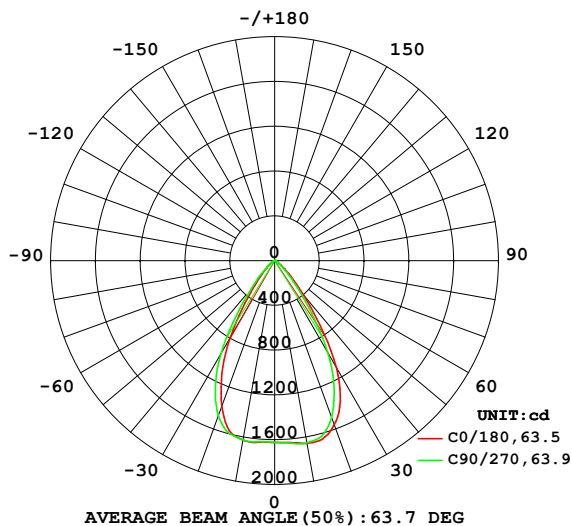


LUMINAIRE PHOTOMETRIC TEST REPORT

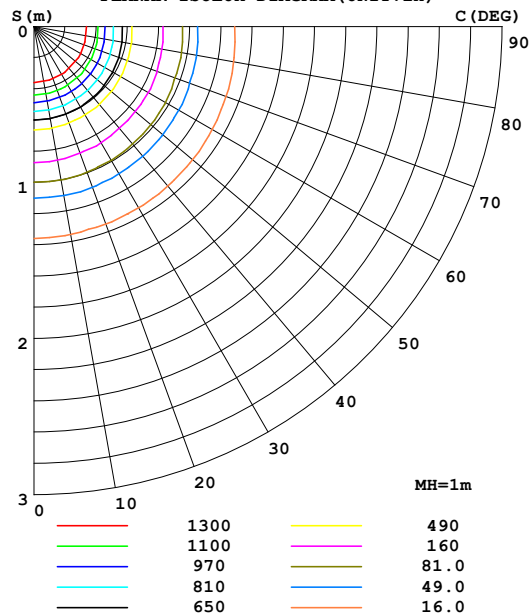
Test:U:240.5V I:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808 Lamp Flux:1748.07x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K RA90 60D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.78 lm/W			
MODEL		Imax (cd)	1664	S/MH(C0/180)	0.88
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.94
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1748.1	η UP,DN(C0-180)	0.0,51.6
NOMINAL FLUX(lm)	1748.07	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	240.43	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:2024-11-06

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	1657	1664	1654	1638	1628	1630	1626	1647	0- 10	156.3	156.3	8.94,8.94
20	1559	1534	1489	1419	1382	1407	1471	1532	10- 20	448.1	604.3	34.6,34.6
30	1104	1058	952.0	851.2	797.2	847.3	959.6	1054	20- 30	566.3	1171	67,67
40	410.3	380.6	322.0	269.7	246.9	261.8	323.4	377.1	30- 40	373.3	1544	88.3,88.3
50	119.7	109.3	90.24	74.33	68.73	73.58	88.11	104.9	40- 50	140.8	1685	96.4,96.4
60	30.73	29.87	25.79	21.59	19.65	20.88	25.44	27.29	50- 60	45.92	1731	99,99
70	8.121	7.834	7.127	6.668	6.120	6.242	6.860	7.549	60- 70	13.64	1744	99.8,99.8
80	1.462	1.477	1.407	1.316	1.266	1.272	1.336	1.392	70- 80	3.316	1748	100,100
90	0.0562	0.0379	0.0492	0.0380	0.0424	0.0369	0.0418	0.0386	80- 90	0.4679	1748	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): 1633.1 lm

%lum = 93.4%

%lamp = 93.4%

Conical surface Flux(120deg): 1730.6 lm

%lum = 99.0%

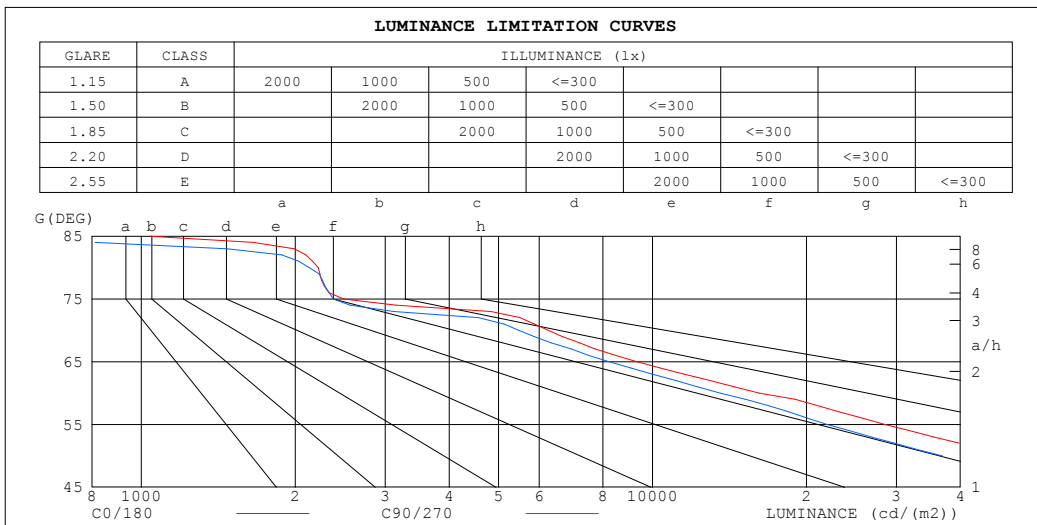
%lamp = 99.0%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808 Lamp Flux:1748.07x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K RA90 60D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



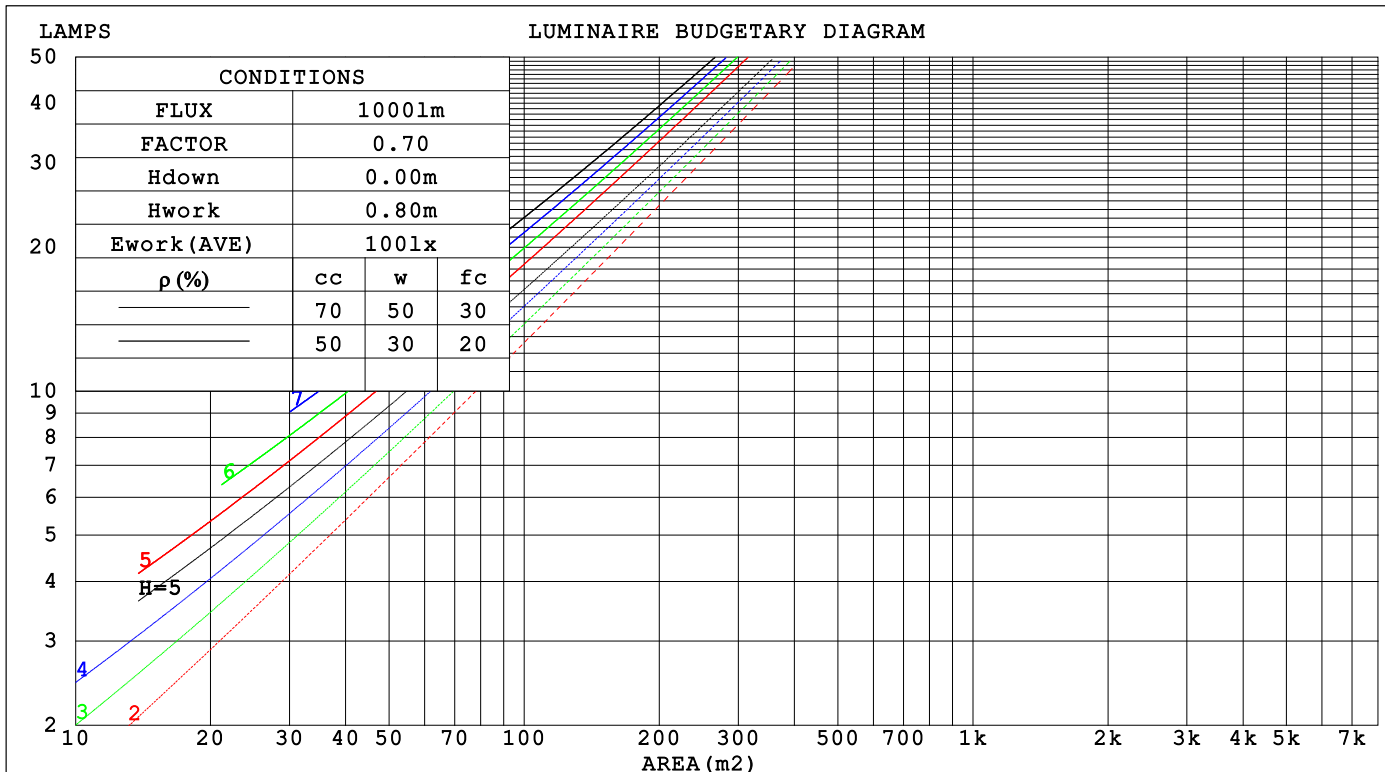
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808 Lamp Flux:1748.07x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K RA90 60D	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															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808 Lamp Flux:1748.07x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K 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	.186	.106	.033	.179	.102	.032	.166	.095	.030	.155	.089	.029	.144	.083	.027	
2.0	.179	.098	.030	.173	.095	.029	.162	.090	.028	.153	.086	.027	.144	.081	.026	
3.0	.171	.091	.027	.166	.089	.027	.157	.085	.026	.148	.081	.025	.141	.078	.024	
4.0	.163	.085	.025	.159	.083	.025	.151	.080	.024	.143	.077	.023	.137	.074	.023	
5.0	.155	.079	.023	.152	.078	.023	.145	.075	.022	.138	.073	.022	.132	.071	.021	
6.0	.148	.074	.021	.145	.073	.021	.139	.071	.021	.133	.069	.020	.128	.067	.020	
7.0	.142	.070	.020	.139	.069	.020	.133	.067	.019	.128	.066	.019	.123	.064	.019	
8.0	.135	.066	.019	.133	.065	.018	.128	.064	.018	.123	.062	.018	.119	.061	.018	
9.0	.130	.063	.017	.127	.062	.017	.123	.061	.017	.119	.060	.017	.115	.058	.017	
10.0	.124	.060	.017	.122	.059	.016	.118	.058	.016	.114	.057	.016	.111	.056	.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	.039	.017	.015	.013		
3.0	.145	.114	.088	.125	.098	.077	.086	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.136	.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	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005		
8.0	.108	.065	.035	.093	.056	.031	.064	.040	.022	.037	.023	.013	.012	.008	.004		
9.0	.103	.060	.030	.089	.052	.027	.062	.036	.019	.036	.022	.011	.012	.007	.004		
10.0	.099	.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:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz UTHDi:0.17% ITHDi:6.45% KDisp:0.9808Lamp Flux:1748.07x1 lm										
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K 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	24.1	25.1	24.4	25.3	25.5	23.3	24.3	23.5	24.5	24.6
3H	24.0	24.9	24.2	25.1	25.3	23.2	24.1	23.4	24.3	24.5
4H	23.9	24.8	24.2	25.0	25.2	23.1	23.9	23.4	24.2	24.4
6H	23.8	24.6	24.1	24.9	25.1	23.0	23.8	23.3	24.0	24.3
8H	23.8	24.6	24.1	24.8	25.1	22.9	23.7	23.3	24.0	24.2
12H	23.7	24.5	24.1	24.7	25.0	22.9	23.6	23.2	23.9	24.2
4H 2H	23.9	24.8	24.2	25.0	25.2	23.1	24.0	23.4	24.2	24.4
3H	23.8	24.5	24.1	24.8	25.1	23.0	23.7	23.3	24.0	24.3
4H	23.7	24.4	24.0	24.7	25.0	22.9	23.6	23.2	23.9	24.2
6H	23.6	24.2	24.0	24.5	24.9	22.8	23.4	23.2	23.7	24.1
8H	23.6	24.1	24.0	24.5	24.8	22.8	23.3	23.1	23.7	24.0
12H	23.5	24.0	23.9	24.4	24.8	22.7	23.2	23.1	23.6	24.0
8H 4H	23.6	24.1	24.0	24.5	24.8	22.8	23.3	23.1	23.7	24.0
6H	23.5	23.9	23.9	24.3	24.7	22.7	23.1	23.1	23.5	23.9
8H	23.4	23.8	23.9	24.2	24.7	22.6	23.0	23.1	23.4	23.9
12H	23.4	23.7	23.8	24.1	24.6	22.6	22.9	23.0	23.3	23.8
12H 4H	23.5	24.0	23.9	24.4	24.8	22.7	23.2	23.1	23.6	24.0
6H	23.4	23.8	23.9	24.2	24.7	22.6	23.0	23.1	23.4	23.9
8H	23.4	23.7	23.8	24.1	24.6	22.6	22.9	23.0	23.3	23.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.8 / - 6.8					+ 2.3 / - 6.9				
1.5H	+ 4.2 / - 5.1					+ 3.7 / - 4.6				
2.0H	+ 5.2 / - 6.4					+ 4.6 / - 5.6				

CIE Pub.117, 1748 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.9$)
Area: 0.0038 m²

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808 Lamp Flux:1748.07x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K RA90 60D TYPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		Shielding Angle:

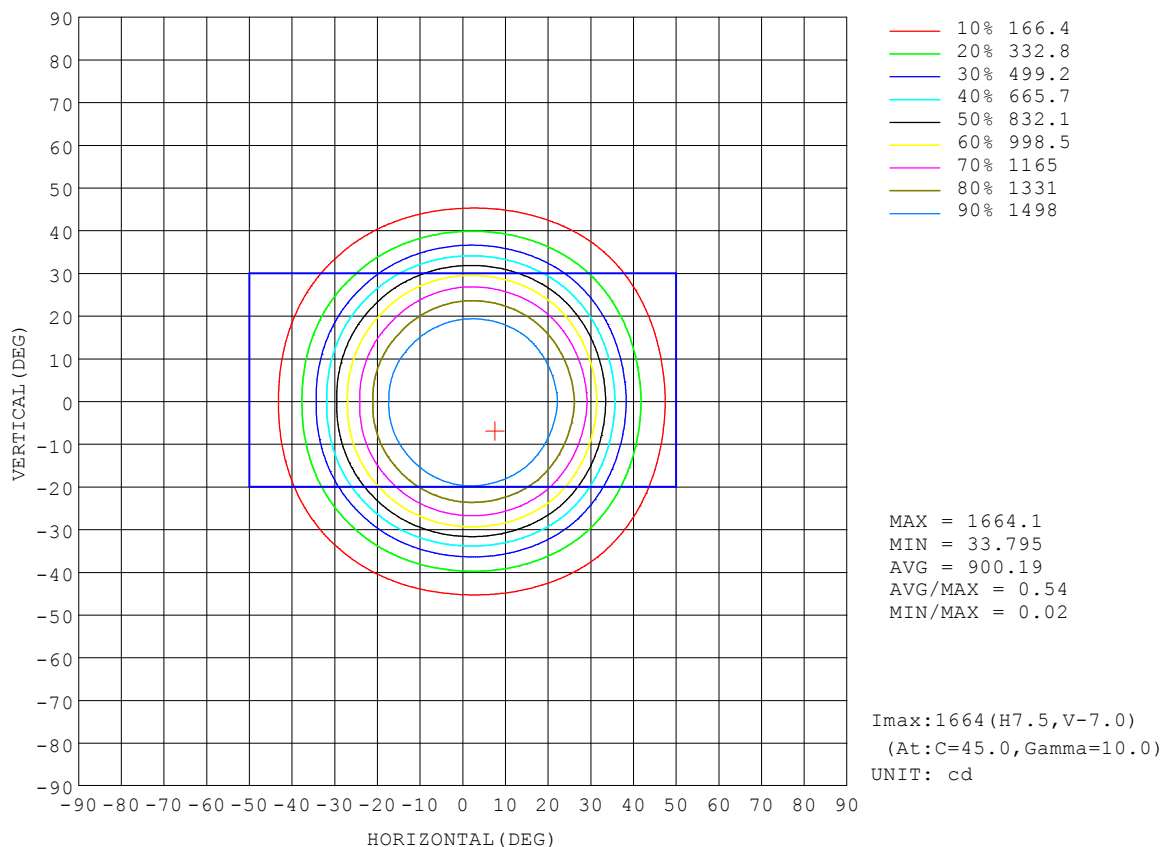
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	86	82	91	85	81	90	85	81	77
1.00	97	91	87	96	91	87	95	91	86	82
1.25	102	96	92	101	95	92	99	94	91	87
1.50	105	100	96	103	99	95	101	97	94	90
2.00	108	103	100	106	102	99	103	100	98	92
2.50	110	105	102	108	104	101	105	102	99	93
3.00	111	108	105	109	106	104	106	103	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	112	110	109	108	107	105	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:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808 Lamp Flux:1748.07x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

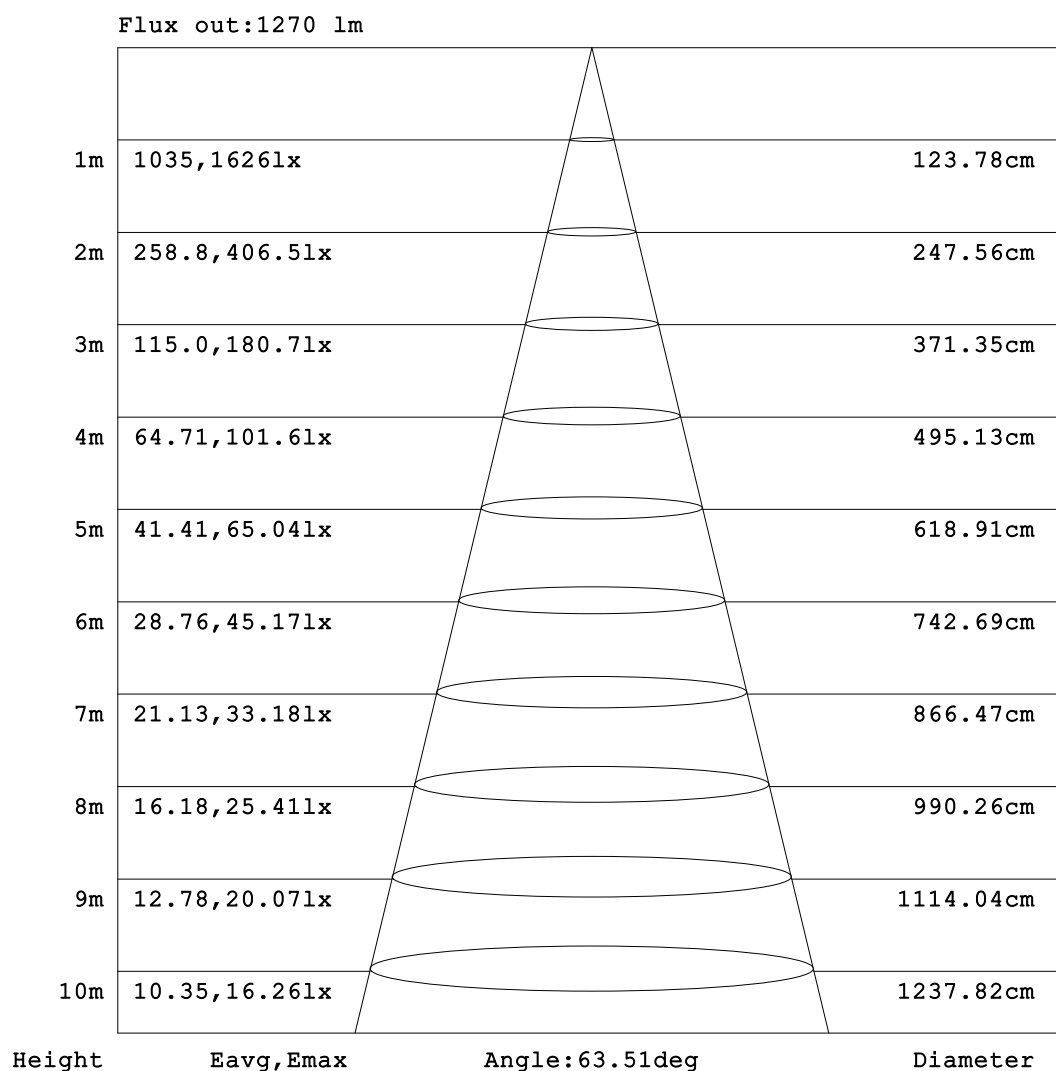


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808		Lamp Flux:1748.07x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



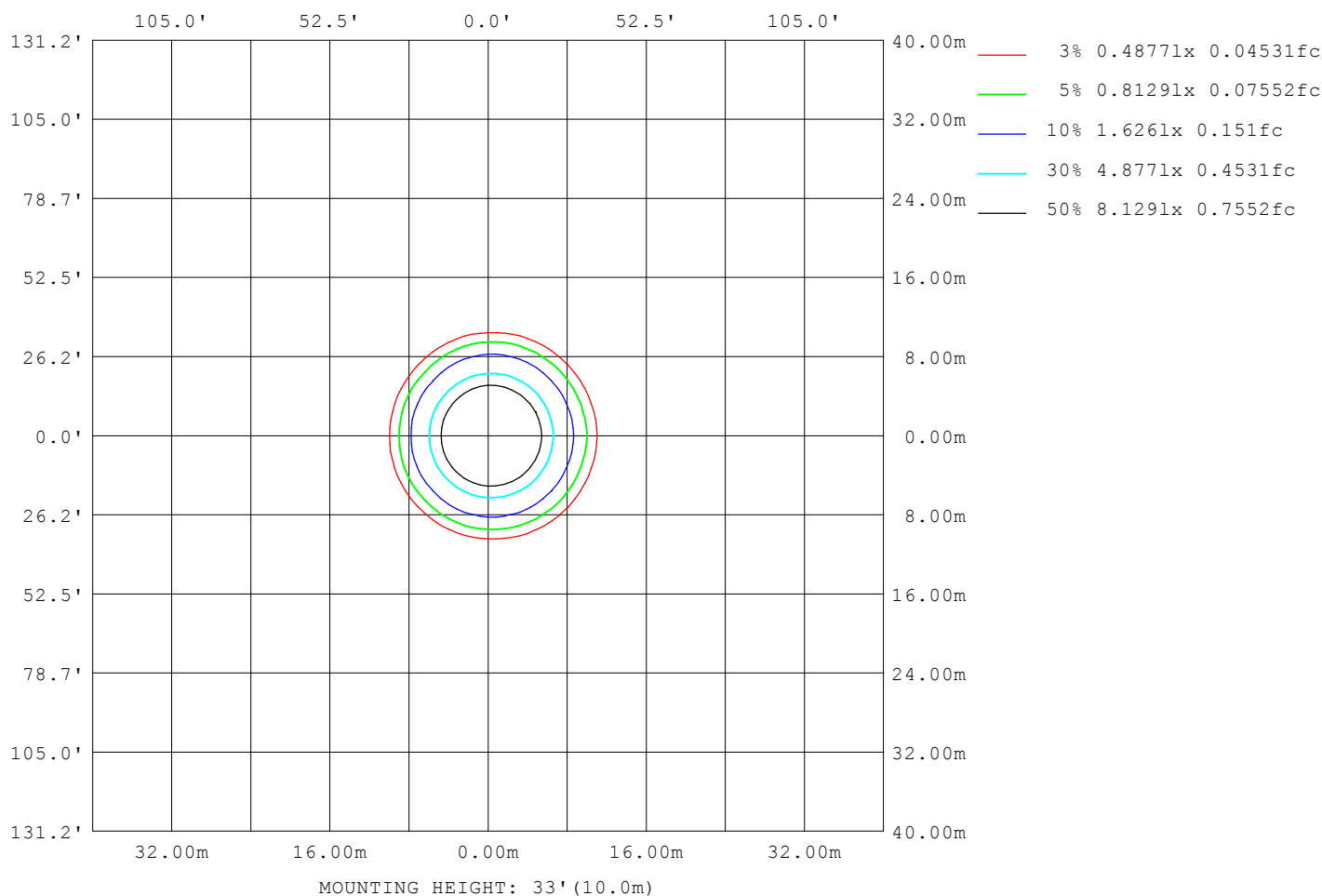
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808		Lamp Flux:1748.07x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K 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:2024-11-06

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:0.0625A P:14.7W PF:0.9784 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.45% KDisp:0.9808 Lamp Flux:1748.07x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 4000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

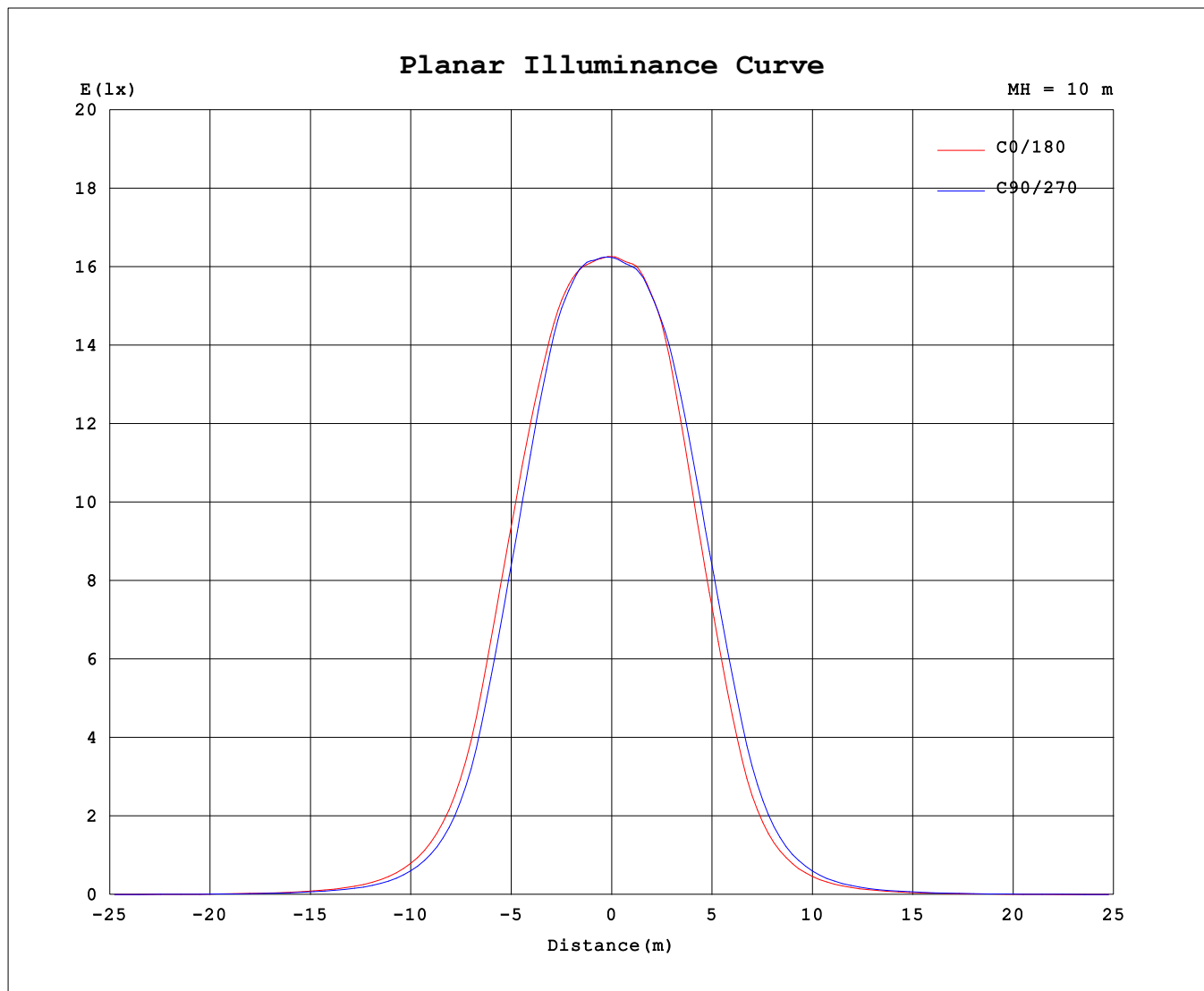
AvgL	cd/m2
L_0~180 (65) av	7859
L_0~180 (75) av	2388
L_0~180 (85) av	700
L_90~270 (65) av	8041
L_90~270 (75) av	2301
L_90~270 (85) av	464
L_45 (65) av	7826
L_45 (75) av	2325
L_45 (85) av	525

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-11-06

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: 2024-11-06

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	1624	1624	1624	1624	1624	1624	1624	1624
3.0	1626	1631	1630	1627	1622	1619	1620	1626
6.0	1635	1645	1642	1641	1632	1628	1626	1631
9.0	1652	1660	1654	1645	1633	1635	1631	1645
12.0	1659	1661	1645	1625	1613	1616	1614	1641
15.0	1651	1642	1625	1585	1571	1580	1592	1625
18.0	1605	1586	1555	1499	1470	1487	1532	1578
21.0	1534	1504	1449	1375	1333	1362	1435	1501
24.0	1432	1389	1310	1219	1171	1205	1306	1382
27.0	1288	1240	1148	1051	997.1	1040	1150	1230
30.0	1104	1058	952.0	851.2	797.2	847.3	959.6	1054
33.0	871.0	834.1	727.7	633.6	583.8	631.8	740.5	829.3
36.0	641.2	609.3	520.2	442.4	406.5	438.0	529.9	607.1
39.0	460.8	430.0	364.0	305.5	280.4	297.7	367.6	426.4
42.0	323.9	297.4	251.7	211.4	191.9	203.5	250.5	294.7
45.0	225.2	207.5	172.0	143.2	131.3	139.3	170.3	202.8
48.0	154.8	141.3	116.0	96.46	89.07	95.57	114.7	137.2
51.0	105.0	95.90	78.84	65.22	60.48	64.78	77.61	92.96
54.0	71.04	65.46	54.22	45.28	41.53	44.48	53.23	61.77
57.0	47.82	45.35	38.17	32.55	29.75	32.01	37.84	42.23
60.0	30.73	29.87	25.79	21.59	19.65	20.88	25.44	27.29
63.0	19.91	19.81	17.28	14.56	13.04	13.85	16.62	17.86
66.0	13.08	12.80	11.58	10.14	9.186	9.614	11.07	11.80
69.0	9.062	8.773	7.991	7.427	6.790	6.944	7.661	8.384
72.0	6.460	6.176	5.361	4.354	3.530	3.904	5.165	5.988
75.0	2.445	2.422	2.335	2.290	2.251	2.182	2.191	2.255
78.0	1.776	1.795	1.786	1.749	1.709	1.678	1.678	1.707
81.0	1.284	1.281	1.208	1.093	1.031	1.054	1.149	1.214
84.0	0.6566	0.5811	0.3225	0.1584	0.1514	0.1539	0.3215	0.5306
87.0	0.1252	0.1005	0.0949	0.0665	0.0704	0.0677	0.0982	0.1024
90.0	0.0562	0.0379	0.0492	0.0380	0.0424	0.0369	0.0418	0.0386

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-06

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: