

Report No.:

Test Time: 24/09/2018 16:21

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CM

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 3158 lm

Voltage: 24.0 V

Current: 1.162 A

Power: 27.89 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1913 lm

Downward Ratio: 28.06%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 30.29%

Upward Ratio: 2.23%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 161.2, 210.5, 172.4, 172.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.8, 125.9, 122.1, 122.0

Luminaire Efficacy Rating (LER): 68.64

Central Intensity: 550.24 cd

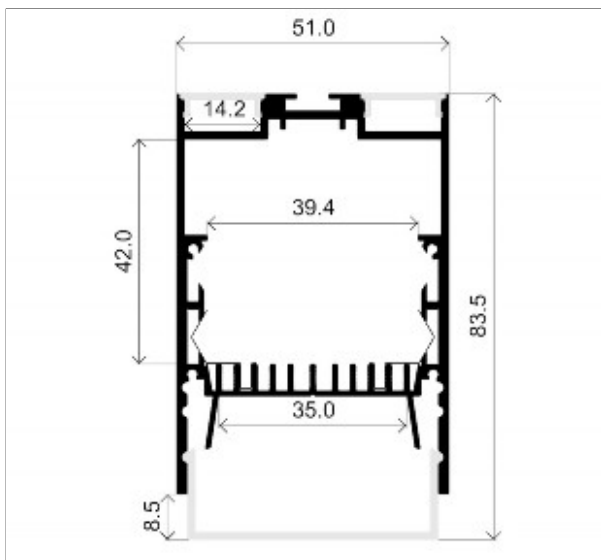
Max. Intensity: 554.77 cd

Pos of Max. Intensity: H170 V1

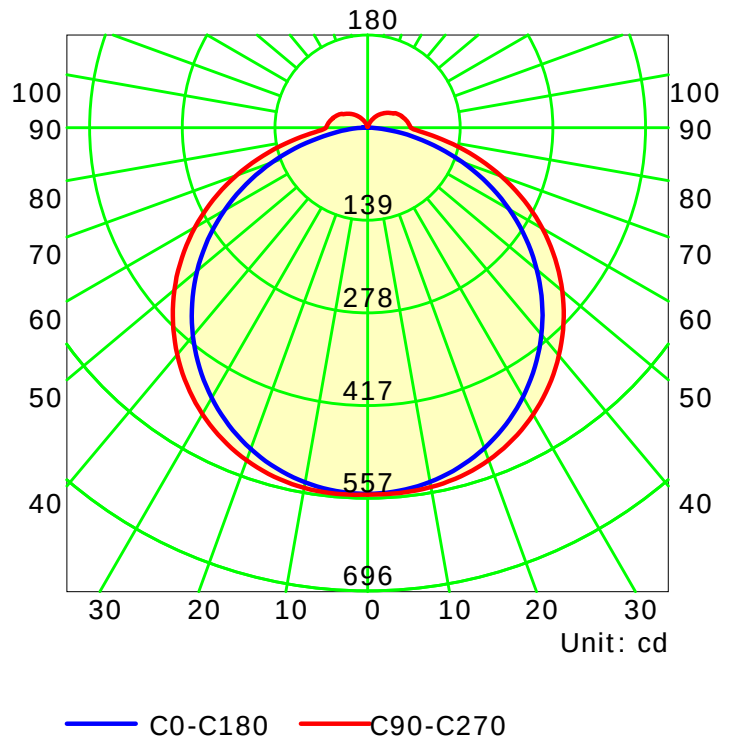
S/MH(C0/C180): 1.26

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

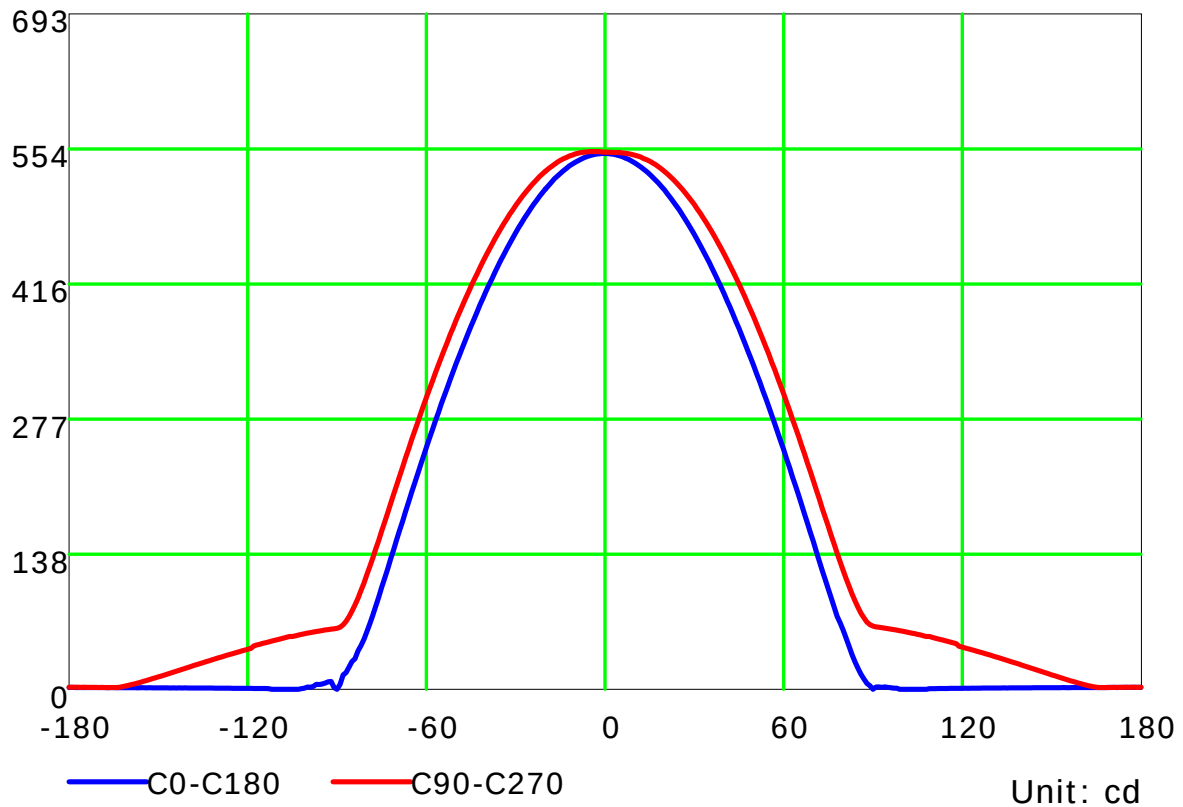
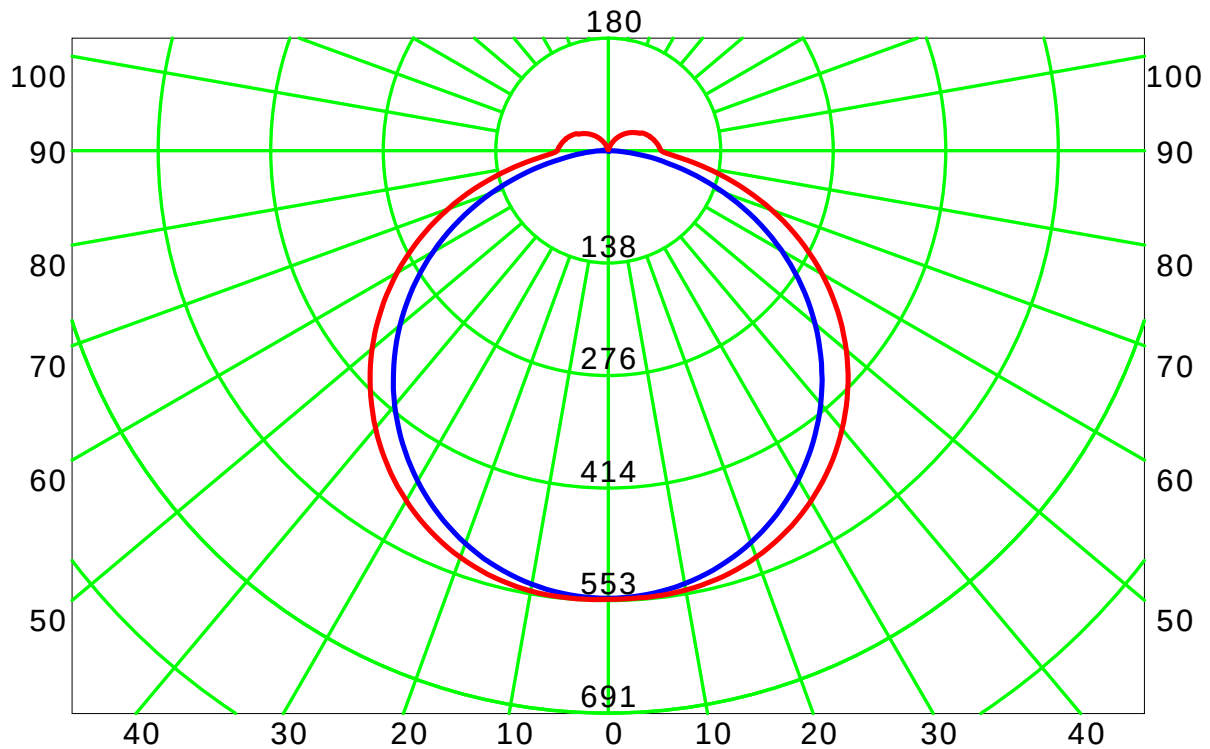
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

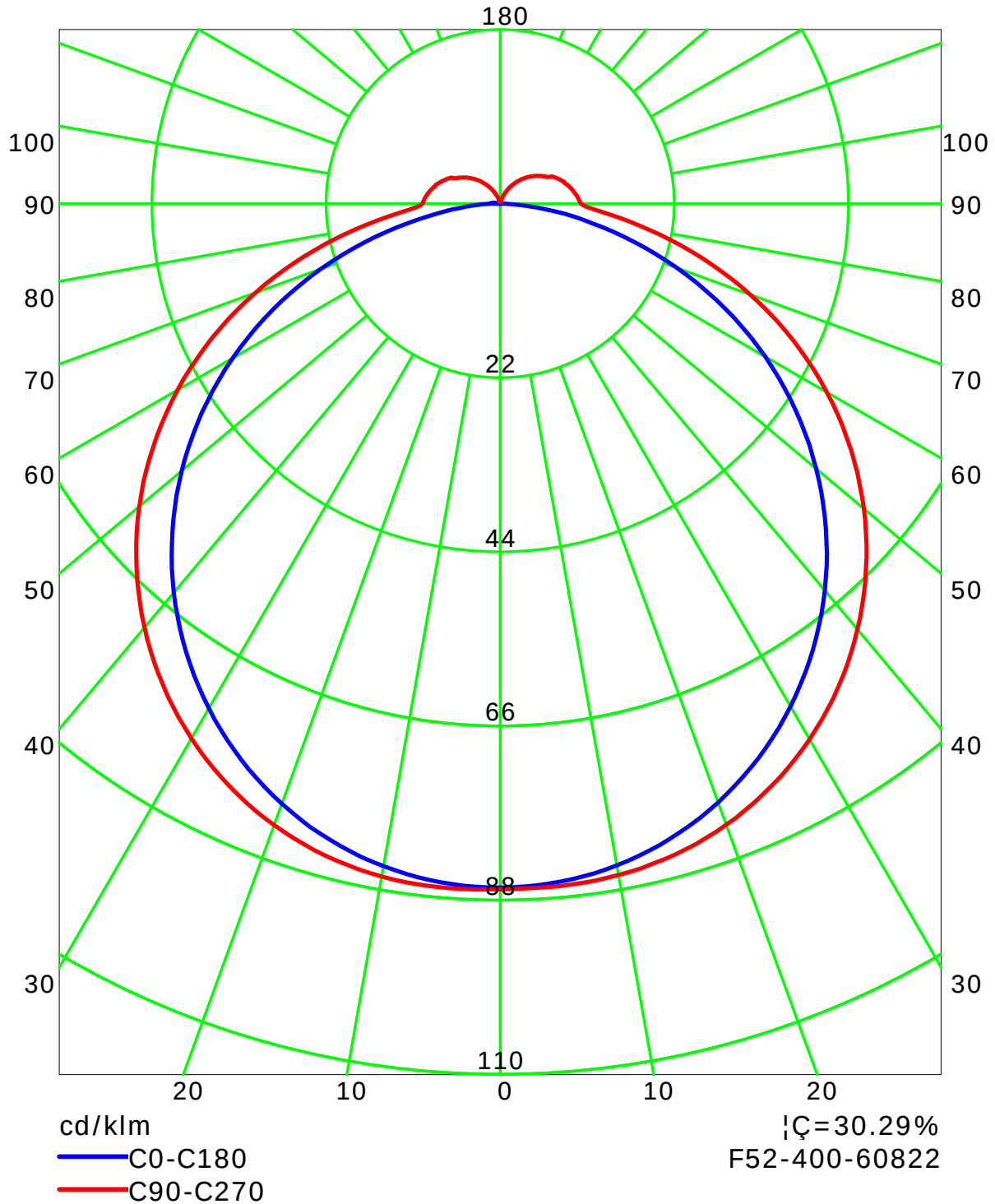
Luminous Intensity Distribution Curve



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:

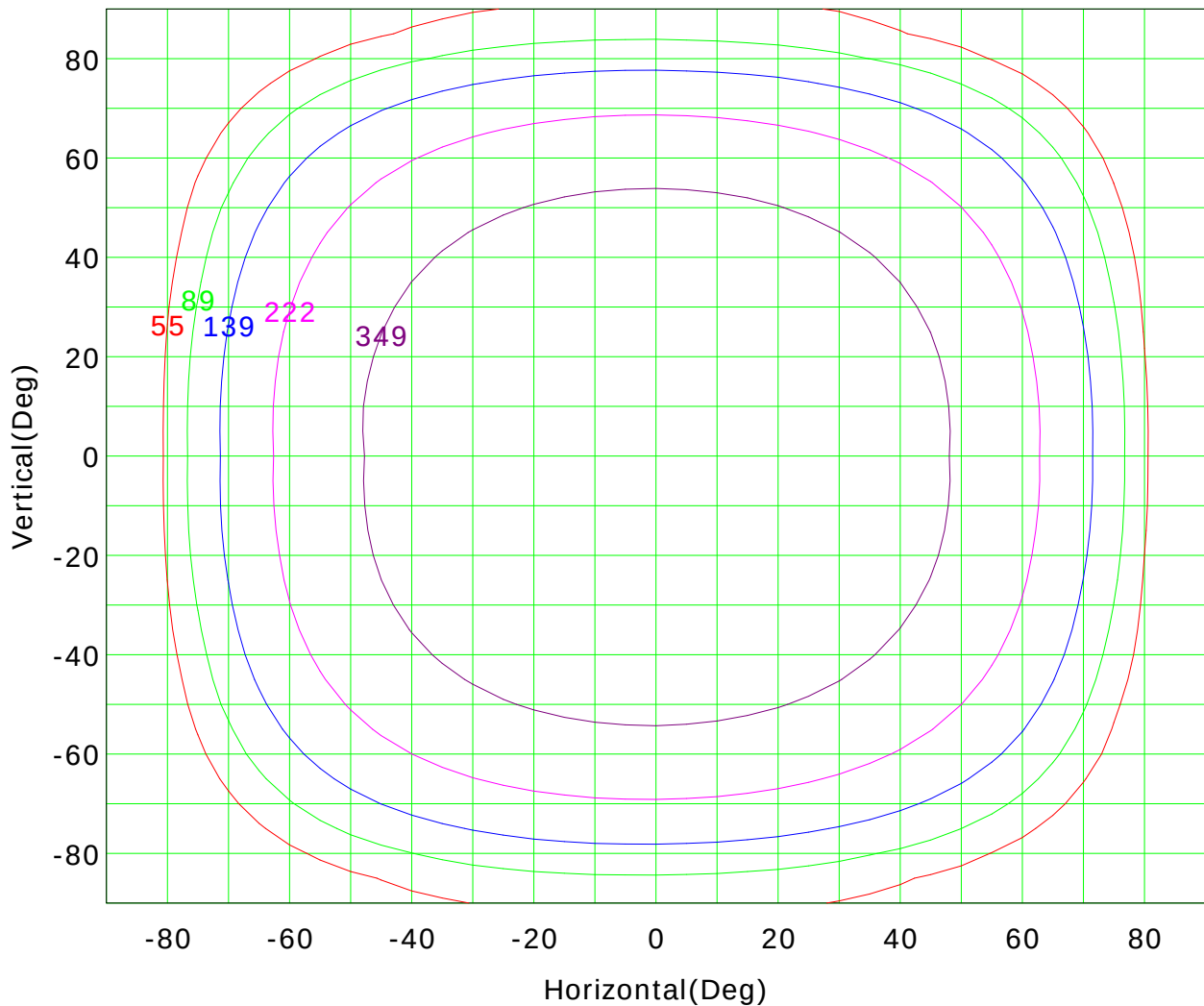
Luminous Intensity Distribution Curve(cd / klm)



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%): 555 cd

(10%):	55 cd	(16%):	89 cd
(25%):	139 cd	(40%):	222 cd
(63%):	349 cd	(100%):	555 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

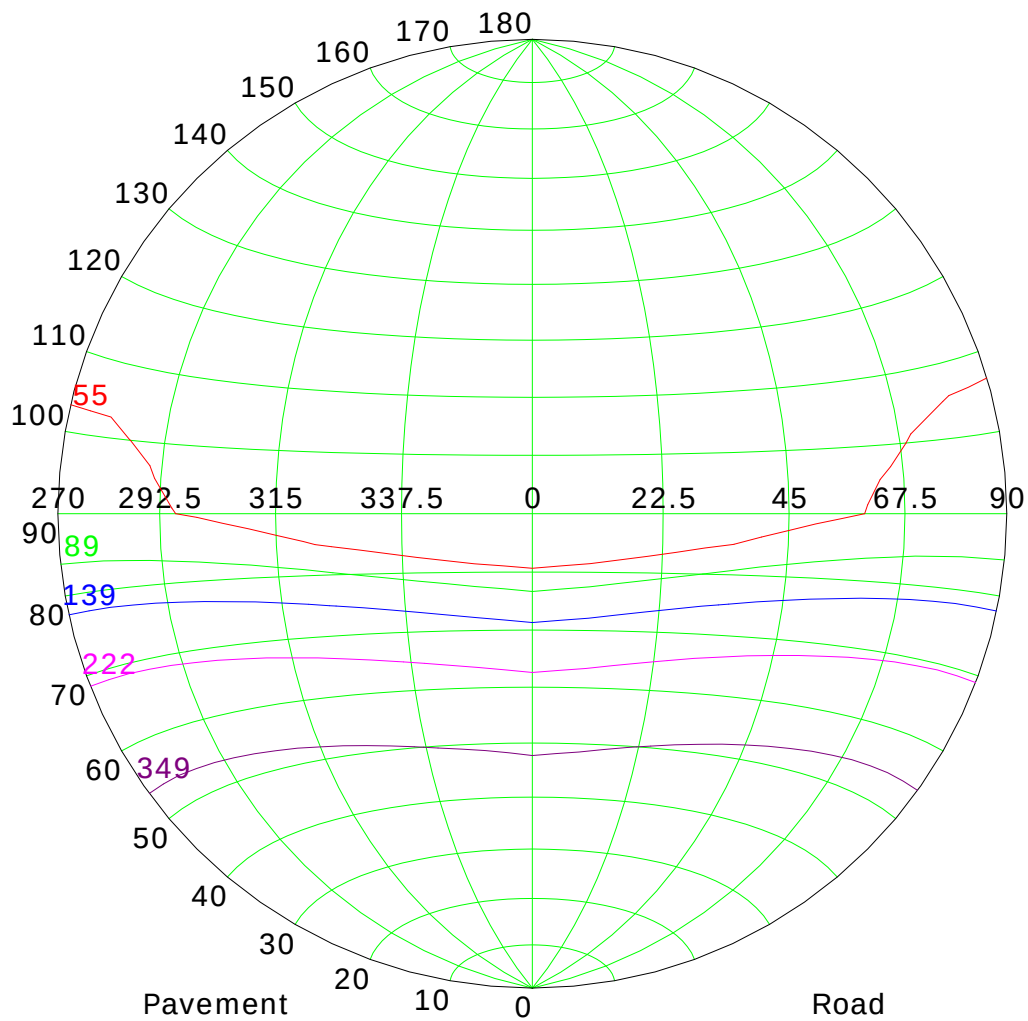
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



Imax (100%): 555 cd

(10%):	55 cd	(16%):	89 cd
(25%):	139 cd	(40%):	222 cd
(63%):	349 cd	(100%):	555 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

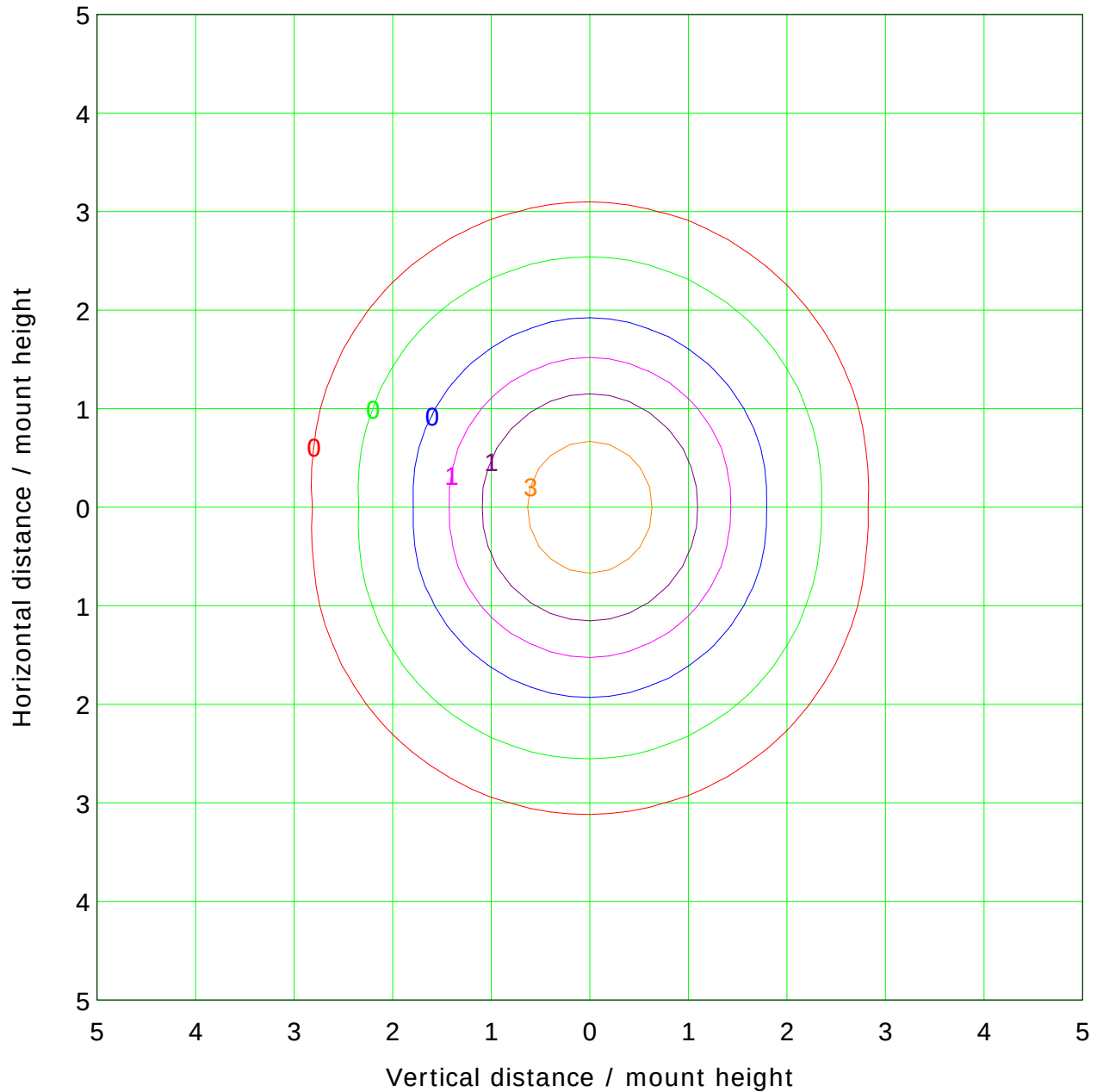
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



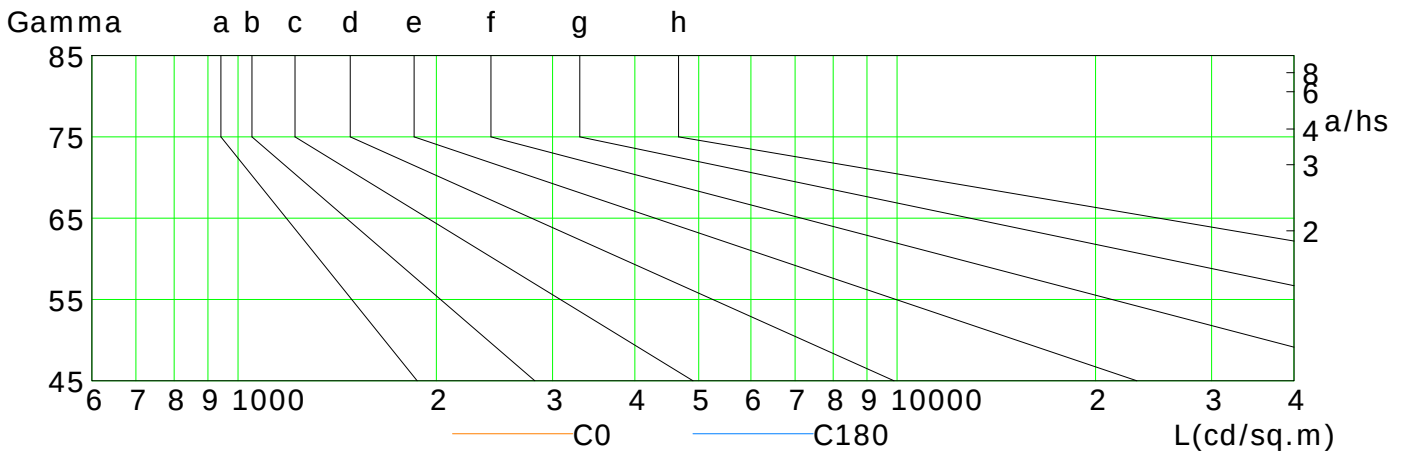
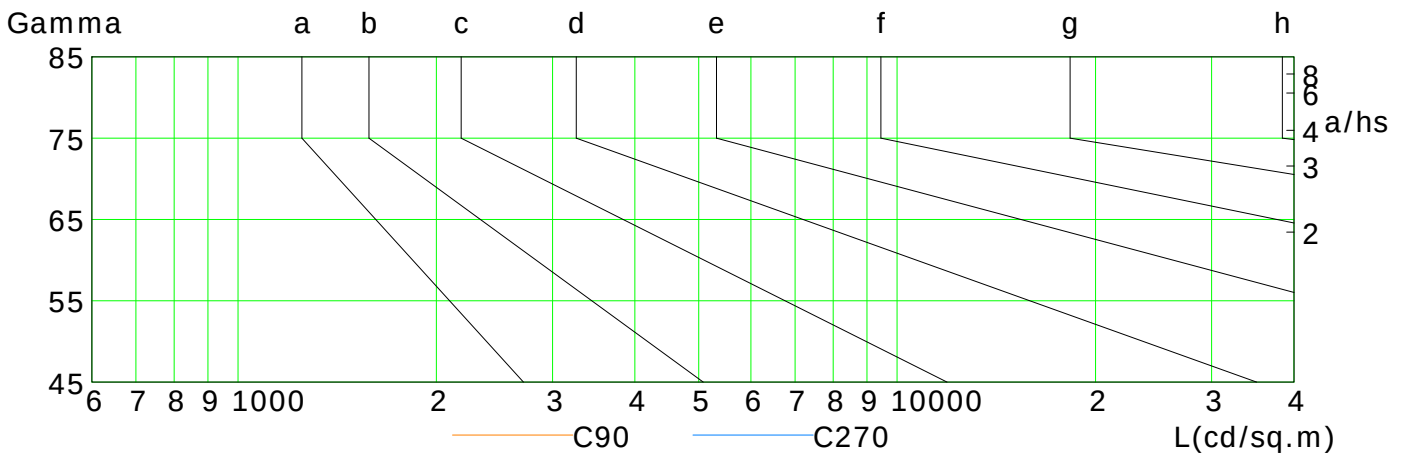
C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

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

a b c d e f g h



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	371	332	290	246	200	152	103	61	21
C90	416	382	344	303	260	214	167	122	84
C180	373	335	293	248	202	154	105	59	28
C270	414	379	341	300	256	209	163	118	80

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

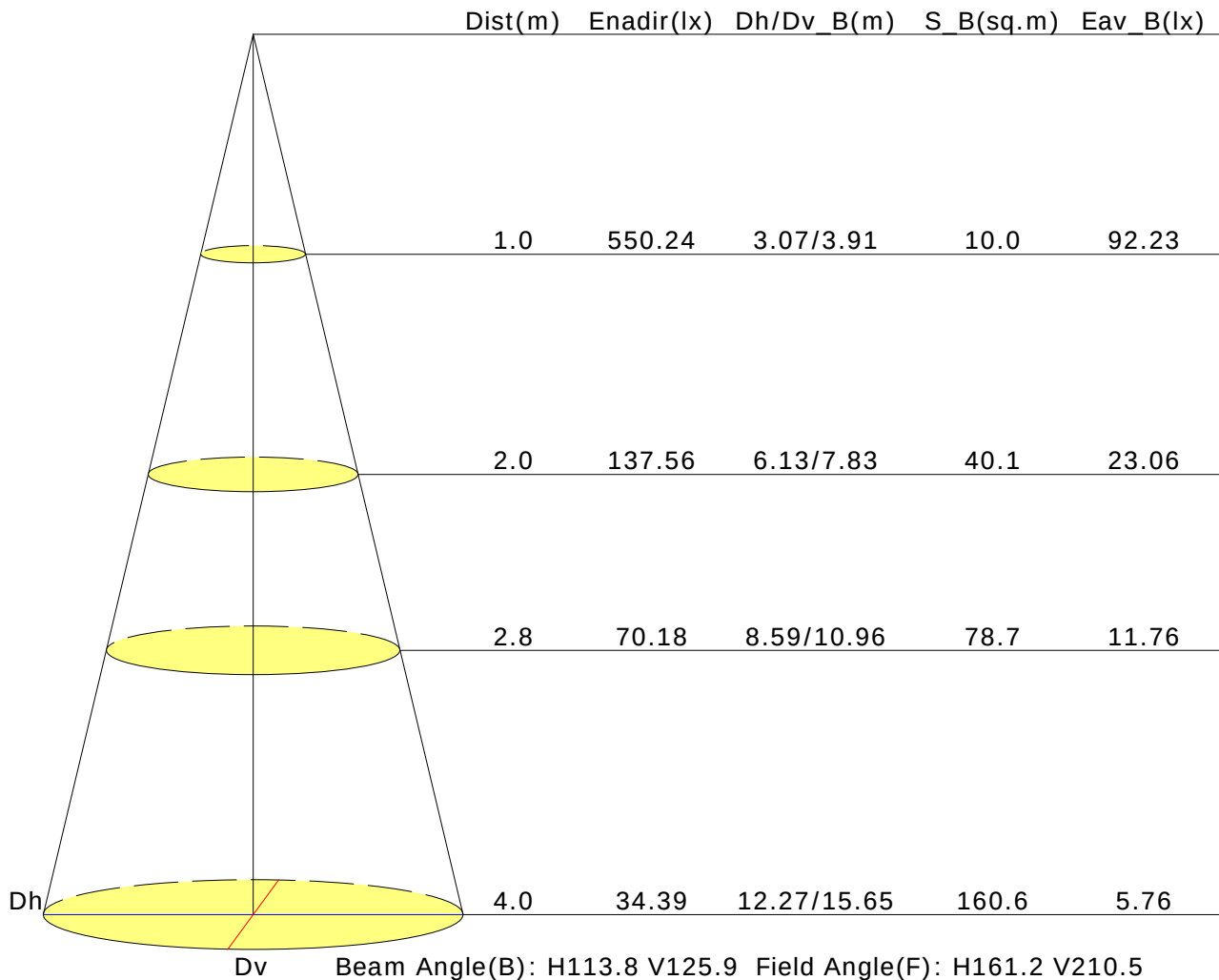
Test Device: GPM-2000

Distance: 7.970 m

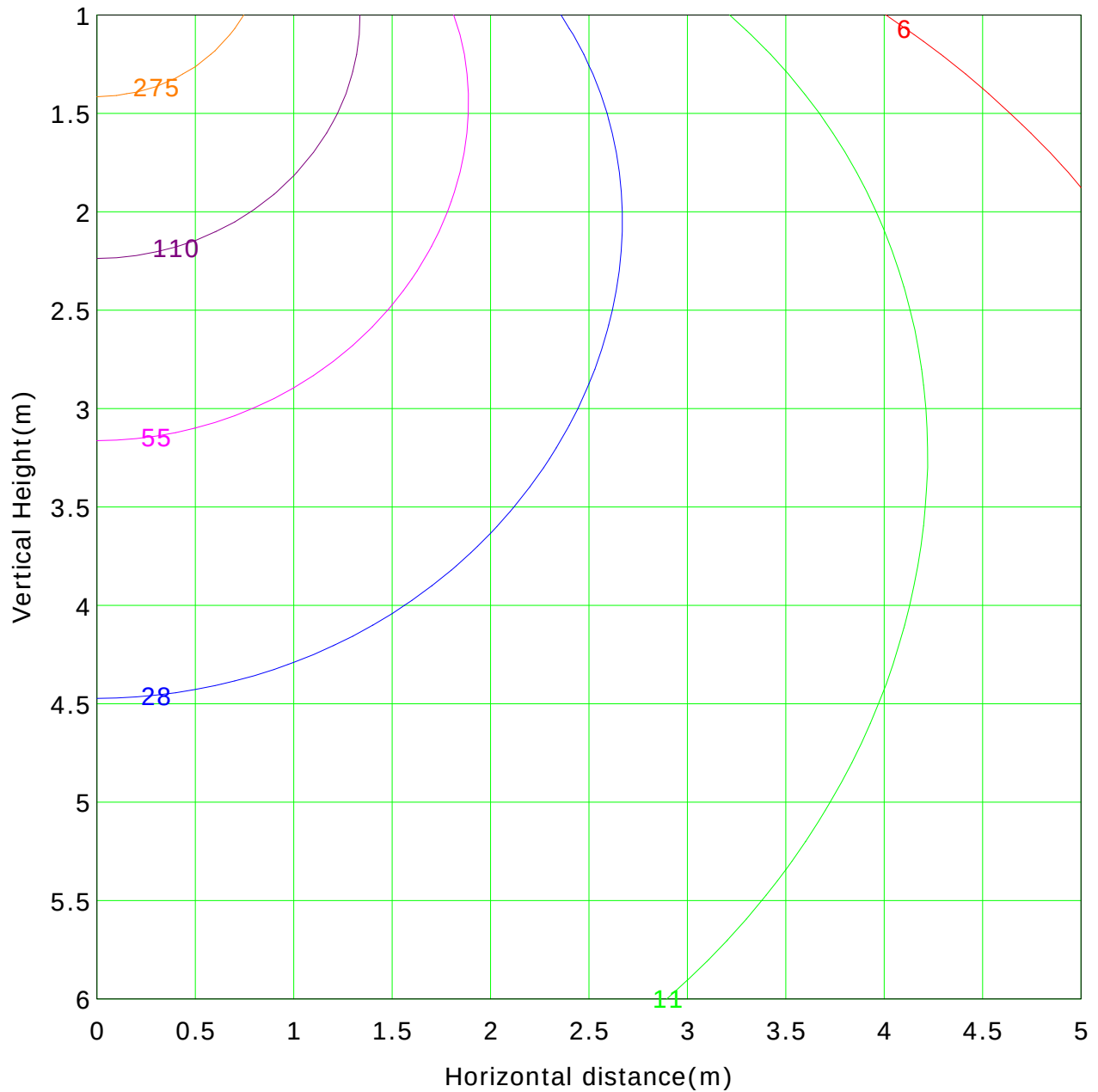
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 550.2 lx

(1%): 5.5 lx	(2%): 11.0 lx
(5%): 27.5 lx	(10%): 55.0 lx
(20%): 110.0 lx	(50%): 275.1 lx
(100%): 550.2 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: 25/09/2018 09:37

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CM

Lamp Description: F52-400-60822

Voltage: 24.0 V

Power: 27.92 W

Lumens per Lamp: 3158 lm

Current: 1.164 A

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1887.3 lm

Downward Ratio: 100%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 160.4, 160.2, 160.3, 160.3

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.9, 113.2, 113.6, 113.6

Luminaire Efficacy Rating (LER): 67.65

Max. Intensity: 659.47 cd

S/MH(C0/C180): 1.26

Total Rated Lamp Lumens: 1887.3 lm

Efficiency: 100%

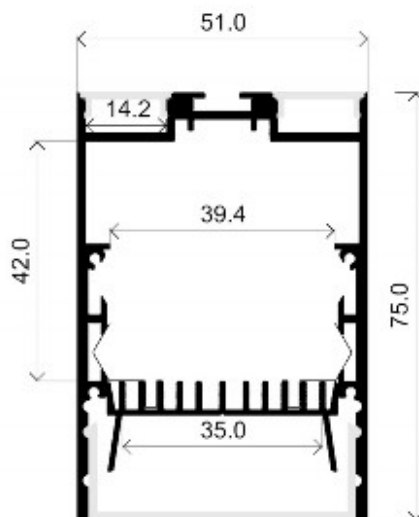
Upward Ratio: 0%

Central Intensity: 658.88 cd

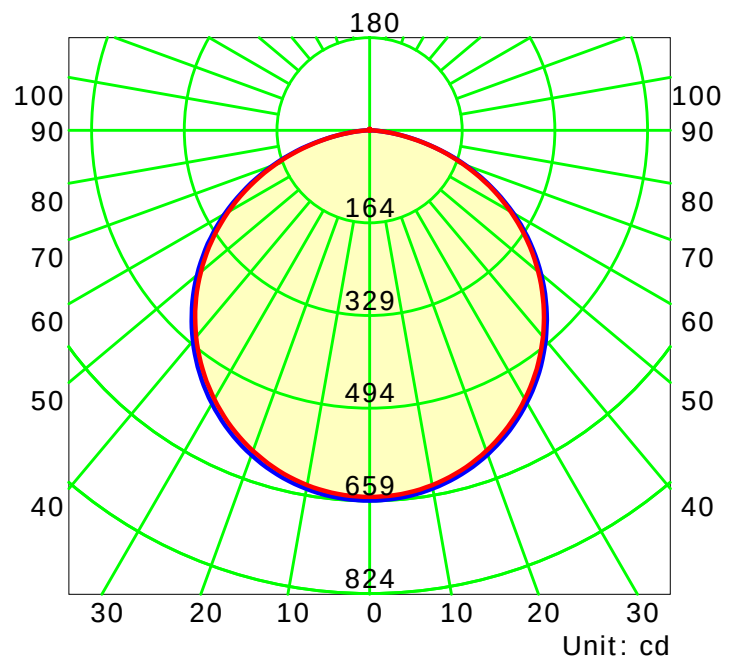
Pos of Max. Intensity: H10 V0

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

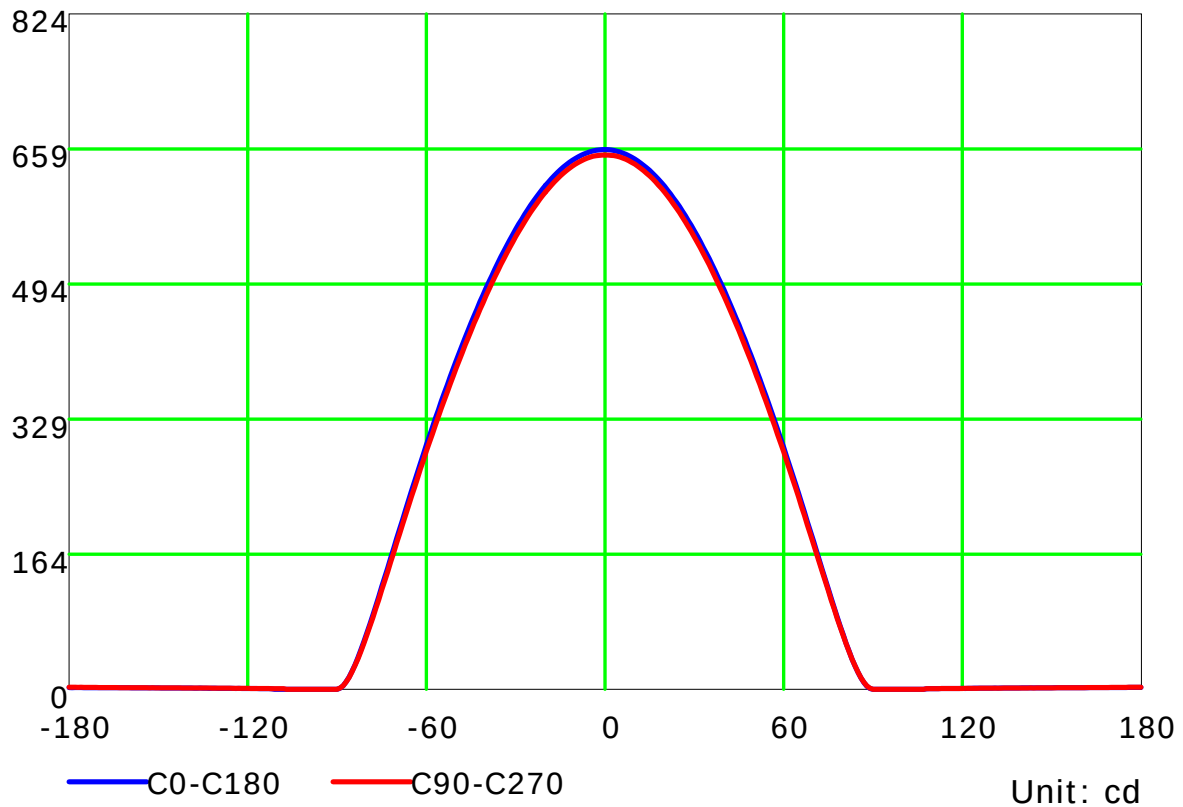
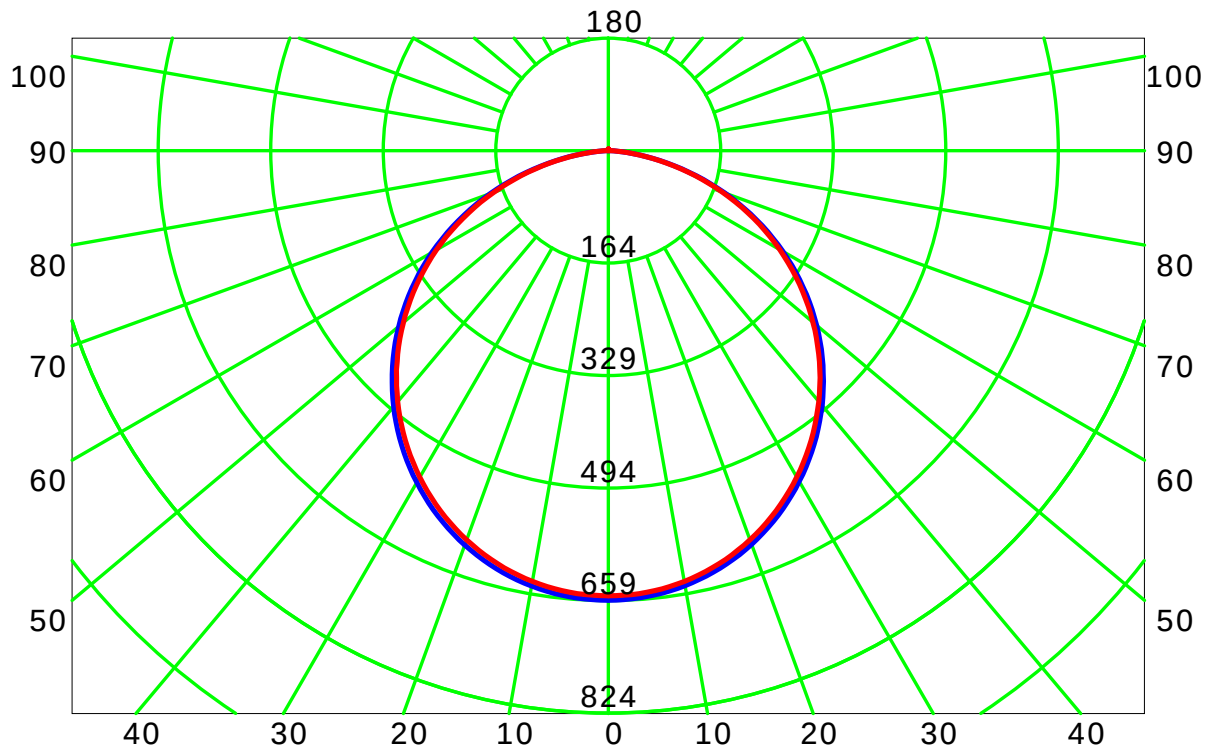
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

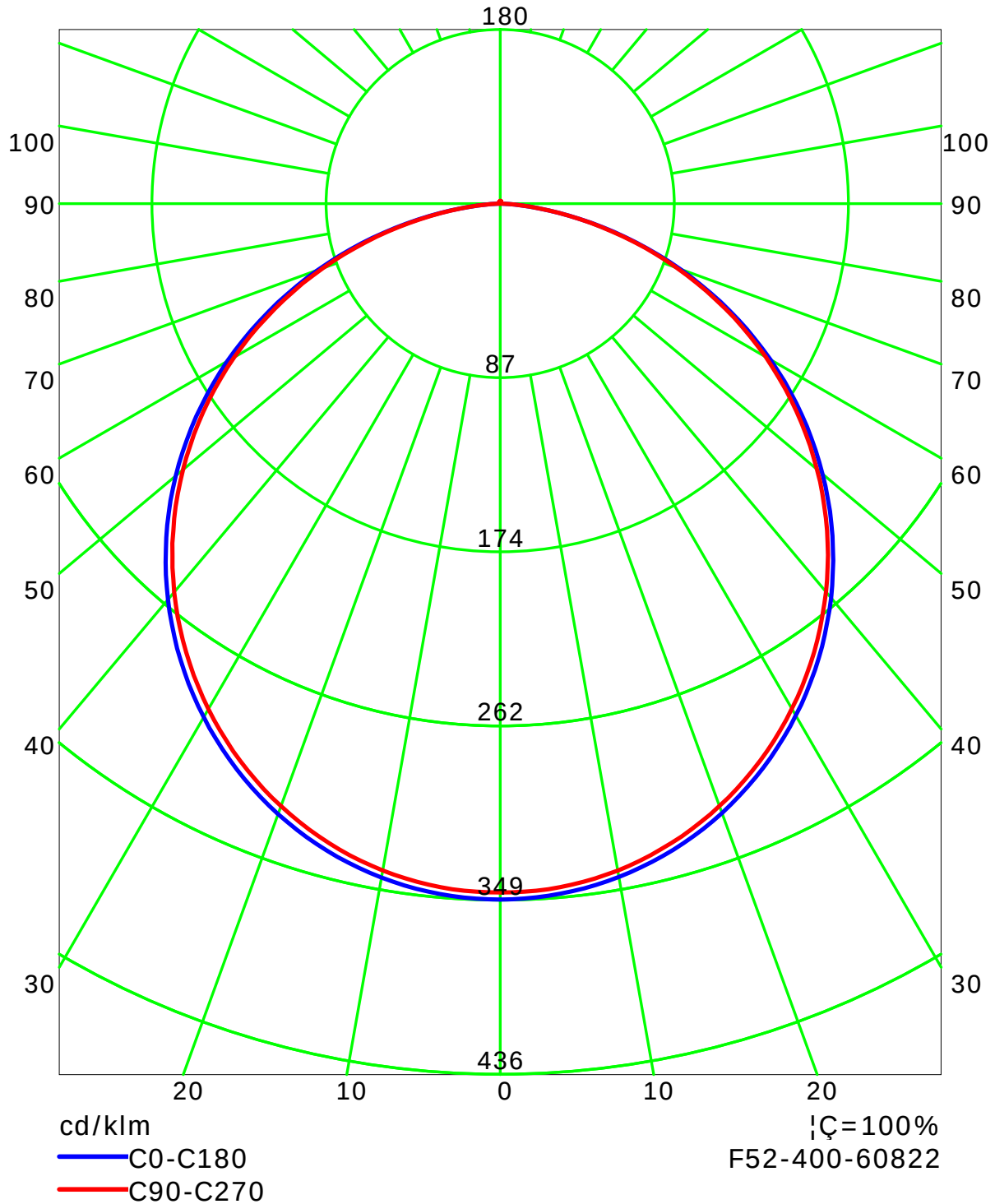
Luminous Intensity Distribution Curve



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:

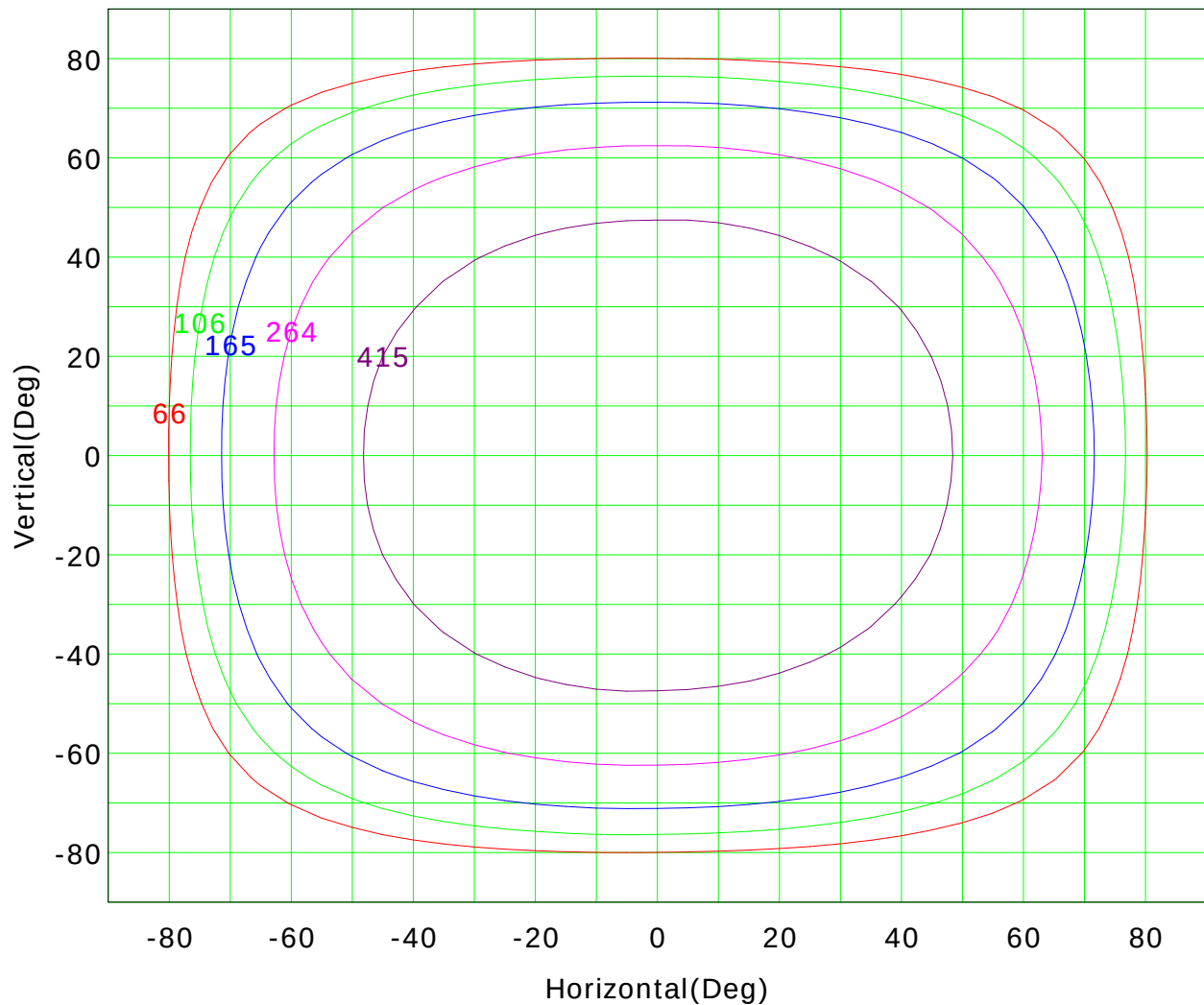
Luminous Intensity Distribution Curve(cd / klm)



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%): 659 cd

(10%):	66 cd	(16%):	106 cd
(25%):	165 cd	(40%):	264 cd
(63%):	415 cd	(100%):	659 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

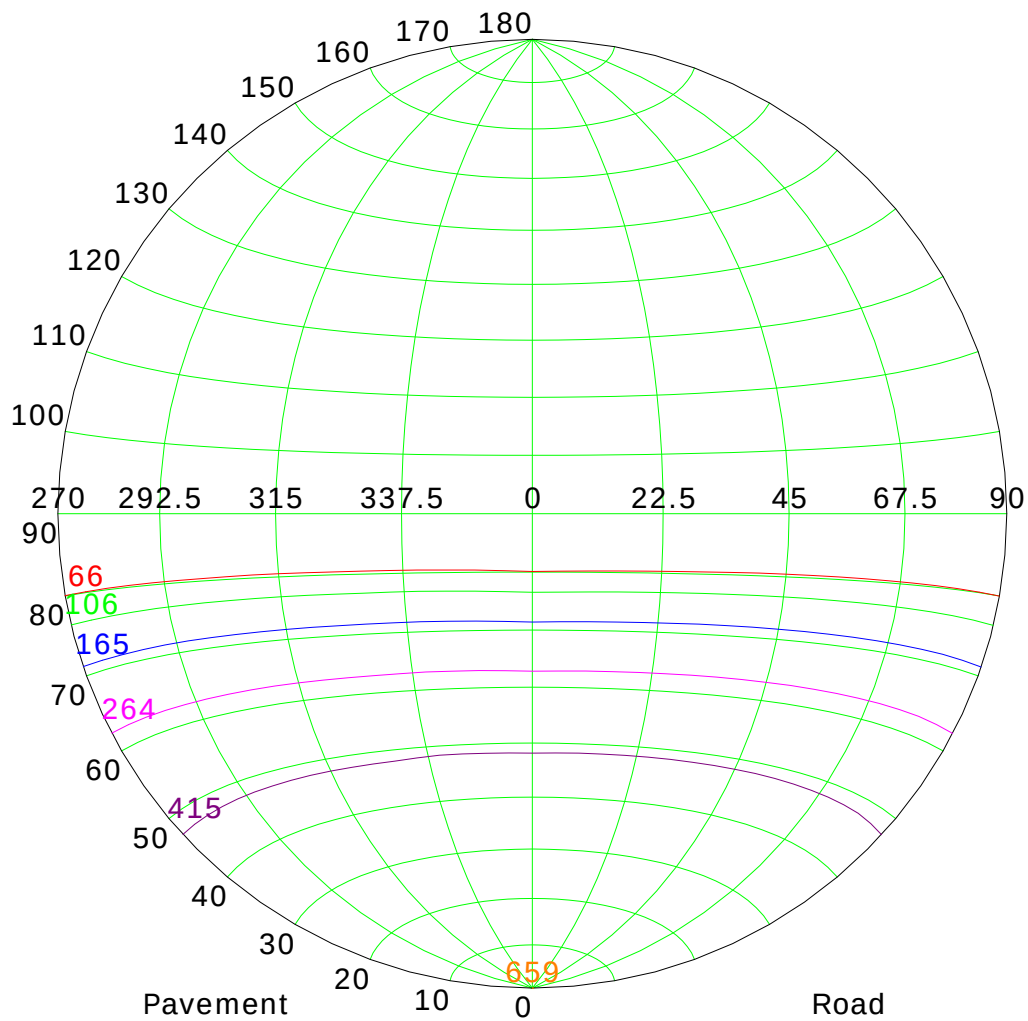
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 659 cd

(10%):	66 cd	(16%):	106 cd
(25%):	165 cd	(40%):	264 cd
(63%):	415 cd	(100%):	659 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

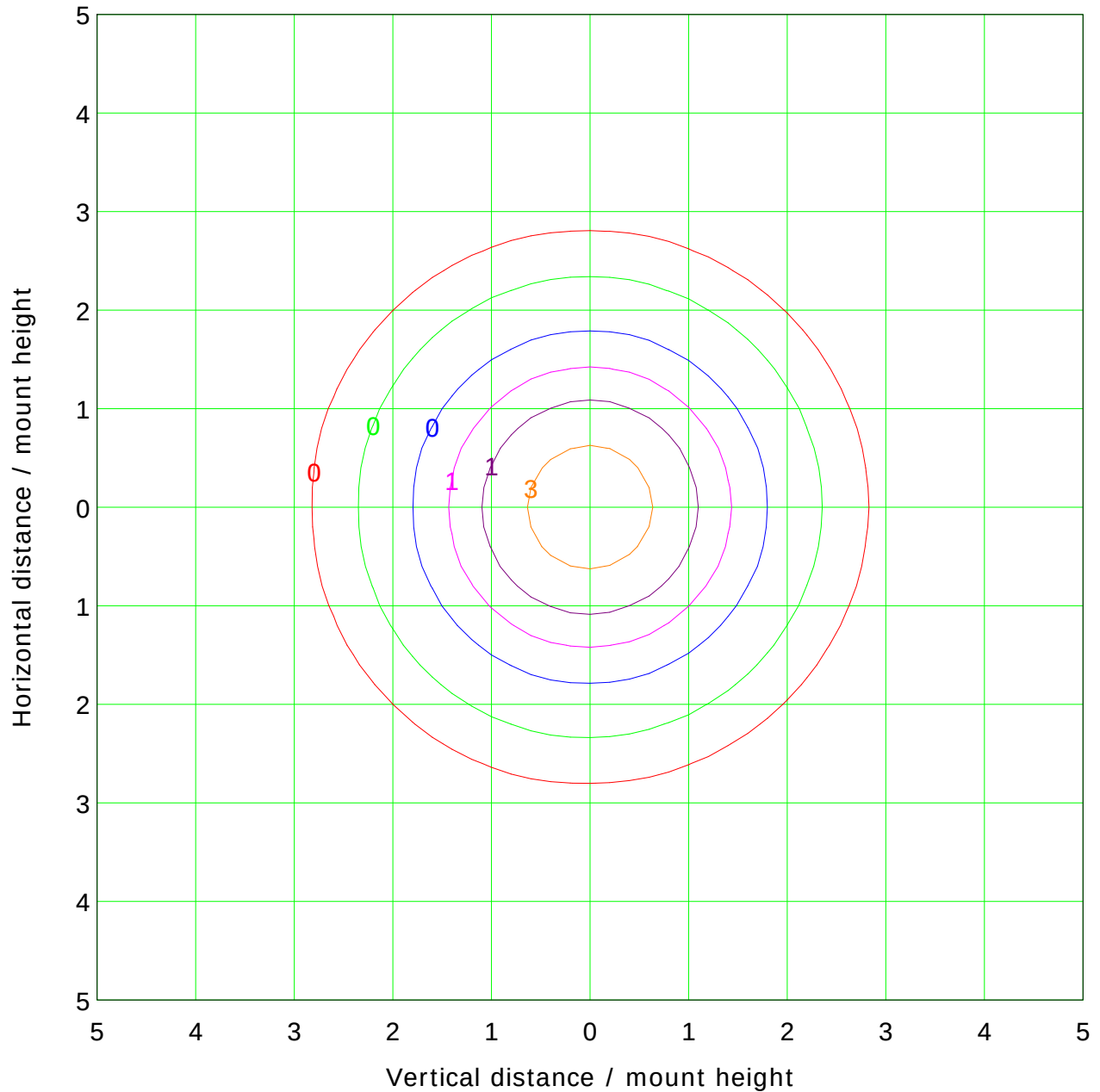
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 6.6 lx	
— (1%):	0.1 lx	— (2%):	0.1 lx
— (5%):	0.3 lx	— (10%):	0.7 lx
— (20%):	1.3 lx	— (50%):	3.3 lx
— (100%):	6.6 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

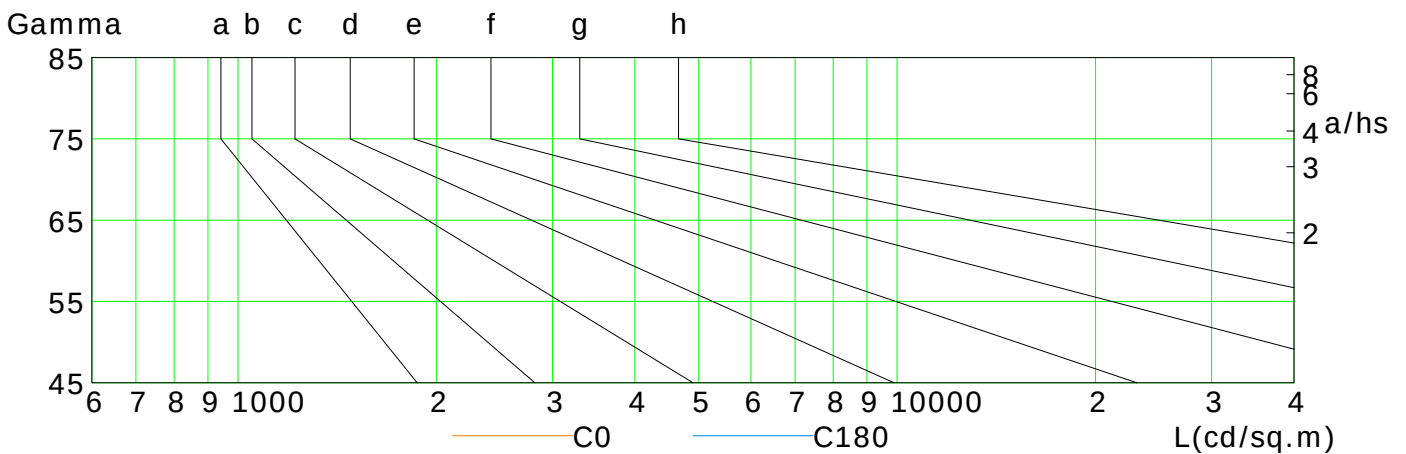
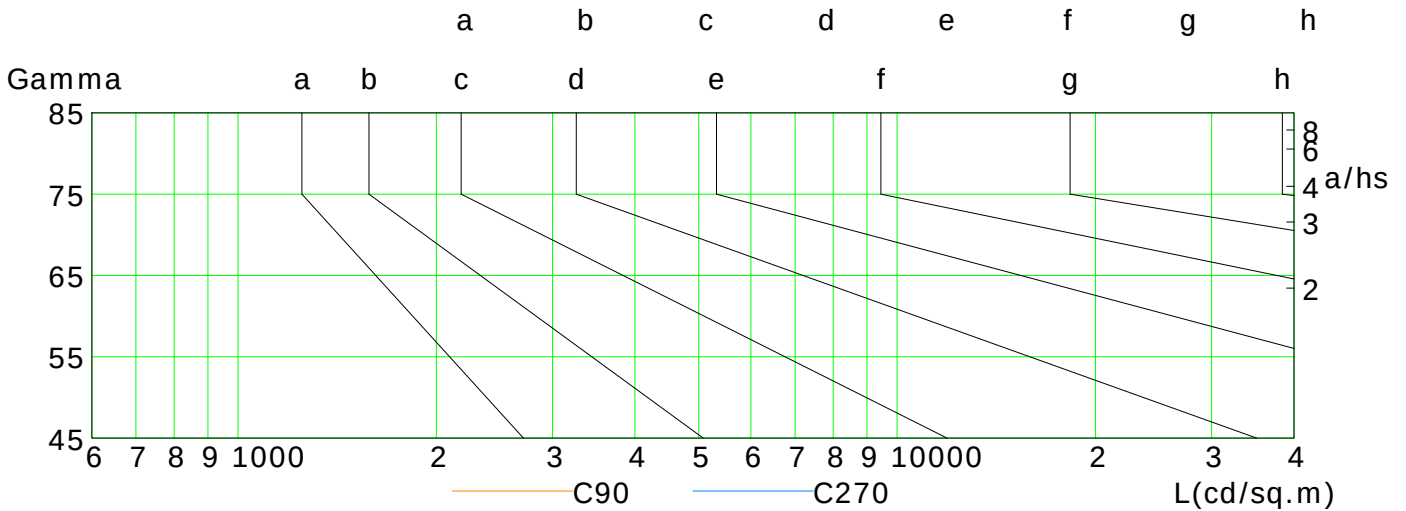
Distance: 7.970 m

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	445	398	348	295	239	181	122	67	21
C90	438	392	342	290	235	178	121	66	21
C180	447	401	351	298	242	184	125	69	22
C270	438	392	343	291	235	179	121	66	21

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

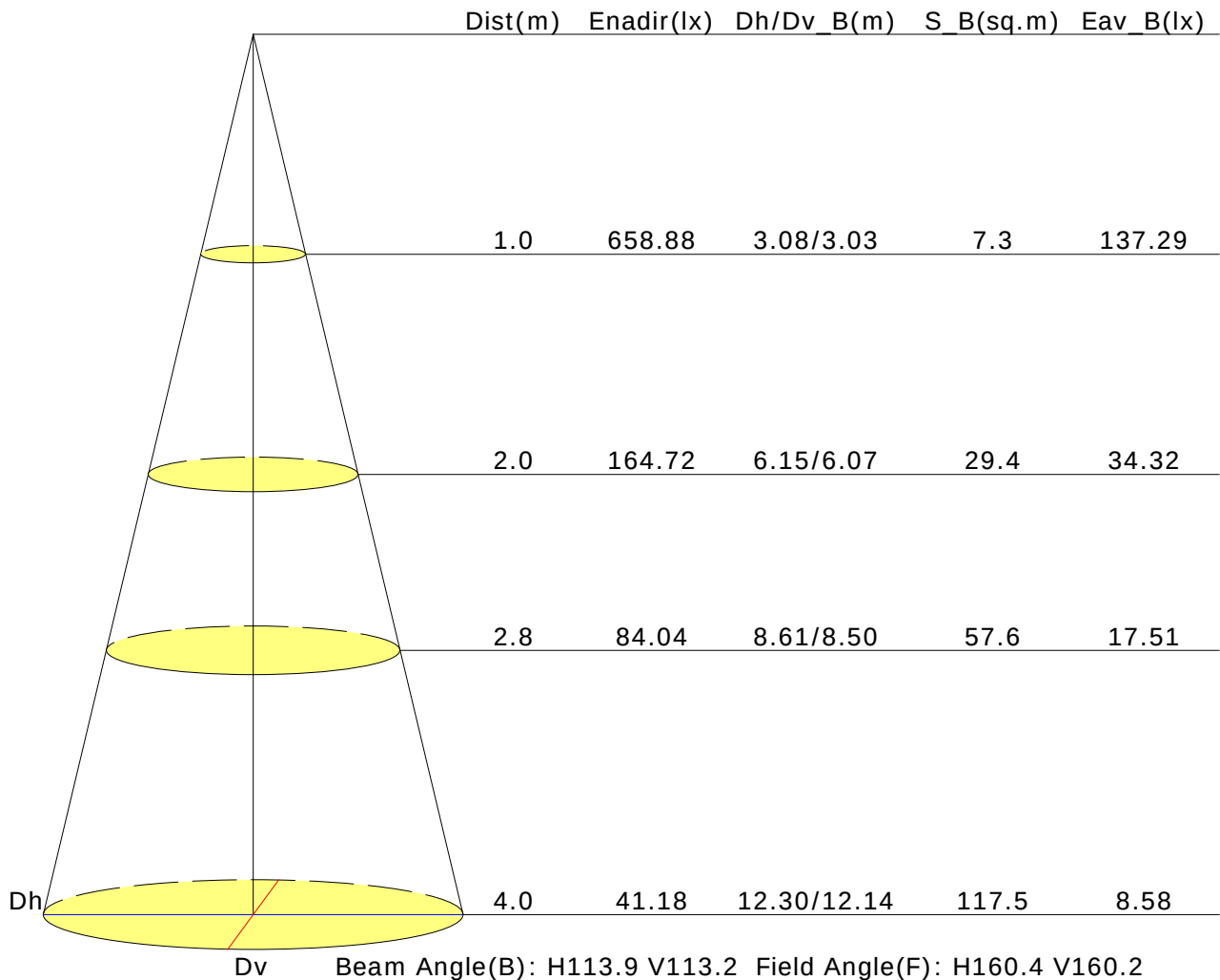
Test Device: GPM-2000

Distance: 7.970 m

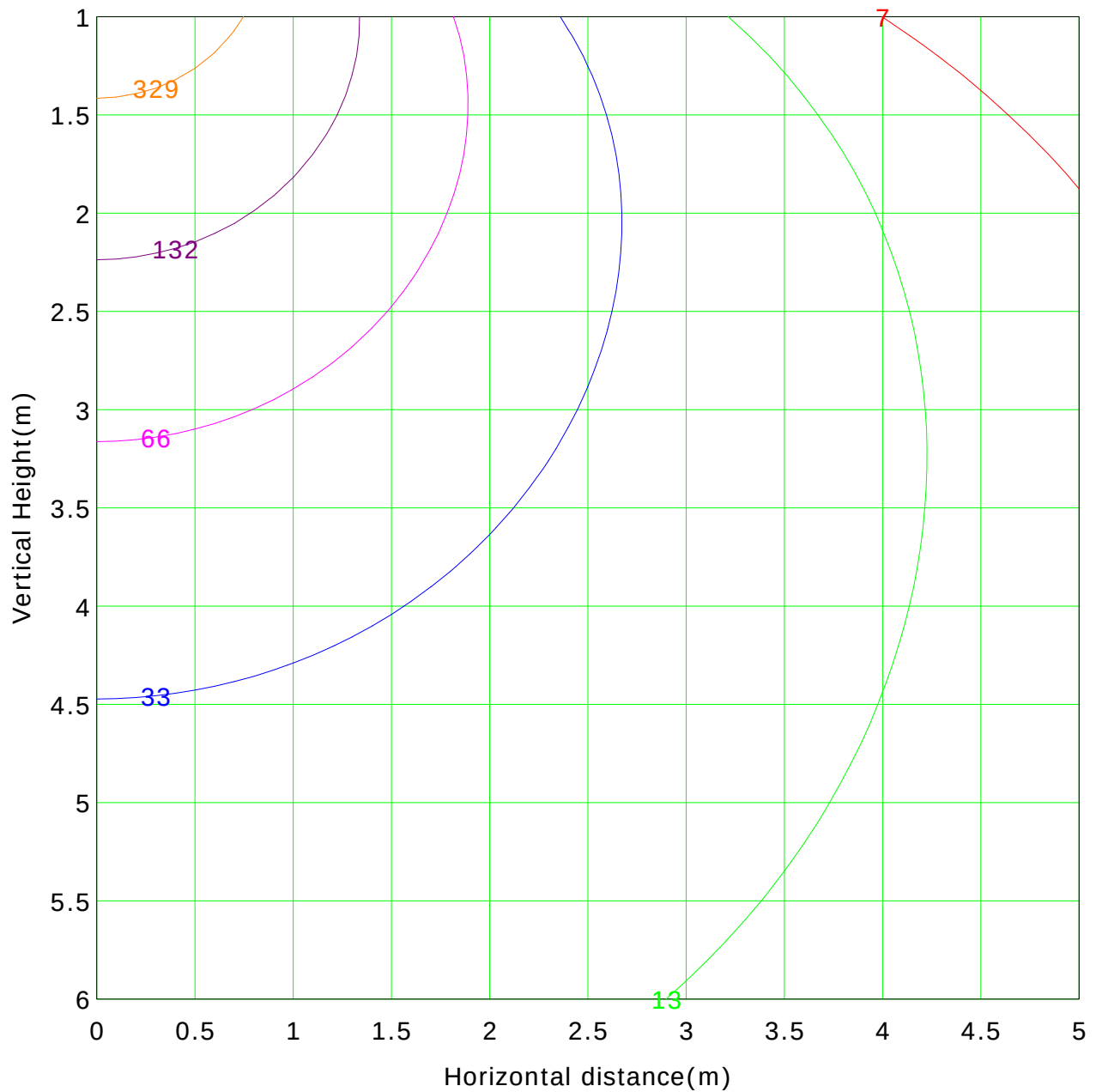
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 6.0m	Max Lux: 658.9 lx
(1%): 6.6 lx	(2%): 13.2 lx	
(5%): 32.9 lx	(10%): 65.9 lx	
(20%): 131.8 lx	(50%): 329.4 lx	
(100%): 658.9 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: 25/09/2018 11:22

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CS

Lamp Description: F52-400-60822

Voltage: 24.0 V

Power: 27.92 W

Lumens per Lamp: 3158 lm

Current: 1.163 A

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1836.1 lm

Downward Ratio: 92%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 165.9, 221.9, 177.0, 176.1

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.3, 126.5, 121.9, 121.4

Luminaire Efficacy Rating (LER): 65.81

Max. Intensity: 522.97 cd

S/MH(C0/C180): 1.25

Total Rated Lamp Lumens: 1836.1 lm

Efficiency: 100%

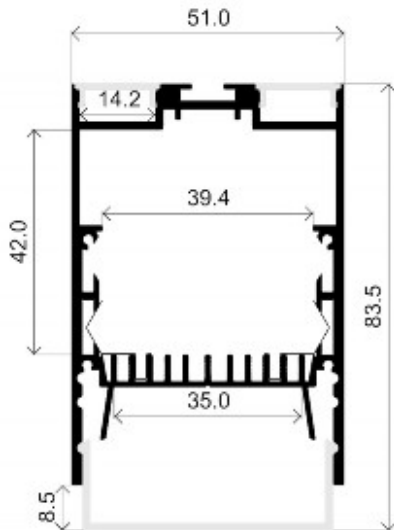
Upward Ratio: 8%

Central Intensity: 520.99 cd

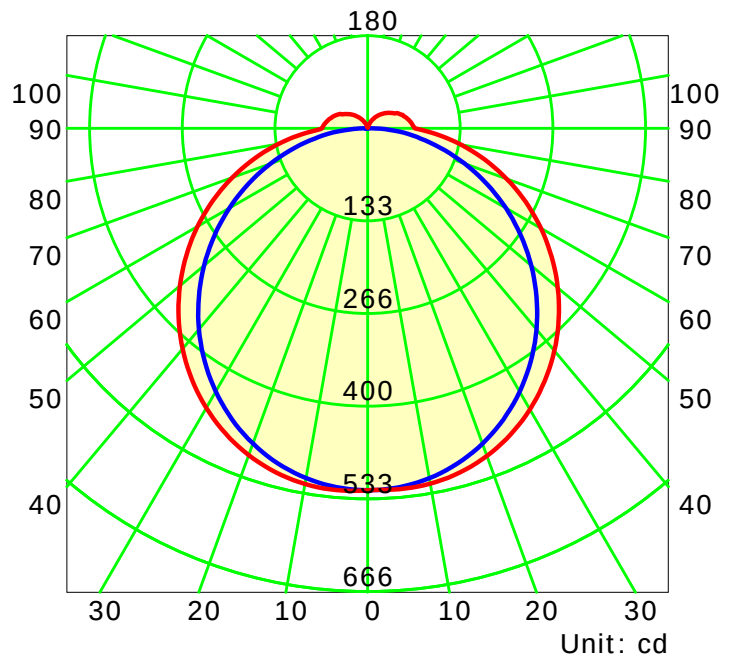
Pos of Max. Intensity: H280 V5

S/MH(C90/C270): 1.33

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

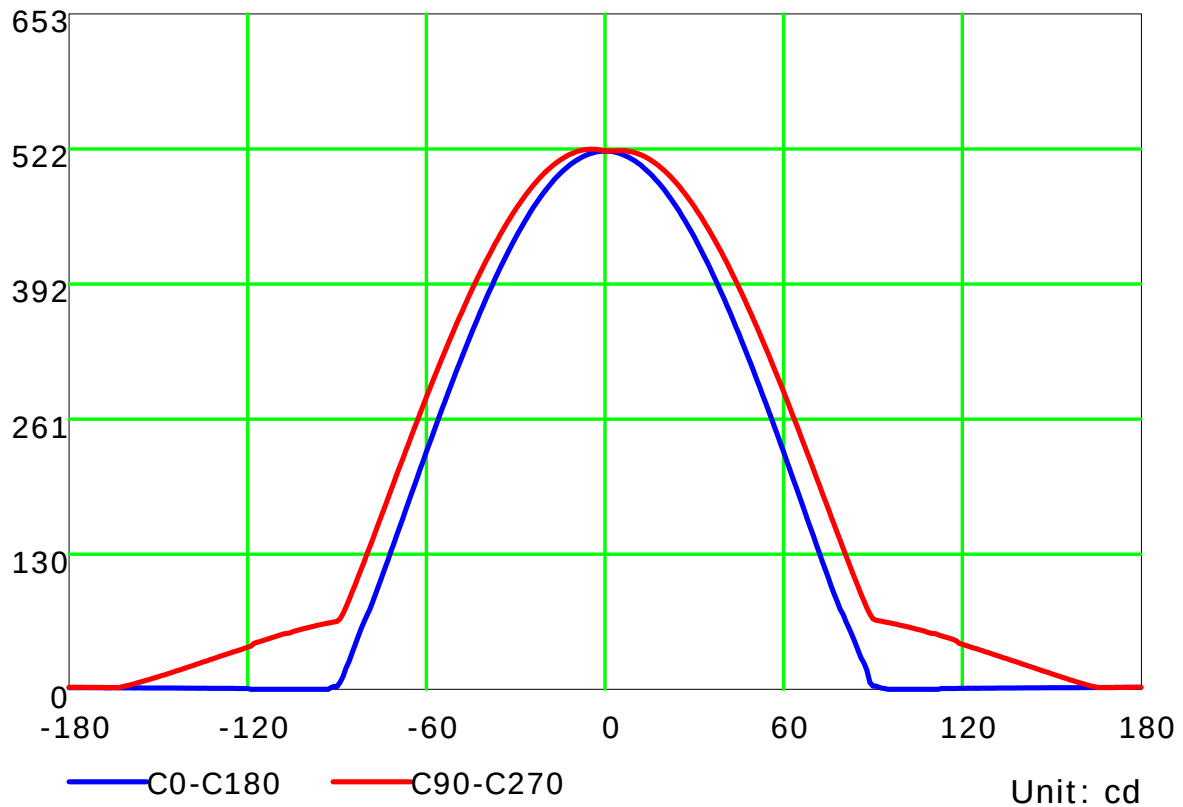
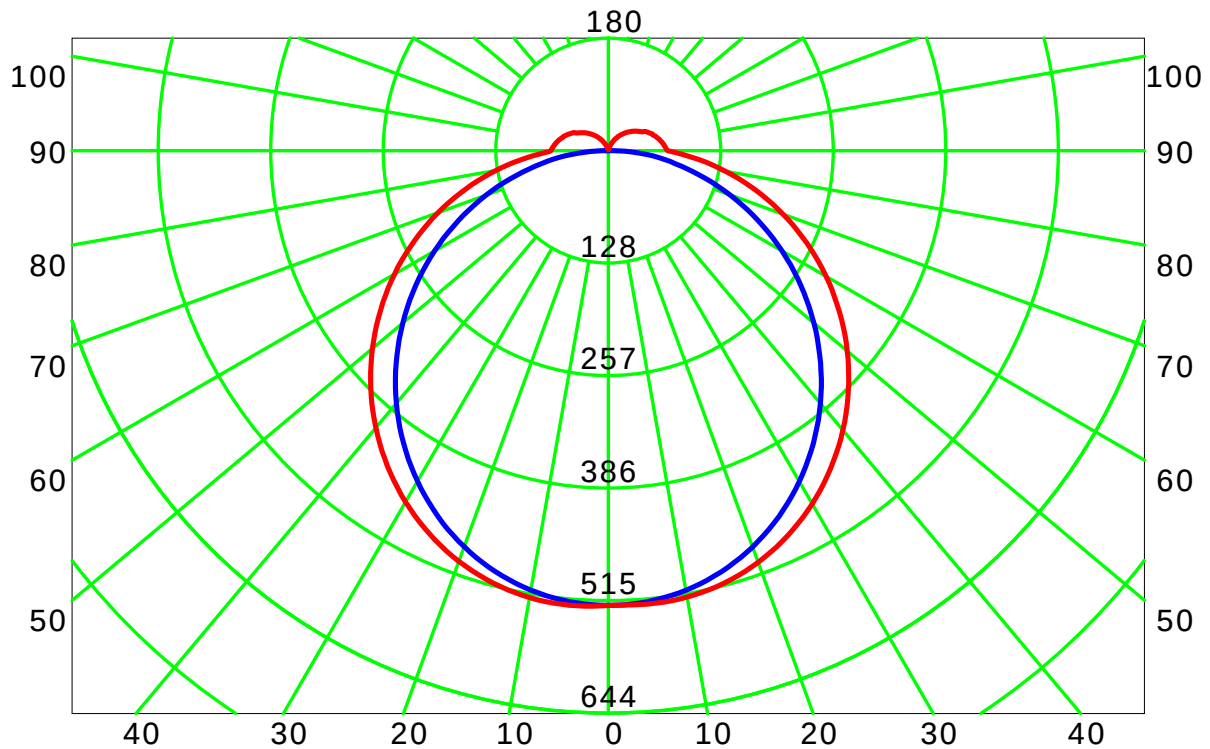
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

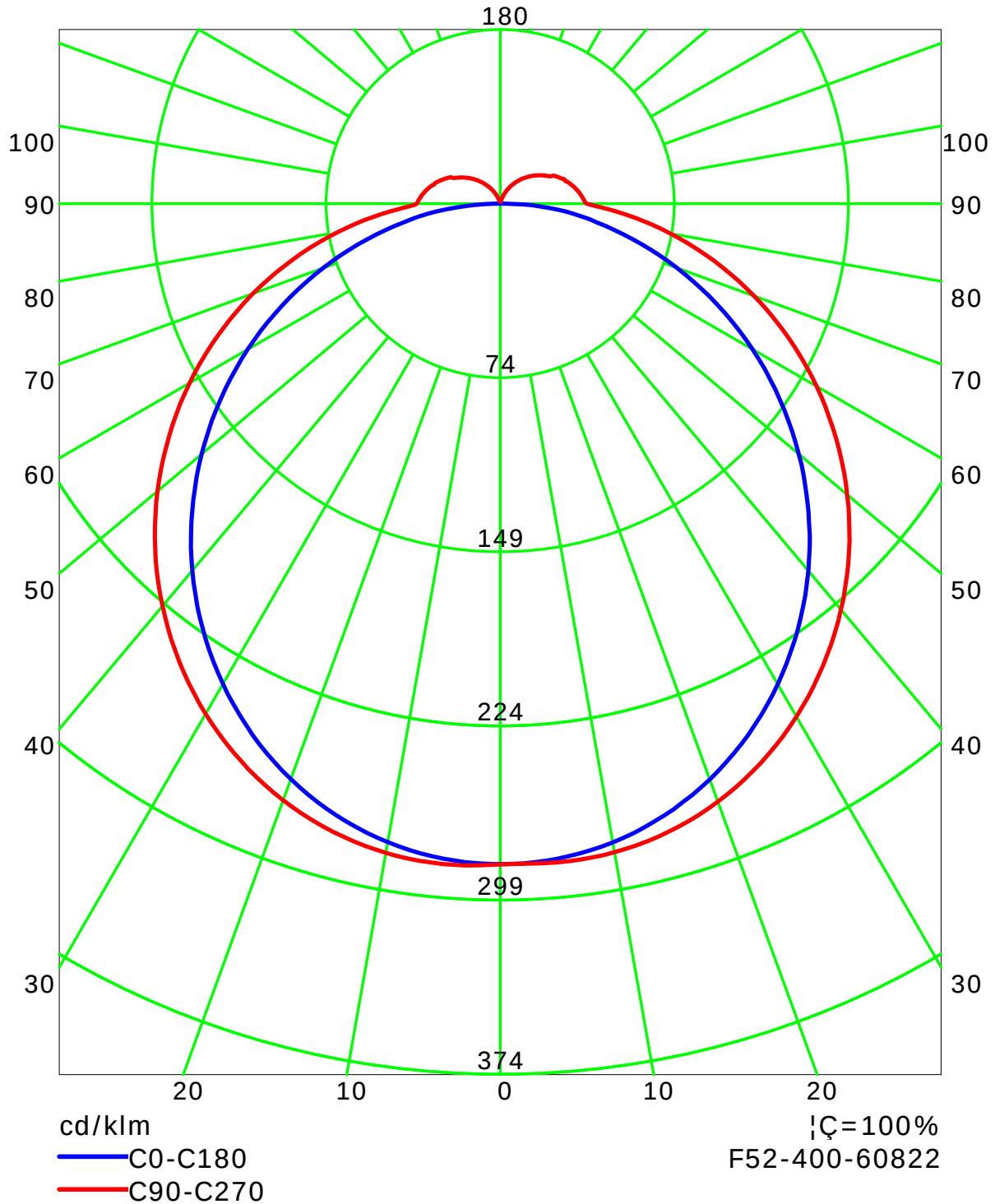
Luminous Intensity Distribution Curve



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:

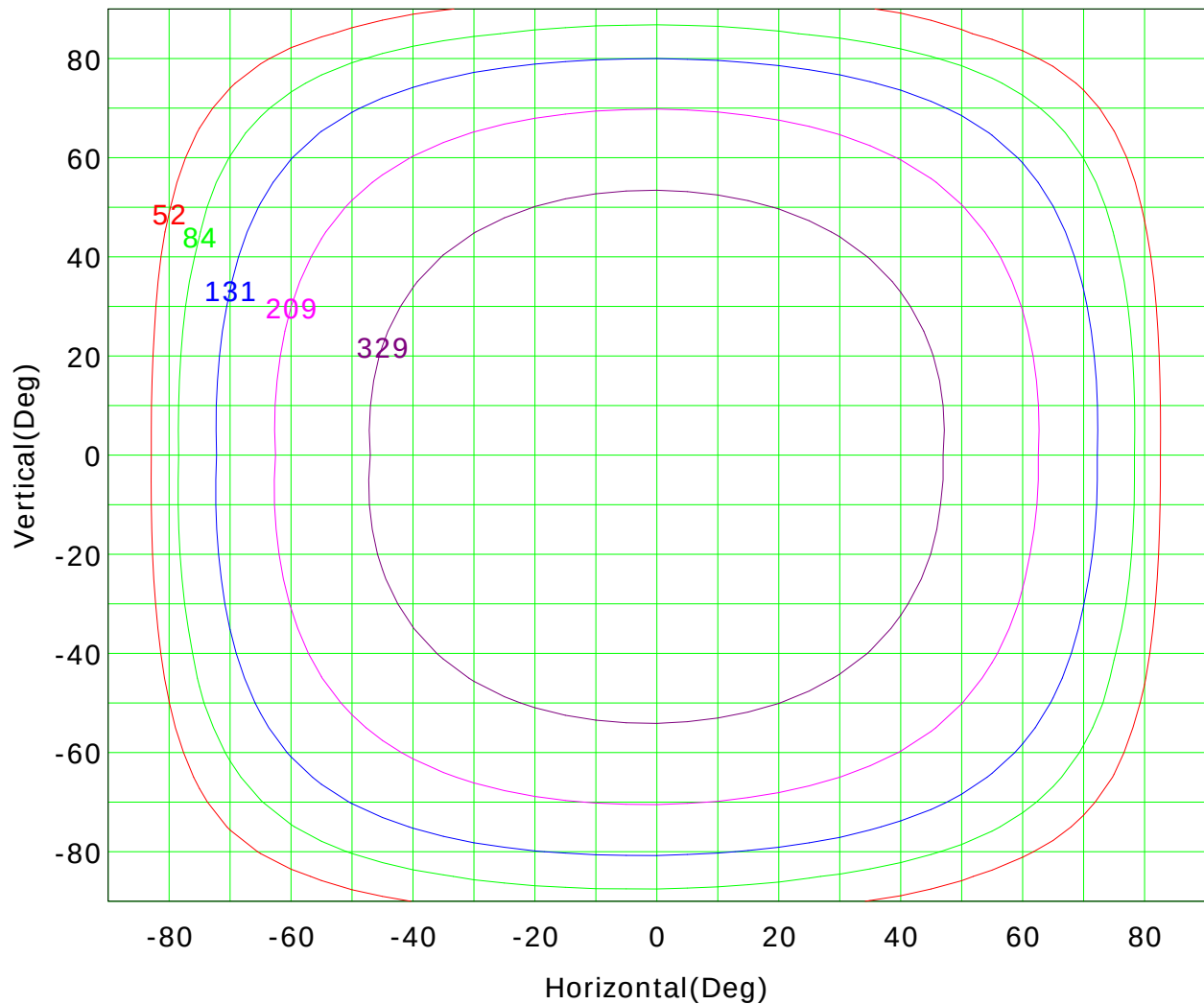
Luminous Intensity Distribution Curve(cd / klm)



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%): 523 cd

(10%):	52 cd	(16%):	84 cd
(25%):	131 cd	(40%):	209 cd
(63%):	329 cd	(100%):	523 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

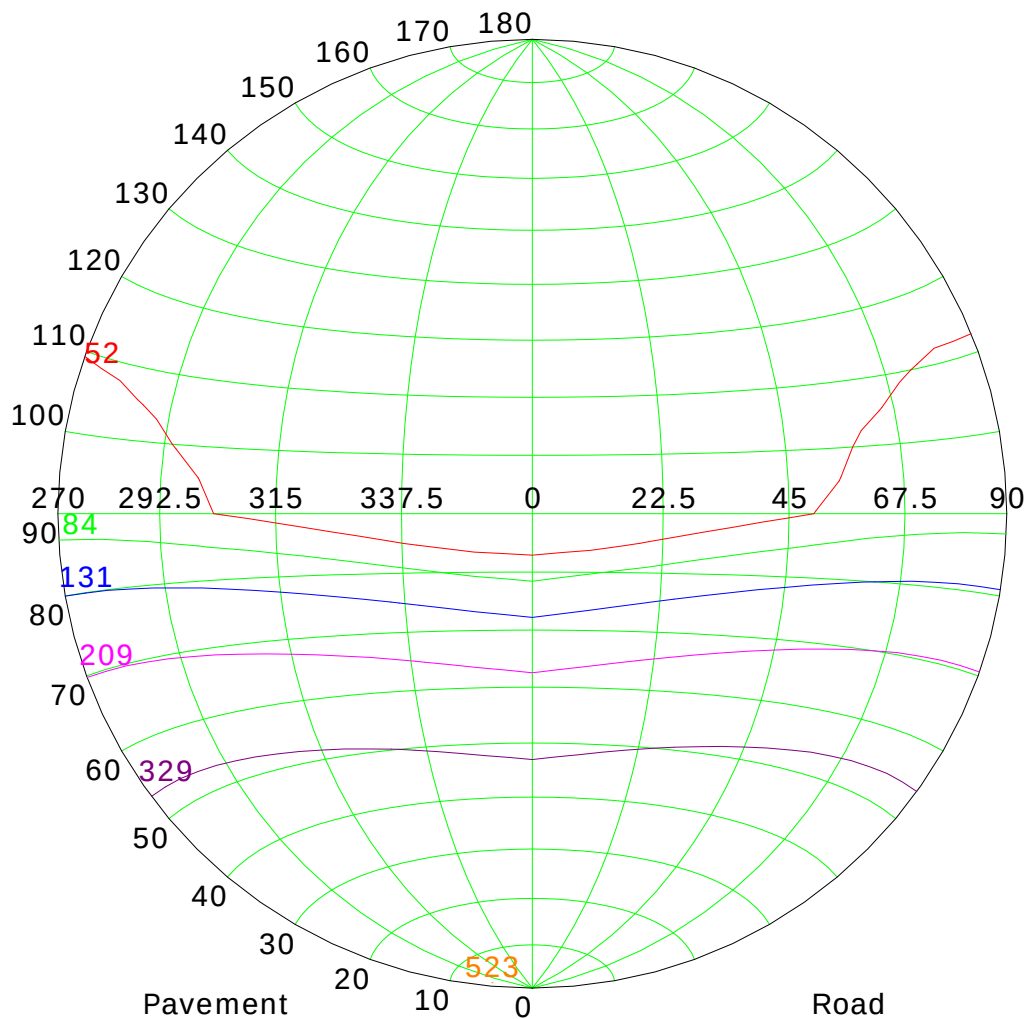
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



Imax (100%): 523 cd

(10%):	52 cd	(16%):	84 cd
(25%):	131 cd	(40%):	209 cd
(63%):	329 cd	(100%):	523 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

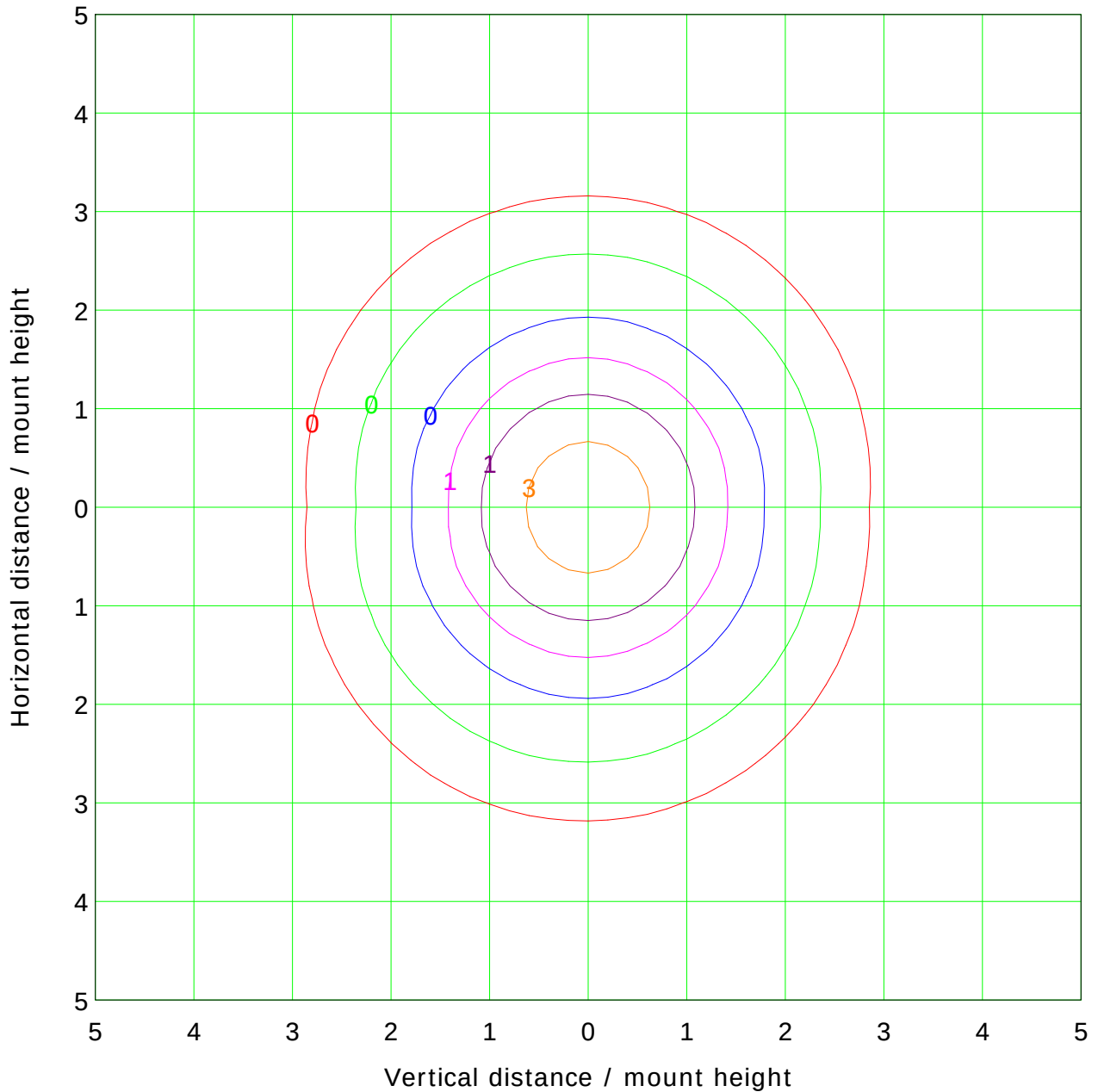
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 5.2 lx

(1%): 0.1 lx	(2%): 0.1 lx
(5%): 0.3 lx	(10%): 0.5 lx
(20%): 1.0 lx	(50%): 2.6 lx
(100%): 5.2 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

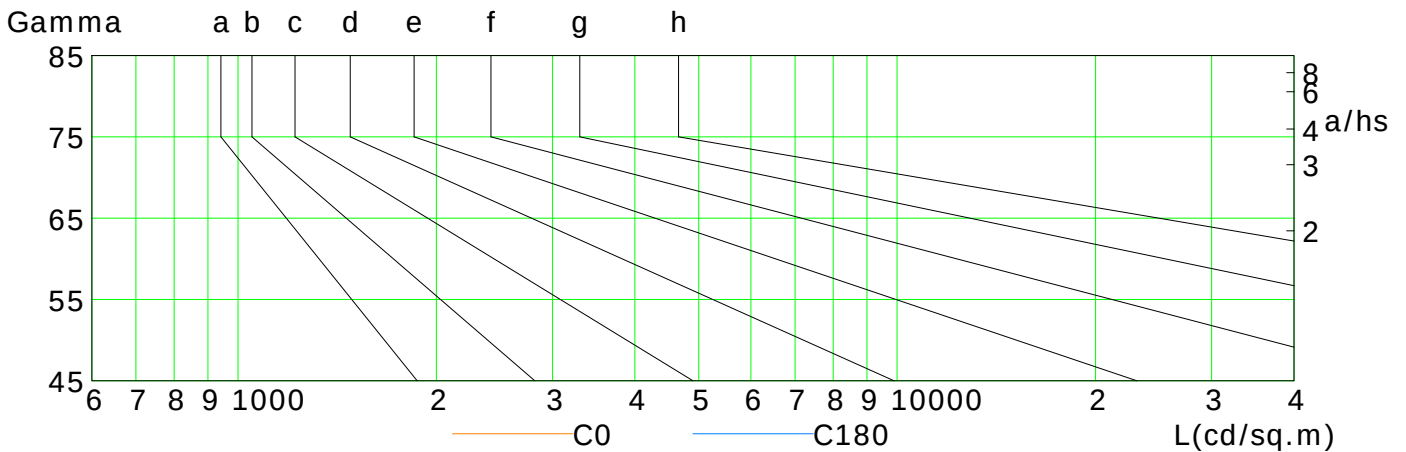
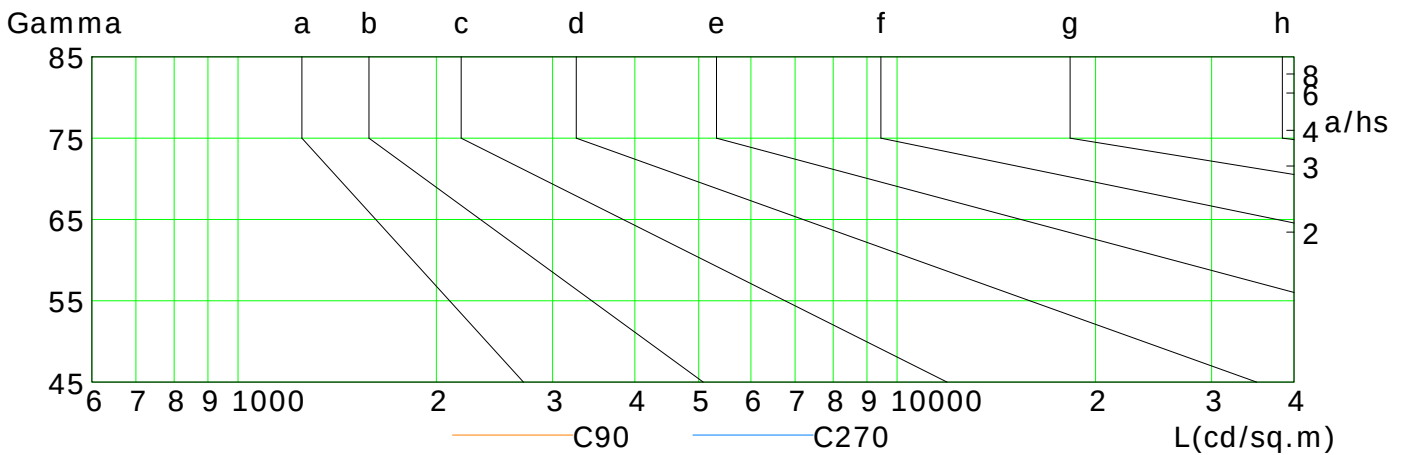
Humidity:

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	344	307	269	230	189	149	108	72	38
C90	389	357	324	288	251	213	175	136	100
C180	344	308	269	230	189	149	108	71	35
C270	385	353	319	283	246	208	169	131	94

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

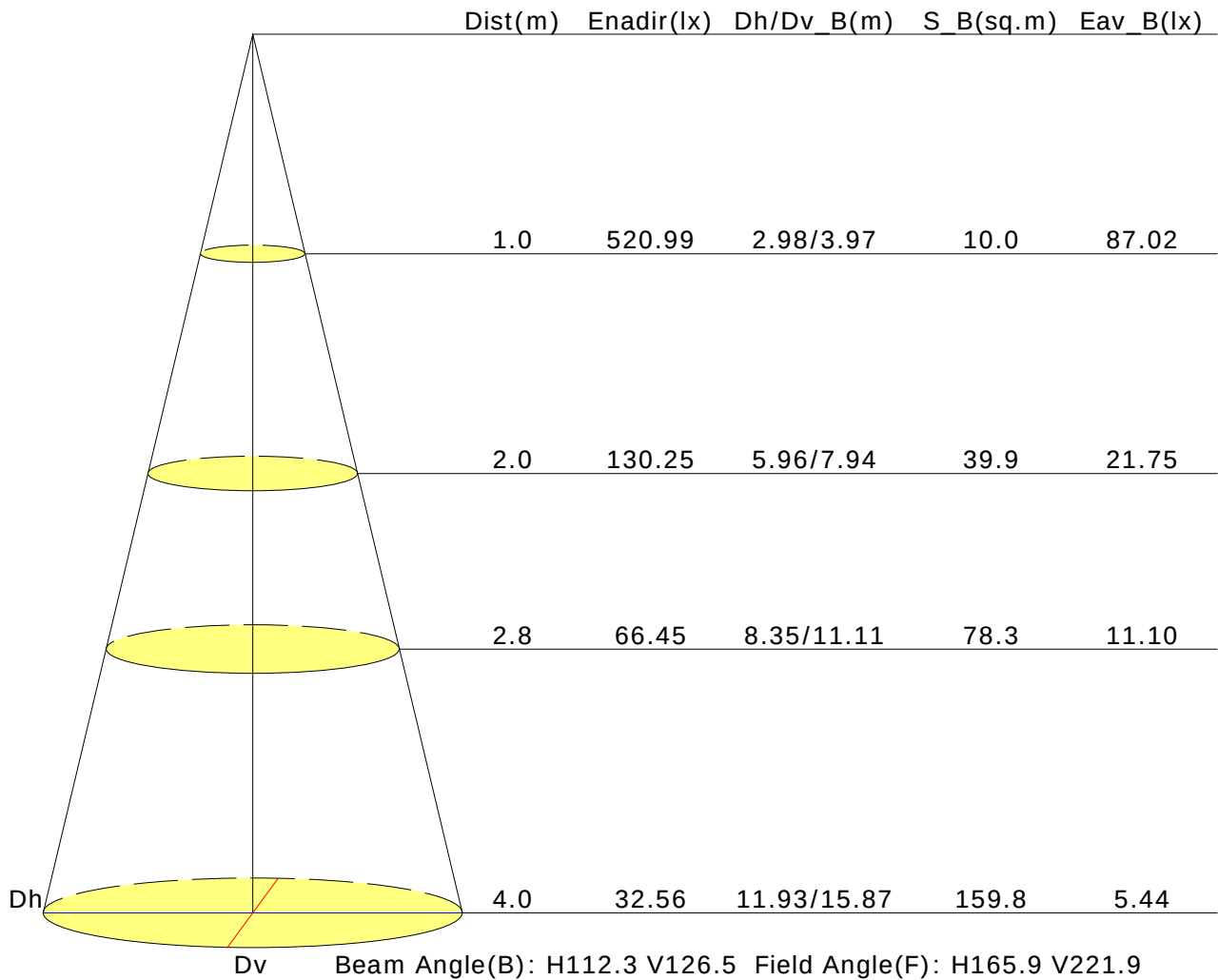
Test Device: GPM-2000

Distance: 7.970 m

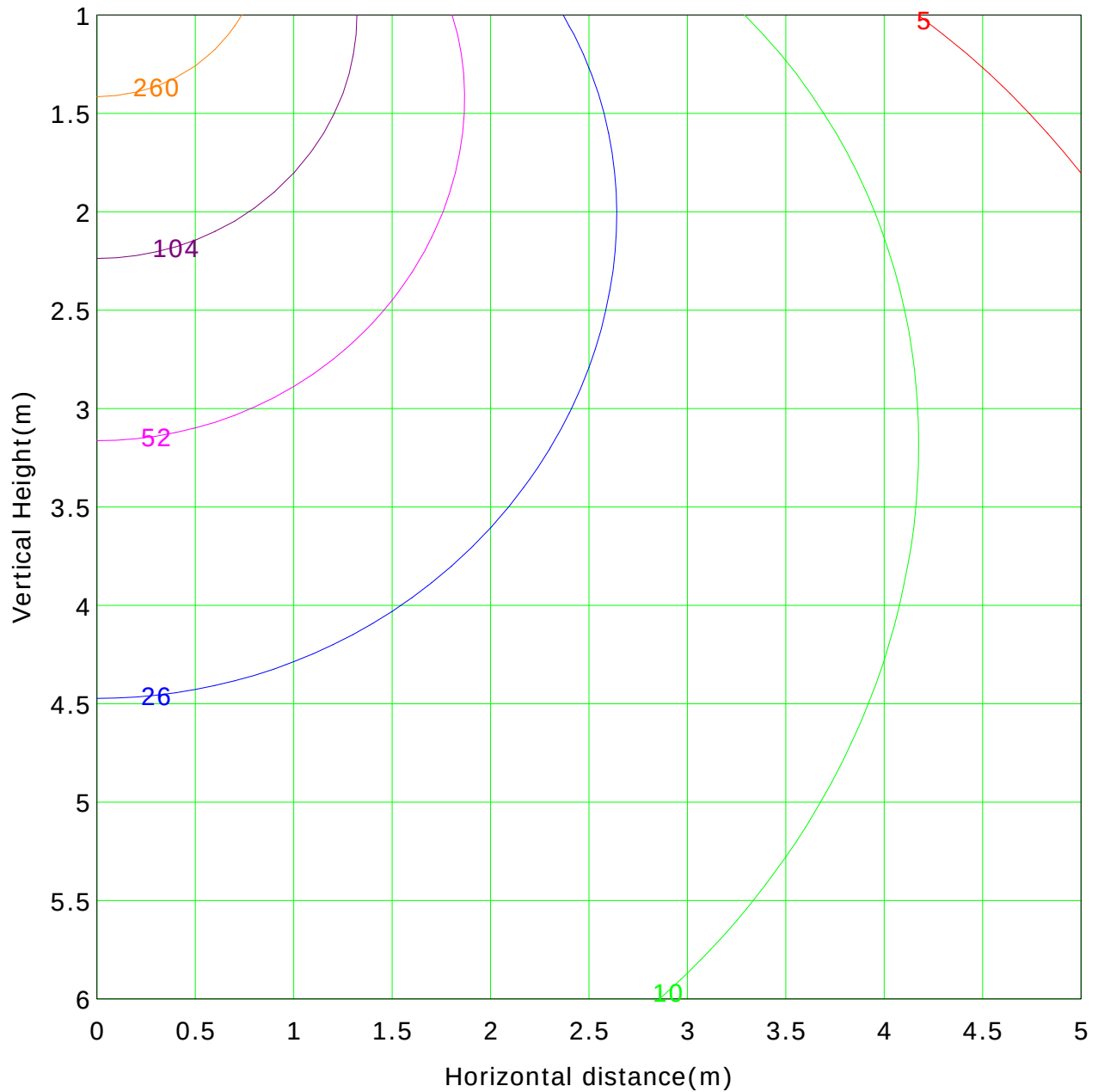
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 521.0 lx

(1%): 5.2 lx	(2%): 10.4 lx
(5%): 26.0 lx	(10%): 52.1 lx
(20%): 104.2 lx	(50%): 260.5 lx
(100%): 521.0 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: 25/09/2018 12:36

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CS

Lamp Description: F52-400-60822

Voltage: 24.0 V

Power: 28.01 W

Lumens per Lamp: 3158 lm

Current: 1.167 A

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1795.8 lm

Downward Ratio: 100%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 164.2, 163.7, 163.9, 164.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.5, 111.4, 111.8, 112.0

Luminaire Efficacy Rating (LER): 64.16

Max. Intensity: 624.41 cd

S/MH(C0/C180): 1.25

Total Rated Lamp Lumens: 1795.8 lm

Efficiency: 100%

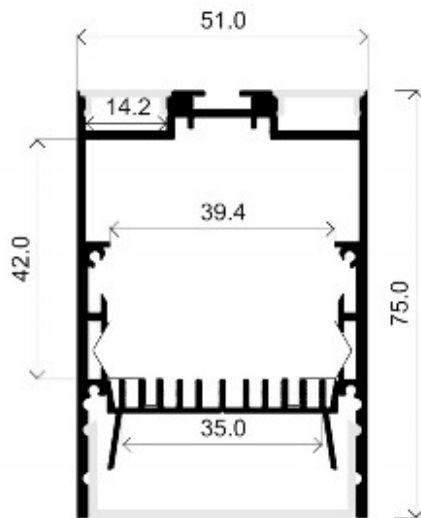
Upward Ratio: 0%

Central Intensity: 623.14 cd

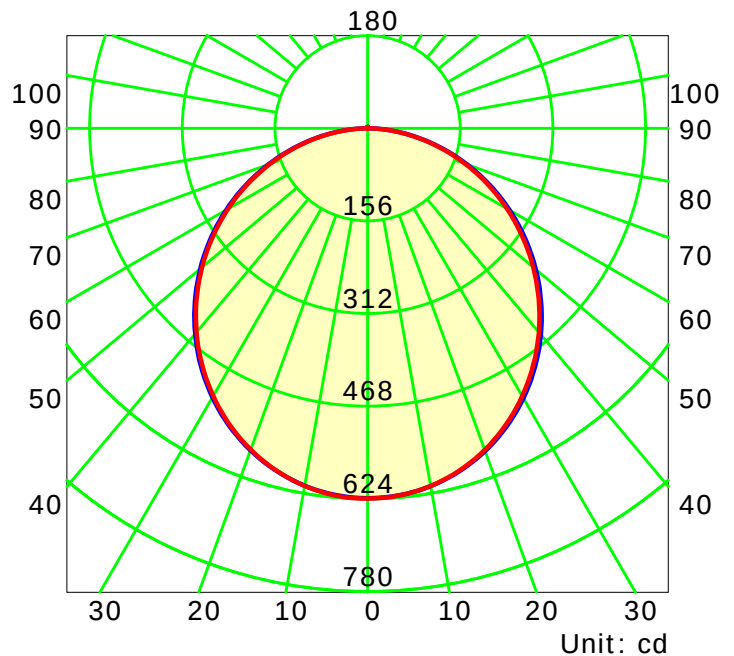
Pos of Max. Intensity: H20 V0

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

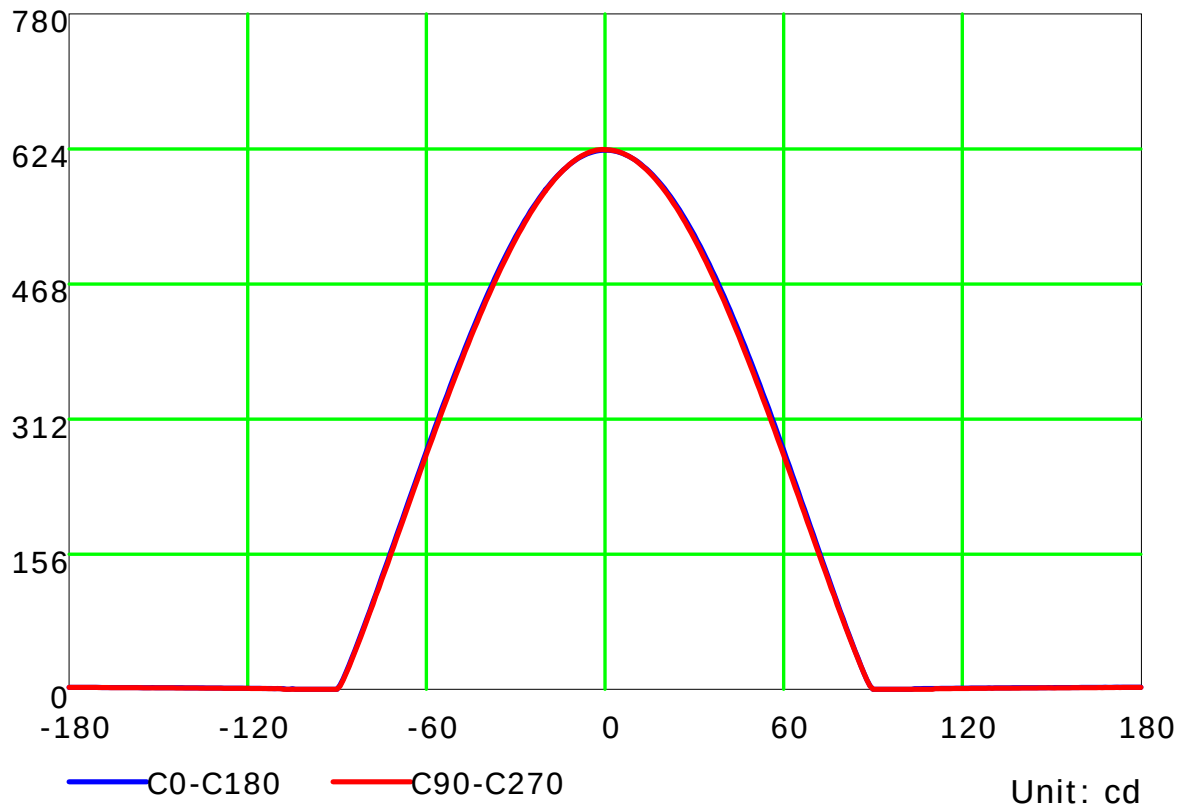
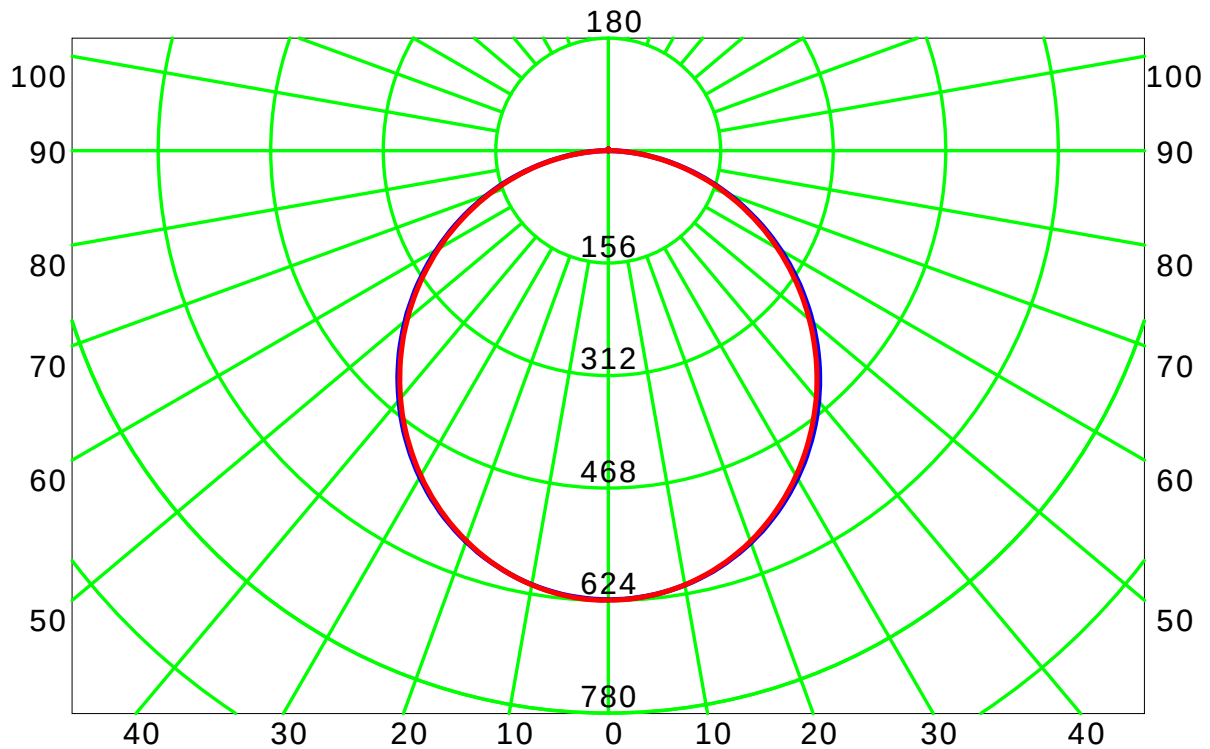
Test Device: GPM-2000

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

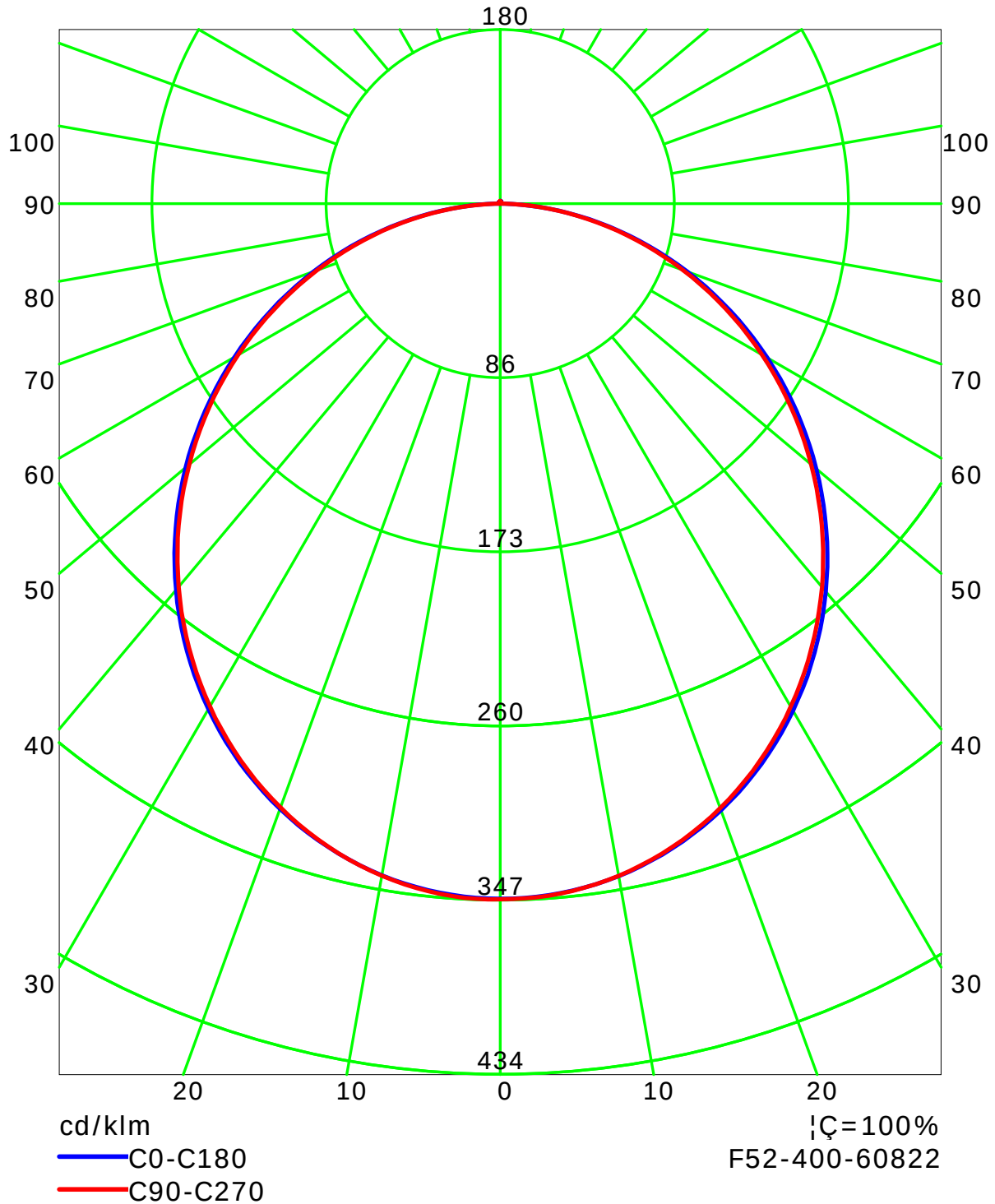
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

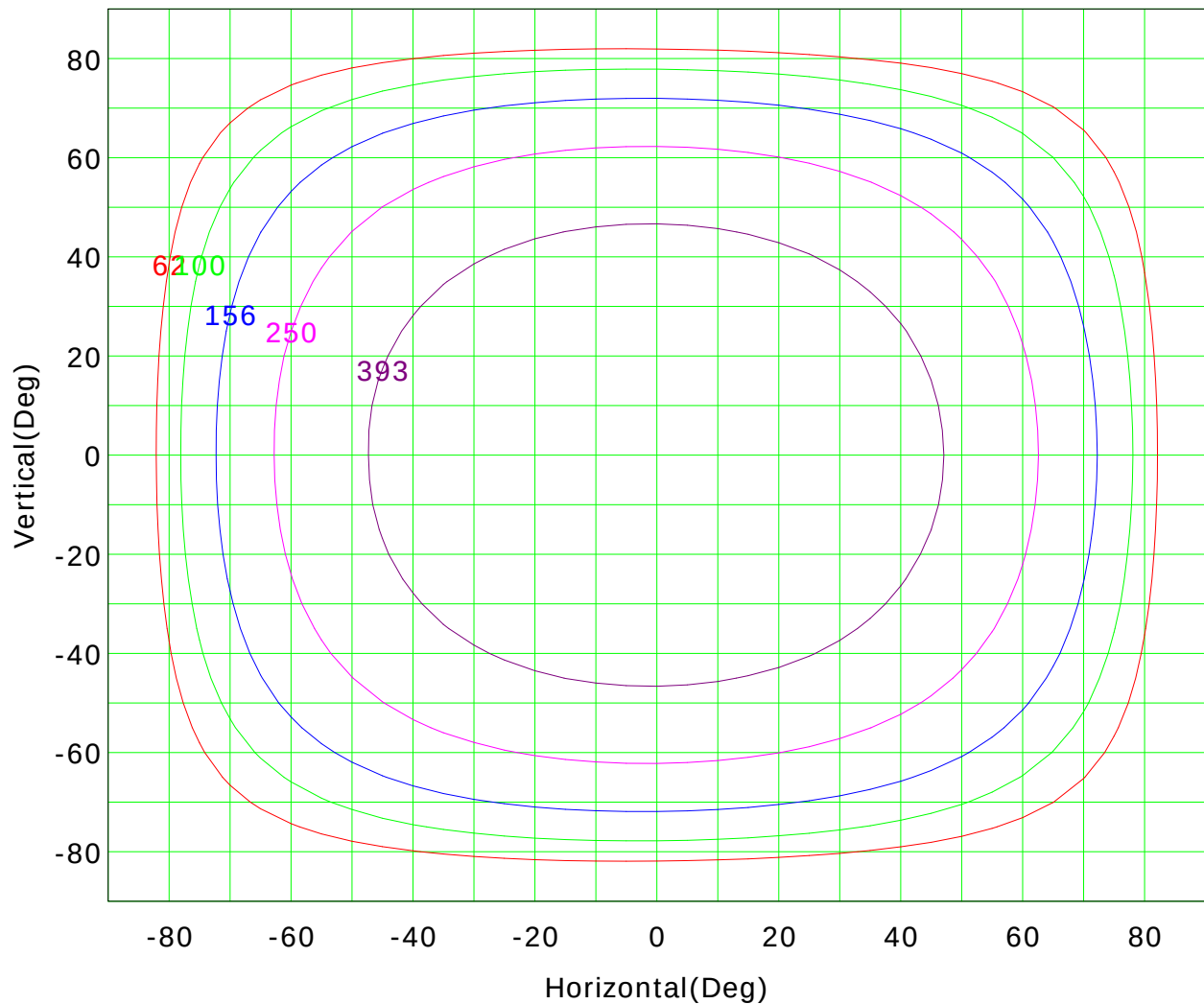
Luminous Intensity Distribution Curve(cd / klm)



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%): 624 cd

(10%):	62 cd	(16%):	100 cd
(25%):	156 cd	(40%):	250 cd
(63%):	393 cd	(100%):	624 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

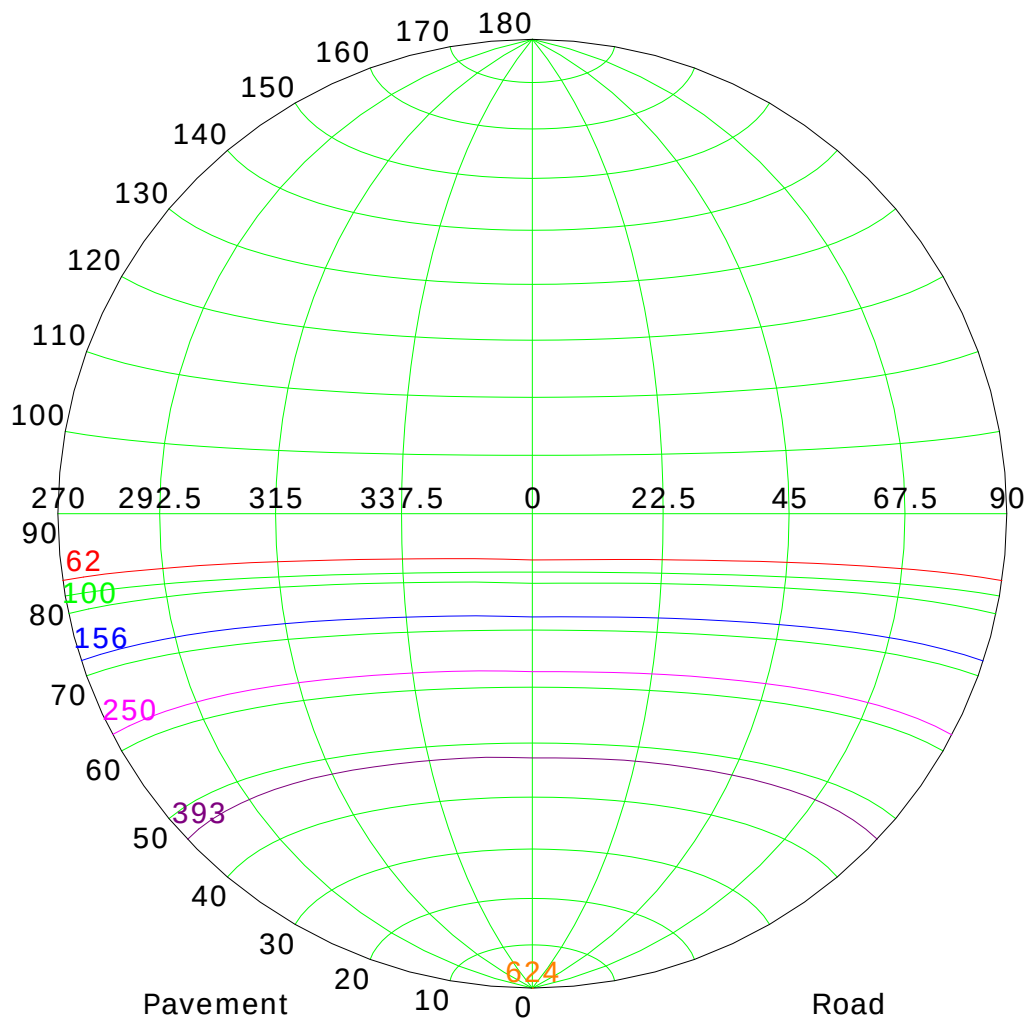
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 624 cd

(10%):	62 cd	(16%):	100 cd
(25%):	156 cd	(40%):	250 cd
(63%):	393 cd	(100%):	624 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

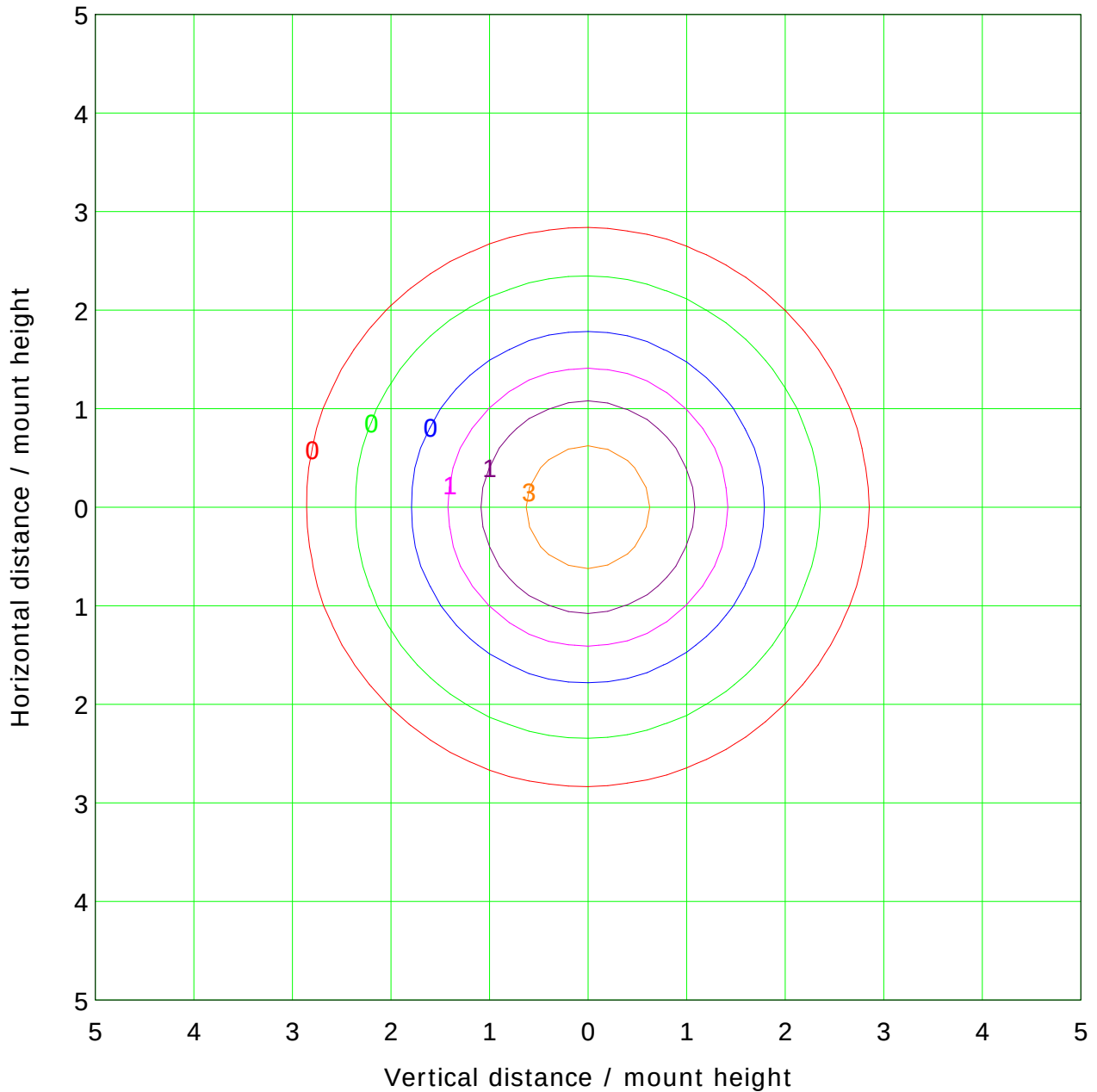
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 6.2 lx

(1%): 0.1 lx	(2%): 0.1 lx
(5%): 0.3 lx	(10%): 0.6 lx
(20%): 1.2 lx	(50%): 3.1 lx
(100%): 6.2 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

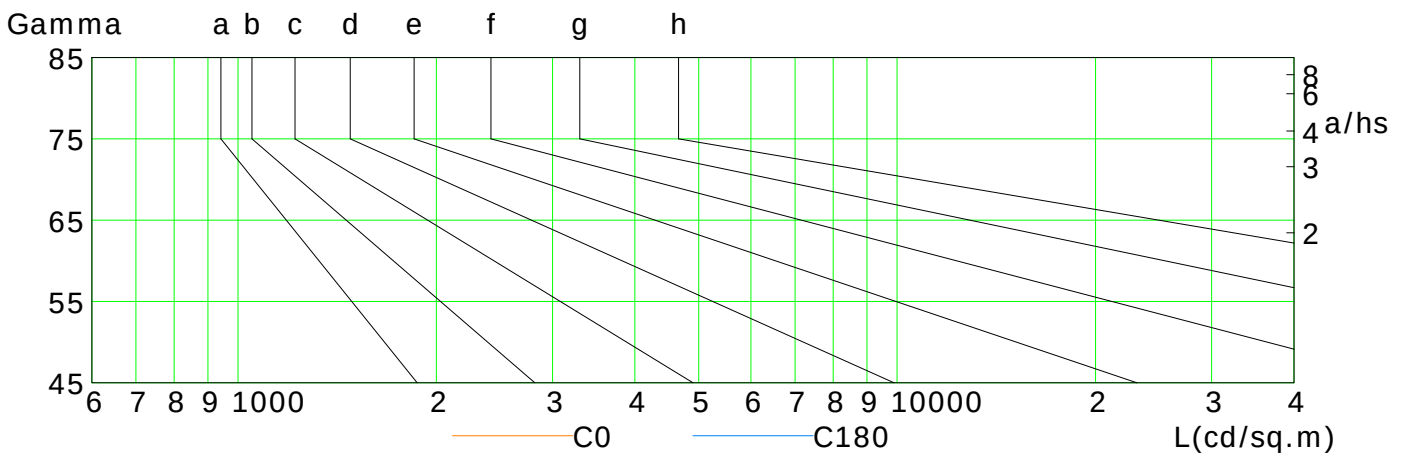
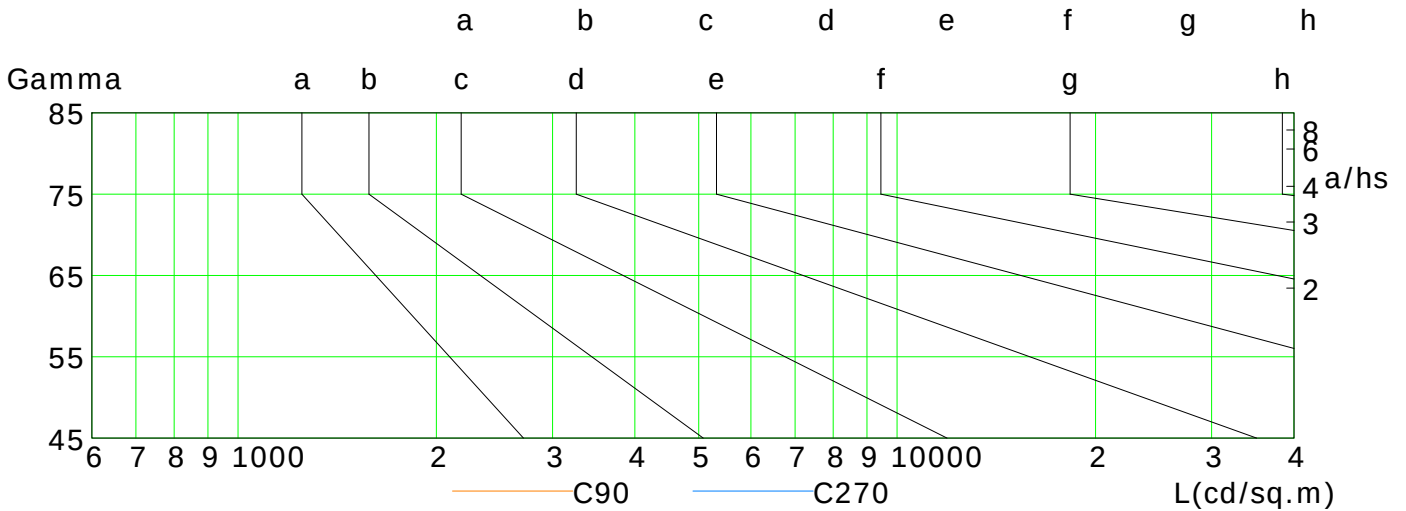
Distance: 7.970 m

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	413	370	324	277	228	179	129	81	36
C90	408	364	318	271	223	174	126	79	35
C180	411	368	323	275	227	178	130	82	37
C270	408	364	319	272	223	175	127	79	35

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

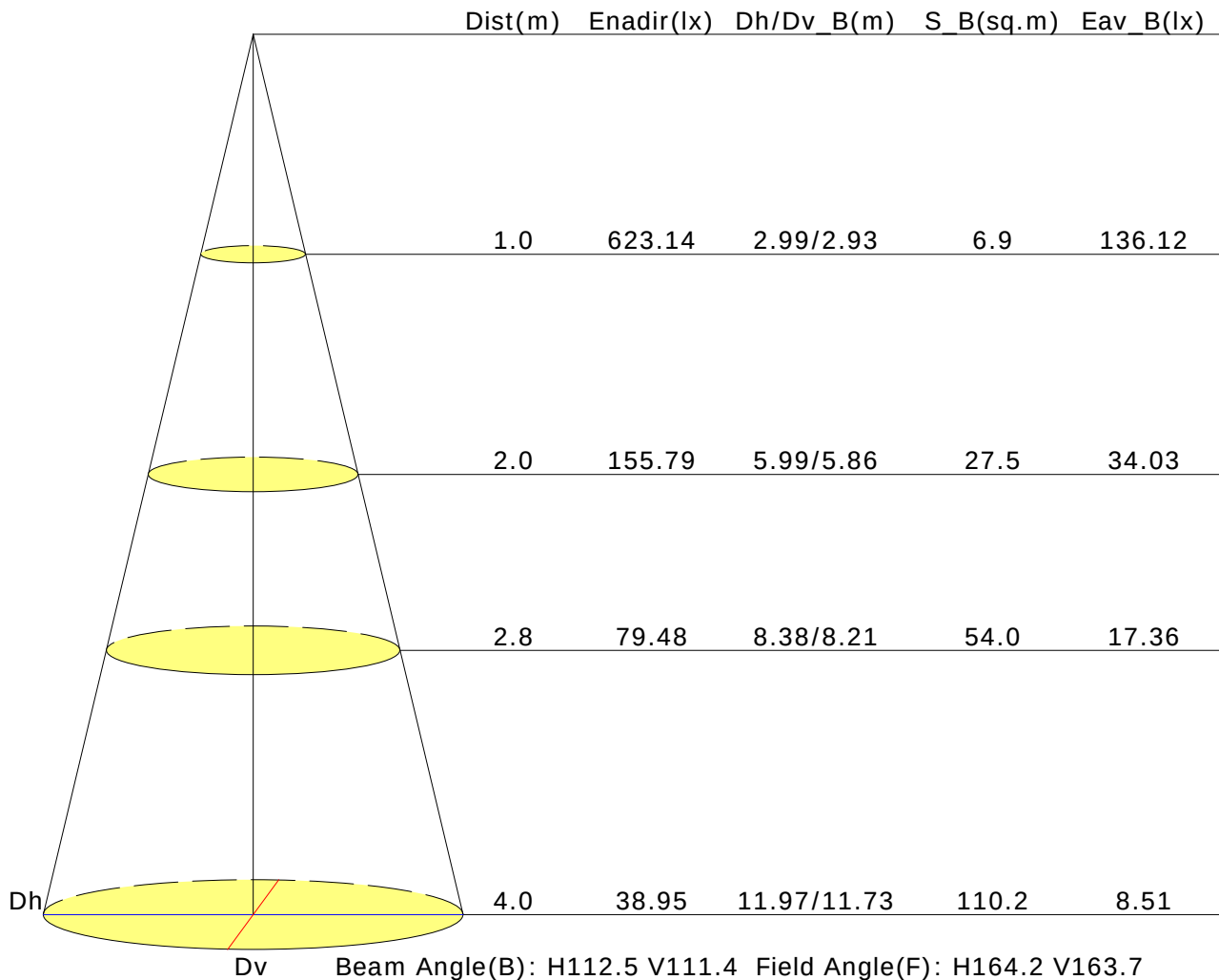
Test Device: GPM-2000

Distance: 7.970 m

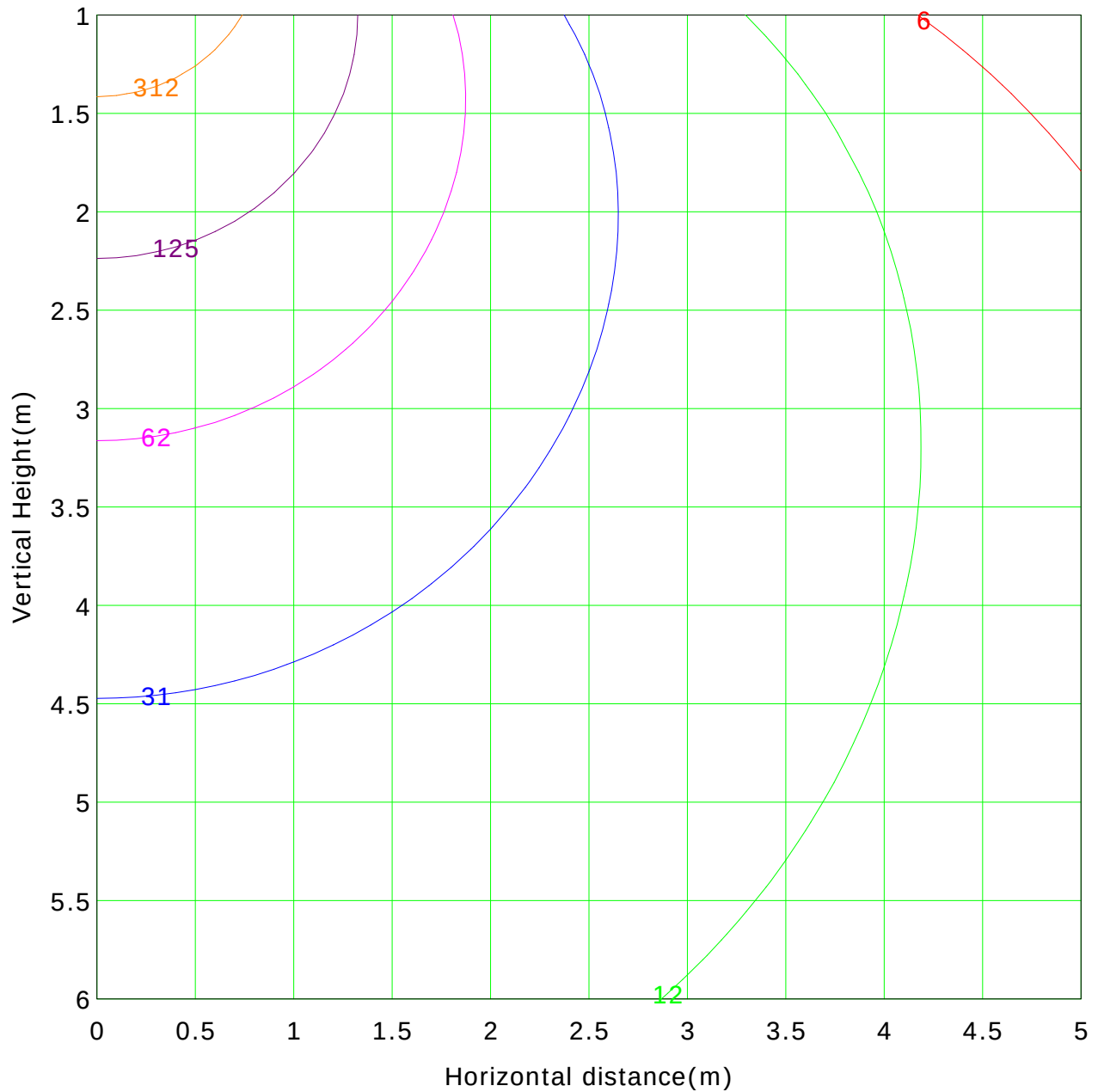
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 623.1 lx

— (1%): 6.2 lx	— (2%): 12.5 lx
— (5%): 31.2 lx	— (10%): 62.3 lx
— (20%): 124.6 lx	— (50%): 311.6 lx
— (100%): 623.1 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:

Report No.:

Test Time: 05/10/2018 12:58

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CS

Lamp Description: F52-400-60822

Voltage: 24.0 V

Power: 27.77 W

Lumens per Lamp: 3158 lm

Current: 1.157 A

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1867.7 lm

Downward Ratio: 100%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 164.2, 157.9, 159.8, 160.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.8, 109.5, 110.7, 110.8

Luminaire Efficacy Rating (LER): 67.31

Max. Intensity: 665.61 cd

S/MH(C0/C180): 1.25

Total Rated Lamp Lumens: 1867.7 lm

Efficiency: 100%

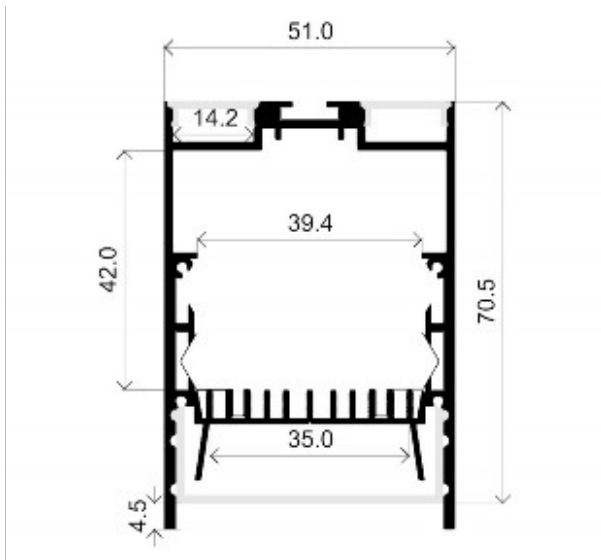
Upward Ratio: 0%

Central Intensity: 665.15 cd

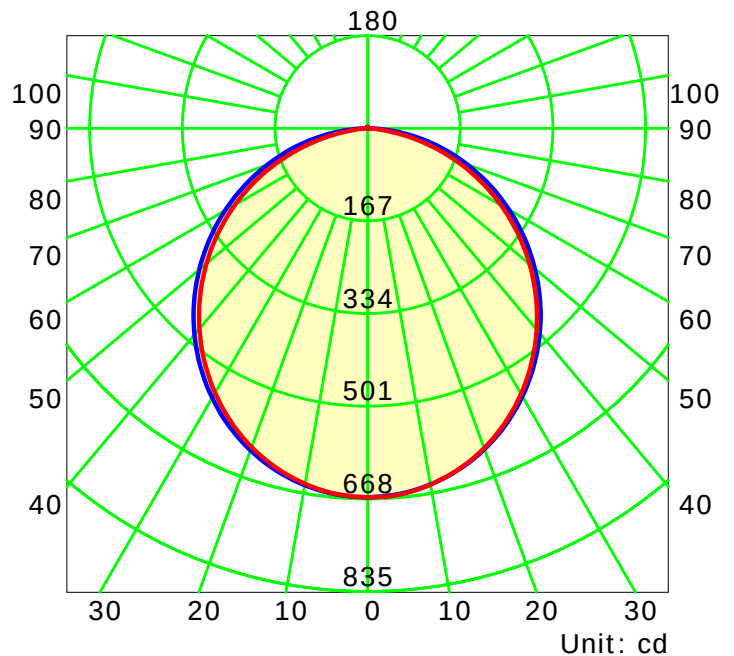
Pos of Max. Intensity: H100 V1

S/MH(C90/C270): 1.23

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

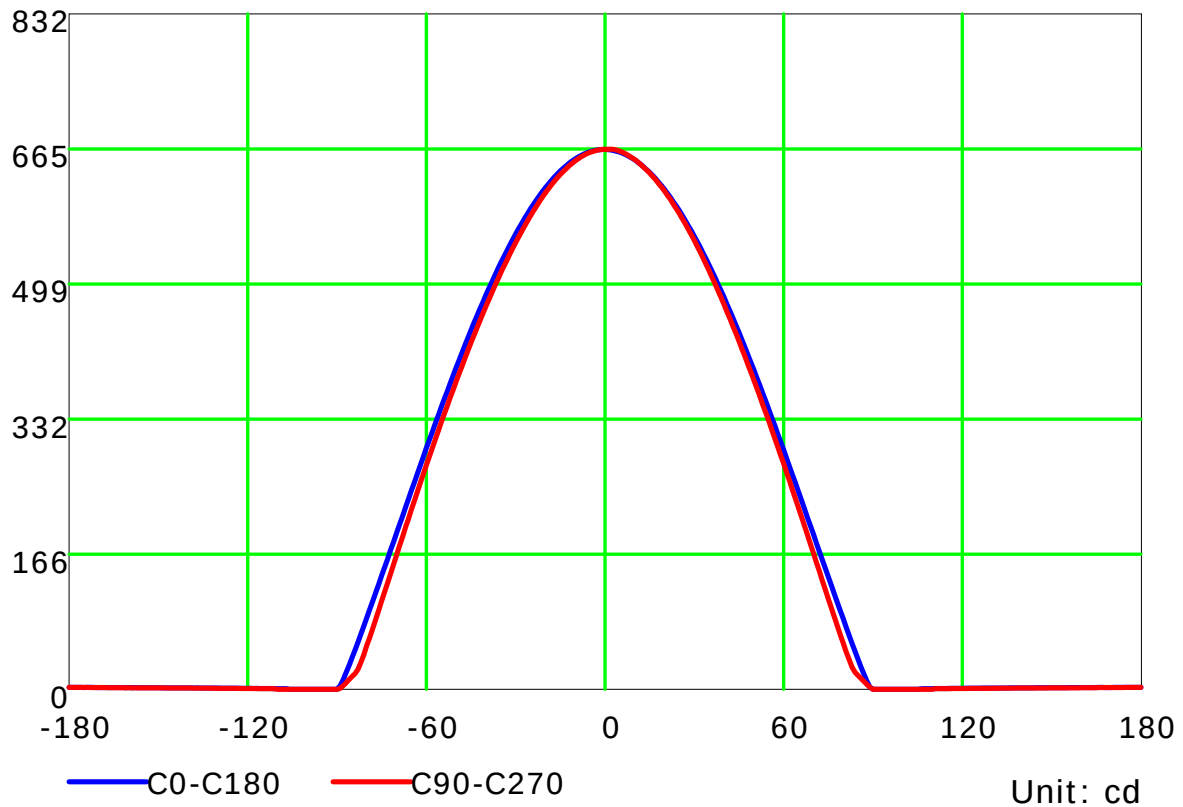
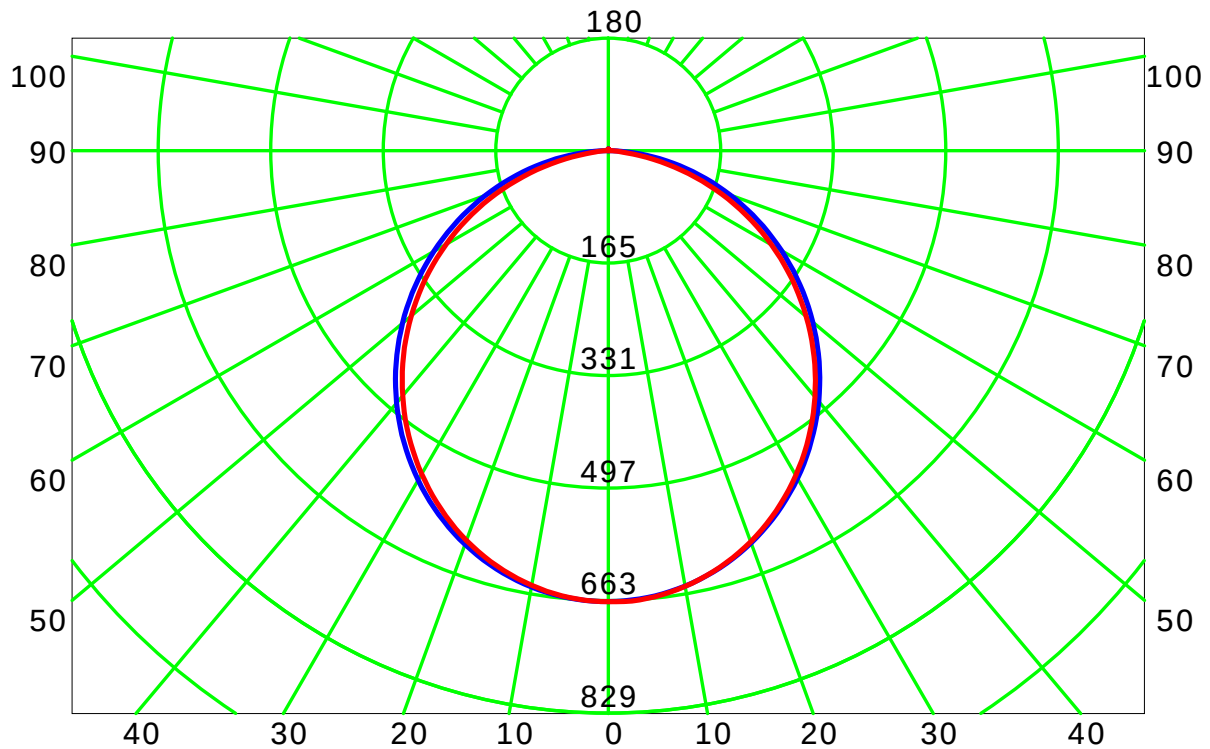
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

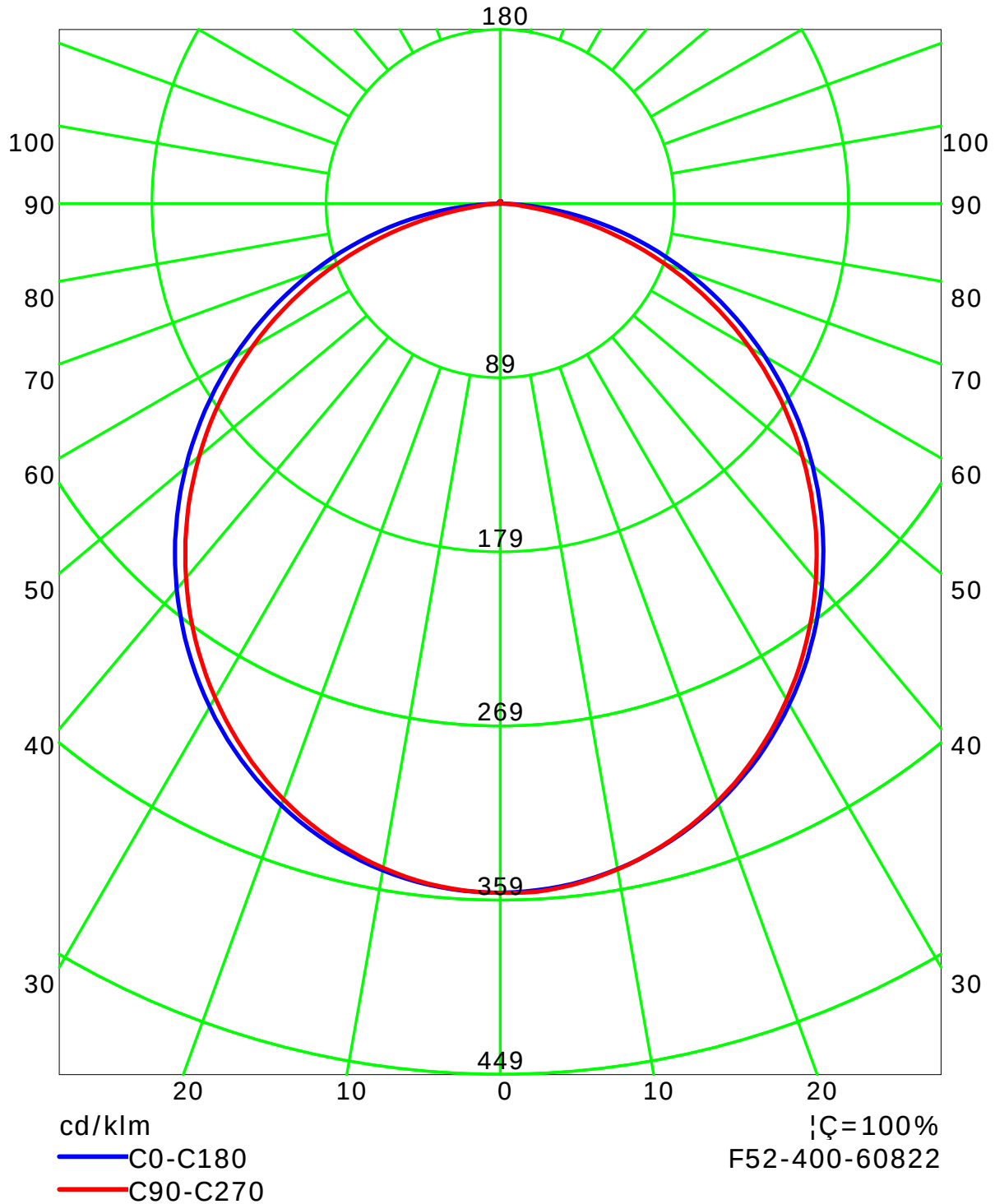
Luminous Intensity Distribution Curve



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:

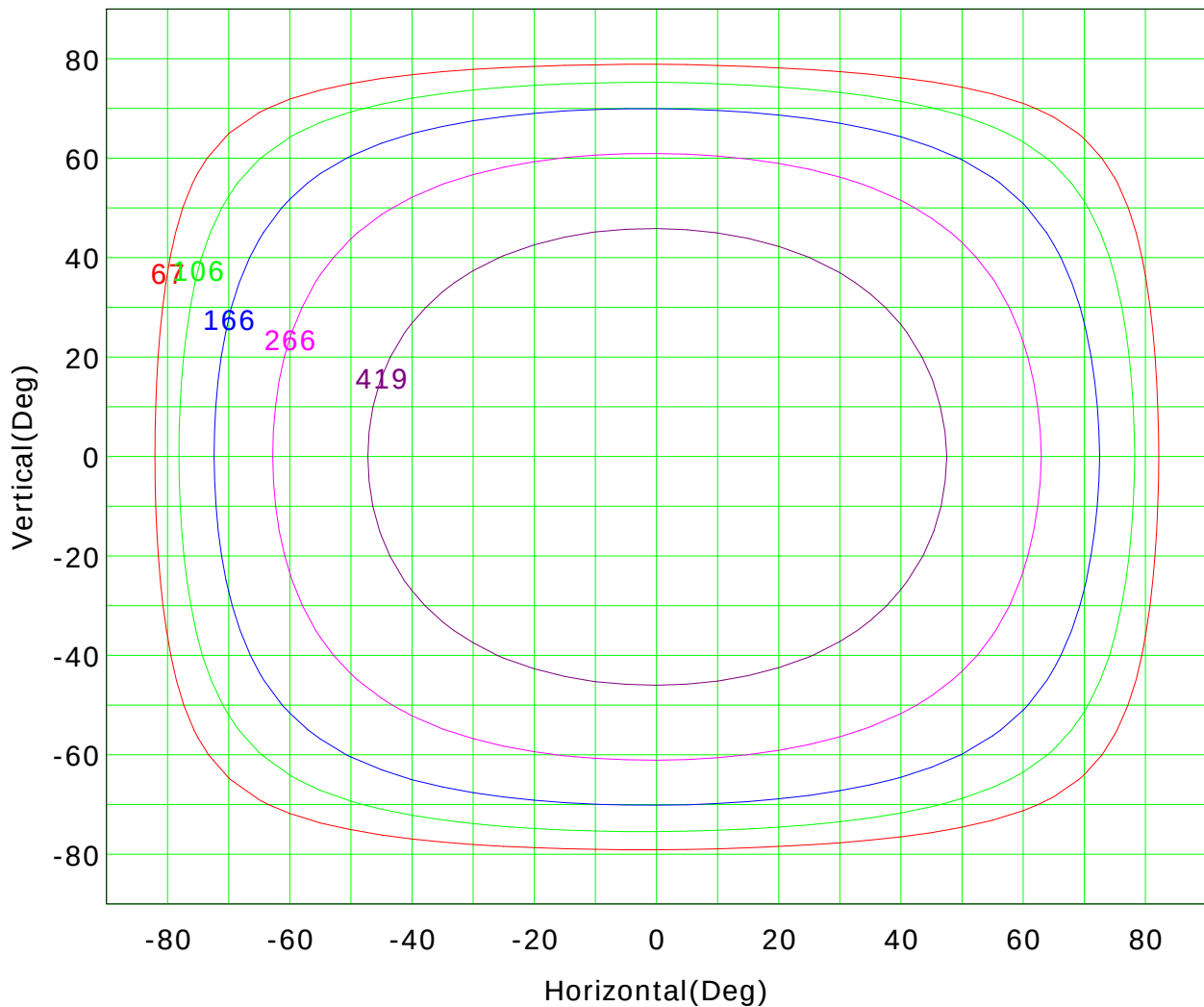
Luminous Intensity Distribution Curve(cd / klm)



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%): 666 cd

(10%): 67 cd	(16%): 106 cd
(25%): 166 cd	(40%): 266 cd
(63%): 419 cd	(100%): 666 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

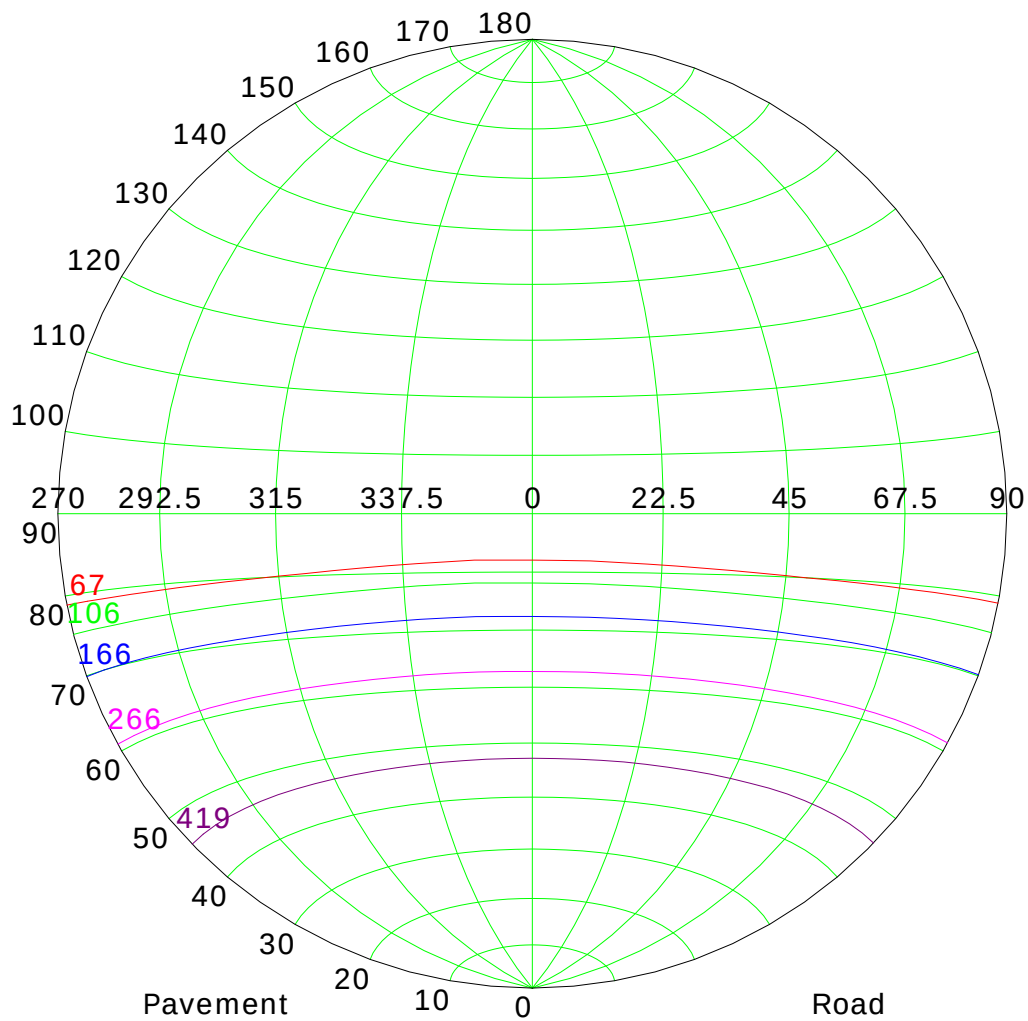
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 666 cd

(10%): 67 cd	(16%): 106 cd
(25%): 166 cd	(40%): 266 cd
(63%): 419 cd	(100%): 666 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

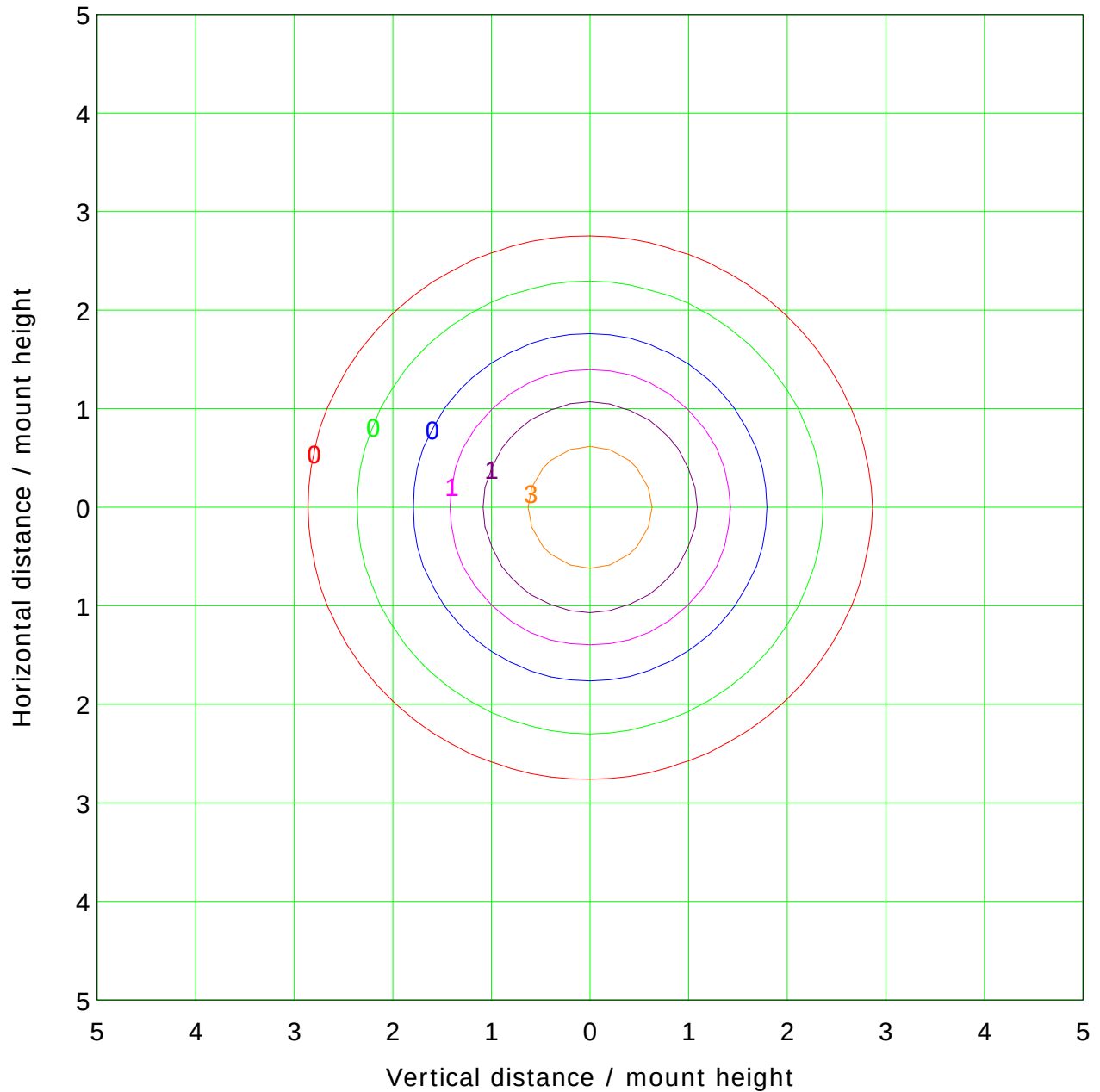
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 6.7 lx	
— (1%):	0.1 lx	— (2%):	0.1 lx
— (5%):	0.3 lx	— (10%):	0.7 lx
— (20%):	1.3 lx	— (50%):	3.3 lx
— (100%):	6.7 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

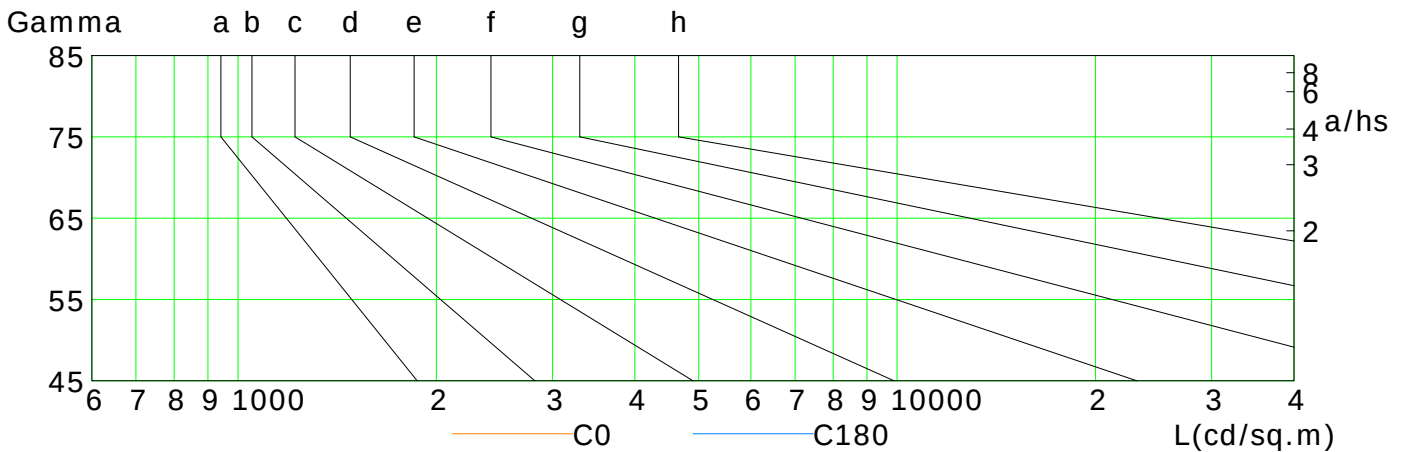
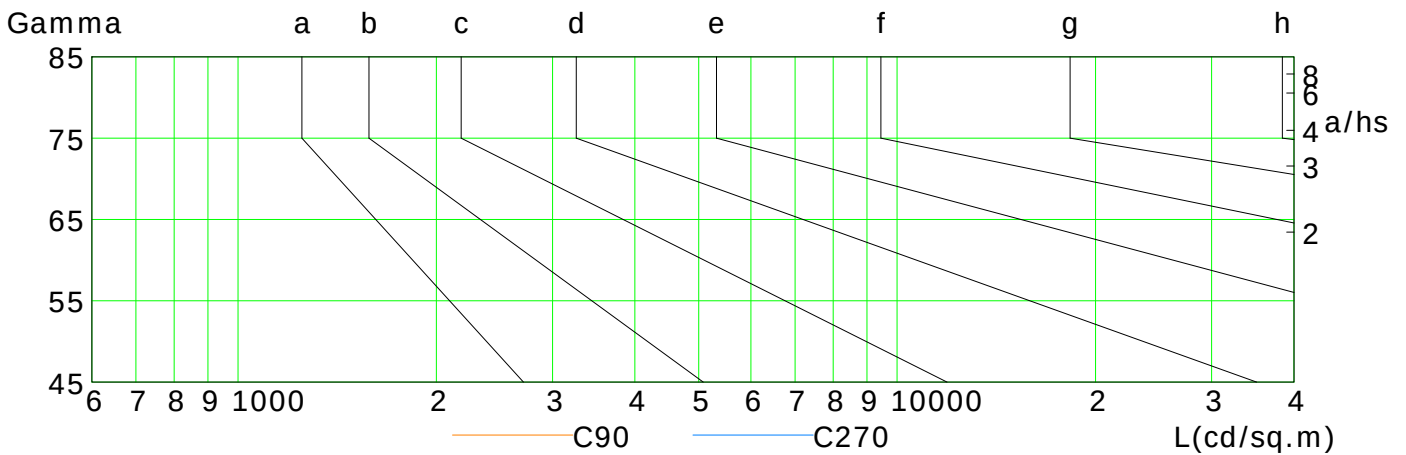
Humidity:

Inspector:

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	440	394	345	295	243	191	139	87	37
C90	429	381	331	278	224	168	112	57	17
C180	442	396	348	297	245	193	140	88	39
C270	427	379	329	276	222	165	109	54	16

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

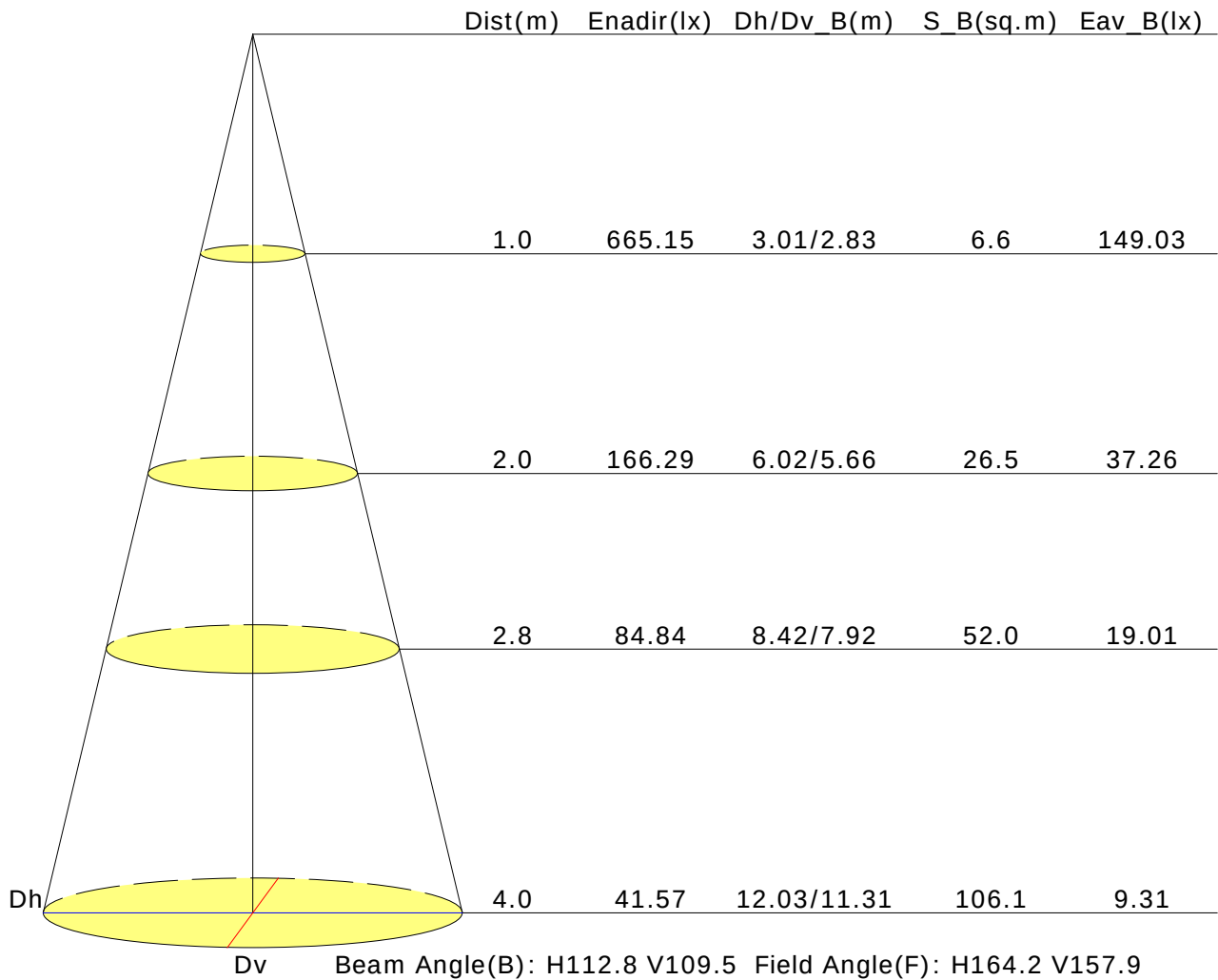
Test Device: GPM-2000

Distance: 7.970 m

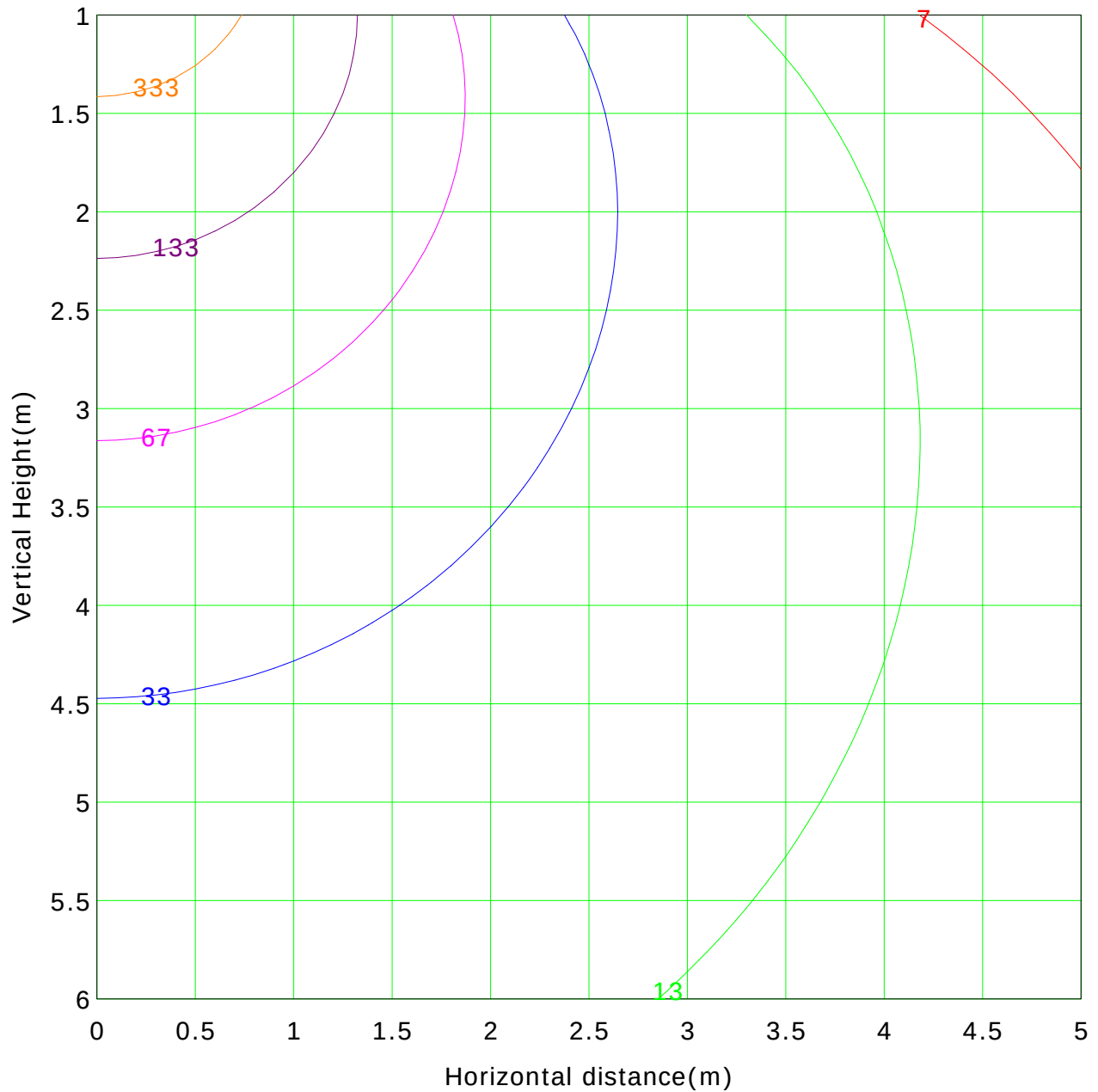
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 665.2 lx

(1%): 6.7 lx	(2%): 13.3 lx
(5%): 33.3 lx	(10%): 66.5 lx
(20%): 133.0 lx	(50%): 332.6 lx
(100%): 665.2 lx	

Report No.:

Test Time: 25/09/2018 14:48

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CM

Lamp Description: F52-400-60822

Voltage: 24.0 V

Power: 27.83 W

Lumens per Lamp: 3158 lm

Current: 1.160 A

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1366.9 lm

Downward Ratio: 93%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 162.7, 205.3, 171.8, 171.6

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.8, 125.2, 121.6, 121.5

Luminaire Efficacy Rating (LER): 49.16

Max. Intensity: 399.3 cd

S/MH(C0/C180): 1.26

Total Rated Lamp Lumens: 1366.9 lm

Efficiency: 100%

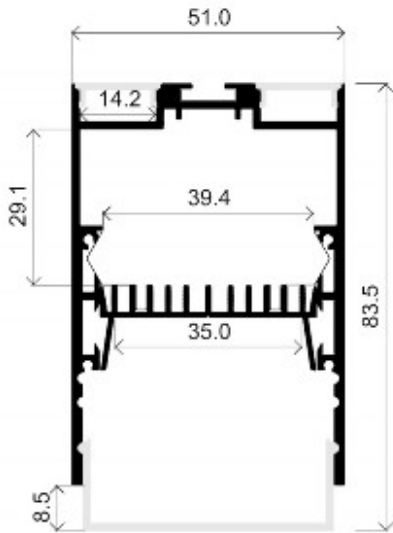
Upward Ratio: 7%

Central Intensity: 399.29 cd

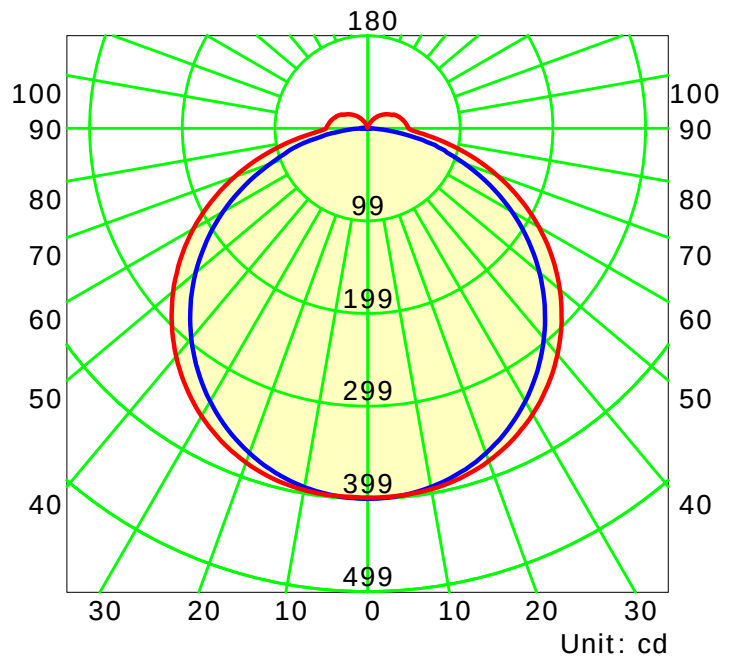
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 1.33

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

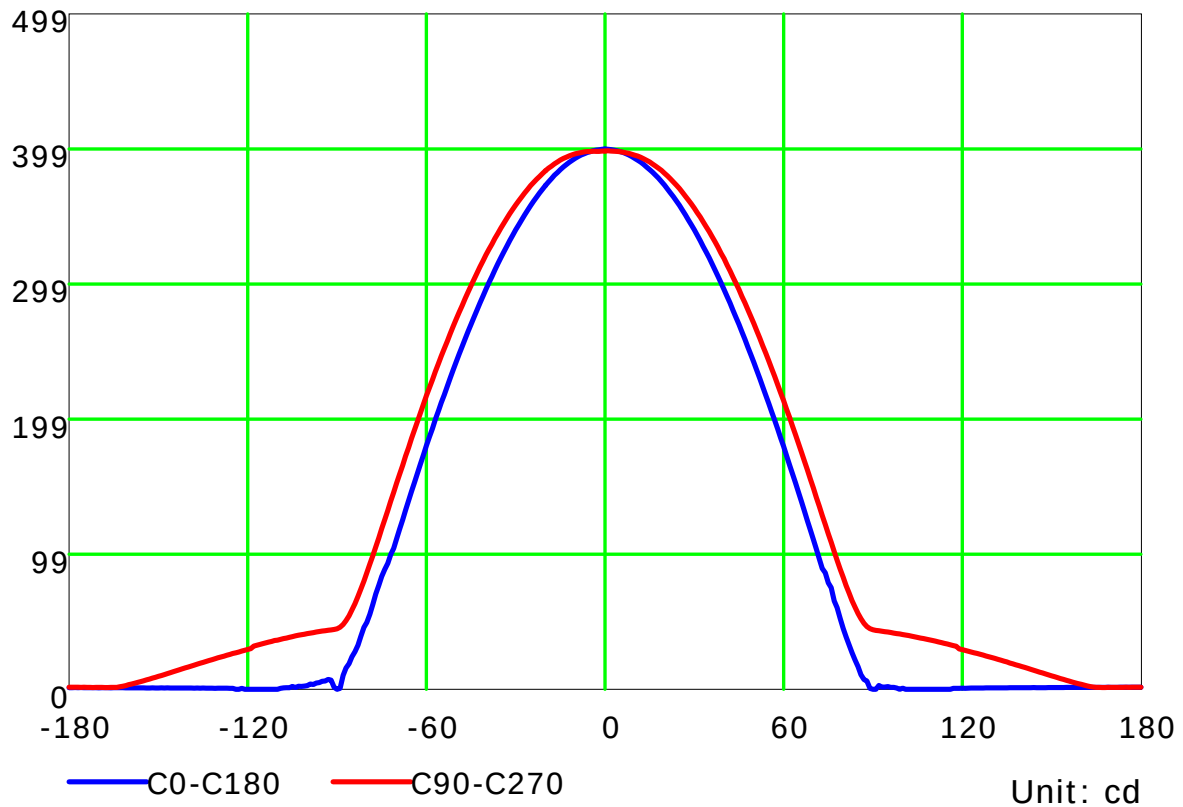
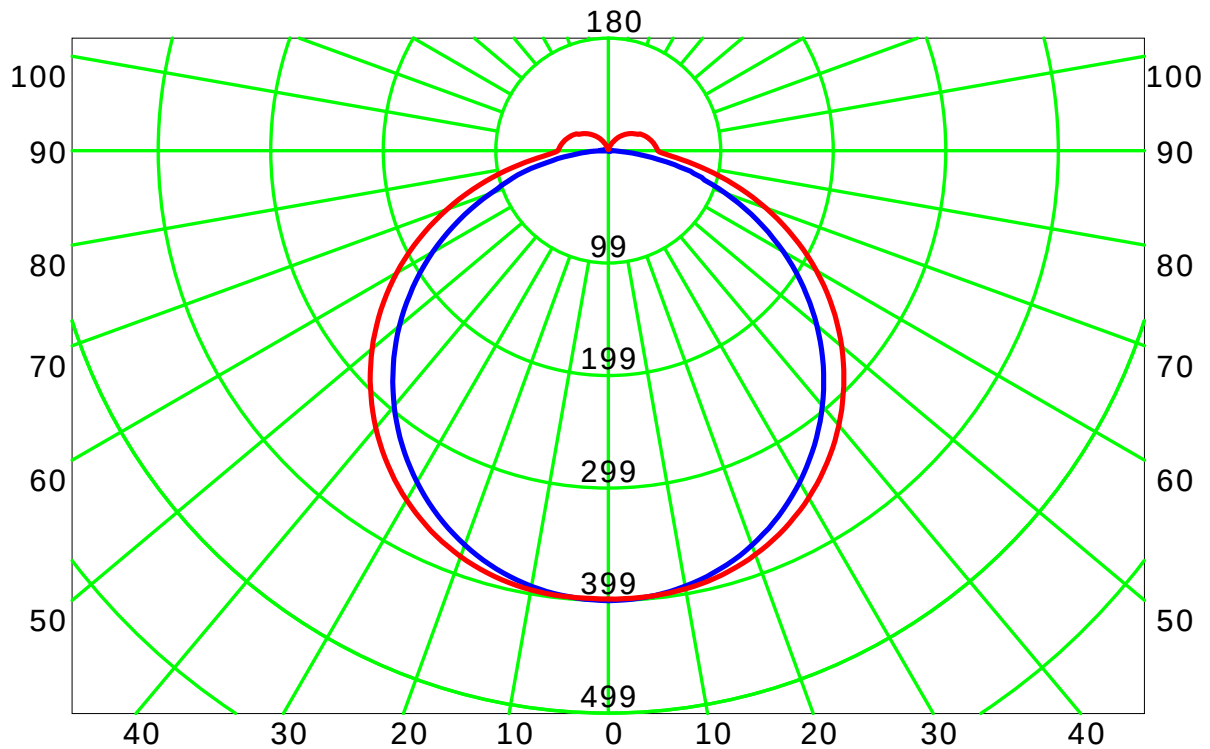
Test Device: GPM-2000

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

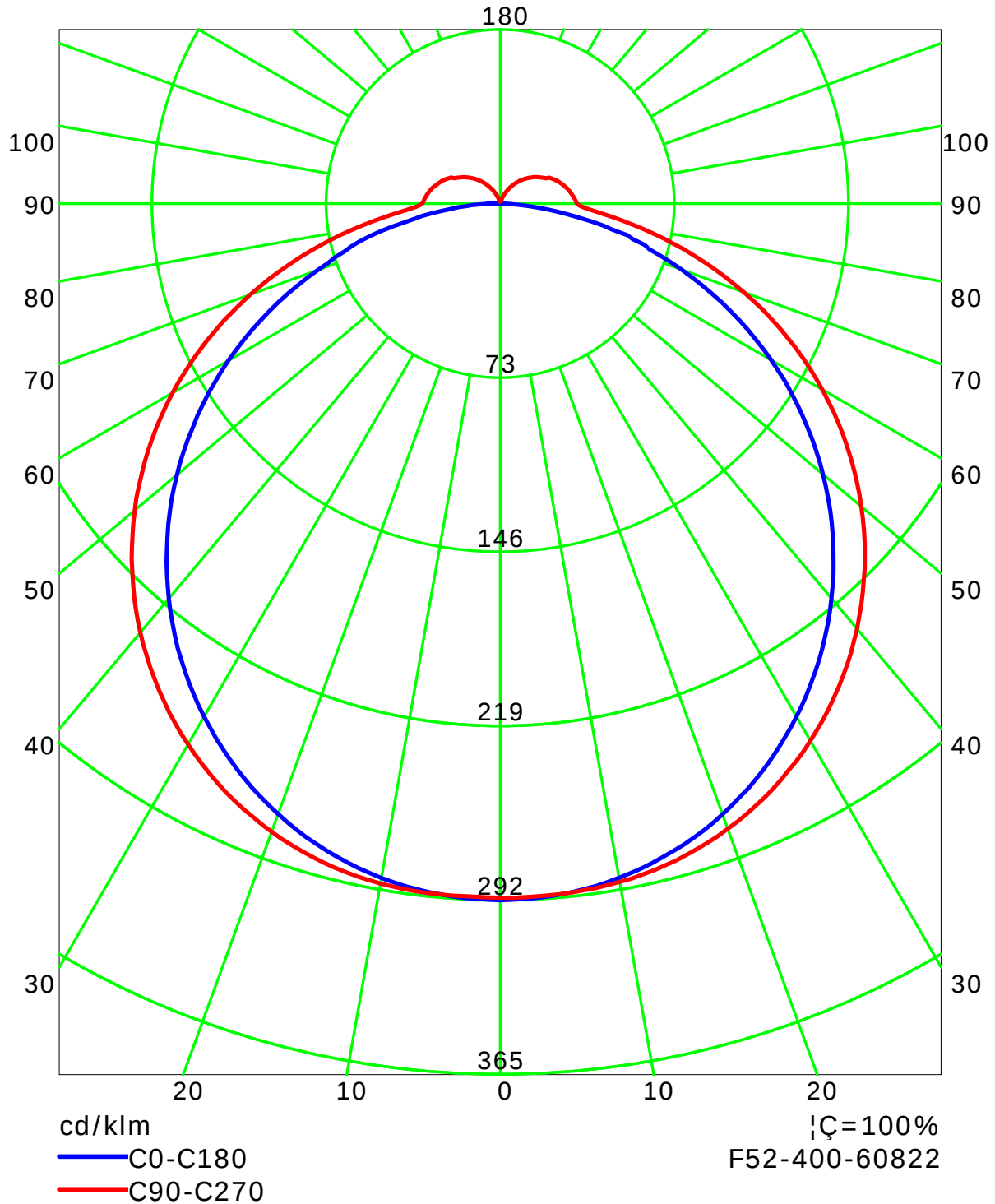
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

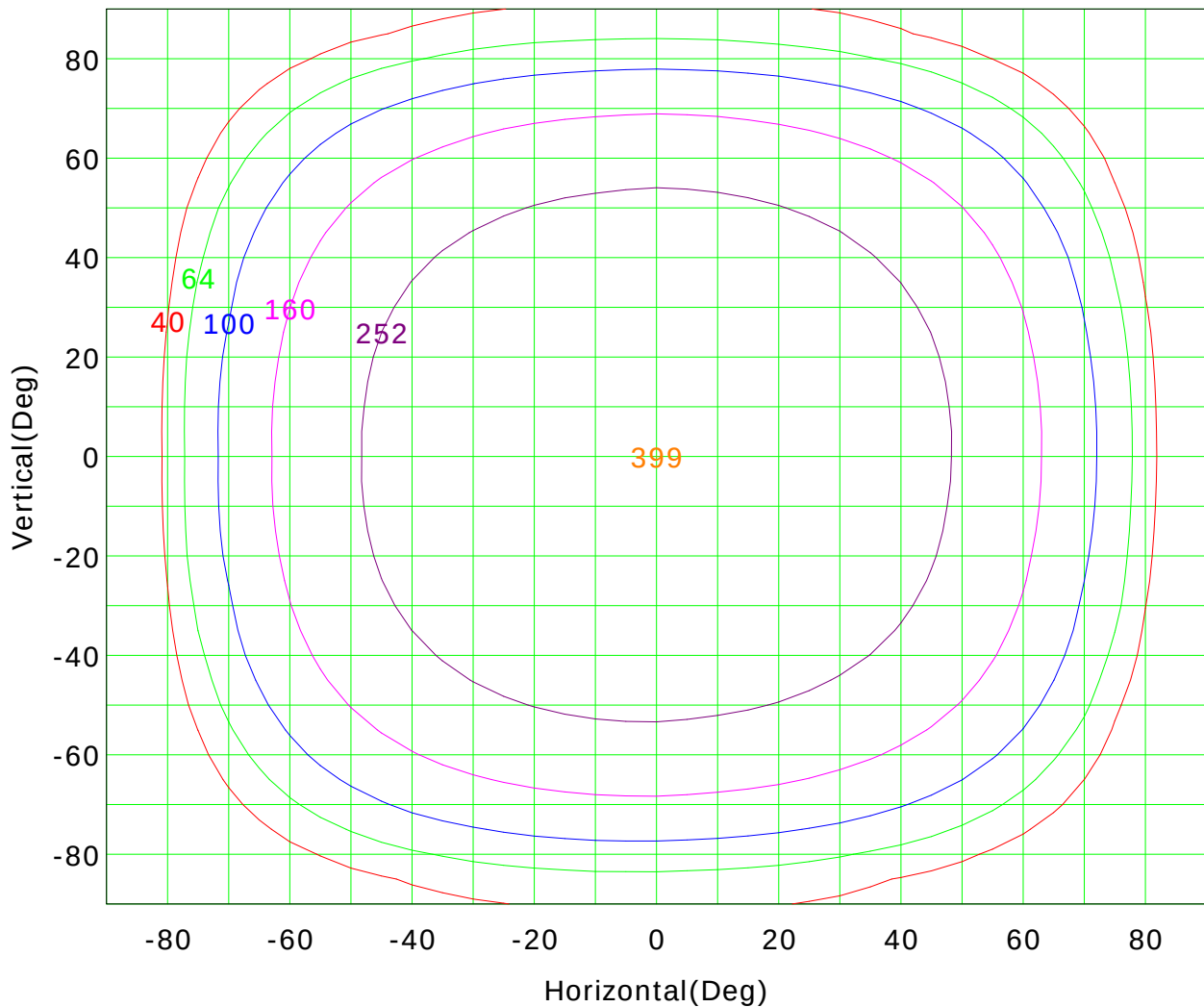
Luminous Intensity Distribution Curve(cd / klm)



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%): 399 cd

(10%):	40 cd	(16%):	64 cd
(25%):	100 cd	(40%):	160 cd
(63%):	252 cd	(100%):	399 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

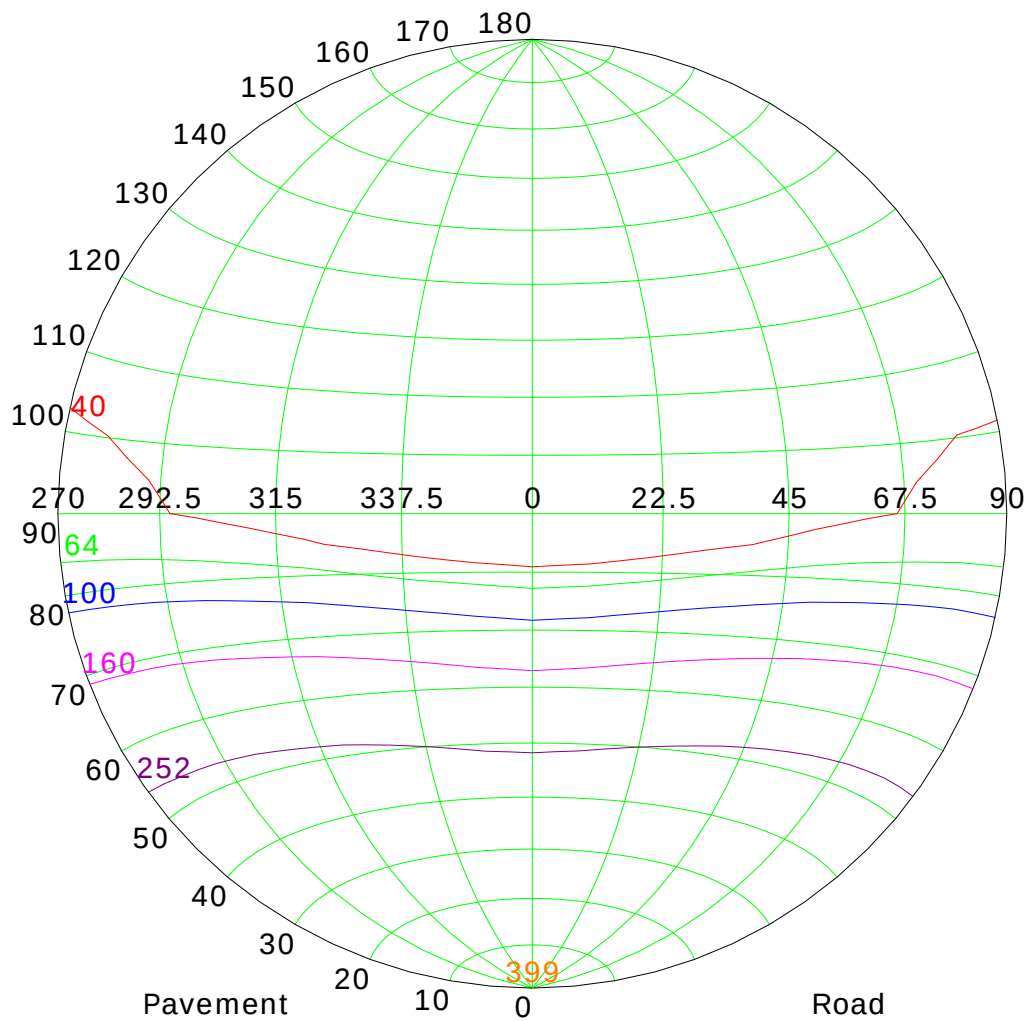
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 399 cd

(10%):	40 cd	(16%):	64 cd
(25%):	100 cd	(40%):	160 cd
(63%):	252 cd	(100%):	399 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

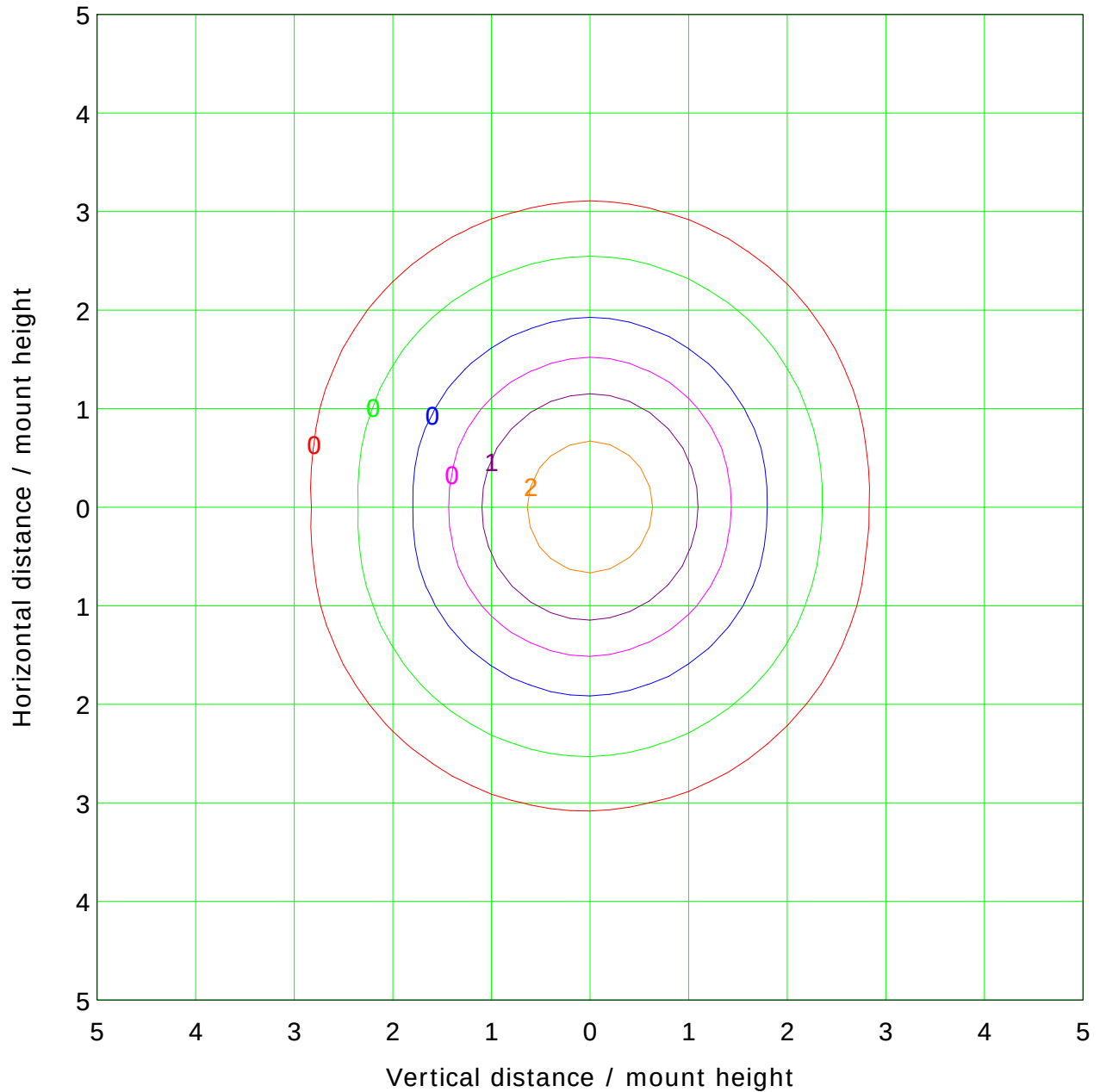
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 4.0 lx

(1%): 0.0 lx	(2%): 0.1 lx
(5%): 0.2 lx	(10%): 0.4 lx
(20%): 0.8 lx	(50%): 2.0 lx
(100%): 4.0 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

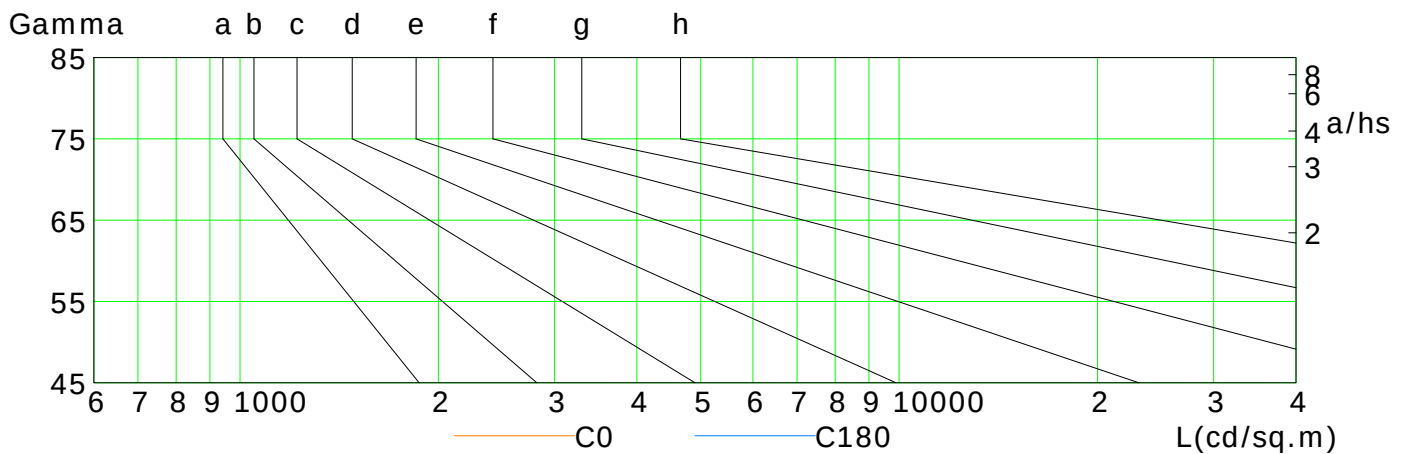
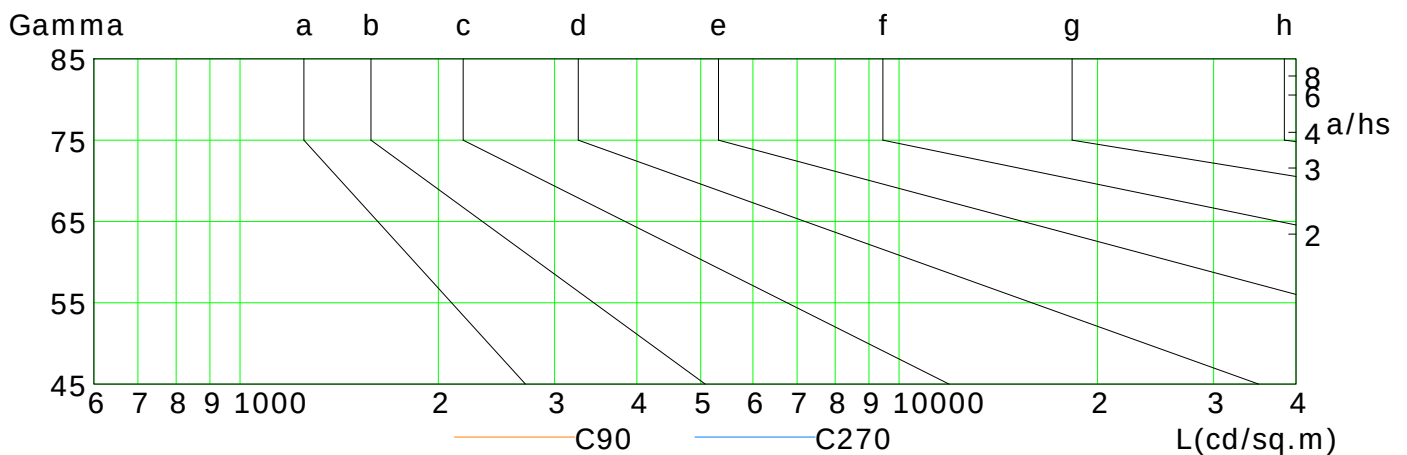
Humidity:

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	270	242	211	179	146	111	79	45	17
C90	296	270	243	213	182	149	115	83	56
C180	270	242	212	180	146	111	83	50	24
C270	298	274	246	217	185	152	119	86	59

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

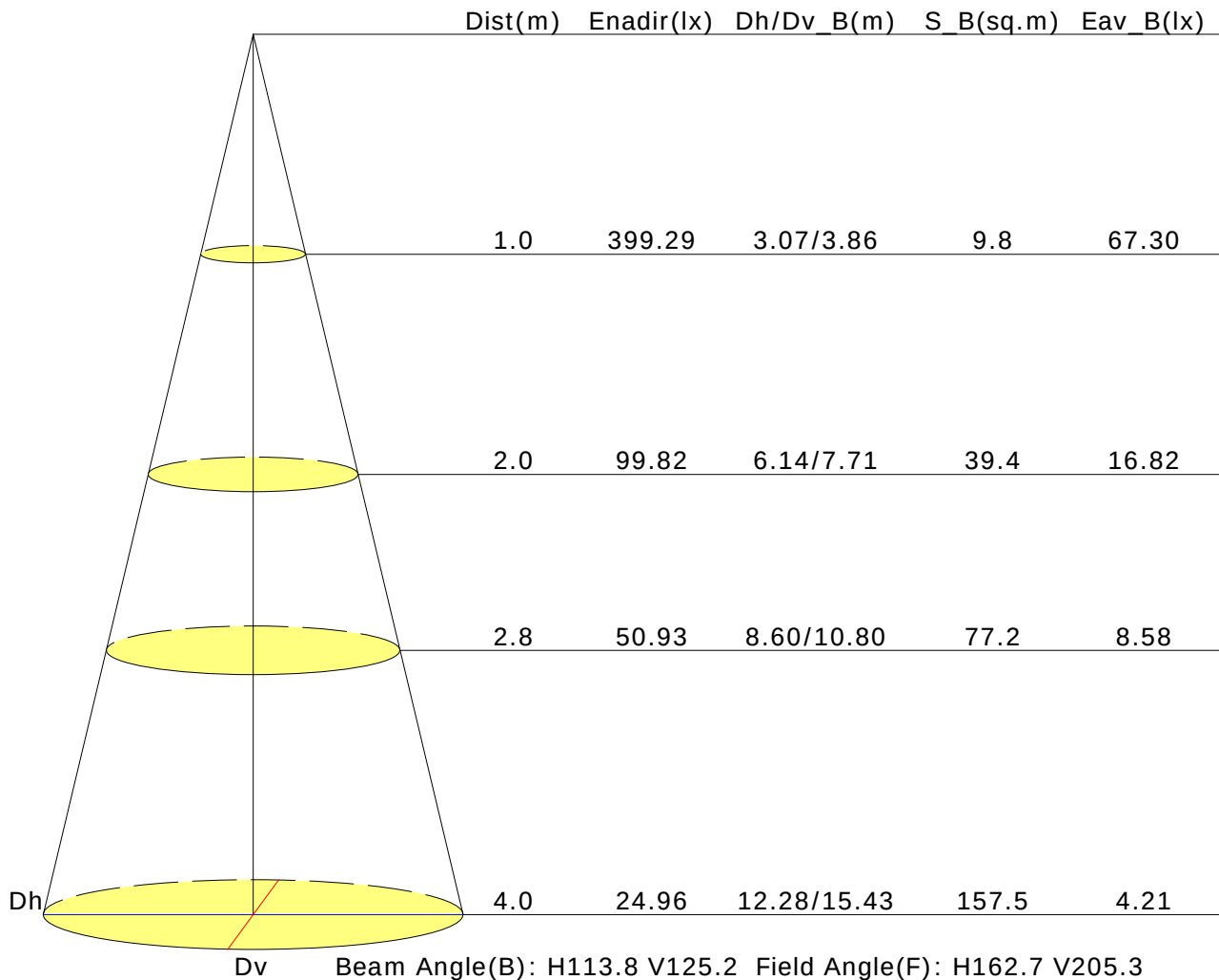
Test Device: GPM-2000

Distance: 7.970 m

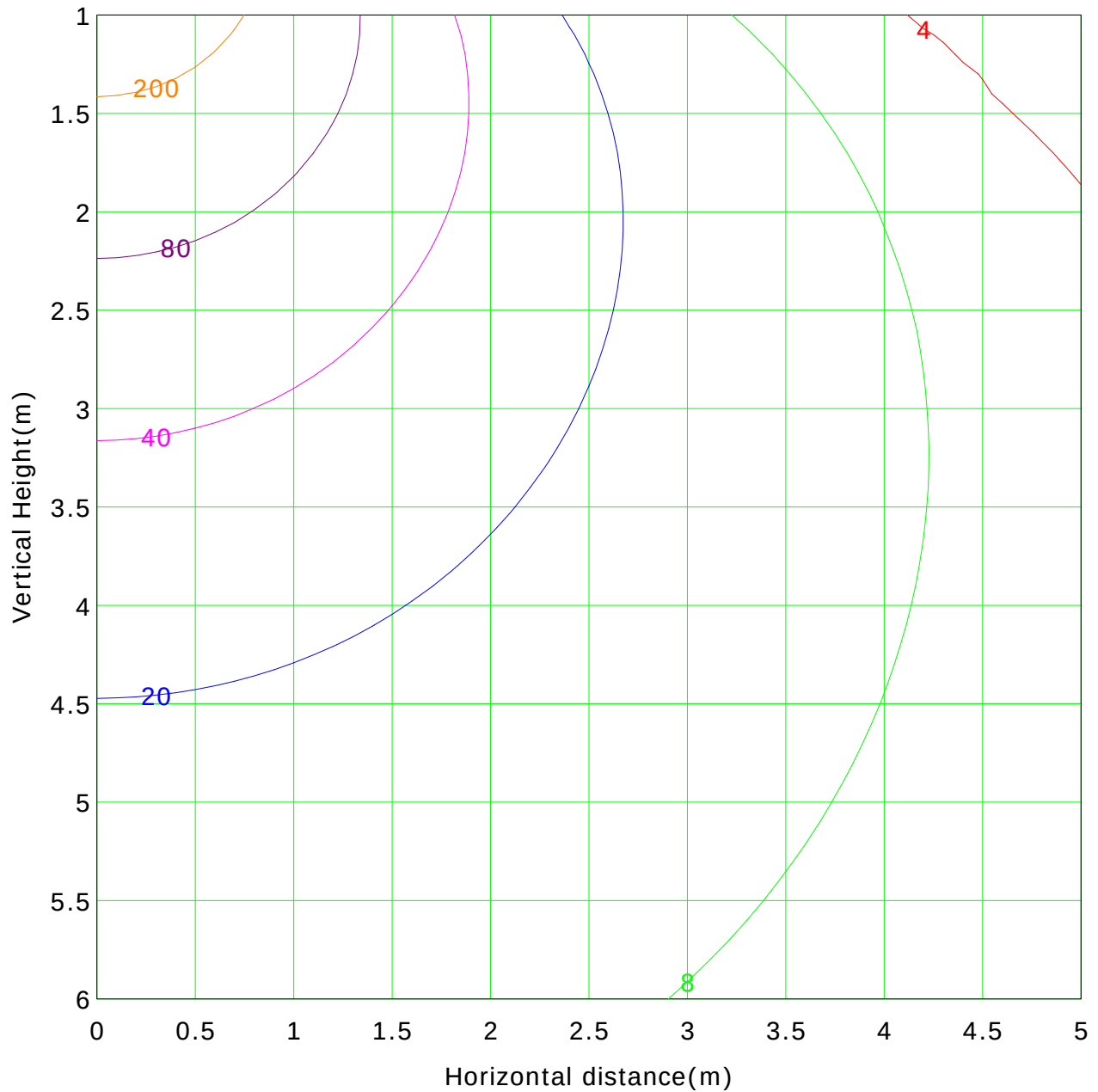
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 399.3 lx

(1%): 4.0 lx	(2%): 8.0 lx
(5%): 20.0 lx	(10%): 39.9 lx
(20%): 79.9 lx	(50%): 199.6 lx
(100%): 399.3 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:

Report No.:

Test Time: 25/09/2018 15:51

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CM

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 3158 lm

Voltage: 24.0 V

Current: 1.156 A

Power: 27.74 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1414.1 lm

Downward Ratio: 22.32%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 22.39%

Upward Ratio: 0.07%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 160.3, 159.9, 160.1, 160.1

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 113.9, 112.7, 113.3, 113.3

Luminaire Efficacy Rating (LER): 51.03

Central Intensity: 494.9 cd

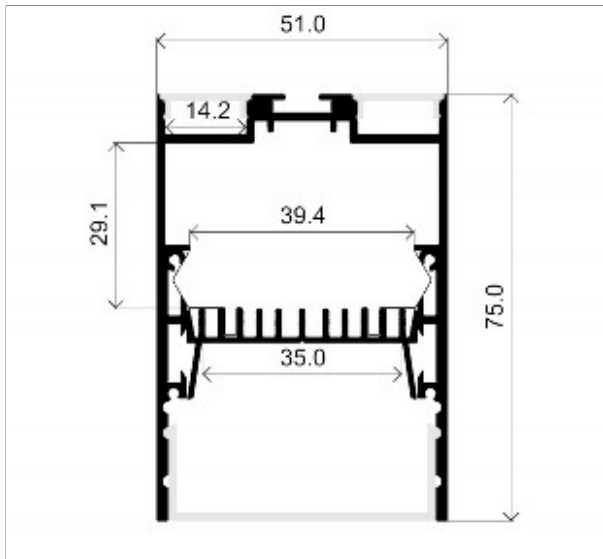
Max. Intensity: 494.93 cd

Pos of Max. Intensity: H0 V1

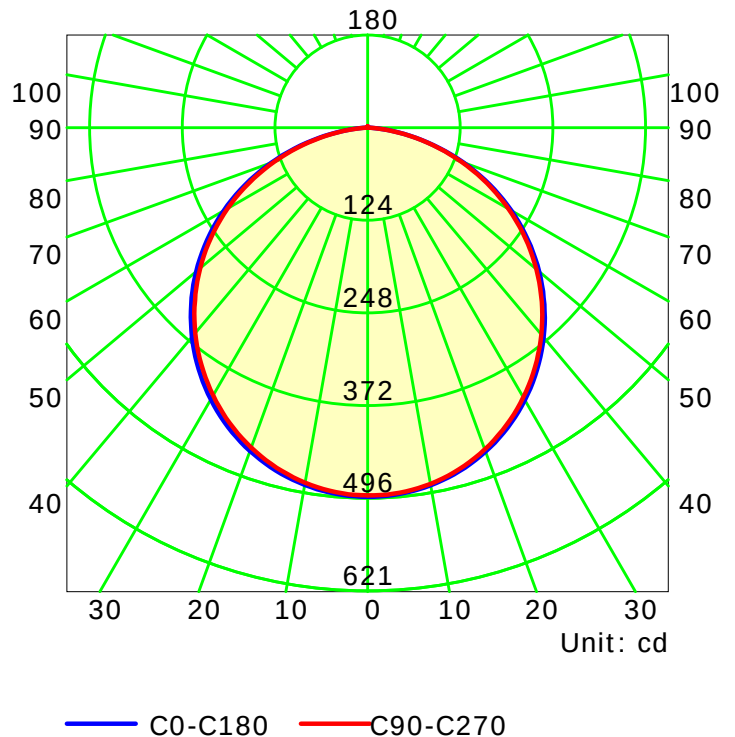
S/MH(C0/C180): 1.26

S/MH(C90/C270): 1.25

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

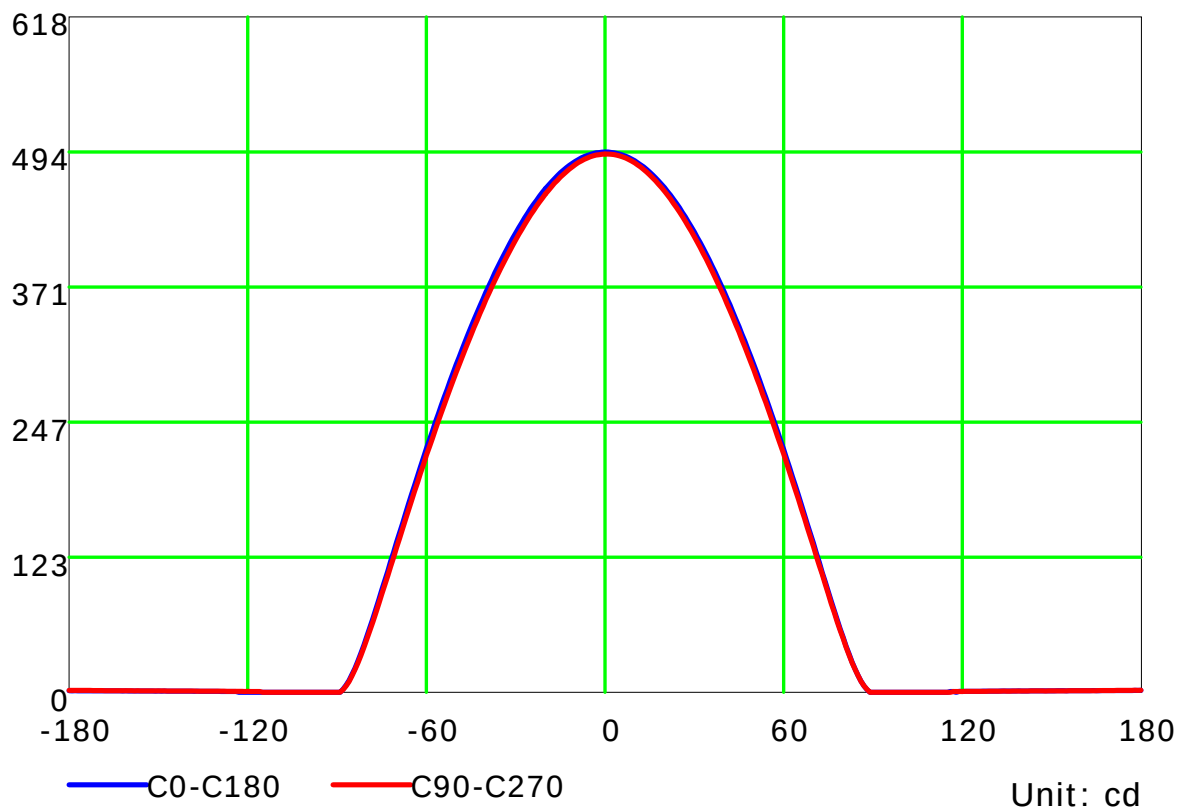
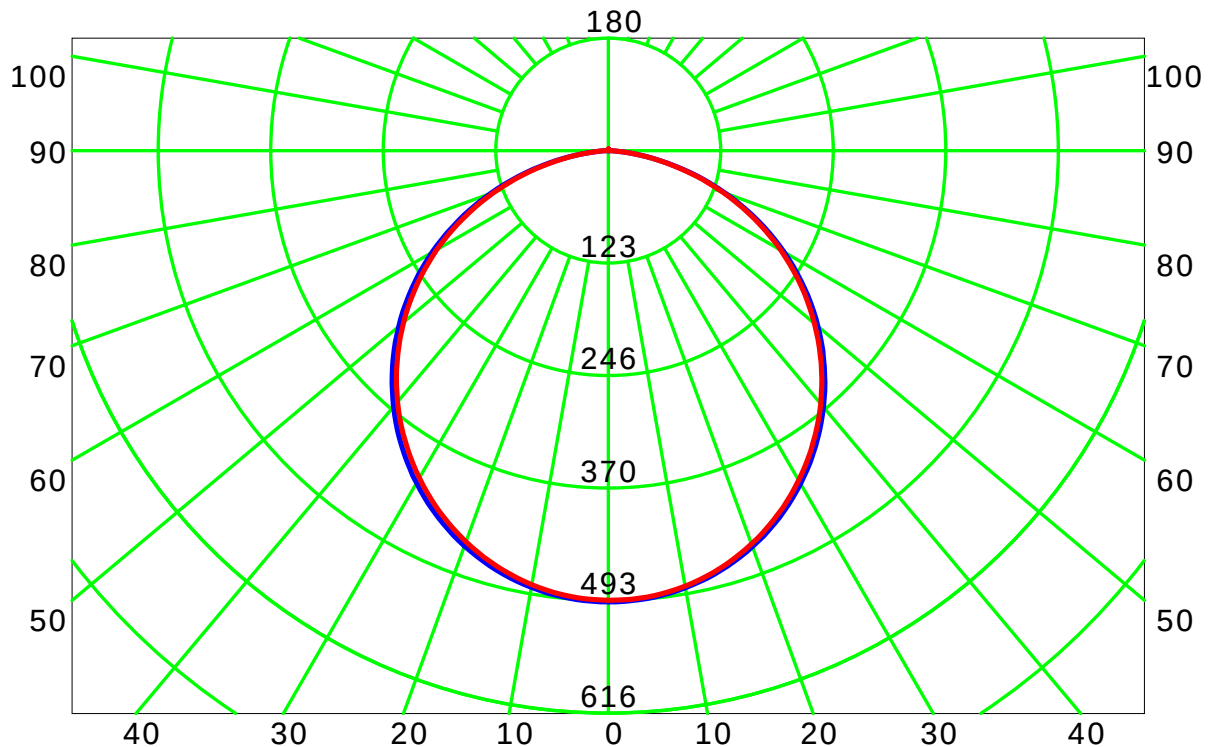
Test Device: GPM-2000

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

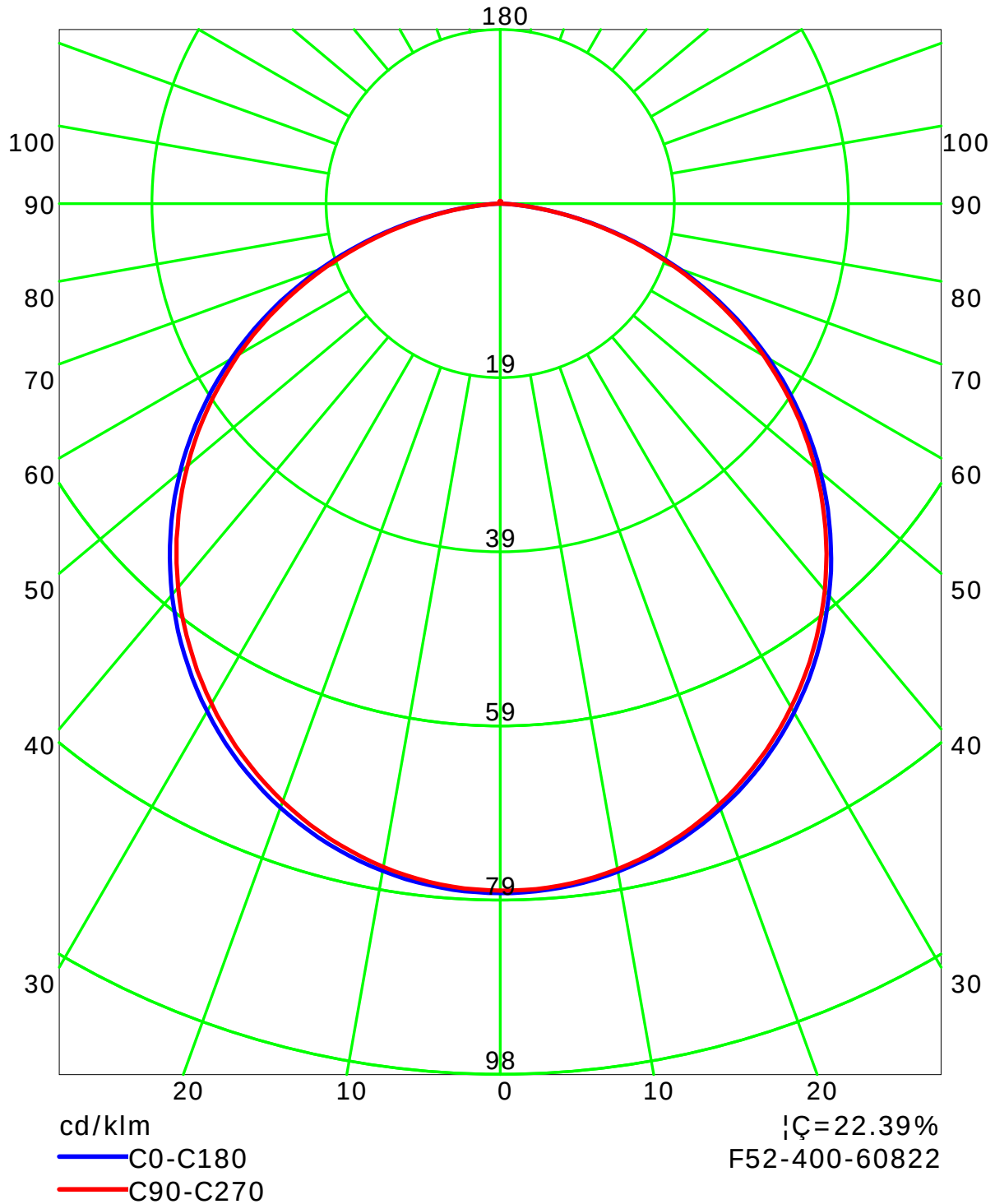
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

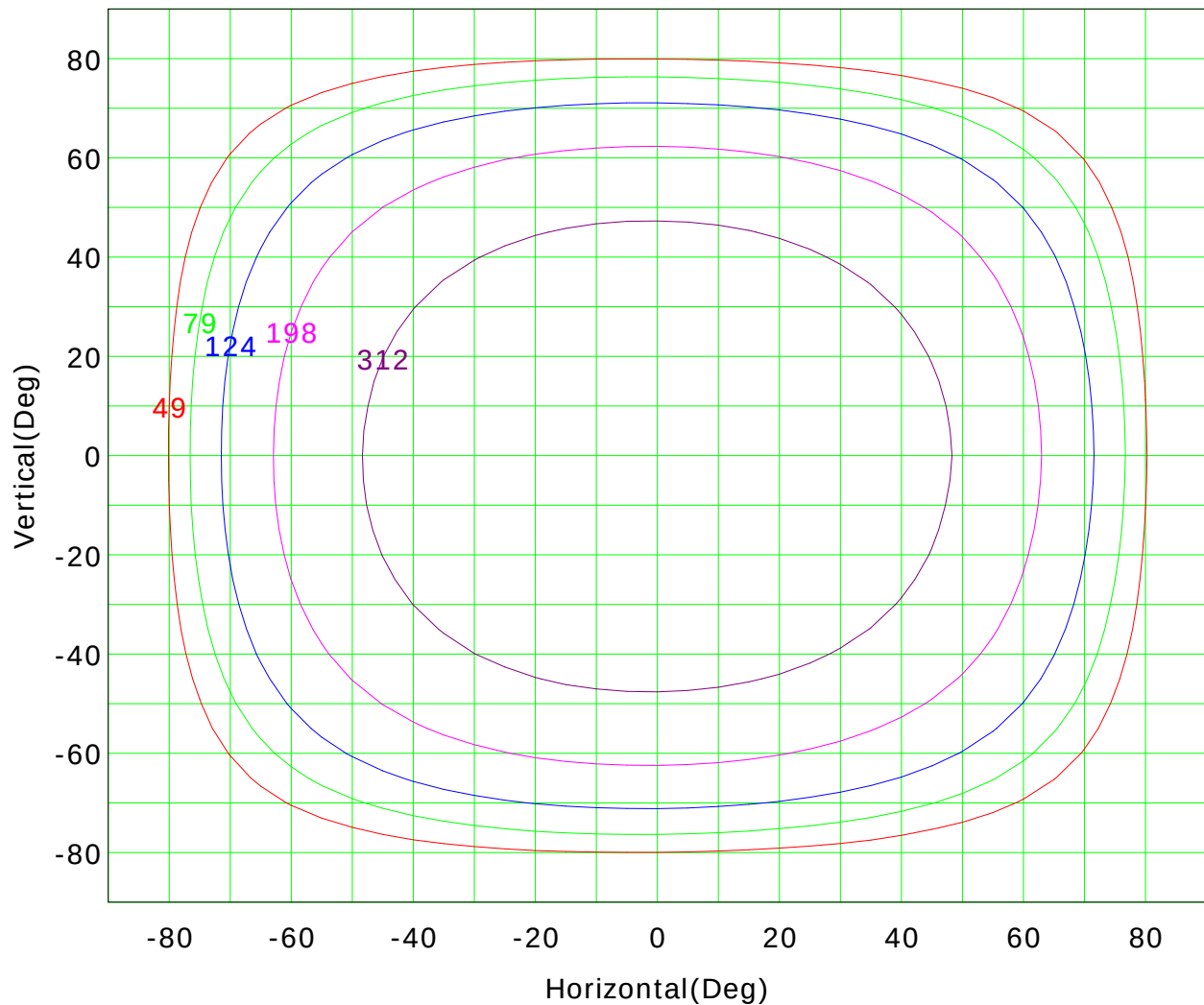
Luminous Intensity Distribution Curve(cd / klm)



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%): 495 cd

(10%):	49 cd	(16%):	79 cd
(25%):	124 cd	(40%):	198 cd
(63%):	312 cd	(100%):	495 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

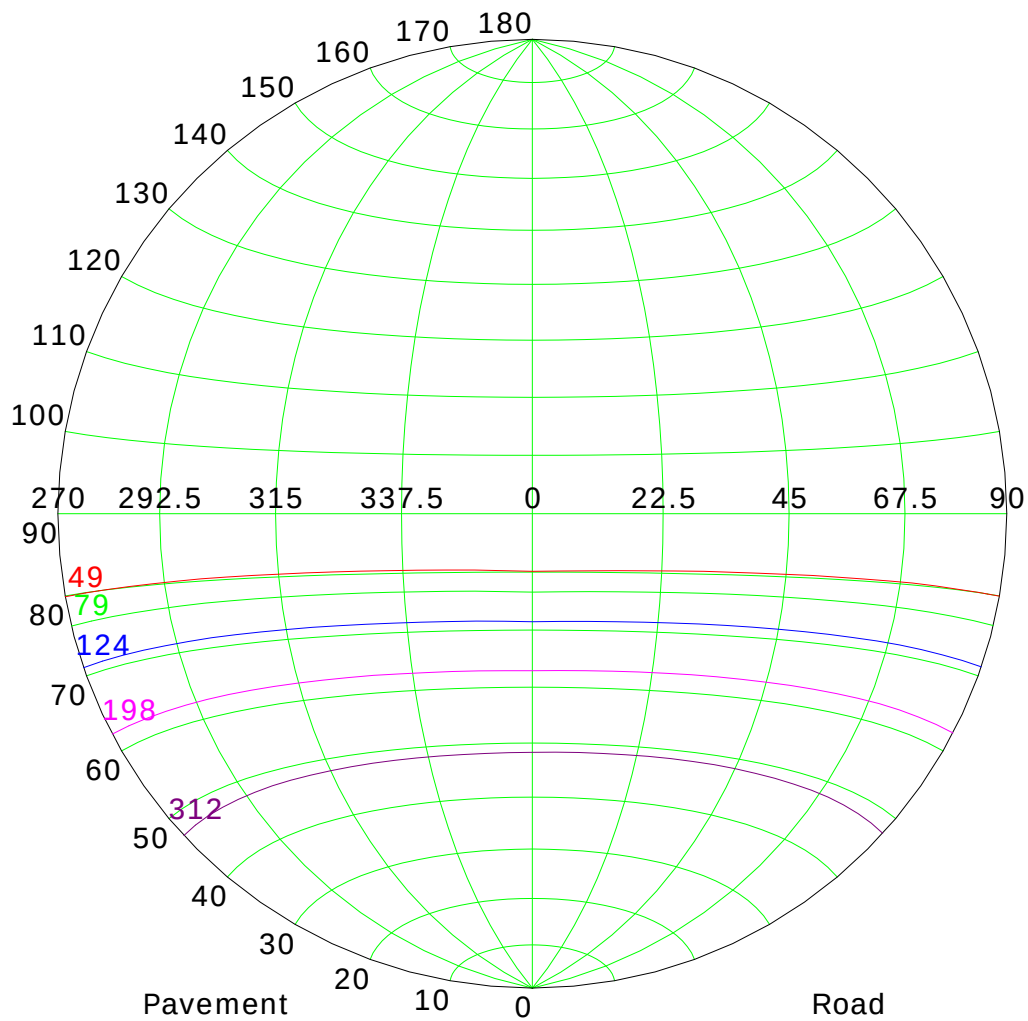
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 495 cd

(10%):	49 cd	(16%):	79 cd
(25%):	124 cd	(40%):	198 cd
(63%):	312 cd	(100%):	495 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

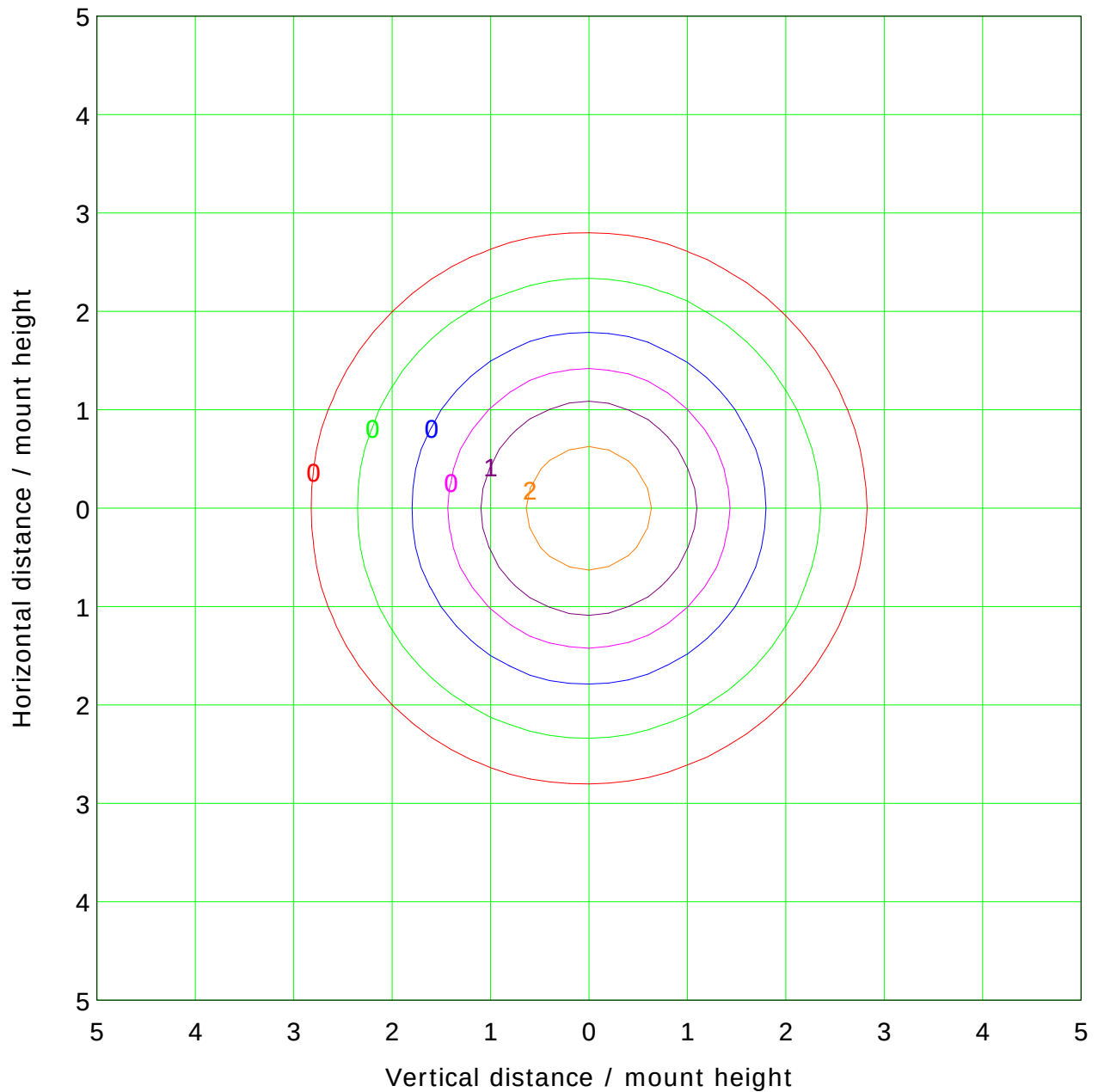
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



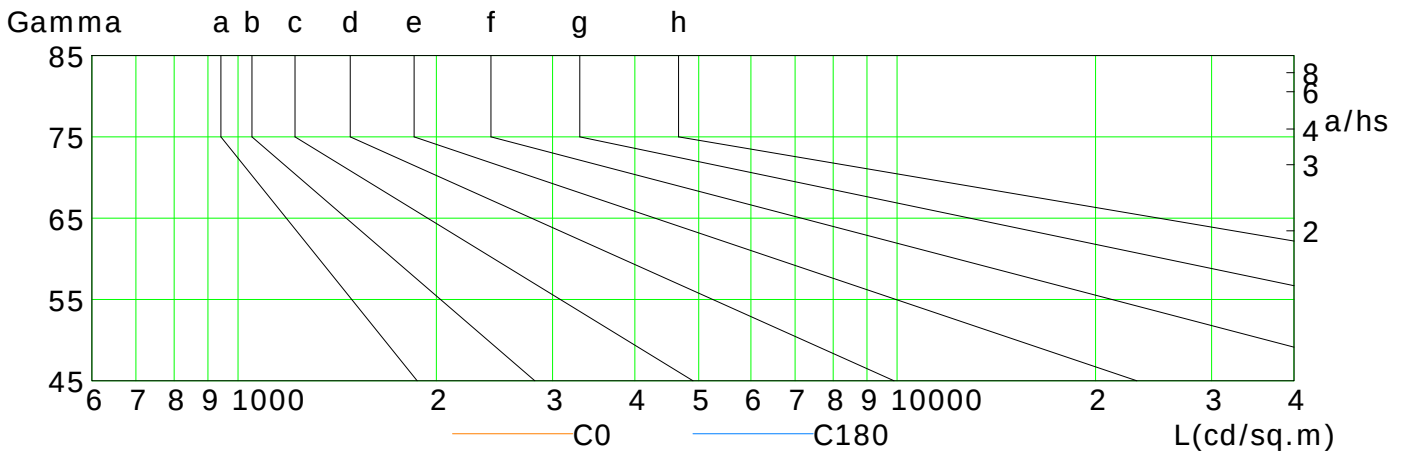
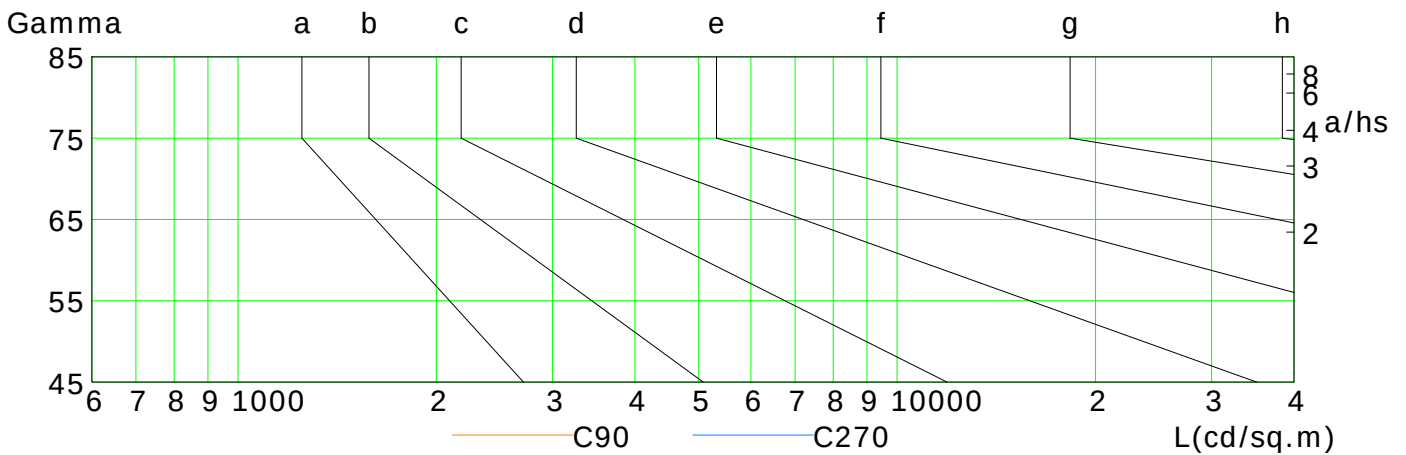
C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

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

a b c d e f g h



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	335	300	262	223	180	137	92	50	15
C90	330	295	258	219	177	134	90	49	15
C180	335	300	263	223	181	138	94	51	16
C270	327	293	256	217	175	133	90	49	15

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

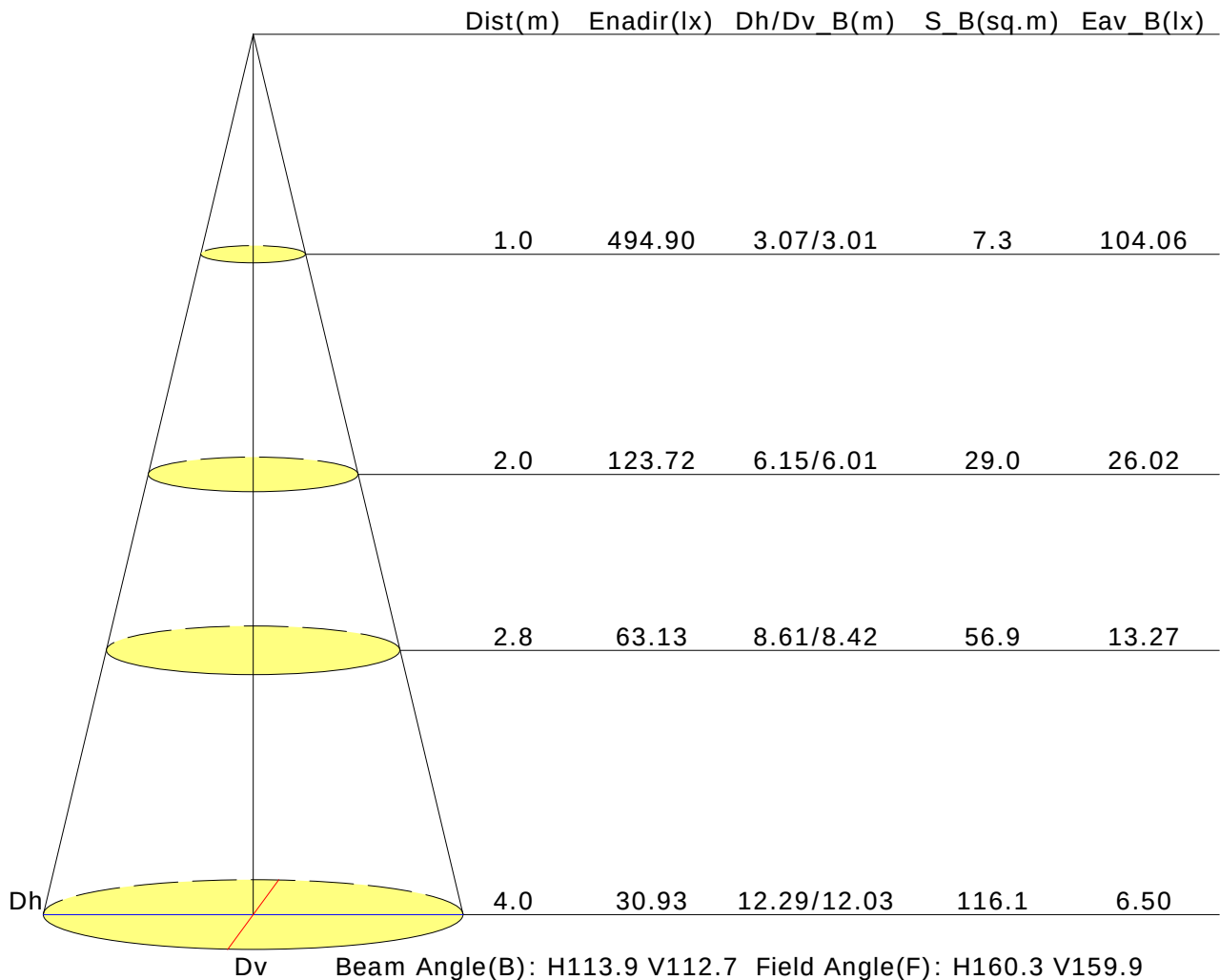
Test Device: GPM-2000

Distance: 7.970 m

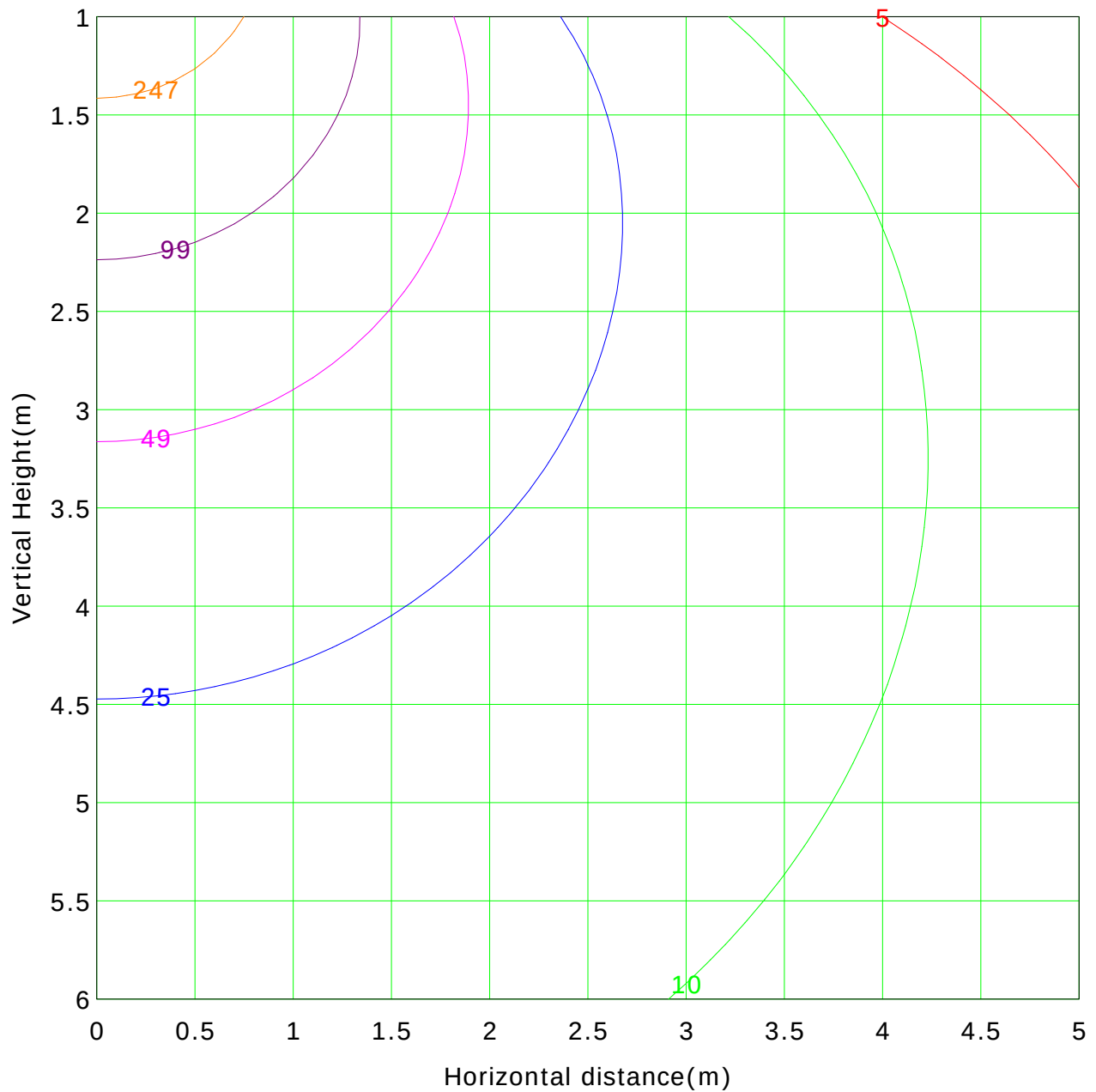
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 6.0m	Max Lux: 494.9 lx
(1%): 4.9 lx	(2%): 9.9 lx	
(5%): 24.7 lx	(10%): 49.5 lx	
(20%): 99.0 lx	(50%): 247.4 lx	
(100%): 494.9 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: 25/09/2018 16:50

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + 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: 27.69 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1348.8 lm

Downward Ratio: 19.72%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 21.35%

Upward Ratio: 1.63%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 166.3, 218.1, 176.5, 175.7

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.2, 125.7, 121.5, 120.9

Luminaire Efficacy Rating (LER): 48.76

Central Intensity: 387.55 cd

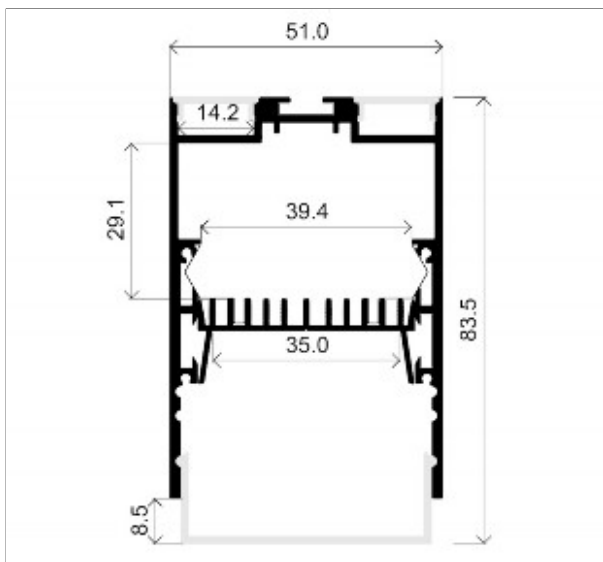
Max. Intensity: 387.55 cd

Pos of Max. Intensity: H0 V0

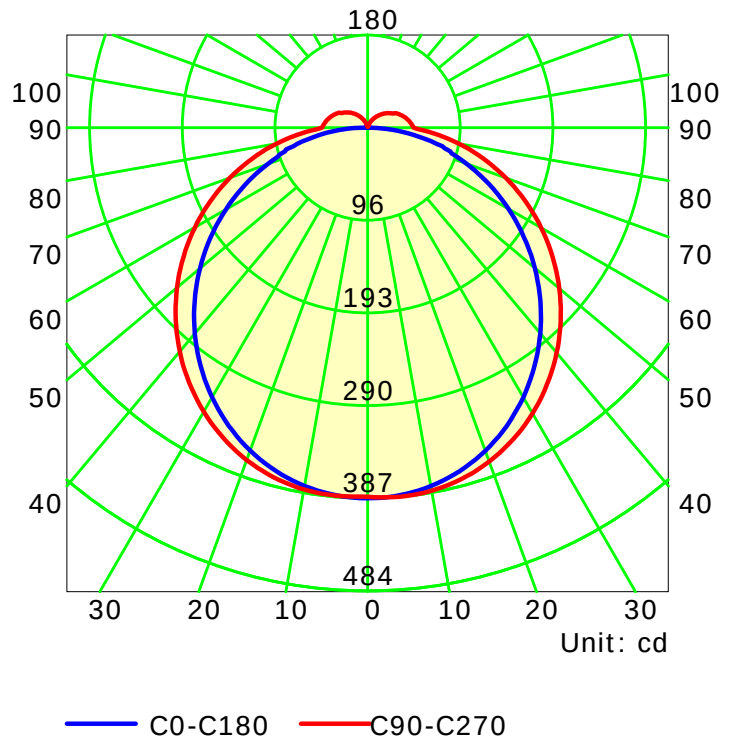
S/MH(C0/C180): 1.25

S/MH(C90/C270): 1.32

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

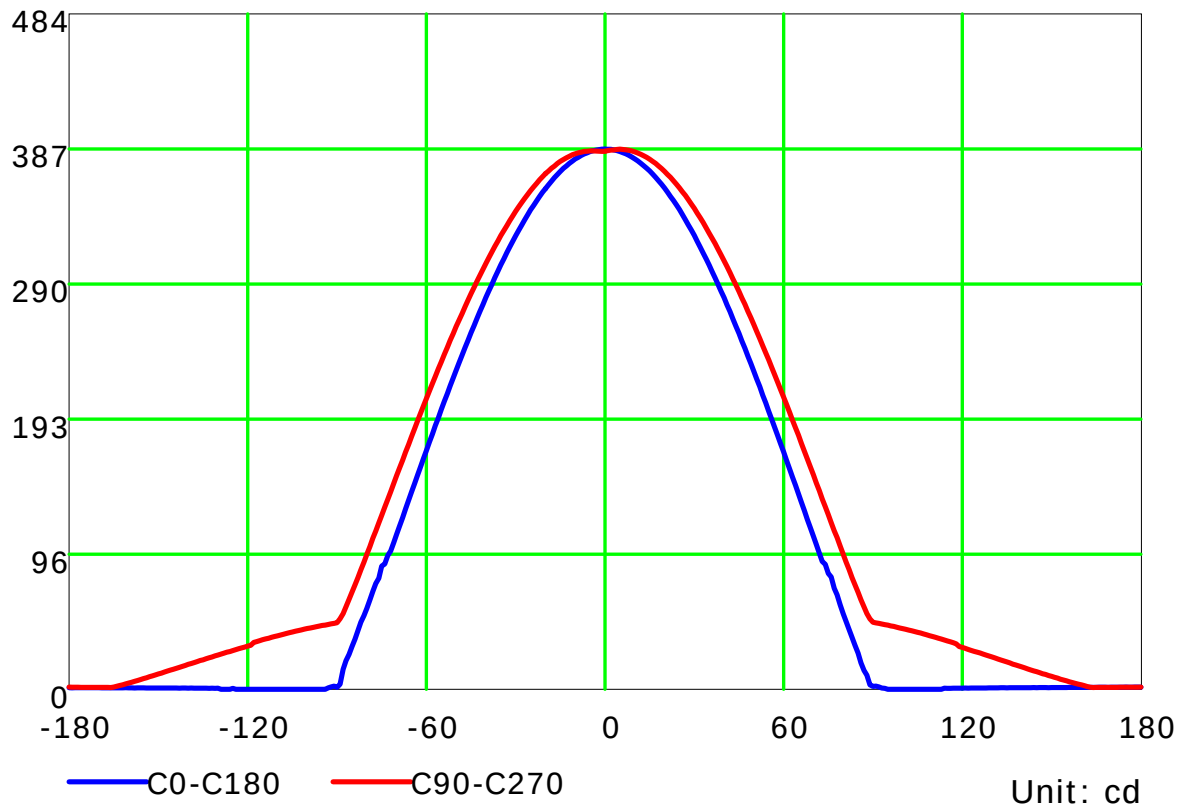
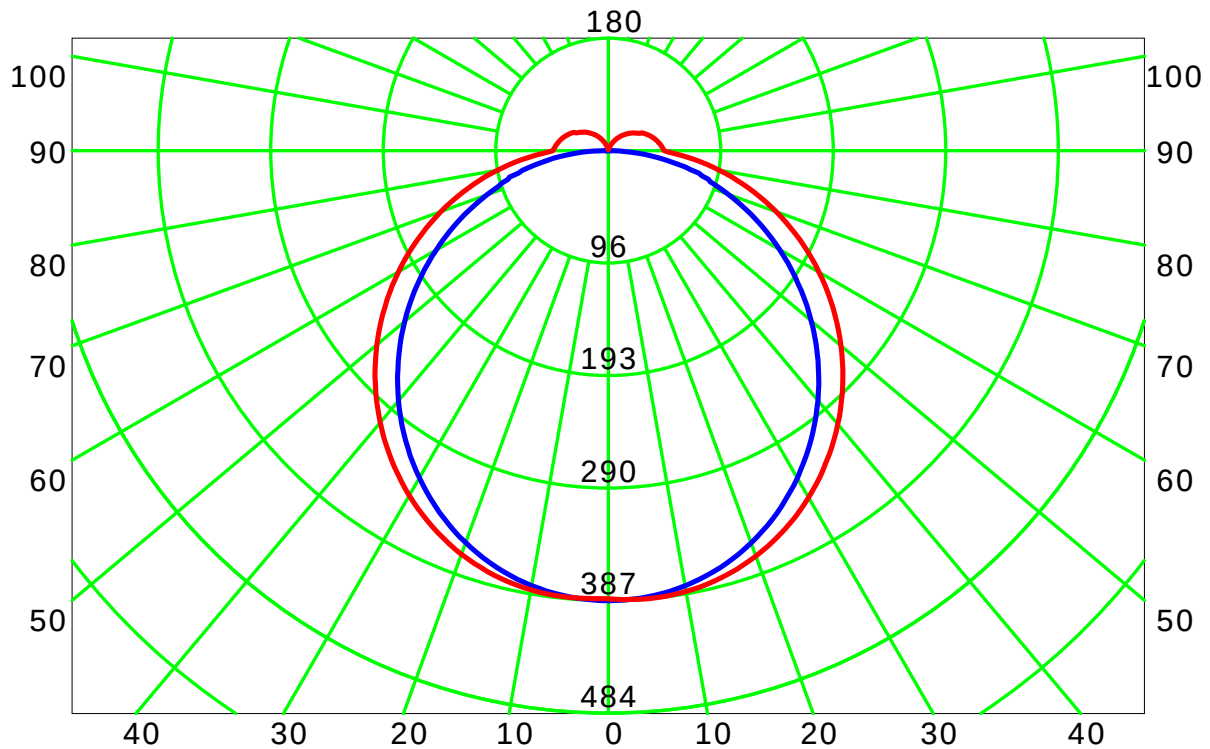
Test Device: GPM-2000

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

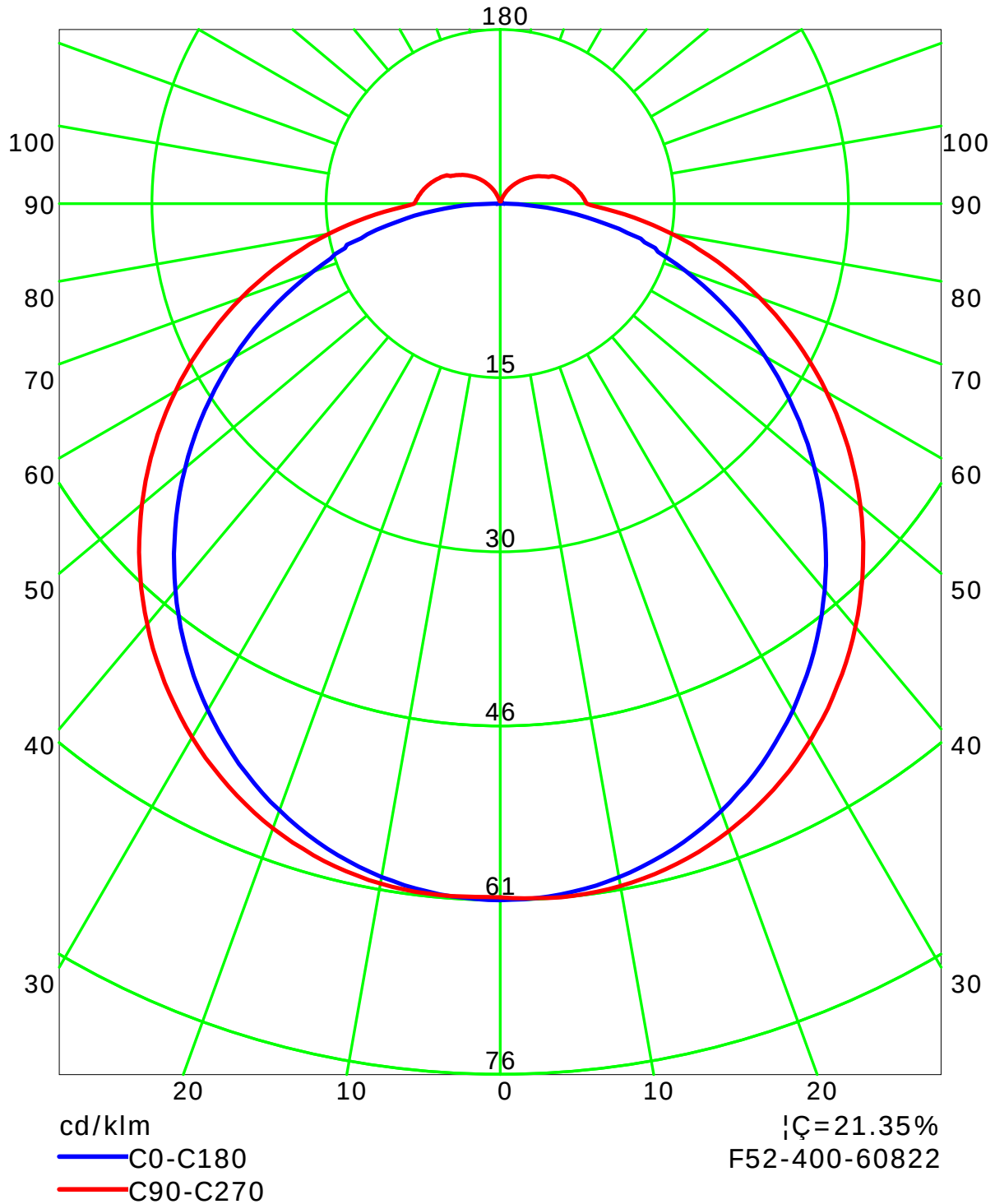
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

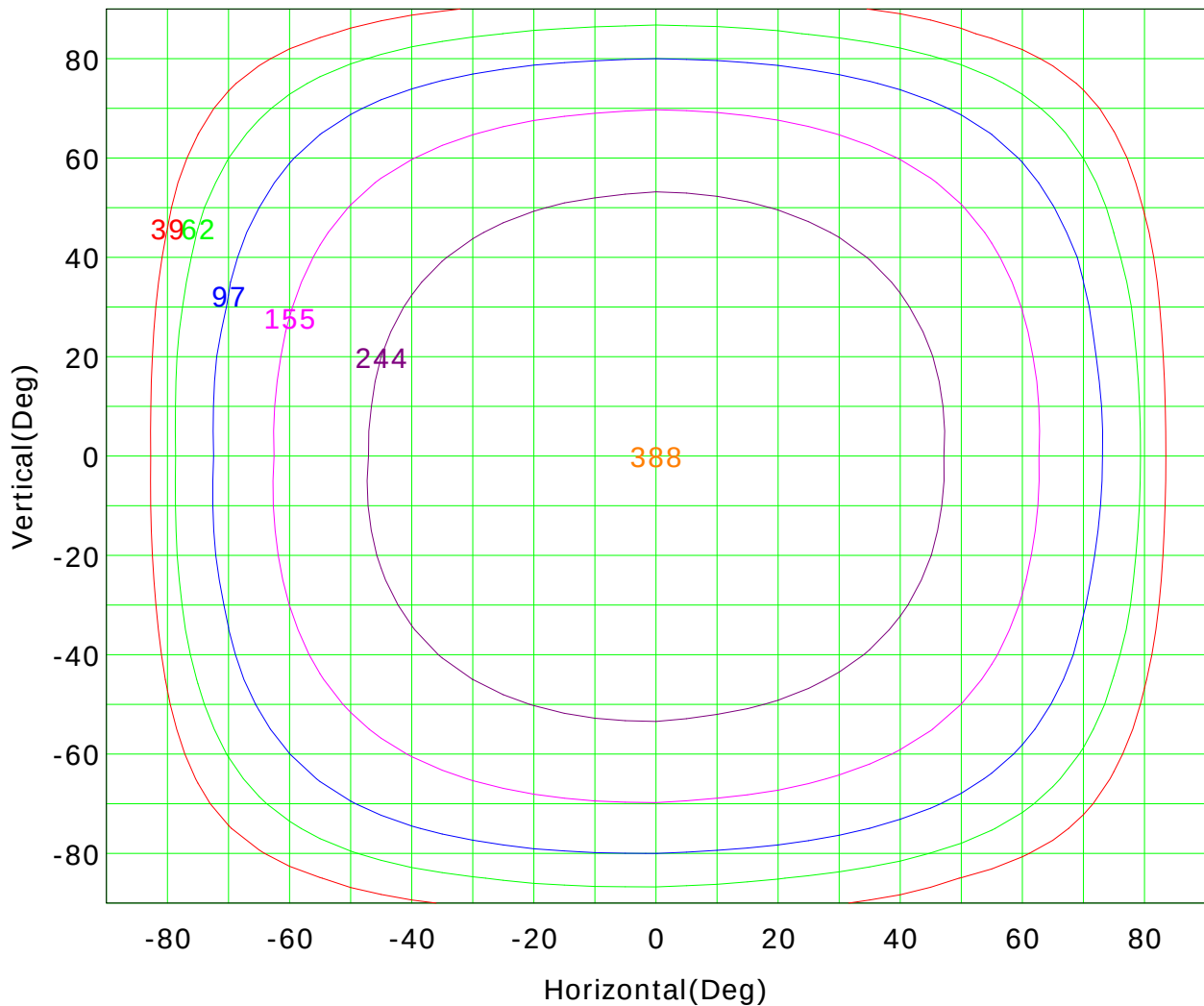
Luminous Intensity Distribution Curve(cd / klm)



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%): 388 cd

(10%):	39 cd	(16%):	62 cd
(25%):	97 cd	(40%):	155 cd
(63%):	244 cd	(100%):	388 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

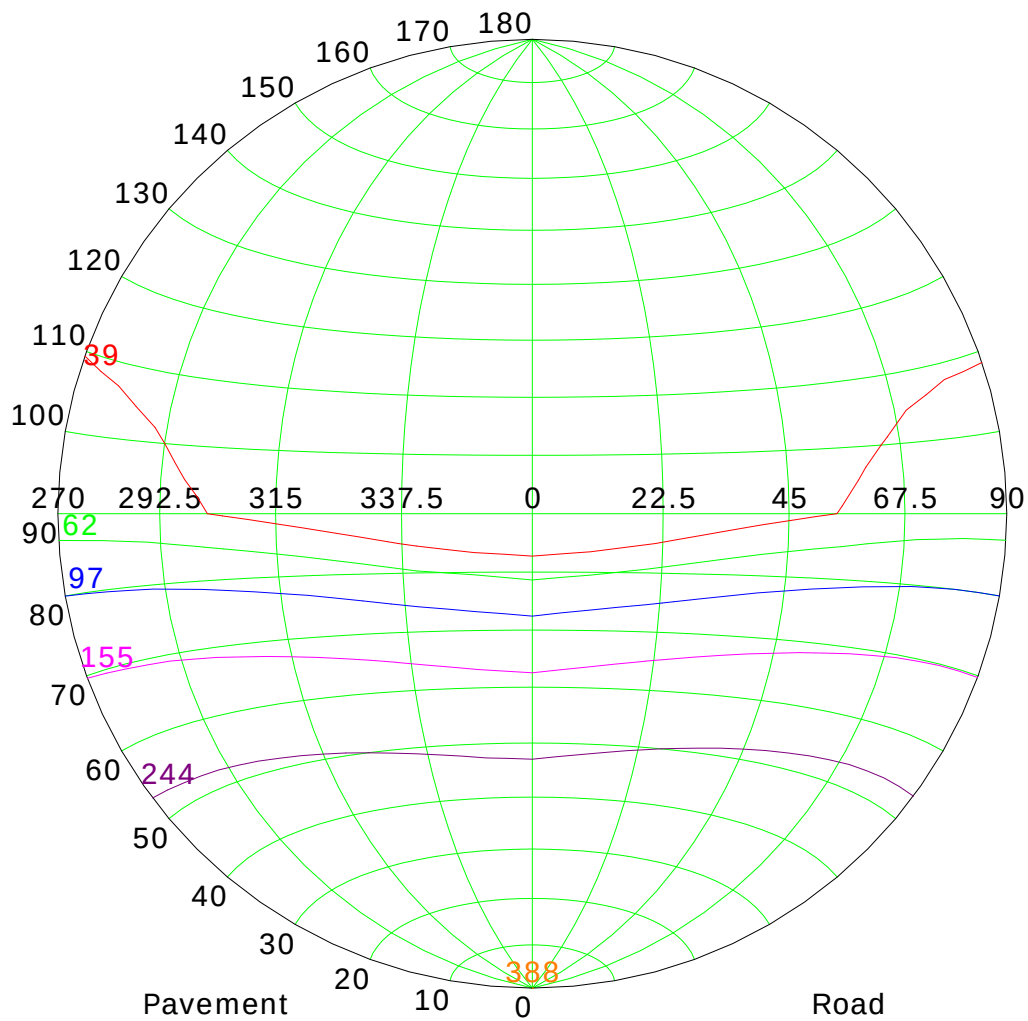
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 388 cd

(10%):	39 cd	(16%):	62 cd
(25%):	97 cd	(40%):	155 cd
(63%):	244 cd	(100%):	388 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

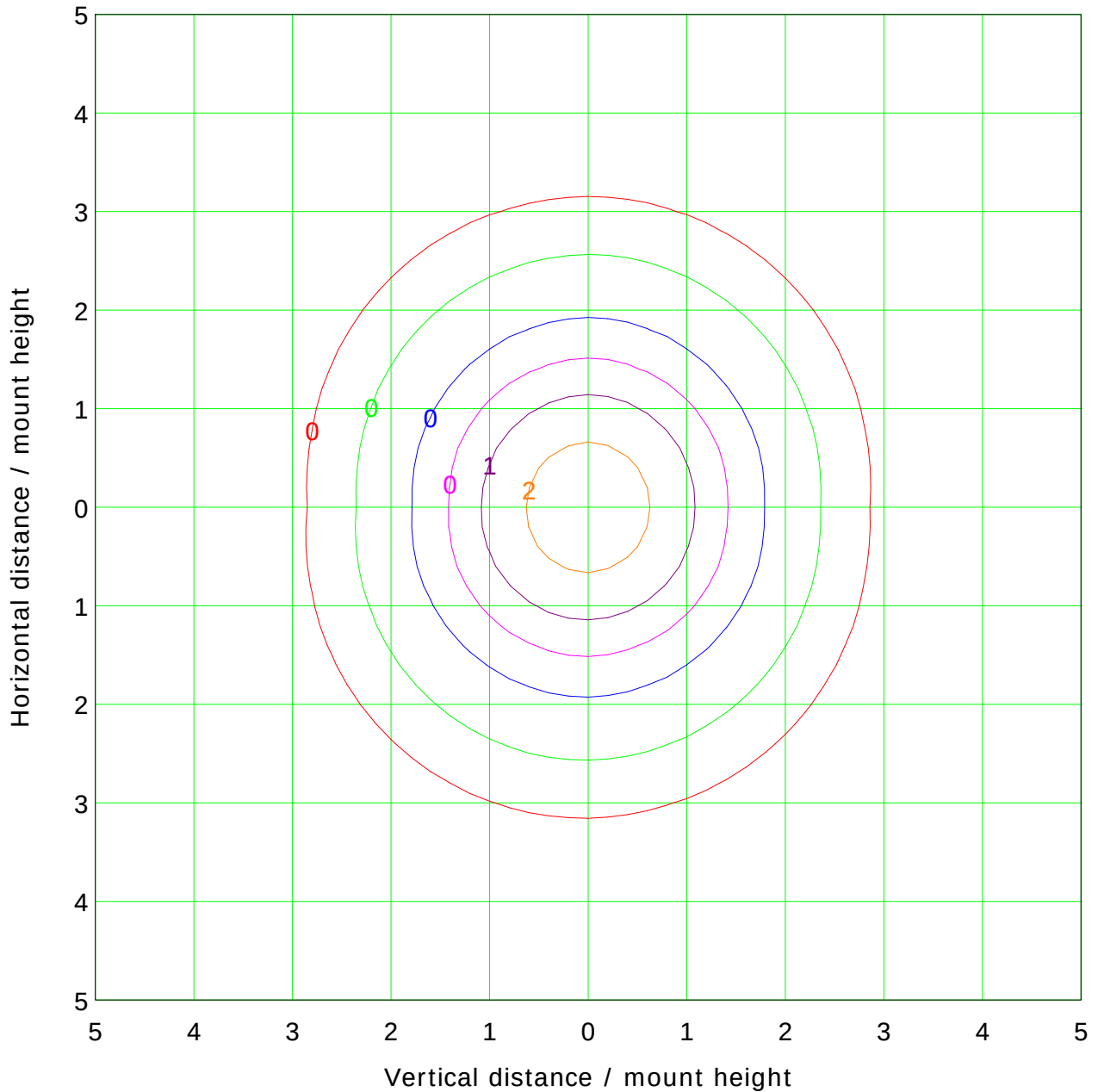
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 3.9 lx	
— (1%):	0.0 lx	— (2%):	0.1 lx
— (5%):	0.2 lx	— (10%):	0.4 lx
— (20%):	0.8 lx	— (50%):	1.9 lx
— (100%):	3.9 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

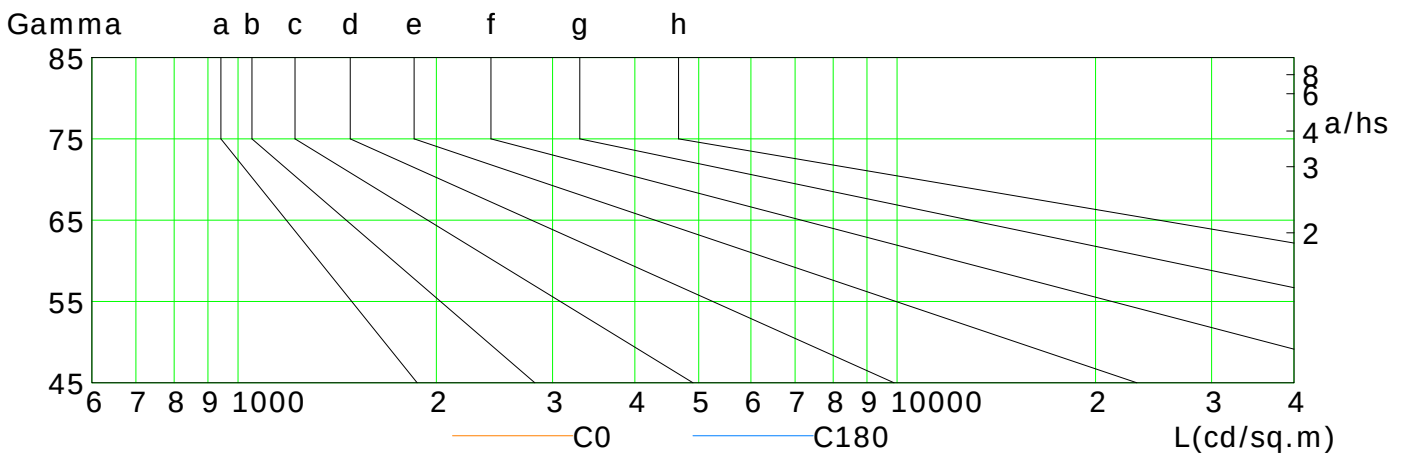
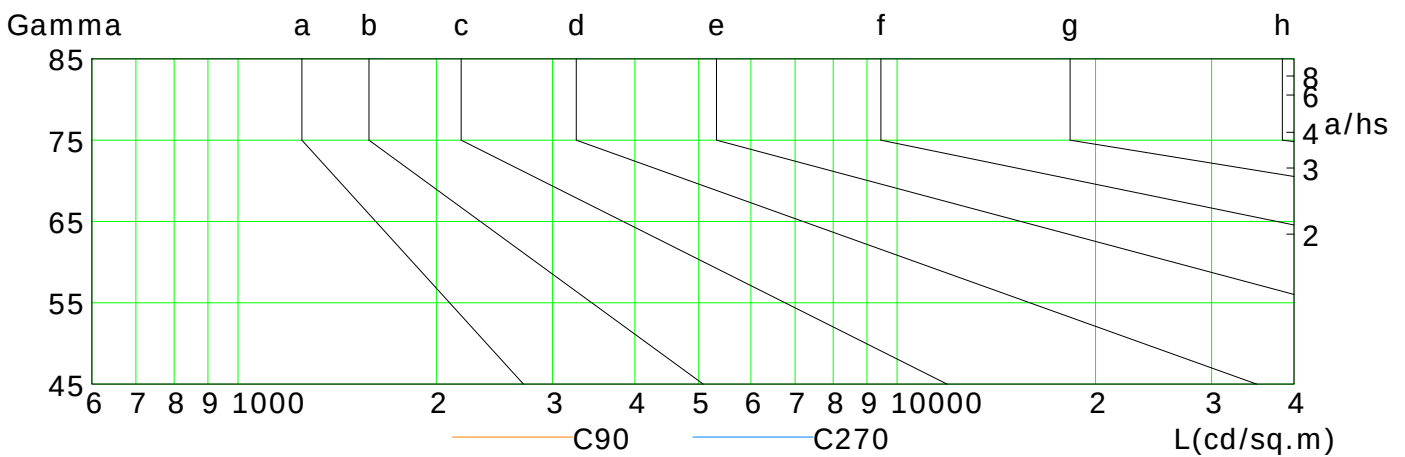
Humidity:

Inspector:

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	255	228	199	170	140	110	83	54	26
C90	285	262	236	210	182	154	125	97	70
C180	256	229	201	171	142	111	88	58	31
C270	284	260	235	208	181	153	125	97	70

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

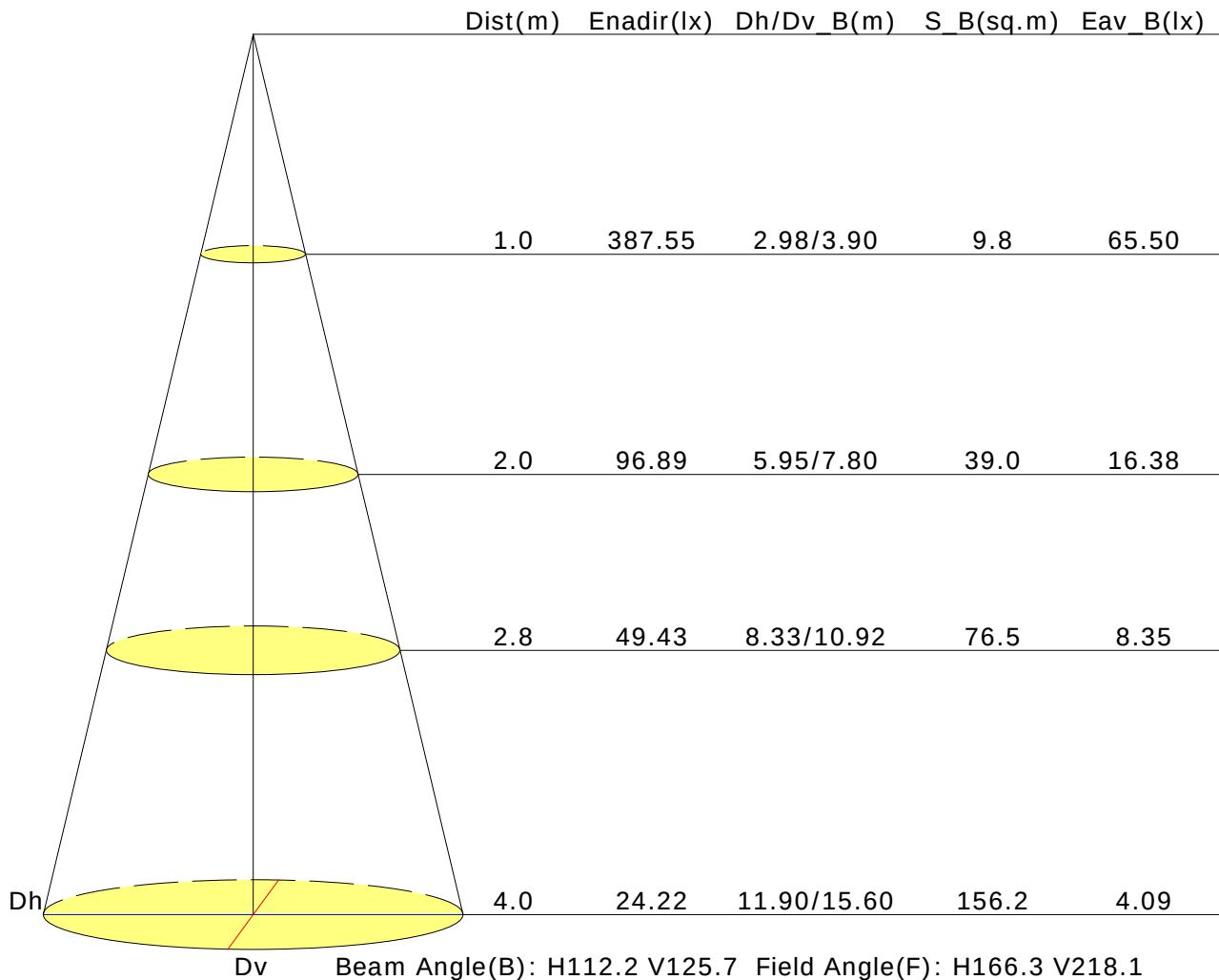
Test Device: GPM-2000

Distance: 7.970 m

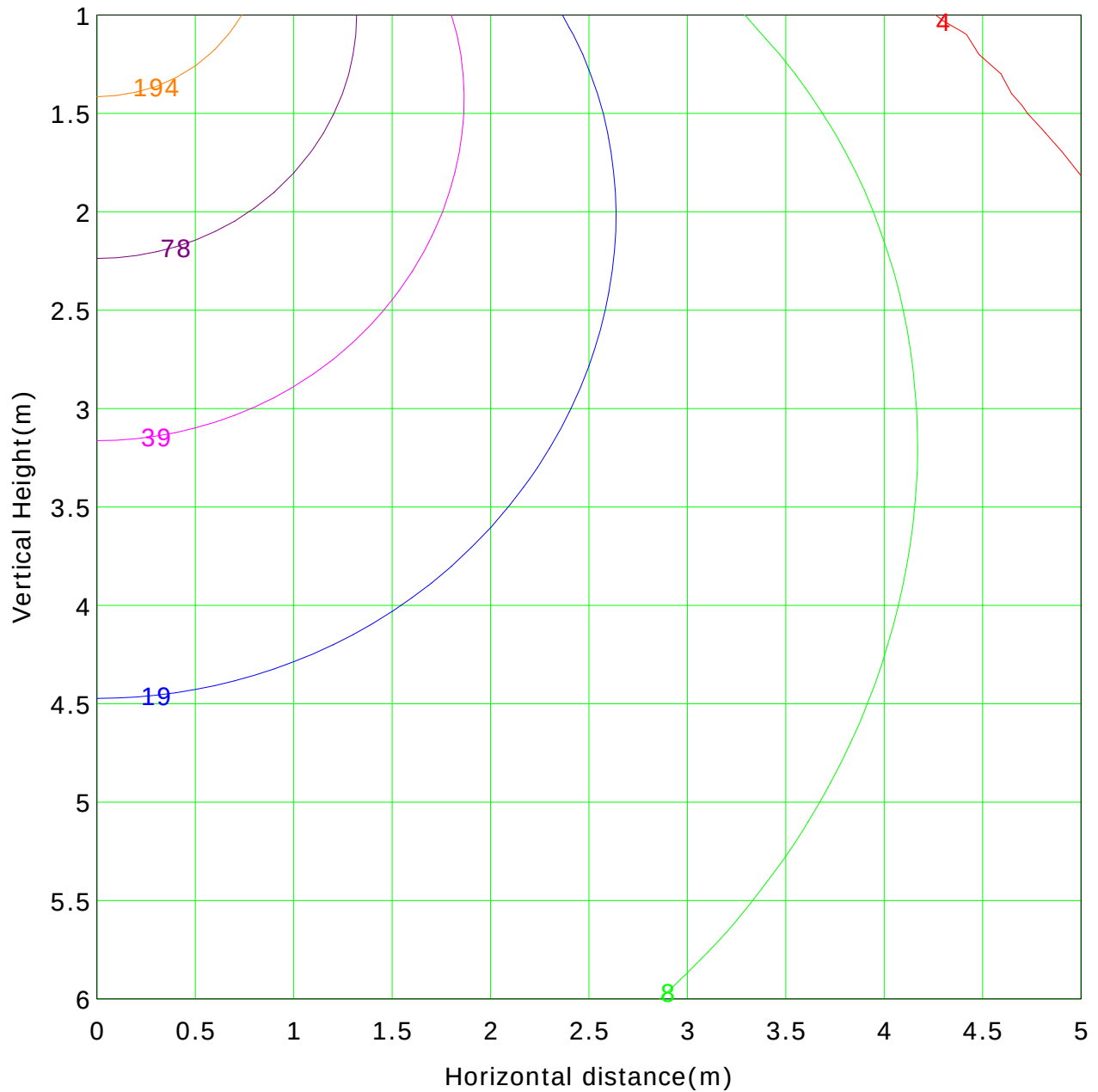
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 387.5 lx

(1%): 3.9 lx	(2%): 7.8 lx
(5%): 19.4 lx	(10%): 38.8 lx
(20%): 77.5 lx	(50%): 193.8 lx
(100%): 387.5 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 09:10

Luminaire Property

Luminaire Manufacturer: Lighting Line

Luminaire Description: LLP-CL02-07 + LLD-07-CS

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 3158 lm

Voltage: 24.0 V

Current: 1.143 A

Power: 27.44 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 1373.2 lm

Downward Ratio: 21.68%

Total Rated Lamp Lumens: 6316.0 lm

Efficiency: 21.74%

Upward Ratio: 0.06%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 163.9, 163.6, 163.7, 163.8

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.2, 110.9, 111.5, 111.6

Luminaire Efficacy Rating (LER): 50.09

Central Intensity: 481.6 cd

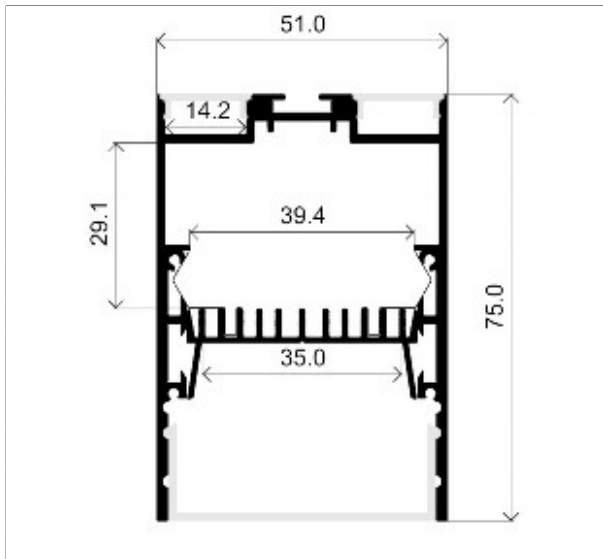
Max. Intensity: 481.65 cd

Pos of Max. Intensity: H10 V0

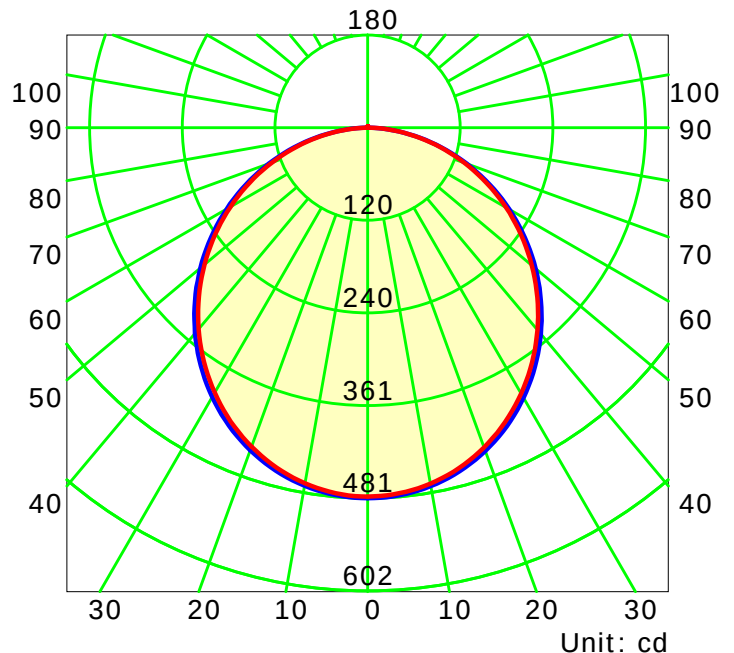
S/MH(C0/C180): 1.25

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

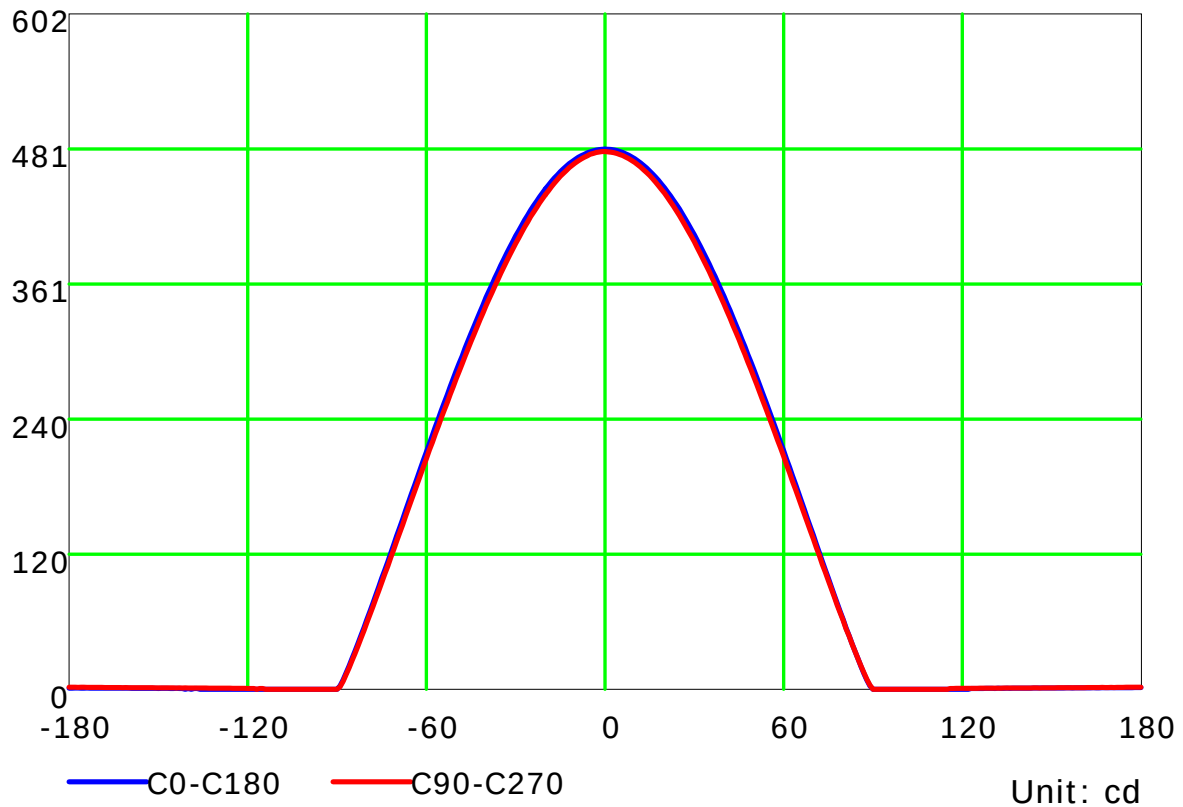
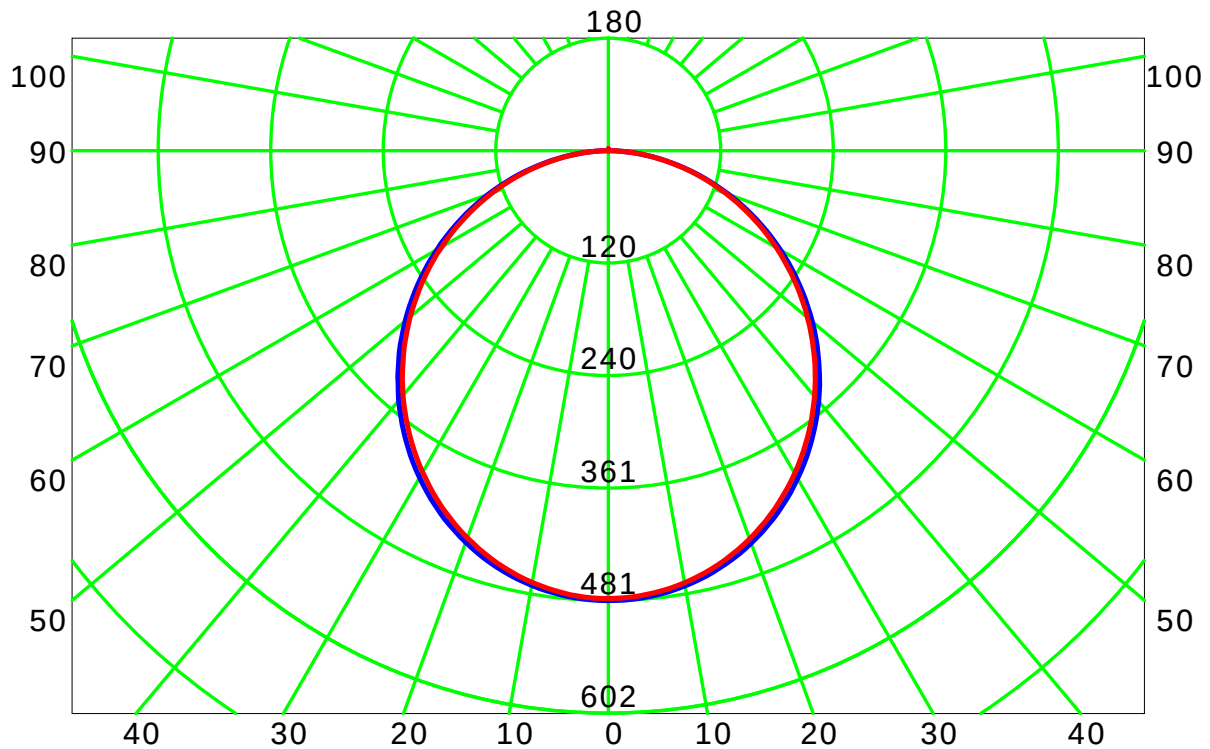
Test Device: GPM-2000

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

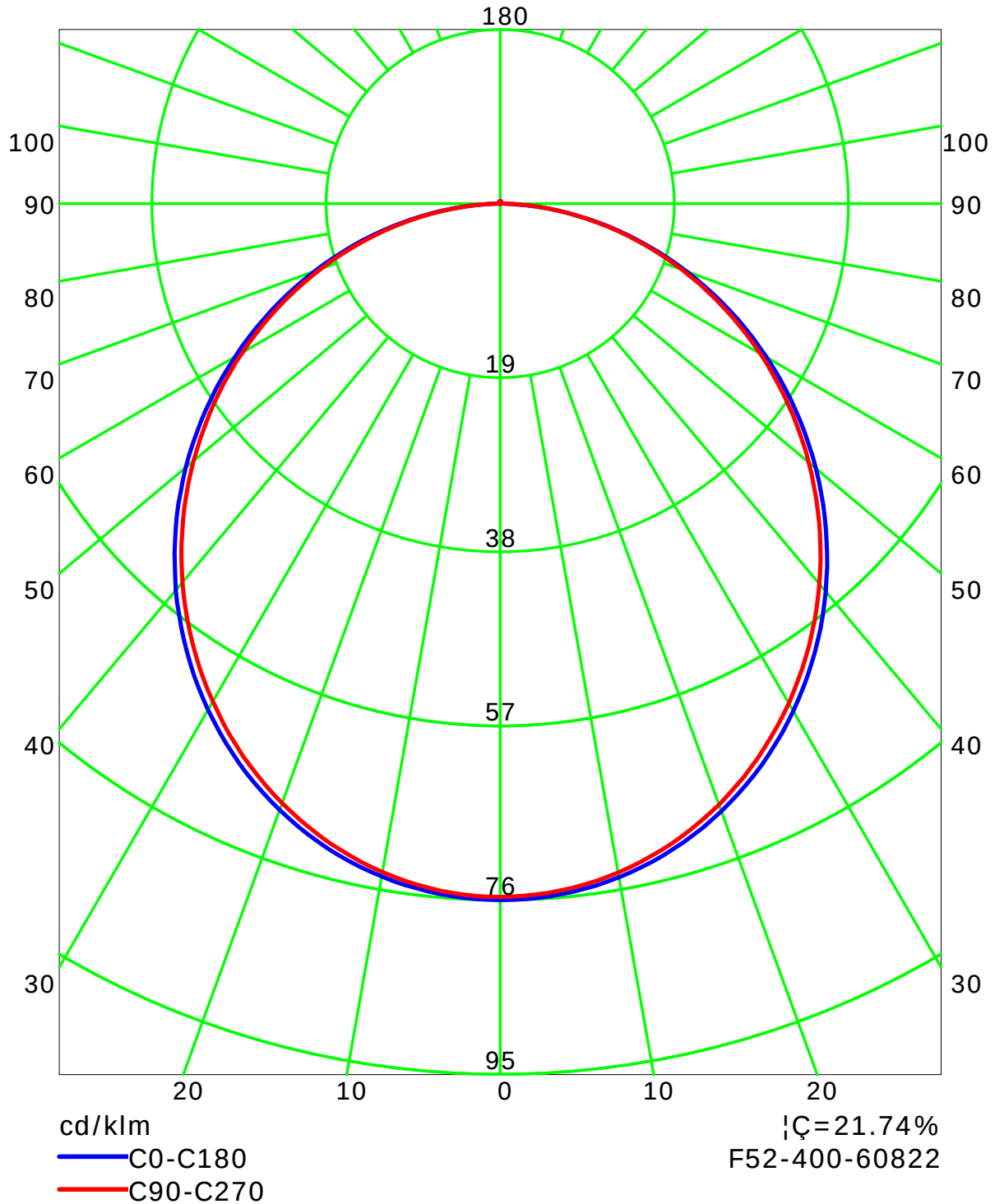
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

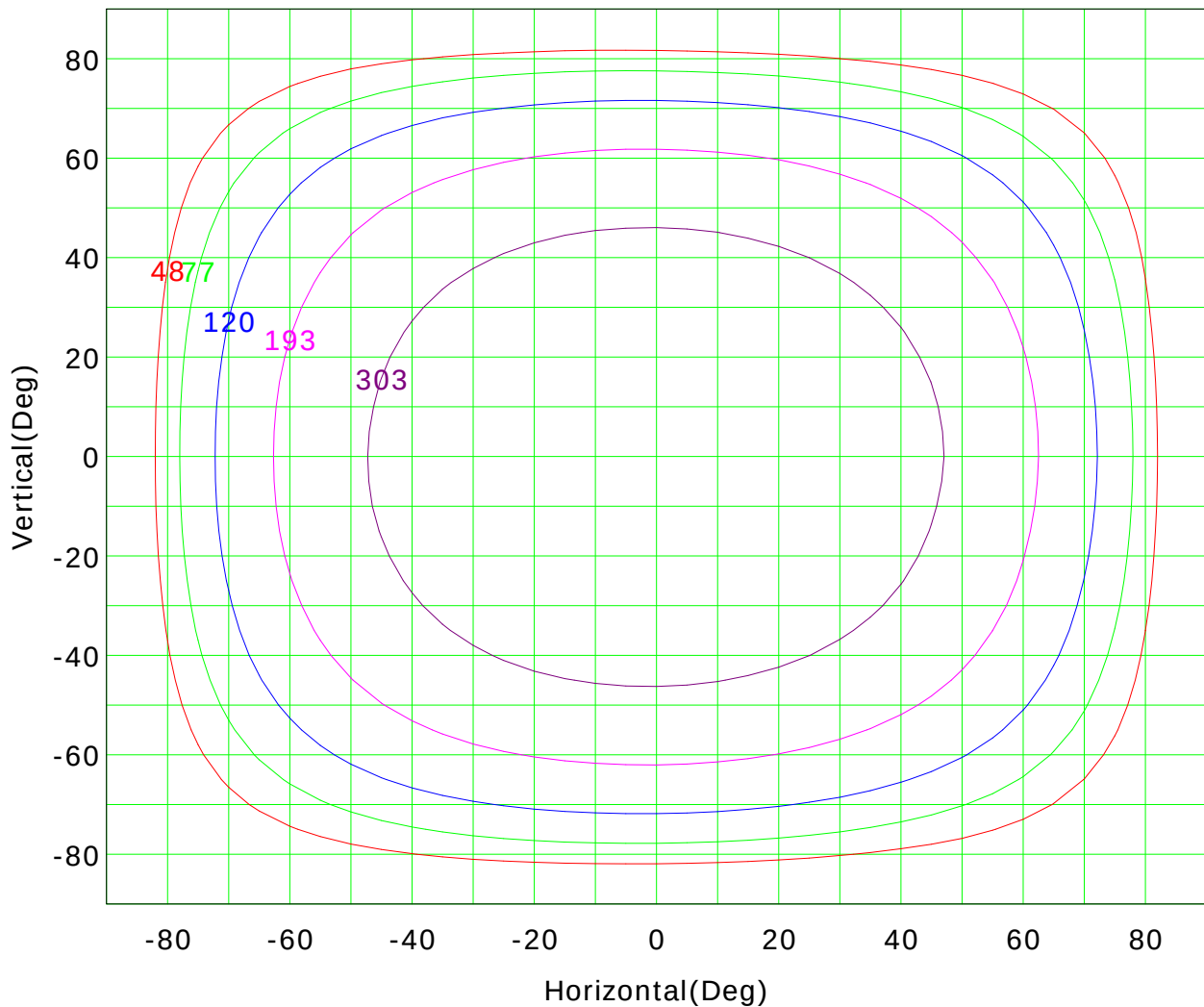
Luminous Intensity Distribution Curve(cd / klm)



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%): 482 cd

(10%):	48 cd	(16%):	77 cd
(25%):	120 cd	(40%):	193 cd
(63%):	303 cd	(100%):	482 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

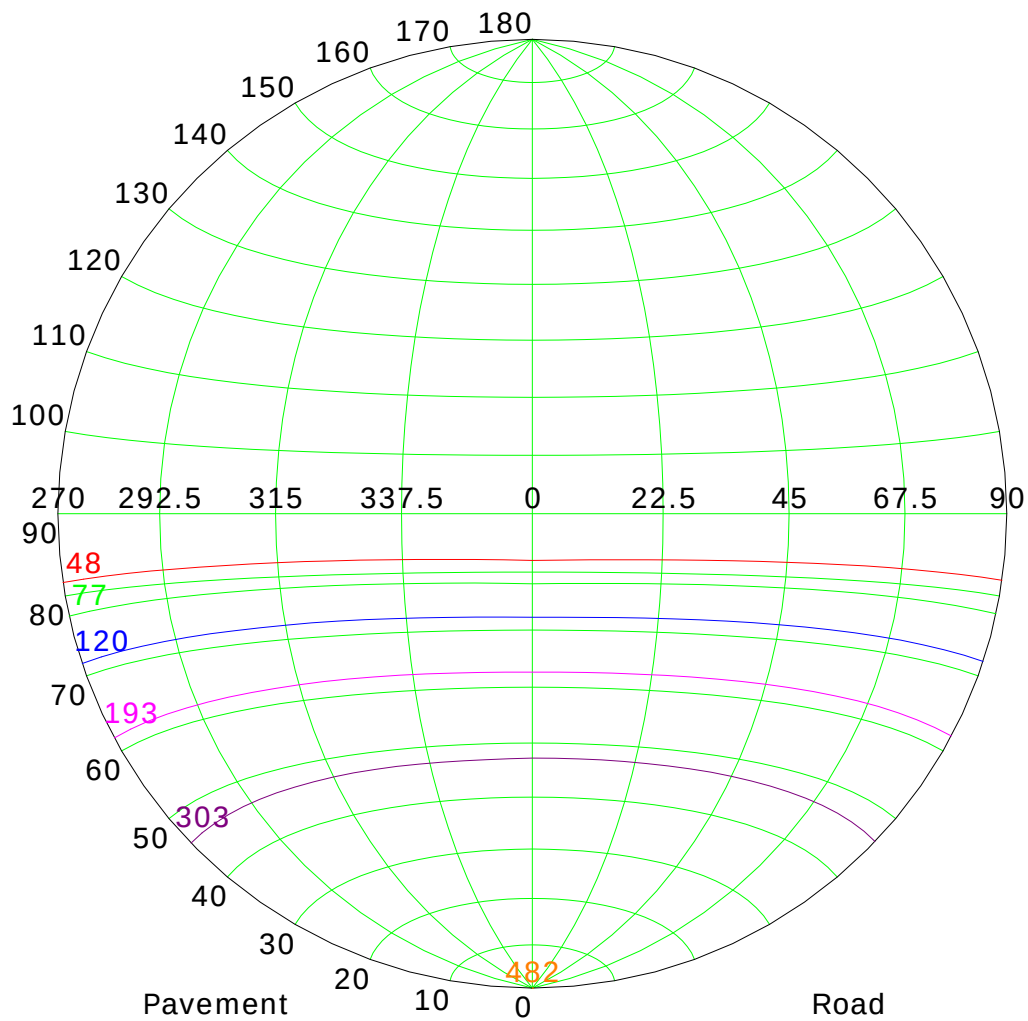
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 482 cd

(10%):	48 cd	(16%):	77 cd
(25%):	120 cd	(40%):	193 cd
(63%):	303 cd	(100%):	482 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

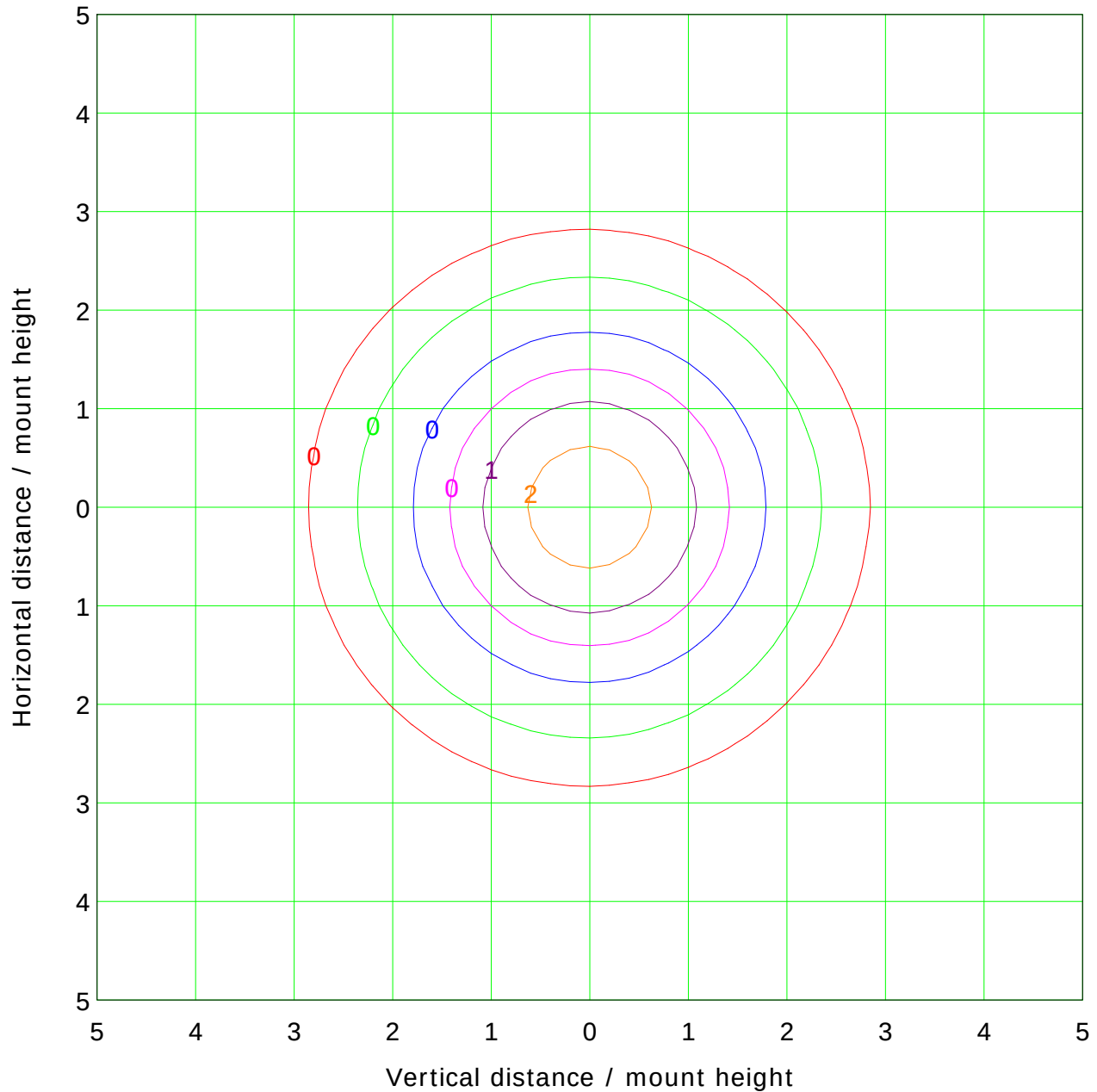
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 4.8 lx	
(1%):	0.0 lx	(2%):	0.1 lx
(5%):	0.2 lx	(10%):	0.5 lx
(20%):	1.0 lx	(50%):	2.4 lx
(100%):	4.8 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

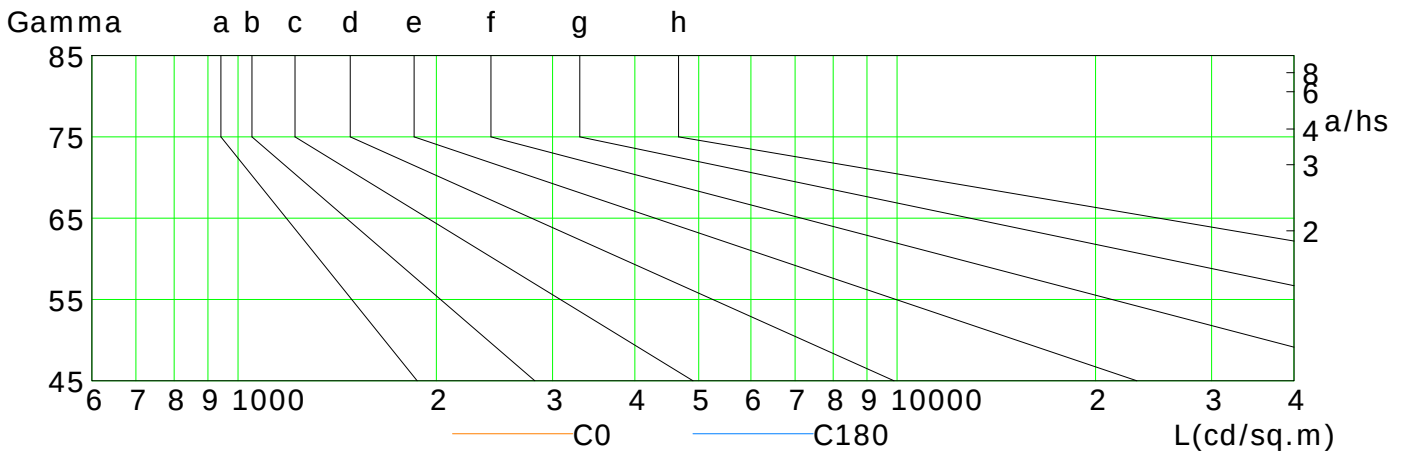
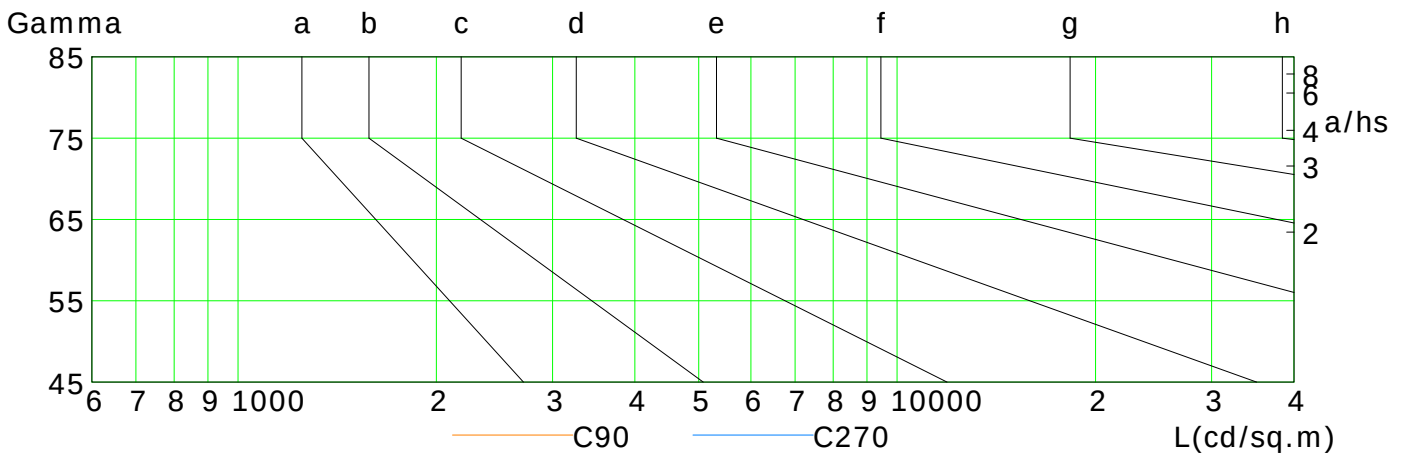
Humidity:

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	319	285	249	213	175	137	99	62	27
C90	312	278	243	208	171	134	97	61	27
C180	317	284	249	212	174	137	99	62	27
C270	310	277	242	206	169	132	95	59	25

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

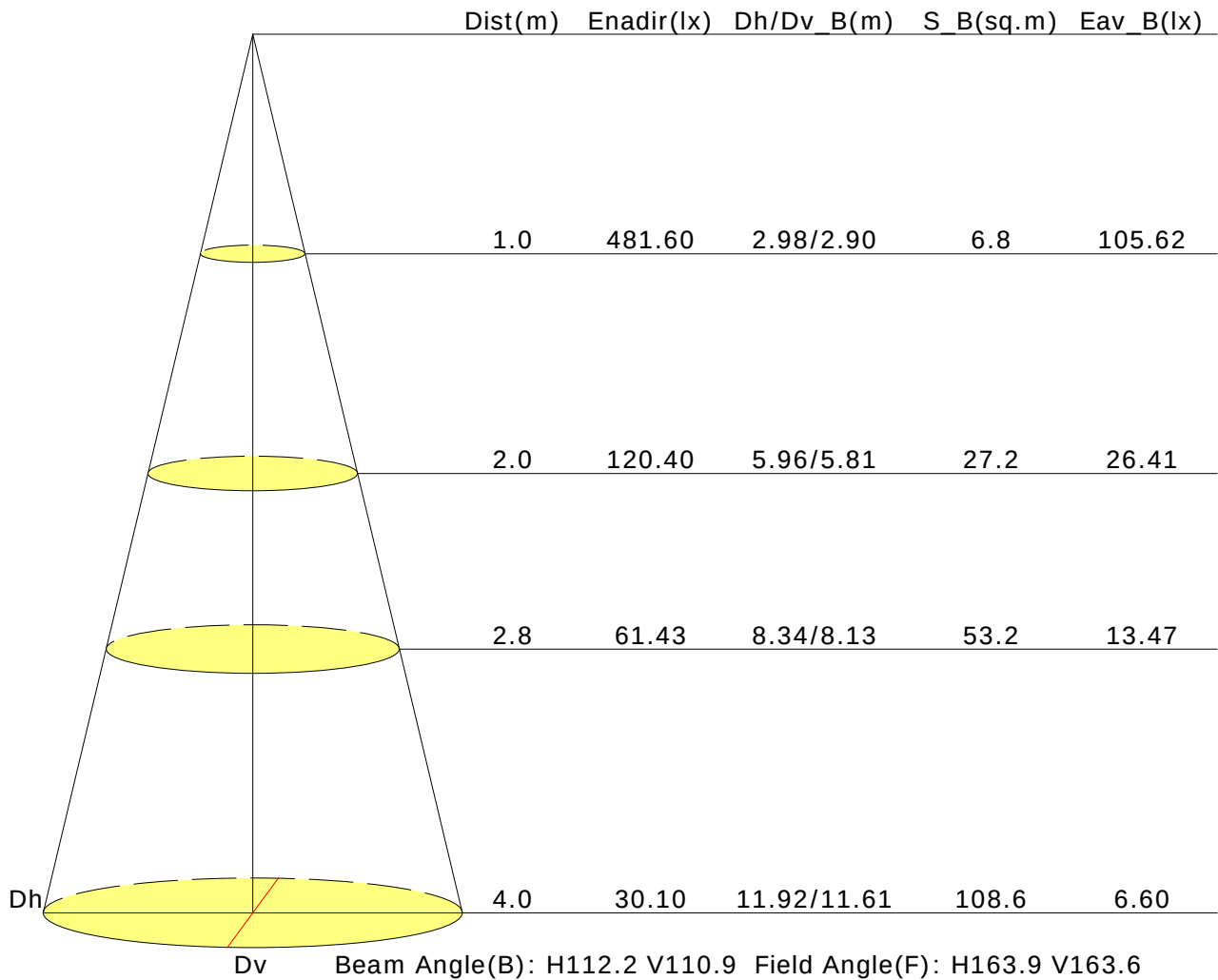
Test Device: GPM-2000

Distance: 7.970 m

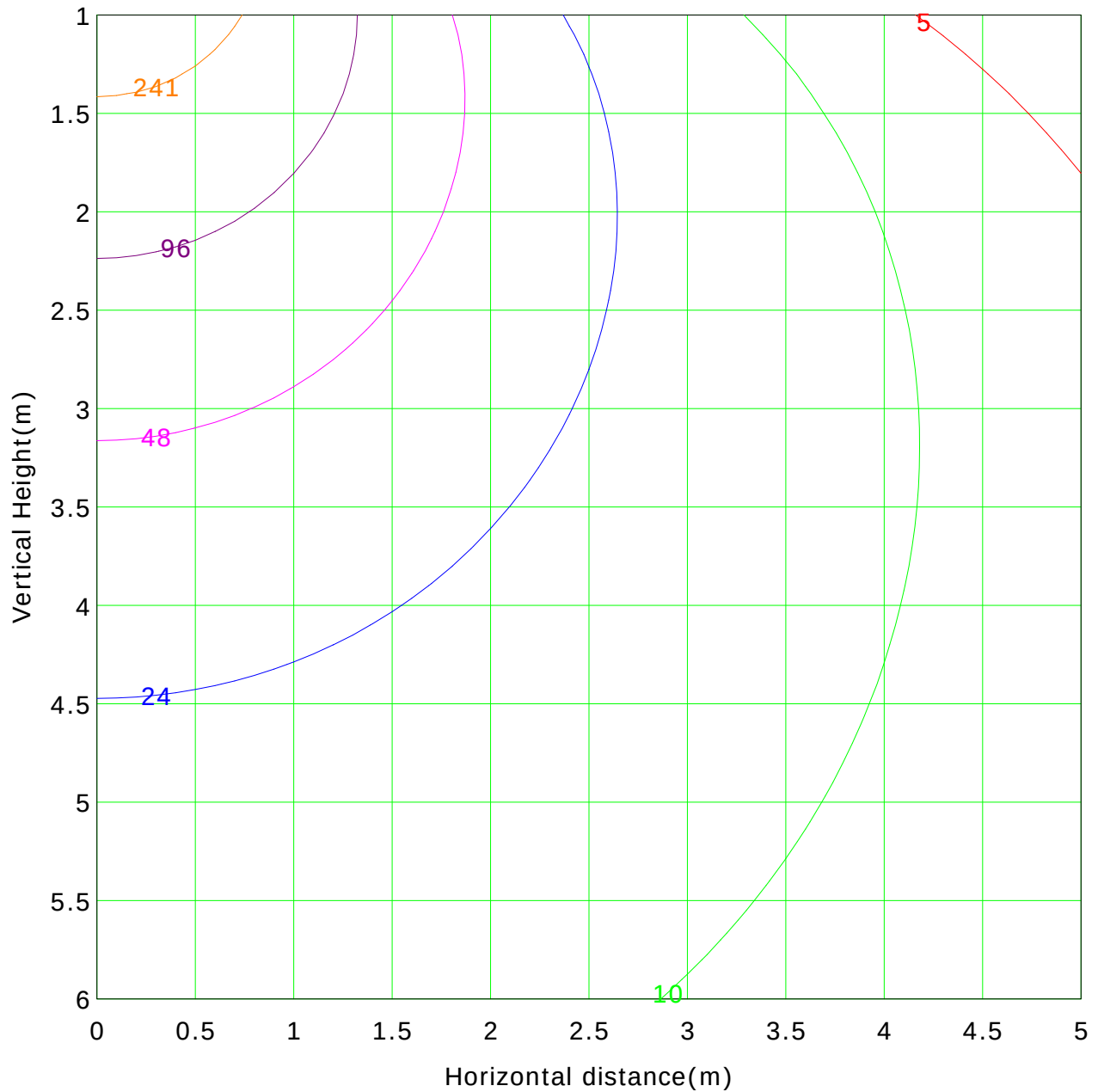
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 6.0m Max Lux: 481.6 lx

(1%): 4.8 lx	(2%): 9.6 lx
(5%): 24.1 lx	(10%): 48.2 lx
(20%): 96.3 lx	(50%): 240.8 lx
(100%): 481.6 lx	