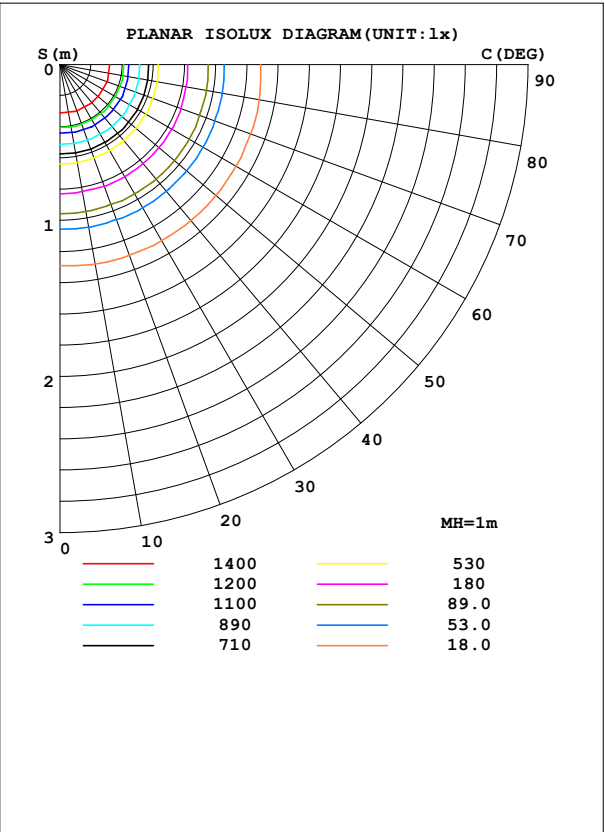
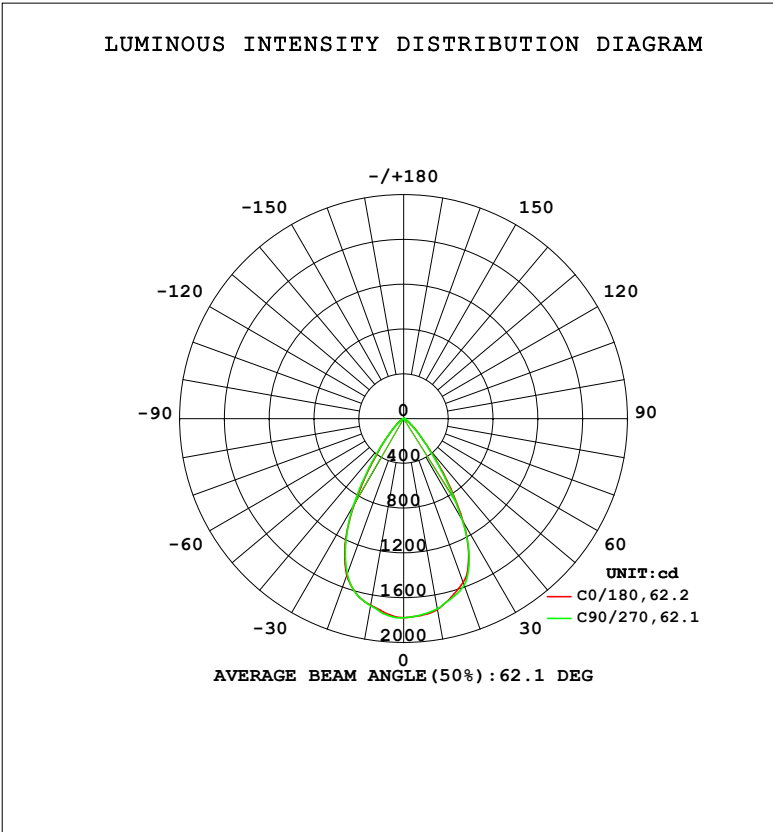


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz		
UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 121.02 lm/W
MODEL		Imax (cd)	1780	S/MH(C0/180)	0.88	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.89	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1795.9	η UP,DN(C0-180)	0.0,52.5	
NOMINAL FLUX(lm)	1795.88	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.5	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	240.4	η down (%)	100.0	CIBSE SHR MAX	0.95	



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-07

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	1731	1734	1725	1712	1694	1688	1699	1719	0- 10	166.3	166.3	9.26,9.26
20	1557	1591	1583	1546	1487	1457	1473	1512	10- 20	459.9	626.3	34.9,34.9
30	1068	1093	1048	971.7	883.1	855.5	904.3	977.1	20- 30	588.7	1215	67.7,67.7
40	363.5	373.4	351.1	323.4	281.3	265.1	286.9	328.2	30- 40	377.6	1593	88.7,88.7
50	101.3	108.8	100.5	88.03	79.12	76.68	81.30	89.82	40- 50	138.7	1731	96.4,96.4
60	28.71	29.50	27.42	22.49	21.66	23.06	25.50	27.80	50- 60	46.40	1778	99,99
70	8.122	8.063	7.620	6.648	6.589	7.002	7.486	7.949	60- 70	14.12	1792	99.8,99.8
80	1.778	1.539	1.277	1.132	1.175	1.429	1.779	1.889	70- 80	3.470	1795	100,100
90	0.0517	0.0337	0.0479	0.0347	0.0385	0.0308	0.0395	0.0373	80- 90	0.5062	1796	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): 1680.5 lm

%lum = 93.6%

%lamp = 93.6%

Conical surface Flux(120deg): 1777.8 lm

%lum = 99.0%

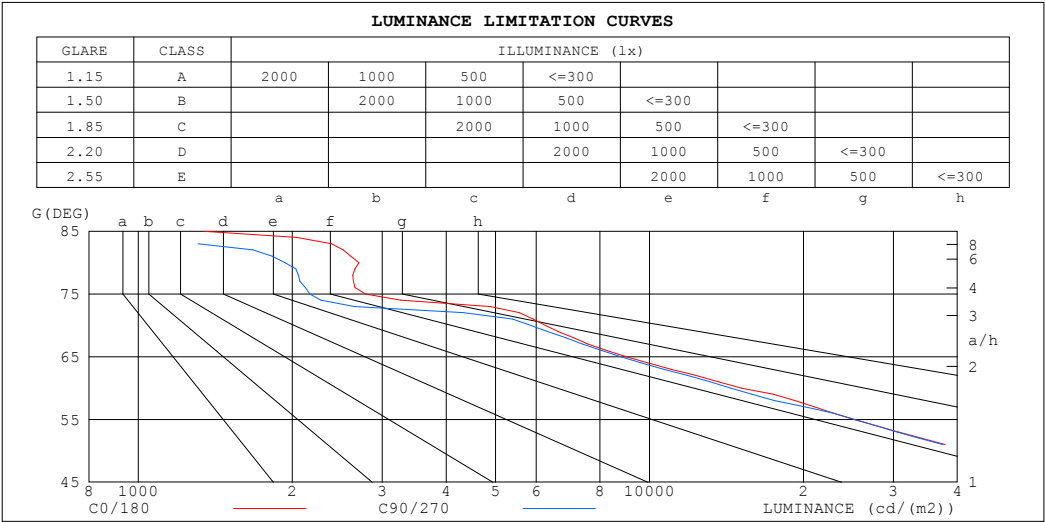
%lamp = 99.0%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz		
UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1344	401
80	2699	1935
75	2785	2166
70	6259	5860
65	9010	8789
60	15133	14424
55	25130	25244
50	41549	41138
45	71355	70048

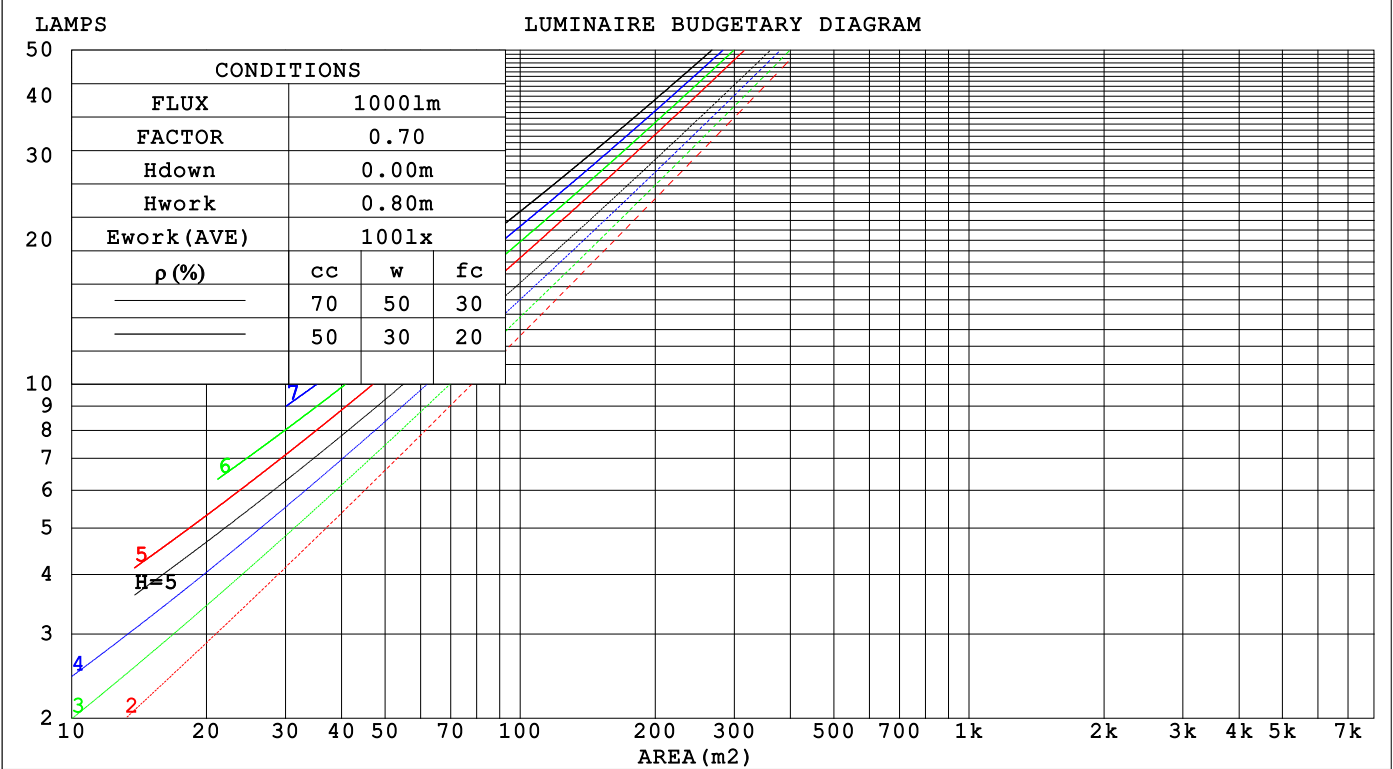
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz		
UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	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:2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz		
UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	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															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.185	.105	.033	.178	.102	.032	.166	.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	.091	.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	.138	.073	.022	.132	.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	.125	.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:2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz										
UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm										
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W					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	23.7	24.7	23.9	24.8	25.0	23.5	24.5	23.8	24.7	24.9
3H	23.5	24.5	23.8	24.7	24.9	23.4	24.3	23.7	24.5	24.7
4H	23.5	24.3	23.7	24.6	24.8	23.3	24.2	23.6	24.4	24.6
6H	23.4	24.2	23.7	24.4	24.7	23.2	24.0	23.5	24.3	24.5
8H	23.3	24.1	23.6	24.4	24.6	23.2	24.0	23.5	24.2	24.5
12H	23.3	24.0	23.6	24.3	24.6	23.1	23.9	23.5	24.2	24.4
4H 2H	23.5	24.3	23.8	24.6	24.8	23.3	24.2	23.6	24.4	24.7
3H	23.4	24.1	23.7	24.4	24.6	23.2	24.0	23.5	24.2	24.5
4H	23.3	23.9	23.6	24.2	24.6	23.1	23.8	23.5	24.1	24.4
6H	23.2	23.8	23.6	24.1	24.5	23.0	23.6	23.4	24.0	24.3
8H	23.1	23.7	23.5	24.0	24.4	23.0	23.5	23.4	23.9	24.3
12H	23.1	23.6	23.5	24.0	24.3	22.9	23.4	23.3	23.8	24.2
8H 4H	23.1	23.7	23.5	24.0	24.4	23.0	23.5	23.4	23.9	24.3
6H	23.0	23.5	23.5	23.9	24.3	22.9	23.3	23.3	23.7	24.2
8H	23.0	23.4	23.4	23.8	24.2	22.8	23.2	23.3	23.7	24.1
12H	22.9	23.3	23.4	23.7	24.2	22.8	23.1	23.3	23.6	24.0
12H 4H	23.1	23.6	23.5	24.0	24.3	22.9	23.4	23.3	23.8	24.2
6H	23.0	23.4	23.4	23.8	24.2	22.8	23.2	23.3	23.7	24.1
8H	22.9	23.3	23.4	23.7	24.2	22.8	23.1	23.3	23.6	24.0
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.7 / - 6.8					+ 2.6 / - 6.7				
1.5H	+ 4.3 / - 4.7					+ 4.0 / - 4.5				
2.0H	+ 4.7 / - 5.9					+ 4.7 / - 5.9				

CIE Pub.117, 1796 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 2.0$)
Area: 0.0038 m²

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

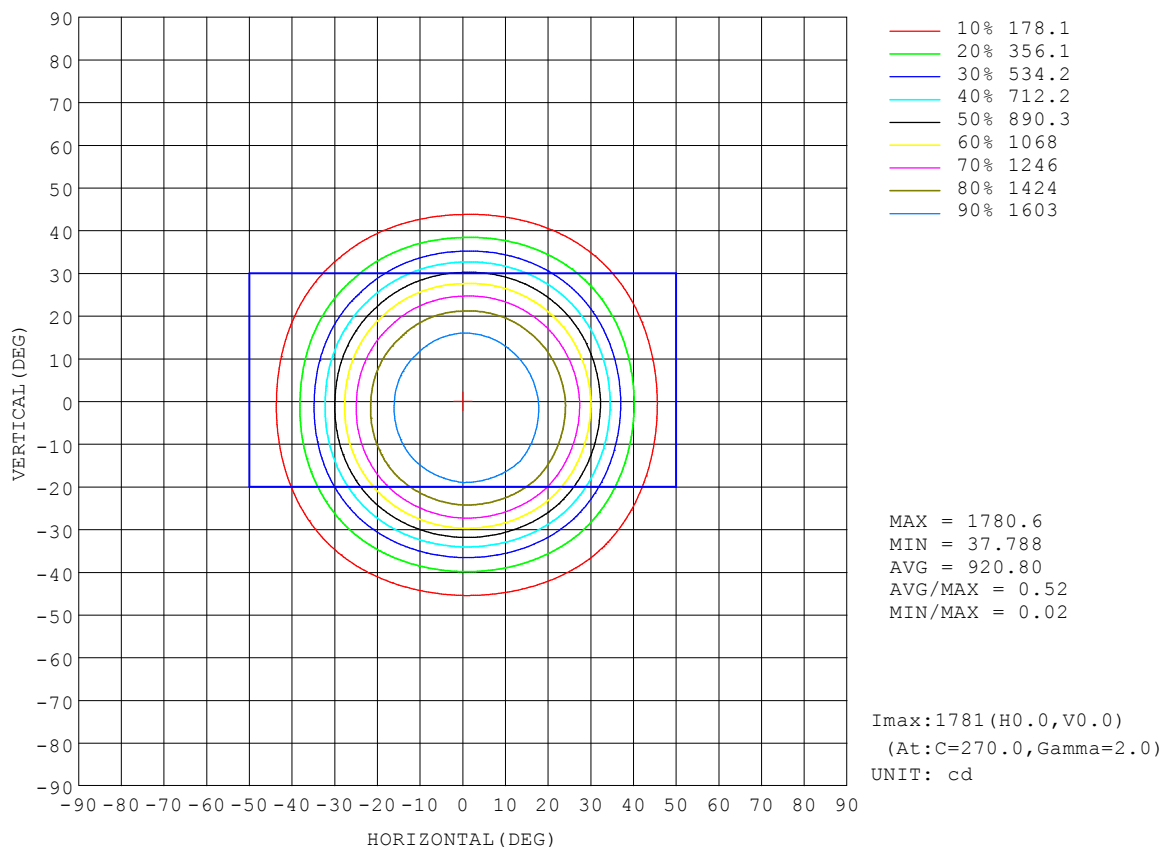
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	86	82	92	86	82	90	85	81	77
1.00	97	91	87	97	91	87	95	91	87	82
1.25	102	96	92	101	96	92	99	94	91	87
1.50	105	100	96	103	99	96	101	97	94	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	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: 2024-08-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 γ 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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

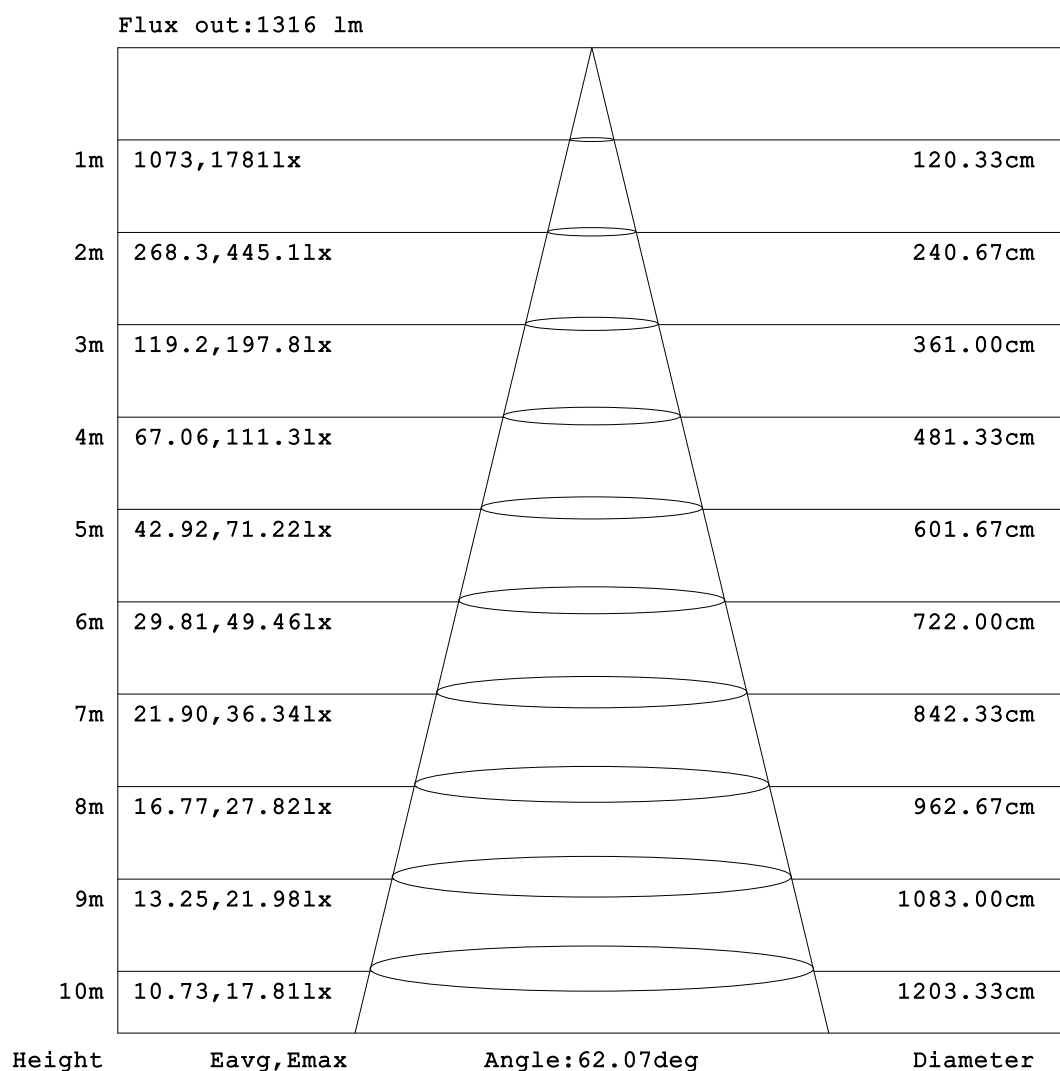


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:



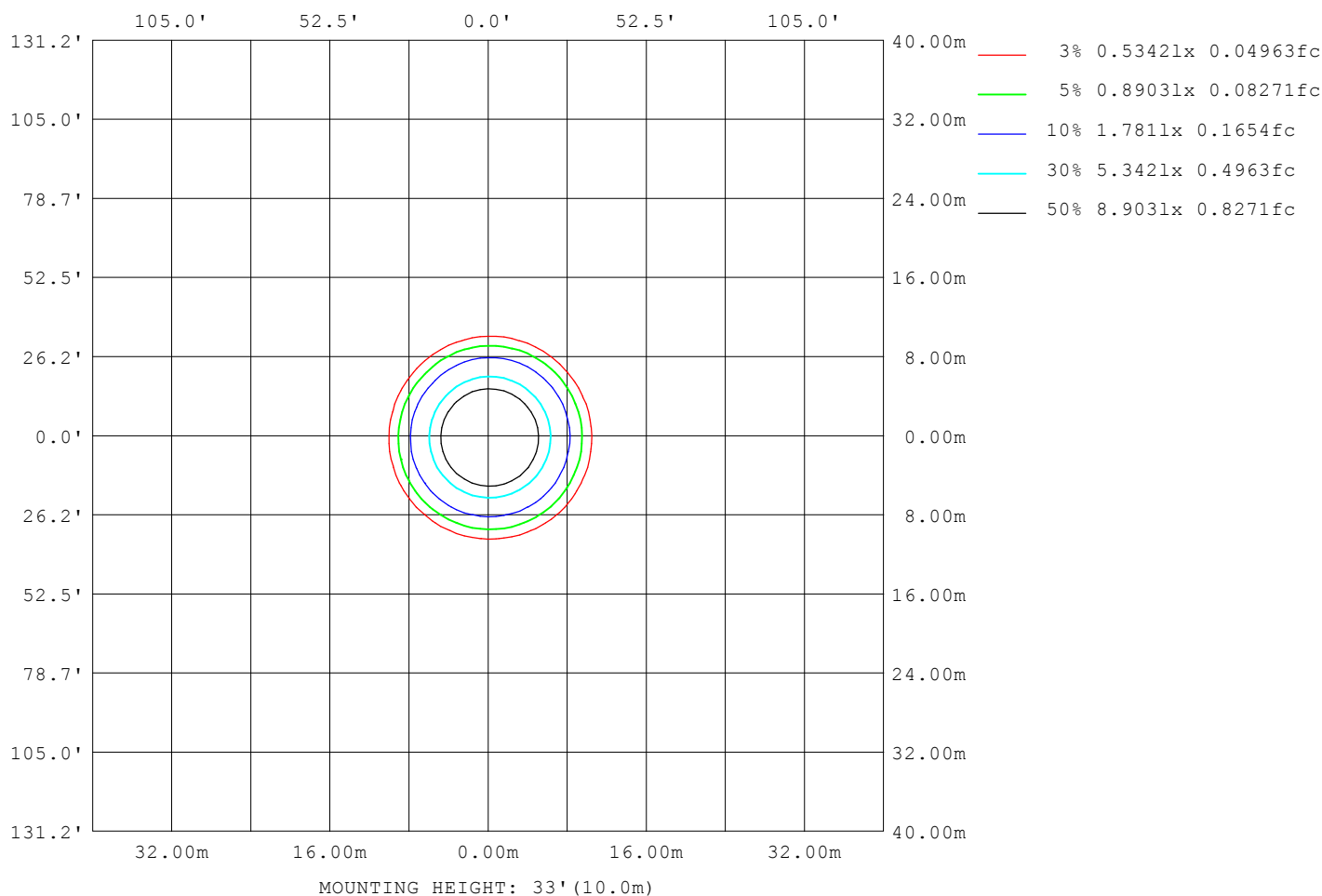
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	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: 2024-08-07

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:240.4V I:0.0634A P:14.8W PF:0.9736 Freq:49.99Hz UTHDi:0.17% ITHDi:8.00% KDisp:0.9796 Lamp Flux:1795.88x1 lm		
NAME: TR11-20-XX-01+白色防眩环 4000K RA90 60D 15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 70mm	Shielding Angle:

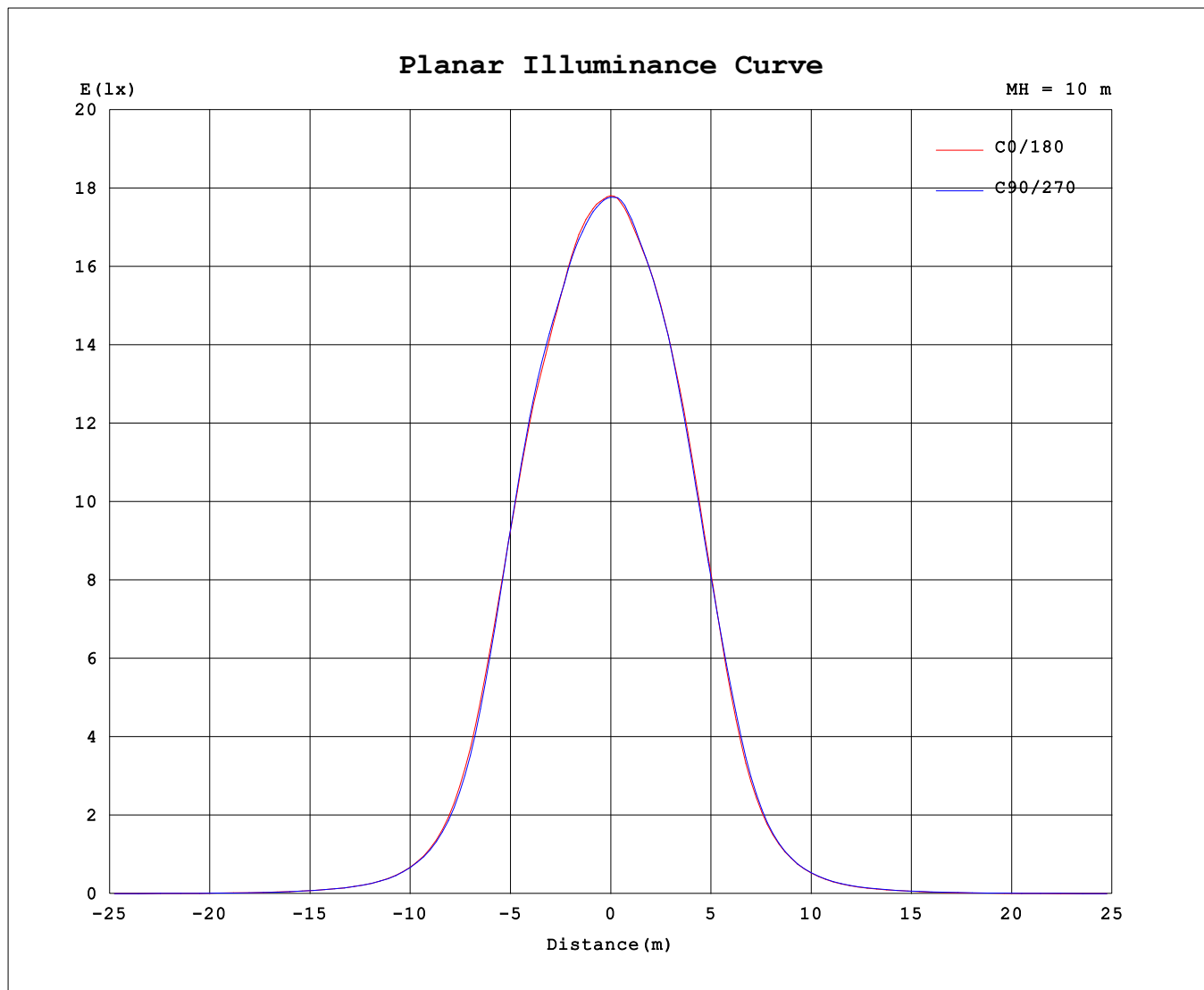
AvgL	cd/m2
L_0~180 (65) av	7989
L_0~180 (75) av	2468
L_0~180 (85) av	829
L_90~270 (65) av	8467
L_90~270 (75) av	2503
L_90~270 (85) av	424
L_45 (65) av	8118
L_45 (75) av	2491
L_45 (85) av	599

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-07

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: 2024-08-07

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	1778	1778	1778	1778	1778	1778	1778	1778
3.0	1771	1770	1769	1770	1767	1771	1777	1775
6.0	1761	1757	1755	1748	1735	1737	1750	1760
9.0	1742	1741	1734	1723	1702	1700	1709	1732
12.0	1701	1708	1700	1690	1671	1660	1673	1687
15.0	1649	1662	1661	1646	1623	1611	1624	1634
18.0	1595	1624	1622	1597	1551	1526	1546	1567
21.0	1535	1571	1555	1512	1446	1414	1431	1479
24.0	1425	1464	1440	1378	1296	1260	1282	1344
27.0	1268	1308	1272	1199	1111	1078	1104	1176
30.0	1068	1093	1048	971.7	883.1	855.5	904.3	977.1
33.0	831.9	844.2	798.7	737.2	653.4	629.6	683.2	755.3
36.0	603.1	612.0	571.5	528.5	461.4	439.6	481.2	544.3
39.0	414.5	424.0	397.3	366.7	318.4	300.3	327.0	373.0
42.0	280.8	290.5	273.9	250.3	220.5	206.0	223.7	253.5
45.0	191.4	200.8	188.3	169.6	149.3	140.9	151.8	170.5
48.0	130.8	139.1	129.1	113.7	101.6	96.78	103.9	114.7
51.0	90.35	96.21	89.62	77.09	69.91	68.07	72.05	78.79
54.0	61.76	66.64	61.95	52.39	48.42	47.68	50.77	55.10
57.0	43.33	46.80	41.61	33.84	33.54	34.50	37.03	39.31
60.0	28.71	29.50	27.42	22.49	21.66	23.06	25.50	27.80
63.0	18.98	19.53	18.39	14.92	14.26	15.32	17.14	18.35
66.0	12.69	12.91	12.45	10.44	10.06	10.45	11.49	12.38
69.0	8.999	9.033	8.601	7.525	7.403	7.746	8.251	8.796
72.0	6.521	6.248	5.077	3.051	3.153	4.658	5.871	6.457
75.0	2.734	2.406	2.132	2.019	2.120	2.458	2.791	2.916
78.0	2.072	1.826	1.625	1.502	1.583	1.928	2.239	2.244
81.0	1.545	1.333	1.087	0.9375	0.9447	1.174	1.515	1.610
84.0	0.8086	0.5585	0.2885	0.1224	0.1321	0.1554	0.4399	0.7743
87.0	0.1207	0.0899	0.0860	0.0549	0.0600	0.0627	0.0906	0.1038
90.0	0.0517	0.0337	0.0479	0.0347	0.0385	0.0308	0.0395	0.0373

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-08-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 γ Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks: