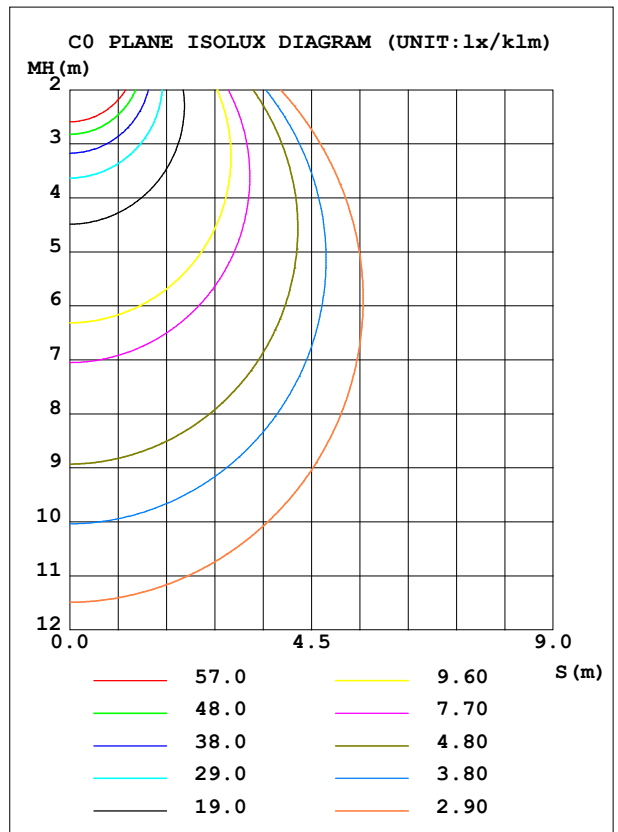
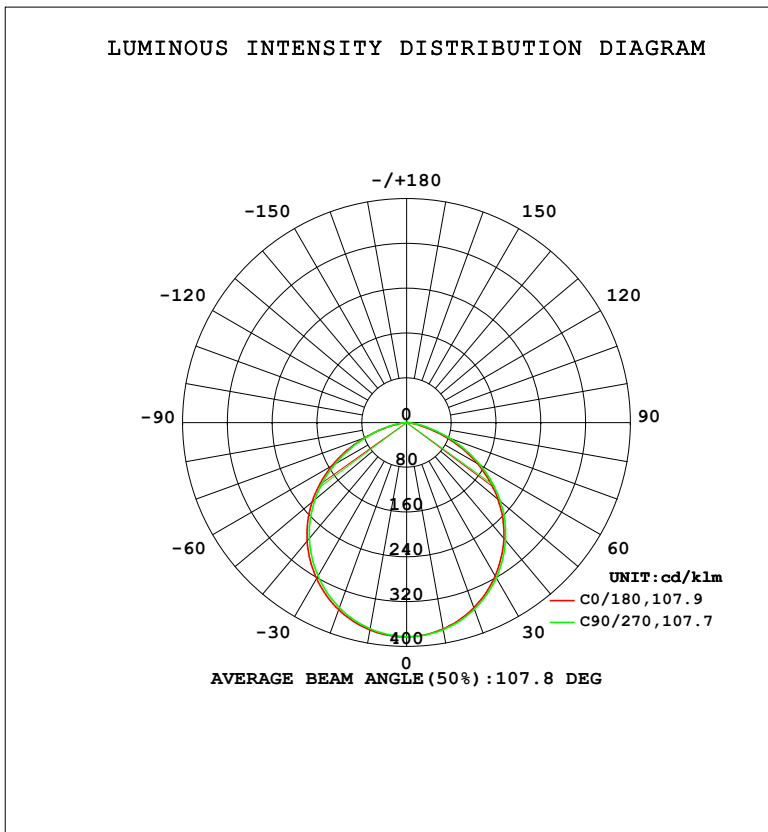


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	LED-4-S9W-2700K-6500K	Watt (lm/klm)	382.9	S/MH (C0/180)	1.25
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	1.24
RATED VOLTAGE (V)	120	TOTAL FLUX (lm/klm)	1000.00	η UP, DN (C0-180)	0.0, 50.3
NOMINAL FLUX (lm)	531.191	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

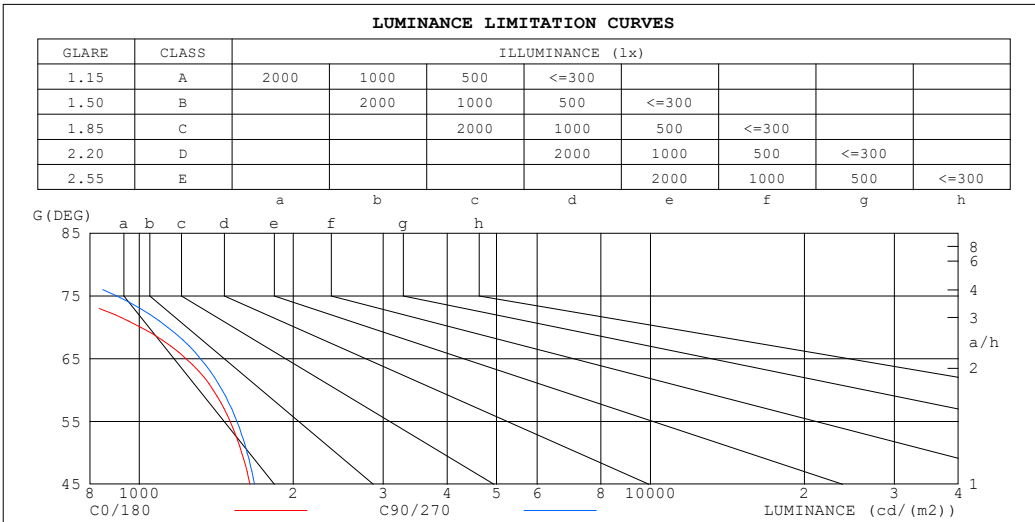
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	374.3	375.0	375.7	375.9	376.4	375.1	374.1	373.7	0- 10	36.15	36.15	3.62,3.62
20	351.8	353.2	354.5	355.2	355.7	353.4	351.7	351.2	10- 20	103.2	139.4	13.9,13.9
30	316.6	318.6	320.5	321.5	321.9	318.8	316.6	315.9	20- 30	155.5	294.9	29.5,29.5
40	270.3	272.6	275.0	276.3	276.6	273.0	270.5	269.7	30- 40	185.8	480.7	48.1,48.1
50	213.3	215.9	218.6	220.2	220.5	216.3	213.7	212.7	40- 50	189.6	670.3	67,67
60	146.0	148.8	151.9	153.4	153.8	149.4	146.9	145.6	50- 60	164.1	834.4	83.4,83.4
70	71.98	77.47	81.33	81.49	79.89	78.44	77.08	74.34	60- 70	112.4	946.7	94.7,94.7
80	12.48	17.53	21.81	19.58	16.81	18.15	19.18	15.13	70- 80	47.96	994.7	99.5,99.5
90	0.2290	0.2380	0.3257	0.2422	0.1336	0.1462	0.1643	0.1510	80- 90	5.305	1000.0	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/klm									UNIT:lm/klm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3 °C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	69	263
80	344	601
75	706	903
70	1006	1137
65	1235	1317
60	1396	1453
55	1505	1552
50	1586	1626
45	1645	1679

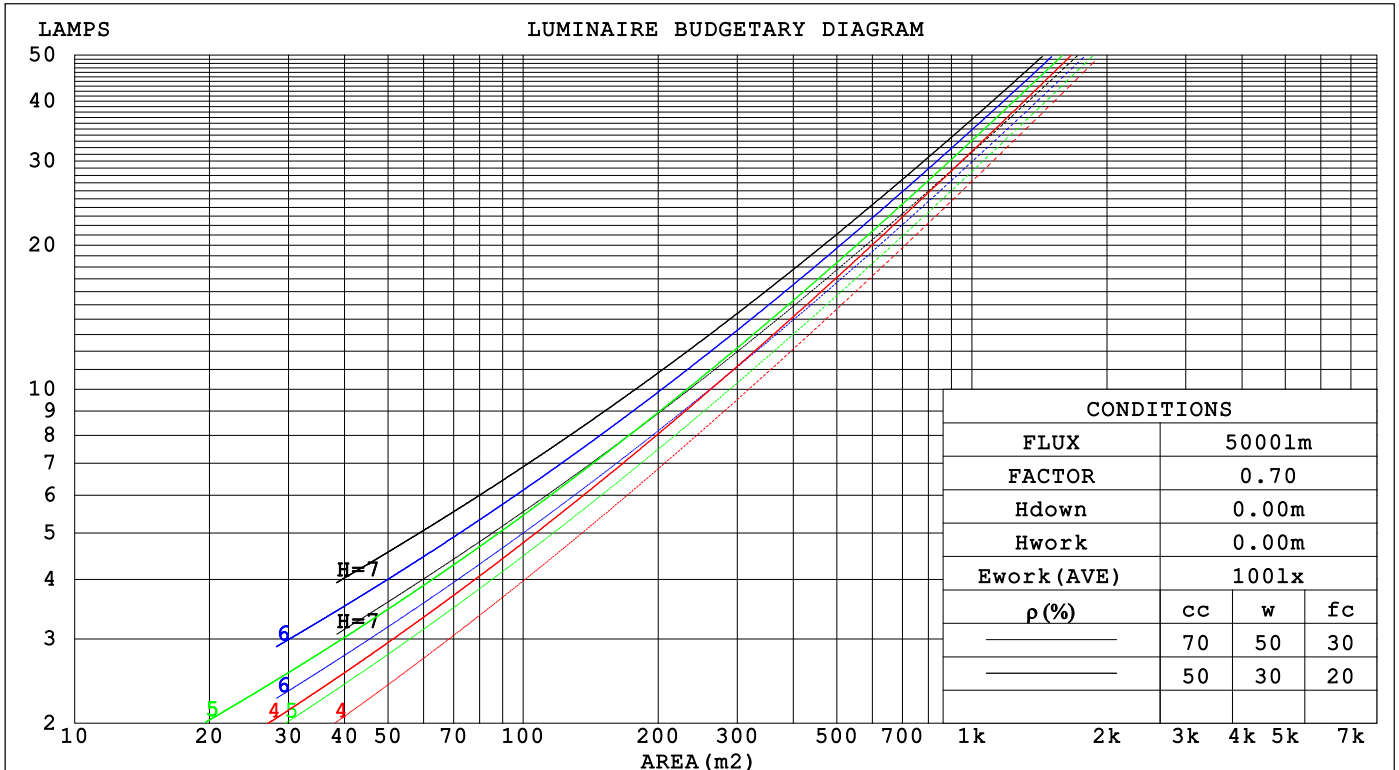
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.05	1.01	.98	1.03	.90	.96	.99	.96	.93	.95	.93	.90	.91	.90	.88	.86
2.0	.92	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.77	.74	.72
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.74	.69	.65	.72	.67	.64	.61
4.0	.72	.64	.58	.71	.63	.57	.69	.62	.56	.66	.60	.56	.64	.59	.55	.53
5.0	.65	.56	.50	.64	.56	.49	.62	.54	.49	.60	.53	.48	.58	.52	.48	.46
6.0	.58	.50	.43	.58	.49	.43	.56	.48	.43	.54	.48	.43	.53	.47	.42	.40
7.0	.53	.44	.38	.52	.44	.38	.51	.43	.38	.49	.43	.38	.48	.42	.38	.36
8.0	.48	.40	.34	.48	.40	.34	.46	.39	.34	.45	.39	.34	.44	.38	.34	.32
9.0	.44	.36	.31	.44	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.30	.29
10.0	.41	.33	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.281	.160	.051	.274	.156	.050	.261	.150	.048	.249	.144	.046	.238	.138	.044	
2.0	.272	.149	.046	.266	.147	.045	.254	.141	.044	.244	.137	.043	.234	.132	.042	
3.0	.256	.136	.041	.250	.134	.040	.240	.130	.040	.231	.126	.039	.222	.123	.038	
4.0	.238	.124	.036	.234	.122	.036	.225	.119	.036	.216	.116	.035	.209	.113	.035	
5.0	.222	.113	.033	.218	.112	.033	.210	.109	.032	.202	.107	.032	.195	.104	.031	
6.0	.207	.104	.030	.203	.103	.030	.196	.101	.029	.190	.098	.029	.183	.097	.029	
7.0	.194	.096	.027	.190	.095	.027	.184	.093	.027	.178	.091	.027	.172	.089	.026	
8.0	.181	.089	.025	.178	.088	.025	.173	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.170	.082	.023	.168	.082	.023	.163	.080	.023	.158	.079	.023	.153	.078	.022	
10.0	.161	.077	.021	.158	.076	.021	.154	.075	.021	.149	.074	.021	.145	.073	.021	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	.178	.156	.137	.153	.134	.118	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.145	.114	.087	.100	.079	.061	.057	.046	.035	.018	.015	.012	
3.0	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.133	.075	.034	.115	.065	.030	.079	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm										
NAME:			TYPE:			WEIGHT:				
SPEC.: 6500K			DIM.:			SERIAL No.:				
MFR.:			SUR.:			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	16.5	17.9	16.7	18.1	18.3	16.6	18.1	16.9	18.3	18.5
3H	17.5	18.8	17.8	19.1	19.3	17.8	19.1	18.1	19.3	19.6
4H	17.7	19.0	18.0	19.3	19.5	18.1	19.4	18.4	19.6	19.9
6H	17.8	19.0	18.1	19.2	19.5	18.2	19.5	18.6	19.7	20.0
8H	17.7	18.9	18.1	19.2	19.4	18.2	19.4	18.6	19.7	20.0
12H	17.7	18.8	18.0	19.1	19.4	18.2	19.3	18.6	19.6	19.9
4H 2H	17.0	18.2	17.3	18.5	18.8	17.1	18.4	17.4	18.6	18.9
3H	18.1	19.3	18.5	19.6	19.9	18.4	19.5	18.7	19.8	20.1
4H	18.5	19.5	18.8	19.8	20.1	18.8	19.8	19.2	20.2	20.5
6H	18.5	19.4	18.9	19.8	20.1	19.0	19.9	19.4	20.3	20.6
8H	18.5	19.3	18.9	19.7	20.1	19.1	19.9	19.5	20.3	20.6
12H	18.5	19.2	18.9	19.6	20.0	19.0	19.8	19.5	20.2	20.6
8H 4H	18.6	19.4	19.0	19.8	20.2	18.9	19.8	19.3	20.1	20.5
6H	18.7	19.4	19.1	19.8	20.2	19.2	19.9	19.6	20.3	20.7
8H	18.7	19.3	19.1	19.7	20.2	19.2	19.8	19.7	20.3	20.7
12H	18.7	19.2	19.1	19.6	20.1	19.2	19.7	19.7	20.2	20.7
12H 4H	18.5	19.3	19.0	19.7	20.1	18.9	19.7	19.3	20.0	20.4
6H	18.7	19.3	19.1	19.7	20.2	19.2	19.8	19.6	20.2	20.6
8H	18.7	19.2	19.2	19.6	20.1	19.2	19.7	19.7	20.2	20.7
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.3 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.5					+ 0.2 / - 0.4				
2.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				

CIE Pub.117, 531.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.2)
 Area: 0.111111 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

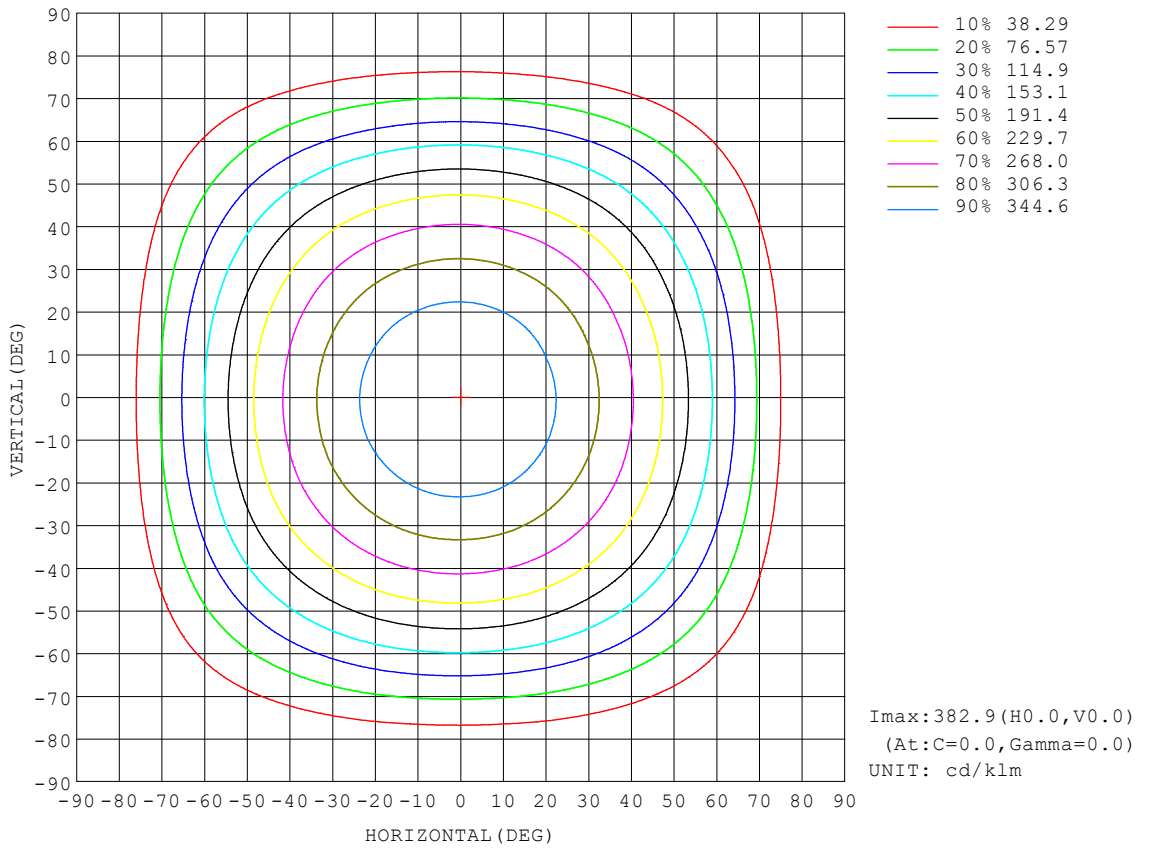
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	59	48	41	57	47	41	35
0.80	70	58	51	69	58	51	67	57	51	44
1.00	78	68	61	77	67	60	75	68	60	53
1.25	85	75	69	84	75	68	81	73	67	60
1.50	90	81	74	89	80	74	86	78	73	66
2.00	97	89	83	95	88	82	92	86	81	73
2.50	101	93	88	99	92	87	95	89	85	77
3.00	104	97	92	102	96	91	98	93	89	81
4.00	108	102	98	105	101	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

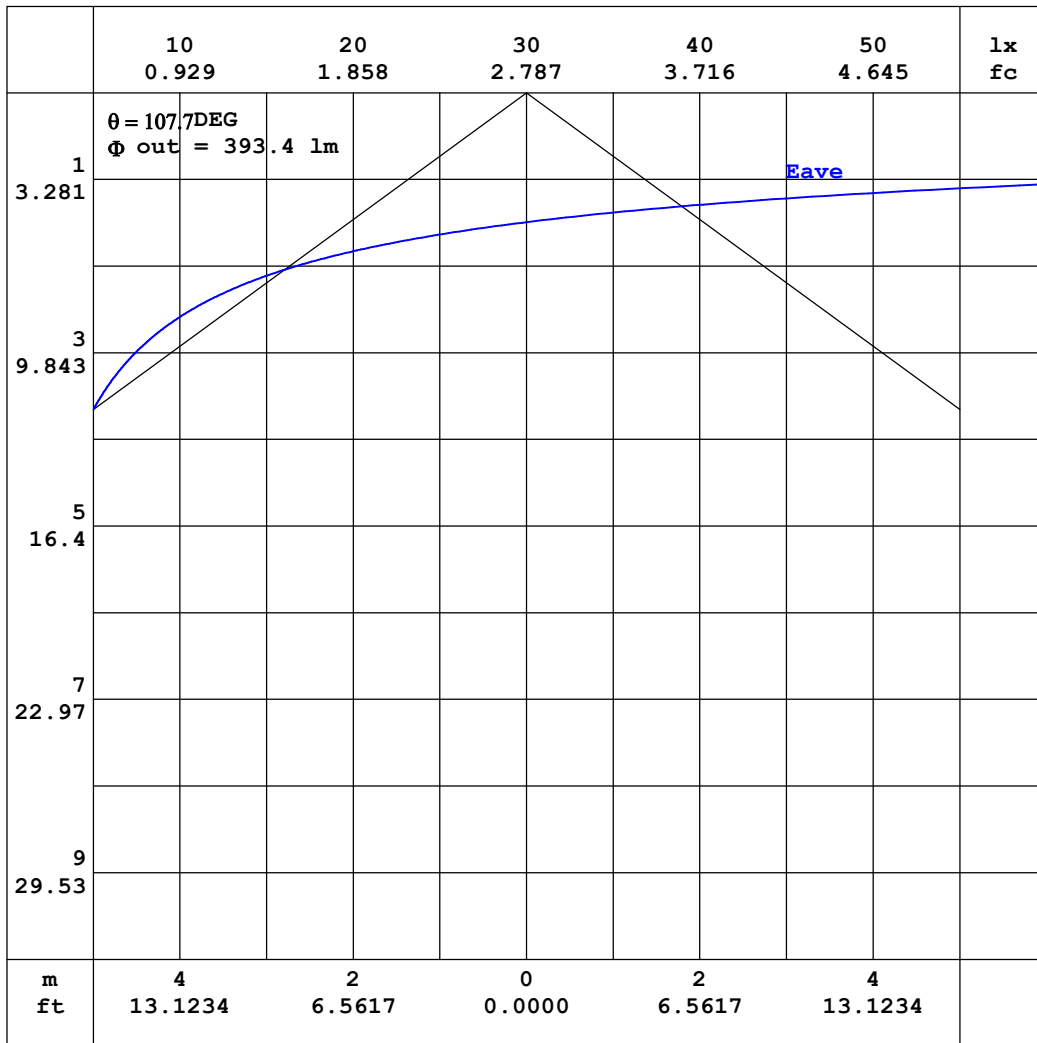


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

AAI CURVES

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



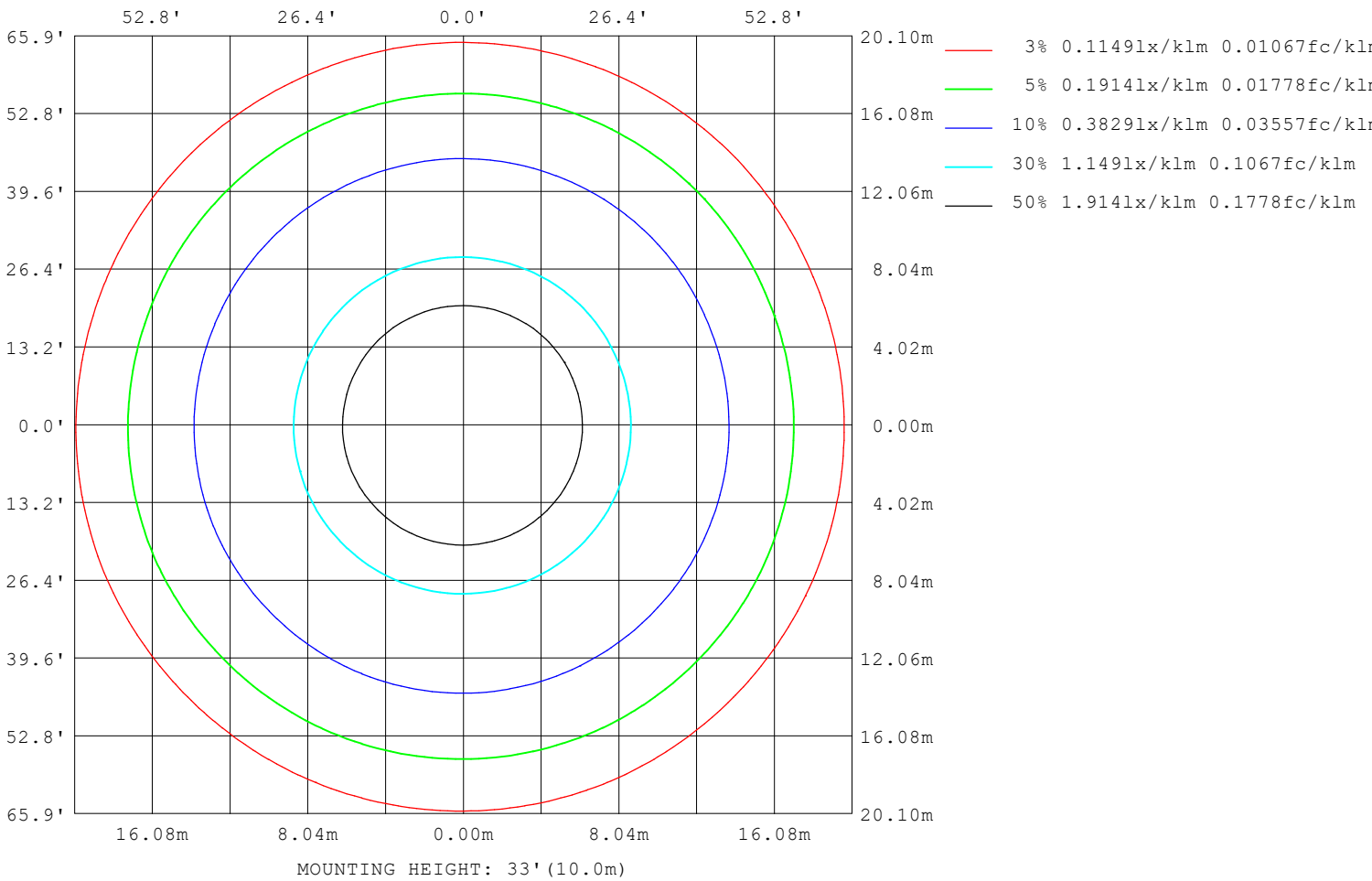
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.19lx1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

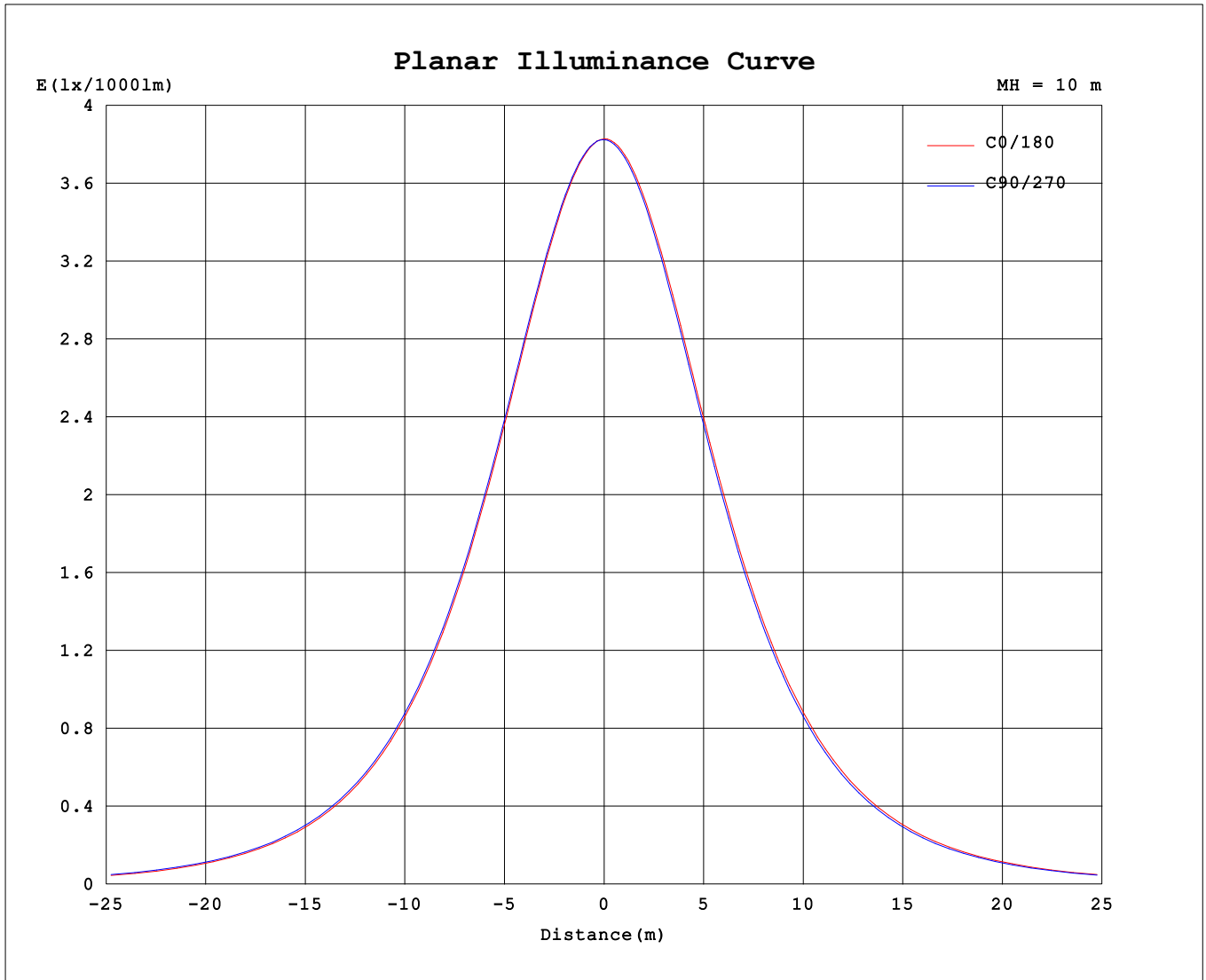
AvgL	cd/m2
L_0~180 (65) av	1281
L_0~180 (75) av	768
L_0~180 (85) av	99
L_90~270 (65) av	1290
L_90~270 (75) av	873
L_90~270 (85) av	238
L_45 (65) av	1287
L_45 (75) av	823
L_45 (85) av	143

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.85V I:0.0740A P:8.7902W PF:0.9914 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:531.191x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.: 6500K	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd/klm

C (DEG)\ γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	383	383	383	383	382	382	382	382	383	383	383	383	382	382	382	382			
5	380	381	381	381	381	381	381	381	381	381	381	380	380	380	380	380			
10	374	375	375	376	376	376	376	376	376	376	375	374	374	374	374	373			
15	365	365	366	367	367	367	367	368	368	367	366	365	365	364	364	364			
20	352	353	353	354	355	355	355	356	356	354	353	352	352	351	351	351			
25	336	337	337	339	339	340	340	341	340	339	338	336	336	335	335	334			
30	317	318	319	320	320	321	322	322	322	320	319	317	317	316	316	315			
35	295	296	297	298	299	300	300	301	301	299	297	296	295	294	294	293			
40	270	272	273	274	275	276	276	277	277	275	273	271	271	270	270	269			
45	243	245	246	248	248	249	250	251	250	248	246	244	244	243	243	242			
50	213	215	216	218	219	220	220	222	220	218	216	214	214	213	213	212			
55	181	182	183	185	186	187	188	189	188	186	184	182	181	180	180	179			
60	146	148	149	151	152	153	153	155	154	151	149	147	147	146	146	144			
65	109	111	113	116	116	118	118	119	117	115	114	112	112	111	110	108			
70	72.0	74.8	77.5	80.6	81.3	82.4	81.5	81.6	79.9	78.5	78.4	77.6	77.1	76.3	74.3	71.4			
75	38.2	41.1	44.4	48.1	48.9	49.1	47.4	46.8	44.9	44.2	45.2	45.6	45.6	44.0	41.4	37.9			
80	12.5	14.5	17.5	20.8	21.8	20.8	19.6	18.3	16.8	16.8	18.2	19.3	19.2	17.4	15.1	12.3			
85	1.26	1.67	2.66	4.13	4.79	3.73	3.17	2.80	2.34	2.31	2.90	3.46	3.90	2.53	1.70	1.08			
90	0.23	0.24	0.24	0.27	0.33	0.26	0.24	0.24	0.13	0.14	0.15	0.18	0.16	0.16	0.15	0.15			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-10

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
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 Remarks: