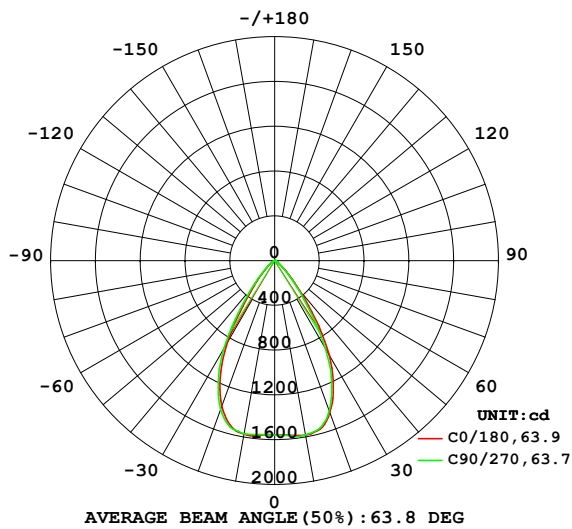


LUMINAIRE PHOTOMETRIC TEST REPORT

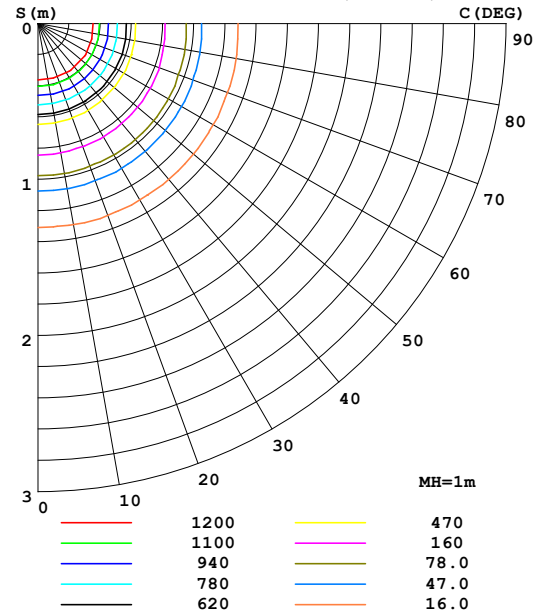
Test:U:240.5V I:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 113.61 lm/W			
MODEL		Imax (cd)	1588	S/MH(C0/180)	0.91
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.94
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1677.3	η UP,DN(C0-180)	0.0,50.8
NOMINAL FLUX(lm)	1677.27	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	240.42	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	1584	1588	1581	1579	1575	1560	1570	1578	0- 10	150.0	150.0	8.94,8.94
20	1442	1455	1427	1399	1383	1393	1412	1441	10- 20	430.6	580.6	34.6,34.6
30	979.4	968.0	910.6	856.9	848.4	869.9	910.3	958.5	20- 30	544.2	1125	67.1,67.1
40	350.1	345.3	305.6	280.3	267.4	282.0	308.8	336.6	30- 40	357.2	1482	88.4,88.4
50	98.22	97.25	87.45	79.17	74.86	76.58	86.05	95.73	40- 50	134.5	1616	96.4,96.4
60	30.20	29.00	25.60	20.81	19.29	20.57	24.59	28.70	50- 60	43.87	1660	99,99
70	7.987	7.716	6.935	5.900	5.544	5.953	6.715	7.574	60- 70	13.30	1674	99.8,99.8
80	1.771	1.610	1.327	1.088	0.9855	1.061	1.337	1.595	70- 80	3.212	1677	100,100
90	0.0566	0.0385	0.0489	0.0383	0.0411	0.0405	0.0402	0.0396	80- 90	0.4719	1677	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): 1567.1 lm

%lum = 93.4%

%lamp = 93.4%

Conical surface Flux(120deg): 1660.3 lm

%lum = 99.0%

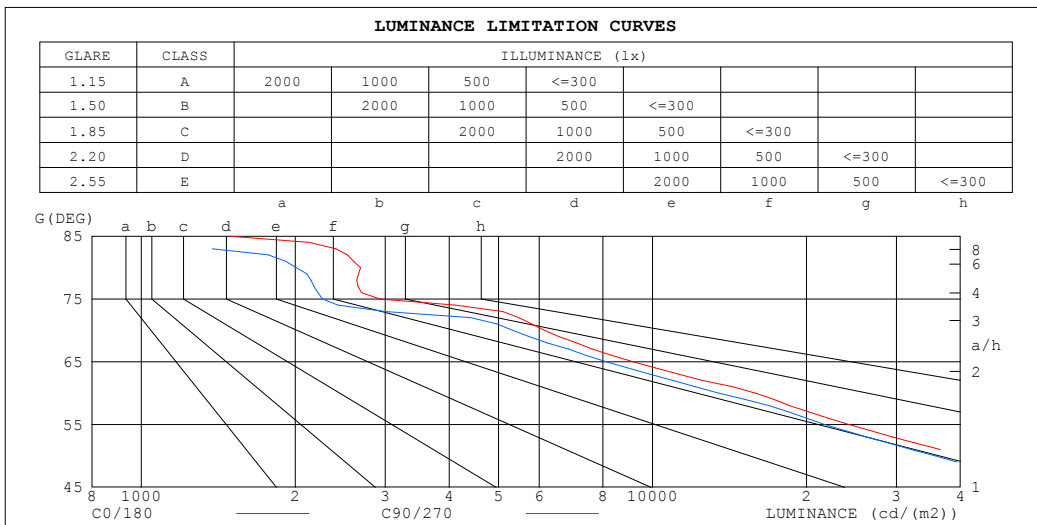
%lamp = 99.0%

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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 3000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1497	449
80	2686	2010
75	2929	2260
70	6152	5335
65	9167	8124
60	15912	13470
55	24227	21723
50	40252	35795
45	69553	61270

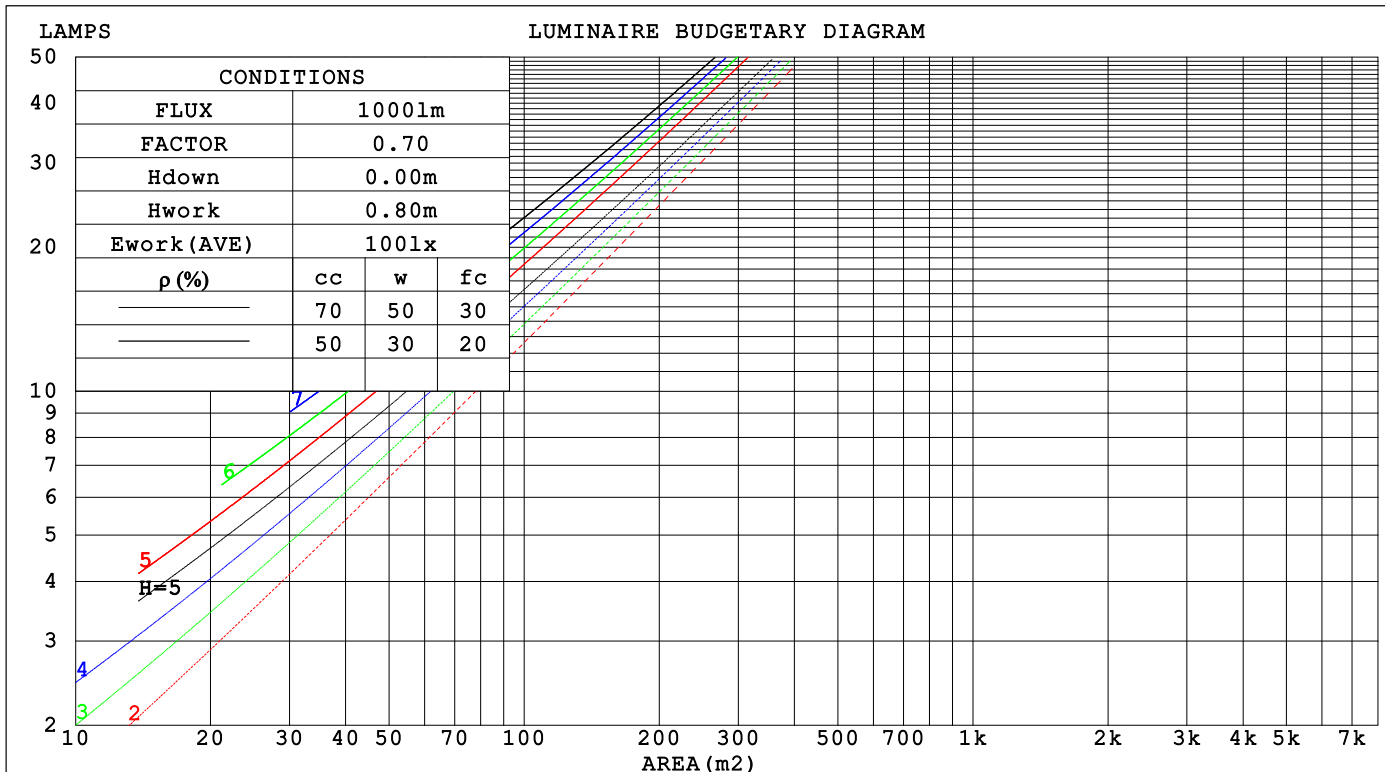
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		Shielding Angle:
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	.143	.081	.026		
3.0	.171	.091	.027	.166	.089	.027	.157	.085	.026	.148	.081	.025	.140	.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	.141	.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	.129	.063	.017	.127	.062	.017	.123	.061	.017	.119	.059	.017	.115	.058	.017		
10.0	.124	.059	.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:2024-11-05

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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm										
NAME: FUSION GT-TR01-AHD-020-COB-01SC 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	23.4	24.4	23.6	24.6	24.8	23.0	24.0	23.2	24.1	24.3
3H	23.3	24.2	23.6	24.4	24.6	22.8	23.8	23.1	24.0	24.2
4H	23.2	24.1	23.5	24.3	24.5	22.7	23.6	23.0	23.8	24.1
6H	23.1	23.9	23.4	24.2	24.4	22.7	23.5	23.0	23.7	24.0
8H	23.1	23.9	23.4	24.1	24.4	22.6	23.4	22.9	23.7	23.9
12H	23.0	23.8	23.4	24.1	24.3	22.6	23.3	22.9	23.6	23.9
4H 2H	23.2	24.1	23.5	24.3	24.5	22.8	23.6	23.1	23.9	24.1
3H	23.1	23.8	23.4	24.1	24.4	22.7	23.4	23.0	23.7	23.9
4H	23.0	23.7	23.4	24.0	24.3	22.6	23.2	22.9	23.5	23.9
6H	22.9	23.5	23.3	23.9	24.2	22.5	23.1	22.9	23.4	23.8
8H	22.9	23.4	23.3	23.8	24.2	22.4	23.0	22.8	23.3	23.7
12H	22.8	23.3	23.3	23.7	24.1	22.4	22.9	22.8	23.3	23.6
8H 4H	22.9	23.4	23.3	23.8	24.2	22.4	23.0	22.8	23.3	23.7
6H	22.8	23.2	23.2	23.6	24.1	22.3	22.8	22.8	23.2	23.6
8H	22.7	23.1	23.2	23.6	24.0	22.3	22.7	22.7	23.1	23.5
12H	22.7	23.0	23.2	23.5	23.9	22.2	22.6	22.7	23.0	23.5
12H 4H	22.8	23.3	23.2	23.7	24.1	22.4	22.9	22.8	23.3	23.6
6H	22.7	23.1	23.2	23.6	24.0	22.3	22.7	22.7	23.1	23.5
8H	22.7	23.0	23.2	23.5	23.9	22.2	22.6	22.7	23.0	23.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.8 / - 6.5					+ 2.4 / - 6.5				
1.5H	+ 4.3 / - 5.0					+ 3.9 / - 4.7				
2.0H	+ 4.8 / - 5.5					+ 4.5 / - 5.3				

CIE Pub.117, 1677 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.8$)
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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 3000K RA90 60D TYPE:		WEIGHT:
SPEC.:		SERIAL No.:
MFR.: Norming lighting		Shielding Angle:
DIM.:		
SUR.: 70mm		

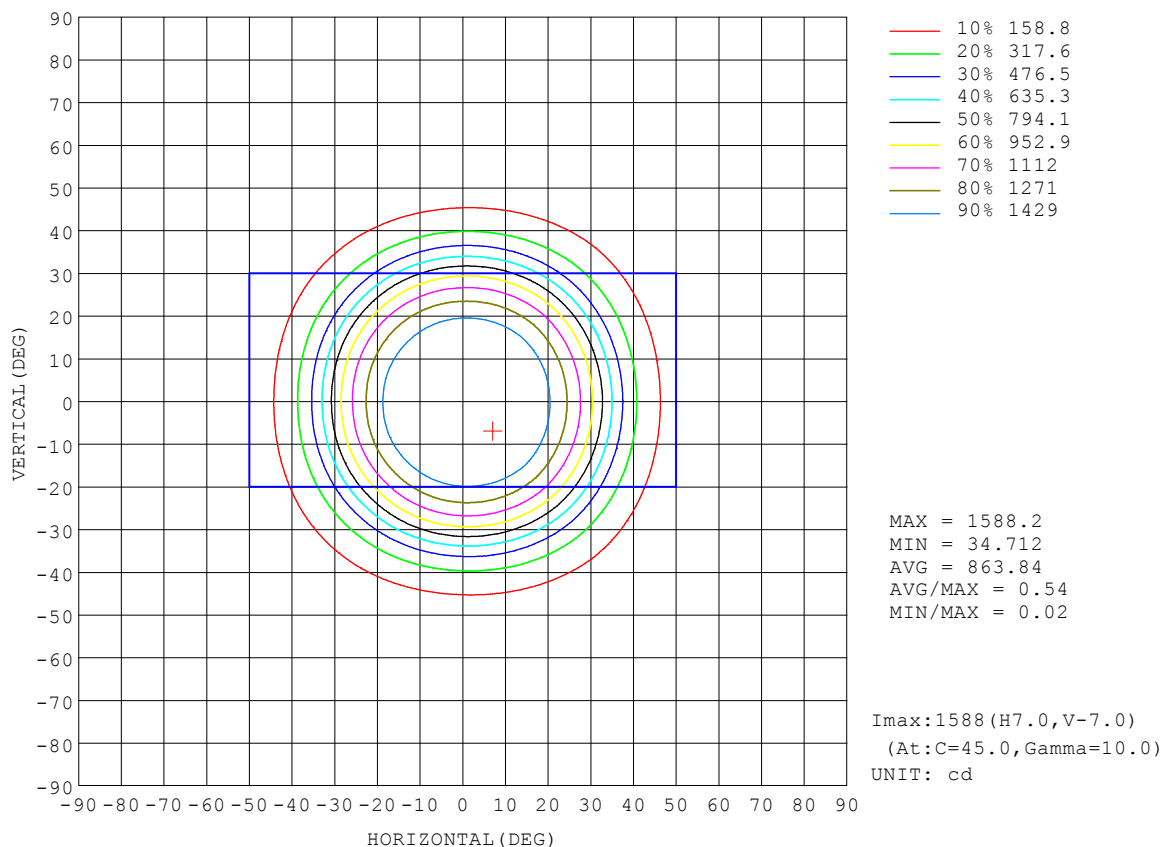
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	86	82	91	85	81	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:2024-11-05

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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 3000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

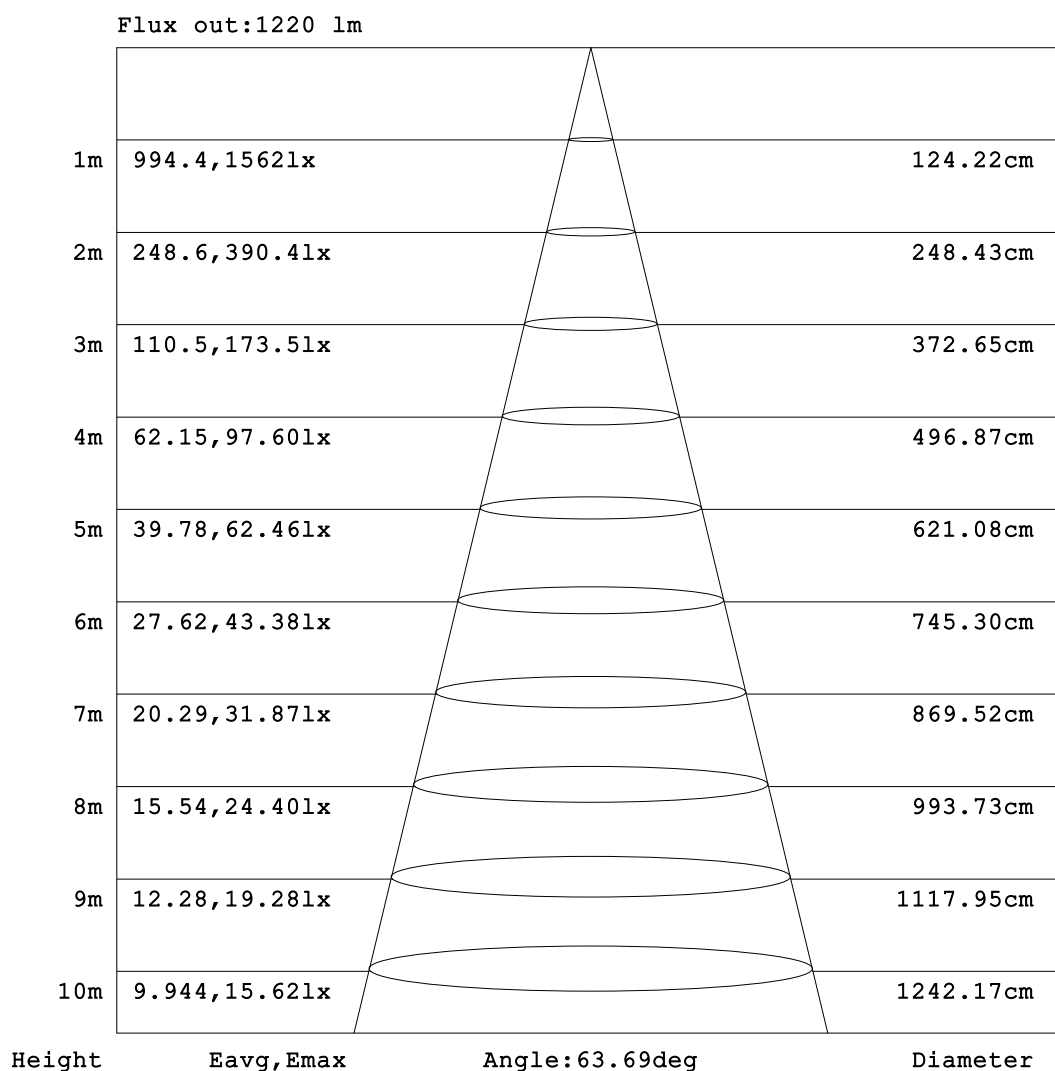


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-11-05

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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808		Lamp Flux:1677.27x1 lm
NAME: FUSION GT-TR01-AHD-020-COB-01SC 3000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



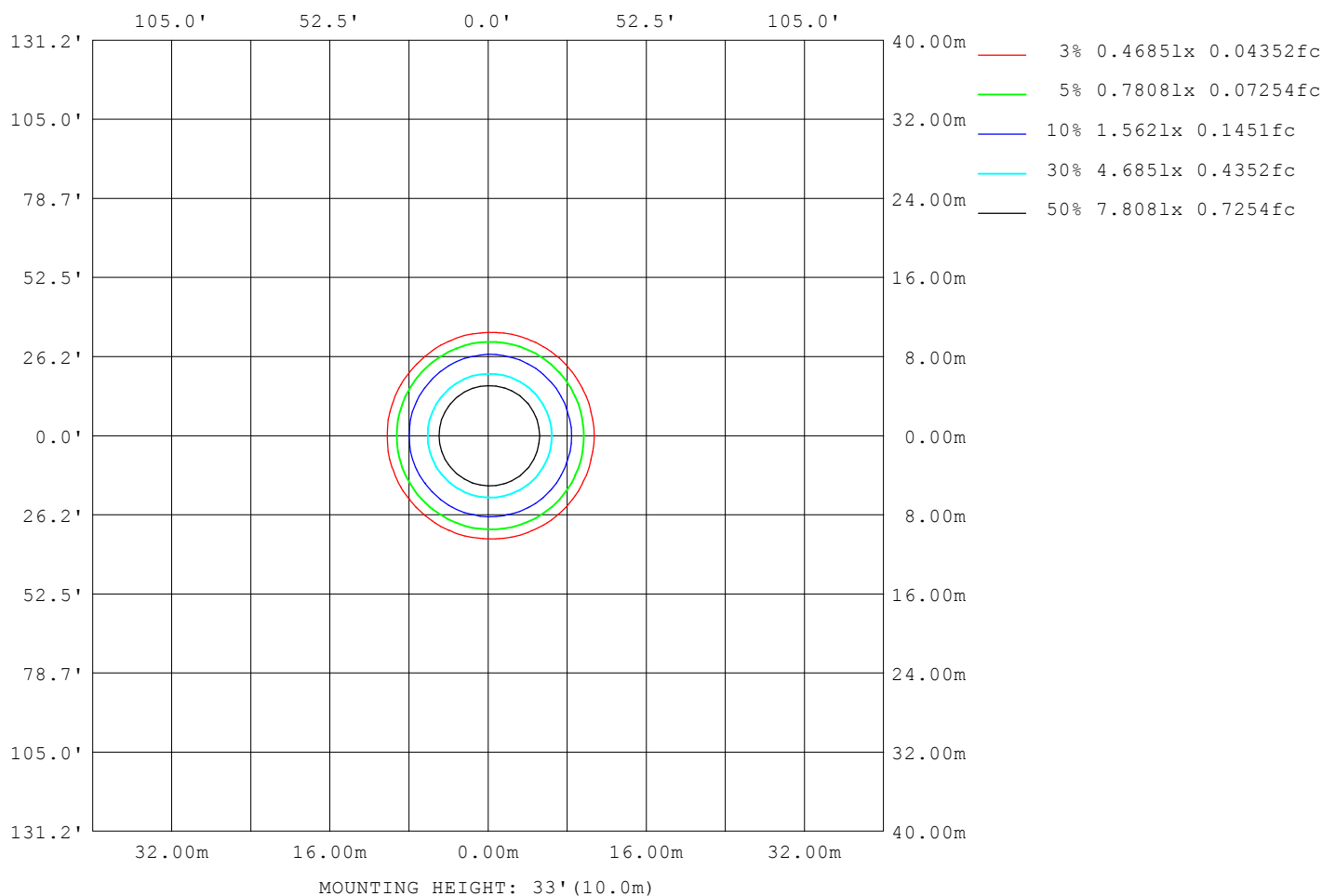
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 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:0.0627A P:14.8W PF:0.9786 Freq:49.99Hz		
UTHDi:0.17% ITHDi:6.54% KDisp:0.9808 Lamp Flux:1677.27x1 lm		
NAME: FUSION GT-TR01-AHD-020-COB-01SC 3000K RA90 60D TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

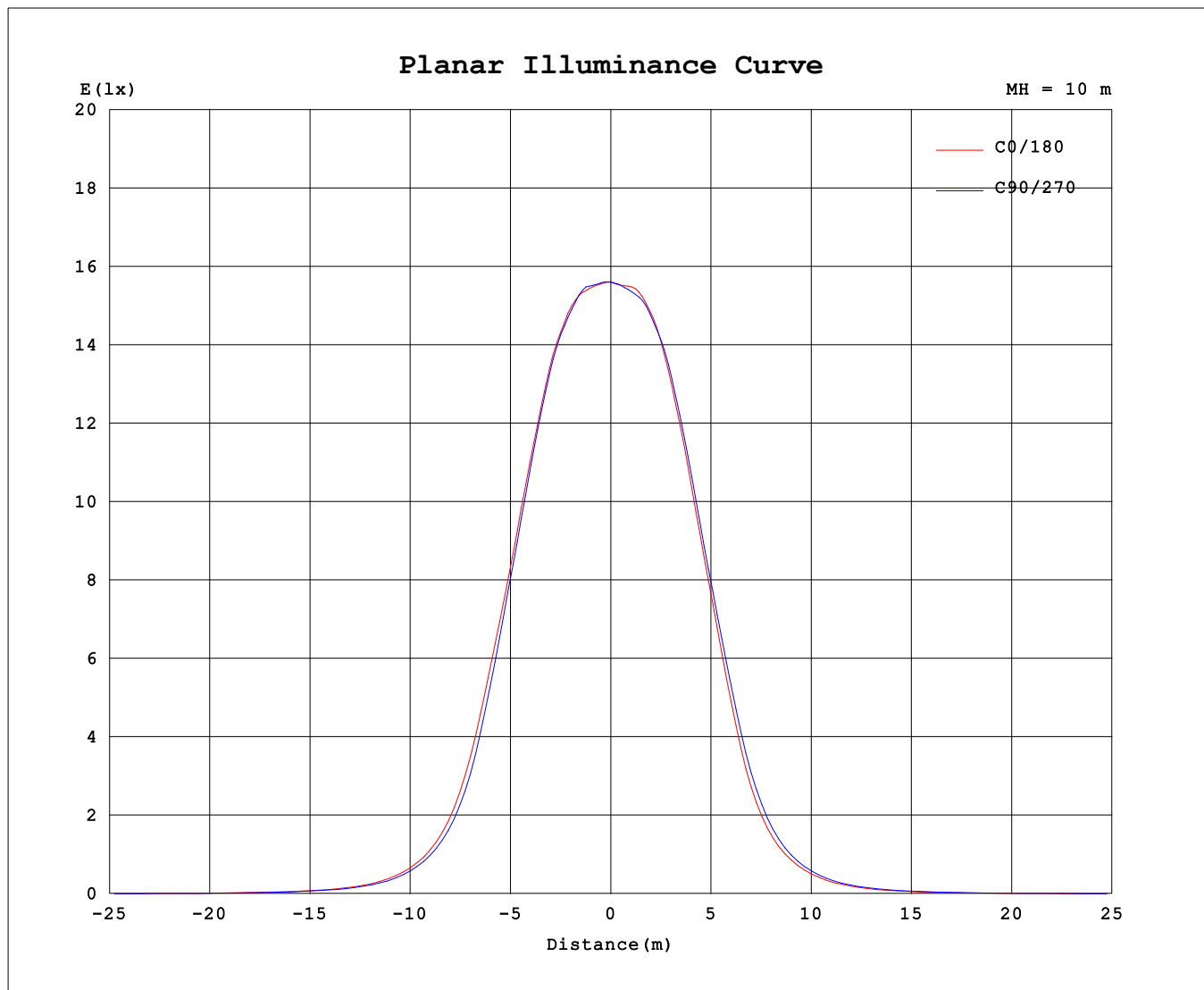
AvgL	cd/m2
L_0~180 (65) av	7621
L_0~180 (75) av	2379
L_0~180 (85) av	913
L_90~270 (65) av	7922
L_90~270 (75) av	2234
L_90~270 (85) av	448
L_45 (65) av	7644
L_45 (75) av	2311
L_45 (85) av	614

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	1560	1560	1560	1560	1560	1560	1560	1560
3.0	1560	1565	1564	1561	1557	1556	1559	1560
6.0	1569	1572	1577	1577	1572	1566	1561	1563
9.0	1581	1587	1585	1583	1578	1565	1571	1575
12.0	1580	1579	1572	1571	1566	1548	1559	1576
15.0	1559	1562	1551	1539	1525	1515	1539	1558
18.0	1505	1511	1490	1466	1449	1453	1475	1503
21.0	1409	1422	1390	1359	1342	1356	1375	1407
24.0	1291	1296	1257	1219	1202	1222	1241	1284
27.0	1141	1146	1102	1056	1044	1065	1090	1137
30.0	979.4	968.0	910.6	856.9	848.4	869.9	910.3	958.5
33.0	776.3	759.6	697.0	640.9	630.1	654.8	700.2	745.3
36.0	567.8	550.0	494.7	455.2	439.6	463.1	503.6	538.9
39.0	395.9	388.7	345.3	317.1	302.9	320.1	350.3	379.9
42.0	272.1	270.5	239.7	220.5	210.9	219.0	240.5	264.4
45.0	186.7	186.8	164.7	150.7	144.0	148.2	165.4	182.4
48.0	127.3	126.5	111.8	102.4	97.18	99.08	111.8	124.7
51.0	87.33	85.35	76.70	69.36	65.37	67.23	75.77	85.02
54.0	59.53	58.32	53.23	46.62	44.26	45.51	52.07	57.89
57.0	41.74	40.84	38.15	32.55	29.70	31.96	36.78	40.15
60.0	30.20	29.00	25.60	20.81	19.29	20.57	24.59	28.70
63.0	19.41	18.96	17.07	13.58	12.57	13.44	16.26	18.16
66.0	12.86	12.50	11.46	9.295	8.703	9.216	10.90	12.11
69.0	8.916	8.632	7.804	6.634	6.278	6.652	7.518	8.448
72.0	6.417	6.153	5.174	3.294	2.535	3.148	5.067	6.073
75.0	2.878	2.685	2.223	1.948	1.801	1.881	2.172	2.577
78.0	2.082	1.958	1.697	1.440	1.324	1.398	1.686	1.927
81.0	1.545	1.398	1.139	0.8964	0.7784	0.8805	1.150	1.381
84.0	0.8450	0.6563	0.3006	0.1421	0.1367	0.1379	0.3388	0.6519
87.0	0.1271	0.1038	0.0953	0.0624	0.0603	0.0616	0.0937	0.1049
90.0	0.0566	0.0385	0.0489	0.0383	0.0411	0.0405	0.0402	0.0396

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: