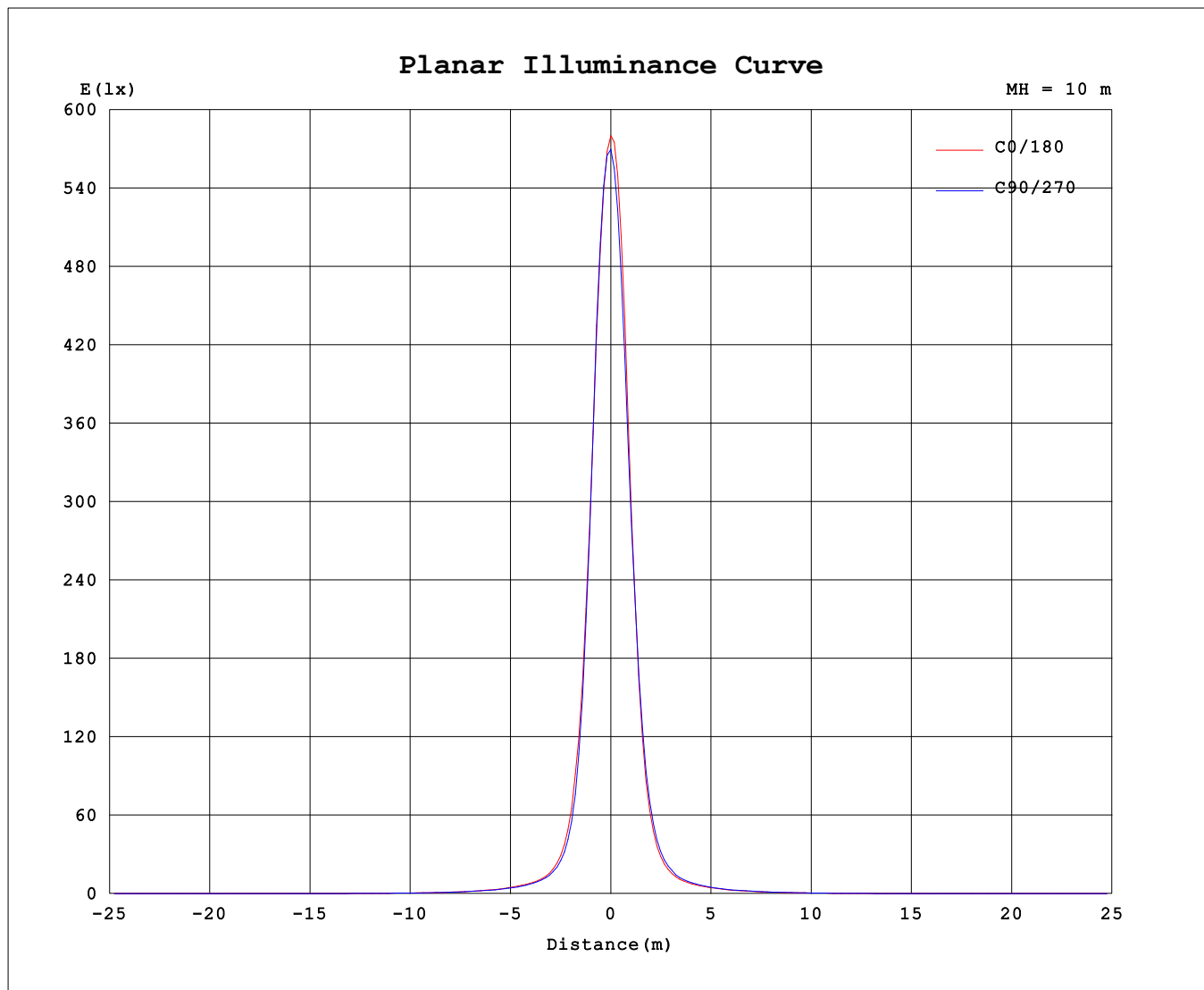
AvgL	cd/m2
L_0~180 (65) av	6442
L_0~180 (75) av	2025
L_0~180 (85) av	749
L_90~270 (65) av	6505
L_90~270 (75) av	2087
L_90~270 (85) av	834
L_45 (65) av	6457
L_45 (75) av	2176
L_45 (85) av	679

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-10-28

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: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-10-28

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	57371	57371	57371	57371	57371	57371	57371	57371
3.0	48813	48917	50321	44658	50061	49839	47976	53015
6.0	28352	27226	28223	22206	28689	29578	28439	35154
9.0	12226	11243	11189	8455	12145	13413	13169	17127
12.0	5196	4653	4455	3571	5054	5777	5756	7362
15.0	2574	2368	2290	2004	2512	2866	2905	3490
18.0	1522	1428	1423	1288	1491	1643	1709	1967
21.0	1084	1016	1012	943.0	1042	1121	1177	1326
24.0	832.1	771.7	768.4	725.6	789.6	843.6	886.4	990.7
27.0	646.6	600.3	599.9	562.7	616.0	654.5	683.5	759.2
30.0	498.0	466.5	469.6	438.9	479.9	509.6	529.1	579.3
33.0	395.7	375.8	376.1	354.7	384.5	408.0	419.6	454.7
36.0	317.6	306.4	306.6	288.8	311.8	330.1	335.9	362.2
39.0	253.0	248.5	245.5	234.0	249.8	263.8	267.7	285.5
42.0	206.1	203.0	201.1	193.0	204.9	214.4	217.0	230.9
45.0	170.8	165.7	164.7	155.8	167.1	173.9	176.7	190.7
48.0	135.0	134.7	135.4	128.5	136.6	140.7	141.0	151.9
51.0	108.9	107.5	107.8	101.5	109.3	112.3	113.9	122.0
54.0	90.11	87.53	87.27	81.96	88.26	91.55	93.70	99.65
57.0	66.79	63.85	64.72	58.93	65.98	68.37	68.80	77.93
60.0	53.28	50.91	51.13	47.30	51.79	54.63	54.65	59.23
63.0	43.20	41.21	41.57	38.17	41.84	44.32	44.18	48.02
66.0	31.52	30.09	31.99	27.24	32.04	32.89	32.31	37.67
69.0	20.53	20.03	21.44	18.68	20.95	21.47	20.84	23.97
72.0	14.88	14.70	15.77	13.87	15.30	15.59	15.17	16.89
75.0	6.717	6.369	7.576	5.405	7.332	7.548	6.901	10.87
78.0	4.137	4.008	4.219	3.659	4.137	4.156	4.244	4.591
81.0	2.794	2.734	2.934	2.433	2.807	2.808	2.985	2.932
84.0	1.037	0.9435	1.098	0.8352	1.120	1.045	1.257	1.327
87.0	0.4763	0.3660	0.5179	0.2749	0.4677	0.4559	0.6177	0.5717
90.0	0.2259	0.1379	0.2337	0.1458	0.1509	0.1389	0.2893	0.1474

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-28

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: