

Report No.:

Test Time: 26/09/2018 11:29

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-DW05-07 + LLD-07-CM

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 3158 lm

Voltage: 24.0 V

Current: 1.160 A

Power: 27.84 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1932.8 lm

Downward Ratio: 28.61%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 30.60%

Upward Ratio: 1.99%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 161.5, 226.1, 173.0, 172.8

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.6, 126.4, 122.4, 122.3

Luminaire Efficacy Rating (LER): 69.48

Central Intensity: 560.89 cd

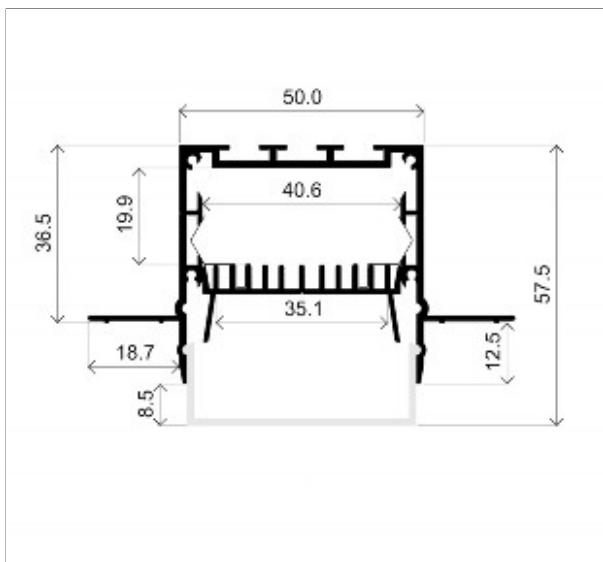
Max. Intensity: 561.28 cd

Pos of Max. Intensity: H20 V1

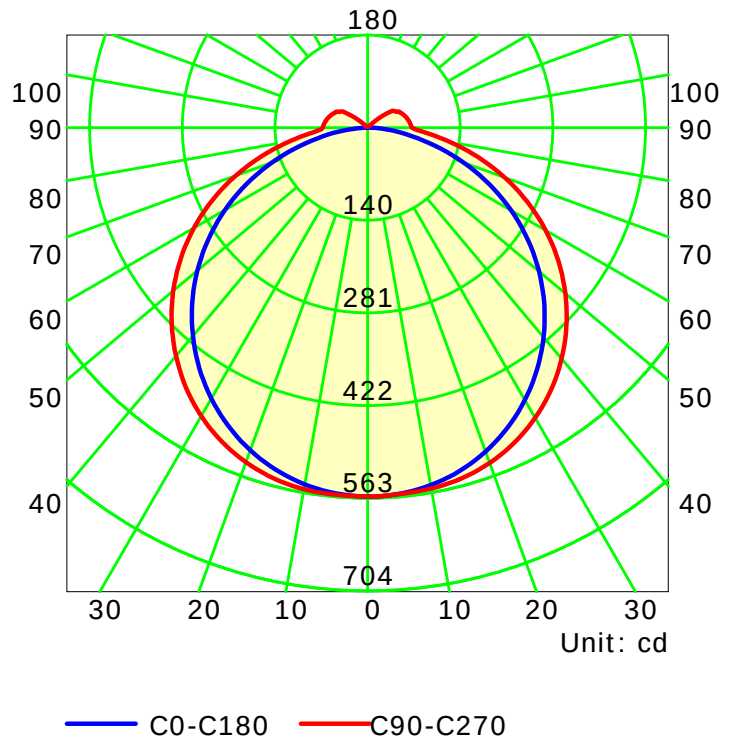
S/MH(C0/C180): 1.26

S/MH(C90/C270): 1.34

Picture Of Luminaire



Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

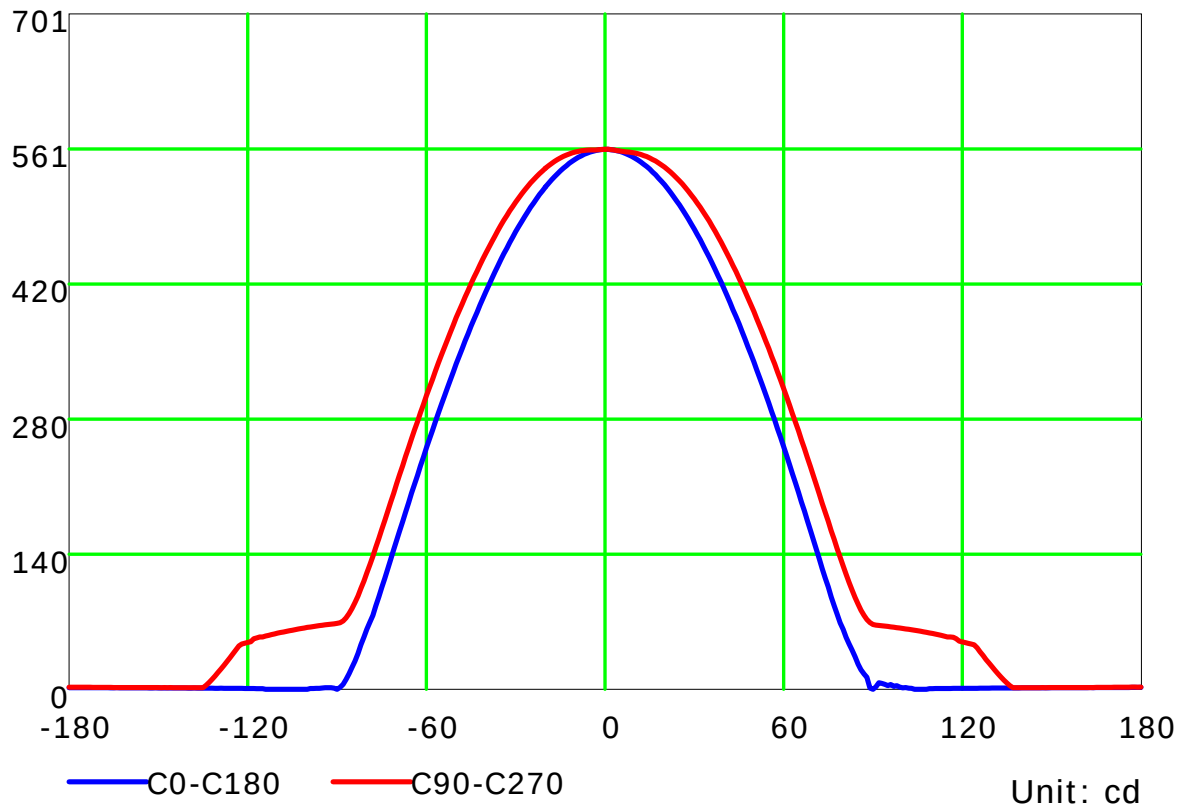
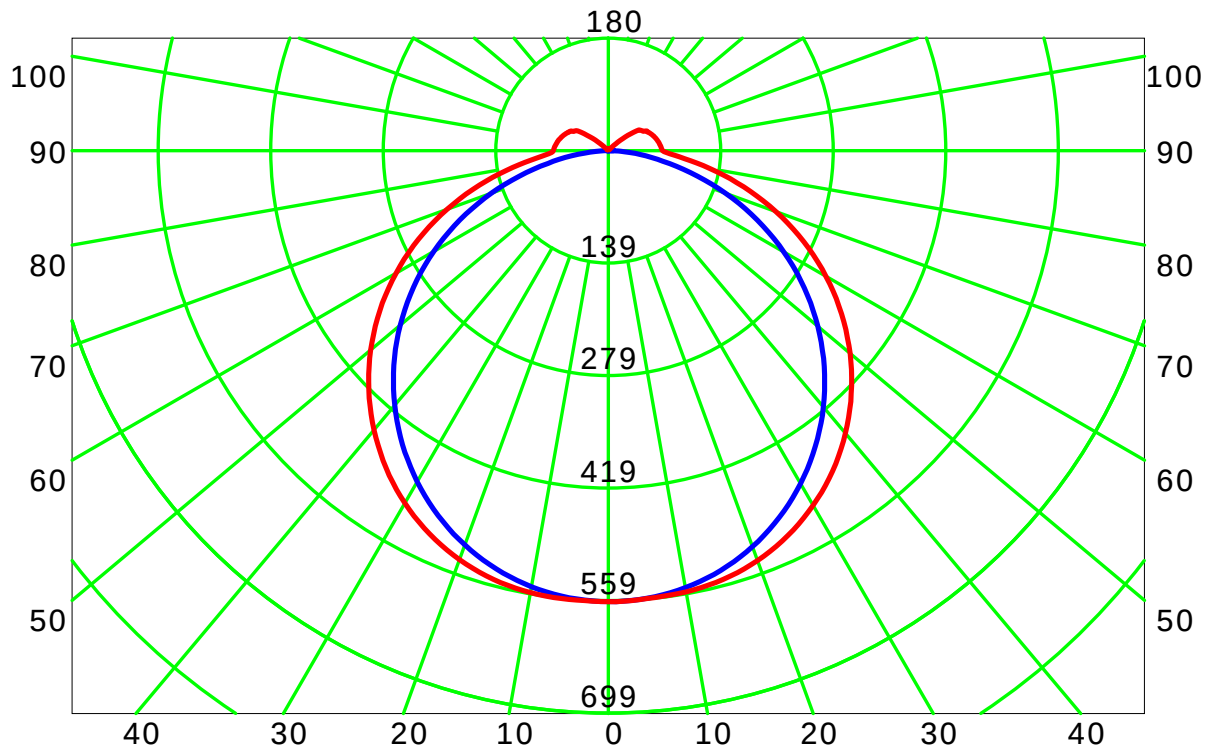
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

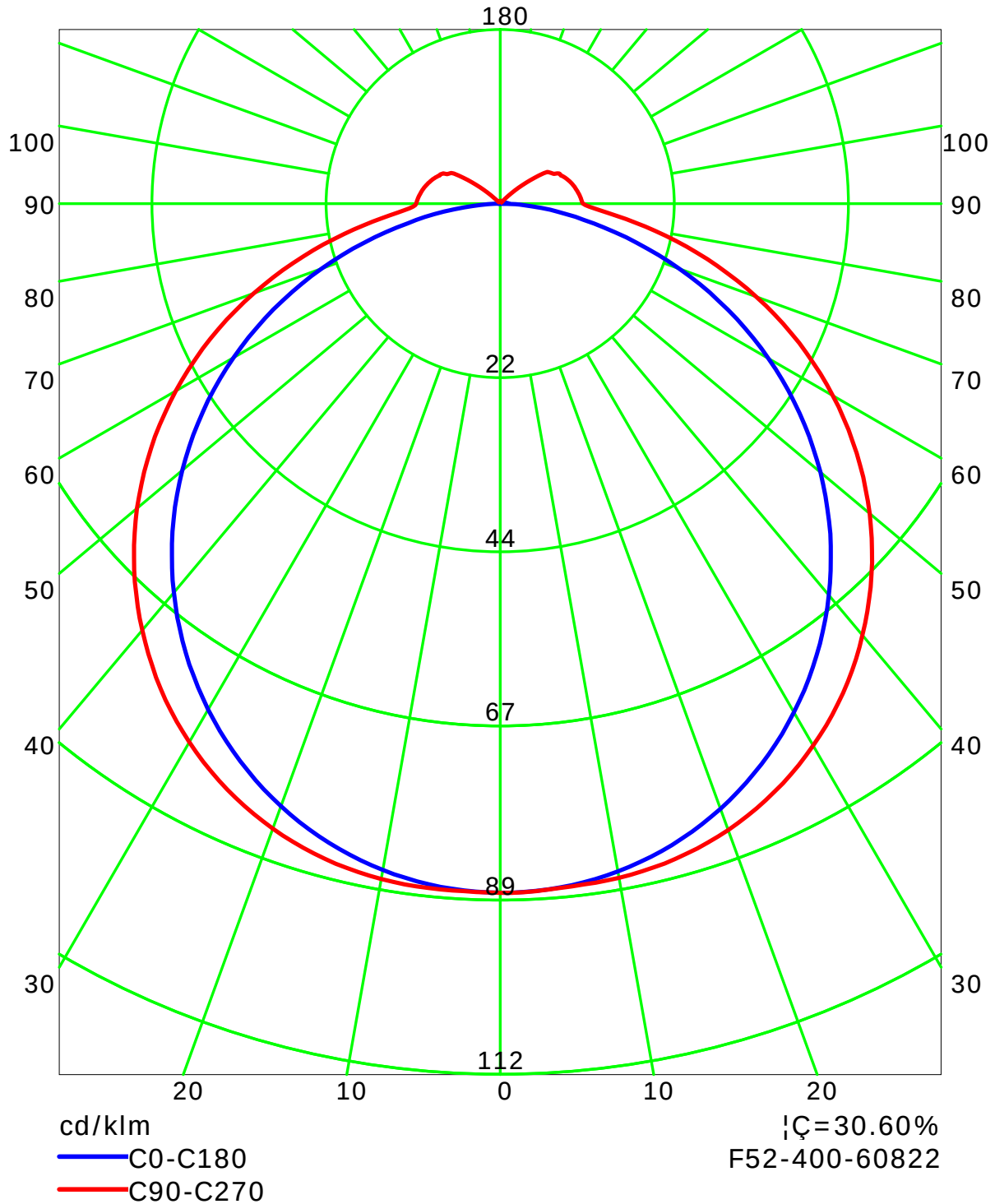
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

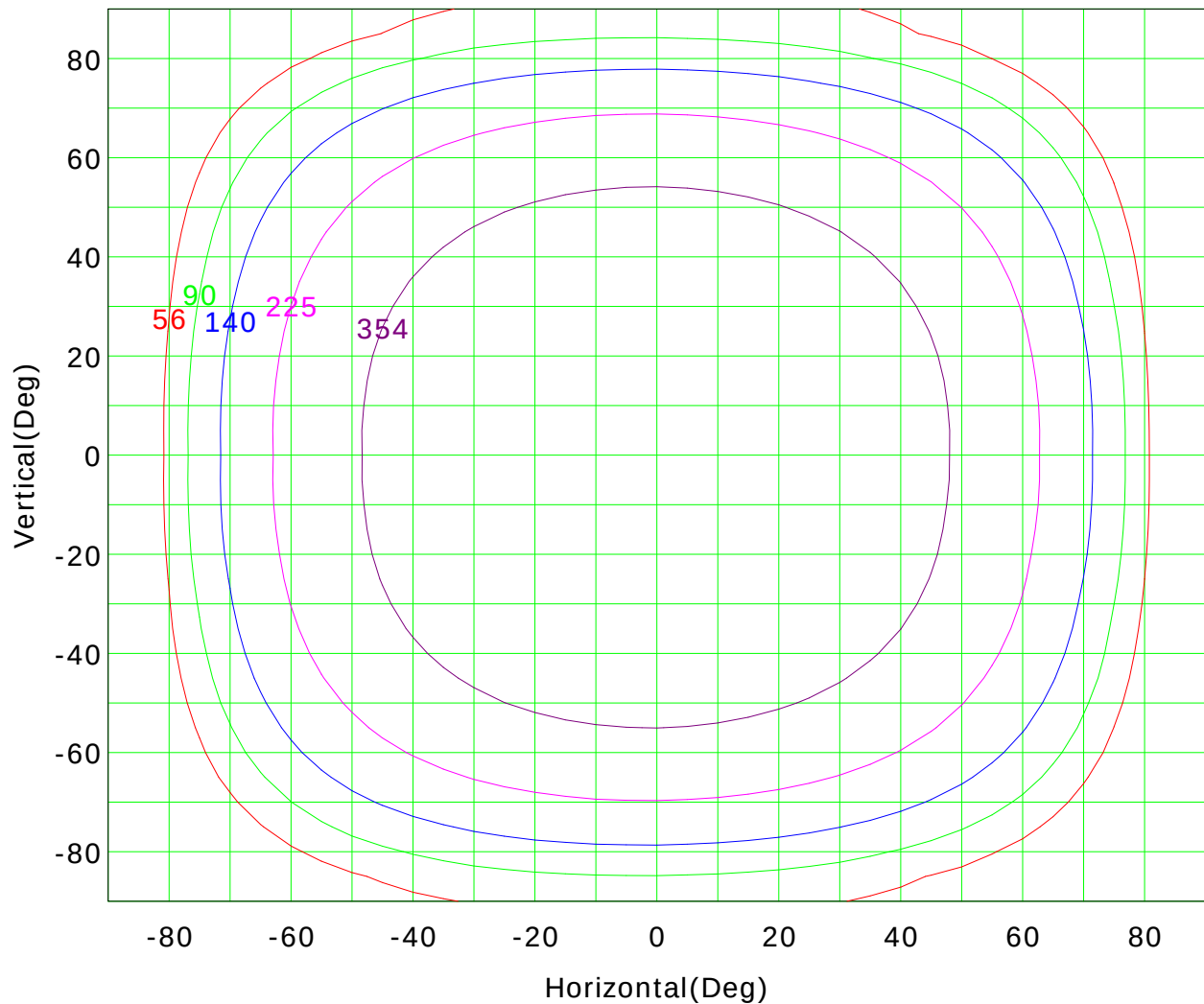
Luminous Intensity Distribution Curve(cd / klm)



C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Isocandela (rectangle)



I_{max} (100%): 561 cd

(10%):	56 cd	(16%):	90 cd
(25%):	140 cd	(40%):	225 cd
(63%):	354 cd	(100%):	561 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

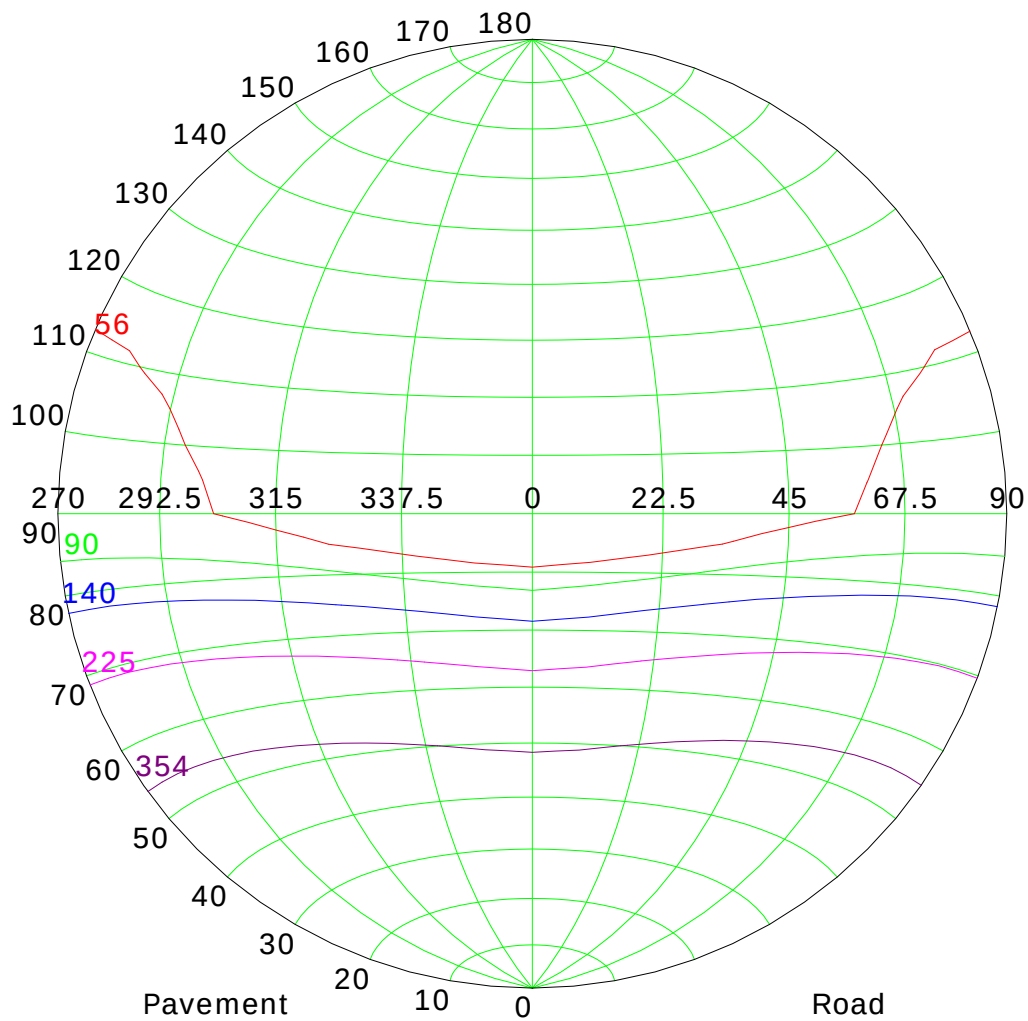
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 561 cd

(10%):	56 cd	(16%):	90 cd
(25%):	140 cd	(40%):	225 cd
(63%):	354 cd	(100%):	561 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

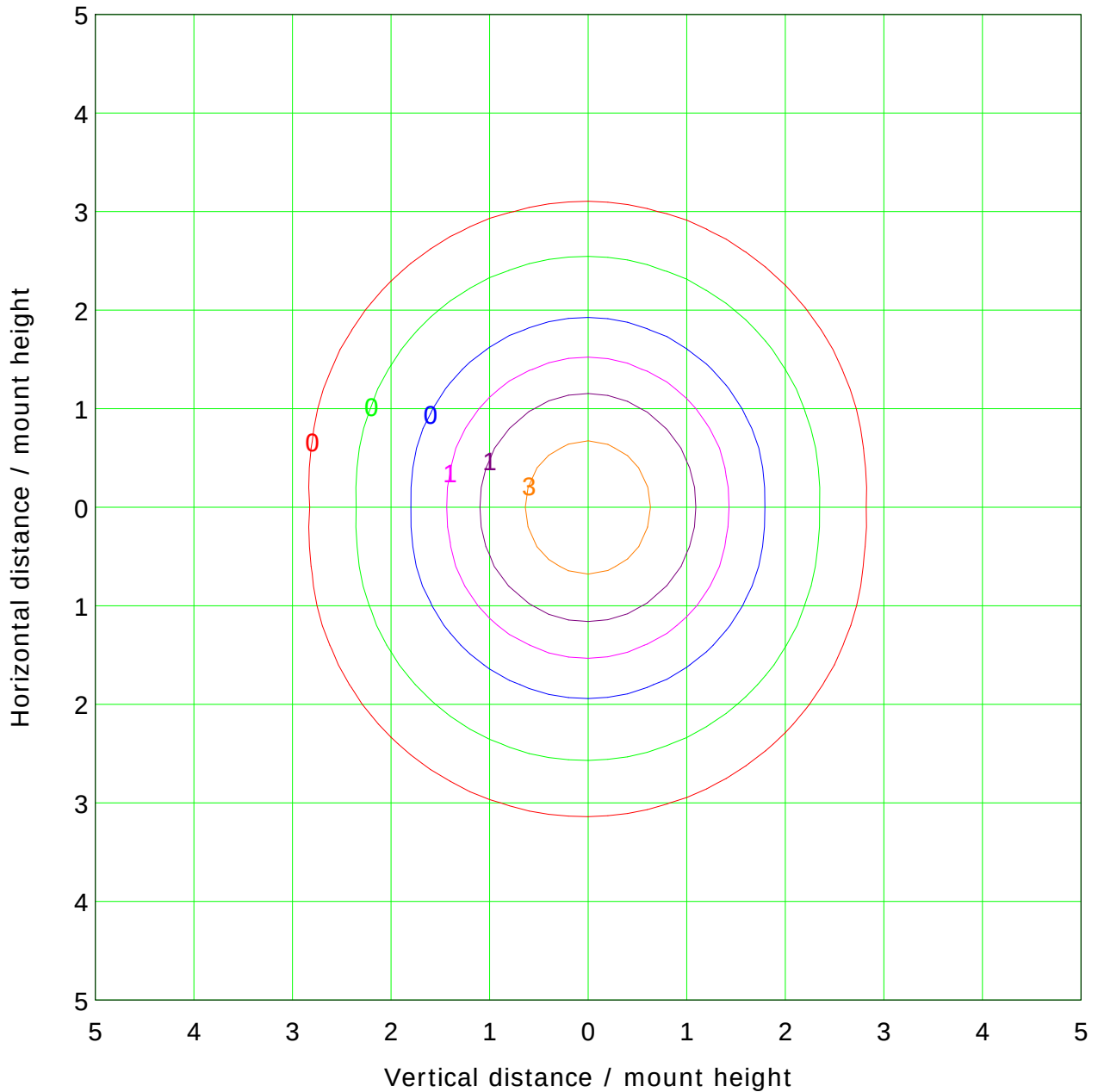
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 5.6 lx	
(1%):	0.1 lx	(2%):	0.1 lx
(5%):	0.3 lx	(10%):	0.6 lx
(20%):	1.1 lx	(50%):	2.8 lx
(100%):	5.6 lx		

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

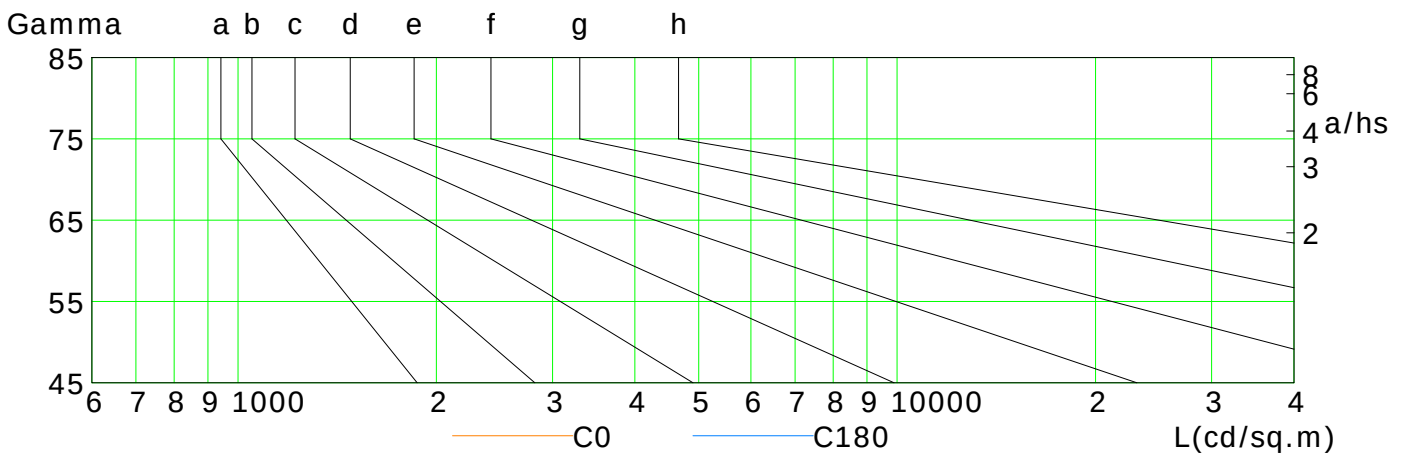
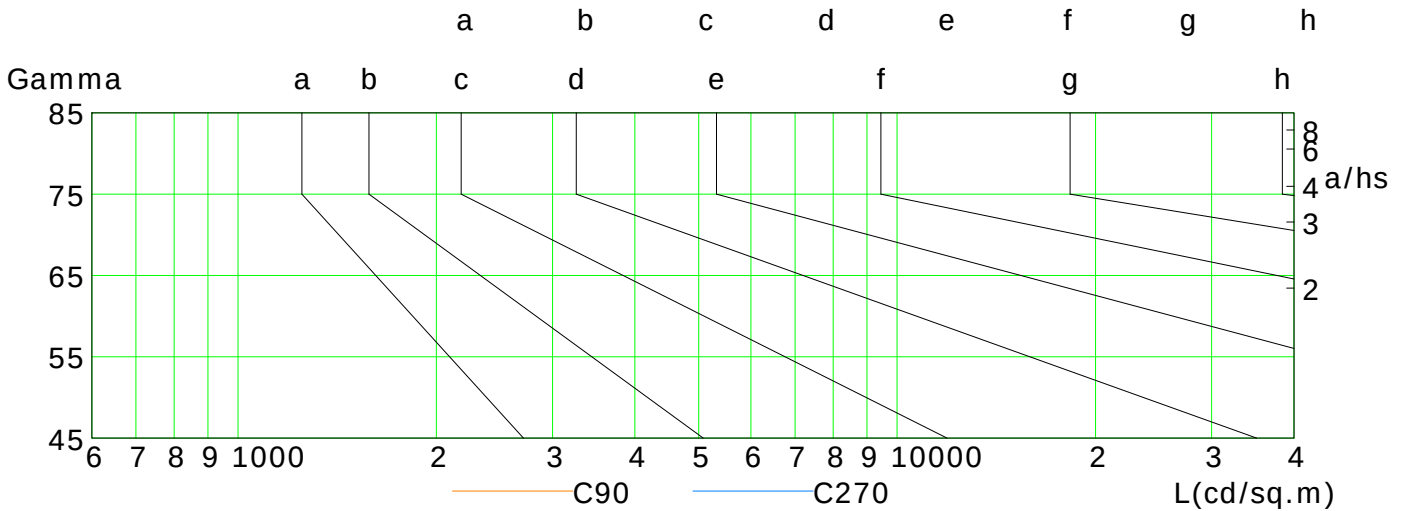
Distance: 7.970 m

Humidity:

Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	380	340	298	252	205	155	106	62	26
C90	427	393	354	313	269	222	175	128	89
C180	377	338	296	251	204	155	106	62	23
C270	421	386	347	305	260	213	166	121	84

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

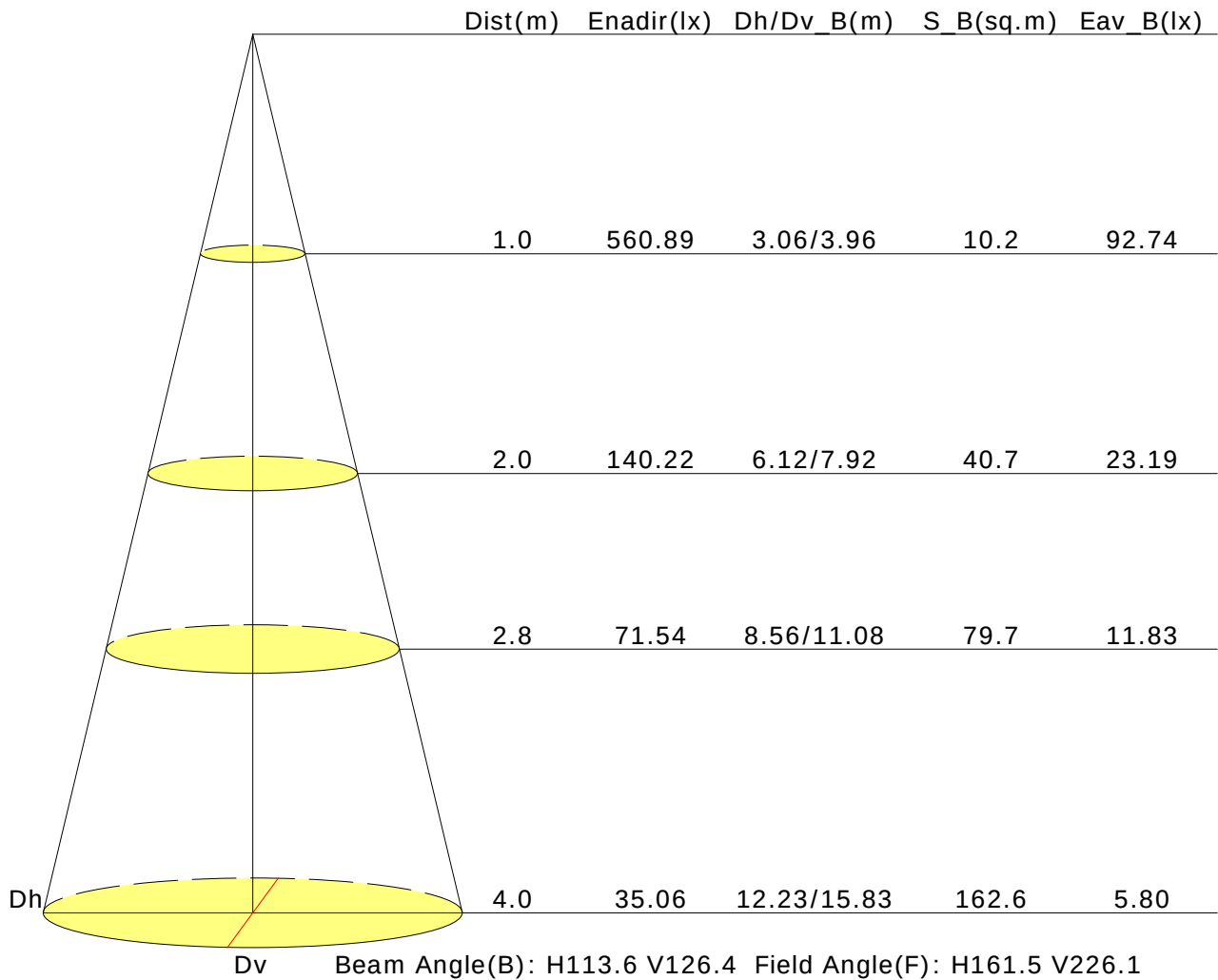
Test Device: GPM-2000

Distance: 7.970 m

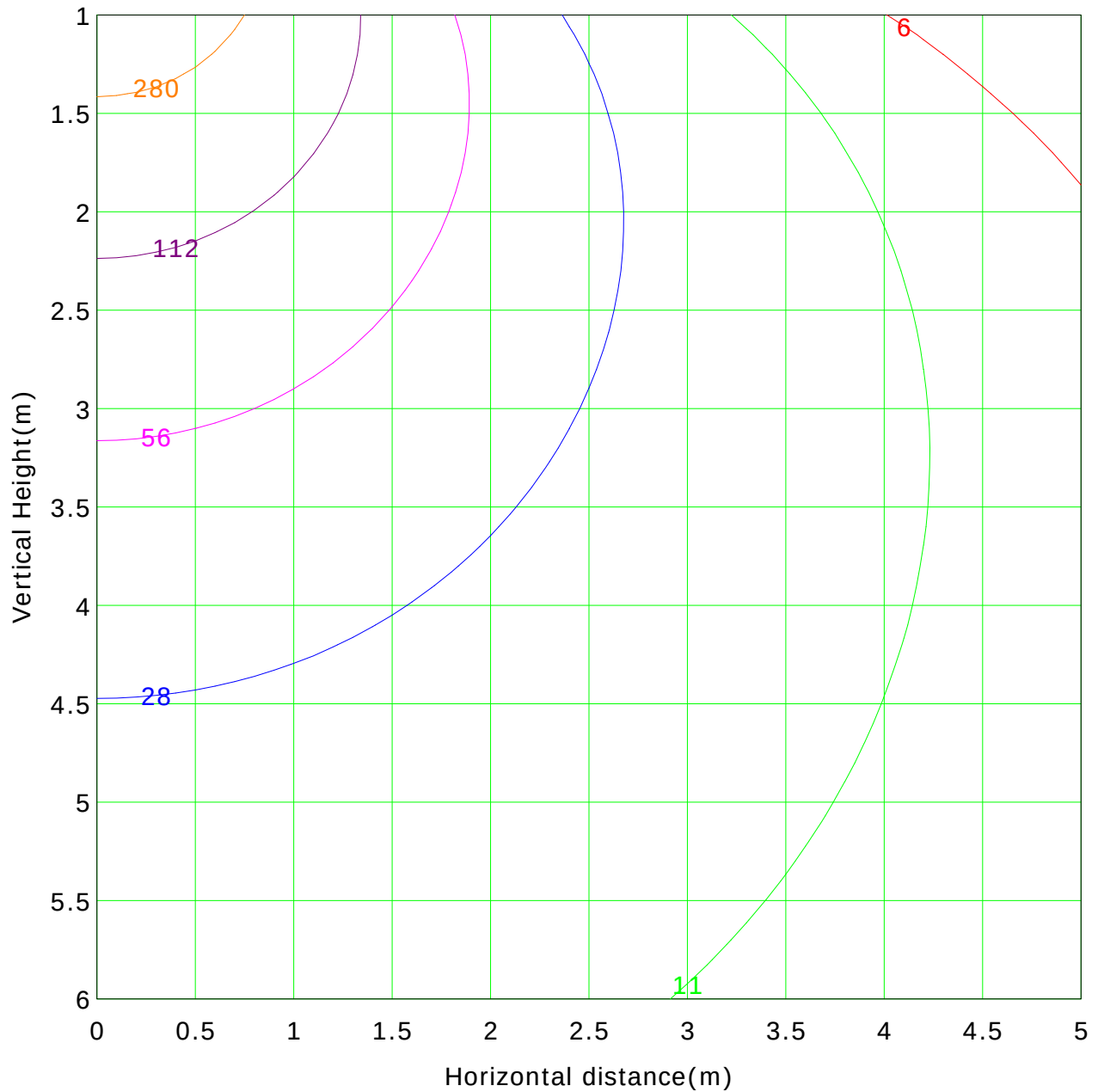
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 6.0m	Max Lux: 560.9 lx
(1%): 5.6 lx	(2%): 11.2 lx	
(5%): 28.0 lx	(10%): 56.1 lx	
(20%): 112.2 lx	(50%): 280.4 lx	
(100%): 560.9 lx		

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Report No.:

Test Time: 26/09/2018 12:37

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-DW05-07 + LLD-07-CM

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 3158 lm

Voltage: 24.0 V

Current: 1.160 A

Power: 27.83 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1874.6 lm

Downward Ratio: 29.57%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 29.68%

Upward Ratio: 0.11%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 160.4, 160.1, 160.2, 160.2

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.9, 113.1, 113.6, 113.6

Luminaire Efficacy Rating (LER): 67.41

Central Intensity: 652.44 cd

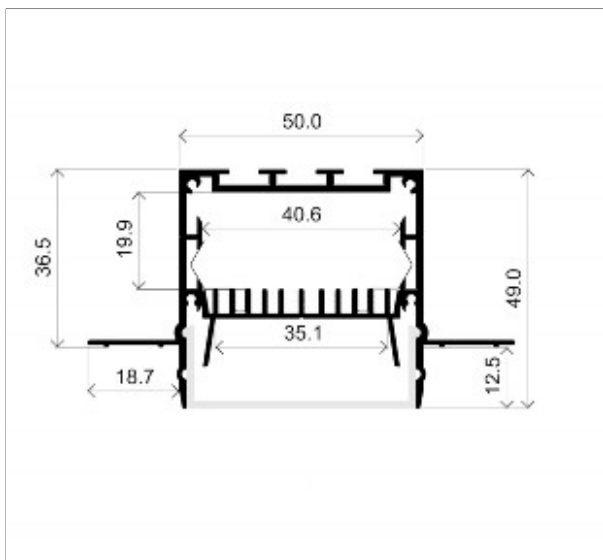
Max. Intensity: 652.56 cd

Pos of Max. Intensity: H10 V1

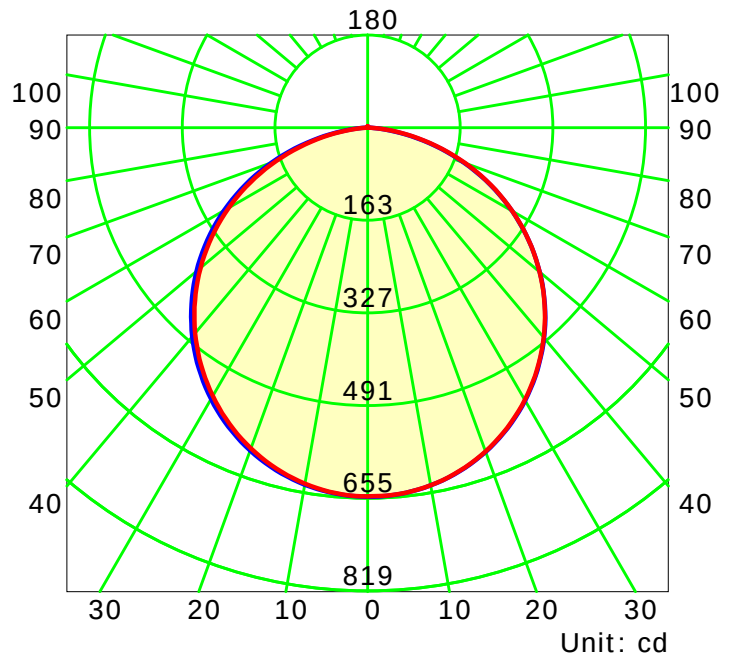
S/MH(C0/C180): 1.27

S/MH(C90/C270): 1.26

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

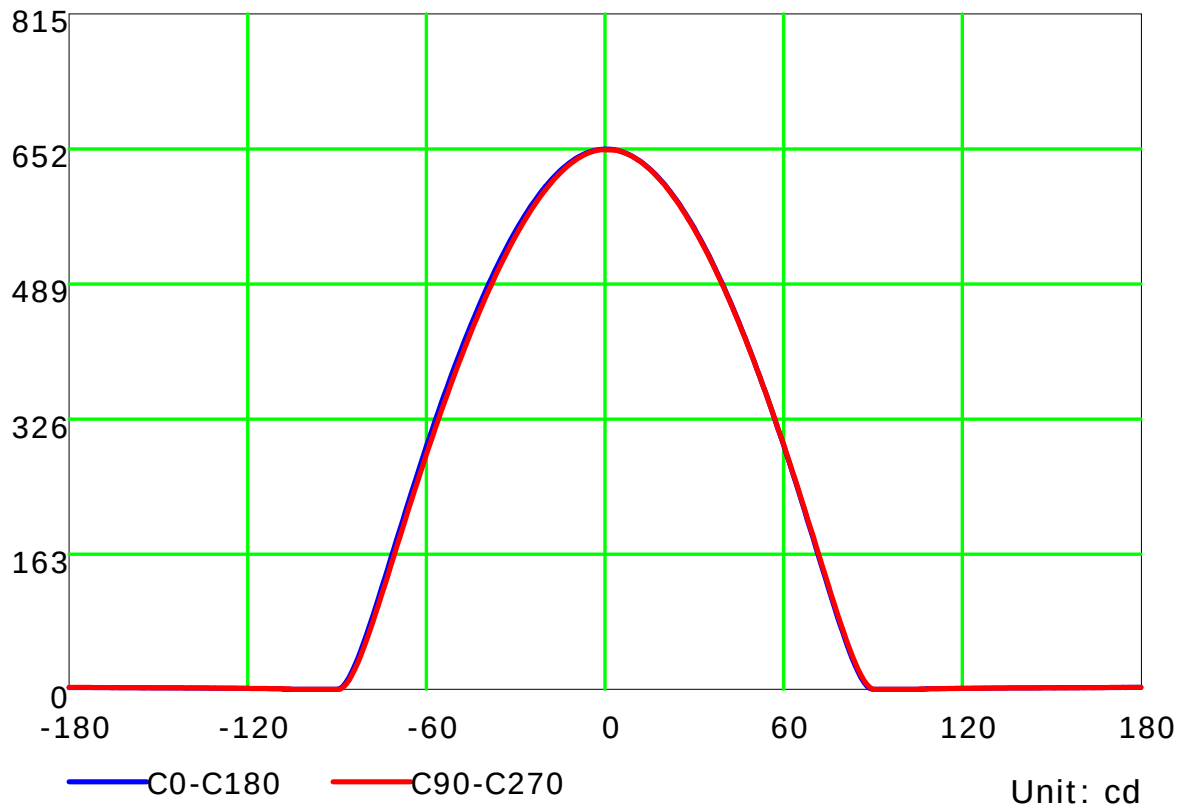
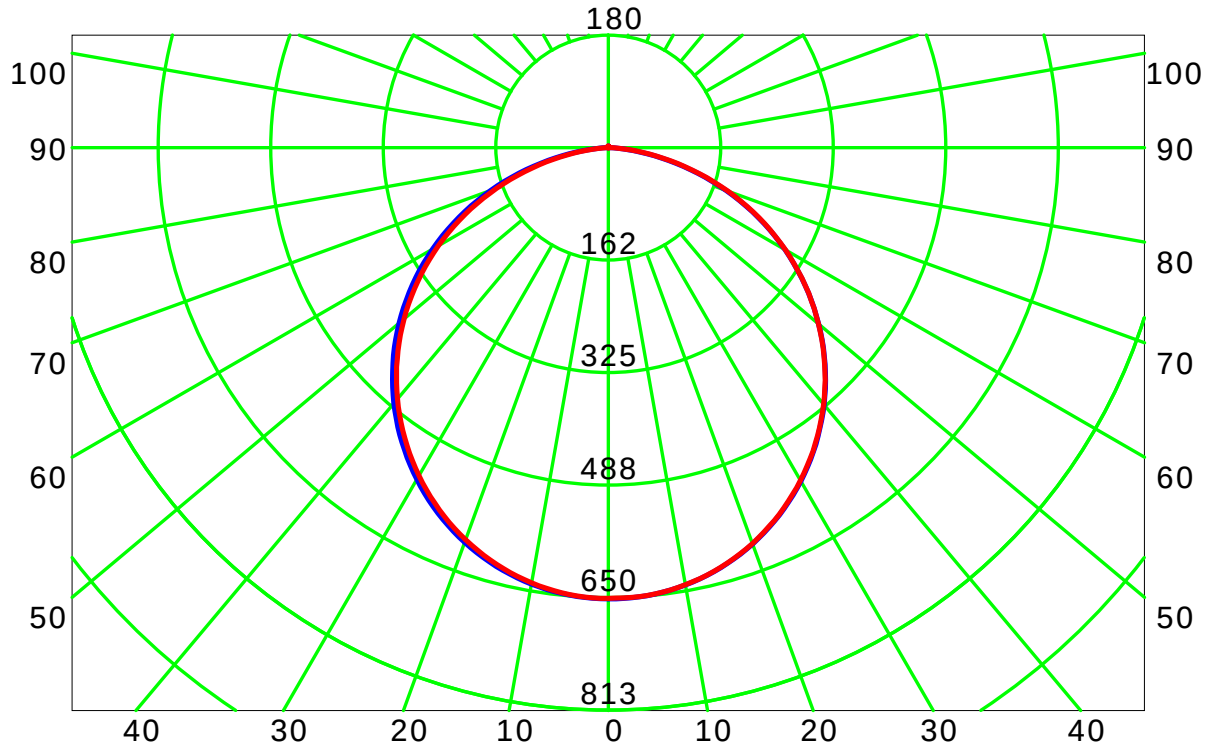
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

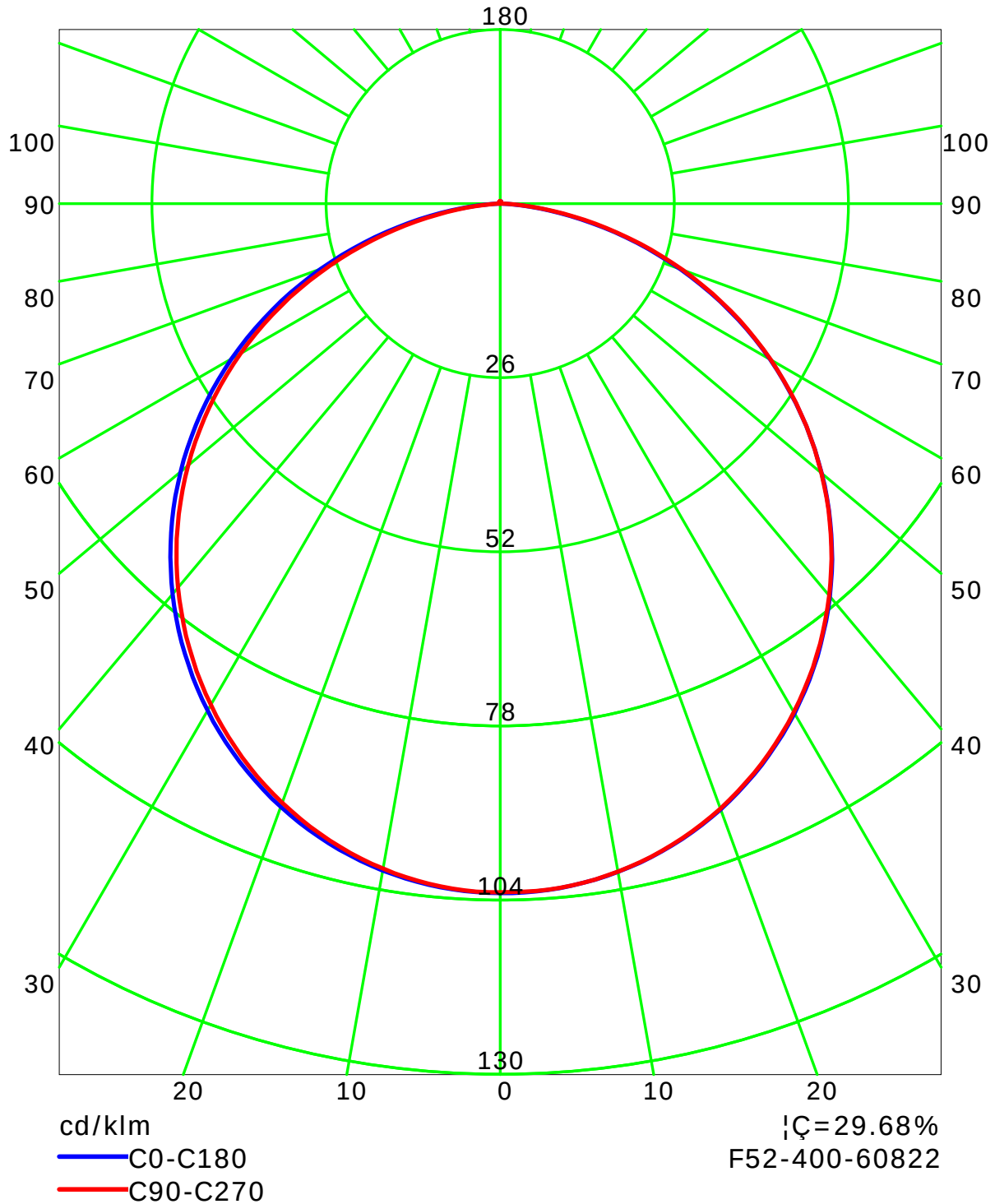
Luminous Intensity Distribution Curve



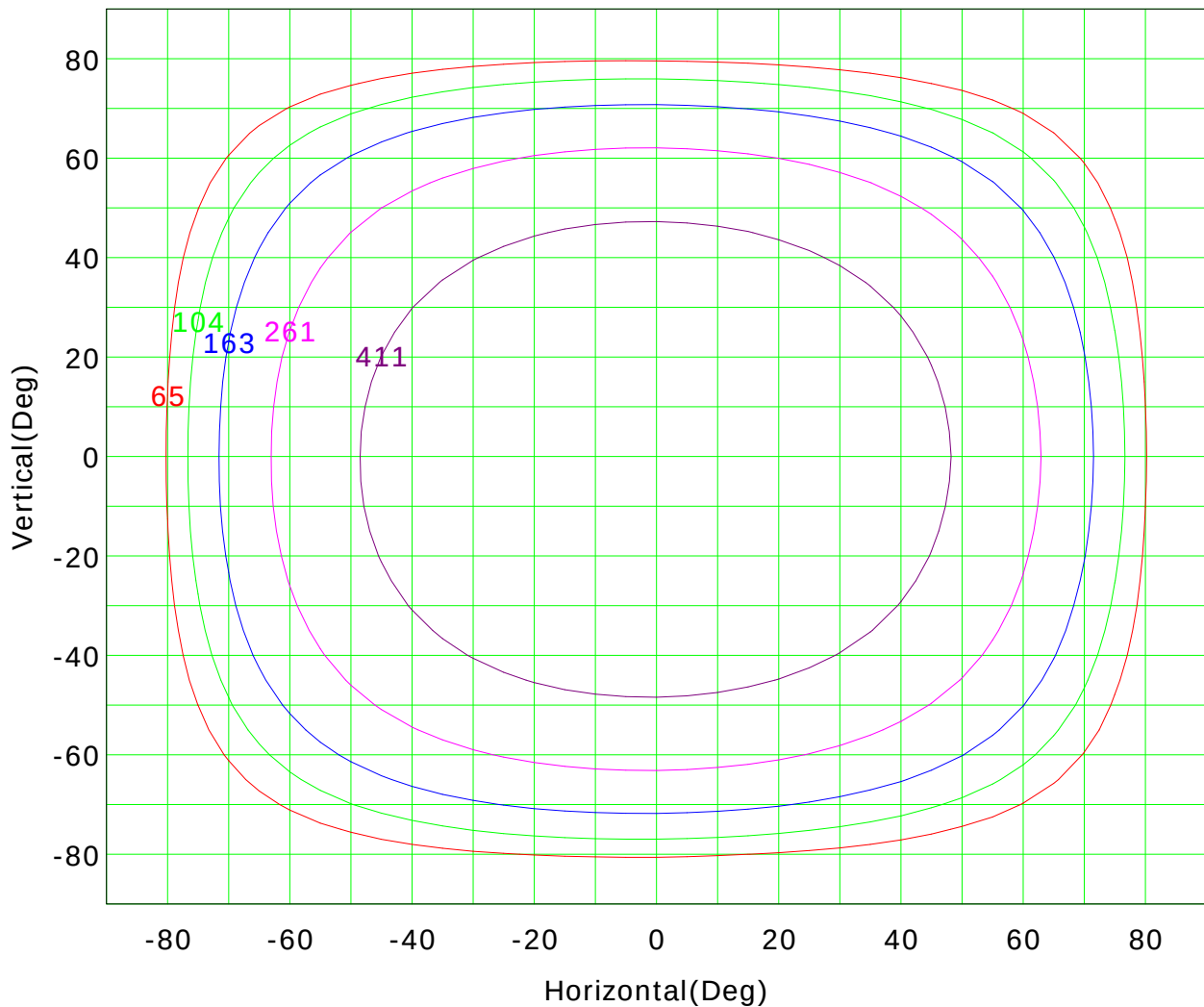
C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Luminous Intensity Distribution Curve(cd / klm)



Isocandela (rectangle)



I_{max} (100%): 653 cd

(10%):	65 cd	(16%):	104 cd
(25%):	163 cd	(40%):	261 cd
(63%):	411 cd	(100%):	653 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

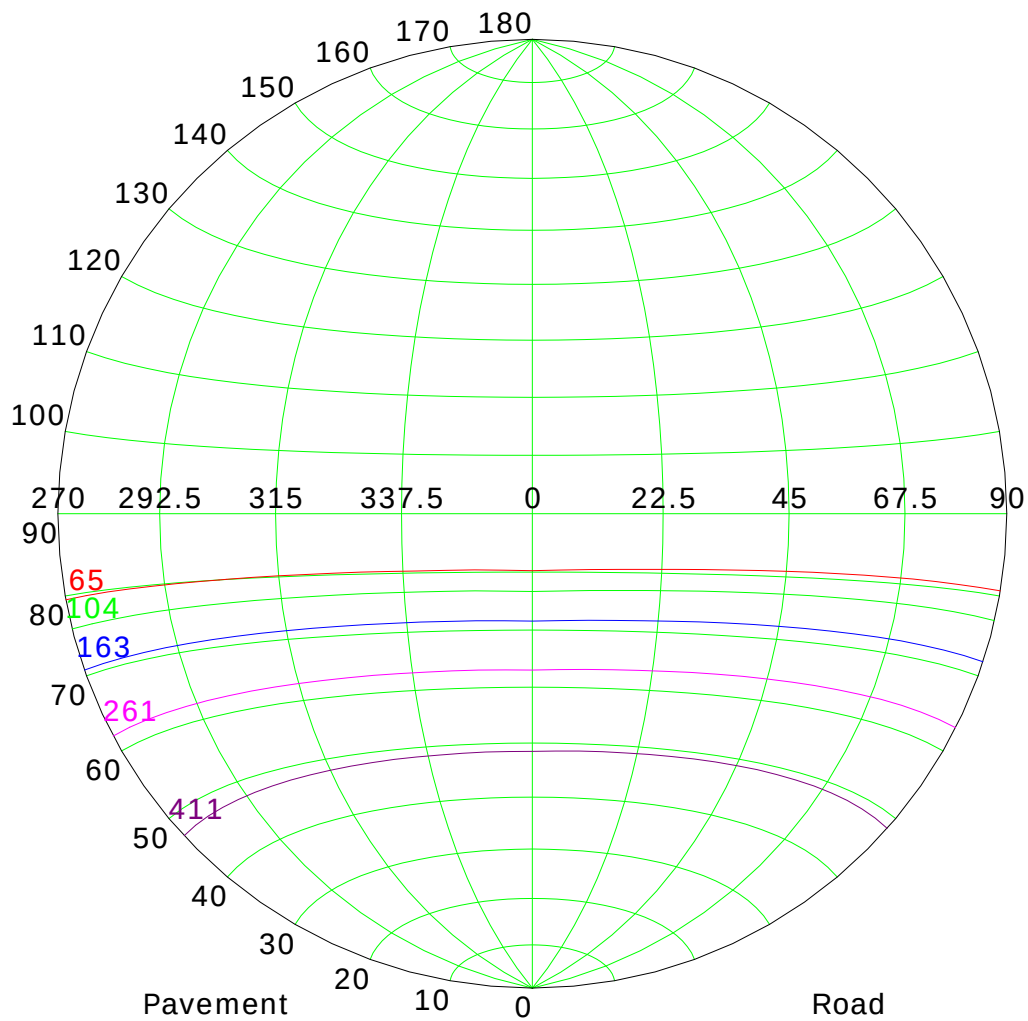
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 653 cd

(10%): 65 cd	(16%): 104 cd
(25%): 163 cd	(40%): 261 cd
(63%): 411 cd	(100%): 653 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

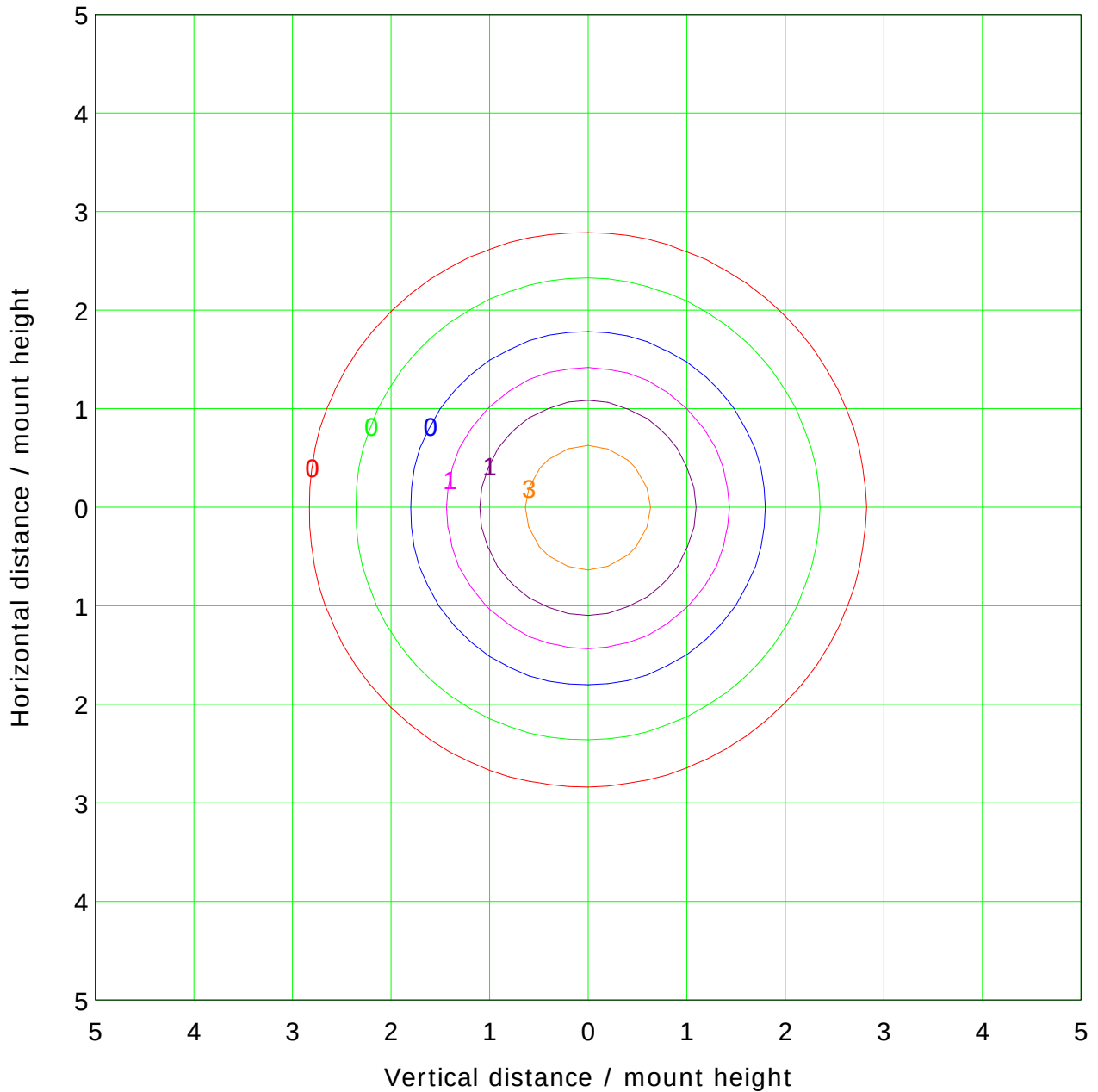
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot

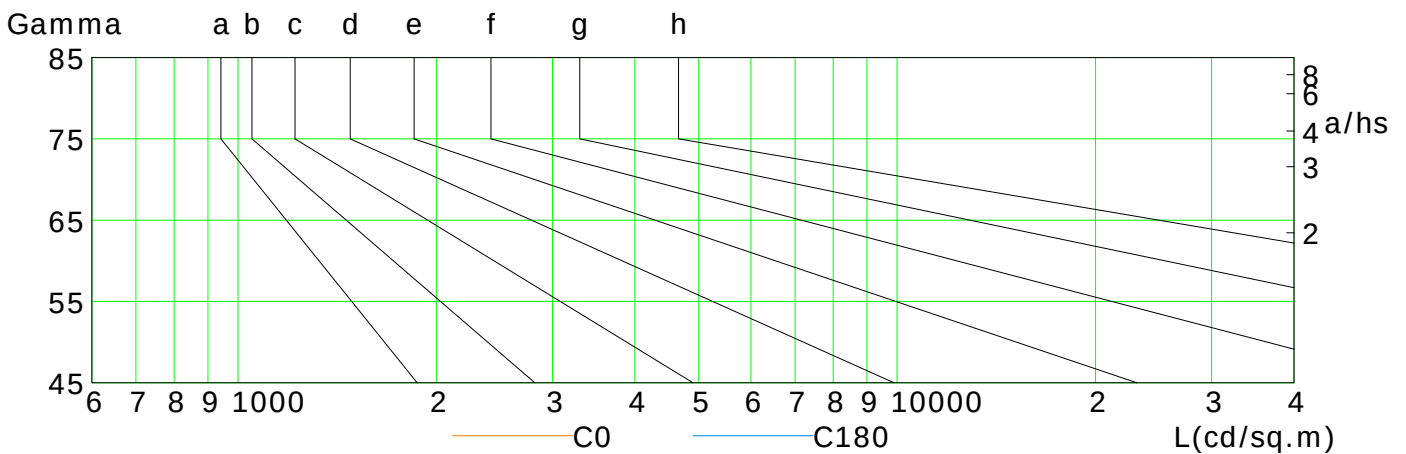
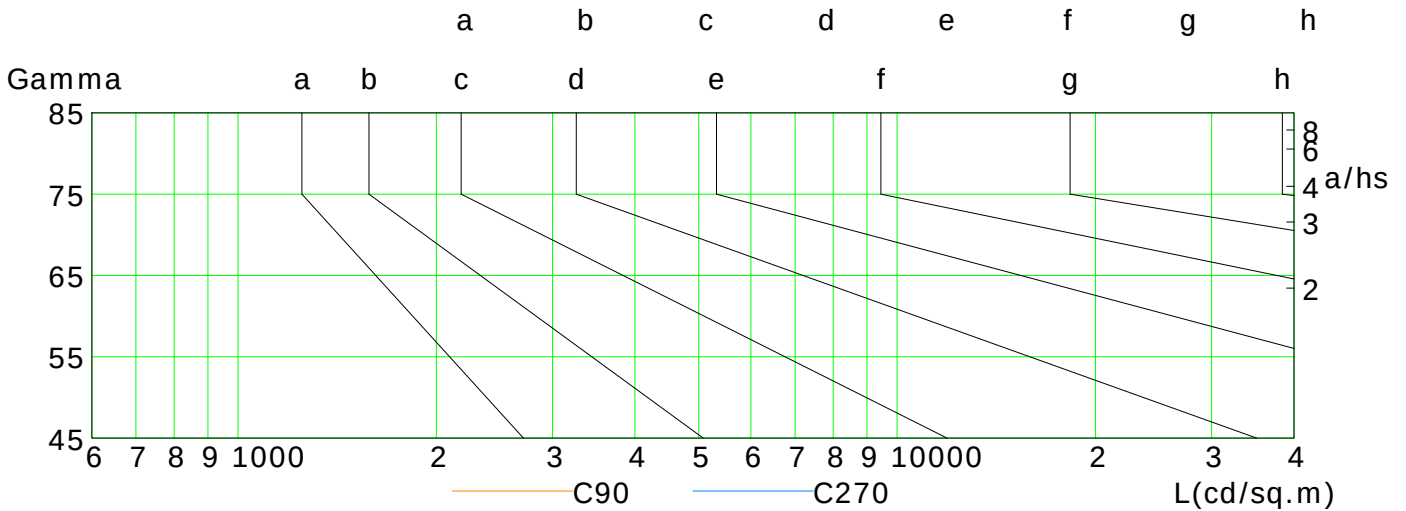


C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	443	397	348	295	239	182	123	67	21
C90	442	397	348	296	241	184	126	71	24
C180	440	395	346	294	238	181	123	67	21
C270	432	386	336	284	228	172	114	60	17

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

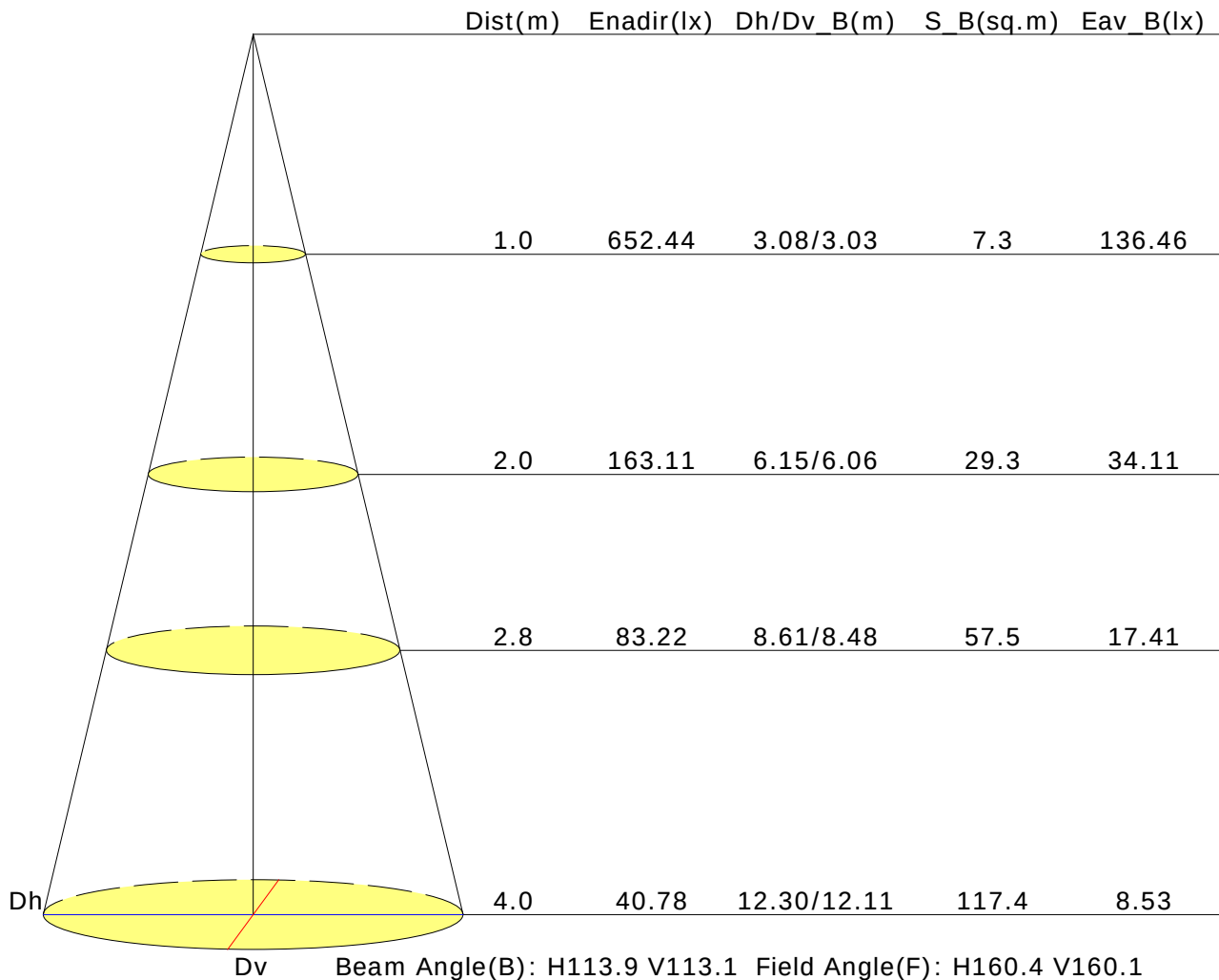
Test Device: GPM-2000

Distance: 7.970 m

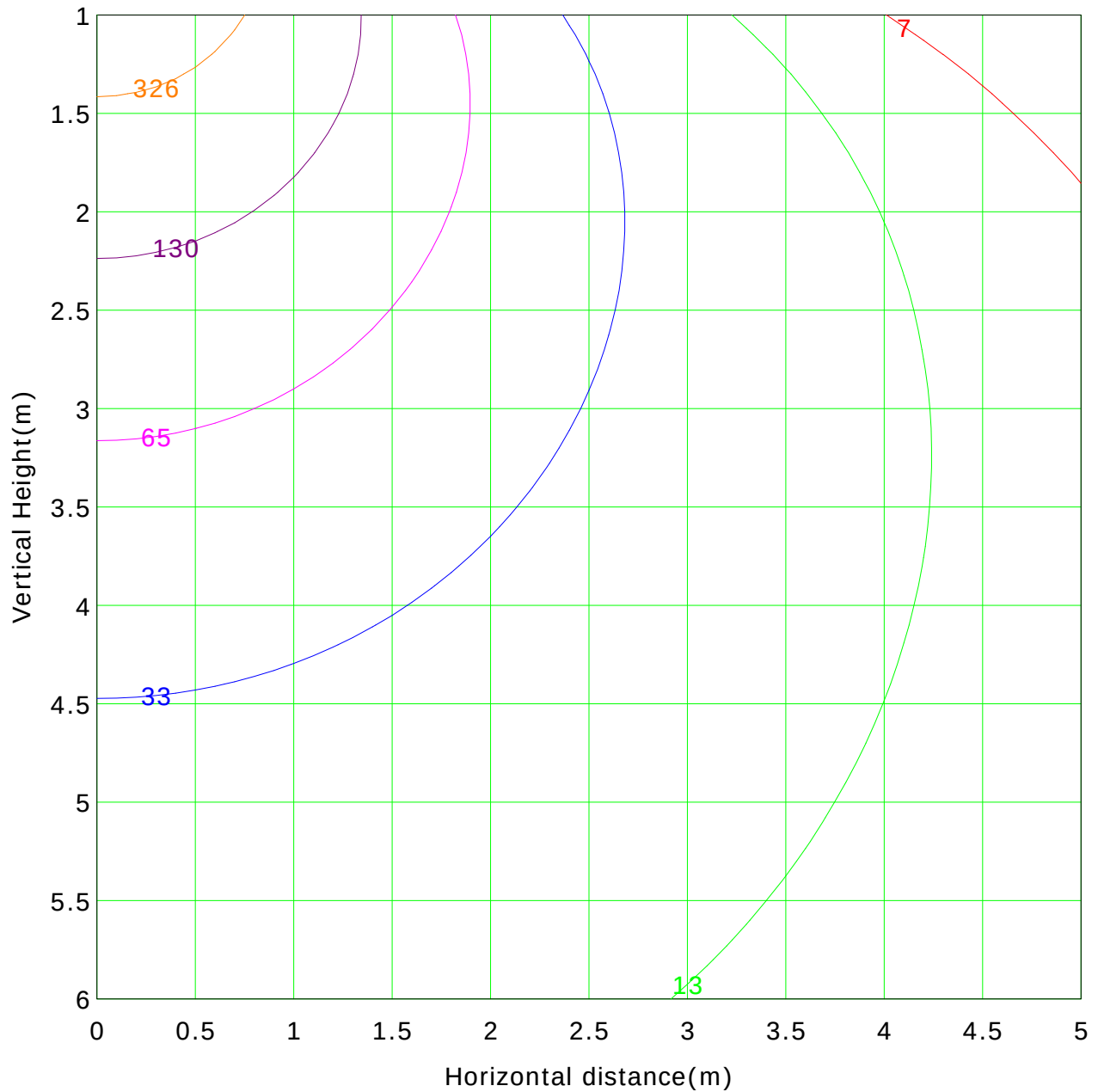
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 6.0m	Max Lux: 652.4 lx
(1%): 6.5 lx	(2%): 13.0 lx	
(5%): 32.6 lx	(10%): 65.2 lx	
(20%): 130.5 lx	(50%): 326.2 lx	
(100%): 652.4 lx		

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Report No.:

Test Time: 26/09/2018 14:19

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-DW05-07 + LLD-07-CS

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 3158 lm

Voltage: 24.0 V

Current: 1.160 A

Power: 27.84 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1895.2 lm

Downward Ratio: 27.94%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 30.01%

Upward Ratio: 2.07%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 165.8, 235.5, 177.6, 177.2

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.2, 127.5, 122.4, 122.3

Luminaire Efficacy Rating (LER): 68.13

Central Intensity: 539.66 cd

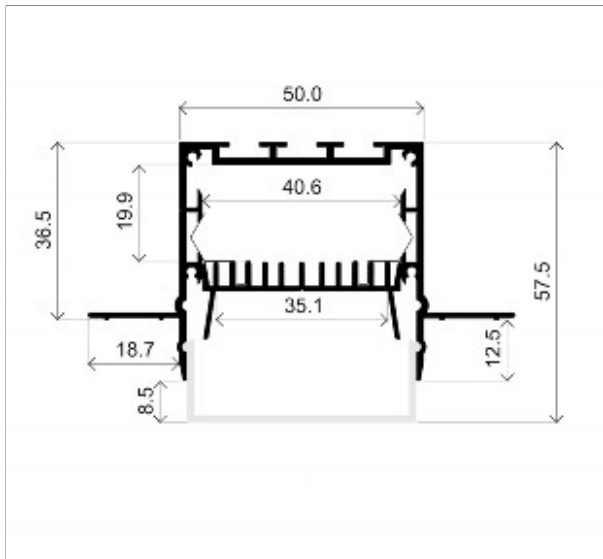
Max. Intensity: 540.23 cd

Pos of Max. Intensity: H270 V6

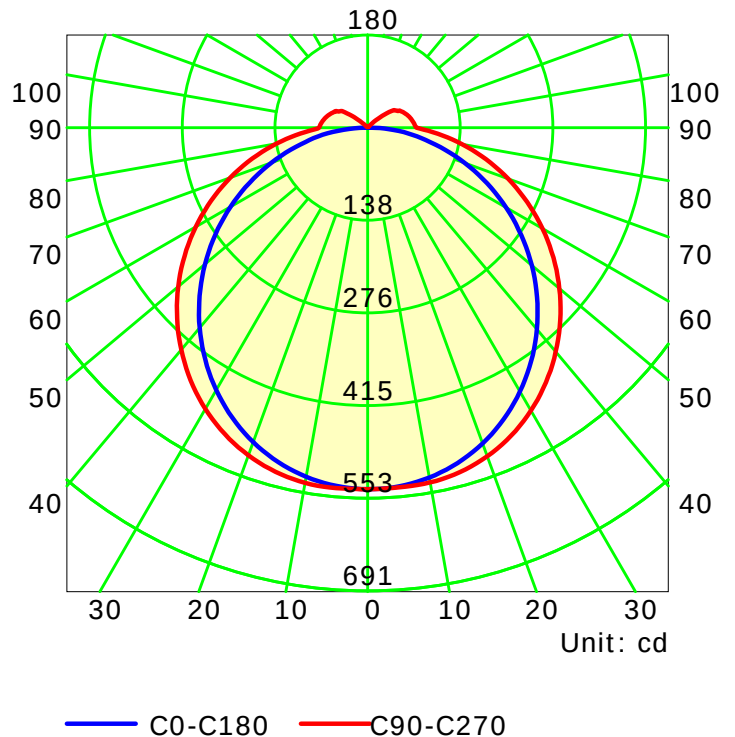
S/MH(C0/C180): 1.25

S/MH(C90/C270): 1.33

Picture Of Luminaire



Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

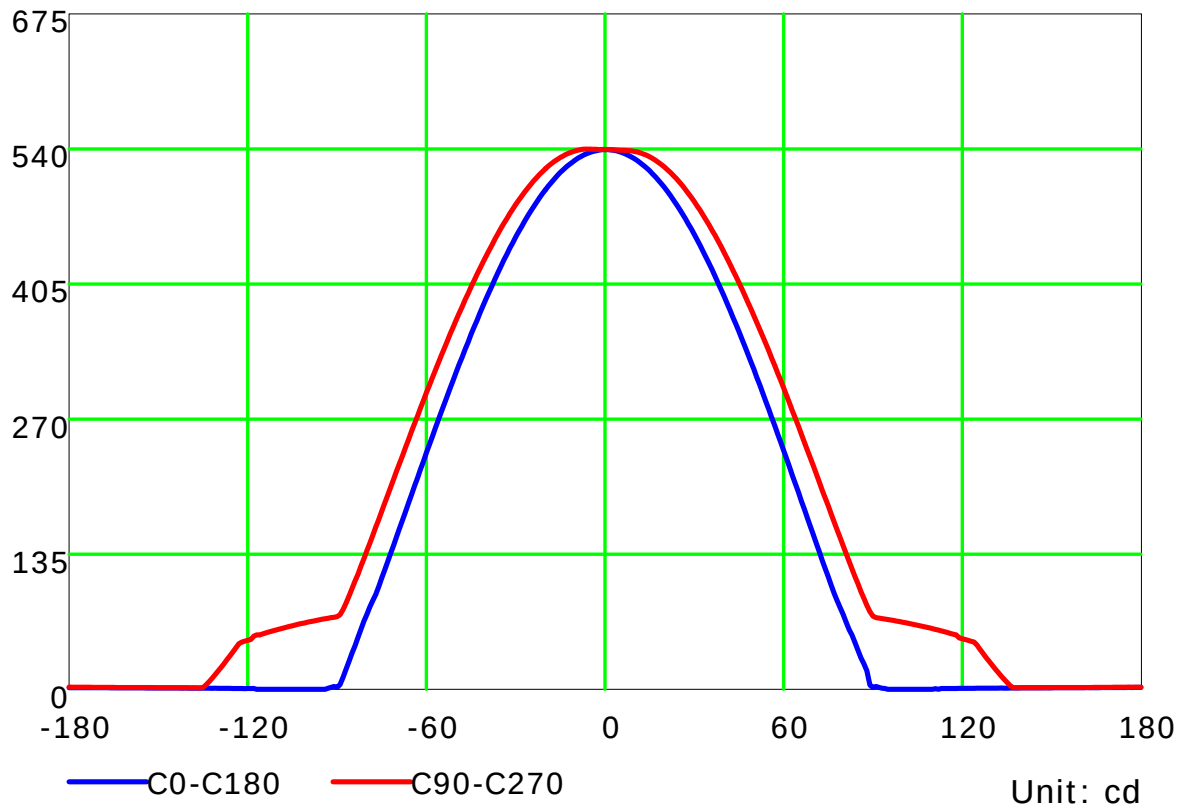
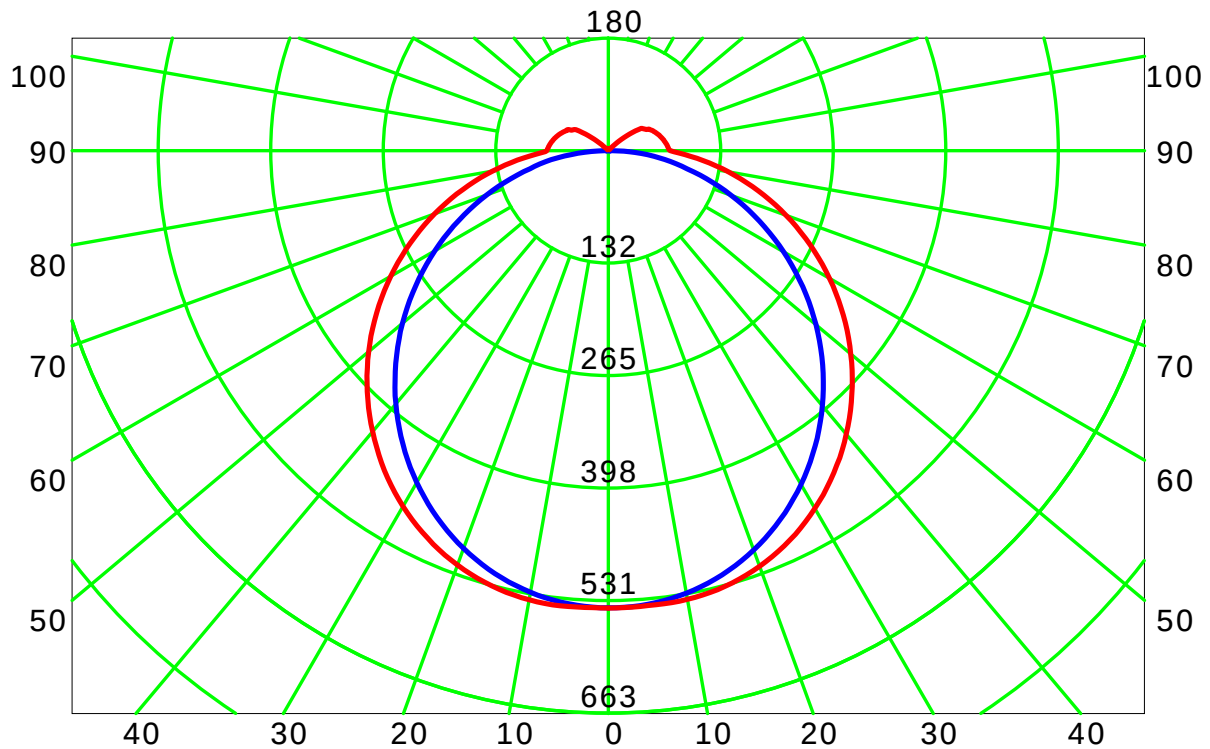
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

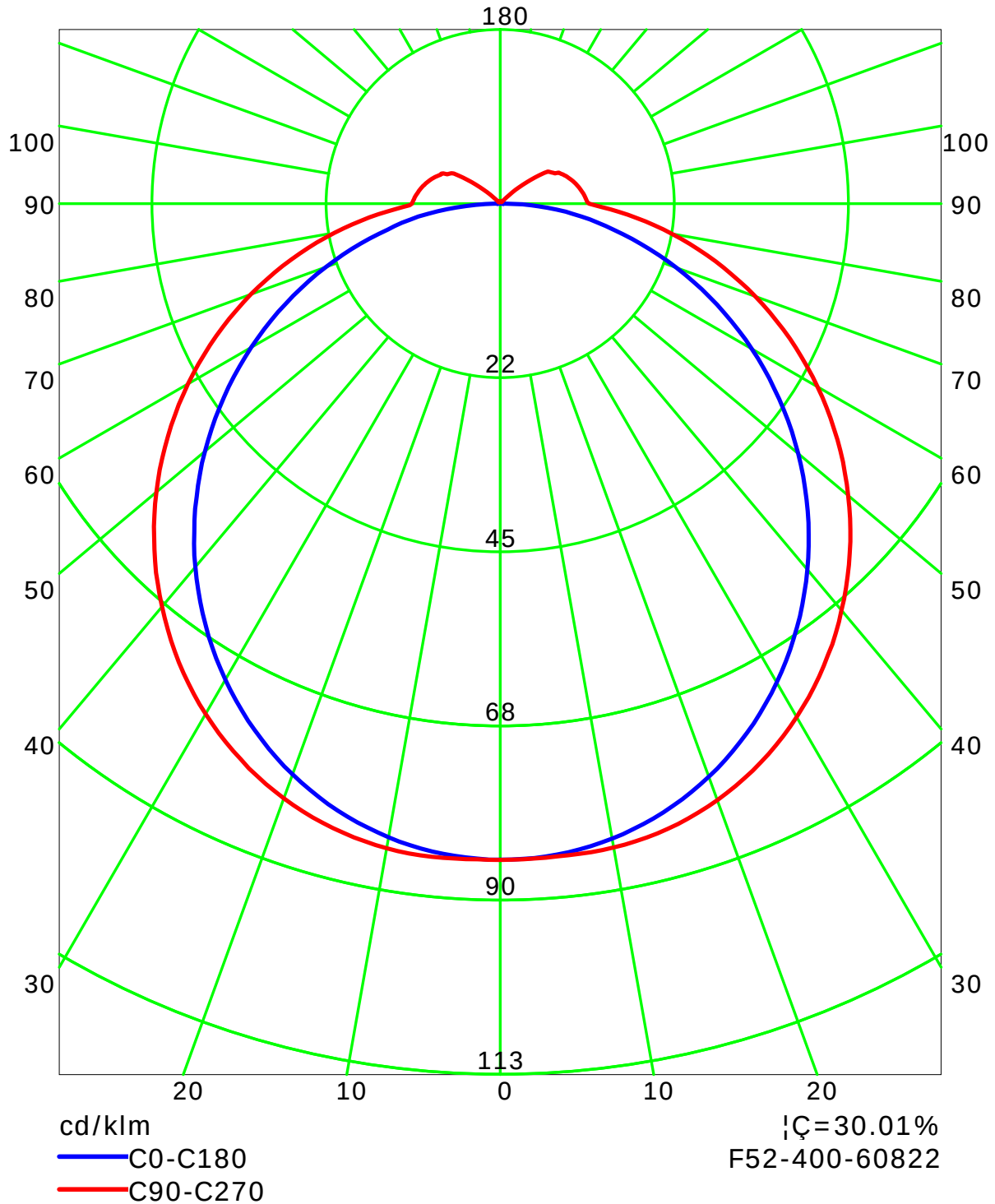
Luminous Intensity Distribution Curve



C Plane (°): 0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°): 0.0-180.0: 1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

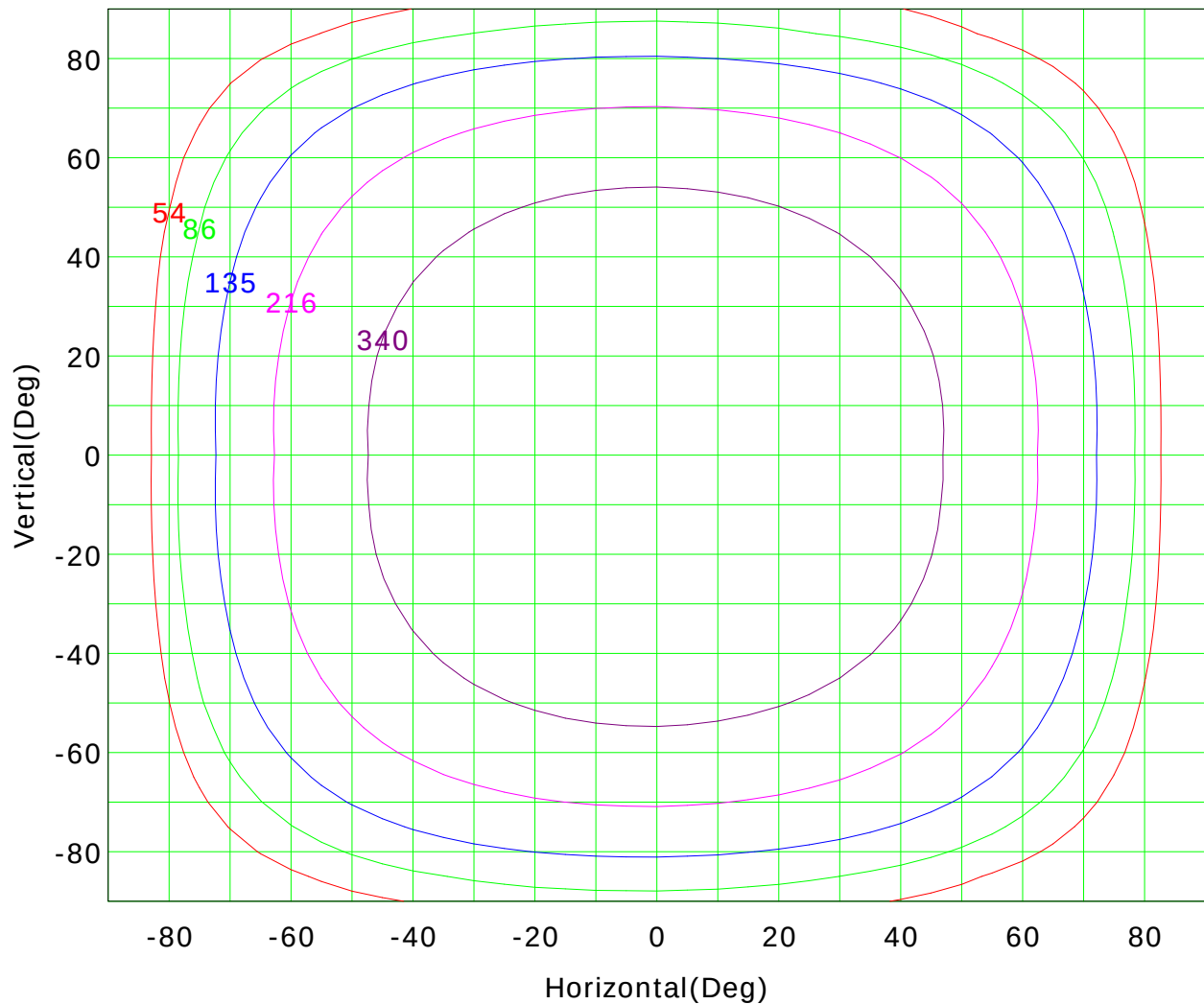
Luminous Intensity Distribution Curve(cd / klm)



C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Isocandela (rectangle)



I_{max} (100%): 540 cd

(10%):	54 cd	(16%):	86 cd
(25%):	135 cd	(40%):	216 cd
(63%):	340 cd	(100%):	540 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

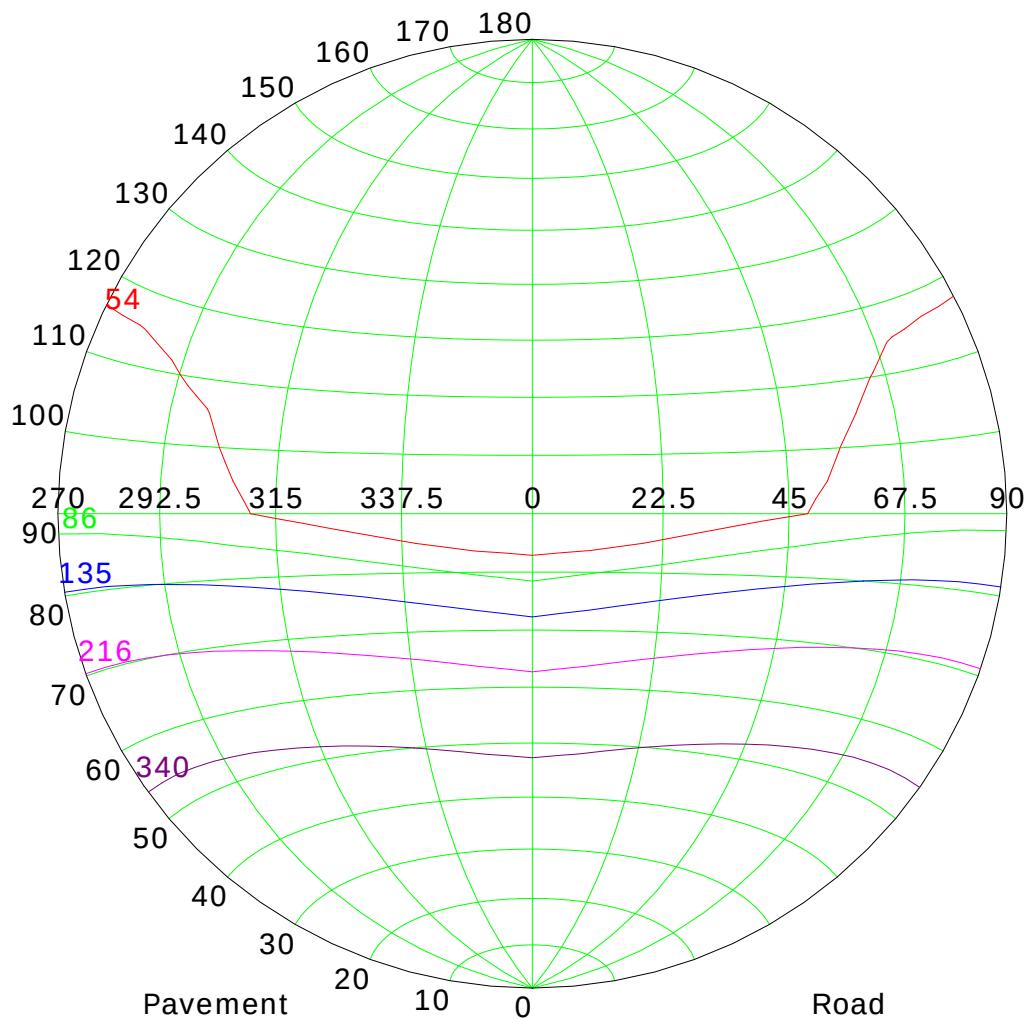
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 540 cd

(10%): 54 cd	(16%): 86 cd
(25%): 135 cd	(40%): 216 cd
(63%): 340 cd	(100%): 540 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

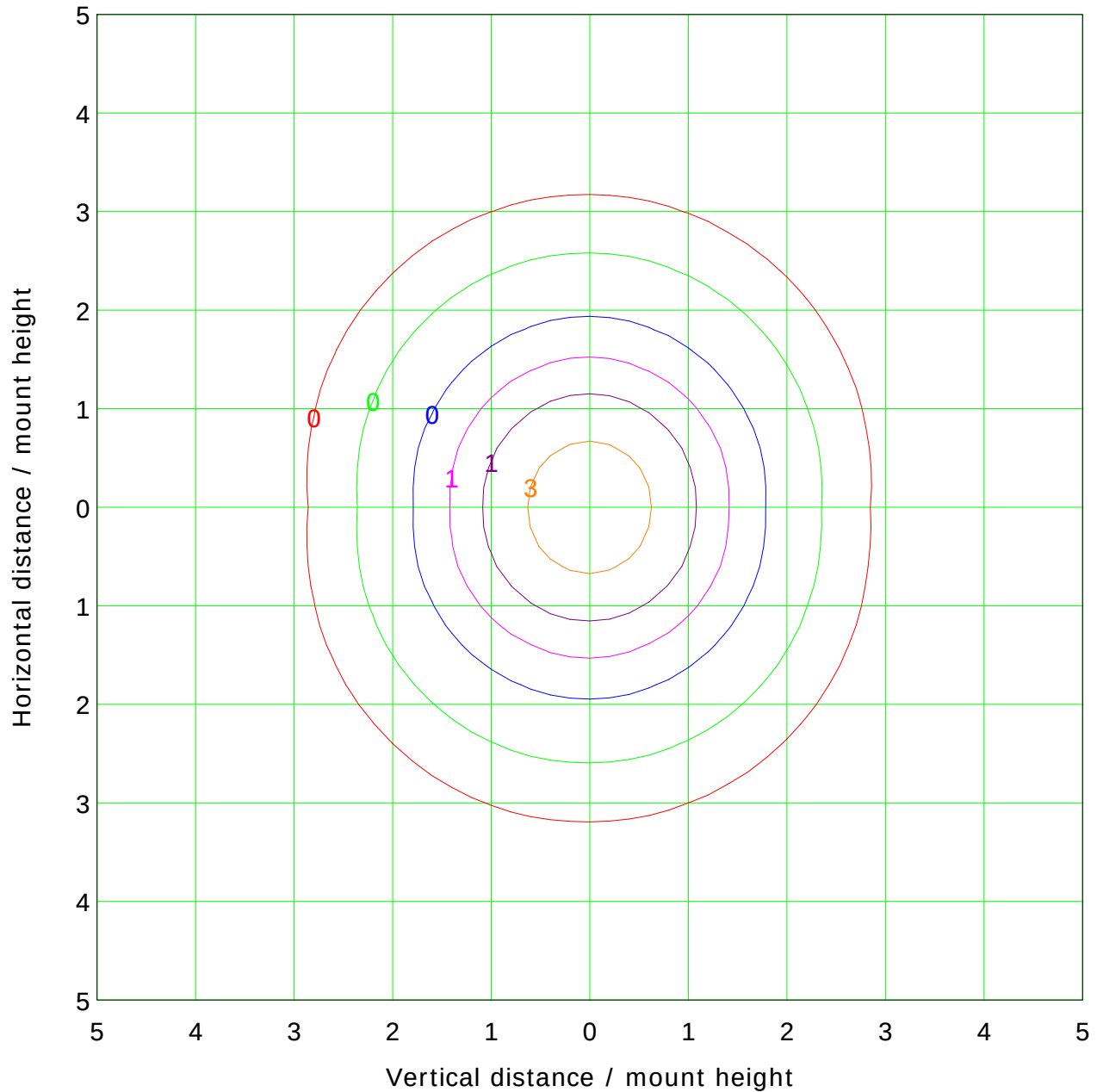
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



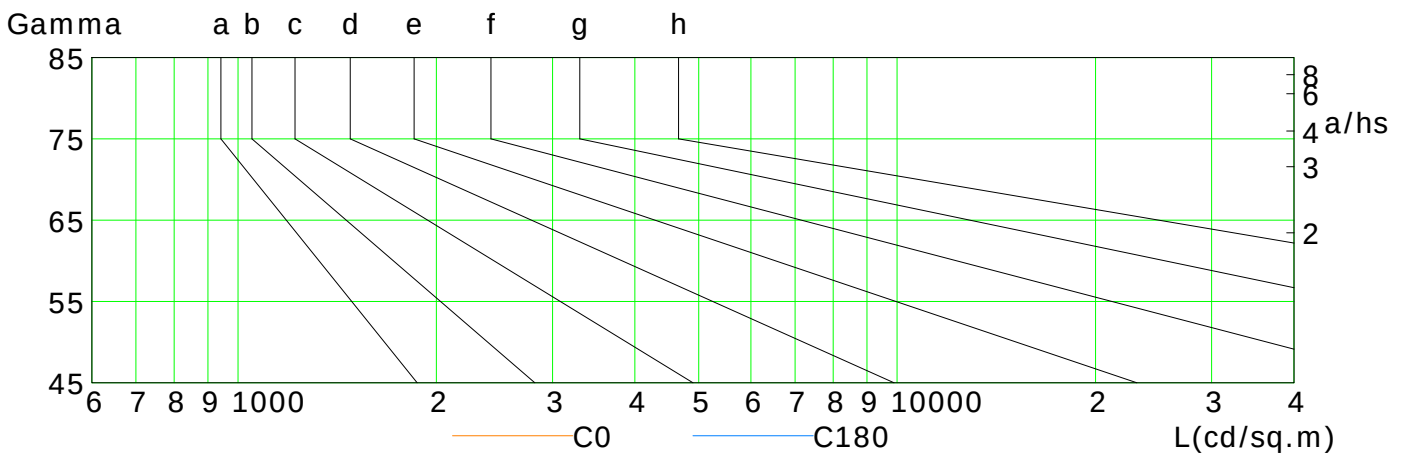
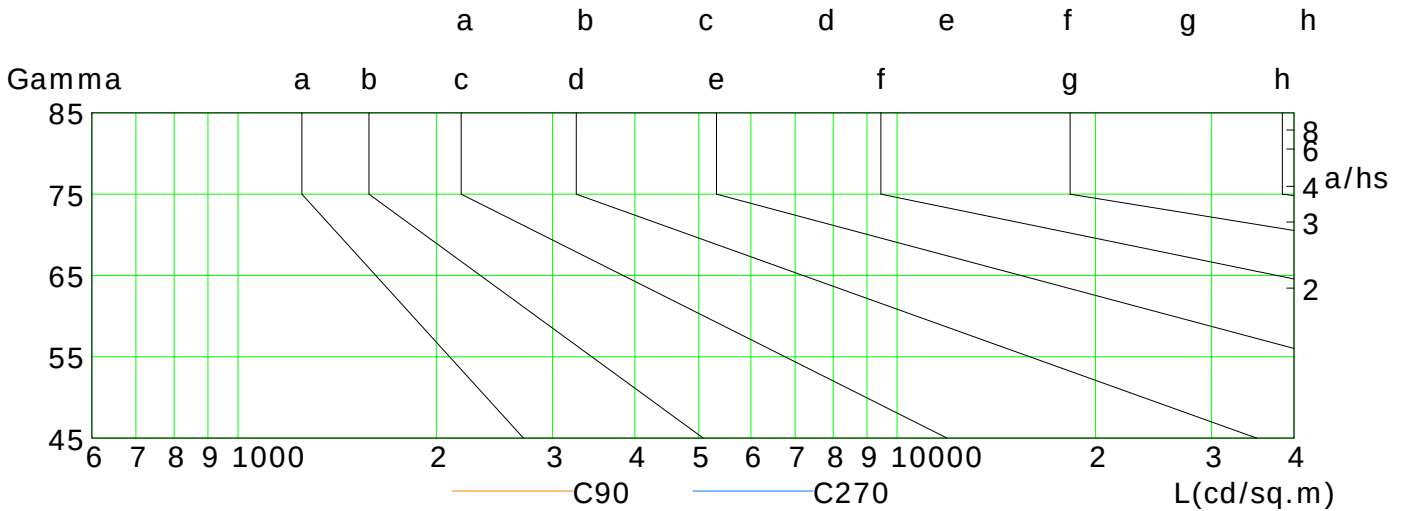
Mounting Height: 10.0m		Max Lux(100%): 5.4 lx	
— (1%):	0.1 lx	— (2%):	0.1 lx
— (5%):	0.3 lx	— (10%):	0.5 lx
— (20%):	1.1 lx	— (50%):	2.7 lx
— (100%):	5.4 lx		

C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	358	320	280	239	197	154	112	75	39
C90	407	374	339	301	263	223	183	144	105
C180	355	317	277	237	194	153	111	75	36
C270	402	369	334	297	258	218	178	139	101

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

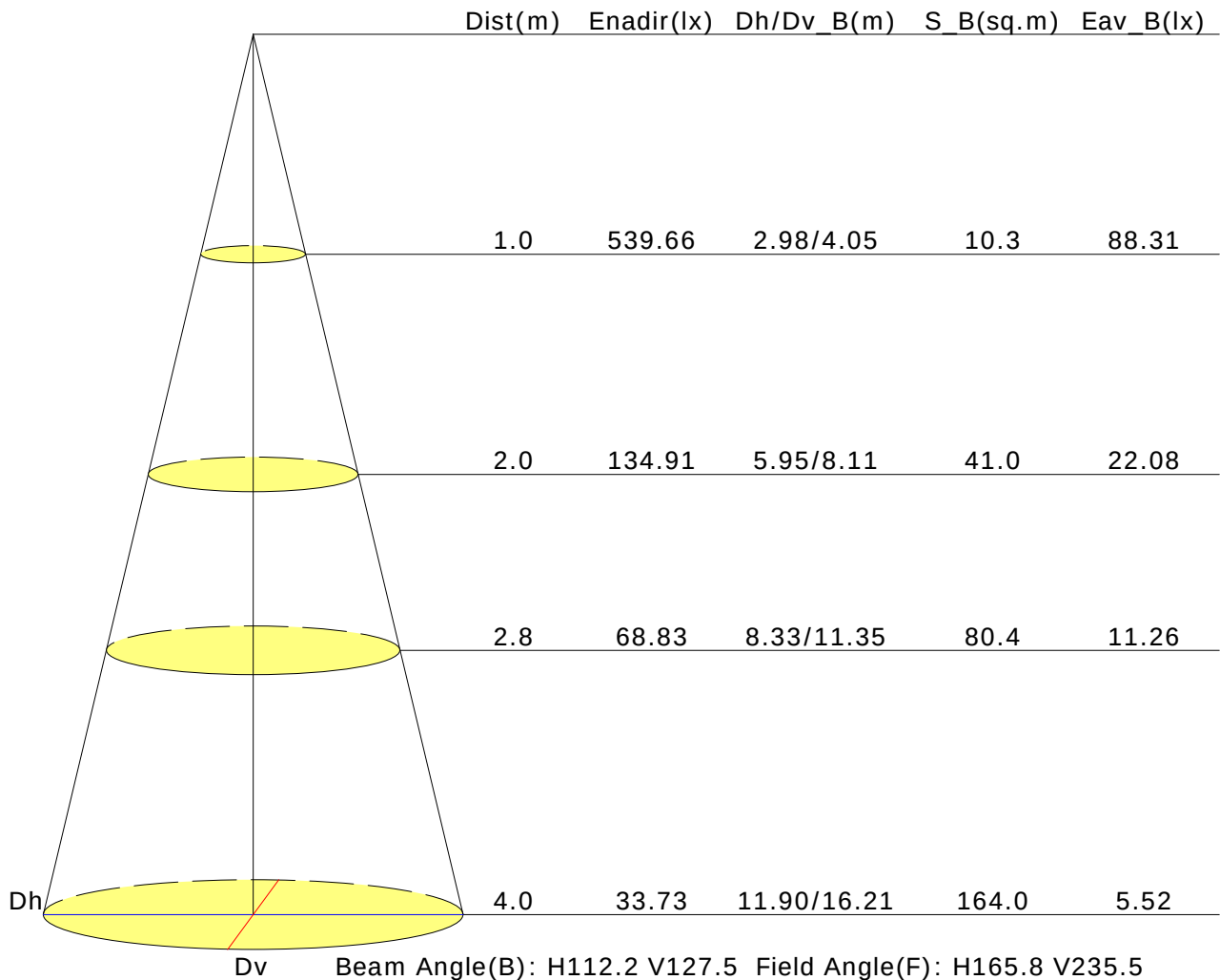
Test Device: GPM-2000

Distance: 7.970 m

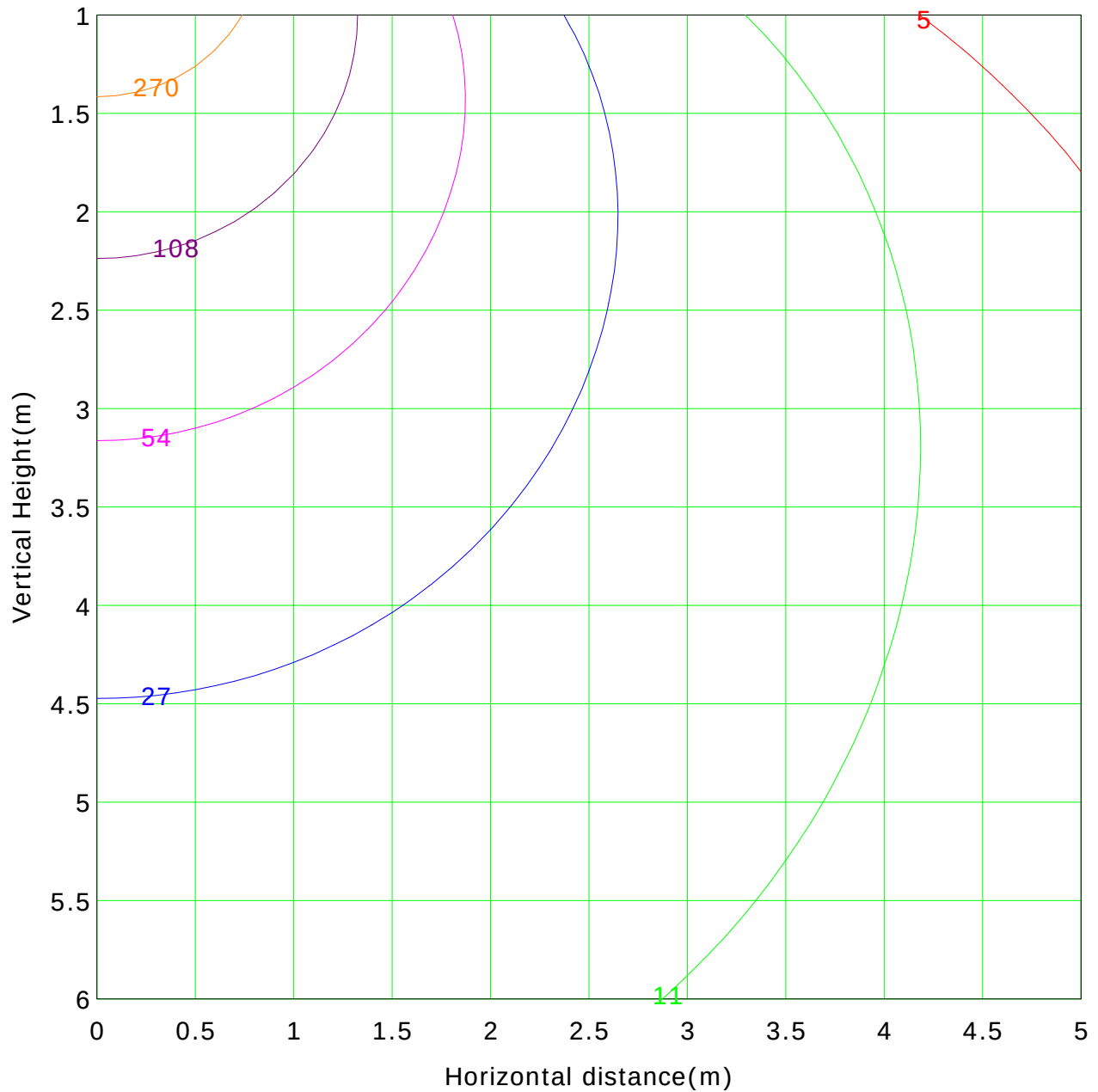
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 539.7 lx

(1%): 5.4 lx	(2%): 10.8 lx
(5%): 27.0 lx	(10%): 54.0 lx
(20%): 107.9 lx	(50%): 269.8 lx
(100%): 539.7 lx	

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Report No.:

Test Time: 26/09/2018 15:29

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-DW05-07 + LLD-07-CS

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 3158 lm

Voltage: 24.0 V

Current: 1.154 A

Power: 27.70 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1820 lm

Downward Ratio: 28.72%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 28.82%

Upward Ratio: 0.10%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 164.1, 163.8, 163.9, 163.9

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.6, 111.6, 112.0, 112.1

Luminaire Efficacy Rating (LER): 65.76

Central Intensity: 632.06 cd

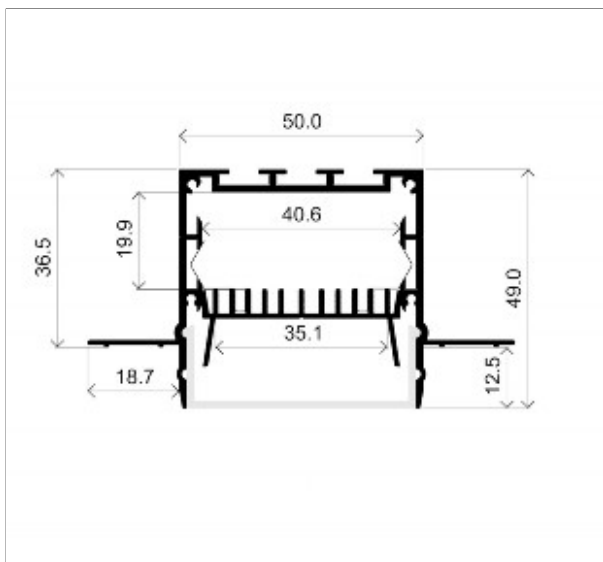
Max. Intensity: 632.06 cd

Pos of Max. Intensity: H0 V0

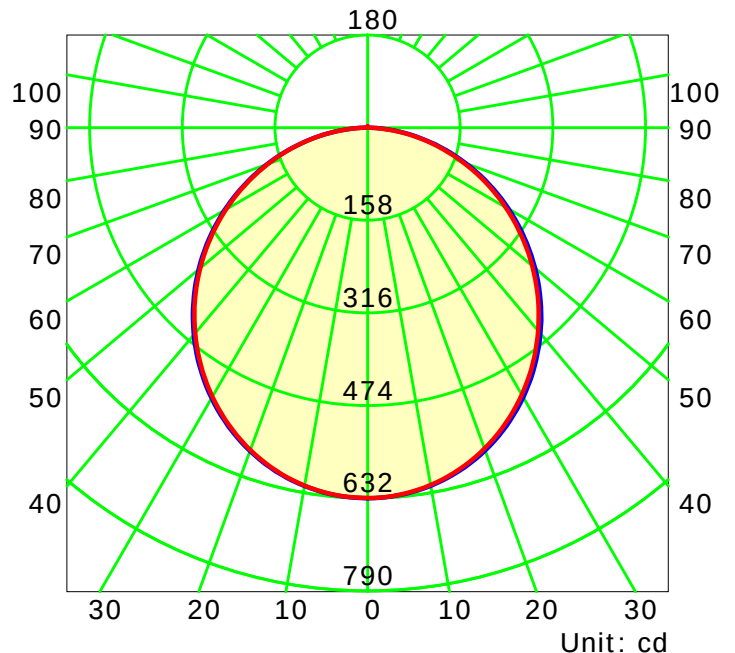
S/MH(C0/C180): 1.25

S/MH(C90/C270): 1.24

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

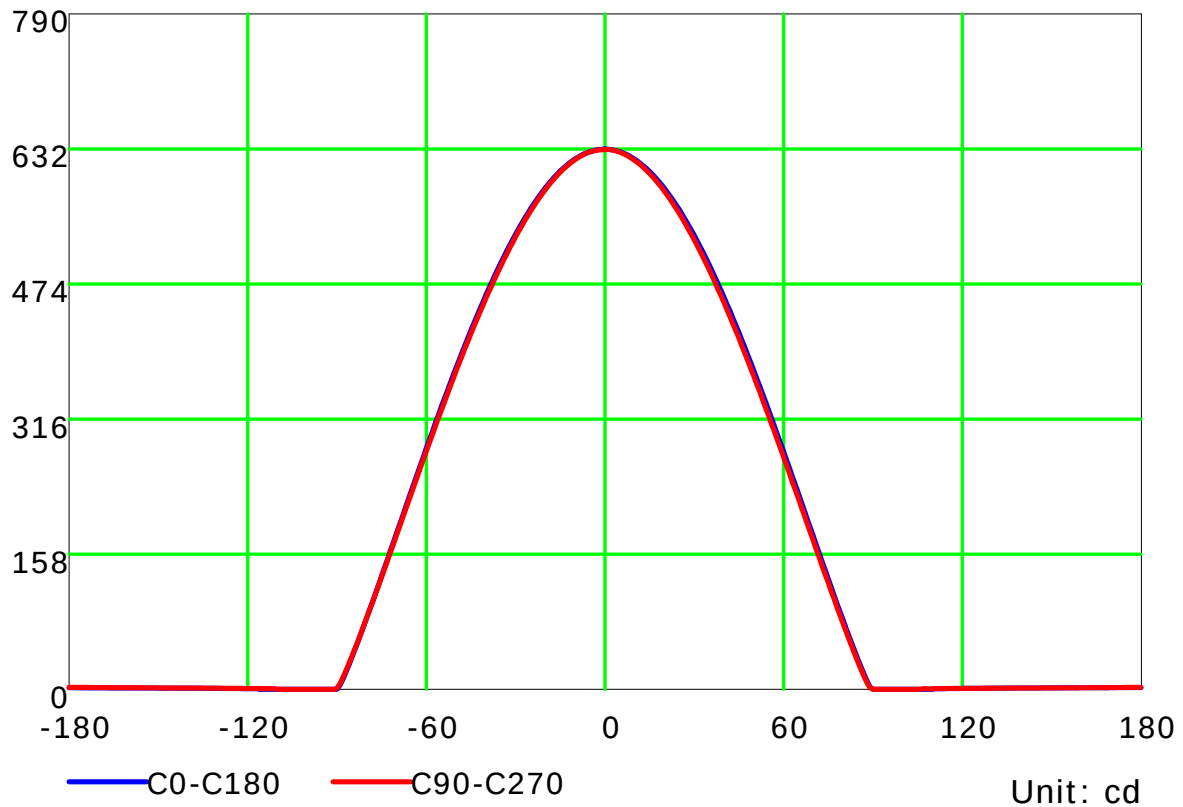
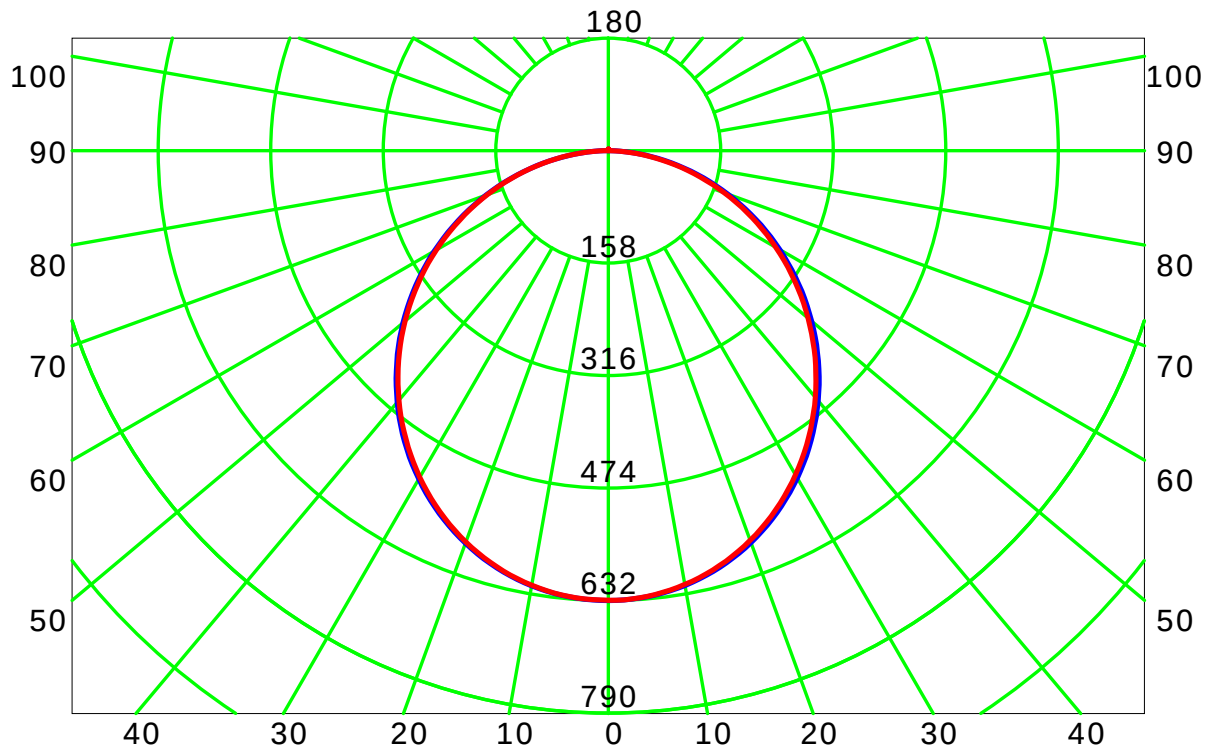
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

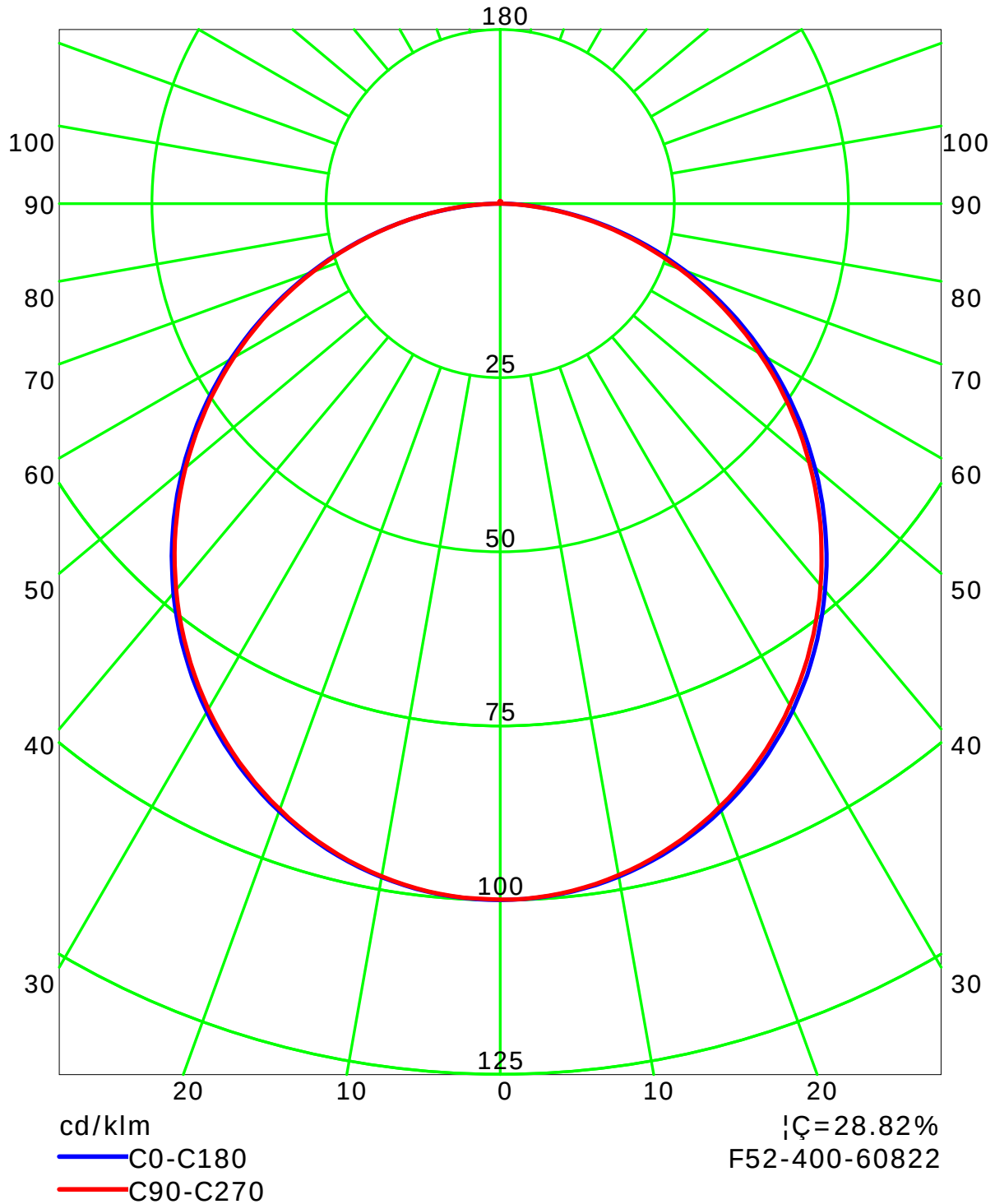
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

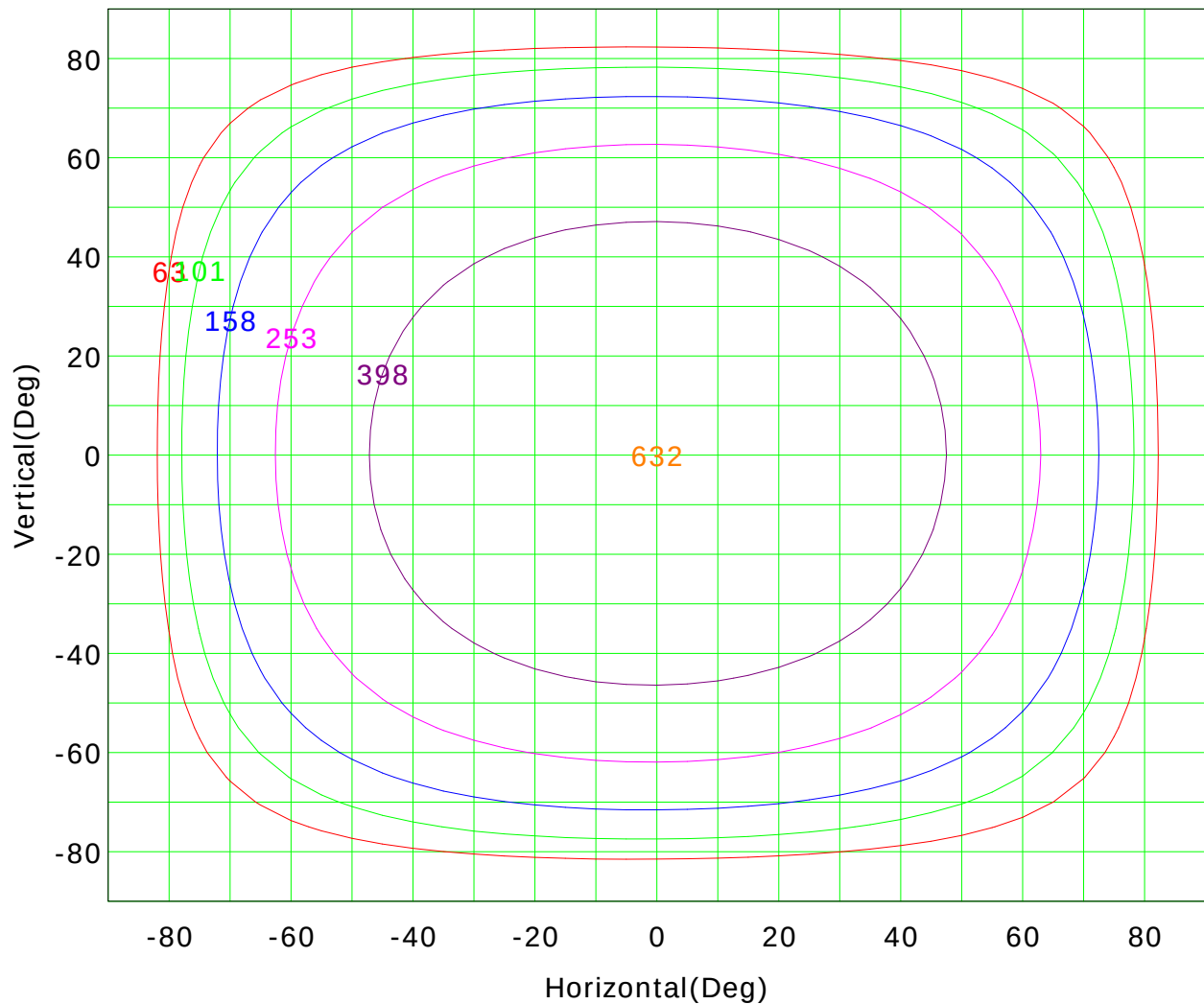
Luminous Intensity Distribution Curve(cd / klm)



C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Isocandela (rectangle)



I_{max} (100%): 632 cd

(10%):	63 cd	(16%):	101 cd
(25%):	158 cd	(40%):	253 cd
(63%):	398 cd	(100%):	632 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

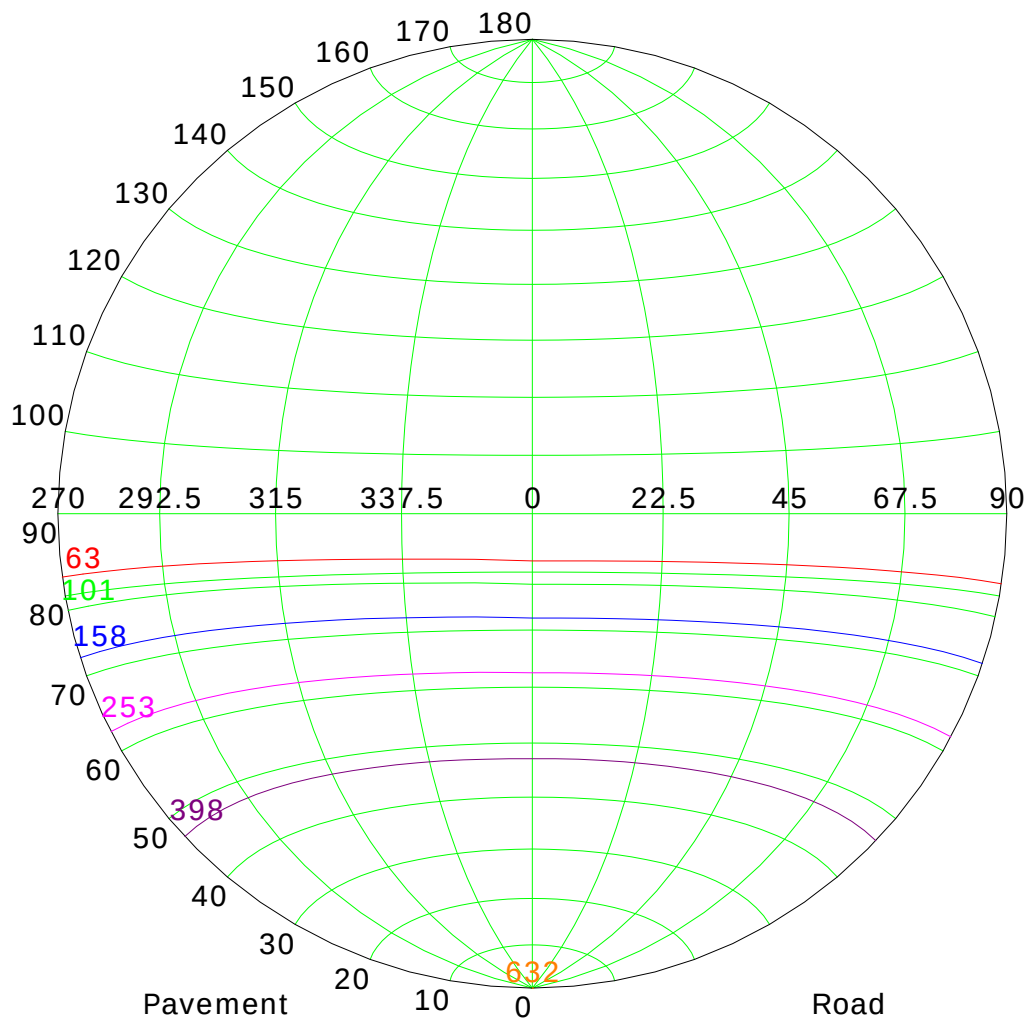
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 632 cd

(10%):	63 cd	(16%):	101 cd
(25%):	158 cd	(40%):	253 cd
(63%):	398 cd	(100%):	632 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

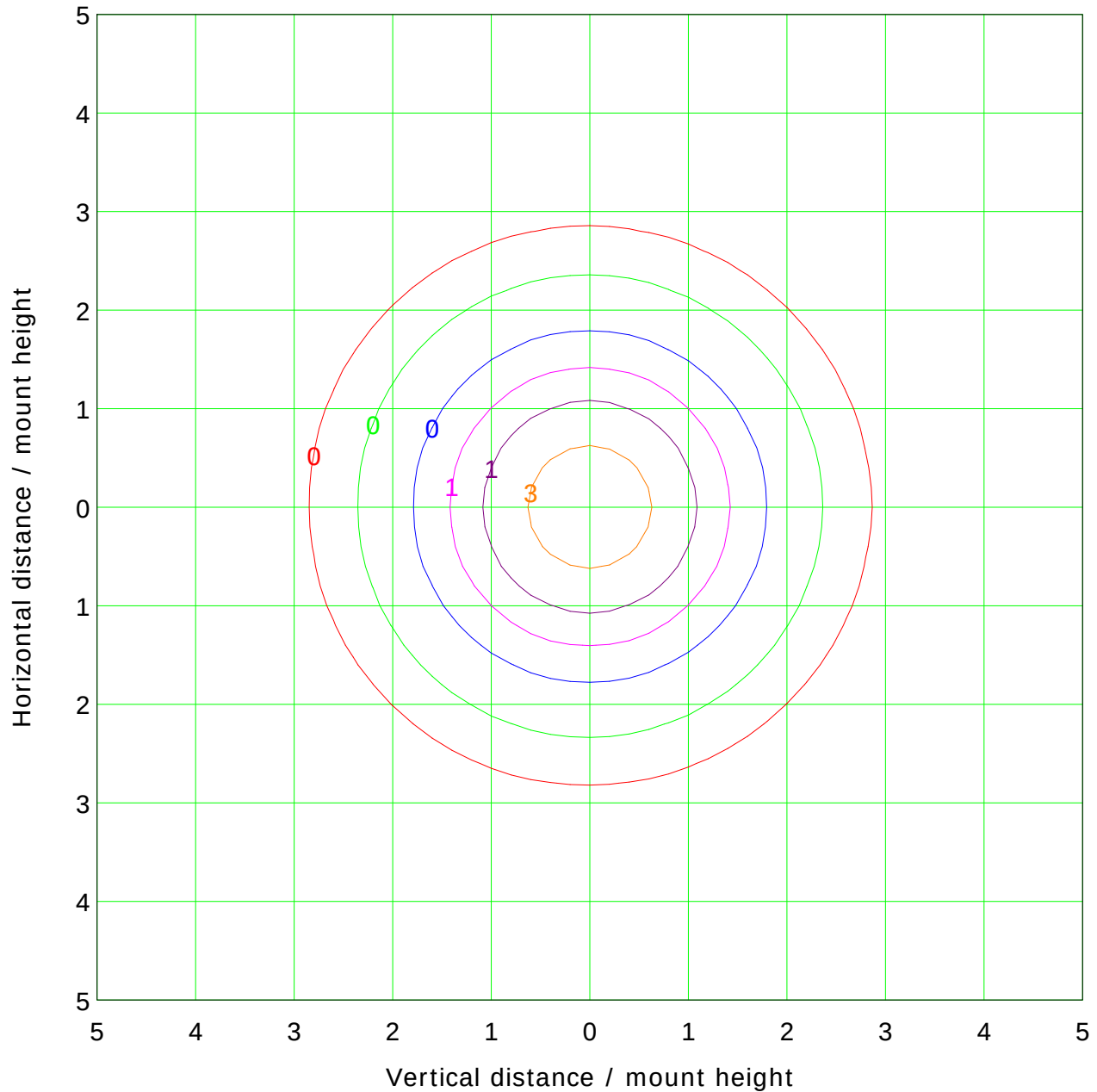
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 6.3 lx

(1%): 0.1 lx	(2%): 0.1 lx
(5%): 0.3 lx	(10%): 0.6 lx
(20%): 1.3 lx	(50%): 3.2 lx
(100%): 6.3 lx	

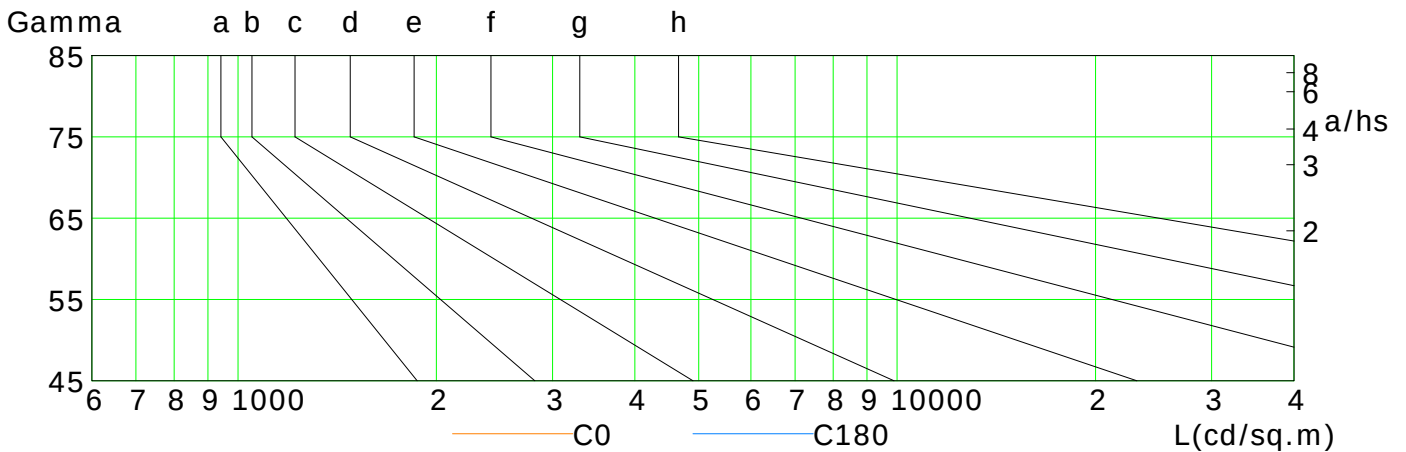
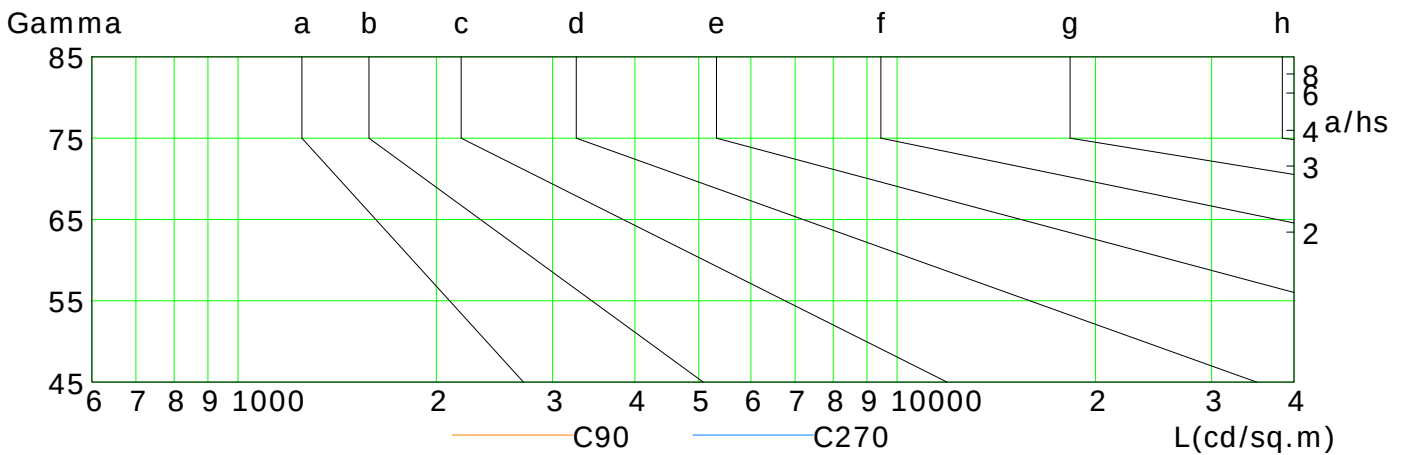
C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300

a b c d e f g h



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	417	373	326	278	229	179	129	81	35
C90	411	366	320	272	223	173	125	77	32
C180	420	376	330	283	233	183	133	84	38
C270	417	373	326	279	230	181	132	84	39

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

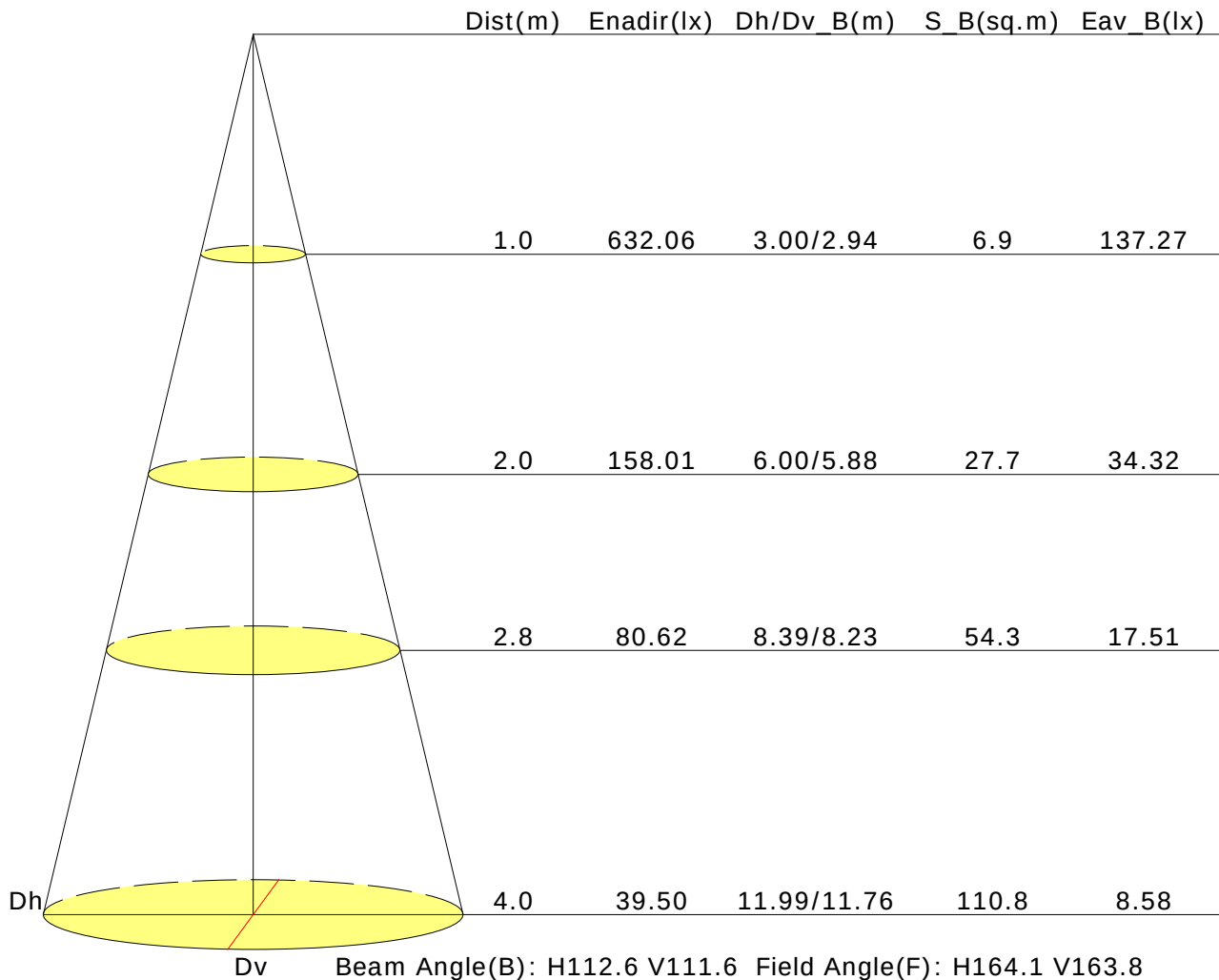
Test Device: GPM-2000

Distance: 7.970 m

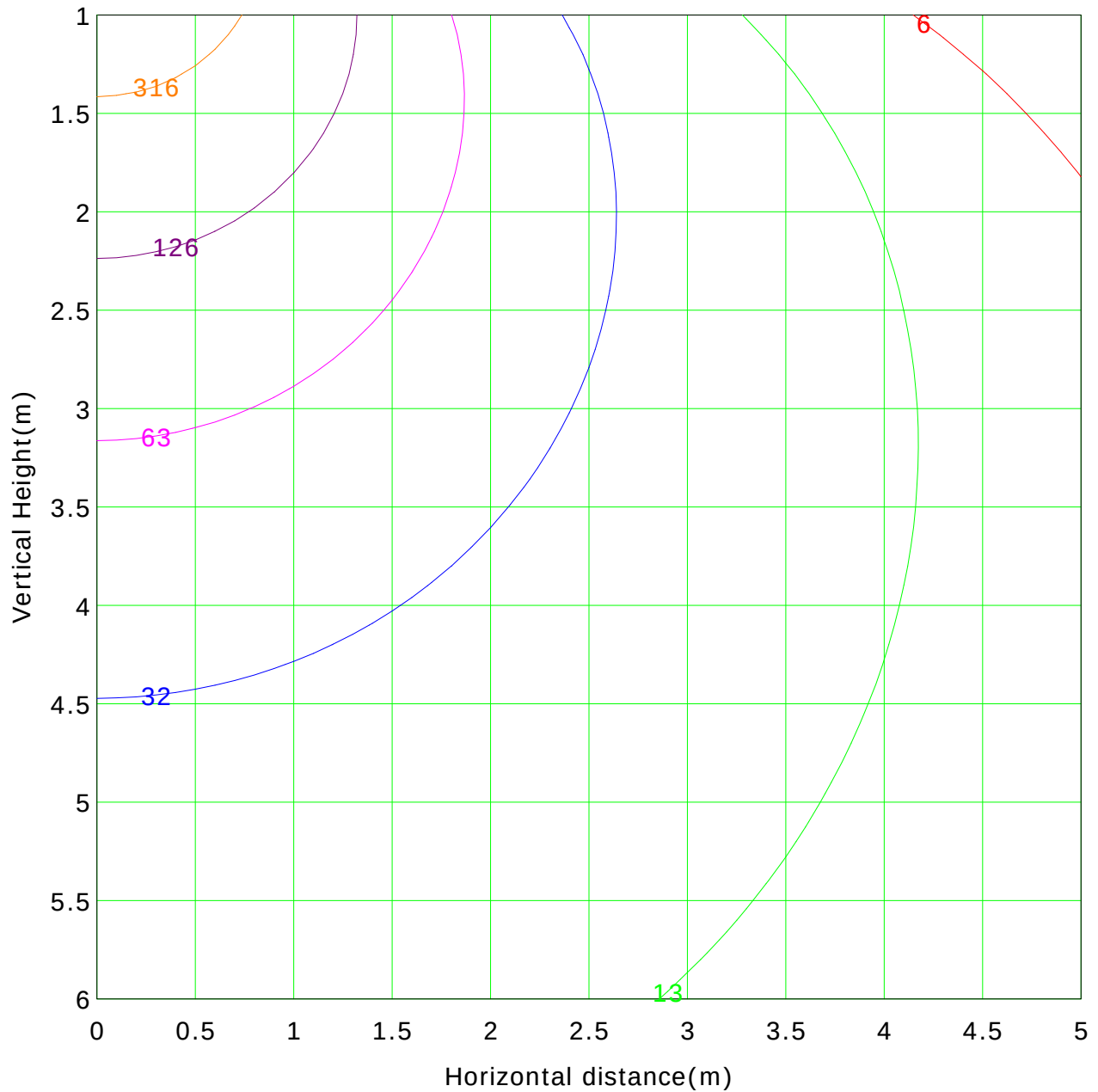
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 632.1 lx

— (1%): 6.3 lx	— (2%): 12.6 lx
— (5%): 31.6 lx	— (10%): 63.2 lx
— (20%): 126.4 lx	— (50%): 316.0 lx
— (100%): 632.1 lx	

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector: