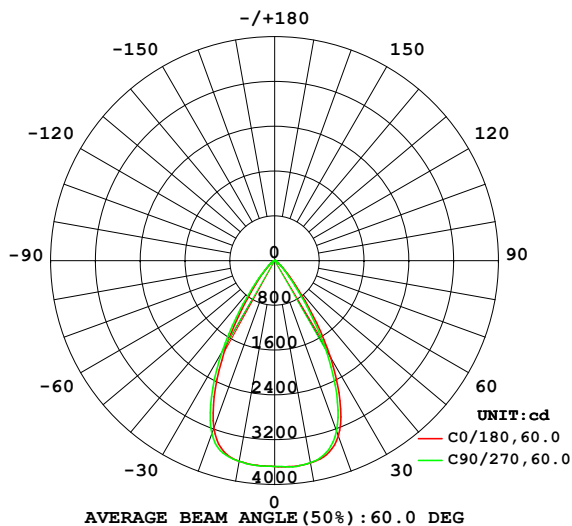


LUMINAIRE PHOTOMETRIC TEST REPORT

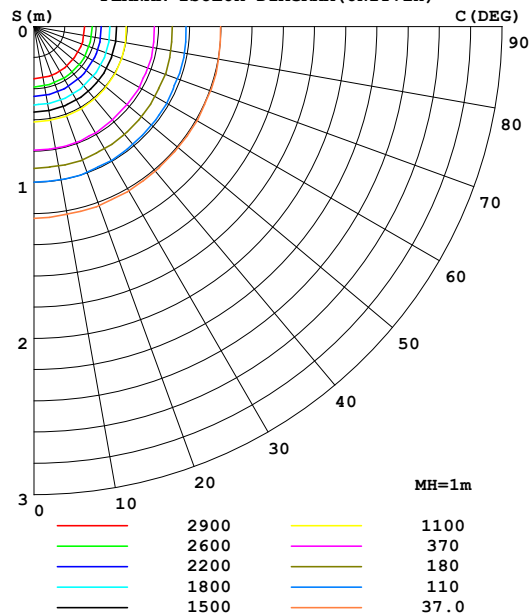
Test:U:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm		
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.12 lm/W			
MODEL		Imax (cd)	3700	S/MH(C0/180)	0.86
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.89
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	3543.1	η UP,DN(C0-180)	0.0,50.4
NOMINAL FLUX(lm)	3543.07	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	240.25	η down (%)	100.0	CIBSE SHR MAX	0.90

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:2024-10-29

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	3667	3672	3665	3645	3639	3638	3639	3642	0- 10	350.5	350.5	9.89,9.89
20	3331	3278	3235	3194	3175	3217	3288	3324	10- 20	992.3	1343	37.9,37.9
30	2004	1942	1819	1724	1686	1743	1879	1987	20- 30	1189	2532	71.5,71.5
40	602.3	570.7	514.7	485.9	471.7	497.2	552.8	593.0	30- 40	676.3	3208	90.5,90.5
50	159.7	148.9	141.7	137.4	132.2	133.7	150.0	160.3	40- 50	224.0	3432	96.9,96.9
60	52.10	46.03	43.10	41.70	40.63	40.83	46.65	50.79	50- 60	79.07	3511	99.1,99.1
70	15.08	14.71	13.30	11.18	10.19	11.76	14.11	14.89	60- 70	25.72	3537	99.8,99.8
80	2.837	2.751	2.533	2.296	2.176	2.381	2.666	2.759	70- 80	5.347	3542	100,100
90	0.1113	0.0870	0.1144	0.0953	0.0969	0.0889	0.0968	0.0799	80- 90	1.028	3543	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): 3351.1 lm

%lum = 94.6%

%lamp = 94.6%

Conical surface Flux(120deg): 3511 lm

%lum = 99.1%

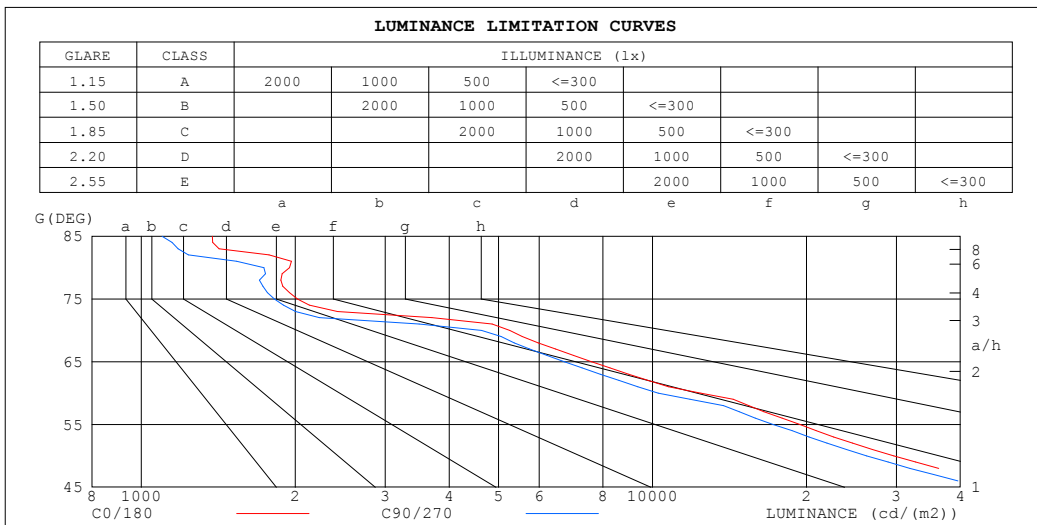
%lamp = 99.1%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm		
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	Shielding Angle:



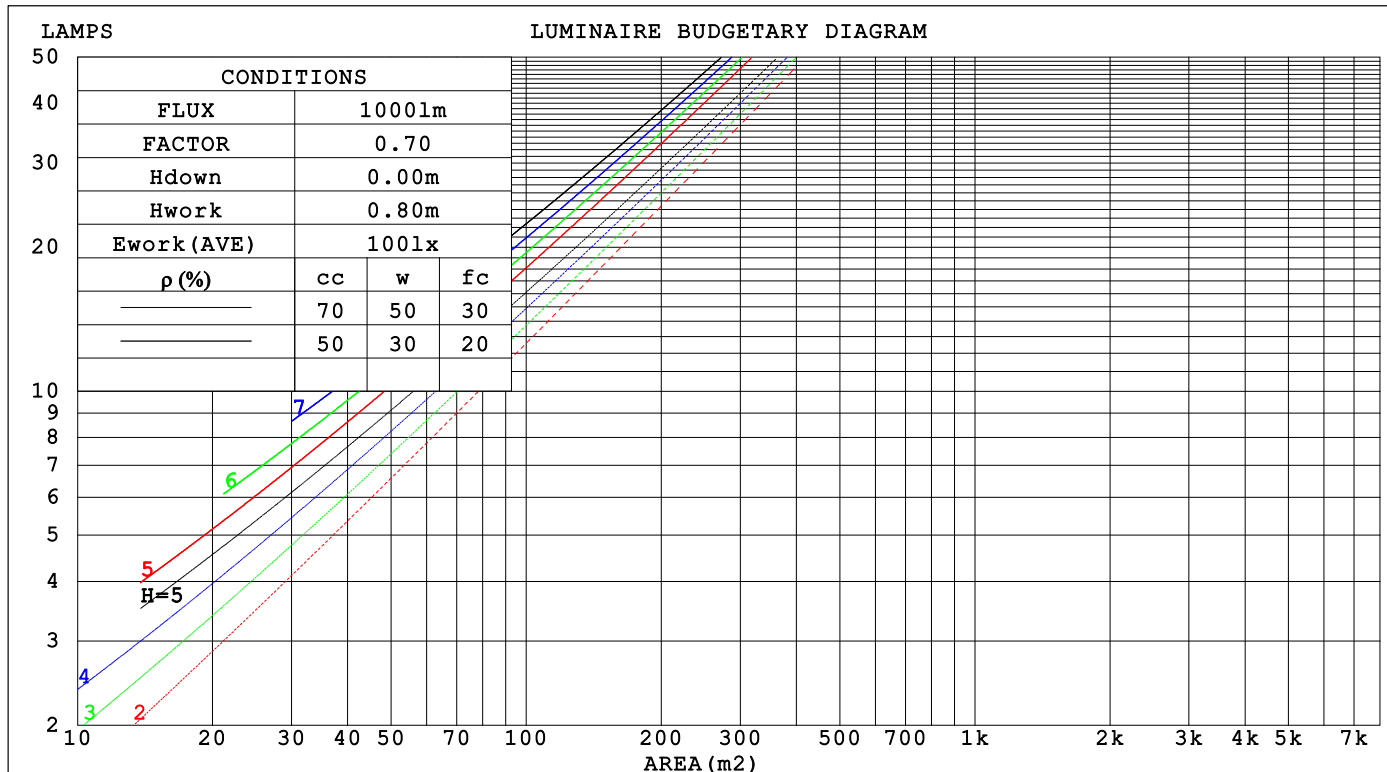
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm		
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	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: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm		
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	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	.181	.103	.033	.174	.099	.032	.161	.093	.030	.150	.086	.028	.139	.081	.026															
2.0	.174	.095	.029	.168	.093	.028	.157	.087	.027	.148	.083	.026	.138	.078	.025															
3.0	.166	.088	.026	.161	.086	.026	.152	.082	.025	.143	.079	.024	.135	.075	.023															
4.0	.158	.082	.024	.154	.080	.024	.146	.077	.023	.138	.074	.022	.132	.072	.022															
5.0	.150	.077	.022	.147	.075	.022	.140	.073	.021	.133	.070	.021	.128	.068	.020															
6.0	.143	.072	.021	.140	.071	.020	.134	.069	.020	.129	.067	.020	.123	.065	.019															
7.0	.137	.068	.019	.134	.067	.019	.129	.065	.019	.124	.064	.018	.119	.062	.018															
8.0	.131	.064	.018	.129	.063	.018	.124	.062	.018	.119	.060	.017	.115	.059	.017															
9.0	.126	.061	.017	.123	.060	.017	.119	.059	.017	.115	.058	.016	.111	.056	.016															
10.0	.120	.058	.016	.118	.057	.016	.115	.056	.016	.111	.055	.016	.107	.054	.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	.171	.157	.145	.147	.135	.124	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.086	.062	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.126	.087	.059	.108	.076	.051	.074	.053	.036	.043	.031	.022	.014	.010	.007	
6.0	.118	.078	.049	.102	.068	.043	.070	.047	.030	.041	.028	.018	.013	.009	.006	
7.0	.112	.071	.042	.096	.061	.036	.067	.043	.026	.039	.025	.015	.013	.008	.005	
8.0	.106	.064	.036	.092	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.101	.059	.031	.087	.051	.027	.061	.036	.019	.035	.021	.011	.011	.007	.004	
10.0	.097	.055	.027	.083	.048	.024	.058	.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:2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm										
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:						WEIGHT:				
SPEC.:						DIM.:			SERIAL No.:	
MFR.: Norming lighting						SUR.: 104mm			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	22.1	23.1	22.3	23.2	23.4	21.5	22.5	21.8	22.7	22.8
3H	22.0	22.9	22.2	23.1	23.3	21.4	22.3	21.7	22.5	22.7
4H	21.9	22.7	22.2	22.9	23.2	21.3	22.2	21.6	22.4	22.6
6H	21.8	22.6	22.1	22.8	23.1	21.2	22.0	21.5	22.3	22.5
8H	21.8	22.5	22.1	22.8	23.0	21.2	22.0	21.5	22.2	22.5
12H	21.7	22.4	22.0	22.7	23.0	21.1	21.9	21.5	22.1	22.4
4H 2H	21.9	22.7	22.2	22.9	23.2	21.3	22.2	21.6	22.4	22.6
3H	21.8	22.5	22.1	22.8	23.0	21.2	21.9	21.5	22.2	22.5
4H	21.7	22.3	22.0	22.6	22.9	21.1	21.8	21.5	22.1	22.4
6H	21.6	22.2	22.0	22.5	22.9	21.0	21.6	21.4	22.0	22.3
8H	21.5	22.1	21.9	22.4	22.8	21.0	21.5	21.4	21.9	22.3
12H	21.5	22.0	21.9	22.4	22.7	21.0	21.4	21.4	21.8	22.2
8H 4H	21.5	22.1	21.9	22.4	22.8	21.0	21.5	21.4	21.9	22.3
6H	21.5	21.9	21.9	22.3	22.7	20.9	21.3	21.3	21.7	22.2
8H	21.4	21.8	21.9	22.2	22.6	20.9	21.2	21.3	21.7	22.1
12H	21.4	21.7	21.8	22.1	22.6	20.8	21.1	21.3	21.6	22.0
12H 4H	21.5	22.0	21.9	22.4	22.7	20.9	21.4	21.4	21.8	22.2
6H	21.4	21.8	21.8	22.2	22.6	20.9	21.2	21.3	21.7	22.1
8H	21.4	21.7	21.8	22.1	22.6	20.8	21.1	21.3	21.6	22.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 3.1 / - 6.5					+ 2.6 / - 6.4				
1.5H	+ 4.8 / - 4.8					+ 4.3 / - 4.5				
2.0H	+ 4.8 / - 5.2					+ 4.4 / - 5.0				

CIE Pub.117, 3543 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 4.4$)
Area: 0.0084 m²

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm		
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		Shielding Angle:
DIM.:		
SUR.: 104mm		

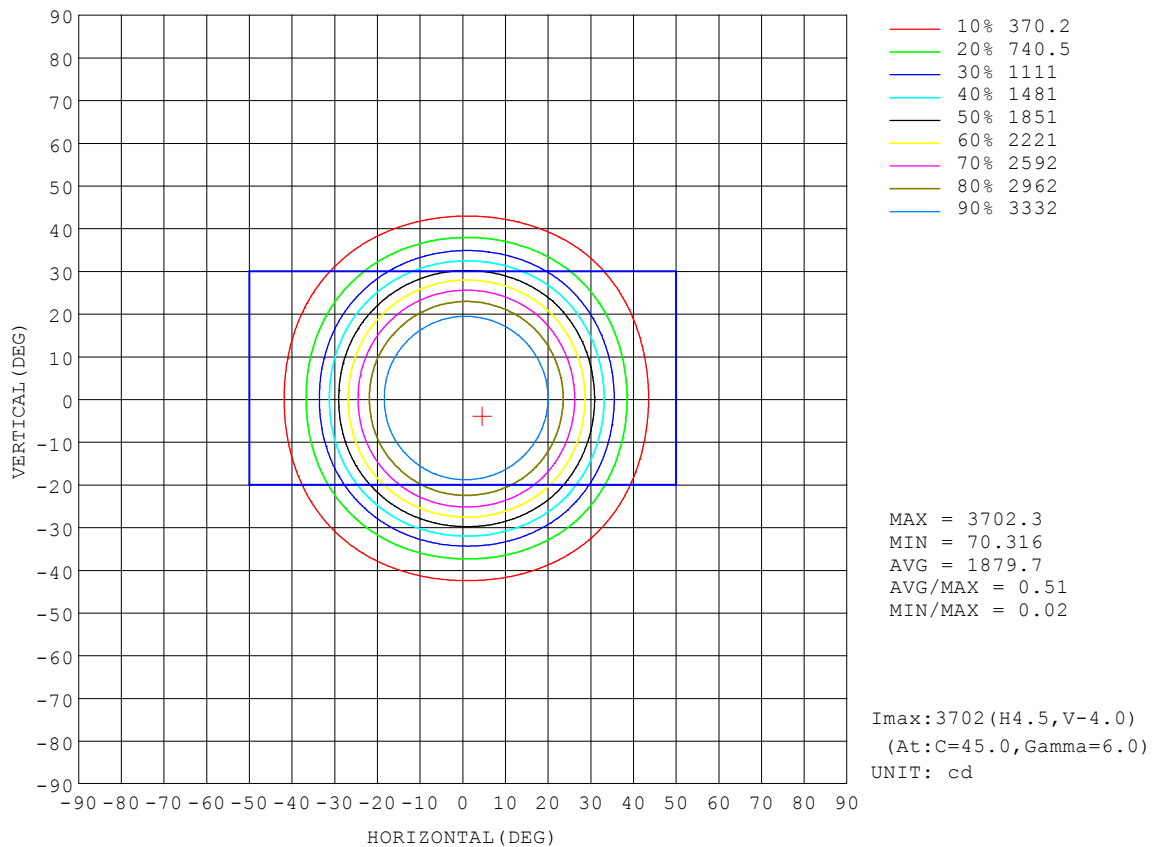
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	84	78	75	71
0.80	93	87	83	93	87	83	91	86	83	79
1.00	98	92	88	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	100	96	102	98	95	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	107	104	106	104	102	95
4.00	114	111	108	111	109	107	108	106	104	97
5.00	115	112	111	113	111	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: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm		
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	Shielding Angle:

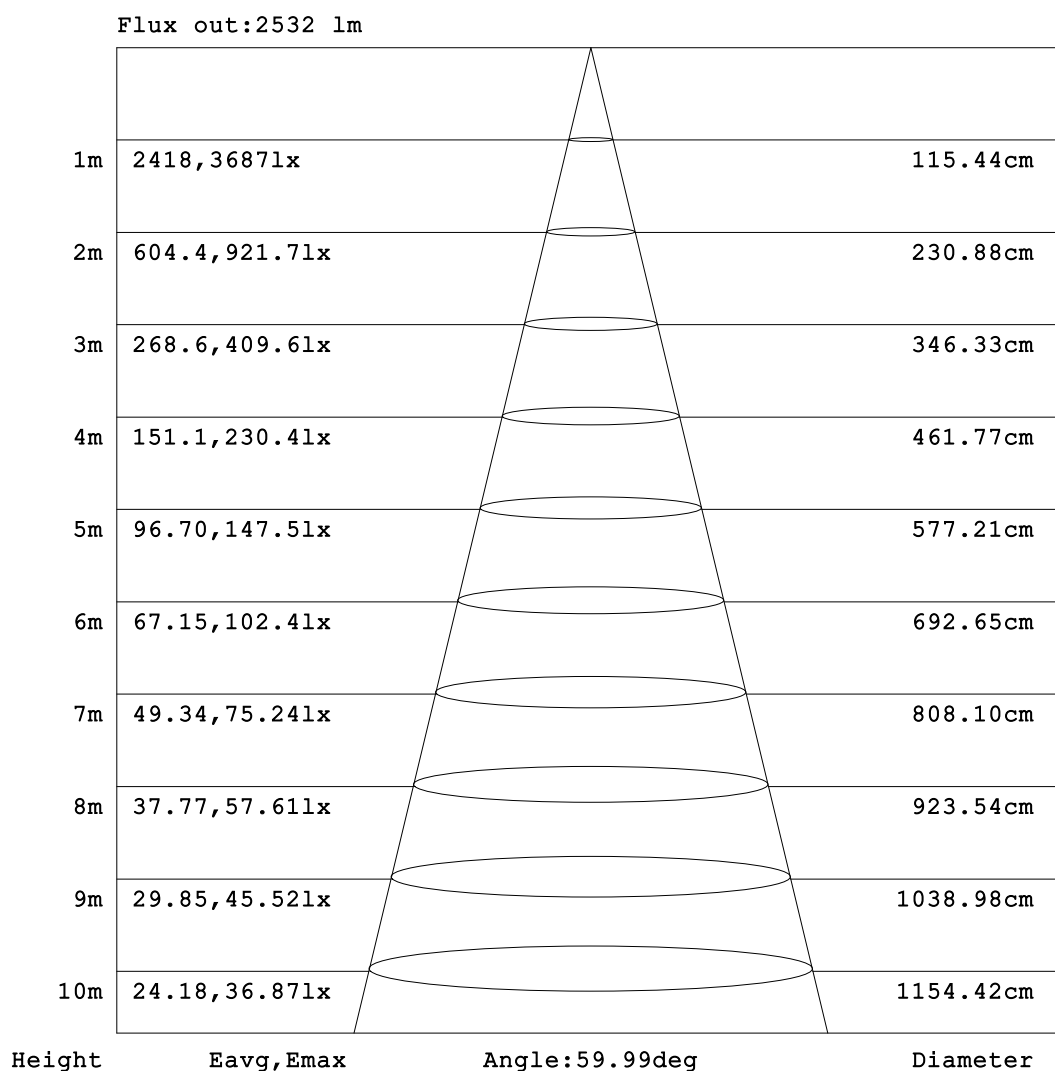


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821		Lamp Flux:3543.07x1 lm
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	Shielding Angle:



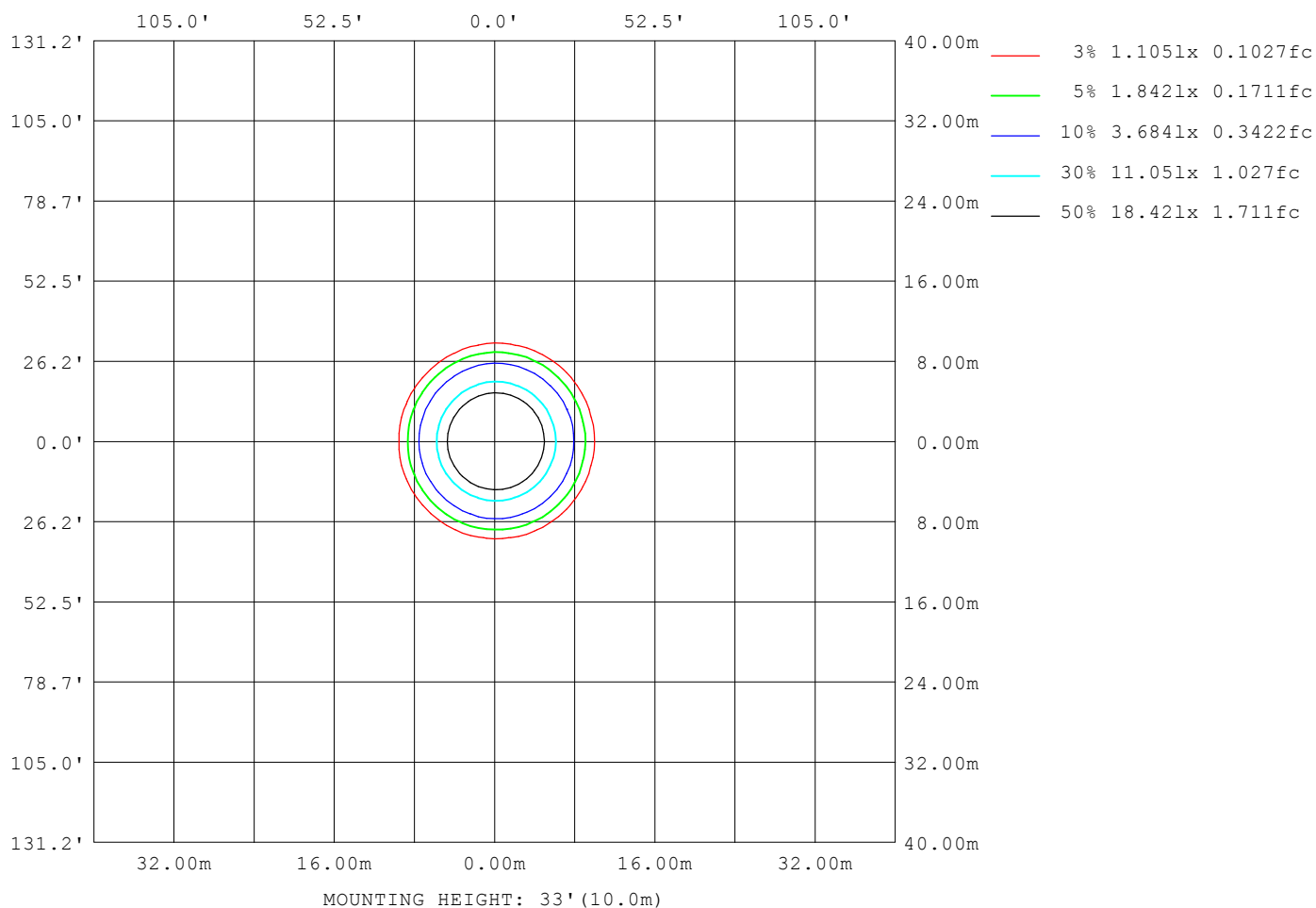
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821		Lamp Flux:3543.07x1 lm
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-10-29

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:240.3V I:0.1273A P:30.0W PF:0.9804 Freq:49.99Hz		
UTHDi:0.18% ITHDi:5.93% KDisp:0.9821 Lamp Flux:3543.07x1 lm		
NAME: FUSION GT-TR02-AHD-035-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 104mm	Shielding Angle:

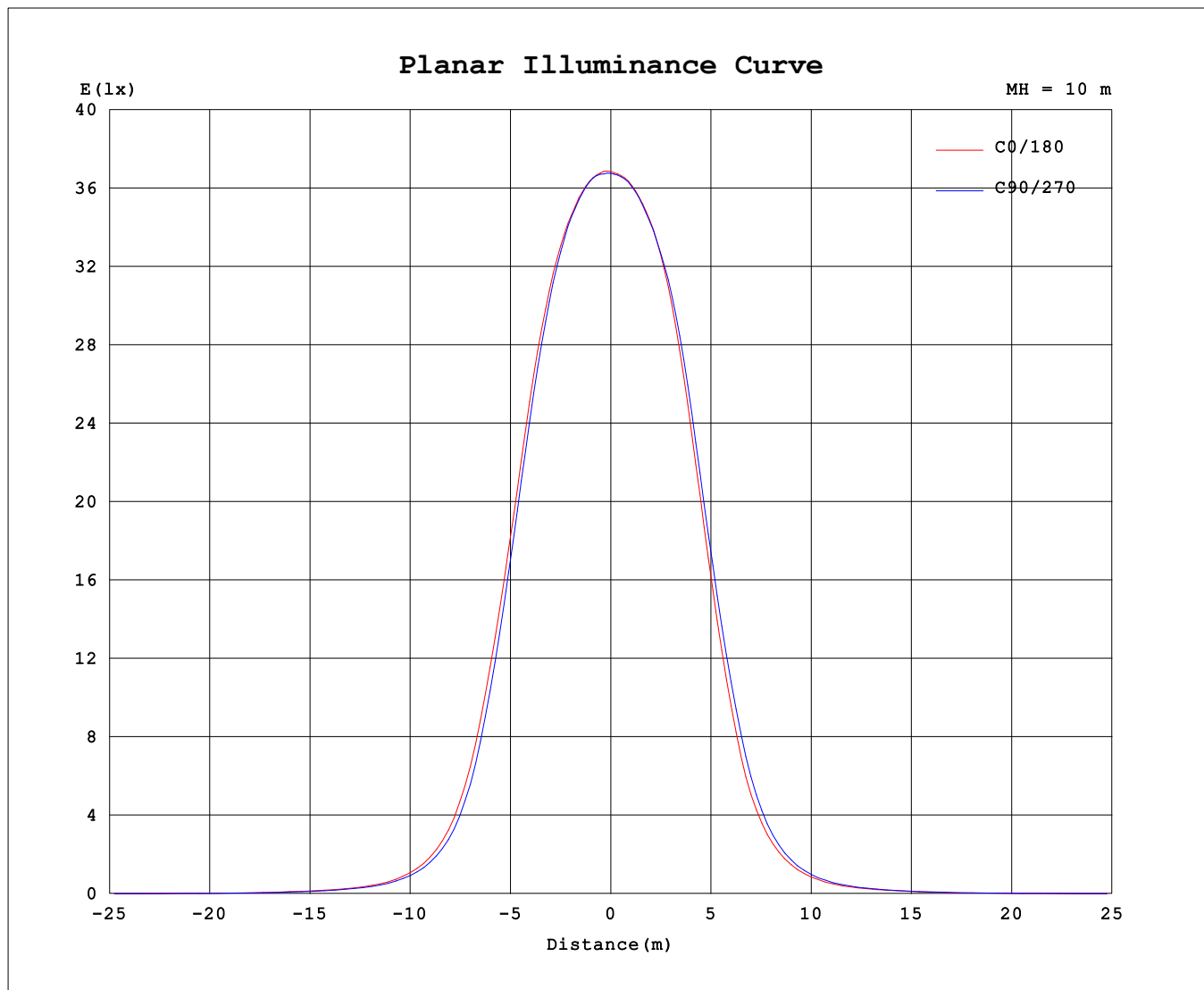
AvgL	cd/m2
L_0~180 (65) av	6966
L_0~180 (75) av	1842
L_0~180 (85) av	1124
L_90~270 (65) av	6975
L_90~270 (75) av	1831
L_90~270 (85) av	1112
L_45 (65) av	6877
L_45 (75) av	1824
L_45 (85) av	1087

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-10-29

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: 2024-10-29

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	3677	3677	3677	3677	3677	3677	3677	3677
3.0	3685	3690	3688	3680	3672	3669	3674	3681
6.0	3689	3700	3695	3680	3667	3664	3669	3678
9.0	3677	3682	3675	3653	3647	3646	3648	3653
12.0	3647	3645	3640	3625	3613	3615	3617	3618
15.0	3589	3566	3555	3546	3527	3543	3559	3560
18.0	3462	3418	3395	3373	3358	3389	3437	3449
21.0	3245	3193	3137	3086	3065	3109	3191	3240
24.0	2897	2851	2766	2690	2664	2710	2815	2888
27.0	2477	2427	2313	2221	2185	2240	2370	2467
30.0	2004	1942	1819	1724	1686	1743	1879	1987
33.0	1501	1440	1318	1234	1190	1259	1388	1484
36.0	1038	986.9	896.5	828.0	806.1	862.0	953.5	1027
39.0	689.7	655.1	589.5	555.2	540.1	571.1	635.8	681.0
42.0	456.5	431.0	392.4	371.5	360.0	377.5	420.0	450.6
45.0	303.3	283.7	263.0	250.5	240.7	249.1	278.5	300.1
48.0	203.6	190.3	179.2	172.5	166.4	168.9	189.3	203.2
51.0	142.1	132.5	126.6	123.3	118.6	119.9	134.0	143.2
54.0	102.9	96.46	92.65	90.65	87.79	88.35	98.06	103.8
57.0	75.46	69.41	67.64	65.91	64.59	65.17	72.15	76.44
60.0	52.10	46.03	43.10	41.70	40.63	40.83	46.65	50.79
63.0	34.22	31.16	30.16	29.28	28.54	28.60	32.47	34.63
66.0	23.89	22.13	21.24	20.44	20.13	20.28	22.71	24.11
69.0	16.72	16.26	15.23	14.24	13.92	14.78	15.97	16.59
72.0	9.592	8.246	5.786	5.115	4.956	5.349	6.300	8.980
75.0	4.388	4.229	3.964	3.673	3.621	3.736	3.998	4.219
78.0	3.266	3.160	2.975	2.921	2.890	2.968	3.107	3.189
81.0	2.579	2.419	2.020	1.663	1.524	1.712	2.195	2.448
84.0	1.209	1.122	1.009	0.8704	0.8300	0.8641	1.018	1.128
87.0	0.6179	0.5264	0.4317	0.3086	0.2789	0.3180	0.4586	0.5404
90.0	0.1113	0.0870	0.1144	0.0953	0.0969	0.0889	0.0968	0.0799

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-10-29

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: